Molded Case Circuit Breakers

Dual Function Circuit Breaker

3VA41 1-pole

QR Circuit Breakers

3VA molded case circuit breakers

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Sentron

What's **new** in molded case circuit breakers:

New! 3-Pole GFCI (5mA and 30mA)

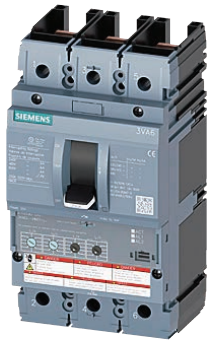
Siemens introduces the new 3-pole GFCI, expanding their commercial GFCI line to enhance safety in demanding applications. The 3-pole GFCI is available in Bolt-on configuration now, with Cable-in/Cable-out coming soon.

- Available in 2- and 3-pole (15-100A)
- Rated 65kA interrupting rating
- NEC 210.8 compliant
- UL and cUL listed
- Class A 5mA (UL943) and 30mA (UL1053) protection

New 3VA Large Frame up to 2000A

- Full suite of external accessories including connection technology, mounting bases, external breaker operators, interlocks and test devices.
- UL 100% ratings available in 1200A and 1600A frame sizes – TMTU & ETU
- DAS+ Arc Energy Reduction as a standard feature in all ETU versions – US National Electric Code compliant.
- Mechanical platform is based on predecessor 3VL design with 25 years of installed base and proven best-in-class reliability. As a result, footprint is nearly identical as 3VL7 (NG) and 3VL8 (PG) MCCBs allowing for simple upgrade to 3VA in existing electrical apparatus.

The new Siemens 3VA molded case circuit breakers



- 125A thru 2000A Thermal Magnetic Trip breakers
- 150A thru 2000A Electronic Trip Circuit Breakers
- Extensive and flexible accessories
- Common internal accessories for the entire breaker family
- Power metering with the series-8 LCD electronic trip
- Illuminated rotary handles show switch position
- Smaller footprint than Sentron or VL breakers
- Enhanced Tools and Resources

The **Dual Function Circuit Breaker** combines GFCI and AFCI, protecting against both Arc Faults and Ground Faults. This, along with the new Self-Test & Lockout feature, makes it the first in class in electrical safety for homeowners.

- Faster Installation
- Cost savings
- Smaller Device
- Self Test & Lockout feature as required by UL 943 effective June 2015

The Siemens 3VA41 circuit breaker is a compact, industrial design thermal magnetic breaker with features which include a design that meets multi-national standards (UL, NOM, EAC), available with NAVAL ratings which meet UL489 Supplement SB, and an extensive selection of UL listed, field installable internal accessories (auxillary and alarm switches, shunt and undervoltage trips). The 3VA41 is available from 15A to 125A in 1, 1 in 2-pole, 2 or 3-pole versions on 1 inch pole centers having AC interrupting ratings up to 65KA @ 480VAC and 25KA @ 600Y347V and DC ratings up to 100KA @ 250VDC.

1-Pole **1 in 2-Pole** **2-Pole** **3-Pole**

Ordering

The 3VA breakers are shipped complete with non-interchangeable trip units and without lugs.

The 3VA41 panelboard mounted circuit breakers are shipped with aluminum load side lugs installed as standard.

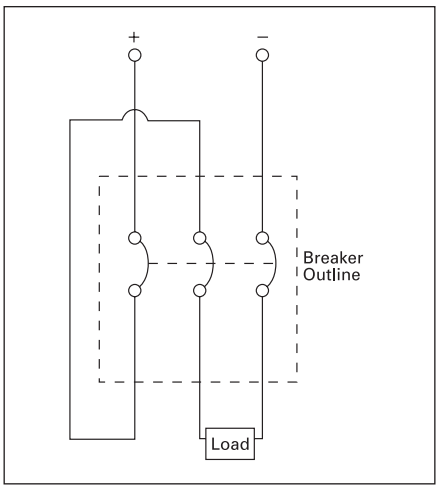
3VA51 through 3VA55 thermal-magnetic trip breakers as well as 3VA61 through 3VA66 electronic trip breakers are shipped as standard without lugs installed. To order factory installed nut keepers, which are required for installation in panelboards or switchboards, the 12th digit of the catalog should be change to "2" when ordering. (For example, a 35KA@480VAC, 40A, 3-pole, 3VA51 with lugs would be catalog number 3VA5140-5ED32-0AA0).

To order factory installed standard line and load lugs, the 12th digit of the catalog number should be changed to "6" (standard lugs are identified in the respective lug tables and footnotes in the SpeedFax). (For example, a 35KA@480VAC, 40A, 3-pole, 3VA51 with lugs would be catalog number 3VA5140-5ED3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "NAVAL", and are suitable for use at 50C.

To order NAVAL-rated thermal-magnetic trip circuit breakers, the 13th digit of the catalog number should be changed to the number "1". (For example, a 35KA @480VAC, 40A, 3-pole, NAVAL rated 3VA51 would be catalog number 3VA5140-5ED3**1**-1AA0).

All 3VA5 thermal-magnetic trip and 3VA6 electronic trip circuit breakers are UL listed for reverse feed applications.

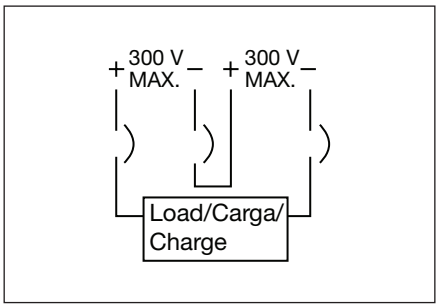


500V DC Wiring Configuration

Connecting Breakers for DC Application

Most Siemens thermal magnetic trip MCCBs are applicable on direct current (dc) systems. Generally, for 250 V dc systems a two pole breaker is used, with one pole on each leg of the supply circuit. For three pole breakers applied on 500 V undergrounded DC systems, it is important to connect the power supply "zig-zag" through the breaker as shown in the figure below. This assures that the Voltage between phases on the breaker terminals is uniformly distributed.

See below for an alternative connection diagram. For a list of 3VA5 breakers with the DC ratings, please refer to pages 7-10 to 7-11.



W-C-375C/GEN

Class	Interrupting Rating: Symmetrical Amperes①	Interrupting Rating: Volts AC 60HZ	Poles	Range of Current Trip③	Breaker Type (All Circuit Breakers Meet or Exceed the Indicated Class Level)
10a②	5,000	120/240	1 or 2	15–100	QP, BQ, QT, BL, BT④
10b	5,000	240	2 or 3	15–100	QP, BQ, BQD, CQD, BL
11a	7,500	120	1	15–100	QP, BQ, BQD, CQD, BL
11b	7,500	240	2 or 3	15–100	QP, BQ, BQD, CQD, BL
12a②	10,000	120/240	1 or 2	15–100	QP, BQ, QT, ED2, BL, BT④
12b	10,000	240	2 or 3	15–225	QP, BQ, QJ2, ED2, BQD, CQD, BL
12c	10,000	277	1	15–100	BQD, CQD, NGG, NGB, NEG, NEB
13a	14,000	277	1	15–100	ED4, BQD, CQD, NGG, NGB, NEG, NEB
13b	14,000	277/480	1, 2, or 3	15–100	ED4, BQD, CQD
14a	22,000	120/240	1 or 2	15–100	QPH, BQH, BLH, BTH④
14b	22,000	240	2 or 3	70–400	QJH2, QJ2-H, BQH, BQD, CQD, BLH
15a	65,000	120/240	1 or 2	15–100	HQP, HBQ, ED4, HED4, NGG, NGB
15b	65,000	240	2 or 3	15–225	ED6, ED4, FXD6, FD6, HED4, BQD, CQD, HQJ2H, NGG, NGB, NEG, NEB
16a	100,000	480	2 or 3	15–225	CFD6, CED6
16b	100,000	600	2 or 3	15–600	CED6, CFD6, CJD6, SCJD6, CLD6, SCLD6
17a	200,000	600	2 or 3	70–2000	—
18a	18,000 14,000 14,000	240 480 600	2 or 3	15–125	ED6, HED6, HHED6
19a	22,000 18,000 14,000	240 480 600	2 or 3	70–225	FXD6, FD6, CFD6, HFD6
20a	25,000 22,000 22,000	240 480 600	2 or 3	70–225	FXD6-A, FD6-A, CFD6, HFD6
21a	42,000 30,000 22,000	240 480 600	2 or 3	70–800	HFD6, CFD6, JXD6(A), JD6(A), SJD6-B, HJD(A), HJXD6(A), HHJD6, SHJD6-B, CJD6, SCJD6-B, LXD6(A), LD6(A), SLD6-B, HLD6(A), HLXD6(A), HHLD6, SLD6-B, SHLD6-B, CLD6, SCLD6-B, LMD6, LMXD6, HLMD6, HLMXD6, MD6, MXD6, SMD6-B, HMD6, HMXD6, SHMD6-B, CMD6, SCMD6-B
22a	65,000 25,000 18,000	240 480 600	2 or 3	15–125	CED6, ED6, HED6, HHED6, FXD6-A, FD6-A
23a	65,000 35,000 25,000	240 480 600	2 or 3	70–1200	HHED6, FXD6-A, FD6-A, HFD6, HHFD6, CFD6, JD6(A), JXD6(A), SJD6-B, HJD6(A), HJXD6(A), SHJD6-B, HHJD6, HHJXD6, CJD6, SCJD6-B, LXD6(A), LD6(A), SLD6-B, HLD6(A), HLXD6(A), SHLD6-B, HHLD6, HHLXD6, CLD6, SCLD6-B, LMD6, LMXD6, HLMD6, HLMXD6, MD6, MXD6, SMD6-B, HMD6, HMXD6, SHMD6-B, CMD6, SCMD6-B, ND6, NXD6, SND6-B, HND6, HNXD6, SHND6-B, CND6, SCND6-B
24a	65,000 50,000 42,000	240 480 600	2 or 3	1200–2000	PD6, PXD6, HPD6, HPXD6, CPD6 RD6, RXD6, HRD6, HRXD6, SPD6-B, SHPD6-B
25a	125,000 80,000 60,000	240 480 600	2 or 3	600–4000	HHLD6, CLD6, CMD6, CND6 SCLD6-B, SCMD6-B, SCND6-B, CPD6

Applicable Standards

UL 489 / CSA C22.2 NO. 5-16 / NMX-J-266-ANCE-2016 — Molded Case Circuit Breakers, Molded Case Switches and Circuit Breaker Enclosures.

UL486A — Wire Connectors and Solderless Lugs for use with copper wire

UL486B — Wire Connectors and Solderless Lugs for use with aluminum wire

UL943 — Ground Fault Interrupters (for personnel protectors)

UL50 — Cabinets and Boxes

UL869 — Service Equipment

Note:

(A) Molded case circuit breakers are designed and tested in accordance to applicable portions of UL489 and meet application requirements of the National Electric Code. Unless marked otherwise, circuit breakers are 80% duty rated.

(B) Molded case circuit breakers are to be connected with 60 or 75°C wire for circuit breakers having a rated ampacity of 100 amperes or less. Circuit breakers having a rated ampacity greater than 100 amperes shall only be cabled with 75°C cable unless otherwise indicated on the circuit breaker label. Exceptions to this rule are outlined in the article 110-14 C(1)(2) of the 2005 National Electric Code.

① Interrupting ratings are not limited to the values or groups of values listed. However, the values listed are minimum values for the class specified.

② Single-unit or duplex construction must be specified.

③ Use minimum frame size for ampere rating.

④ BT and BTH are only available in 15A and 20A with two 1-pole circuits in one inch of unit space. BT and BTH series breakers can be used in any Siemens panelboard in positions that accept BL or BLH series breakers. It is the installers responsibility to ensure that there is adequate neutral connections available in the panel before installing these breakers.

Thermal-Magnetic Trip Breakers

							Plug-In Breakers						Panelboard Breakers		
							QT	QP, QPP①	QPH, QPPH①	HQP, HQPP①	HQPPH①	QPJ⑦	BL/BT⑧⑩	BLH/BTH⑩	HBL
Page							7-20	7-21, 7-23	7-21, 7-23	7-19, 7-23	7-19, 7-23	7-23	7-28	7-28	7-28
Ratings	AC	Poles					1, 2	1, 2, 3	1, 2, 3	1, 2, 3⑤	2	2, 3	1,2,3	1,2,3	1,2,3
		Amperes					15-50	10-125②③	10-125②③	10-125②⑤	100-225	150-200	10-125	15-125	15-100
		Volts (50/60 Hz)			1 Pole		120/240	120/240	120/240	120/240	120/240	120/240	120/240	120/240	120/240
					2 Pole								120/240	120/240	120/240
					3 Pole		—	240	240	240	240	240	240	240	240
		Interrupt Rating Symmetrical RMS Amperes	UL		120V		10,000	10,000	22,000	65,000	—	—	10,000	22,000	65,000
					240V		10,000	10,000	22,000	65,000	100,000	10,000	10,000	22,000	65,000
					277V		—	—	—	—	—	—	—	—	—
					347V		—	—	—	—	—	—	—	—	—
					480/277V		—	—	—	—	—	—	—	—	—
					480V		—	—	—	—	—	—	—	—	—
					600/347V		—	—	—	—	—	—	—	—	—
					600V		—	—	—	—	—	—	—	—	—
			IEC 947-2 50/60Hz⑨	220/240V	2-Pole	I_{CU}	—	—	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—	—	—
					2, 3-Pole	I_{CU}	—	—	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—	—	—
				380/415V	2-Pole	I_{CU}	—	—	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—	—	—
					2, 3-Pole	I_{CU}	—	—	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—	—	—
				500V	2-Pole	I_{CU}	—	—	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—	—	—
					2, 3-Pole	I_{CU}	—	—	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—	—	—
	DC	125/250 V DC Interrupting Rating			2-Pole		—	—	—	—	—	—	—	—	—
					3-Pole		—	—	—	—	—	—	—	—	—
Dimensions in Inches		Height			10-50A		—	2.87	2.87	—	—	—	3.56	3.56	3.75
					10-60A		3.12	—	—	—	—	—	—	—	—
					55-125A		—	3.12	3.12	3.12	3.12	3⑦	3.75	3.75	3.75
		Width			1-Pole		1.00	1.00	1.00	1.00	—	—	1.00	1.00	1.00
					2-Pole		2.00	2.00①	2.00①	2.00	4.00①	⑦	2.00	2.00	2.00
					3-Pole		3.00	3.00	3.00	3.00	—	3.00⑦	3.00	3.00	3.00
		Depth					2.06	2.37	2.37	2.37	2.37	2.34	2.37	2.37	2.37
Overcurrent Devices		Thermal and Fixed magnetic Trip					√	√	√	√	√	√	√	√	√
		Thermal and Adjustable Magnetic trip					—	—	—	—	—	—	—	—	—
		Adjustable Magnetic trip only					—	—	—	—	—	—	—	—	—
		Motor Circuit Protector					—	—	—	—	—	—	—	—	—
		Molded Case Switch					—	√④	—	—	—	—	—	—	—
Accessories & Modifications		Undervoltage Trip					—	—	—	—	—	—	—	—	—
		Shunt Trip					—	√④	√④	√⑥	√⑥	—	√	√	√
		Auxilary Switch					—	—	—	—	√⑥	—	√	√	√
		Alarm Switch					—	—	—	—	—	—	—	—	—
		Mechanical Interlock					—	—	—	—	—	—	—	—	—
		Fungus Proofing (ref. page 7-167)					—	—	—	—	—	—	√	√	√
Individual Enclosures		Type 1 - Indoor Surface					√	√	√	√	√	—			
		Type 1 - Indoor, Flush					—	√	√	√	√	—			
		Type 3R - Outdoor-Rainproof					—	√	√	√	√	—			

Q3100

B120

B220H

B320HH

BT

For inches / millimeters conversion, see Application Data section.
For Plug-in Breakers, see Load Centers & Circuit Breakers section.

①Types QPP, QPPH, HQPP and HQPPH are special 2-pole configurations for metering equipment. Amperage range = 125–225A, width = 4 in.
②Single pole breakers available in ratings 10–70A only.
③125A, 2-pole 120/240V AC only.
④Not applicable to types QPP and QPPH.
⑤Single pole circuit breakers available in ratings 15-70A only, 125A available as a 2-pole only.
⑥Not applicable to type HQPP and HQPPH.
⑦Fits only Siemens EQIII load centers. Breaker is 2 or 3 poles wide.
⑧10A, 1-pole & 2-pole 120/240V AC only.
⑨Applicable for 15-30A breakers only.
⑩BT and BTH are only available in 15A and 20A with two 1-pole circuits in one inch of unit space. BT and BTH series breakers can be used in any Siemens panelboard in positions that accept BL or BLH series breakers. It is the installers responsibility to ensure that there is adequate neutral connections available in the panel before installing these breakers.

Thermal-Magnetic Trip Breakers

							Panelboard Breakers							
							BQD, BQD6①	**NGB NGB2②**	**HGB HGB2②**	**LGB LGB2②**	**3VA41 SEAB**	**3VA41 MEAB**	**3VA41 HEAB**
Page							**7-34**	**7-35**	**7-35**	**7-35**	**7-49, 7-50**	**7-49, 7-50**	**7-49, 7-50**
Ratings	AC	Poles					1,2,3	1,2,3	1,2,3	1,2,3	1, 2, 3	1, 2, 3	1, 2, 3
		Amperes					15-100	15-125	15-125	15-125	15-125	15-125	15-125
		Volts (50/60 Hz)			1 Pole		277	347	347	347	347	347	347
					2 Pole		480/277	600/347	600/347	600/347	600/347	600/347	600/347
					3 Pole		480/277	600/347	600/347	600/347	600/347	600/347	600/347
		Interrupt Rating Symmetrical RMS Amperes	UL		120V		65,000	—	—	—	—	—	—
					240V		65,000	100,000	100,000	100,000	65,000	85,000	150,000
					277V		14,000	25,000	35,000	65,000	25,000	35,000	65,000
					347V		10,000	14,000	14,000 22,000②	14,000 65,000②	14,000	18,000	25,000
					480/277V		14,000	25,000	35,000	65,000	25,000	35,000	65,000
					480V		—	— 25,000②	— 35,000②	— 65,000②	25,000	35,000	65,000
					600/347V		10,000	14,000	14,000 22,000②	14,000 25,000②	14,000	18,000	25,000
					600V		—	—	—	—	—	—	—
			IEC 947-2 50/ 60Hz	220/ 240V	2-Pole	I_{CU}	18,000	—	—	—	—	—	—
						I_{CS}	9,000	—	—	—	—	—	—
					2, 3-Pole	I_{CU}	65,000	—	—	—	—	—	—
						I_{CS}	33,000	—	—	—	—	—	—
				380/ 415V	2-Pole	I_{CU}	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—
					2, 3-Pole	I_{CU}	18,000	—	—	—	—	—	—
						I_{CS}	9,000	—	—	—	—	—	—
				500V	2-Pole	I_{CU}	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—
					2, 3-Pole	I_{CU}	—	—	—	—	—	—	—
						I_{CS}	—	—	—	—	—	—	—
	DC	125/250 V DC Interrupting Rating			2-Pole		14,000	14,000	14,000	14,000	—	—	—
					3-Pole		—	—	—	—	—	—	—
		125VDC Interrupting Rating			1-Pole		—	—	—	—	14,000	25,000	30,000
		250VDC Interrupting Rating			2-Pole		—	—	—	—	50,000	85,000	100,000
		250VDC Interrupting Rating			3-Pole		—	—	—	—	50,000	85,000	100,000
Dimensions in Inches		Height			10-50A		4.50	5.00 5.40②	5.00 5.40②	5.00 5.40②	—	—	—
					10-60A		—	—	—	—	—	—	—
					55-125A		4.50	5.00 5.40②	5.00 5.40②	5.00 5.40②	5.1	5.1	5.1
		Width			1-Pole		1.00	1.00	1.00	1.00	1.0	1.0	1.0
					2-Pole		2.00	2.00	2.00	2.00	2.0	2.0	2.0
					3-Pole		3.00	3.00	3.00	3.00	3.0	3.0	3.0
		Depth					2.69	2.71	2.71	2.71	3.6	3.6	3.6
Overcurrent Devices		Thermal and Fixed magnetic Trip					√	√	√	√	√	√	√
		Thermal and Adjustable Magnetic trip					—	—	—	—	—	—	—
		Adjustable Magnetic trip only					—	—	—	—	—	—	—
		Motor Circuit Protector					—	—	—	—	—	—	—
		Molded Case Switch					—	—	—	—	—	—	—
Accessories & Modifications		Undervoltage Trip					—	—	—	—	√	√	√
		Shunt Trip					√	√	√	√	√	√	√
		Auxilary Switch					√	√	√	√	√	√	√
		Alarm Switch					√	√	√	√	√	√	√
		Mechanical Interlock					—	—	—	—	√	√	√
		Fungus Proofing (ref. page 7-167)					√	√	√	√			
Individual Enclosures		Type 1 - Indoor Surface											
		Type 1 - Indoor, Flush											
		Type 3R - Outdoor-Rainproof											

3VA41 125A 1-Pole

For inches / millimeters conversion, see Application Data section.
For Plug-in Breakers, see Load Centers & Circuit Breakers section.

①BQD6 CSA certified 10,000A @ 600Y/347V 15–70A only.
②When two numbers are shown for the xGB/xGB2 column, the top rating is for xGB and the bottom rating for xGB2.

Thermal-Magnetic Trip Breakers

							General Purpose Breakers						
							BQ	BQH	HBQ	QR2	QRH2	HQR2	HQR2H
Page							7-40	7-40	7-40	7-42	7-42	7-42	7-42
Ratings	**AC**	Poles					1, 2, 3	1, 2, 3	1, 2, 3	2, 3	2, 3	2, 3	2, 3
		Amperes, Continuous		1-Pole			15–70	15–70	15–50	—	—	—	—
				2-Pole			15–125	15–100	15–70	100–250	100–250	100–250	100–250
				3-Pole			15–100	15–100	15–100	100–250	100–250	100–250	100–250
		Volts (50/60 Hertz)		1-Pole			120/240	120/240	120/240	—	—	—	—
				2-Pole			240	240	240	240	240	240	240
				3-Pole			240	240	240	240	240	240	240
		Interrupt Rating Symmetrical RMS Amperes	UL	120V			10,000	22,000	65,000	—	—	—	—
				240V			10,000	22,000	65,000	10,000	25,000	65,000	100,000
				480V			—	—	—	—	—	—	—
				600/347V			—	—	—	—	—	—	—
			IEC 947-2 50/ 60Hz	220/ 240V	1-Pole	I_{cu}	—	—	—	—	—	—	—
						I_{cs}	—	—	—	—	—	—	—
					2,3-Pole	I_{cu}	—	—	—	—	—	—	—
						I_{cs}	—	—	—	—	—	—	—
				380/ 415V	1-Pole	I_{cu}	—	—	—	—	—	—	—
						I_{cs}	—	—	—	—	—	—	—
					2,3-Pole	I_{cu}	—	—	—	—	—	—	—
						I_{cs}	—	—	—	—	—	—	—
				500V	1-Pole	I_{cu}	—	—	—	—	—	—	—
						I_{cs}	—	—	—	—	—	—	—
					2,3-Pole	I_{cu}	—	—	—	—	—	—	—
						I_{cs}	—	—	—	—	—	—	—
	DC	Volts — 2-Pole					—	—	—	—	—	—	—
		Interrupting Rating — DC Amperes					—	—	—	—	—	—	—
Dimensions in inches		Height		15–50A			3.75	3.75	4.00	—	—	—	—
				55–125A			4.00	4.00	4.00	—	—	—	—
				60–225A			—	—	—	7.00	7.00	7.00	7.00
		Width		1-Pole			1.00	1.00	1.00	—	—	—	—
				2-Pole			2.00	2.00	2.00	3.00	3.00	3.00	3.00
				3-Pole			3.00	3.00	3.00	4.50	4.50	4.50	4.50
		Depth					2.37	2.37	2.37	2.53	2.53	2.53	2.53
Overcurrent Devices		Thermal and Fixed Magnetic Trip					√	√	√	√	√	√	√
		Molded Case Switch					√	—	—	—	—	—	√③
Accessories and Modifications		Undervoltage Trip					—	—	—	—	—	—	—
		Shunt Trip					√	√	√	√	√	√	√
		Auxiliary Switch					√	√	√	√	√	√	√
		Alarm Switch					—	—	—	—	—	—	—
		Mechanical Interlock					—	—	—	√	√	√	√
		Fungus Proofing (ref. page 7-167)					√	√	√	√	√	√	√
Individual Enclosures		Type 1 — Indoor Surface					√	√	√	√	√	√	√
		Type 1 — Indoor, Flush					√	√	√	√	√	√	√
		Type 3R — Outdoor-Rainproof					√	√	√	√	√	√	√
		Type 5, 12 — Lint, Fine Dust, Oils, Coolants					—	—	—	—	—	—	—

BQ1B020

BQ1B020H

HB1B020

For inches / millimeters conversion, see Application Data section.

① CQD breakers are rated 14,000 KAIC at 480/277V.
② Type CQD6—CSA only.
③ 3-pole only.
④ Applicable for 15-30A breakers only.

Thermal-Magnetic Trip Breakers

							General Purpose Breakers			
							CQD	NGG	HGG	LGG
Page							7-44	7-45	7-45	7-45
Ratings	**AC**	Poles					1, 2, 3	1, 2, 3	1, 2, 3	1, 2, 3
		Amperes, Continuous		1-Pole			15–100	15–125	15–125	15–125
				2-Pole			15–100	15–125	15–125	15–125
				3-Pole			15–100	15-125	15–125	15–125
		Volts (50/60 Hertz)		1-Pole			277	347	347	347
				2-Pole			480/277	600/347	600/347	600/347
				3-Pole			480/277	600/347	600/347	600/347
		Interrupt Rating Symmetrical RMS Amperes	UL	120V			65,000	65,000	65,000	65,000
				240V			65,000	65,000	65,000	65,000
				480V			14,000①	25,000	35,000	65,000
				600/347V			10,000②	14,000	14,000	14,000
			IEC 947-2 50/ 60Hz	220/ 240V	1-Pole	Icu	18,000④	25,000	—	—
						Ics	9,000④	12,500	—	—
					2,3-Pole	Icu	65,000④	65,000	—	—
						Ics	32,500④	32,500	—	—
				380/ 415V	1-Pole	Icu	—	—	—	—
						Ics	—	—	—	—
					2,3-Pole	Icu	18,000④	25,000	—	—
						Ics	9,000④	12,500	—	—
				500V	1-Pole	Icu	—	—	—	—
						Ics	—	—	—	—
					2,3-Pole	Icu	—	—	—	—
						Ics	—	—	—	—
	DC	Volts — 2-Pole					125/250	125/250	125/250	125/250
		Interrupting Rating — DC Amperes					14,000	14,000	14,000	14,000
Dimensions in inches		Height		15–50A			4.50	5.40	5.40	5.40
				55–125A			4.50	5.40	5.40	5.40
				60–225A			—	—	—	—
		Width		1-Pole			1.00	1.00	1.00	1.00
				2-Pole			2.00	2.00	2.00	2.00
				3-Pole			3.00	3.00	3.00	3.00
		Depth					2.87	2.90	2.90	2.90
Overcurrent Devices		Thermal and Fixed Magnetic Trip					√	√	√	√
		Molded Case Switch					—	—	—	—
Accessories and Modifications		Undervoltage Trip					—	—	—	—
		Shunt Trip					√	√	√	√
		Auxiliary Switch					√	√	√	√
		Alarm Switch					√	√	√	√
		Mechanical Interlock					—	—	—	—
		Fungus Proofing (ref. page 7-167)					√	√	√	√
Individual Enclosures		Type 1 — Indoor Surface					—	√	√	√
		Type 1 — Indoor, Flush					—	√	√	√
		Type 3R — Outdoor-Rainproof					—	√	√	√
		Type 5, 12 — Lint, Fine Dust, Oils, Coolants					—	—	√	√

CQD120

LGG2B020L

For inches / millimeters conversion, see Application Data section.

① CQD breakers are rated 14,000 KAIC at 480/277V.
② Type CQD6—CSA only.
③ 3-pole only.
④ Applicable for 15-30A breakers only.






Type		3VA51	3VA51	3VA52	3VA53	3VA54	3VA55
Page		**7-51**	**7-51, 7-52, 7-53**	**7-59, 7-60, 7-61**	**7-67, 7-68**	**7-72**	**7-76**
Number of Poles		1	2, 3, 4	2 in 3-pole, 3, 4	2 in 3-pole, 3, 4	2 in 3-pole, 3, 4	3, 4
3VA5 molded case circuit breakers							
Size		125 A	125 A	250 A	400 A	600 A	800 A
Rated current I_n	A	15 … 125	15 … 125	100 … 250	200 … 400	400 … 600	600 … 800
Frequency	Hz	0 … 400	0 … 400	0 … 400	0 … 400	0 … 400	0 … 400
Electrical characteristics according to UL489							
Rated operational voltage 50/60 Hz AC	V	347	600	600	600	600	600
Electrical characteristics according to IEC 60947-2							
Rated operational voltage U_e 50/60 Hz AC	V	415	690	690	690	690	690
Rated insulation voltage U_i	V	500	800	800	800	800	800
Rated impulse withstand voltage U_{imp}	kV	8	8	8	8	8	8

Short-circuit breaking capacity according to UL 489 UL Breaker Type		Ⓢ SEAS	Ⓜ MEAS	Ⓗ HEAS	Ⓢ SEAS	Ⓜ MEAS	Ⓗ HEAS	Ⓜ MFAS	Ⓗ HFAS	Ⓒ CFAS	Ⓜ MJAS	Ⓗ HJAS	Ⓒ CJAS	Ⓜ MLAS	Ⓗ HLAS	Ⓒ CLAS	Ⓜ MMAS	Ⓗ HMAS	Ⓒ CMAS
120 V AC / 50/60 Hz	kA	65	85	150	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
240 V AC / 50/60 Hz	kA	—	—	—	65	85	100	85	100	200	85	100	200	85	100	200	85	100	200
277 V AC / 50/60 Hz	kA	25	35	50	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
347 V AC / 50/60 Hz	kA	14	18	18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
480 Y/277 V AC / 50/60 Hz	kA	—	—	—	25	35	65	35	65	100	35	65	100	35	65	100	35	65	100
480 V AC / 50/60 Hz	kA	—	—	—	25	35	65	35	65	100	35	65	100	35	65	100	35	65	100
600 Y/347 V AC / 50/60 Hz	kA	—	—	—	14	18	25	18	25	35	18	25	35	18	25	35	18	25	50
600 V AC / 50/60 Hz	kA	—	—	—	—	—	—	18	25	35	18	25	35	18	25	35	18	25	50
125 V DC	kA	14	25	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
250 V DC	kA	—	—	—	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
500 V DC	kA	—	—	—	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
600 V DC (3-pole only)	kA	—	—	—	—	—	—	50	85	100	50	85	100	50	85	100	50	85	100
750 V DC	kA	—	—	—	—	—	—	50	85	100	50	85	100	50	85	100	50	85	100
1000 V DC (4-pole only)	kA	—	—	—	—	—	—	50	85	100	6	6	10	6	6	10	18	25	50

Short-circuit breaking capacity according to IEC 60947-2		Ⓢ	Ⓜ	Ⓗ	Ⓢ	Ⓜ	Ⓗ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ
Rated ultimate short-circuit breaking capacity I_{cu} **Rated service short-circuit breaking capacity I_{cs}** rms value, according to IEC 60947-2																			
240 V AC / 50/60 Hz	kA	25/25	36/36	55/55	55/55	85/85	150/150	85/85	100/100	200/200	85/85	100/100	200/200	85/85	100/100	200/200	85	100	200
415 V AC / 50/60 Hz	kA	5/5	5/5	5/5	36/36	55/55	70/70	55/55	70/70	110/110	55/55	70/70	110/110	55/55	70/70	110/110	55	70	110
690 V AC / 50/60 Hz	kA	—	—	—	5/5	7/5	10/5	7/7	10/10	10/10	7/7	10/10	10/10	7/7	10/10	10/10	25	35	35
125 V DC	kA	14	25	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
250 V DC	kA	—	—	—	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
500 V DC	kA	—	—	—	50	85	100	50	85	100	50	85	100	50	85	100	50	85	100
750 V DC (3-pole only)	kA	—	—	—	—	—	—	50	85	100	50	85	100	50	85	100	50	85	100

— Not available

Applicable Standards:

- UL489 — Molded Case Circuit Breakers
- UL486A-UL486B — Wire connectors
- UL 489 / CSA C22.2 NO. 5-16 / NMX-J-266-ANCE-2016 — Molded Case Circuit Breakers, Molded Case Switches and Circuit Breaker Enclosures
- EN 60947-1 AMD 2 — Molded case circuit breakers
- EN 60947-2 AMD 2 2013
- EN 50581 2012 — RoHS compliant
- All 3VA breakers are HACR rated per UL






3VA57	3VA58	3VA59	3VA61	3VA62	3VA63
7-82	**7-86**	**7-90**	**7-55, 7-56**	**7-63, 7-64**	**7-69, 7-70**
2, 3	3	3	3, 4	3, 4	3, 4
1200A	1600A	2000A	150 A	250 A	400 A
800, 900, 1000, 1200	1400, 1600	1800, 2000	15 … 125	15 … 125	100 … 250
0 … 400	0 … 400	0 … 400	50/60 Hz	50/60 Hz	50/60 Hz
600	600	600	600	600	600
690	690	690	690	690	690
800	800	800	800	800	800
8	8	8	8	8	8

Ⓜ MNAS	Ⓗ HNAS	Ⓒ CNAS	Ⓜ MPAS	Ⓗ HPAS	Ⓒ CPAS	Ⓜ MRAS	Ⓗ HRAS	Ⓒ CRAS	Ⓜ MDAE	Ⓗ HDAE	Ⓒ CDAE	Ⓛ LDAE	Ⓔ EDAE	Ⓜ MFAE	Ⓗ HFAE	Ⓒ CFAE	Ⓛ LFAE	Ⓔ EFAE	Ⓜ MJAE	Ⓗ HJAE	Ⓒ CJAE	Ⓛ LJAE	Ⓔ EJAE
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
85	100	200	85	100	200	85	100	200	100	100	200	200	—	100	100	200	200	—	100	100	200	200	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
35	65	100	35	65	100	35	65	100	35	65	100	150	200	35	65	100	150	200	35	65	100	150	200
35	65	100	35	65	100	35	65	100	35	65	100	150	200	35	65	100	150	200	35	65	100	150	200
25	35	65	25	35	65	25	35	65	18	22	35	50	100	18	22	35	50	100	18	22	35	50	100
25	35	65	25	35	65	25	35	65	18	22	35	50	100	18	22	35	50	100	18	22	35	50	100
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	85	100	50	85	100	50	85	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	85	100	50	85	100	50	85	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
50	85	100	50	85	100	50	85	100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ	Ⓛ	Ⓔ	Ⓜ	Ⓗ	Ⓒ	Ⓛ	Ⓔ	Ⓜ	Ⓗ	Ⓒ	Ⓛ	Ⓔ
65/35	100/50	200/100	65/35	100/50	200/100	—	—	—	85/85	110/110	150/150	200/200	—	85/85	110/110	150/150	200/200	—	85/85	110/110	150/150	200/200	—
50/25	70/35	100/50	50/25	70/35	100/50	—	—	—	55/55	85/85	110/110	150/150	150/150	55/55	85/85	110/110	150/150	150/150	55/55	85/85	110/110	150/150	150/110
20/10	30/15	35/17	20/10	30/15	35/17	—	—	—	2.5/2.5	2.5/2.5	2.5/2.5	2.5/2.5	3/3	3/3	3/3	3/3	3/3	3/3	5/5	5/5	5/5	5/5	6/6
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	30	30	30	30	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

UL Type Structure

Position 1	Position 2		Position 3	Position 4
KAIC @ 480V	**Frame (max amps)**		**Family**	**Trip System / Special Application**
S = 25=low **M** = 35=med low **H** = 65=med **C** = 100=med high **L** = 150=high **E** = 200=extra high	**E** = 125A **D** = 150A **F** = 250A **J** = 400A **L** = 600A	**M** = 800A **MN** = 1000A **N** = 1200A **P** = 1600A **R** = 2000A	**A** = 3VA	**S** = Standard TMTU or MCS (Molded Case Switch) **E** = High End ETU **B** = Panelboard TMTU (Bolt-on) **M** = TMTU 50°C/NAVAL (UL 489 SB) **P** = TMTU MCP (Motor Circuit Protector) **R** = ETU MCP (Motor Circuit Protector)






Type		3VA64	3VA65	3VA66	3VA67	3VA68	3VA69
Page		**7-73, 7-74**	**7-77, 7-78**	**7-80, 7-81**	**7-83, 7-84**	**7-87, 7-88**	**7-91**
Number of Poles		3, 4	3, 4	3, 4	3	3	3
3VA molded case circuit breakers							
Size		600 A	800A	1000A	1200 A	1600 A	2000 A
Rated current I_n	A	200 … 400	600-800	1000	800, 1000, 1200	1600	2000
Frequency	Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Electrical characteristics according to UL489							
Rated operational voltage 50/60 Hz AC	V	600	600	600	600	600	600
Electrical characteristics according to IEC 60947-2							
Rated operational voltage U_e 50/60 Hz AC	V	690	690	690	690	690	690
Rated insulation voltage U_i	V	800	800	800	800	800	800
Rated impulse withstand voltage U_{imp}	kV	8	8	8	8	8	8

Short-circuit breaking capacity according to UL 489 UL Breaker Type		Ⓜ MLAE	Ⓗ HLAE	Ⓒ CLAE	Ⓛ LLAE	Ⓔ ELAE	Ⓜ MMAE	Ⓗ HMAE	Ⓒ CMAE	Ⓜ MMNAE	Ⓗ HMNAE	Ⓒ CMNAE	Ⓜ MNAE	Ⓗ HNAE	Ⓒ CNAE	Ⓜ MPAE	Ⓗ HPAE	Ⓒ CPAE	Ⓜ MRAE	Ⓗ HRAE	Ⓒ CRAE
120 V AC / 50/60 Hz	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
240 V AC / 50/60 Hz	kA	100	100	200	200	—	100	150	200	100	150	200	85	100	200	85	100	200	85	100	200
277 V AC / 50/60 Hz	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
347 V AC / 50/60 Hz	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
480 Y/277 V AC / 50/60 Hz	kA	35	65	100	150	200	35	65	100	35	65	100	—	—	—	—	—	—	—	—	—
480 V AC / 50/60 Hz	kA	35	65	100	150	200	35	65	100	35	65	100	35	65	100	35	65	100	35	65	100
600 Y/347 V AC / 50/60 Hz	kA	18	22	35	50	100	25	35	50	25	35	50	—	—	—	—	—	—	—	—	—
600 V AC / 50/60 Hz	kA	18	22	35	50	100	25	35	50	25	35	50	25	35	65	25	35	65	25	35	65
125 V DC	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
250 V DC	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
500 V DC	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
600 V DC (3-pole only)	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
750 V DC (4-pole only)	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1000 V DC (4-pole only)	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Short-circuit breaking capacity according to IEC 60947-2		Ⓜ	Ⓗ	Ⓒ	Ⓛ	Ⓔ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ	Ⓜ	Ⓗ	Ⓒ
Rated ultimate short-circuit breaking capacity I_{cu} **Rated service short-circuit breaking capacity I_{cs}** rms value, according to IEC 60947-2																					
240 V AC / 50/60 Hz	kA	85/85	110/110	150/150	200/200	—	85/85	110/110	200/150	85/85	110/110	200/150	65/35	100/50	200/100	65/35	100/50	200/100	—	—	—
415 V AC / 50/60 Hz	kA	55/55	85/85	110/110	150/150	150/110	55/55	85/85	110/85	55/55	85/85	110/85	50/25	70/35	100/50	50/25	70/35	100/50	—	—	—
690 V AC / 50/60 Hz	kA	6/6	6/6	6/6	6/6	6/6	25/19	35/19	35/19	25/19	35/19	35/19	20/10	30/15	35/17	20/10	30/15	35/17	—	—	—
125 V DC	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
250 V DC	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
500 V DC	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
750 V DC (3-pole only)	kA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

— Not available

Thermal-Magnetic Trip Breakers

						General Purpose Breakers									
						ED2	ED4	ED6	HED4	HHED6	CED6	FD6A, FXD6A	HFD6, HFXD6	HHFD6, HHFXD6	CFD6
Page						7-128	7-128	7-128	7-129	7-129	7-129	7-131	7-132	7-132	7-132
Ratings	**AC**	Poles				1, 2, 3	1, 2, 3	1④, 2, 3	1, 2, 3	3	2, 3	2, 3	2, 3	2, 3	3
		Amperes, Continuous				15–100	15–125	15–125⑦	15–125	15–50	15–125	70–250	70-250	70-250	70–250
		Volts 50/60HZ			1-Pole	120	277	347	277	—	—	—	—	—	—
					2-Pole	240	480	600	480	600	600	600	600	600	600
					3-Pole	240	480	600	480	600	600	600	600	600	600
		Interrupt Rating Symmetrical RMS Amperes	UL		120V	10,000	—	—	100,000	—	—	—	—	—	—
					240V	10,000	65,000	65,000	100,000⑤	100,000	200,000	65,000	100,000	200,000	200,000
					277V	—	22,000①	—	65,000②	—	—	—	—	—	—
					347V	—	—	30,000	—	—	—	—	—	—	—
					480V	—	18,000	25,000	42,000	65,000	200,000	35,000	65,000	100,000	200,000
					600V	—	—	18,000	—	18,000	100,000	22,000	25,000	25,000	100,000
			IEC 947-2 50/ 60HZ	220/240V	Icu	—		65,000⑧	—	—	—	65,000	100,000	—	—
					Ics	—	—	17,000⑧	—	—	—	33,000	50,000	—	—
				380/415V	Icu	—		35,000⑧	—	—	—	35,000	65,000	—	—
					Ics	—	—	9,000⑧	—	—	—	18,000	33,000	—	—
				500V	Icu	—	—	18,000⑧	—	—	—	—	—	—	—
					Ics	—	—	5,000⑧	—	—	—	—	—	—	—
	DC	2-Pole, 250V DC Interrupting Ratings				5,000	30,000	30,000	30,000	—	30,000	30,000	30,000	—	50,000
		3-Pole, 500V DC Interrupting Ratings③				—	—	18,000	—	—	50,000	18,000	25,000	—	50,000
Dimensions in inches		Height				6.34	6.34	6.34	6.34	6.58	9.26	9.50	9.50	14.12	14.12
		Width			1-Pole	1.00	1.00	1.00	1.00	—	—	—	—	—	—
					2-Pole	2.00	2.00	2.00	2.00	2.00	2.00	4.50	4.50	4.50	4.50
					3-Pole	3.00	3.00	3.00	3.00	3.00	3.00	4.50	4.50	4.50	4.50
					4-Pole	—	—	—	—	—	—	—	—	—	—
		Depth				4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Overcurrent Devices		Thermal and Fixed Magnetic Trip				√	√	√	√	√	√	—	—	—	—
		Thermal and Adjustable Magnetic Trip				—	—	—	—	—	—	√	√	√	√
		Adjustable Magnetic Trip only				—	—	√	—	—	√	√	—	—	√
		Motor Circuit Protector										√	—	—	√
		Molded Case Switch				√	√	√	—	—	√	√	—	—	√
Accessories and Modifications		Undervoltage Trip				√	√	√	√	√	√	√	√	√	√
		Shunt Trip				√	√	√	√	√	√	√	√	√	√
		Auxiliary Switch				√	√	√	√	√	√	√	√	√	√
		Alarm Switch				√	√	√	√	√	√	√	√	√	√
		Mechanical Interlock				—	—	—	—	—	—	√	√	√	√
		Rear Connection Studs				√	√	√	√	√	√	√	√	√	√
		Electric Motor Operator				√	√	√	√	√	√	√	√	√	√
		Plug-In Mounting Assembly (3 Pole Only)				√	√	√	√	√	√	√	√	√	√
		Fungus Proofing (ref. page 7-167)				√	√	√	√	√	√	√	√	√	√
Individual Enclosures		Type 1 — Indoor Surface				√	√	√	√	√	√	√	√	√	√
		Type 1 — Indoor, Flush				√	√	√	√	√	√	—	√	—	√
		Type 3R — Outdoor-Rainproof				√	√	√	√	√	√	√	√	√	√
		Type 7 — Flammable Gas Atmosphere				√	√	√	√	√	—	√	√	√	—
		Type 9 — Combustion Dusttight				√	√	√	√	√	—	√	√	√	—
		Type 5, 12 — Lint, Fine Dust, Oils, Coolants				√	√	√	√	√	√	√	√	√	√
		Type 12K — Semi-Dusttight				√	√	√	√	√	√	√	√	√	√

For inches / millimeters conversion, see Application Data section.

① 1-pole only.
② 35-100A: 25,000 AIR at 277V AC/15-30A: 65,000 AIR at 277V AC.
③ For DC UPS system application.
④ Single pole ED6 (15–30A) 30kA, (35–100A) 18 kA. CSA Only.
⑤ Single pole HED4, 15-30A: 65,000 AIR at 240V AC; single pole HED4, 35-100A: 25,000 AIR at 240V AC.
⑥ HGG and LGG breakers are rated at 600/347V.
⑦ ED6, 2-pole available 20-30 amps only.
⑧ Rating applicable only to 3-pole breakers

ED62B020

HED41B040

HHED63B020

Thermal-Magnetic Trip Breakers

						General Purpose Breakers								
						JXD2-A	JD6-A, JXD6-A	HJD6-A, HJXD6-A	HHJD6-A, HHJXD6-A	CJD6-A	LD6, LXD6	HLD6, HLXD6	HHLD6, HHLXD6	CLD6-A
Page						7-134	7-134	7-135	7-135	7-135	7-137	7-138	7-138	7-138
Ratings	**AC**	Poles				2, 3	2, 3	2, 3	2, 3	3	2, 3	2, 3	2, 3	3
		Amperes, Continuous				200-400	200-400	200-400	200-400	200-400	250-600	250-600	250-600	450-600
		Volts 50/60HZ			2-Pole 3-Pole	240	600	600	600	600	600	600	600	600
		Interrupt Rating Symmetrical RMS Amperes	UL		240V	65,000	65,000	100,000	200,000	200,000	65,000	100,000	200,000	200,000
					480V	—	35,000	65,000	100,000	150,000	35,000	65,000	100,000	150,000
					600V	—	25,000	35,000	50,000	100,000	25,000	35,000	50, 000	100,000
			IEC 947-2 50/60HZ①	220/ 240V	Icu	—	65,000	100,000	—	—	65,000	100,000	—	—
					Ics	—	33,000	50,000	—	—	33,000	50,000	—	—
				380/ 415V	Icu	—	40,000	65,000	—	—	40,000	65,000	—	—
					Ics	—	20,000	33,000	—	—	20,000	33,000	—	—
				500V	Icu	—	—	—	—	—	—	—	—	—
					Ics	—	—	—	—	—	—	—	—	—
	DC	2-Pole 250V DC Interrupting Ratings				30,000	30,000	30,000	—	—	30,000	30,000	—	—
		3-Pole, 500V DC Interrupting Ratings②				—	25,000	35,000	—	50,000	35,000	—	—	50, 000
Dimensions in inches		Height				11.00	11.00	11.00	11.00	17.86	11.00	11.00	11.00	17.86
		Width			2, 3-Pole	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
		Depth				4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Overcurrent Devices		Thermal and Fixed Magnetic Trip				—	—	—	—	—	—	—	—	—
		Thermal and Adjustable Magnetic Trip				√	√	√	√	√	√	√	√	√
		Adjustable Magnetic Trip Only Motor Circuit Protector				—	√	—	—	√	√	—	—	√
		Molded Case Switch				√	√	√	—	√	√	√	—	√
Accessories & Modifications		Undervoltage Trip				√	√	√	√	√	√	√	√	√
		Shunt Trip				√	√	√	√	√	√	√	√	√
		Auxiliary Switch				√	√	√	√	√	√	√	√	√
		Alarm Switch				√	√	√	√	√	√	√	√	√
		Mechanical Interlock				√	√	√	√	√	√	√	√	√
		Rear Connection Studs				√	√	√	√	√	√	√	√	√
		Electric Motor Operator				√	√	√	√	√	√	√	√	√
		Plug-In Mounting Assembly				√	√	√	√	√	√	√	√	√
		Fungus Proofing (ref. page 7-167)				—	√	√	√	√	√	√	√	√
Individual Enclosures		Type 1 — Indoor Surface				√	√	√	√	√	√	√	√	√
		Type 1 — Indoor, Flush				—	—	—	—	—	—	—	—	—
		Type 3R — Outdoor-Rainproof				√	√	√	√	√	√	√	√	√
		Type 7 — Flammable Gas Atmosphere				√	√	√	√	—	√	√	√	—
		Type 9 — Combustion Dusttight				√	√	√	√	—	√	√	√	—
		Type 5, 12 — Lint, Fine Dust, Oils, Coolants				√	√	√	√	√	√	√	√	√
		Type 12K — Semi-Dusttight				√	√	√	√	√	√	√	√	√

For inches / millimeters conversion, see Application Data section.

① Only applicable to non-interchangeable trip unit types: JXD6-A, HJXD6-A, LXD6 and HLXD6

② For DC UPS application.

Thermal-Magnetic Trip Breakers

						General Purpose Breakers						
						LMD6, LMXD6	HLMD6, HLMXD6	MD6, MXD6	HMD6, HMXD6	CMD6	ND6, NXD6	HND6, HNXD6
Page						7-140	7-141	7-143	7-144	7-144	7-146	7-147
Ratings	**AC**	Poles				2, 3	2, 3	2, 3	2, 3	3	2, 3	2, 3
		Amperes, Continuous				500-800	500-800	500-800	500-800	400-800	800-1200	800-1200
		Volts 50/60 HZ	2-Pole 3-Pole			600	600	600	600	600	600	600
		Interrupt Rating Symmetrical RMS Amperes	UL		240V	65,000	100,000	65,000	100,000	200,000	65,000	100,000
					480V	50,000	65,000	50,000	65,000	100,000	50,000	65,000
					600V	25,000	50,000	25,000	50,000	65,000	25,000	50,000
			IEC 947-2 50/60HZ③	220/240V	Icu	—	—	65,000	100,000	—	65,000	100,000
					Ics	—	—	33,000	50,000	—	33,000	50,000
				380/415V	Icu	—	—	40,000	65,000	—	40,000	65,000
					Ics	—	—	20,000	33,000	—	20,000	33,000
				500V	Icu	—	—	—	—	—	—	—
					Ics	—	—	—	—	—	—	—
	DC	2-Pole 250V DC Interrupting Ratings				30,000	30,000	30,000	30,000	30,000	30,000	30,000
		3-Pole, 500V DC Interrupting Ratings①				25,000	50,000	25,000	50,000	50,000	25,000	50,000
Dimensions in inches		Circuit breakers require Connect-all mounting block. Dims shown are for circuit breaker only.	Height			16.00	16.00	16.00	16.00	16.00	16.00	16.00
			Width			7.50	7.50	9.00	9.00	9.00	9.00	9.00
			Depth			4.59	4.59	6.19	6.19	6.19	6.19	6.19
Overcurrent Devices		Thermal and Adjustable Magnetic Trip				√	√	√	√	√	√	√
		Adjustable Magnetic Trip Only Motor Circuit Protector				√	—	√	—	√	—	—
		Molded Case Switch									√	—
Accessories and Modifications		Undervoltage Trip				√	—	√	—	√	√	√
		Shunt Trip				√	√	√	√	√	√	√
		Auxiliary Switch				√	√	√	√	√	√	√
		Alarm Switch				√	√	√	√	√	√	√
		Mechanical Interlock				√	√	√	√	√	√	√
		Rear Connections Studs				√	√	√	√	√	√	√
		Electric Motor Operator				√	√	√	√	√	√	√
		Plug-in Mounting Assembly				√	√	√	√	√	√	√
		Fungus Proofing (ref. page 7-167)				—	—	√	√	√	√	√
		Mounting Block (required)				—	—	—	—	—	—	—
Individual Enclosures		Type 1 — Indoor Surface				√	√	√	√	√	√	√
		Type 1 — Indoor, Flush				—	—	—	—	—	—	—
		Type 3R — Outdoor-Rainproof				√	√	√	√	√	√	√
		Type 7 — Flammable Gas Atmosphere				—	—	—	—	—	—	—
		Type 9 — Combustion Dusttight				—	—	—	—	—	—	—
		Type 5, 12 — Lint, Fine Dust, Oils, Coolants				—	—	—	—	—	—	—
		Type 12K — Semi-Dusttight				√	√	√	√	√	√	√

For inches / millimeters conversion, see Application Data section.

① For DC UPS application.

② Requires Connect-all mounting assembly. Dimensions shown are for circuit breaker only.

③ Only applicable to non-interchangeable trip unit types: NXD6, HNXD6, MXD6 and HMXD6

Thermal-Magnetic Trip Breakers

						General Purpose Breakers					
						CND6	PD6,② PXD6②	HPD6,② HPXD6②	CPD6②	RD6,① RXD6①	HRD6,① HRXD6①
Page						**7-147**	**7-149**	**7-149**	**7-149**	**7-152**	**7-152**
Ratings	**AC**	Poles				3	3	3	3	3	3
		Amperes, Continuous				800-1200	1200-1600	1200-1600	1200-1600	1600-2000	1600-2000
		Volts 50/60 HZ	2-Pole 3-Pole			600	600	600	600	600	600
		Interrupt Rating Symmetrical RMS Amperes	UL		240V	200,000	65,000	100,000	200,000	65,000	100,000
					480V	100,000	50,000	65,000	100,000	50,000	65,000
					600V	65,000	25,000	50,000	65,000	25,000	50,000
			IEC 947-2 50/60HZ③	220/240V	Icu	—	—	—	—	—	—
					Ics	—	—	—	—	—	—
				380/415V	Icu	—	—	—	—	—	—
					Ics	—	—	—	—	—	—
				500V	Icu	—	—	—	—	—	—
					Ics	—	—	—	—	—	—
	DC	2-Pole 250V DC Interrupting Ratings				30,000	30,000	30,000	30,000	30,000	30,000
		3-Pole, 500V DC Interrupting Ratings①				50,000	25,000	50,000	50,000	25,000	50,000
Dimensions in inches		Circuit breakers require Connect-all mounting block. Dims shown are for circuit breaker only.	Height			16.00	16.0	16.00	16.00	16.00	16.00
			Width			9.00	9.00	9.00	9.00	9.00	9.00
			Depth			6.19	6.19	6.19	6.19	6.19	6.19
Overcurrent Devices		Thermal and Adjustable Magnetic Trip				√	√	√	√	√	√
		Adjustable Magnetic Trip Only Motor Circuit Protector				—	—	—	—	—	—
		Molded Case Switch				√	√	—	—	√	—
Accessories and Modifications		Undervoltage Trip				√	√	√	√	√	√
		Shunt Trip				√	√	√	√	√	√
		Auxiliary Switch				√	√	√	√	√	√
		Alarm Switch				√	√	√	√	√	√
		Mechanical Interlock				√	√	√	√	√	√
		Rear Connections Studs				√	—	—	—	—	—
		Electric Motor Operator				√	√	√	√	√	√
		Plug-in Mounting Assembly				√	—	—	—	—	—
		Fungus Proofing (ref. page 7-167)				√	√	√	√	√	√
		Mounting Block (required)				—	√	√	√	√	√
Individual Enclosures		Type 1 — Indoor Surface				√	√	√	√	√	√
		Type 1 — Indoor, Flush				—	—	—	—	—	—
		Type 3R — Outdoor-Rainproof				√	—	—	—	—	—
		Type 7 — Flammable Gas Atmosphere				—	—	—	—	—	—
		Type 9 — Combustion Dusttight				—	—	—	—	—	—
		Type 5, 12 — Lint, Fine Dust, Oils, Coolants				—	—	—	—	—	—
		Type 12K — Semi-Dusttight				√	—	—	—	—	—

For inches / millimeters conversion, see Application Data section.

① Requires Connect-all mounting assembly. Dimensions shown are for circuit breaker only.

Reference Guide Notes

Arc-Fault Circuit Interrupters (AFCI)

AFCI's are designed to detect arcing faults (an unintentional arcing condition in a circuit) and mitigate the effects by functioning to de-energize the circuit when an arc-fault is detected.

Combination Type AFCI

Detects all three possible types of arc faults: line-to-ground, line-to-neutral and series arcs.

Breaker Type	Amp Rating	10,000 A IR Catalog No.	22,000 A IR Catalog No.	65,000 A IR Catalog No.
QAF2/QAFH2/HQAF2 **1-Pole 120V AC**	15 20	**QA115AFC** **QA120AFC**	**QA115AFCH** **QA120AFCH**	**QA115AFCHH■** **QA120AFCHH■**
QAF/QAFH **2-Pole 120/240V AC**	15 20	**Q215AFC** **Q220AFC**	**Q215AFCH■** **Q220AFCH■**	— —
QTA **Tandem 120V AC**	15/15 20/20	**Q1515AFC** **Q2020AFC**	— —	— —
QAF2N **Plug-on Neutral / 1-Pole 120V AC**	15 20	**QA115AFCN** **QA120AFCN**	— —	— —
QAFN **Plug-on Neutral / 2-Pole 120/240V AC**	15 20	**Q215AFCN** **Q220AFCN**	— —	— —
QTAN **Plug-on Neutral / Tandem 120V AC**	15/15 20/20	**Q1515AFCN** **Q2020AFCN**	— —	— —

Dual Function (AFCI/GFCI)

The Dual Function Circuit Breaker combines Combination Type AFCI and 5mA Class A GFCI protection in one device.

QFGA2/QFGAH2/HQFGA2 **1-Pole 120V AC**	15 20	**Q115DF** **Q120DF**	**Q115DFH** **Q120DFH**	**Q115DFHH■** **Q120DFHH■**
QFGA2N **Plug-on Neutral / 1-Pole 120V AC**	15 20	**Q115DFN** **Q120DFN**	— —	— —

Ground-Fault Circuit Interrupters (GFCI)

Class A (5mA) Ground Fault Protection Intended for personnel protection.

Breaker Type	Amp Rating	10kAIC Catalog No.	22kAIC Catalog No.	65kAIC Catalog No.
QPF2/QPHF2/HQPF2 1-Pole 120V AC	15 20 30	**QF115A** **QF120A** **QF130A**	**QF115AH** **QF120AH** **QF130AH**	**QF115AHH■** **QF120AHH■** **QF130AHH■**
QPF2N 1-Pole 120V AC Plug-On Neutral	15 20 30	**QF115AN** **QF120AN** **QF130AN**	— — —	— — —
QPFB/QPHFB/HQPFB 2-Pole 120/240V AC	15 20 25 30	**Q215GF** **Q220GF** **Q225GF** **Q230GF**	**Q215GFH■** **Q220GFH■** — **Q230GFH■**	**Q215GFHH■** **Q220GFHH■** — **Q230GFHH■**
QPF/QPHF 2-Pole 120/240V AC	35 40 45 50 60	**QF235A** **QF240A** **QF245A** **QF250A** **QF260A**	— **QF240AH■** — **QF250AH■** **QF260AH■**	— — — — —
QPFBN 2-Pole 120/240V AC Plug-On Neutral	15 20 30	**Q215GFN** **Q220GFN** **Q230GFN**	— — —	— — —

Ground-Fault Equipment Protection (30mA) Intended for equipment protection.

QE2/QEH2/HQE2 1-Pole 120V AC	15 20 30	**QE115** **QE120** **QE130**	— — —	— — —
QEB/QEHB/HQEB 2-Pole 120/240V AC	15 20 30	**Q215EG** **Q220EG** **Q230EG**	**Q215EGH** **Q220EGH** **Q230EGH**	**Q215EGHH■** **Q220EGHH■** **Q230EGHH■**
QE/QEH 2-Pole 120/240V AC	40 50 60	**QE240** **QE250** **QE260**	**QE240H** **QE250H** **QE260H**	— — —

■ Built to order. Allow 8 -10 weeks for delivery.


1-Pole Combination Type AFCI


2-Pole Combination Type AFCI


1-Pole Dual Function AFCI/GFC


1-pole Tandem Type AFCI


1-Pole AFCI Plug-on Neutral


1-Pole Dual Function Plug-on Neutral


1-Pole GFCI


2-Pole GFCI


1-Pole Equipment Protection


2-Pole Equipment Protection

Accessories

Description	Catalog No.
Padlocking Device 1-Pole	**ECPLD1**
Padlocking Device 2-Pole	**ECPLD2**
Handle Block	**ECBX231M**

Continuous Current Rating @ 40° C	Type QP① 10,000A IR Catalog Number	Type QPH 22,000A IR Catalog Number	Type HQP 65,000A IR Catalog Number
1-Pole Plug-In (120/240V AC)②			
10	Q110③	—	—
15	Q115④	Q115H④	Q115HH■④
20	Q120④	Q120H④	Q120HH■④
25	Q125	Q125H■	Q125HH■
30	Q130	Q130H	Q130HH■
35	Q135■	Q135H■	Q135HH■
40	Q140	Q140H	Q140HH■
45	Q145■	Q145H■	Q145HH■
50	Q150	Q150H	Q150HH■
60	Q160	Q160H■	Q160HH■
70	Q170	Q170H■	Q170HH■
2-Pole Plug-In (Common-Trip 120/240V AC)⑤			
10	Q210③	—	—
15	Q215	Q215H	Q215HH
20	Q220	Q220H	Q220HH
25	Q225	Q225H■	Q225HH■
30	Q230	Q230H	Q230HH
35	Q235	Q235H■	Q235HH■
40	Q240	Q240H	Q240HH■
45	Q245	Q245H■	Q245HH■
50	Q250	Q250H	Q250HH
60	Q260	Q260H	Q260HH
70	Q270	Q270H	Q270HH
80	Q280	Q280H■	Q280HH■
90	Q290	Q290H	Q290HH■
100	Q2100	Q2100H	Q2100HH
110	Q2110	Q2110H	Q2110HH■
125	Q2125	Q2125H	Q2125HH
2-Pole Plug-In (Common-Trip 240V AC)⑤⑥			
15	Q215R	—	—
20	Q220R	—	—
30	Q230R	—	—
40	Q240R	—	—
50	Q250R	—	—
3-Pole Plug-In (Common-Trip 240V AC)⑦			
15	Q315	Q315H	Q315HH■
20	Q320	Q320H	Q320HH
25	Q325	Q325H■	Q325HH■
30	Q330	Q330H	Q330HH
35	Q335	Q335H■	Q335HH■
40	Q340	Q340H	Q340HH
45	Q345	Q345H■	Q345HH■
50	Q350	Q350H	Q350HH
60	Q360	Q360H	Q360HH
70	Q370	Q370H	Q370HH■
80	Q380	Q380H	Q380HH■
90	Q390	Q390H	Q390HH■
100	Q3100	Q3100H	Q3100HH

Q120

Q220

Q320

QP / QPH / HQP Internal Accessories

Control Voltage AC	Catalog Number	Field/Factory Installed
120V Shunt Trip	add suffix ...00S01■	Factory
24V Shunt Trip	add suffix ...00S07■	Factory
120V Auxiliary Switch	add suffix ...01■⑧	Factory

For external accessories, please refer to page 7-169

■ Built to order. Allow 2-3 weeks for delivery.

① UL Listed for use with 60/75° wire through 40 amps, UL listed for use with 75° wire only for 50 amps and above, HACR rated.
② Shipped 12 per sleeve.
③ Type QP1, UL listed for 16 AWG conductors and multiple wires.
④ UL Listed for use on 3-phase grounded "B" systems — 10,000 for this application.
⑤ Shipped 6 per sleeve.
⑥ UL Listed for frequent switching applications (SWD). 120V AC Fluorescent Lighting.
⑦ Shipped 4 per sleeve.
⑧ 1A and 1B contacts.

Duplex Circuit Breakers

Breaker Type	Ampere Rating	Catalog Number	Catalog Number
QT **1-Pole** **10K AIC** **120V AC**	15–15	**Q1515**	**Q1515NC**①
	15–20	**Q1520**	**Q1520NC**①
	20–20	**Q2020**	**Q2020NC**①
	20–30	**Q2030**	—
	30–15■	**Q3015**	—
	30–20	**Q3020**	—
	30–30	**Q3030**	**Q3030NC**①
	SHIPPING: 12 per carton, (Wt. 4.8 lbs.)		

Triplex Circuit Breakers

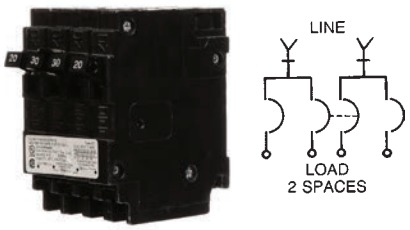
Breaker Type	Ampere Rating		Catalog Number
	Single Pole	Common-Trip 2-Pole	
QT **2-Pole** **10K AIC** **120/240V AC** **Inner Poles** **Common Trip**	15	15	**Q21515CT**
	15	20	**Q21520CT**
	15	25	**Q21525CT**■
	15	30	**Q21530CT**
	15	35	**Q21535CT**■
	15	40	**Q21540CT**
	15	45	**Q21545CT**■
	15	50	**Q21550CT**
	20	20	**Q22020CT**
	20	25	**Q22025CT**■
	20	30	**Q22030CT**
	20	35	**Q22035CT**■
	20	40	**Q22040CT**
	20	45	**Q22045CT**■
	20	50	**Q22050CT**
	30	30	**Q23030CT**
	SHIPPING: 6 per carton, (Wt. 4.9 lbs.)		

Quadplex Circuit Breakers

Breaker Type	Ampere Rating		Catalog Number
	Common-Trip 2-Pole Outside	Common-Trip 2-Pole Inside	
QT **2-Pole** **10K AIC** **120/240V AC** **Inner and** **Outter 2 Poles** **Common Trip**	15	15	**Q21515CT2**
	15	30	**Q21530CT2**
	20	20	**Q22020CT2**
	20	50	**Q22050CT2**
	30	20	**Q23020CT2**
	30	25	**Q23025CT2**
	30	30	**Q23030CT2**
	30	40	**Q23040CT2**
	30	50	**Q23050CT2**
	40	20	**Q24020CT2**
	40	30	**Q24030CT2**
	40	40	**Q24040CT2**
	SHIPPING: 6 per carton, (Wt. 4.8 lbs.)		

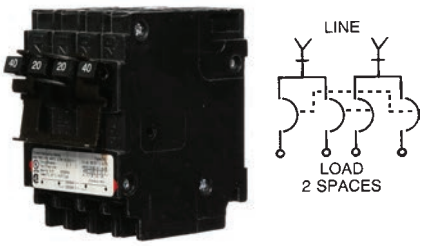
QT Duplex

These space saver duplex breakers combine two independent 1/2" breaker poles in a common unit. This unit plugs into one load center stab and requires one panel space. HACR rated.



QT Triplex

These space saver triplex breakers provide a 2-pole common trip breaker for 120/240V AC circuits and two single poles for 120V AC circuits. Triplex require two panel spaces. HACR rated.



QT Quadplex

These space saver quadplex breakers provide two sets of common trip, two-pole breakers for 120/240V AC circuits, and require two panel spaces. HACR rated.

For external accessories, please refer to page 7-169

For inches / millimeters conversion, see Application Data section.

■ Built to order. Allow 2–3 weeks for delivery.

① Non-CTL. For replacement use only in panels manufactured before 1968

HID Lighting

For high-intensity discharge lamp loads having in-rush currents above the instantaneous trip setting of a standard breaker.

Breaker Type	Wiring Diagram	Complete Breaker UL Unenclosed	
		Ampere Rating	Catalog Number
QP 1-Pole 120V AC	Figure 1	15	Q115HID①■
		20	Q120HID①
		30	Q130HID
QP 2-Pole 120/240V AC	Figure 2	15	Q215HID
		20	Q220HID■
		30	Q230HID■

Molded Case Switch

For applications that do not require overcurrent protection.

QP 1-Pole 120V AC	Figure 1	100	Q1100S
QP 2-Pole 120/240V AC	Figure 2	30 50 60 125	Q230S Q250S Q260S Q2125S

No-Noise

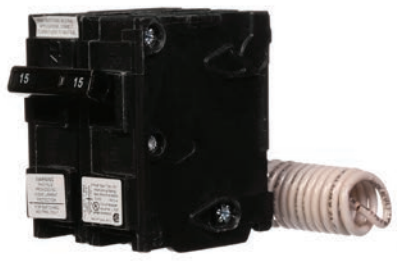
For applications that require a reduction in the 60-cycle hum of a standard breaker.

QP 2-Pole 120/240V AC	Figure 2	50 60	Q250NN■ Q260NN

Switching Neutrals

Used where all conductors are required to be disconnected. Neutral pole of the circuit breaker does not connect to load center bus. One side is wired to neutral and the other side to the device.

QG 2-Wire Common Trip 120V AC	Figure 3	15 20	QG215 QG220
QG 3-Wire Common Trip 120/240V AC	Figure 4	20	QG320



Switching Neutral

Figure 1

Figure 2

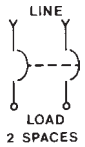


Figure 3

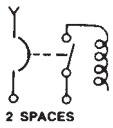
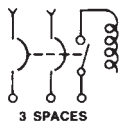


Figure 4



Wiring Diagrams

■ Built to order. Allow 2–3 weeks for delivery.
Note: All circuit breakers on this page are 10K AIC

① UL Listed as SWD (Switching Duty) Rated, suitable for 120V AC Fluorescent Lighting.

Features

- 3/4" format
- HACR Rated
- UL Classified for use in certain Square D load centers

Type QD Circuit Breakers

The Type QD circuit breaker line is available in 1-pole and 2-pole common trip versions listed on this page.

The circuit breakers are UL Classified and UL Listed.

All QD breakers are supplied with load side connectors suitable for 60/75°C wire and are calibrated for 40°C maximum ambient applications.

UL Classified

Siemens Type QD circuit breakers are UL Classified for use in specific Square D load centers in place of Square D Type QO® circuit breakers. A Panelboard Compatibility List packaged with each QD breaker shows which type QD circuit breakers are acceptable for use in Square D load centers.

The interrupting rating on these circuit breakers is 10,000A IR maximum and they are ***not*** series rated with Square D circuit breakers or equipment. This UL Classification allows a Siemens Type QD circuit breaker to be used in place of a Square D Type QO circuit breaker in those load centers that are specifically shown on the Panelboard Compatibility list. For additional information, contact your local Siemens sales engineer.

D120

D220

Continuous Current Rating @ 40°C	1-Pole 120V Catalog Number	2-Pole 120/240V Common Trip Catalog Number
15	D115①	D215
20	D120①	D220
30	D130	D230
40	D140	D240
50	D150	D250
60	D160	D260

Shipping Weights

Number of Poles	Number Per Carton	Shipping Weight (lbs.)
1	16	3.8
2	8	4.2

Panelboard Compatibility List

Listed Panelboards—Square D—Catalog Numbers

QO2L30F/S	QO12M100/RB	QO120-30M150/RB	QO130-40M200
QO2-4L70F/S	QO16-20M100/RB	QO124L150G	QO130M200/RB
QO2-4L70TS	QO16M100/RB	QO124M150	QO130-40L200G/RB
QO2-4L70RB	QO20M100/RB	QO130L150G/RB	QO140M200/RB
QO6-12L100F/S	QO112L125G/RB	QO130M150/RB	QO16L200/RB
QO6-12L100DF/S	QO112-24L125G/RB	QO16L150/RB	QO16M200/RB
QO6-12L100TF/S	QO112-24L125GWGC	QO16M150/RB	QO18-16M200FTRB
QO6-12L100DTF/S	QO116L125G	QO16-30L150/RB	QO20-40L200/RB
QO6-12L100RB	QO116-24L125G/RB	QO18-16M150FTRB	QO20-40M200TF/S
QO8-16L100F/S	QO12-24L125/RB	QO20-30M150/RB	QO20-40M200/RB
QO8-16L100DF/S	QO120-24L125G	QO20-30M150TF/S	QO24L200/RB
QO8-16L100TF/S	QO120-24L125GWGC	QO20-30L150	QO24M200/RB
QO8-16L100DTF/S	QO120L125G	QO24L150/RB	QO30L200/RB
QO8-16L100RB	QO124L125G/RB	QO24M150/RB	QO30M200/RB
QO112M100/RB	QO124M125/RB	QO30L150/RB	QO30-40L200/RB
QO116M100/RB	QO16L125/RB	QO30M150/RB	QO30-40M200/RB
QO120M100/RB	QO16-12M125FTRB	QO8-16M200FT/RB	QO40M200/RB
QO124M100	QO16-24L125/RB	QO112L200G/RB	QO140M225
QO12L100DF/S	QO20L125/RB	QO120-40M200/RB	QO142L225G/RB
QO12L100RB	QO20-24L125/RB	QO120-40M200TC	
QO12-20M100/RB	QO24L125/RB	QO124M200	
QO12-20M100TF/S	QO120-30L150G	QO130L200G/RB	

For inches / millimeters conversion, see Application Data section.

① UL Listed for frequent switching applications (SWD). 120V AC Fluorescent Lighting. One or two load conductors.

Breaker Type	Ampere Rating	Catalog Number	Catalog Number	UL Interrupting Ratings (kA)
QN 2-Pole 120/240V AC	150	QN2150	QN2150R②	10
	175	QN2175■	QN2175R②■	10
	200	QN2200	QN2200R②	10
	225	QN2225	QN2225R②	10
QNH 2-Pole 120/240V AC	150	QN2150H	QN2150RH②	22
	175	QN2175H■	QN2175RH②■	22
	200	QN2200H	QN2200RH②	22
	225	QN2225H	QN2225RH②	22
HQN 2-Pole 120/240V AC	150	HQN2150	HQN2150R②	65
	175	HQN2175■	—	65
	200	HQN2200	HQN2200R②	65
	225	HQN2225	HQN2225R②	65

Requires 4 panel spaces, 2 adjacent and 2 opposite. **SHIPPING:** 1 per carton (Wt. 3 lbs.)

QN⑤ **QNR**⑤

Main Breaker Kits

For use in PL, ES, and Ult Load Centers④			For use in EQIII Load Centers			
UL Type	Ampere Rating	Catalog Number	UL Type	Ampere Rating	Catalog Number	UL Interrupting Ratings (kA)
EQ8681	100	MBK100A	EQ9675	100	MBK100	22
EQ8682	125	MBK125A	EQ9677	125	MBK125	22
EQ8693	150	MBK150A	EQ9683	150	MBK150	22
—	—	—	EQ9684	175	MBK175■	22
EQ8695	200	MBK200A	EQ9685	200	MBK200	22
EQ8696	225	MBK225A	EQ9686	225	MBK225	22

EQ9675

Breaker Type	Ampere Rating	Catalog Number	UL Interrupting Ratings (kA)
QPJ③ 3-Pole 240V AC	125	QPJ3125	10
	150	QPJ3150	10
	200	QPJ3200	10

Requires 6 spaces due to cross over design. Fits only EQIII 125-400A 3-phase load centers
SHIPPING: 5 per carton (Wt. 17 lbs.)

MBK (100,125)A **MBK** (150,200,225)A

Breaker Type	Ampere Rating	Catalog Number	UL Interrupting Breaker Ratings (kA) Volts AC 120/240
QPP 2-Pole 120/240V AC	125	Q2125B	10
	150	Q2150B	10
	175	Q2175B■	10
	200	Q2200B	10
	225	Q2225B	10
QPPH 2-Pole 120/240V AC	125	Q2125BH	22
	150	Q2150BH	22
	175	Q2175BH■	22
	200	Q2200BH	22
	225	Q2225BH■	22
HQPH 2-Pole, 120/240V AC	100	HQ2100H	100
	125	HQ2125H	100
HQPP 2-Pole 120/240V AC	125	Obsolete	
	150		
	175		
	200		
	225		
HQPPH 2-Pole 120/240V AC	100	Obsolete	
	125		
	150		
	175		
	200		
	225		

QPJ

2-Pole **QPP**

For inches / millimeters conversion, see Application Data section.
■ Built to order. Allow 2–3 weeks for delivery.

① All circuit breakers on this page are common trip.
② Reverse handle.
③ CSA Listed.
④ MBK100A for use in 100 and 125A load centers.
MBK125A for use in 125A load centers.
MBK150A for use in 150, 200 and 225A load centers.
MBK200A for use in 200 and 225A load centers.
MBK225A for use in 225A load centers.
MBK175A for use in 200 and 225A load centers.
⑤ QNR required for horizontal applications or vertical applications where the lugs are facing up. The QN breaker is required for vertical applications where the lugs are facing down as shown.

QS Breaker[1]

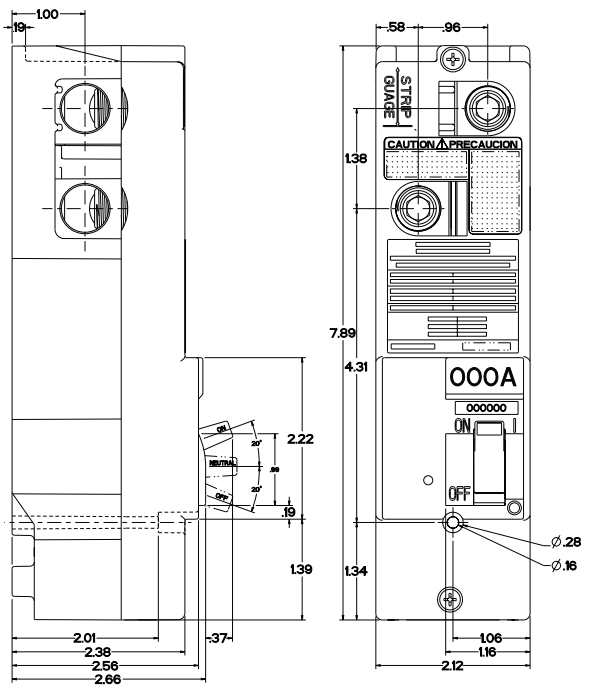
PowerMod's core offering of residential Meter Stacks, type WMM, offers the widest product offering & flexibility in the industry. Each meter stack houses the QuickSystem features to maximize productivity and minimize labor costs. To further simplify installation, our 225 Amp meter stacks feature the QS breaker. The QS breaker adds to the Siemens exclusive feature set in our Power Mod product line. Benefits and part numbers include:

- An exclusive side wired design saves wiring space and eliminates difficult "S bends"
- No need for costly filler plates — QS 225 Amp breaker takes the same space as standard 100 Amp QPs
- Single right hand bend wiring - saves time and wire
- Provides 100K AIC flexibility from 100 up to 225 Amps
- 10K to 100K AIC Series Rating

QS Breaker

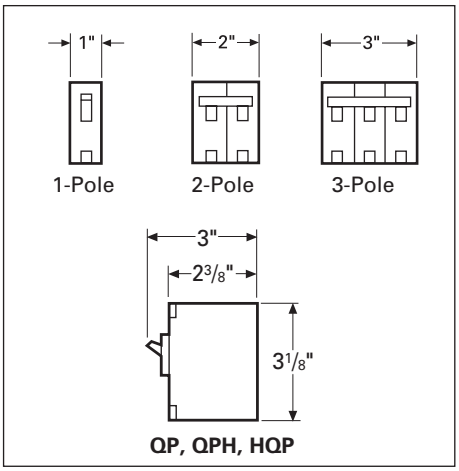
Breaker Type	QS	QSH	QSHH	HQS	HQSH
Amperage	10K AIC	22K AIC	42K AIC	65K AIC	100K AIC
100	QS2100	QS2100H	QSH2100	QS2100HH	HQS2100H
110	QS2110	QS2110H	QSH2110	QS2110HH	HQS2110H
125	QS2125	QS2125H	QSH2125	QS2125HH	HQS2125H
150	QS2150	QS2150H	QSH2150	QS2150HH	HQS2150H
175	QS2175	QS2175H	QSH2175	QS2175HH	HQS2175H
200	QS2200	QS2200H	QSH2200	QS2200HH	HQS2200H
225	QS2225	QS2225H	QSH2225	QS2225HH	HQS2225H

QS Breaker Dimension Drawing

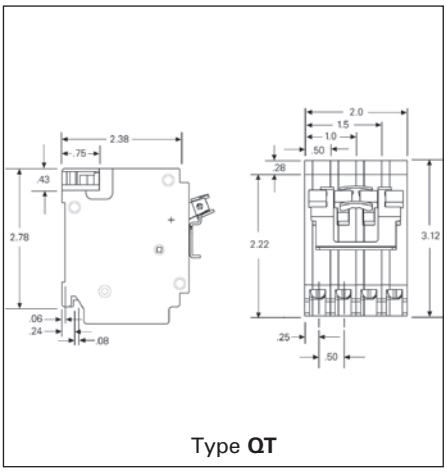


Front View

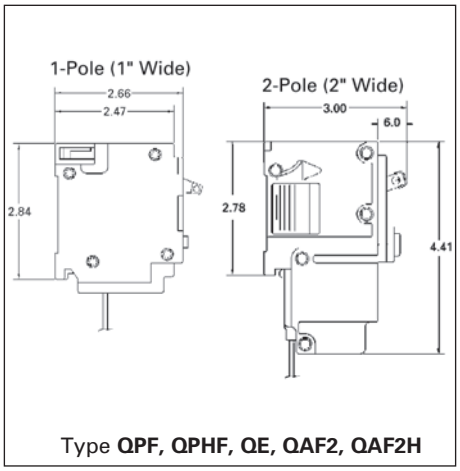
[1] For PowerMod information, please refer to Section 2, page 2-49



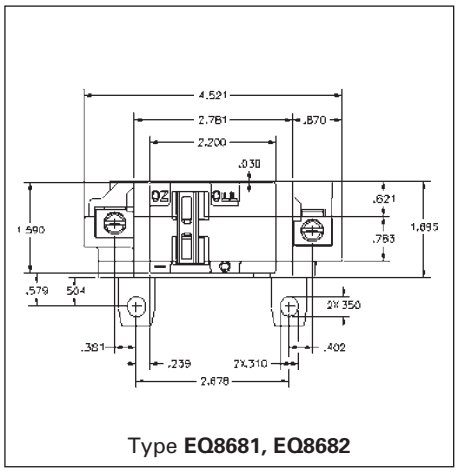
QP, QPH, HQP



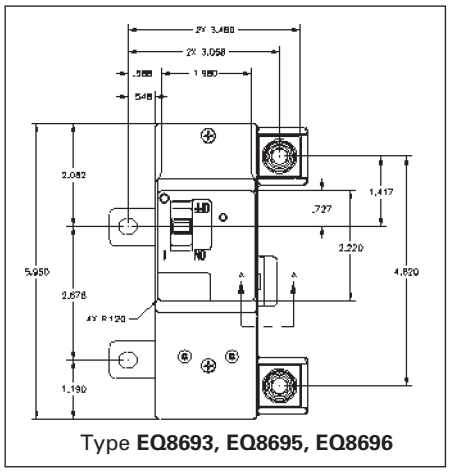
Type **QT**



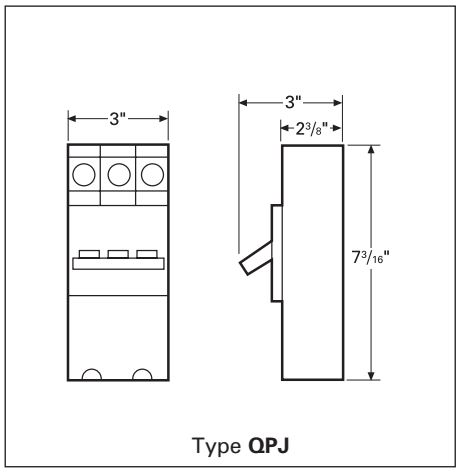
Type **QPF, QPHF, QE, QAF2, QAF2H**



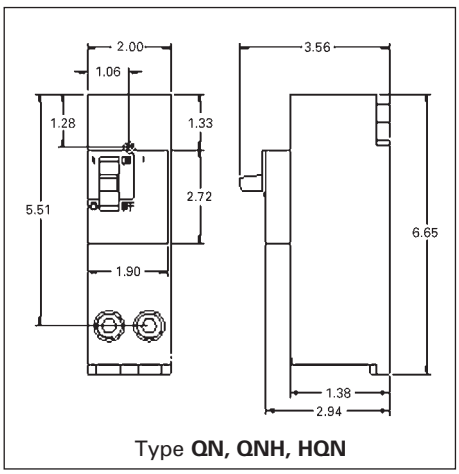
Type **EQ8681, EQ8682**



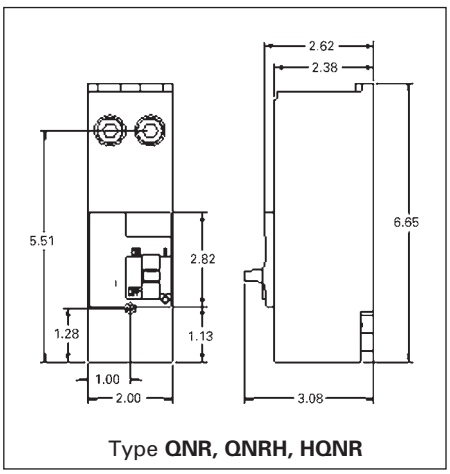
Type **EQ8693, EQ8695, EQ8696**



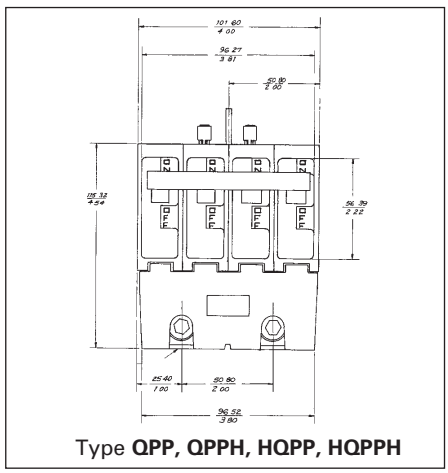
Type **QPJ**



Type **QN, QNH, HQN**



Type **QNR, QNRH, HQNR**



Type **QPP, QPPH, HQPP, HQPPH**

① All standard circuit breakers are calibrated to 40°C maximum ambient application.

Circuit Breaker Type	Circuit Breaker Ampere Rating	Cables Per Connector	Connector Wire Range
	LOAD SIDE		
QP, QPH, HQP, Plug-in	10	1 or 2	#14-#16 AWG Cu
	15–35	1 1	#14–#6 AWG Cu #14–#6 AWG Al
	40–50	1 1	#8–#6 AWG Cu #8–#4 AWG Al
	55-125	1 1	#8-#2/0 AWG Cu #8-#2/0 AWG Al
QP 1 & 2-Pole Only	55-60	1	#6-#4 AWG Cu-Al (#3 AWG compatible with QPH & HQP)
QT	15–35	1 1	#14–#6 AWG Cu #14–#6 AWG Al
	40	1	#8 AWG CU-Al
	40–50 Exception: 1 & 2-pole QP at 55-60	1 1	#8–#6 AWG Cu #8–#4 AWG Al
QPF, QPHF	15–30	1 1	#14–#10 AWG Cu #12–#8 AWG Al
	40–60	1 1	#8–#6 AWG Cu #8–#4 AWG Al
QAF2, QAFH2, QFGA2, QFGAH2	15–20	1 1	#14–#12 AWG Cu #12–#10 AWG Al
QD	15–20	2	#14–#10 AWG Cu Only
	15–20	1 1	#14–#12 AWG Cu #12–#10 AWG Al
	25–35	1 1	#10–#8 AWG Cu #10–#6 AWG Al
	40–60	1 1	#8–#6 AWG Cu #8–#4 AWG Al
QN, QNH, HQN	150-225	1	#1–300kcmil Cu-Al
QS, QSH, QSHH, HQS, HQSH	100–225	1	#3–300kcmil Cu-Al
EQ8681-Ultimate, PL, ES	100	1	#4–3/0 AWG Cu-Al
EQ8682-Ultimate, PL, ES	125	1	#4–3/0 AWG Cu-Al
EQ8693-Ultimate, PL, ES	150	1	#1–300kcmil Cu-Al
EQ8695-Ultimate, PL, ES	200	1	#1–300kcmil Cu-Al
EQ8696-Ultimate, PL, ES	225	1	#1–300kcmil Cu-Al
QPP, QPPH, HQPP, HQPPH	125	1 1	#1 AWG Cu #2/0 AWG Al
	150	1 1	#1/0 AWG Cu #3/0 AWG Al
	175	1 1	#2/0 AWG Cu #4/0 AWG Al
	200	1 1	#3/0 AWG Cu 250kcmil AWG Al
	225	1 1	#4/0 AWG Cu 300kcmil AWG Al
EQ9675-EQIII	100	1 1	#8-#2/0 AWG Cu #8-#2/0 AWG Al
EQ9677-EQIII	125	1 1	#8-#2/0 AWG Cu #8-#2/0 AWG Al
EQ9683-EQIII	150	1 1	#1/0 AWG Cu #3/0 AWG Al
EQ9684	175	1 1	#3/0 AWG Cu 250kcmil AWG Al
EQ9685-EQIII	200	1 1	#2/0 AWG Cu #4/0 AWG Al
EQ9686-EQIII	225	1 1	#4/0 AWG Cu 300kcmil AWG Al
QPJ	125–200	1	#2–300kcmil Cu-Al

Features

- 2 inch wide plug-on design
  - — Includes (2) 1 Pole circuits breakers
  - — No loss of load center spaces
- Easy to install and perfect for retrofit
- LEDs provide protection status
- Warranty: 2 years, $20k

Benefits

By installing a Siemens Circuit Breaker and Surge Protective Device (SPD) in the load center of the residence, surge protection is provided for all branch circuits①.

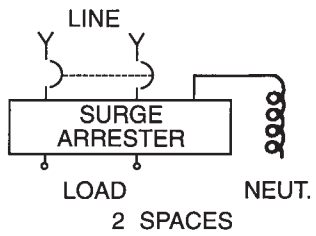
Two green LED indicator lights are provided to show that surge protection is provided for all circuits connected to the load center. These breakers should be used for circuit protection of frequently used household or facility circuits because the lights and devices connected to these circuits provide an effective indication that surge protection is being provided.

The circuit breaker and SPD utilize Siemens-built 150V AC, 40mm, metal oxide varistors (MOVs). The maximum impulse rating for the SPD module is 40kA. The standard interrupting rating for the circuit breakers is 10k AIC. All Type QP circuit breakers and SPD are plug-on style, with load terminals provided. The devices are rated for 120/240V AC and are calibrated for 40 degrees C maximum ambient applications.

Breaker Type	Ampere Rating	Catalog Number	Surge Type
QP 1- Pole 120/240V AC 10K AIC	(2) 15	**QSA1515SPD**	SPD
	(2) 20	**QSA2020SPD**	SPD

Catalog Number	**QSA1515SPD QSA2020SPD**
Amperage	15 or 20 Amp
Number of Poles	(2) 1-Pole Circuit Breakers
Initial Clamping Level	240 Volts
Transient Energy Rating	360 Joules line-to-neutral 720 Joules line-to-line
Transient Suppression	500 volts peak, line-to-neutral
Voltage Rating	1000 volts peak, line-to-line
Peak Current Rating (impulse)	40,000 amperes
Discharge Voltage Characteristic	@ 1,500A, 600 volts @ 5,000A, 800 volts (both line-to-neutral)
Discharge Current Withstand Rating	10,000 amperes line-to-neutral
Circuit Breaker Interrupting Rating	10,000A, 120/240V AC
Listings/Certifications	UL, CSA Meets UL 1449 4th Edition

Circuit Breaker and Surge Protective Device (SPD)



① For warranty information please refer to the surge website www.usa.siemens.com/surge

1-Pole Bolt-On (120/240V AC)⑤

Cont. Current Rating @ 40° C	Type BL①⑪ 10,000A IR Catalog No.	Type BT (Tandem)⑫ 10,000A IR Catalog No.	Type BLH①⑪ 22,000A IR Catalog No.	Type BTH (Tandem)⑫ 22,000A IR Catalog No.	Type HBL①⑪ 65,000A IR Catalog No.
10⑨	B110	—	—	—	—
15	B115④	B1515	B115H④	B1515H	B115HH④
20	B120④	B2020	B120H④	B2020H	B120HH④
25	B125	—	B125H	—	B125HH■
30	B130	—	B130H	—	B130HH
35	B135	—	B135H■	—	B135HH■
40	B140	—	B140H	—	B140HH
45	B145■	—	B145H■	—	B145HH■
50	B150	—	B150H	—	B150HH■
60	B160	—	B160H■	—	B160HH■
70	B170	—	B170H■	—	B170HH■

2-Pole Bolt-On (Common-Trip 120/240V AC)⑥

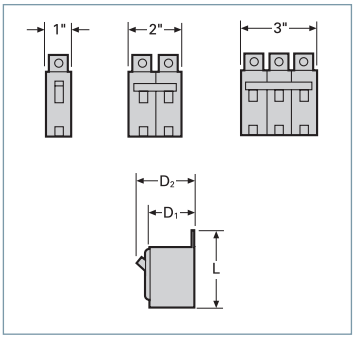
Cont. Current Rating @ 40° C	Type BL①⑪ 10,000A IR Catalog No.	Type BLH①⑪ 22,000A IR Catalog No.	Type HBL①⑪ 65,000A IR Catalog No.
10	B210	—	—
15	B215	B215H	B215HH
20	B220	B220H	B220HH
25	B225	B225H■	B225HH■
30	B230	B230H	B230HH
35	B235	B235H■	B235HH■
40	B240	B240H	B240HH
45	B245	B245H■	B245HH■
50	B250	B250H	B250HH
60	B260	B260H	B260HH
70	B270	B270H■	B270HH■
80	B280	B280H■	B280HH■
90	B290	B290H■	B290HH■
100	B2100	B2100H	B2100HH
110	B2110■	B2110H■	B2110HH■
125	B2125	B2125H	B2125HH■

2-Pole Bolt-On (Common-Trip 240V AC)③⑥⑩

15	B215R	—	—
20	B220R	—	—
30	B230R	—	—
40	B240R■	—	—
50	B250R	—	—

3-Pole Bolt-On (Common-Trip 240V AC)⑦

15	B315	B315H	B315HH
20	B320	B320H	B320HH
25	B325	B325H	B325HH■
30	B330	B330H	B330HH
35	B335	B335H■	B335HH■
40	B340	B340H	B340HH
45	B345	B345H■	B345HH■
50	B350	B350H	B350HH
60	B360	B360H	B360HH
70	B370	B370H	B370HH
80	B380	B380H■	B380HH
90	B390	B390H■	B390HH
100	B3100	B3100H	B3100HH



Breaker Type	Amp.	Dimensions L	D1	D2
BL, BLH	15-50	3 9/16	2 3/8	3
BL, BLH	55-125	3 3/4	2 3/8	3
HBL	15-125	3 3/4	2 3/8	3
BT, BTH	15-20	3 3/4	2 3/8	3

Modifications

Description	Catalog No.
Marine 50°C Ambient Calibration	add suffix...M
Fungus Proofing	add suffix...F

BL/BLH/HBL Internal Accessories

Description	Catalog Number	Field/Factory Installed
120VAC Shunt Trip	add suffix...00S01■	Factory
24VAC Shunt Trip	add suffix...00S07■	Factory
120V Auxiliary Switch	add suffix...01■②	Factory

For external accessories, please refer to page 7-169

■ Built to order. Allow 2-3 weeks for delivery

① UL Listed for use with 60/75° wire through 40 amps, UL listed for use with 75° wire only for 50 amps and above, HACR rated. 120V AC Fluorescent Lighting.
② 1A and 1B contacts.
③ UL Listed for use on 3-phase grounded "B" systems — 10,000 for this application.
④ UL Listed for frequent switching applications (SWD).
⑤ Shipped 12 per sleeve.
⑥ Shipped 6 per sleeve.
⑦ Shipped 4 per sleeve.
⑧ UL Listed 5KA IR.
⑨ 10 Amp breaker does not have INSTA-WIRE.
⑩ For 3 Phase Applications.
⑪ UL Listed for reverse feed.
⑫ It is the installers responsibility to ensure that there is adequate neutral connections available in the panel before installing these breakers.

Arc-Fault Circuit Interrupters (AFCI)

AFCI's detect arcing faults (an unintentional arcing condition in a circuit) that standard circuit breakers are unable to detect. The device is intended to mitigate the effects of arcing faults by functioning to de-energize the circuit when an arc-fault is detected.

• UL Listed • HACR Rated

Combination Type AFCI

Detects all three possible types of arc fault: line-to-ground, line-to-neutral, and series.

Breaker Type	Ampere Rating	10,000 A IR Catalog Number	22,000 A IR Catalog Number	65,000 A IR Catalog Number
BAF2/BAFH2/HBAF2 1-Pole 120V AC	15	BA115AFC①	BA115AFCH■	BA115AFCHH■
	20	BA120AFC①	BA120AFCH■	BA120AFCHH■
BAF/BAFH 2-Pole 120/240V AC	15	B215AFC①	B215AFCH■	—
	20	B220AFC①	B220AFCH■	—

1-Pole Combination Type AFCI

2-Pole Combination Type AFCI

Dual Function AFCI/GFCI

The Dual Function Circuit Breaker combines Combination Type AFCI and GFCI, protecting against both Arc Faults and (5mA) Ground Faults. The device includes the Self Test feature, making it the first in class in electrical safety for homeowners.

BFGA2/BFGAH2/ HBFGA2 1-Pole 120V AC	15	B115DF	B115DFH■	B115DFHH■
	20	B120DF	B120DFH■	B120DFHH■

1-Pole Dual Function AFCI/GFC

Ground-Fault Circuit Interrupters (GFCI)

Class A (5mA) Ground Fault Protection Intended for personnel protection. De-energizes the circuit for all ungrounded conductors of the circuit.

Breaker Type	Amp Rating	10kAIC Catalog No.	22kAIC Catalog No.	65kAIC Catalog No.
BLF2/BLHF2/HBLF2 1-Pole 120V AC Bolt-On	15	BF115A①	BF115AH①	BF115AHH■
	20	BF120A①	BF120AH①	BF120AHH■
	25	BF125A	BF125AH■	BF125AHH■
	30	BF130A	BF130AH	BF130AHH■
BLFB/BLHFB/HBLFB 2-Pole 120/240V AC Bolt-On	15	B215GF	B215GFH■	B215GFHH
	20	B220GF	B220GFH	B220GFHH
	30	B230GF	B230GFH	B230GFHH
BLF/BLHF 2-Pole 120/240V AC Bolt-On	40	BF240A	BF240AH■	—
	50	BF250A	BF250AH■	—
	60	BF260A	BF260AH■	—

Ground Fault Equipment Protection (30mA)

Provides protection of equipment from damaging line-to-ground faults currents. De-energizes the circuit for all ungrounded conductors of the circuit.

BLE2/BLEH2/HBLE2 1-Pole 120V AC Bolt-On	15	BE115	BE115H	
	20	BE120	BE120H	
	30	BE130	BE130H	
BLEB/BLEHB/HBLEB 2-Pole 120/240V AC Bolt-On	15	B215EG	B215EGH	B215EGHH
	20	B220EG	B220EGH	B220EGHH
	30	B230EG	B230EGH	B230EGHH
BLE/BLEH 2-Pole 120/240V AC Bolt-On	40	BE240	BE240H	
	50	BE250	BE250H	
	60	BE260	BE260H	

1-Pole Equipment Protection

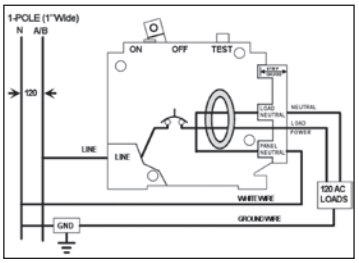
2-Pole Equipment Protection

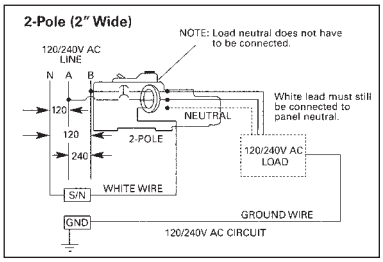
BAF2/BLF2/BLE Accessories

Description	Catalog Number
Padlocking Device 1-Pole	ECPLD1
Padlocking Device 2-Pole	ECPLD2
Handle Block	ECBX231M

■ Built to order. Allow 8 -10 weeks for delivery.
① UL Listed as SWD (Switching Duty) Rated, suitable for 120V AC Fluorescent Lighting.

Wiring Diagrams





7 MOLDED CASE CIRCUIT BREAKERS

Special Application Breakers

Switching Neutrals①

Breaker Type	Ampere Rating	Catalog Number
BLG 2-Wire Common Trip	15 20	**BG215■** **BG220■**
BLG 3-Wire Common Trip	30	**BG330■**

HID Lighting①

For high-intensity discharge lamp loads having in-rush currents above the instantaneous trip setting of a standard breaker.

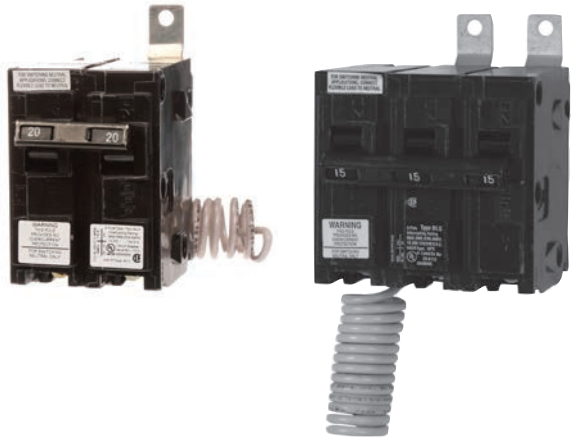
BL 1-Pole	15 20 30	**B115HID②■** **B120HID②** **B130HID■**
BL 2-Pole	15 20 30	**B215HID②■** **B220HID②** **B230HID■**

Molded Case Switch

For applications that do not require overcurrent protection.

BL 2-Pole	30	**B230S**

2-Wire 3-Wire



Switching Neutrals

■ Built to order. Allow 2–3 weeks for delivery.

① HACR rated.
② UL Listed for frequent switching applications (SWD). 120V AC fluorescent lighting.

Ground-Fault Circuit Interrupters (GFCI)

Class A (5mA) Ground Fault Protection

Intended for personnel protection. De-energizes the circuit for all ungrounded conductors of the circuit.

Breaker Type	Number of Poles	Amp Rating	65,000 A IR Catalog No.
HBQDPF	3	15	**B315GFHH**
		20	**B320GFHH**
		25	**B325GFHH**
		30	**B330GFHH**
		35	**B335GFHH**
		40	**B340GFHH**
		45	**B345GFHH**
		50	**B350GFHH**
		60	**B360GFHH**
		70	**B370GFHH**
		80	**B380GFHH**
		90	**B390GFHH**
		100	**B3100GFHH**
	2	70	**B270GFHH**
		80	**B280GFHH**
		90	**B290GFHH**
		100	**B2100GFHH**

Ground-Fault Equipment Protection (30mA)

Provides protection of equipment from damaging line-to-ground faults currents. De-energizes the circuit for all ungrounded conductors of the circuit.

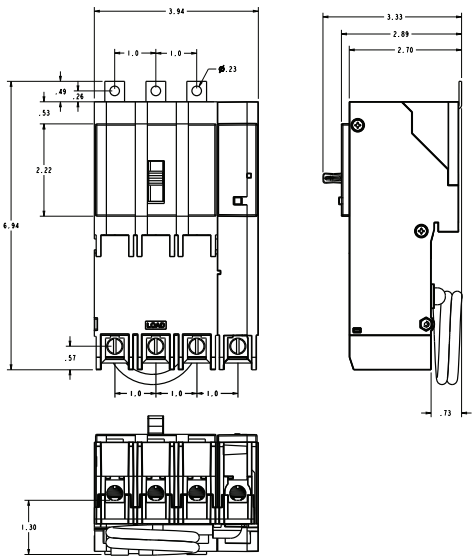
Breaker Type	Number of Poles	Amp Rating	65,000 A IR Catalog No.
HBQDQE	3	15	**B315EGHH**
		20	**B320EGHH**
		25	**B325EGHH**
		30	**B330EGHH**
		35	**B335EGHH**
		40	**B340EGHH**
		45	**B345EGHH**
		50	**B350EGHH**
		60	**B360EGHH**
		70	**B370EGHH**
		80	**B380EGHH**
		90	**B390EGHH**
		100	**B3100EGHH**
	2	70	**B270EGHH**
		80	**B280EGHH**
		90	**B290EGHH**
		100	**B2100EGHH**

Interrupting Ratings (max. RMS symmetrical amperes kA)

Breaker Type	Number of Poles	UL Volts AC	
		240	208/120
HBQDPF	2-Pole	65	—
	3-Pole	—	65
HBQDQE	2-Pole	65	—
	3-Pole	—	65

2-Pole and 3-Pole GFCI

2P/3P GFCI Drawing/Dimensions



Shipping Weights

Number of Poles	Number per Carton	Shipping Weight lbs. (kg)
3	1	3.0 (1.36)

Lugs For 60/75°C Wire

HBQD – Load End Only	
15–40	#14–#6 AWG Cu #12–#6 AWG Al
45–100	#8–#1 AWG Cu #6–#1/0 AWG Al

Ground-Fault Circuit Interrupters (GFCI)

Class A (5mA) Ground Fault Protection

Intended for personnel protection. De-energizes the circuit for all ungrounded conductors of the circuit.

Breaker Type	Number of Poles	Amp Rating	65,000 A IR Catalog No.
HCQDPF	3	15	BQ315GFHH
		20	BQ320GFHH
		25	BQ325GFHH
		30	BQ330GFHH
		35	BQ335GFHH
		40	BQ340GFHH
		45	BQ345GFHH
		50	BQ350GFHH
		60	BQ360GFHH
		70	BQ370GFHH
		80	BQ380GFHH
		90	BQ390GFHH
		100	BQ3100GFHH
	2	15	BQ215GFHH
		20	BQ220GFHH
		25	BQ225GFHH
		30	BQ230GFHH
		35	BQ235GFHH
		40	BQ240GFHH
		45	BQ245GFHH
		50	BQ250GFHH
		60	BQ260GFHH
		70	BQ270GFHH
		80	BQ280GFHH
		90	BQ290GFHH
		100	BQ2100GFHH

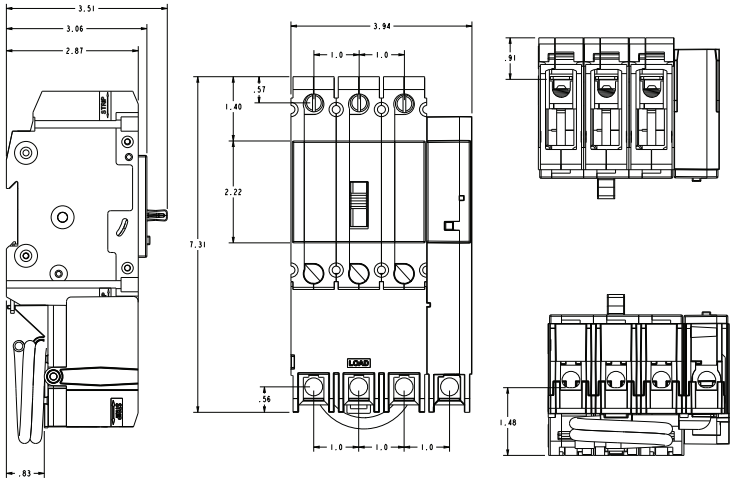
Ground-Fault Equipment Protection (30mA)

Provides protection of equipment from damaging line-to-ground faults currents. De-energizes the circuit for all ungrounded conductors of the circuit.

Breaker Type	Number of Poles	Amp Rating	65,000 A IR Catalog No.
HCQDQE	3	15	BQ315EGHH
		20	BQ320EGHH
		25	BQ325EGHH
		30	BQ330EGHH
		35	BQ335EGHH
		40	BQ340EGHH
		45	BQ345EGHH
		50	BQ350EGHH
		60	BQ360EGHH
		70	BQ370EGHH
		80	BQ380EGHH
		90	BQ390EGHH
		100	BQ3100EGHH
	2	15	BQ215EGHH
		20	BQ220EGHH
		25	BQ225EGHH
		30	BQ230EGHH
		35	BQ235EGHH
		40	BQ240EGHH
		45	BQ245EGHH
		50	BQ250EGHH
		60	BQ260EGHH
		70	BQ270EGHH
		80	BQ280EGHH
		90	BQ290EGHH
		100	BQ2100EGHH

2-Pole and 3-Pole GFCI

2P/3P GFCI Drawing/Dimensions



Interrupting Ratings (max. RMS symmetrical amperes kA)

Breaker Type	Number of Poles	UL	
		240 Volts AC	208/120 Volts AC
HCQDPF	2-Pole	65	—
	3-Pole	—	65
HQCQDQE	2-Pole	65	—
	3-Pole	—	65

Shipping Weight

Number of Poles	Number per Carton	Shipping Weight lbs. (kg)
3	1	3.0 (1.36)

Lugs For 60/75°C Wire

HBQD – Line and Load	
15–40	#14–#6 AWG Cu #12–#6 AWG Al
45–100	#8–#1 AWG Cu #6–#1/0 AWG Al

Enclosures

Type	Catalog No.
N1S	CQDN1SL
N1F	CQDN1FL
N3R	CQDN3RL

Shunt Trip

Control Voltage		HBQDPF, HBQDQE
V AC	V DC	Catalog Number
120	—	**CQDST120**
240	—	**CQDST240▲**
277	—	**CQDST277▲**
480	—	**CQDST480▲**
600	—	**CQDST600**
—	12	**CQDST12**
—	24	**CQDST24**
—	48	**CQDST48**
—	125	**CQDST125**

Auxiliary Switch

Maximum Voltage		Number of Contacts	HBQDPF, HBQDQE Catalog Number
AC	DC		
240	125	1A–1B	**CQDA1**
240	125	2A–2B	**CQDA2**

Alarm Switch

Maximum Voltage		HBQDPF, HBQDQE
AC	DC	Catalog Number
240	125	**CQDBA**

Shunt Trip and Auxiliary Switch Combinations

Shunt Trip Voltage		HBQDPF, HBQDQE
AC	DC	Catalog Number
24	—	**CQDST24AAS▲**
120	—	**CQDST120AAS▲**
240	—	**CQDST240AAS▲**
277	—	**CQDST277AAS▲**
480	—	**CQDST480AAS▲**
600	—	**CQDST600AAS▲**
—	12	**CQDST12DAS▲**
—	24	**CQDST24DAS▲**
—	48	**CQDST48DAS▲**
—	125	**CQDST125DAS▲**

Alarm and Auxiliary Switch Combinations

For Breaker	Catalog Number
HBQDPF, HBQDQE	**CQDA1BA▲**

CQDST120AAS

Padlocking Devices

Description	Catalog No.
HBQDPF, HBQDQE	**BQDPLD**

Handle Blocking Device

Description	Catalog No.
HBQDPF, HBQDQE	**BQDHBD**

▲ Built to order. Allow 6–8 weeks for delivery.

[1] Adds 1-pole space for accessory.

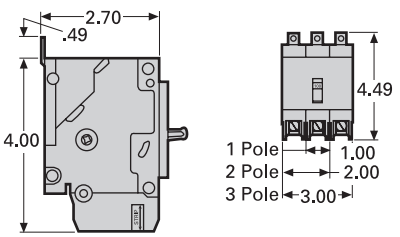
BQD④

Continuous Current Rating @ 40°C	1-Pole 277V AC–125V DC Catalog Number	2-Pole③ 480Y/277V AC– 125/250V DC Catalog Number	3-Pole③ 480Y/277V AC Catalog Number
15	BQD115①②	BQD215⑤	BQD315⑤
20	BQD120①②	BQD220⑤	BQD320⑤
25	BQD125②	BQD225⑤	BQD325⑤
30	BQD130②	BQD230⑤	BQD330⑤
35	BQD135②	BQD235⑤	BQD335⑤
40	BQD140②	BQD240⑤	BQD340⑤
45	BQD145②■	BQD245⑤	BQD345⑤
50	BQD150②	BQD250⑤	BQD350⑤
60	BQD160	BQD260	BQD360
70	BQD170■	BQD270	BQD370
80	BQD180■	BQD280	BQD380
90	BQD190■	BQD290	BQD390
100	BQD1100■	BQD2100	BQD3100

BQD6 CSA Certified

Continuous Current Rating @ 40°C	1-Pole 347V AC Catalog Number	2-Pole③ 600/347V AC Catalog Number	3-Pole③ 600/347V AC Catalog Number
15	BQD6115①	BQD6215	BQD6315
20	BQD6120①	BQD6220	BQD6320
25	BQD6125■	BQD6225■	BQD6325■
30	BQD6130	BQD6230	BQD6330
35	BQD6135■	BQD6235■	BQD6335■
40	BQD6140■	BQD6240■	BQD6340
45	BQD6145■	BQD6245■	BQD6345■
50	BQD6150■	BQD6250■	BQD6350
60	BQD6160■	BQD6260■	BQD6360
70	BQD6170■	BQD6270■	BQD6370

BQD, BQD6



BQD, BQD6

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.) (ea.)
1	1/12/48	.6
2	1/6/24	1.2
3	1/4/16	2.0

Interrupting Ratings (max. RMS symmetrical amperes kA)

Breaker Type	Number of Poles	UL Volts AC 120	240	277	480/277	347	600/347	Volts DC 125	125/250	IEC 947-2⑥ Volts AC 220/240 I_{cu}	I_{cs}	380/415 I_{cu}	I_{cs}
BQD	1-Pole	65	—	14	—	—	—	14	—	18	9	—	—
	2-Pole	—	65	—	14	—	—	—	14	65	33	18	9
	3-Pole	—	65	—	14	—	—	—	14	65	33	18	9
		BQD6 CSA Certified Only											
BQD6 (CSA only)	1-Pole	—	—	—	—	10	—	14	—	18	9	—	—
	2-Pole	—	—	—	—	—	10	—	14	65	33	18	9
	3-Pole	—	—	—	—	—	10	—	—	65	33	18	9

Lugs For 60/75°C Wire

BQD – Load End Only	
15–40	#14–#6 AWG Cu #12–#6 Al
45–100	#8–#1 AWG Cu #6–#1/0 Al

For inches / millimeters conversion, see Application Data section.
■ Built to order. Allow 2–3 weeks for delivery.

① SWD rated for switching fluorescent lighting.
② HID rated at 277V AC.
③ Not suitable for 3-phase delta 480V applications.
④ HACR rated.
⑤ HID rated at 480Y/277V AC.
⑥ Applicable for 15-30A breakers only

For external accessories, please refer to pages 7-171 – 7-176
For internal accessories, please refer to page 7-37

Type NGB Frame⑤ (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	NGB1B015B①②	NGB2B015B②	NGB3B015B②
20	NGB1B020B①②	NGB2B020B②	NGB3B020B②
25	NGB1B025B②	NGB2B025B②	NGB3B025B②
30	NGB1B030B②	NGB2B030B②	NGB3B030B②
35	NGB1B035B②	NGB2B035B②	NGB3B035B②
40	NGB1B040B②	NGB2B040B②	NGB3B040B②
45	NGB1B045B②	NGB2B045B②	NGB3B045B②
50	NGB1B050B②	NGB2B050B②	NGB3B050B②
60	NGB1B060B	NGB2B060B	NGB3B060B
70	NGB1B070B	NGB2B070B	NGB3B070B
80	NGB1B080B	NGB2B080B	NGB3B080B
90	NGB1B090B	NGB2B090B	NGB3B090B
100	NGB1B100B	NGB2B100B	NGB3B100B
110	NGB1B110B	NGB2B110B	NGB3B110B
125	NGB1B125B	NGB2B125B	NGB3B125B

Load lugs are included as standard. HACR rated.

NGB1B030B

Type HGB⑤ (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	HGB1B015B①②	HGB2B015B②	HGB3B015B②
20	HGB1B020B①②	HGB2B020B②	HGB3B020B②
25	HGB1B025B②	HGB2B025B②	HGB3B025B②
30	HGB1B030B②	HGB2B030B②	HGB3B030B②
35	HGB1B035B②	HGB2B035B②	HGB3B035B②
40	HGB1B040B②	HGB2B040B②	HGB3B040B②
45	HGB1B045B②	HGB2B045B②	HGB3B045B②
50	HGB1B050B②	HGB2B050B②	HGB3B050B②
60	HGB1B060B	HGB2B060B	HGB3B060B
70	HGB1B070B	HGB2B070B	HGB3B070B
80	HGB1B080B	HGB2B080B	HGB3B080B
90	HGB1B090B	HGB2B090B	HGB3B090B
100	HGB1B100B	HGB2B100B	HGB3B100B
110	HGB1B110B	HGB2B110B	HGB3B110B
125	HGB1B125B	HGB2B125B	HGB3B125B

Type LGB⑤ (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	LGB1B015B①②	LGB2B015B②	LGB3B015B②
20	LGB1B020B①②	LGB2B020B②	LGB3B020B②
25	LGB1B025B②	LGB2B025B②	LGB3B025B②
30	LGB1B030B②	LGB2B030B②	LGB3B030B②
35	LGB1B035B②	LGB2B035B②	LGB3B035B②
40	LGB1B040B②	LGB2B040B②	LGB3B040B②
45	LGB1B045B②	LGB2B045B②	LGB3B045B②
50	LGB1B050B②	LGB2B050B②	LGB3B050B②
60	LGB1B060B	LGB2B060B	LGB3B060B
70	LGB1B070B	LGB2B070B	LGB3B070B
80	LGB1B080B	LGB2B080B	LGB3B080B
90	LGB1B090B	LGB2B090B	LGB3B090B
100	LGB1B100B	LGB2B100B	LGB3B100B
110	LGB1B110B	LGB2B110B	LGB3B110B
125	LGB1B125B	LGB2B125B	LGB3B125B

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight lbs. (kg)
1	1	0.9 (0.4)
2	1	1.9 (0.9)
3	1	2.9 (1.2)

Lugs for 60/75°C Wire

Type	Ampere Rating	Wire Size	Catalog Number
NGB HGB LGB	15-30A	#14-#6 AWG Cu	TC1Q1 (qty. 1) 3TC1Q1 (qty. 3)
		#12-#6 AWG Al	
	35-125A	#8-1/0 AWG Cu	3TC1GG20
		#8-2/0 AWG Al	

Interrupting Ratings (max. RMS symmetrical amperes kA)

		UL489							
		Volts AC						Volts DC	
	Poles	120	240	277	347	480Y/277	600Y/347	125	125/250
NGB	1	100	—	25	14	—	—	14	—
	2,3	—	100	—	—	25	14	—	14④
HGB	1	100	—	35	14	—	—	14	—
	2,3	—	100	—	—	35	14	—	14④
LGB	1	100	—	65	14	—	—	14	—
	2,3	—	100	—	—	65	14	—	14④

① SWD rated.
② HID rated.
③ 2-pole only.
④ 2-pole only or two outer poles of 3-pole breaker
⑤ UL Listed for reverse feed.

For external accessories, please refer to pages 7-171 to 7-176
For internal accessories, please refer to page 7-37

Type NGB2⑤⑦ (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	NGB1K015B①②	NGB2K015B②	NGB3K015B②
20	NGB1K020B①②	NGB2K020B②	NGB3K020B②
25	NGB1K025B②	NGB2K025B②	NGB3K025B②
30	NGB1K030B②	NGB2K030B②	NGB3K030B②
35	NGB1K035B②	NGB2K035B②	NGB3K035B②
40	NGB1K040B②	NGB2K040B②	NGB3K040B②
45	NGB1K045B②	NGB2K045B②	NGB3K045B②
50	NGB1K050B②	NGB2K050B②	NGB3K050B②
60	NGB1K060B	NGB2K060B	NGB3K060B
70	NGB1K070B	NGB2K070B	NGB3K070B
80	NGB1K080B	NGB2K080B	NGB3K080B
90	NGB1K090B	NGB2K090B	NGB3K090B
100	NGB1K100B	NGB2K100B	NGB3K100B
110	NGB1K110B	NGB2K110B	NGB3K110B
125	NGB1K125B	NGB2K125B	NGB3K125B

Load lugs are included as standard. HACR rated.

LGB3K125B

Type HGB2⑤⑦ (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	HGB1K015B①②	HGB2K015B②	HGB3K015B②
20	HGB1K020B①②	HGB2K020B②	HGB3K020B②
25	HGB1K025B②	HGB2K025B②	HGB3K025B②
30	HGB1K030B②	HGB2K030B②	HGB3K030B②
35	HGB1K035B②	HGB2K035B②	HGB3K035B②
40	HGB1K040B②	HGB2K040B②	HGB3K040B②
45	HGB1K045B②	HGB2K045B②	HGB3K045B②
50	HGB1K050B②	HGB2K050B②	HGB3K050B②
60	HGB1K060B	HGB2K060B	HGB3K060B
70	HGB1K070B	HGB2K070B	HGB3K070B
80	HGB1K080B	HGB2K080B	HGB3K080B
90	HGB1K090B	HGB2K090B	HGB3K090B
100	HGB1K100B	HGB2K100B	HGB3K100B
110	HGB1K110B	HGB2K110B	HGB3K110B
125	HGB1K125B	HGB2K125B	HGB3K125B

Type LGB2⑤⑦ (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	LGB1K015B①②	LGB2K015B②	LGB3K015B②
20	LGB1K020B①②	LGB2K020B②	LGB3K020B②
25	LGB1K025B②	LGB2K025B②	LGB3K025B②
30	LGB1K030B②	LGB2K030B②	LGB3K030B②
35	LGB1K035B②	LGB2K035B②	LGB3K035B②
40	LGB1K040B②	LGB2K040B②	LGB3K040B②
45	LGB1K045B②	LGB2K045B②	LGB3K045B②
50	LGB1K050B②	LGB2K050B②	LGB3K050B②
60	LGB1K060B	LGB2K060B	LGB3K060B
70	LGB1K070B	LGB2K070B	LGB3K070B
80	LGB1K080B	LGB2K080B	LGB3K080B
90	LGB1K090B	LGB2K090B	LGB3K090B
100	LGB1K100B	LGB2K100B	LGB3K100B
110	LGB1K110B	LGB2K110B	LGB3K110B
125	LGB1K125B	LGB2K125B	LGB3K125B

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight lbs. (kg)
1	1	.75 (.34)
2	1	1.3 (.59)
3	1	2.0 (.98)

Lugs for 60/75°C Wire

Type	Ampere Rating	Wire Size	Catalog Number
NGB2 HGB2 LGB2	15-30A	#14-#6 AWG Cu	**TC1Q1** (qty. 1) **3TC1Q1** (qty. 3)
		#12-#6 AWG Al	
	35-125A	#8-2/0 AWG CU/AL	**3TC1GG20**

Interrupting Ratings (max. RMS symmetrical amperes kA)

Type	Poles	UL 489							
		Volts AC						Volts DC	
		120	240	277	480	347	600Y/347	125	125/250
NGB2	1	100	—	25	—	14	—	14	—
	2, 3	—	100	—	25	—	14	—	14④
HGB2	1	100	—	35	—	22	—	14	—
	2, 3	—	100	—	35	—	22	—	14④
LGB2	1	100	—	65	—	25	—	14	—
	2, 3	—	100	—	65	—	25	—	14④

① SWD rated.
② HID rated.
③ 2-pole only.
④ 2-pole only or two outer poles of 3-pole breaker
⑤ Suitable for reverse feed applications
⑥ 3 pole breakers suitable for single phase applications
⑦ xGB2 breakers require different strap kits than xGB. Refer to Section 11 for specific catalog numbers.

For external accessories, please refer to pages 7-171 to 7-176
For internal accessories, please refer to page 7-37

Shunt Trip

Control Voltage		BQD, BQD6, CQD, CQD6, NGG, HGG, LGG, NGB, HGB, LGB, NGB2, HGB2 and LGB2 Catalog Number
V AC	V DC	
120	—	CQDST120
240	—	CQDST240▲
277	—	CQDST277▲
480	—	CQDST480▲
600	—	CQDST600
—	12	CQDST12
—	24	CQDST24
—	48	CQDST48
—	125	CQDST125

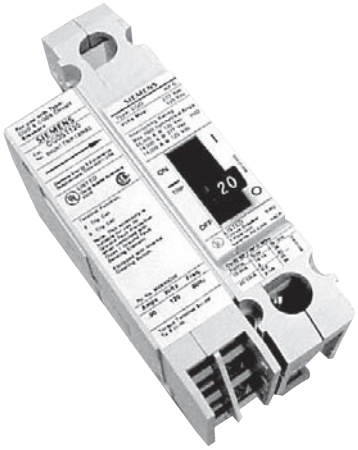
CQDST120AAS

Auxiliary Switch

Maximum Voltage		Number of Contacts	BQD, BQD6, CQD, CQD6, NGG, HGG, LGG, NGB, HGB, LGB, NGB2, HGB2 and LGB2 Catalog Number
AC	DC		
240	125	1A–1B	CQDA1
240	125	2A–2B	CQDA2

Alarm Switch

Maximum Voltage		BQD, BQD6, CQD, CQD6, NGG, HGG, LGG, NGB, HGB, LGB, NGB2, HGB2 and LGB2 Catalog Number
AC	DC	
240	125	CQDBA



CQD with Accessory Installed

Shunt Trip and Auxiliary Switch Combinations

Shunt Trip Voltage		BQD, BQD6, CQD, CQD6, NGG, HGG, LGG, NGB, HGB, LGB, NGB2, HGB2 and LGB2 Catalog Number
AC	DC	
24	—	CQDST24AAS▲
120	—	CQDST120AAS▲
240	—	CQDST240AAS▲
277	—	CQDST277AAS▲
480	—	CQDST480AAS▲
600	—	CQDST600AAS▲
—	12	CQDST12DAS▲
—	24	CQDST24DAS▲
—	48	CQDST48DAS▲
—	125	CQDST125DAS▲

Alarm and Auxiliary Switch Combinations

For Breaker	Catalog Number
BQD, BQD6, CQD, CQD6, NGG, HGG, LGG, NGB, HGB, LGB, NGB2, HGB2 and LGB2	CQDA1BA▲

▲ Built to order. Allow 6–8 weeks for delivery.

[1] Adds 1-pole space for accessory.

3VA41 125A Frame, 1-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAB) Catalog Number	M-Interrupting Class (MEAB) Catalog Number	H-Interrupting Class (HEAB) Catalog Number
		TM210 FTFM	
15	3VA4195-4ED14-0AA0①②	3VA4195-5ED14-0AA0①②	3VA4195-6ED14-0AA0①②
20	3VA4120-4ED14-0AA0①②	3VA4120-5ED14-0AA0①②	3VA4120-6ED14-0AA0①②
25	3VA4125-4ED14-0AA0②	3VA4125-5ED14-0AA0②	3VA4125-6ED14-0AA0②
30	3VA4130-4ED14-0AA0②	3VA4130-5ED14-0AA0②	3VA4130-6ED14-0AA0②
35	3VA4135-4ED14-0AA0②	3VA4135-5ED14-0AA0②	3VA4135-6ED14-0AA0②
40	3VA4140-4ED14-0AA0②	3VA4140-5ED14-0AA0②	3VA4140-6ED14-0AA0②
45	3VA4145-4ED14-0AA0②	3VA4145-5ED14-0AA0②	3VA4145-6ED14-0AA0②
50	3VA4150-4ED14-0AA0②	3VA4150-5ED14-0AA0②	3VA4150-6ED14-0AA0②
60	3VA4160-4ED14-0AA0	3VA4160-5ED14-0AA0	3VA4160-6ED14-0AA0
70	3VA4170-4ED14-0AA0	3VA4170-5ED14-0AA0	3VA4170-6ED14-0AA0
80	3VA4180-4ED14-0AA0	3VA4180-5ED14-0AA0	3VA4180-6ED14-0AA0
90	3VA4190-4ED14-0AA0	3VA4190-5ED14-0AA0	3VA4190-6ED14-0AA0
100	3VA4110-4ED14-0AA0	3VA4110-5ED14-0AA0	3VA4110-6ED14-0AA0
110	3VA4111-4ED14-0AA0	3VA4111-5ED14-0AA0	3VA4111-6ED14-0AA0
125	3VA4112-4ED14-0AA0	3VA4112-5ED14-0AA0	3VA4112-6ED14-0AA0

3VA41 125A Frame, 1 in 2-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAB) Catalog Number	M-Interrupting Class (MEAB) Catalog Number	H-Interrupting Class (HEAB) Catalog Number
		TM210 FTFM①	
15	3VA4195-4ED54-0AA0①②	3VA4195-5ED54-0AA0①②	3VA4195-6ED54-0AA0①②
20	3VA4120-4ED54-0AA0①②	3VA4120-5ED54-0AA0①②	3VA4120-6ED54-0AA0①②
25	3VA4125-4ED54-0AA0②	3VA4125-5ED54-0AA0②	3VA4125-6ED54-0AA0②
30	3VA4130-4ED54-0AA0②	3VA4130-5ED54-0AA0②	3VA4130-6ED54-0AA0②
35	3VA4135-4ED54-0AA0②	3VA4135-5ED54-0AA0②	3VA4135-6ED54-0AA0②
40	3VA4140-4ED54-0AA0②	3VA4140-5ED54-0AA0②	3VA4140-6ED54-0AA0②
45	3VA4145-4ED54-0AA0②	3VA4145-5ED54-0AA0②	3VA4145-6ED54-0AA0②
50	3VA4150-4ED54-0AA0②	3VA4150-5ED54-0AA0②	3VA4150-6ED54-0AA0②
60	3VA4160-4ED54-0AA0	3VA4160-5ED54-0AA0	3VA4160-6ED54-0AA0
70	3VA4170-4ED54-0AA0	3VA4170-5ED54-0AA0	3VA4170-6ED54-0AA0
80	3VA4180-4ED54-0AA0	3VA4180-5ED54-0AA0	3VA4180-6ED54-0AA0
90	3VA4190-4ED54-0AA0	3VA4190-5ED54-0AA0	3VA4190-6ED54-0AA0
100	3VA4110-4ED54-0AA0	3VA4110-5ED54-0AA0	3VA4110-6ED54-0AA0
110	3VA4111-4ED54-0AA0	3VA4111-5ED54-0AA0	3VA4111-6ED54-0AA0
125	3VA4112-4ED54-0AA0	3VA4112-5ED54-0AA0	3VA4112-6ED54-0AA0

3VA41 125A Frame, 2-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAB) Catalog Number	M-Interrupting Class (MEAB) Catalog Number	H-Interrupting Class (HEAB) Catalog Number
		TM210 FTFM	
15	3VA4195-4ED24-0AA0①②	3VA4195-5ED24-0AA0①②	3VA4195-6ED24-0AA0①②
20	3VA4120-4ED24-0AA0①②	3VA4120-5ED24-0AA0①②	3VA4120-6ED24-0AA0①②
25	3VA4125-4ED24-0AA0②	3VA4125-5ED24-0AA0②	3VA4125-6ED24-0AA0②
30	3VA4130-4ED24-0AA0②	3VA4130-5ED24-0AA0②	3VA4130-6ED24-0AA0②
35	3VA4135-4ED24-0AA0②	3VA4135-5ED24-0AA0②	3VA4135-6ED24-0AA0②
40	3VA4140-4ED24-0AA0②	3VA4140-5ED24-0AA0②	3VA4140-6ED24-0AA0②
45	3VA4145-4ED24-0AA0②	3VA4145-5ED24-0AA0②	3VA4145-6ED24-0AA0②
50	3VA4150-4ED24-0AA0②	3VA4150-5ED24-0AA0②	3VA4150-6ED24-0AA0②
60	3VA4160-4ED24-0AA0	3VA4160-5ED24-0AA0	3VA4160-6ED24-0AA0
70	3VA4170-4ED24-0AA0	3VA4170-5ED24-0AA0	3VA4170-6ED24-0AA0
80	3VA4180-4ED24-0AA0	3VA4180-5ED24-0AA0	3VA4180-6ED24-0AA0
90	3VA4190-4ED24-0AA0	3VA4190-5ED24-0AA0	3VA4190-6ED24-0AA0
100	3VA4110-4ED24-0AA0	3VA4110-5ED24-0AA0	3VA4110-6ED24-0AA0
110	3VA4111-4ED24-0AA0	3VA4111-5ED24-0AA0	3VA4111-6ED24-0AA0
125	3VA4112-4ED24-0AA0	3VA4112-5ED24-0AA0	3VA4112-6ED24-0AA0

① SWD rated.
② HID rated.

3VA41 125A
1-Pole

3VA41 125A
1 in 2-Pole

3VA41 125A
2-Pole

Ordering Information

The catalog number listed here are for complete, non-interchangable trip circuit breakers with load lugs installed. 3VA4 breakers up to 40A include 3VA9133-0JB10 lugs. 45A to 125A breakers include 3VA9133-0JB11 lugs.

All 3VA41 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

For NAVAL-rated 1, 2 or 3-P thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 40A, 3-pole, NAVAL rated 3VA41 would be catalog number 3VA4140-5ED31-**1**AA0) Not available for 1 in 2-pole breakers.

3VA41 125A Frame, 3-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAB) Catalog Number	M-Interrupting Class (MEAB) Catalog Number	H-Interrupting Class (HEAB) Catalog Number
		TM210 FTFM	
15	3VA4195-4ED34-0AA0①②	3VA4195-5ED34-0AA0①②	3VA4195-6ED34-0AA0①②
20	3VA4120-4ED34-0AA0①②	3VA4120-5ED34-0AA0①②	3VA4120-6ED34-0AA0①②
25	3VA4125-4ED34-0AA0②	3VA4125-5ED34-0AA0②	3VA4125-6ED34-0AA0②
30	3VA4130-4ED34-0AA0②	3VA4130-5ED34-0AA0②	3VA4130-6ED34-0AA0②
35	3VA4135-4ED34-0AA0②	3VA4135-5ED34-0AA0②	3VA4135-6ED34-0AA0②
40	3VA4140-4ED34-0AA0②	3VA4140-5ED34-0AA0②	3VA4140-6ED34-0AA0②
45	3VA4145-4ED34-0AA0②	3VA4145-5ED34-0AA0②	3VA4145-6ED34-0AA0②
50	3VA4150-4ED34-0AA0②	3VA4150-5ED34-0AA0②	3VA4150-6ED34-0AA0②
60	3VA4160-4ED34-0AA0	3VA4160-5ED34-0AA0	3VA4160-6ED34-0AA0
70	3VA4170-4ED34-0AA0	3VA4170-5ED34-0AA0	3VA4170-6ED34-0AA0
80	3VA4180-4ED34-0AA0	3VA4180-5ED34-0AA0	3VA4180-6ED34-0AA0
90	3VA4190-4ED34-0AA0	3VA4190-5ED34-0AA0	3VA4190-6ED34-0AA0
100	3VA4110-4ED34-0AA0	3VA4110-5ED34-0AA0	3VA4110-6ED34-0AA0
110	3VA4111-4ED34-0AA0	3VA4111-5ED34-0AA0	3VA4111-6ED34-0AA0
125	3VA4112-4ED34-0AA0	3VA4112-5ED34-0AA0	3VA4112-6ED34-0AA0

3VA41 125A 3-Pole

Trip Settings for 3VA41

TM210 - FTFM		
I_n (A)	I_r (A)	I_i (A)
15	15	300
20	20	300
25	25	300
30	30	300
35	35	350
40	40	400
45	45	450
50	50	500
60	60	600
70	70	700
80	80	800
90	90	900
100	100	1000
110	110	1100
125	125	1250

Interrupting Ratings for 3VA41

Inter-rupting Class	Breaker Type	Poles	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 120	240	277	347	480Y/277V	480	600Y/347V	Volts DC 125	250
S	SEAB	1	65		25	14				14	
		2, 3		65			25	25	14		50
M	MEAB	1	85		35	18				25	
		2, 3		85			35	35	18		85
H	HEAB	1	150		65	25				30	
		2, 3		150			65	65	25		100

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA41	1	1 (25.4)	5.1 (129.4)	3.6 (92.2)	0.62	0.28
3VA41	1 in 2	2 (50.8)	5.1 (129.4)	3.6 (92.2)	0.94	0.43
3VA41	2	2 (50.8)	5.1 (129.4)	3.6 (92.2)	1.13	0.51
3VA41	3	3 (76.2)	5.1 (129.4)	3.6 (92.2)	1.64	0.74

Connectors for 75C Wire for 3VA41

Type	Min. cable size	Max. cable size	Catalog No. (kit of 3 lugs)
Steel wrap around (Cu cable only), 1 cable lugs	AWG 14	3/0	**3VA9133-0JA11**
Aluminum body lug small (Cu/Al cable), 1 cable lug	AWG 14	AWG 8	**3VA9133-0JB10**③
Aluminum body lug (Cu/Al cable), 1 cable lugs	AWG 8	3/0	**3VA9133-0JB11**④
Aluminum body lug small with control wire tap (Cu/Al cable), 1 cable lug	AWG 14	AWG 8	**3VA9133-0JG10**③
Aluminum body lug with control wire tap (Cu/Al cable), 1 cable lugs	AWG 8	3/0	**3VA9133-0JG11**④
Copper body lug small (Cu cable only), 1 cable lugs	AWG 14	AWG 8	**3VA9133-0JD10**③
Copper body lug (Cu cable only), 1 cable lugs	AWG 8	2/0	**3VA9133-0JD11**④
Copper body lug small with control wire tap (Cu cable only), 1 cable lugs	AWG 14	AWG 8	**3VA9133-0JK10**③
Copper body lug with control wire tap (Cu cable only), 1 cable lugs	AWG 8	2/0	**3VA9133-0JK11**④

3VA4 Accessories

Description	Catalog Number
Padlocking Device for 3VA4 breaker	**3VA9038-0LB11**

① SWD rated.
② HID rated.
③ Use these lugs on 15A to 40A breakers.
④ Use these lugs on 45A to 125A breakers.

Internal accessories configuration		3VA4/3VA5 125 A 1 in 2-pole /2-pole	3VA4 125 A 3-pole
Slot No.:		23 22 21 125 A	23 22 21 125 A 11 12 13
Auxiliary switch	**Type**		
Auxiliary switch	AUX_HQ	x x x	x x x x x x
	AUX_HQ_el	x x x	x x x x x x
	AUX_HP	x	x x
		x	x x
Leading changeover switch	LCS_HQ		x
	LCS_HQ_el		x
	LCS_HP		x
Alarm switch	**Type**		
Trip alarm switch	TAS_HQ	x x	x x x x
	TAS_HQ_el	x x	x x x x
	TAS_HP	x	x x
Short circuit alarm switch	SAS_HQ		
	SAS_HQ_el		
Auxiliary release	**Type**		
Shunt trip flexible	STF	x	x
Shunt trip left	STL	x	x
	STL_el		
Residual current release	RCR		
Undervoltage release	UVR	x	x
Universal release	UNI	x	x
Other			
Cylinder lock (type Ronis)			x

All BQ/BQH/HBQ circuit breakers are supplied with load side lugs. If line side lugs are required, add suffix "L" to catalog number. Consult Siemens for any additional charge. All standard circuit breakers are calibrated for 40°C maximum ambient application.

Continuous Current Rating @ 40° C	Type BQ① 10,000A IR Catalog Number	Type BQH 22,000A IR Catalog Number	Type HBQ 65,000A IR Catalog Number
1-Pole (120/240V AC)⑤			
15	BQ1B015④	BQ1B015H④	HB1B015■④
20	BQ1B020④	BQ1B020H④	HB1B020■④
25	BQ1B025	BQ1B025H■	HB1B025■
30	BQ1B030	BQ1B030H	HB1B030■
35	BQ1B035■	BQ1B035H■	HB1B035■
40	BQ1B040	BQ1B040H	HB1B040■
45	BQ1B045■	—	HB1B045■
50	BQ1B050	BQ1B050H	HB1B050■
60	BQ1B060■⑨	BQ1B060H■	HB1B060■
70	BQ1B070■	BQ1B070H■	HB1B070■
2-Pole (Common-Trip 120/240V AC)⑥			
15	BQ2B015	BQ2B015H	HB2B015■
20	BQ2B020	BQ2B020H	HB2B020■
25	BQ2B025	BQ2B025H■	HB2B025■
30	BQ2B030	BQ2B030H	HB2B030■
35	BQ2B035	BQ2B035H■	HB2B035■
40	BQ2B040	BQ2B040H	HB2B040■
45	BQ2B045	—	HB2B045■
50	BQ2B050	BQ2B050H	HB2B050■
60	BQ2B060⑨	BQ2B060H	HB2B060■
70	BQ2B070	BQ2B070H■	HB2B070■
80	BQ2B080	BQ2B080H■	HB2B080
90	BQ2B090	BQ2B090H■	HB2B090■
100	BQ2B100	BQ2B100H	HB2B100
110	BQ2B110	—	HB2B110■
125	BQ2B125	BQ2B125H	HB2B125
2-Pole (Common-Trip 240V AC)③⑥			
15	BQ2H015	—	—
20	BQ2H020	—	—
30	BQ2H030	—	—
40	BQ2H040■	—	—
50	BQ2H050	—	—
60	BQ2H060	—	—
70	BQ2H070■	—	—
80	BQ2H080■	—	—
90	BQ2H090■	—	—
100	BQ2H100■	—	—
3-Pole (Common-Trip 240V AC)⑦			
15	BQ3B015	BQ3B015H	HB3B015■
20	BQ3B020	BQ3B020H	HB3B020■
25	BQ3B025■	BQ3B025H■	HB3B025
30	BQ3B030	BQ3B030H	HB3B030
35	BQ3B035■	BQ3B035H	HB3B035
40	BQ3B040	BQ3B040H	HB3B040
45	BQ3B045■	BQ3B045H	HB3B045
50	BQ3B050	BQ3B050H	HB3B050
60	BQ3B060	BQ3B060H	HB3B060
70	BQ3B070	BQ3B070H	HB3B070■
80	BQ3B080	BQ3B080H■	HB3B080■
90	BQ3B090	BQ3B090H■	HB3B090■
100	BQ3B100	BQ3B100H	HB3B100

1-Pole

2-Pole

3-Pole

Factory Modifications

Description	Catalog Number
Line Side Lugs	**add suffix...L**
Quick Connect Lug	**add suffix...QX**
Marine 50° C Ambient Calibration	**add suffix...M**
Fungus Proofing	**add suffix...F**

BQ / BQH / HBQ Internal Accessories

Description	Catalog Number	Field/Factory Installed
120VAC Shunt Trip	**add suffix...00S01■**	Factory
24VAC Shunt Trip	**add suffix...00S07■**	Factory
120V Auxiliary Switch	add suffix...01■②	Factory

For external accessories, please refer to page 7-169

■ Built to order. Allow 2-3 weeks for delivery

① UL Listed for use with 60/75° wire through 40 amps, UL listed for use with 75° wire only for 50 amps and above, HACR rated.

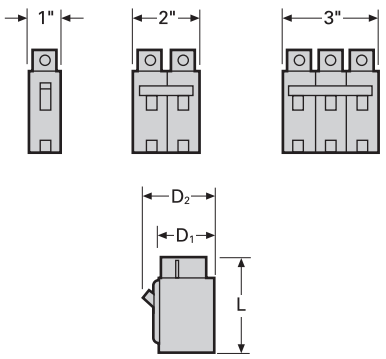
② 1A and 1B contacts.
③ UL Listed for use on 3-phase grounded "B" systems — 10,000 for this application.
④ UL Listed for frequent switching applications (SWD). 120V AC Fluorescent Lighting.

⑤ Shipped 12 per sleeve.
⑥ Shipped 6 per sleeve.
⑦ Shipped 4 per sleeve.
⑧ UL Listed 5KA IR.
⑨ Refer to Table A on page 7-164

Breaker Type	Ampere Rating	Catalog Number	Line Side Connector	Load Side Connector	Interrupting Ratings (KA) (RMS Symmetrical Amperes) Volts AC 120	120/240
1-Pole DIN Rail (120/240V AC)						
BQLD 1-Pole 120V DIN Rail	10	**BQ1B010QLD**	TC1Q1	TC1Q1	10	
	15	**BQ1B015QLD**	TC1Q1	TC1Q1	10	
	20	**BQ1B020QLD**	TC1Q1	TC1Q1	10	
	25	**BQ1B025QLD**	TC1Q1	TC1Q1	10	
	30	**BQ1B030QLD**	TC1Q1	TC1Q1	10	
	35	**BQ1B035QLD**	TC1Q1	TC1Q1	10	
	40	**BQ1B040QLD**	TC1Q1	TC1Q1	10	
	45	**BQ1B045QLD**	TA1Q1	TA1Q1	10	
	50	**BQ1B050QLD**	TA1Q1	TA1Q1	10	
	60	**BQ1B060QLD**	TA1Q1	TA1Q1	10	
BQXD 1-Pole 120V DIN Rail	10	**BQ1B010QXD**	TC1Q1	Quick-Connect	10	
	15	**BQ1B015QXD**	TC1Q1	Quick-Connect	10	
	20	**BQ1B020QXD**	TC1Q1	Quick-Connect	10	
	25	**BQ1B025QXD**	TC1Q1	Quick-Connect	10	
	30	**BQ1B030QXD**	TC1Q1	Quick-Connect	10	
	35	**BQ1B035QXD**	TC1Q1	Quick-Connect	10	
	40	**BQ1B040QXD**	TC1Q1	Quick-Connect	10	
	45	**BQ1B045QXD**	TA1Q1	Quick-Connect	10	
	50	**BQ1B050QXD**	TA1Q1	Quick-Connect	10	
	60	**BQ1B060QXD**	TA1Q1	Quick-Connect	10	
2-Pole DIN Rail (120/240V AC)						
BQLD 2-Pole 120/240V DIN Rail	10	**BQ2B010QLD**	TC1Q1	TC1Q1		10
	15	**BQ2B015QLD**	TC1Q1	TC1Q1		10
	20	**BQ2B020QLD**	TC1Q1	TC1Q1		10
	25	**BQ2B025QLD**	TC1Q1	TC1Q1		10
	30	**BQ2B030QLD**	TC1Q1	TC1Q1		10
	35	**BQ2B035QLD**	TC1Q1	TC1Q1		10
	40	**BQ2B040QLD**	TC1Q1	TC1Q1		10
	45	**BQ2B045QLD**	TA1Q1	TA1Q1		10
	50	**BQ2B050QLD**	TA1Q1	TA1Q1		10
	60	**BQ2B060QLD**	TA1Q1	TA1Q1		10
BQXD 2-Pole 120/240V DIN Rail	10	**BQ2B010QXD**	TC1Q1	Quick-Connect		10
	15	**BQ2B015QXD**	TC1Q1	Quick-Connect		10
	20	**BQ2B020QXD**	TC1Q1	Quick-Connect		10
	25	**BQ2B025QXD**	TC1Q1	Quick-Connect		10
	30	**BQ2B030QXD**	TC1Q1	Quick-Connect		10
	35	**BQ2B035QXD**	TC1Q1	Quick-Connect		10
	40	**BQ2B040QXD**	TC1Q1	Quick-Connect		10
	45	**BQ2B045QXD**	TA1Q1	Quick-Connect		10
	50	**BQ2B050QXD**	TA1Q1	Quick-Connect		10
	60	**BQ2B060QXD**	TA1Q1	Quick-Connect		10

BQ1B015QLD **BQ2B015QLD**

BQ1B015QXD **BQ2B015QXD**



Lugs-For Use with BQXD⑥

Circuit Breaker Amp. Rtg.	Cab. Per Lug	Lug Wire Range AWG	Catalog Number
Line Side			
10–40	1 1	#16–#6 Cu #12–#6 Al	**TC1Q1**①②
45–125	1 1	#8–#1 Cu #6–#1/0 Al	**TA1Q1**

Finger Safe Terminal Shield

Protects against accidental contact with lugs–1 per lug. Fits line and load end.

Catalog Number	Qty
BQFS2	2
BQFS1K	1000

BQ Enclosures

Type	Catalog Number④
1	**EB3100S**③⑤
3R	**WB3100**

BQ Breaker Dimensions

Number of Poles	Breaker Type	Amperes	Dimensions (inches) L	D1	D2
1, 2	BQ	15-50	3¾	2⅜	3
1, 2	BQH, HBQ	15-50	4	2⅜	3
1, 2	BQ, BQH, HBQ	55-125	4	2⅜	3
3	BQ, BQH, HBQ	15-100	4	2⅜	3
1, 2	BQXD	15-60	4½	2⅜	3

For inches / millimeters conversion, see Application Data section.

■ Built to order. Allow 2–3 weeks for delivery.

① UL Listed for use with 60/75° wire through 40 amps, UL listed for use with 75° wire only for 50 amps and above, HACR rated.

②Connector has steel construction.

③Surface mounted indoor. If flush mounting is required, replace suffix "S" in catalog number with suffix "F".

④Neutral included in enclosure.

⑤Enclosure will not accept circuit breakers with shunt trips or auxiliary switches installed.

⑥Type BQXD uses TA1Q1 or TC1Q1 lugs on line side of circuit breaker.

Enclosures, see Section 6
For external accessories, please refer to pages 7-169, 7-171 to 7-176

Continuous Current Rating @ 40°C	2-Pole 240V AC Catalog Number	3-Pole 240V AC Catalog Number
Type QR2①		
100	**QR22B100**	**QR23B100**
125	**QR22B125**	**QR23B125**
150	**QR22B150**	**QR23B150**
175	**QR22B175**	**QR23B175**
200	**QR22B200**	**QR23B200**
225	**QR22B225**	**QR23B225**
250	**QR22B250**	**QR23B250**
Type QRH2①		
100	**QRH22B100■**	**QRH23B100**
125	**QRH22B125**	**QRH23B125**
150	**QRH22B150**	**QRH23B150**
175	**QRH22B175■**	**QRH23B175**
200	**QRH22B200**	**QRH23B200**
225	**QRH22B225**	**QRH23B225**
250	**QRH22B250**	**QRH23B250**
Type HQR2①		
100	**HQR22B100■**	**HQR23B100**
125	**HQR22B125**	**HQR23B125**
150	**HQR22B150**	**HQR23B150**
175	**HQR22B175■**	**HQR23B175**
200	**HQR22B200**	**HQR23B200**
225	**HQR22B225**	**HQR23B225**
250	**HQR22B250**	**HQR23B250**
Type HQR2H①		
100	**HQR22B100H**	**HQR23B100H**
125	**HQR22B125H**	**HQR23B125H**
150	**HQR22B150H**	**HQR23B150H**
175	**HQR22B175H**	**HQR23B175H**
200	**HQR22B200H**	**HQR23B200H**
225	**HQR22B225H**	**HQR23B225H**
250	**HQR22B250H**	**HQR23B250H**

Ordering Information

Load side 3TA1QR300 lugs are mounted and included when circuit breaker is ordered. For line and load lugs (3TA1QR300) installed at no additional charge, add suffix "L" to catalog number.

50°C Calibration - See page 7-167.
400HZ. - See page 7-167.

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
2	1	3.2
3	1	4.5

Lugs For 75°C Wire

Catalog Number	Lug Body	Lug Wire Range
3TA1QR300	Al	#3 - 300 Kcmil Al/Cu
3TC1QR250	Cu	#3 - 300 Kcmil Cu ONLY
CCQ250	CMP	#6 AWG - 350kcmil Al/Cu

Enclosures (Neutral Included)

Type	Catalog Number
1	**QR2N1S or QR2N1F**
3R	**QR2N3R3**
12	**QR2N12**
4X	**QR2N4X**
4X316	**QR2N4X316**

UL 489 Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz)
	240
QR2	10
QRH2	25
HQR2	65
HQR2H	100

■ Built to order. Allow 2–3 weeks for delivery.

Note: QR breakers are UL Listed for reverse feed applications.
① HACR rated.

Enclosures Section 6
For external accessories, please refer to pages 7-171 to 7-176

Shunt Trip

Control Voltage		In Rush	Shunt Trip	Shunt Trip and Auxiliary Switch Combination
AC	DC		Catalog Number	Catalog Number
—	24	1.1A	**S07QR2**	**S07QR2A**
120 - 240	48	2.0A AC / 1.8A DC	**S01QR2**	**S01QR2A**

Auxiliary Switch

Contains (1) or (2) sets of "A" contacts and "B" contacts

Maximum Control Supply Voltage (V)	Maximum Allowable Current (A)	Single Auxiliary 1A -1B Contact Catalog Number	Double Auxiliary 2A - 2B Contact Catalog Number
250 AC /125 DC	5 AC / 0.5 DC	**A01QR2**	**A02QR2**

External Accessories

Description	Catalog Number
Padlock Device	**HPLQR**
Mounting Screw Kit	**MSQR3**
Handle Blocking Device	**HBLQR**
Handle Sliding-bar Interlock	**SBMIQR**

Padlock Device HPLQR

Handle Block Device HBLQR

Mechanical Interlock SBMIQR

Type CQD (Cable In - Cable Out) DIN Rail Mount③

Continuous Current Rating @ 40°C	1-Pole 277V AC 125V DC Catalog Number	2-Pole 480Y/277V AC 125/250V DC Catalog Number	3-Pole 480Y/277V AC Catalog Number
15	CQD115①②	CQD215②	CQD315②
20	CQD120①②	CQD220②	CQD320②
25	CQD125②	CQD225②	CQD325②
30	CQD130②	CQD230②	CQD330②
35	CQD135②■	CQD235②■	CQD335②
40	CQD140②■	CQD240②	CQD340②
45	CQD145②■	CQD245②■	CQD345②■
50	CQD150②■	CQD250②	CQD350②
60	CQD160■	CQD260	CQD360
70	CQD170■	CQD270	CQD370
80	CQD180■	CQD280	CQD380
90	CQD190■	CQD290■	CQD390
100	CQD1100■	CQD2100	CQD3100

Interrupting Ratings (max. RMS symmetrical amperes kA)

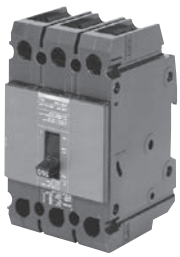
Breaker Type	Number of Poles	UL Volts AC 120	240	277	480/277	600/347	UL Volts DC 125	125/250	IEC 947-2④ Volts AC 220/240 I_{cu}	I_{cs}	380/415 I_{cu}	I_{cs}
CQD	1-Pole	65	—	14	—	—	14	—	18	9	—	—
	2-Pole	—	65	—	14	—	—	14	65	33	18	9
	3-Pole	—	65	—	14	—	—	14	65	33	18	9

Shipping Weights

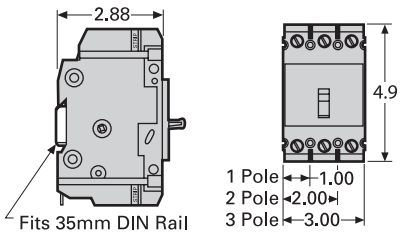
Number of Poles	Number per Carton	Shipping Weight lbs. (kg)
1	1	0.5 (0)
2	1	1.0 (0)
3	1	1.5 (1)

Lugs For 60/75°C Wire

Amps	Wire Size
15–40	#14–#6 AWG Cu #12–#6 AWG Al
45–100	#8–#1 AWG Cu #6–#1/0 AWG Al



CQD



CQD

For inches / millimeters conversion, see Application Data section.

■ Built to order. Allow 2–3 weeks for delivery.

① SWD rated.

Note: CQD breakers are UL Listed for reverse feed applications.

② HID rated.

③ HACR rated.

④ Applicable for 15-30A breakers only.

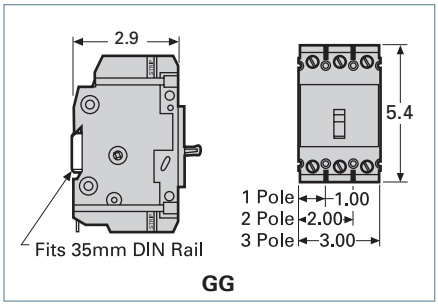
Enclosures Section 6
Accessories pages 7-46 and 7-171 to 7-176

Type NGG (Cable In - Cable Out)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	NGG1B015L①②	NGG2B015L②	NGG3B015L②
20	NGG1B020L①②	NGG2B020L②	NGG3B020L②
25	NGG1B025L②	NGG2B025L②	NGG3B025L②
30	NGG1B030L②	NGG2B030L②	NGG3B030L②
35	NGG1B035L②	NGG2B035L②	NGG3B035L②
40	NGG1B040L②	NGG2B040L②	NGG3B040L②
45	NGG1B045L②	NGG2B045L②	NGG3B045L②
50	NGG1B050L②	NGG2B050L②	NGG3B050L②
60	NGG1B060L	NGG2B060L	NGG3B060L
70	NGG1B070L	NGG2B070L	NGG3B070L
80	NGG1B080L	NGG2B080L	NGG3B080L
90	NGG1B090L	NGG2B090L	NGG3B090L
100	NGG1B100L	NGG2B100L	NGG3B100L
110	NGG1B110L	NGG2B110L	NGG3B110L
125	NGG1B125L	NGG2B125L	NGG3B125L

Line and load lugs are included as standard. If no lugs are required, remove the "L" suffix.
HACR rated.
Suitable for screws or DIN rail mounting.

GG



GG

Type HGG (Cable In - Cable Out)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	HGG1B015L①②	HGG2B015L②	HGG3B015L②
20	HGG1B020L①②	HGG2B020L②	HGG3B020L②
25	HGG1B025L②	HGG2B025L②	HGG3B025L②
30	HGG1B030L②	HGG2B030L②	HGG3B030L②
35	HGG1B035L②	HGG2B035L②	HGG3B035L②
40	HGG1B040L②	HGG2B040L②	HGG3B040L②
45	HGG1B045L②	HGG2B045L②	HGG3B045L②
50	HGG1B050L②	HGG2B050L②	HGG3B050L②
60	HGG1B060L	HGG2B060L	HGG3B060L
70	HGG1B070L	HGG2B070L	HGG3B070L
80	HGG1B080L	HGG2B080L	HGG3B080L
90	HGG1B090L	HGG2B090L	HGG3B090L
100	HGG1B100L	HGG2B100L	HGG3B100L
110	HGG1B110L	HGG2B110L	HGG3B110L
125	HGG1B125L	HGG2B125L	HGG3B125L

Type LGG (Cable In - Cable Out)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	LGG1B015L①②	LGG2B015L②	LGG3B015L②
20	LGG1B020L①②	LGG2B020L②	LGG3B020L②
25	LGG1B025L②	LGG2B025L②	LGG3B025L②
30	LGG1B030L②	LGG2B030L②	LGG3B030L②
35	LGG1B035L②	LGG2B035L②	LGG3B035L②
40	LGG1B040L②	LGG2B040L②	LGG3B040L②
45	LGG1B045L②	LGG2B045L②	LGG3B045L②
50	LGG1B050L②	LGG2B050L②	LGG3B050L②
60	LGG1B060L	LGG2B060L	LGG3B060L
70	LGG1B070L	LGG2B070L	LGG3B070L
80	LGG1B080L	LGG2B080L	LGG3B080L
90	LGG1B090L	LGG2B090L	LGG3B090L
100	LGG1B100L	LGG2B100L	LGG3B100L
110	LGG1B110L	LGG2B110L	LGG3B110L
125	LGG1B125L	LGG2B125L	LGG3B125L

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight lbs. (kg)
1	1	.75 (0.34)
2	1	1.3 (0.59)
3	1	2.0 (0.98)

Lugs For 60/75°C Wire

NGG		
Ampere Rating	Wire Size	Catalog Number
15–30A	#14–#6 AWG Cu #12–#6 AWG Al	TC1Q1 (qty. 1) 3TC1Q1 (qty. 3)
35–125A	#8-2/0 AWG CU/AL	3TC1GG20 (qty. 3)
15–125A	Nut Keeper plate w/ screw (for crimp terminals)	TNKG3 (qty. 3)

Interrupting Ratings (max. RMS symmetrical amperes kA)

Breaker Type	Poles	UL489								IEC 60947-2 (Ics = 50%Icu)		
		Volts AC						Volts DC		Volts AC		Volts DC
		120	240	277	347	480	600Y/347	125	125/250	240	415	125/250
NGG	1	65	—	25	14	—	—	14	—	25	—	—
	2,3	—	65	—	—	25	14	—	14①	65	—	14
HGG	1	65	—	35	14	—	—	14	—	—	—	—
	2,3	—	65	—	—	35	14	—	14①	—	—	—
LGG	1	65	—	65	14	—	—	14	—	—	—	—
	2,3	—	65	—	—	65	14	—	14①	—	—	—

For inches / millimeters conversion, see Application Data section.

① SWD rated.

② HID rated at 15-50A 1-pole @ 277 VAC; 2 & 3-pole @ 480 VAC

Enclosures Section 6
Accessories pages 7-46 and 7-171 to 7-176

Shunt Trip

Control Voltage		BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB Catalog Number
V AC	V DC	
120	—	CQDST120
240	—	CQDST240▲
277	—	CQDST277▲
480	—	CQDST480▲
600	—	CQDST600
—	12	CQDST12
—	24	CQDST24
—	48	CQDST48
—	125	CQDST125

CQDST120AAS

Auxiliary Switch

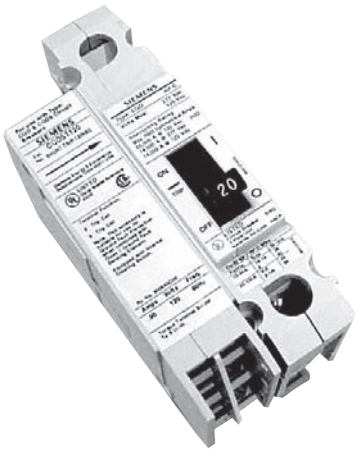
Maximum Voltage		Number of Contacts	BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB Catalog Number
AC	DC		
240	125	1A–1B	CQDA1
240	125	2A–2B	CQDA2

Alarm Switch

Maximum Voltage		BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB Catalog Number
AC	DC	
240	125	CQDBA

Shunt Trip and Auxiliary Switch Combinations

Shunt Trip Voltage		BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB Catalog Number
AC	DC	
24	—	CQDST24AAS▲
120	—	CQDST120AAS▲
240	—	CQDST240AAS▲
277	—	CQDST277AAS▲
480	—	CQDST480AAS▲
600	—	CQDST600AAS▲
—	12	CQDST12DAS▲
—	24	CQDST24DAS▲
—	48	CQDST48DAS▲
—	125	CQDST125DAS▲



CQD with Accessory Installed

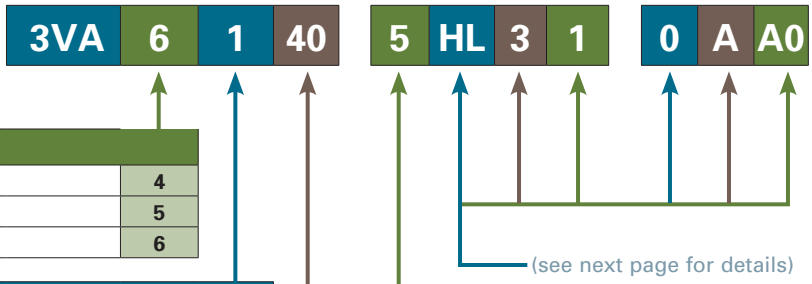
Alarm and Auxiliary Switch Combinations

For Breaker	Catalog Number
BQD, BQD6, CQD, NGG, HGG, LGG, NGB, HGB and LGB	CQDA1BA▲

▲ Built to order. Allow 6–8 weeks for delivery.

①Adds 1-pole space for accessory.

Catalog Numbering Logic



Breaker Designation	
Thermal magnetic panelboard breakers	4
Thermal magnetic (Cable-in Cable-out) breakers	5
Electronic trip breakers	6

Frame Size	
125/150A	1
250A	2
400A	3
600A	4
800A	5
1000A	6
1200A	7
1600A	8
2000A	9

Rated Current

3VA41/ 3VA51	3VA52	3VA53	3VA54	3VA55	3VA57	3VA58	3VA59	3VA61	3VA62	3VA63	3VA64	3VA65	3VA66	3VA67	3VA68	3VA69	
15A																	95
20A	200A	200A															20
	225A	225A															22
25A	250A	250A							250A	250A							25
30A		300A															30
35A		350A															35
40A	40A	400A						40A		400A	400A						40
45A	45A		450A														45
50A	50A		500A														50
60A	60A		600A	600A							600A	600A					60
70A	70A			700A													70
80A	80A			800A	800A							800A		800A			80
90A	90A				900A												90
100A	100A				1000A			100A	100A				1000A	1000A			10
110A	110A																11
125A	125A				1200A									1200A			12
						1400A											14
	150A							150A									15
						1600A									1600A		16
	175A																17
							1800A										18
							2000A									2000A	20

Interrupting Capacity @ 480V			
3VA4/3VA5	3VA6		
MCP/MCS	200K		0
MCP/MCS	MCP/MCS		1
25K			4
35K	35K		5
65K	65K		6
100K	100K		7
	150K		8

Catalog Numbering Logic (cont.)

3VA	6	1	40	–	5	HL	3	1	0	A	A0

(see previous page for details)

Trip Unit Protection Functions

3VA4/3VA5		L	I	N						
TM230	MCCB	fix	adj							EC
TM210	MCCB	fix	fix							ED
TM240	MCCB	adj	adj							EF
TM230	MCCB	fix	adj	100%						GC
TM210	MCCB	fix	fix	100%						GD
TM240	MCCB	adj	adj	100%						GF
TM110M	MSP		fix							MG
TM120M	MSP		adj							MH
TM120M	MSP		adj							MU
MCS110	MCS		fix							BB
3VA6		**L**	**S**	**I**	**G**	**N**	**LCD**	**com.**	**measurement values**	
ETU320 LI	MCCB	adj		adj		0%/50%/100%				HL
ETU330 LIG	MCCB	adj		adj	adj	0%/50%/100%				HM
ETU350 LSI	MCCB	adj	adj	fix		0%/50%/100%				HN
ETU360 LSIG	MCCB	adj	adj	adj	adj	0%/50%/100%				HQ
ETU550 LSI	MCCB	adj	adj	adj		20/40%...100/160%	yes	yes	standard	JP
ETU556 LSI(G)	MCCB	adj	adj	adj	alarm	20/40%...100/160%	yes	yes	standard	JT
ETU560 LSIG	MCCB	adj	adj	adj	adj	20/40%...100/160%	yes	yes	standard	JQ
ETU820 LI	MCCB	adj		adj		20/40%...100/160%	yes	yes	advanced	KL
ETU830 LIG	MCCB	adj		adj	adj	20/40%...100/160%	yes	yes	advanced	KM
ETU850LSI	MCCB	adj	adj	adj		20/40%...100/160%	yes	yes	advanced	KP
ETU856 LSI(G)	MCCB	adj	adj	adj	alarm	20/40%...100/160%	yes	yes	advanced	KT
ETU860 LSIG	MCCB	adj	adj	adj	adj	20/40%...100/160%	yes	yes	advanced	KQ
ETU310M	MCP			adj						MS
MCS110	MCS			fix						BB

Number of Poles

1 pole	1
2 pole	2
3 pole	3
4 pole	4
1-in-2 pole	5
2-in-3 pole	6

Connection Technology

No wire connector	1
Nut keeper kit, line and load	2
Nut keeper kit, load end only	3
Aluminum wire connector, load end only	4
Wire connector, line end only	5
Wire connector, line and load	6

Regional Specifics (as applicable)

Standard	0
NAVAL/50C	1
100% Rated (3VA6)	2

Auxiliary Releases

Without	A

Auxiliary/Alarm Switches

Without	A0

3VA41 125A Frame, 1-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAB) Catalog Number	M-Interrupting Class (MEAB) Catalog Number	H-Interrupting Class (HEAB) Catalog Number
		TM210 FTFM	
15	3VA4195-4ED14-0AA0①②	3VA4195-5ED14-0AA0①②	3VA4195-6ED14-0AA0①②
20	3VA4120-4ED14-0AA0①②	3VA4120-5ED14-0AA0①②	3VA4120-6ED14-0AA0①②
25	3VA4125-4ED14-0AA0②	3VA4125-5ED14-0AA0②	3VA4125-6ED14-0AA0②
30	3VA4130-4ED14-0AA0②	3VA4130-5ED14-0AA0②	3VA4130-6ED14-0AA0②
35	3VA4135-4ED14-0AA0②	3VA4135-5ED14-0AA0②	3VA4135-6ED14-0AA0②
40	3VA4140-4ED14-0AA0②	3VA4140-5ED14-0AA0②	3VA4140-6ED14-0AA0②
45	3VA4145-4ED14-0AA0②	3VA4145-5ED14-0AA0②	3VA4145-6ED14-0AA0②
50	3VA4150-4ED14-0AA0②	3VA4150-5ED14-0AA0②	3VA4150-6ED14-0AA0②
60	3VA4160-4ED14-0AA0	3VA4160-5ED14-0AA0	3VA4160-6ED14-0AA0
70	3VA4170-4ED14-0AA0	3VA4170-5ED14-0AA0	3VA4170-6ED14-0AA0
80	3VA4180-4ED14-0AA0	3VA4180-5ED14-0AA0	3VA4180-6ED14-0AA0
90	3VA4190-4ED14-0AA0	3VA4190-5ED14-0AA0	3VA4190-6ED14-0AA0
100	3VA4110-4ED14-0AA0	3VA4110-5ED14-0AA0	3VA4110-6ED14-0AA0
110	3VA4111-4ED14-0AA0	3VA4111-5ED14-0AA0	3VA4111-6ED14-0AA0
125	3VA4112-4ED14-0AA0	3VA4112-5ED14-0AA0	3VA4112-6ED14-0AA0

3VA41 125A Frame, 1 in 2-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAB) Catalog Number	M-Interrupting Class (MEAB) Catalog Number	H-Interrupting Class (HEAB) Catalog Number
		TM210 FTFM①	
15	3VA4195-4ED54-0AA0①②	3VA4195-5ED54-0AA0①②	3VA4195-6ED54-0AA0①②
20	3VA4120-4ED54-0AA0①②	3VA4120-5ED54-0AA0①②	3VA4120-6ED54-0AA0①②
25	3VA4125-4ED54-0AA0②	3VA4125-5ED54-0AA0②	3VA4125-6ED54-0AA0②
30	3VA4130-4ED54-0AA0②	3VA4130-5ED54-0AA0②	3VA4130-6ED54-0AA0②
35	3VA4135-4ED54-0AA0②	3VA4135-5ED54-0AA0②	3VA4135-6ED54-0AA0②
40	3VA4140-4ED54-0AA0②	3VA4140-5ED54-0AA0②	3VA4140-6ED54-0AA0②
45	3VA4145-4ED54-0AA0②	3VA4145-5ED54-0AA0②	3VA4145-6ED54-0AA0②
50	3VA4150-4ED54-0AA0②	3VA4150-5ED54-0AA0②	3VA4150-6ED54-0AA0②
60	3VA4160-4ED54-0AA0	3VA4160-5ED54-0AA0	3VA4160-6ED54-0AA0
70	3VA4170-4ED54-0AA0	3VA4170-5ED54-0AA0	3VA4170-6ED54-0AA0
80	3VA4180-4ED54-0AA0	3VA4180-5ED54-0AA0	3VA4180-6ED54-0AA0
90	3VA4190-4ED54-0AA0	3VA4190-5ED54-0AA0	3VA4190-6ED54-0AA0
100	3VA4110-4ED54-0AA0	3VA4110-5ED54-0AA0	3VA4110-6ED54-0AA0
110	3VA4111-4ED54-0AA0	3VA4111-5ED54-0AA0	3VA4111-6ED54-0AA0
125	3VA4112-4ED54-0AA0	3VA4112-5ED54-0AA0	3VA4112-6ED54-0AA0

3VA41 125A Frame, 2-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAB) Catalog Number	M-Interrupting Class (MEAB) Catalog Number	H-Interrupting Class (HEAB) Catalog Number
		TM210 FTFM	
15	3VA4195-4ED24-0AA0①②	3VA4195-5ED24-0AA0①②	3VA4195-6ED24-0AA0①②
20	3VA4120-4ED24-0AA0①②	3VA4120-5ED24-0AA0①②	3VA4120-6ED24-0AA0①②
25	3VA4125-4ED24-0AA0②	3VA4125-5ED24-0AA0②	3VA4125-6ED24-0AA0②
30	3VA4130-4ED24-0AA0②	3VA4130-5ED24-0AA0②	3VA4130-6ED24-0AA0②
35	3VA4135-4ED24-0AA0②	3VA4135-5ED24-0AA0②	3VA4135-6ED24-0AA0②
40	3VA4140-4ED24-0AA0②	3VA4140-5ED24-0AA0②	3VA4140-6ED24-0AA0②
45	3VA4145-4ED24-0AA0②	3VA4145-5ED24-0AA0②	3VA4145-6ED24-0AA0②
50	3VA4150-4ED24-0AA0②	3VA4150-5ED24-0AA0②	3VA4150-6ED24-0AA0②
60	3VA4160-4ED24-0AA0	3VA4160-5ED24-0AA0	3VA4160-6ED24-0AA0
70	3VA4170-4ED24-0AA0	3VA4170-5ED24-0AA0	3VA4170-6ED24-0AA0
80	3VA4180-4ED24-0AA0	3VA4180-5ED24-0AA0	3VA4180-6ED24-0AA0
90	3VA4190-4ED24-0AA0	3VA4190-5ED24-0AA0	3VA4190-6ED24-0AA0
100	3VA4110-4ED24-0AA0	3VA4110-5ED24-0AA0	3VA4110-6ED24-0AA0
110	3VA4111-4ED24-0AA0	3VA4111-5ED24-0AA0	3VA4111-6ED24-0AA0
125	3VA4112-4ED24-0AA0	3VA4112-5ED24-0AA0	3VA4112-6ED24-0AA0

① SWD rated.
② HID rated.

3VA41 125A
1-Pole

3VA41 125A
1 in 2-Pole

3VA41 125A
2-Pole

Ordering Information

The catalog number listed here are for complete, non-interchangable trip circuit breakers with load lugs installed. 3VA4 breakers up to 40A include 3VA9133-0JB10 lugs. 45A to 125A breakers include 3VA9133-0JB11 lugs.

All 3VA41 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

For NAVAL-rated 1, 2 or 3-P thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 40A, 3-pole, NAVAL rated 3VA41 would be catalog number 3VA4140-5ED31-**1**AA0) Not available for 1 in 2-pole breakers.

3VA41 125A Frame, 3-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAB) Catalog Number	M-Interrupting Class (MEAB) Catalog Number	H-Interrupting Class (HEAB) Catalog Number
		TM210 FTFM	
15	3VA4195-4ED34-0AA0①②	3VA4195-5ED34-0AA0①②	3VA4195-6ED34-0AA0①②
20	3VA4120-4ED34-0AA0①②	3VA4120-5ED34-0AA0①②	3VA4120-6ED34-0AA0①②
25	3VA4125-4ED34-0AA0②	3VA4125-5ED34-0AA0②	3VA4125-6ED34-0AA0②
30	3VA4130-4ED34-0AA0②	3VA4130-5ED34-0AA0②	3VA4130-6ED34-0AA0②
35	3VA4135-4ED34-0AA0②	3VA4135-5ED34-0AA0②	3VA4135-6ED34-0AA0②
40	3VA4140-4ED34-0AA0②	3VA4140-5ED34-0AA0②	3VA4140-6ED34-0AA0②
45	3VA4145-4ED34-0AA0②	3VA4145-5ED34-0AA0②	3VA4145-6ED34-0AA0②
50	3VA4150-4ED34-0AA0②	3VA4150-5ED34-0AA0②	3VA4150-6ED34-0AA0②
60	3VA4160-4ED34-0AA0	3VA4160-5ED34-0AA0	3VA4160-6ED34-0AA0
70	3VA4170-4ED34-0AA0	3VA4170-5ED34-0AA0	3VA4170-6ED34-0AA0
80	3VA4180-4ED34-0AA0	3VA4180-5ED34-0AA0	3VA4180-6ED34-0AA0
90	3VA4190-4ED34-0AA0	3VA4190-5ED34-0AA0	3VA4190-6ED34-0AA0
100	3VA4110-4ED34-0AA0	3VA4110-5ED34-0AA0	3VA4110-6ED34-0AA0
110	3VA4111-4ED34-0AA0	3VA4111-5ED34-0AA0	3VA4111-6ED34-0AA0
125	3VA4112-4ED34-0AA0	3VA4112-5ED34-0AA0	3VA4112-6ED34-0AA0

3VA41 125A
3-Pole

Trip Settings for 3VA41

TM210 - FTFM		
I_n (A)	I_r (A)	I_i (A)
15	15	300
20	20	300
25	25	300
30	30	300
35	35	350
40	40	400
45	45	450
50	50	500
60	60	600
70	70	700
80	80	800
90	90	900
100	100	1000
110	110	1100
125	125	1250

Interrupting Ratings for 3VA41

Inter-rupting Class	Breaker Type	Poles	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 120	240	277	347	480Y/ 277V	480	600Y/ 347V	Volts DC 125	250
S	SEAB	1	65		25	14				14	
		2, 3		65			25	25	14		50
M	MEAB	1	85		35	18				25	
		2, 3		85			35	35	18		85
H	HEAB	1	150		65	25				30	
		2, 3		150			65	65	25		100

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA41	1	1 (25.4)	5.1 (129.4)	3.6 (92.2)	0.62	0.28
3VA41	1 in 2	2 (50.8)	5.1 (129.4)	3.6 (92.2)	0.94	0.43
3VA41	2	2 (50.8)	5.1 (129.4)	3.6 (92.2)	1.13	0.51
3VA41	3	3 (76.2)	5.1 (129.4)	3.6 (92.2)	1.64	0.74

Connectors for 75C Wire for 3VA41

Type	Min. cable size	Max. cable size	Catalog No. (kit of 3 lugs)
Steel wrap around (Cu cable only), 1 cable lugs	AWG 14	3/0	3VA9133-0JA11
Aluminum body lug small (Cu/Al cable), 1 cable lug	AWG 14	AWG 8	3VA9133-0JB10③
Aluminum body lug (Cu/Al cable), 1 cable lugs	AWG 8	3/0	3VA9133-0JB11④
Aluminum body lug small with control wire tap (Cu/Al cable), 1 cable lug	AWG 14	AWG 8	3VA9133-0JG10③
Aluminum body lug with control wire tap (Cu/Al cable), 1 cable lugs	AWG 8	3/0	3VA9133-0JG11④
Copper body lug small (Cu cable only), 1 cable lugs	AWG 14	AWG 8	3VA9133-0JD10③
Copper body lug (Cu cable only), 1 cable lugs	AWG 8	2/0	3VA9133-0JD11④
Copper body lug small with control wire tap (Cu cable only), 1 cable lugs	AWG 14	AWG 8	3VA9133-0JK10③
Copper body lug with control wire tap (Cu cable only), 1 cable lugs	AWG 8	2/0	3VA9133-0JK11④

3VA4 Accessories

Description	Catalog Number
Padlocking Device for 3VA4 breaker	3VA9038-0LB11

① SWD rated.
② HID rated.
③ Use these lugs on 15A to 40A breakers.
④ Use these lugs on 45A to 125A breakers.

Internal accessories configuration		3VA4/3VA5 125 A 1 in 2-pole /2-pole	3VA4 125 A 3-pole
Slot No.:		23 22 21	23 22 21 11 12 13
Auxiliary switch	**Type**		
Auxiliary switch	AUX_HQ	x x x	x x x x x x
	AUX_HQ_el	x x x	x x x x x x
	AUX_HP	x	x x
		x	x x
Leading changeover switch	LCS_HQ		x
	LCS_HQ_el		x
	LCS_HP		x
Alarm switch	**Type**		
Trip alarm switch	TAS_HQ	x x	x x x x
	TAS_HQ_el	x x	x x x x
	TAS_HP	x	x x
Short circuit alarm switch	SAS_HQ		
	SAS_HQ_el		
Auxiliary release	**Type**		
Shunt trip flexible	STF	x	x
Shunt trip left	STL	x	x
	STL_el		
Residual current release	RCR		
Undervoltage release	UVR	x	x
Universal release	UNI	x	x
Other			
Cylinder lock (type Ronis)			x

3VA51 125A Frame, 1-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAS) Catalog Number	M-Interrupting Class (MEAS) Catalog Number	H-Interrupting Class (HEAS) Catalog Number
	TM210 FTFM		
15	3VA5195-4ED11-0AA0	3VA5195-5ED11-0AA0	3VA5195-6ED11-0AA0
20	3VA5120-4ED11-0AA0	3VA5120-5ED11-0AA0	3VA5120-6ED11-0AA0
25	3VA5125-4ED11-0AA0	3VA5125-5ED11-0AA0	3VA5125-6ED11-0AA0
30	3VA5130-4ED11-0AA0	3VA5130-5ED11-0AA0	3VA5130-6ED11-0AA0
35	3VA5135-4ED11-0AA0	3VA5135-5ED11-0AA0	3VA5135-6ED11-0AA0
40	3VA5140-4ED11-0AA0	3VA5140-5ED11-0AA0	3VA5140-6ED11-0AA0
45	3VA5145-4ED11-0AA0	3VA5145-5ED11-0AA0	3VA5145-6ED11-0AA0
50	3VA5150-4ED11-0AA0	3VA5150-5ED11-0AA0	3VA5150-6ED11-0AA0
60	3VA5160-4ED11-0AA0	3VA5160-5ED11-0AA0	3VA5160-6ED11-0AA0
70	3VA5170-4ED11-0AA0	3VA5170-5ED11-0AA0	3VA5170-6ED11-0AA0
80	3VA5180-4ED11-0AA0	3VA5180-5ED11-0AA0	3VA5180-6ED11-0AA0
90	3VA5190-4ED11-0AA0	3VA5190-5ED11-0AA0	3VA5190-6ED11-0AA0
100	3VA5110-4ED11-0AA0	3VA5110-5ED11-0AA0	3VA5110-6ED11-0AA0
110	3VA5111-4ED11-0AA0	3VA5111-5ED11-0AA0	3VA5111-6ED11-0AA0
125	3VA5112-4ED11-0AA0	3VA5112-5ED11-0AA0	3VA5112-6ED11-0AA0

3VA51 125A Frame, 1 in 2-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAS) Catalog Number	M-Interrupting Class (MEAS) Catalog Number	H-Interrupting Class (HEAS) Catalog Number
	TM210 FTFM		
15	3VA5195-4ED56-0AA0	3VA5195-5ED56-0AA0	3VA5195-6ED56-0AA0
20	3VA5120-4ED56-0AA0	3VA5120-5ED56-0AA0	3VA5120-6ED56-0AA0
25	3VA5125-4ED56-0AA0	3VA5125-5ED56-0AA0	3VA5125-6ED56-0AA0
30	3VA5130-4ED56-0AA0	3VA5130-5ED56-0AA0	3VA5130-6ED56-0AA0
35	3VA5135-4ED56-0AA0	3VA5135-5ED56-0AA0	3VA5135-6ED56-0AA0
40	3VA5140-4ED56-0AA0	3VA5140-5ED56-0AA0	3VA5140-6ED56-0AA0
45	3VA5145-4ED56-0AA0	3VA5145-5ED56-0AA0	3VA5145-6ED56-0AA0
50	3VA5150-4ED56-0AA0	3VA5150-5ED56-0AA0	3VA5150-6ED56-0AA0
60	3VA5160-4ED56-0AA0	3VA5160-5ED56-0AA0	3VA5160-6ED56-0AA0
70	3VA5170-4ED56-0AA0	3VA5170-5ED56-0AA0	3VA5170-6ED56-0AA0
80	3VA5180-4ED56-0AA0	3VA5180-5ED56-0AA0	3VA5180-6ED56-0AA0
90	3VA5190-4ED56-0AA0	3VA5190-5ED56-0AA0	3VA5190-6ED56-0AA0
100	3VA5110-4ED56-0AA0	3VA5110-5ED56-0AA0	3VA5110-6ED56-0AA0
110	3VA5111-4ED56-0AA0	3VA5111-5ED56-0AA0	3VA5111-6ED56-0AA0
125	3VA5112-4ED56-0AA0	3VA5112-5ED56-0AA0	3VA5112-6ED56-0AA0

3VA51 125A Frame, 2-Pole Thermal-Magnetic Trip Unit

Cont. Amp Rating	S-Interrupting Class (SEAS) Catalog Number	M-Interrupting Class (MEAS) Catalog Number	H-Interrupting Class (HEAS) Catalog Number
	TM210 FTFM①		
15	3VA5195-4ED21-0AA0	3VA5195-5ED21-0AA0	3VA5195-6ED21-0AA0
20	3VA5120-4ED21-0AA0	3VA5120-5ED21-0AA0	3VA5120-6ED21-0AA0
25	3VA5125-4ED21-0AA0	3VA5125-5ED21-0AA0	3VA5125-6ED21-0AA0
30	3VA5130-4ED21-0AA0	3VA5130-5ED21-0AA0	3VA5130-6ED21-0AA0
35	3VA5135-4ED21-0AA0	3VA5135-5ED21-0AA0	3VA5135-6ED21-0AA0
40	3VA5140-4ED21-0AA0	3VA5140-5ED21-0AA0	3VA5140-6ED21-0AA0
45	3VA5145-4ED21-0AA0	3VA5145-5ED21-0AA0	3VA5145-6ED21-0AA0
50	3VA5150-4ED21-0AA0	3VA5150-5ED21-0AA0	3VA5150-6ED21-0AA0
60	3VA5160-4ED21-0AA0	3VA5160-5ED21-0AA0	3VA5160-6ED21-0AA0
70	3VA5170-4ED21-0AA0	3VA5170-5ED21-0AA0	3VA5170-6ED21-0AA0
80	3VA5180-4ED21-0AA0	3VA5180-5ED21-0AA0	3VA5180-6ED21-0AA0
90	3VA5190-4ED21-0AA0	3VA5190-5ED21-0AA0	3VA5190-6ED21-0AA0
100	3VA5110-4ED21-0AA0	3VA5110-5ED21-0AA0	3VA5110-6ED21-0AA0
110	3VA5111-4ED21-0AA0	3VA5111-5ED21-0AA0	3VA5111-6ED21-0AA0
125	3VA5112-4ED21-0AA0	3VA5112-5ED21-0AA0	3VA5112-6ED21-0AA0

① Available with NAVAL/50C ratings.

② Applies to 3VA51 3-Pole

3VA51
125A 1-Pole

3VA51
125A 1 in 2-Pole

3VA51
125A 2-Pole

3VA51 Dimensions

Poles	Dimensions inches (mm) W	H	D	Shipping Weight lbs.	kg
1	1 (25.4)	5.5 (140)	3 (76.5)	0.84	0.38
2	2 (50.8)	5.5 (140)	3 (76.5)	1.37	0.62
3	3 (76.2)	5.5 (140)	3 (76.5)	1.73	0.78
4	4 (101.6)	5.5 (140)	3 (76.5)	2.09	0.95

3VA51 125A Frame, 3-Pole Thermal-Magnetic Trip Unit

Cont. Ampere Rating	S-Interrupting Class (SEAS) Catalog Number	M-Interrupting Class (MEAS) Catalog Number	H-Interrupting Class (HEAS) Catalog Number
		TM210 FTFM①	
15	3VA5195-4ED31-0AA0	3VA5195-5ED31-0AA0	3VA5195-6ED31-0AA0
20	3VA5120-4ED31-0AA0	3VA5120-5ED31-0AA0	3VA5120-6ED31-0AA0
25	3VA5125-4ED31-0AA0	3VA5125-5ED31-0AA0	3VA5125-6ED31-0AA0
30	3VA5130-4ED31-0AA0	3VA5130-5ED31-0AA0	3VA5130-6ED31-0AA0
35	3VA5135-4ED31-0AA0	3VA5135-5ED31-0AA0	3VA5135-6ED31-0AA0
40	3VA5140-4ED31-0AA0	3VA5140-5ED31-0AA0	3VA5140-6ED31-0AA0
45	3VA5145-4ED31-0AA0	3VA5145-5ED31-0AA0	3VA5145-6ED31-0AA0
50	3VA5150-4ED31-0AA0	3VA5150-5ED31-0AA0	3VA5150-6ED31-0AA0
60	3VA5160-4ED31-0AA0	3VA5160-5ED31-0AA0	3VA5160-6ED31-0AA0
70	3VA5170-4ED31-0AA0	3VA5170-5ED31-0AA0	3VA5170-6ED31-0AA0
80	3VA5180-4ED31-0AA0	3VA5180-5ED31-0AA0	3VA5180-6ED31-0AA0
90	3VA5190-4ED31-0AA0	3VA5190-5ED31-0AA0	3VA5190-6ED31-0AA0
100	3VA5110-4ED31-0AA0	3VA5110-5ED31-0AA0	3VA5110-6ED31-0AA0
110	3VA5111-4ED31-0AA0	3VA5111-5ED31-0AA0	3VA5111-6ED31-0AA0
125	3VA5112-4ED31-0AA0	3VA5112-5ED31-0AA0	3VA5112-6ED31-0AA0
		TM230 FTAM①	
15	3VA5195-4EC31-0AA0	3VA5195-6EC31-0AA0	3VA5195-6EC31-0AA0
20	3VA5120-4EC31-0AA0	3VA5120-5EC31-0AA0	3VA5120-6EC31-0AA0
25	3VA5125-4EC31-0AA0	3VA5125-5EC31-0AA0	3VA5125-6EC31-0AA0
30	3VA5130-4EC31-0AA0	3VA5130-5EC31-0AA0	3VA5130-6EC31-0AA0
35	3VA5135-4EC31-0AA0	3VA5135-5EC31-0AA0	3VA5135-6EC31-0AA0
40	3VA5140-4EC31-0AA0	3VA5140-5EC31-0AA0	3VA5140-6EC31-0AA0
45	3VA5145-4EC31-0AA0	3VA5145-5EC31-0AA0	3VA5145-6EC31-0AA0
50	3VA5150-4EC31-0AA0	3VA5150-5EC31-0AA0	3VA5150-6EC31-0AA0
60	3VA5160-4EC31-0AA0	3VA5160-5EC31-0AA0	3VA5160-6EC31-0AA0
70	3VA5170-4EC31-0AA0	3VA5170-5EC31-0AA0	3VA5170-6EC31-0AA0
80	3VA5180-4EC31-0AA0	3VA5180-5EC31-0AA0	3VA5180-6EC31-0AA0
90	3VA5190-4EC31-0AA0	3VA5190-5EC31-0AA0	3VA5190-6EC31-0AA0
100	3VA5110-4EC31-0AA0	3VA5110-5EC31-0AA0	3VA5110-6EC31-0AA0
110	3VA5111-4EC31-0AA0	3VA5111-5EC31-0AA0	3VA5111-6EC31-0AA0
125	3VA5112-4EC31-0AA0	3VA5112-5EC31-0AA0	3VA5112-6EC31-0AA0
		TM240 ATAM	
15	3VA5195-4EF31-0AA0	3VA5195-5EF31-0AA0	3VA5195-6EF31-0AA0
20	3VA5120-4EF31-0AA0	3VA5120-5EF31-0AA0	3VA5120-6EF31-0AA0
30	3VA5130-4EF31-0AA0	3VA5130-5EF31-0AA0	3VA5130-6EF31-0AA0
40	3VA5140-4EF31-0AA0	3VA5140-5EF31-0AA0	3VA5140-6EF31-0AA0
50	3VA5150-4EF31-0AA0	3VA5150-5EF31-0AA0	3VA5150-6EF31-0AA0
60	3VA5160-4EF31-0AA0	3VA5160-5EF31-0AA0	3VA5160-6EF31-0AA0
70	3VA5170-4EF31-0AA0	3VA5170-5EF31-0AA0	3VA5170-6EF31-0AA0
80	3VA5180-4EF31-0AA0	3VA5180-5EF31-0AA0	3VA5180-6EF31-0AA0
100	3VA5110-4EF31-0AA0	3VA5110-5EF31-0AA0	3VA5110-6EF31-0AA0

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

For factory installed nut keepers (3VA91330QA00), change the 12th digit of the catalog number to "2". (For example, a 35KA @480VAC, 40A, 3-pole, 3VA51 with nut keepers would be catalog number 3VA5140-5ED3**2**-0AA0).

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 40A, 3-pole, 3VA51 with lugs would be catalog number 3VA5140-5ED3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

For NAVAL-rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 40A, 3-pole, NAVAL rated 3VA51 would be catalog number 3VA5140-5ED31-**1**AA0)

All 3VA51 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

3VA51 125A 3-Pole

Interrupting Ratings for 3VA51

Inter-rupting Class	Breaker Type	Poles	RMS Symmetrical Amperes (kA)										
			Volts AC (50/60 Hz)							Volts DC			
			120	240	277	347	480Y/ 277V	480	600Y/ 347V	125	250	500②	600②
S	SEAS	1	65		25	14				14			
		2, 3, 4		65			25	25	14	14	50	50	50
M	MEAS	1	85		35	18				25			
		2, 3, 4		85			35	35	18	25	85	85	85
H	HEAS	1	150		50	18				30			
	HEAS	1 in 2	150		65	25				30			
	HEAS	2, 3, 4		150			65	65	25	30	100	100	100

Enclosures (3-pole only)

Nema Type	Catalog Number
1 surface	**3VAE125N1S**
1 flush	**3VAE125N1F**
3R	**3VAE125N3R**
12	**3VAE125N12**
4X (304)	**3VAE125N4X**
4X (316)	**3VAE125N4X316**
Neutral	**N125X**

① Available with NAVAL/50C ratings.

3VA51 125A Frame, 4-Pole Thermal-Magnetic Trip Unit

Cont. Ampere Rating	S-Interrupting Class (SEAS) Catalog Number	M-Interrupting Class (MEAS) Catalog Number	H-Interrupting Class (HEAS) Catalog Number
TM210 FTFM Unprotected Neutral			
15	3VA5195-4ED41-0AA0	3VA5195-5ED41-0AA0	3VA5195-6ED41-0AA0
20	3VA5120-4ED41-0AA0	3VA5120-5ED41-0AA0	3VA5120-6ED41-0AA0
25	3VA5125-4ED41-0AA0	3VA5125-5ED41-0AA0	3VA5125-6ED41-0AA0
30	3VA5130-4ED41-0AA0	3VA5130-5ED41-0AA0	3VA5130-6ED41-0AA0
35	3VA5135-4ED41-0AA0	3VA5135-5ED41-0AA0	3VA5135-6ED41-0AA0
40	3VA5140-4ED41-0AA0	3VA5140-5ED41-0AA0	3VA5140-6ED41-0AA0
45	3VA5145-4ED41-0AA0	3VA5145-5ED41-0AA0	3VA5145-6ED41-0AA0
50	3VA5150-4ED41-0AA0	3VA5150-5ED41-0AA0	3VA5150-6ED41-0AA0
60	3VA5160-4ED41-0AA0	3VA5160-5ED41-0AA0	3VA5160-6ED41-0AA0
70	3VA5170-4ED41-0AA0	3VA5170-5ED41-0AA0	3VA5170-6ED41-0AA0
80	3VA5180-4ED41-0AA0	3VA5180-5ED41-0AA0	3VA5180-6ED41-0AA0
90	3VA5190-4ED41-0AA0	3VA5190-5ED41-0AA0	3VA5190-6ED41-0AA0
100	3VA5110-4ED41-0AA0	3VA5110-5ED41-0AA0	3VA5110-6ED41-0AA0
110	3VA5111-4ED41-0AA0	3VA5111-5ED41-0AA0	3VA5111-6ED41-0AA0
125	3VA5112-4ED41-0AA0	3VA5112-5ED41-0AA0	3VA5112-6ED41-0AA0
TM210 FTFM 100% Neutral			
90	3VA5190-4GD41-0AA0	3VA5190-5GD41-0AA0	3VA5190-6GD41-0AA0
100	3VA5110-4GD41-0AA0	3VA5110-5GD41-0AA0	3VA5110-6GD41-0AA0
110	3VA5111-4GD41-0AA0	3VA5111-5GD41-0AA0	3VA5111-6GD41-0AA0
125	3VA5112-4GD41-0AA0	3VA5112-5GD41-0AA0	3VA5112-6GD41-0AA0
TM230 FTAM Unprotected Neutral			
15	3VA5195-4EC41-0AA0	3VA5195-5EC41-0AA0	3VA5195-6EC41-0AA0
20	3VA5120-4EC41-0AA0	3VA5120-5EC41-0AA0	3VA5120-6EC41-0AA0
25	3VA5125-4EC41-0AA0	3VA5125-5EC41-0AA0	3VA5125-6EC41-0AA0
30	3VA5130-4EC41-0AA0	3VA5130-5EC41-0AA0	3VA5130-6EC41-0AA0
35	3VA5135-4EC41-0AA0	3VA5135-5EC41-0AA0	3VA5135-6EC41-0AA0
40	3VA5140-4EC41-0AA0	3VA5140-5EC41-0AA0	3VA5140-6EC41-0AA0
45	3VA5145-4EC41-0AA0	3VA5145-5EC41-0AA0	3VA5145-6EC41-0AA0
50	3VA5150-4EC41-0AA0	3VA5150-5EC41-0AA0	3VA5150-6EC41-0AA0
60	3VA5160-4EC41-0AA0	3VA5160-5EC41-0AA0	3VA5160-6EC41-0AA0
70	3VA5170-4EC41-0AA0	3VA5170-5EC41-0AA0	3VA5170-6EC41-0AA0
80	3VA5180-4EC41-0AA0	3VA5180-5EC41-0AA0	3VA5180-6EC41-0AA0
90	3VA5190-4EC41-0AA0	3VA5190-5EC41-0AA0	3VA5190-6EC41-0AA0
100	3VA5110-4EC41-0AA0	3VA5110-5EC41-0AA0	3VA5110-6EC41-0AA0
110	3VA5111-4EC41-0AA0	3VA5111-5EC41-0AA0	3VA5111-6EC41-0AA0
125	3VA5112-4EC41-0AA0	3VA5112-5EC41-0AA0	3VA5112-6EC41-0AA0
TM230 FTFM 100% Neutral			
90	3VA5190-4GC41-0AA0	3VA5190-5GC41-0AA0	3VA5190-6GC41-0AA0
100	3VA5110-4GC41-0AA0	3VA5110-5GC41-0AA0	3VA5110-6GC41-0AA0
110	3VA5111-4GC41-0AA0	3VA5111-5GC41-0AA0	3VA5111-6GC41-0AA0
125	3VA5112-4GC41-0AA0	3VA5112-5GC41-0AA0	3VA5112-6GC41-0AA0
TM240 ATAM Unprotected Neutral			
15	3VA5195-4EF41-0AA0	3VA5195-5EF41-0AA0	3VA5195-6EF41-0AA0
20	3VA5120-4EF41-0AA0	3VA5120-5EF41-0AA0	3VA5120-6EF41-0AA0
30	3VA5130-4EF41-0AA0	3VA5130-5EF41-0AA0	3VA5130-6EF41-0AA0
40	3VA5140-4EF41-0AA0	3VA5140-5EF41-0AA0	3VA5140-6EF41-0AA0
50	3VA5150-4EF41-0AA0	3VA5150-5EF41-0AA0	3VA5150-6EF41-0AA0
60	3VA5160-4EF41-0AA0	3VA5160-5EF41-0AA0	3VA5160-6EF41-0AA0
70	3VA5170-4EF41-0AA0	3VA5170-5EF41-0AA0	3VA5170-6EF41-0AA0
80	3VA5180-4EF41-0AA0	3VA5180-5EF41-0AA0	3VA5180-6EF41-0AA0
100	3VA5110-4EF41-0AA0	3VA5110-5EF41-0AA0	3VA5110-6EF41-0AA0
TM240 ATAM 100% Neutral			
100	3VA5110-4GF41-0AA0	3VA5110-5GF41-0AA0	3VA5110-6GF41-0AA0

3VA51 125A 4-Pole

Trip Settings for 3VA51

TM210 - FTFM		
I_n (A)	I_r (A)	I_i (A)
15	15	300
20	20	300
25	25	300
30	30	300
35	35	350
40	40	400
45	45	450
50	50	500
60	60	600
70	70	700
80	80	800
90	90	900
100	100	1000
110	110	1100
125	125	1250

TM230 - FTAM							
I_n (A)	I_r (A)	I_i (A)					
15	15	150	180	210	240	270	300
20	20	150	180	210	240	270	300
25	25	150	180	210	240	270	300
30	30	150	180	210	240	270	300
35	35	175	210	245	280	315	350
40	40	200	240	280	320	360	400
45	45	225	270	315	360	405	450
50	50	250	300	350	400	450	500
60	60	300	360	420	480	540	600
70	70	350	420	490	560	630	700
80	80	400	480	560	640	720	800
90	90	450	540	630	720	810	900
100	100	500	600	700	800	900	1000
110	110	550	660	770	880	990	1100
125	125	625	750	875	1000	1125	1250

TM240 - ATAM								
I_n (A)	I_r (A) 90%	I_r (A) 80%	I_i (A)					
15	14	12	150	180	210	240	270	300
20	18	16	150	180	210	240	270	300
30	27	24	150	180	210	240	270	300
40	36	32	200	240	280	320	360	400
50	45	40	250	300	350	400	450	500
60	54	48	300	360	420	480	540	600
70	63	56	350	420	490	560	630	700
80	72	64	400	480	560	640	720	800
100	90	80	500	600	700	800	900	1000

Connectors for 75C Wire for 3VA51

Type	Min. cable size	Max. cable size	Catalog No. (kit of 3 lugs)	Catalog No. (kit of 4 lugs)
Steel wrap around (Cu cable only), 1 cable lugs	AWG 14	3/0	**3VA9133-0JA11**	**3VA9134-0JA11**
Aluminum body lug small (Cu/Al cable), 1 cable lug①③	AWG 14	AWG 8	**3VA9133-0JB10**	**3VA9134-0JB10**
Aluminum body lug (Cu/Al cable), 1 cable lugs②③	AWG 8	3/0	**3VA9133-0JB11**	**3VA9134-0JB11**
Aluminum body lug small with control wire tap (Cu/Al cable), 1 cable lug①	AWG 14	AWG 8	**3VA9133-0JG10**	**3VA9134-0JG10**
Aluminum body lug with control wire tap (Cu/Al cable), 1 cable lugs②	AWG 8	3/0	**3VA9133-0JG11**	**3VA9134-0JG11**
Aluminum body lug large (Cu/Al cable), 1 cable lugs with 1 extended terminal cover	AWG 4	300 kcmil	**3VA9133-0JJ12**	**3VA9134-0JJ12**
Aluminum body lug large with control wire tap (Cu/Al cable), 1 cable lug and 1 extended terminal cover	AWG 4	300 kcmil	**3VA9133-0JC12**	
Distribution lug, 6 cables (Cu/Al cable), 1 cable lugs with 1 extended terminal cover	AWG 14	AWG 2	**3VA9133-0JF60**	**3VA9134-0JF60**
Copper body lug small (Cu cable only), 1 cable lugs①	AWG 14	AWG 8	**3VA9133-0JD10**	**3VA9134-0JD10**
Copper body lug (Cu cable only), 1 cable lugs②	AWG 8	2/0	**3VA9133-0JD11**	**3VA9134-0JD11**
Copper body lug small with control wire tap (Cu cable only), 1 cable lugs①	AWG 14	AWG 8	**3VA9133-0JK10**	**3VA9134-0JK10**
Copper body lug with control wire tap (Cu cable only), 1 cable lugs②	AWG 8	2/0	**3VA9133-0JK11**	**3VA9134-0JK11**

Internal accessories configuration		3VA4/3VA5 125 A 1 in 2-pole /2-pole	3VA5 125 A 3 & 4-pole
Slot No.:		23 22 21	23 22 21 11 12 13
Auxiliary switch	**Type**		
Auxiliary switch	AUX_HQ	x x x	x x x x x x
	AUX_HQ_el	x x x	x x x x x x
	AUX_HP	x	x x
Leading changeover switch	LCS_HQ	x	x x
	LCS_HQ_el		x
	LCS_HP		x
Alarm switch	**Type**		
Trip alarm switch	TAS_HQ	x x	x x x x
	TAS_HQ_el	x x	x x x x
	TAS_HP	x	x x
Short circuit alarm switch	SAS_HQ		
	SAS_HQ_el		
Auxiliary release	**Type**		
Shunt trip flexible	STF	x	x
Shunt trip left	STL	x	x
	STL_el		
Residual current release	RCR		
Undervoltage release	UVR	x	x
Universal release	UNI	x	x
Other			
Cylinder lock (type Ronis)			x

① Use these lugs on 15A to 40A breakers.
② Use these lugs on 45A to 125A breakers.
③ Standard lug installed at the factory when breaker ordered with a "6" in the 12th position.

3VA61
150A 3-Pole

Ordering Information

The numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

For factory installed nut keepers (3VA92430QA00), change the 12th digit of the catalog number to "2" (required to install a breaker in a panelboard or switchboard that has a provision). (For example, a 35KA @480VAC, 40A, 3-pole, 3VA61 with nut keepers is catalog number 3VA6140-5HL3**2**-0AA0).

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 40A, 3-pole, 3VA61 with lugs is catalog number 3VA6140-5HL3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

All 3VA61 electronic trip circuit breakers are available with 100% ratings. To order, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 40A, 3-pole, 100% rated 3VA61 is catalog number 3VA6140-5HL31-**2**AA0). Requires the use of rated lugs — see lug table below.

Note: 100% option not available for E-interrupting class breakers.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C. They are UL listed for reverse feed applications.

3VA61 150A Frame 3-Pole Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MDAE) Catalog Number	H-Interrupting Class (HDAE) Catalog Number	C-Interrupting Class (CDAE) Catalog Number	L-Interrupting Class (LDAE) Catalog Number	E-Interrupting Class (EDAE) Catalog Number
ETU320 LI with dials					
40	3VA6140-5HL31-0AA0	3VA6140-6HL31-0AA0	3VA6140-7HL31-0AA0	3VA6140-8HL31-0AA0	—
60	—	—	—	—	3VA6160-0HL31-0AA0
100	3VA6110-5HL31-0AA0	3VA6110-6HL31-0AA0	3VA6110-7HL31-0AA0	3VA6110-8HL31-0AA0	3VA6110-0HL31-0AA0
150	3VA6115-5HL31-0AA0	3VA6115-6HL31-0AA0	3VA6115-7HL31-0AA0	3VA6115-8HL31-0AA0	3VA6115-0HL31-0AA0
ETU330 LIG with dials					
40	3VA6140-5HM31-0AA0	3VA6140-6HM31-0AA0	3VA6140-7HM31-0AA0	3VA6140-8HM31-0AA0	—
60	—	—	—	—	3VA6160-0HM31-0AA0
100	3VA6110-5HM31-0AA0	3VA6110-6HM31-0AA0	3VA6110-7HM31-0AA0	3VA6110-8HM31-0AA0	3VA6110-0HM31-0AA0
150	3VA6115-5HM31-0AA0	3VA6115-6HM31-0AA0	3VA6115-7HM31-0AA0	3VA6115-8HM31-0AA0	3VA6115-0HM31-0AA0
ETU350 LSI with dials					
40	3VA6140-5HN31-0AA0	3VA6140-6HN31-0AA0	3VA6140-7HN31-0AA0	3VA6140-8HN31-0AA0	—
60	—	—	—	—	3VA6160-0HN31-0AA0
100	3VA6110-5HN31-0AA0	3VA6110-6HN31-0AA0	3VA6110-7HN31-0AA0	3VA6110-8HN31-0AA0	3VA6110-0HN31-0AA0
150	3VA6115-5HN31-0AA0	3VA6115-6HN31-0AA0	3VA6115-7HN31-0AA0	3VA6115-8HN31-0AA0	3VA6115-0HN31-0AA0
ETU550 LSI with LCD					
40	3VA6140-5JP31-0AA0	3VA6140-6JP31-0AA0	3VA6140-7JP31-0AA0	3VA6140-8JP31-0AA0	—
100	3VA6110-5JP31-0AA0	3VA6110-6JP31-0AA0	3VA6110-7JP31-0AA0	3VA6110-8JP31-0AA0	—
150	3VA6115-5JP31-0AA0	3VA6115-6JP31-0AA0	3VA6115-7JP31-0AA0	3VA6115-8JP31-0AA0	—
ETU556 LSI(G Alarm) with LCD					
40	3VA6140-5JT31-0AA0	3VA6140-6JT31-0AA0	3VA6140-7JT31-0AA0	3VA6140-8JT31-0AA0	—
100	3VA6110-5JT31-0AA0	3VA6110-6JT31-0AA0	3VA6110-7JT31-0AA0	3VA6110-8JT31-0AA0	—
150	3VA6115-5JT31-0AA0	3VA6115-6JT31-0AA0	3VA6115-7JT31-0AA0	3VA6115-8JT31-0AA0	—
ETU560 LSIG with LCD					
40	3VA6140-5JQ31-0AA0	3VA6140-6JQ31-0AA0	3VA6140-7JQ31-0AA0	3VA6140-8JQ31-0AA0	—
100	3VA6110-5JQ31-0AA0	3VA6110-6JQ31-0AA0	3VA6110-7JQ31-0AA0	3VA6110-8JQ31-0AA0	—
150	3VA6115-5JQ31-0AA0	3VA6115-6JQ31-0AA0	3VA6115-7JQ31-0AA0	3VA6115-8JQ31-0AA0	—
ETU820 LI LCD with Metering					
40	3VA6140-5KL31-0AA0	3VA6140-6KL31-0AA0	3VA6140-7KL31-0AA0	3VA6140-8KL31-0AA0	—
100	3VA6110-5KL31-0AA0	3VA6110-6KL31-0AA0	3VA6110-7KL31-0AA0	3VA6110-8KL31-0AA0	—
150	3VA6115-5KL31-0AA0	3VA6115-6KL31-0AA0	3VA6115-7KL31-0AA0	3VA6115-8KL31-0AA0	—
ETU830 LIG with LCD and Metering					
40	3VA6140-5KM31-0AA0	3VA6140-6KM31-0AA0	3VA6140-7KM31-0AA0	3VA6140-8KM31-0AA0	—
100	3VA6110-5KM31-0AA0	3VA6110-6KM31-0AA0	3VA6110-7KM31-0AA0	3VA6110-8KM31-0AA0	—
150	3VA6115-5KM31-0AA0	3VA6115-6KM31-0AA0	3VA6115-7KM31-0AA0	3VA6115-8KM31-0AA0	—
ETU850 LSI with LCD and Metering					
40	3VA6140-5KP31-0AA0	3VA6140-6KP31-0AA0	3VA6140-7KP31-0AA0	3VA6140-8KP31-0AA0	—
100	3VA6110-5KP31-0AA0	3VA6110-6KP31-0AA0	3VA6110-7KP31-0AA0	3VA6110-8KP31-0AA0	—
150	3VA6115-5KP31-0AA0	3VA6115-6KP31-0AA0	3VA6115-7KP31-0AA0	3VA6115-8KP31-0AA0	—
ETU856 LSI(G Alarm) with LCD and Metering					
40	3VA6140-5KT31-0AA0	3VA6140-6KT31-0AA0	3VA6140-7KT31-0AA0	3VA6140-8KT31-0AA0	—
60	—	—	—	—	3VA6160-0KT31-0AA0
100	3VA6110-5KT31-0AA0	3VA6110-6KT31-0AA0	3VA6110-7KT31-0AA0	3VA6110-8KT31-0AA0	3VA6110-0KT31-0AA0
150	3VA6115-5KT31-0AA0	3VA6115-6KT31-0AA0	3VA6115-7KT31-0AA0	3VA6115-8KT31-0AA0	3VA6115-0KT31-0AA0
ETU860 LSIG with LCD and Metering					
40	3VA6140-5KQ31-0AA0	3VA6140-6KQ31-0AA0	3VA6140-7KQ31-0AA0	3VA6140-8KQ31-0AA0	—
60	—	—	—	—	3VA6160-0KQ31-0AA0
100	3VA6110-5KQ31-0AA0	3VA6110-6KQ31-0AA0	3VA6110-7KQ31-0AA0	3VA6110-8KQ31-0AA0	3VA6110-0KQ31-0AA0
150	3VA6115-5KQ31-0AA0	3VA6115-6KQ31-0AA0	3VA6115-7KQ31-0AA0	3VA6115-8KQ31-0AA0	3VA6115-0KQ31-0AA0

3VA61
150A 4-Pole

3VA61 150A Frame 4-Pole Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MDAE) Catalog Number	H-Interrupting Class (HDAE) Catalog Number	C-Interrupting Class (CDAE) Catalog Number	L-Interrupting Class (LDAE) Catalog Number	E-Interrupting Class (EDAE) Catalog Number
ETU320 LI with dials					
40	3VA6140-5HL41-0AA0	3VA6140-6HL41-0AA0	3VA6140-7HL41-0AA0	3VA6140-8HL41-0AA0	—
60	—	—	—	—	3VA6160-0HL41-0AA0
100	3VA6110-5HL41-0AA0	3VA6110-6HL41-0AA0	3VA6110-7HL41-0AA0	3VA6110-8HL41-0AA0	3VA6110-0HL41-0AA0
150	3VA6115-5HL41-0AA0	3VA6115-6HL41-0AA0	3VA6115-7HL41-0AA0	3VA6115-8HL41-0AA0	3VA6115-0HL41-0AA0
ETU330 LIG with dials					
40	3VA6140-5HM41-0AA0	3VA6140-6HM41-0AA0	3VA6140-7HM41-0AA0	3VA6140-8HM41-0AA0	—
60	—	—	—	—	3VA6160-0HM41-0AA0
100	3VA6110-5HM41-0AA0	3VA6110-6HM41-0AA0	3VA6110-7HM41-0AA0	3VA6110-8HM41-0AA0	3VA6110-0HM41-0AA0
150	3VA6115-5HM41-0AA0	3VA6115-6HM41-0AA0	3VA6115-7HM41-0AA0	3VA6115-8HM41-0AA0	3VA6115-0HM41-0AA0
ETU350 LSI with dials					
40	3VA6140-5HN41-0AA0	3VA6140-6HN41-0AA0	3VA6140-7HN41-0AA0	3VA6140-8HN41-0AA0	—
60	—	—	—	—	3VA6160-0HN41-0AA0
100	3VA6110-5HN41-0AA0	3VA6110-6HN41-0AA0	3VA6110-7HN41-0AA0	3VA6110-8HN41-0AA0	3VA6110-0HN41-0AA0
150	3VA6115-5HN41-0AA0	3VA6115-6HN41-0AA0	3VA6115-7HN41-0AA0	3VA6115-8HN41-0AA0	3VA6115-0HN41-0AA0
ETU550 LSI with LCD					
40	3VA6140-5JP41-0AA0	3VA6140-6JP41-0AA0	3VA6140-7JP41-0AA0	3VA6140-8JP41-0AA0	—
100	3VA6110-5JP41-0AA0	3VA6110-6JP41-0AA0	3VA6110-7JP41-0AA0	3VA6110-8JP41-0AA0	—
150	3VA6115-5JP41-0AA0	3VA6115-6JP41-0AA0	3VA6115-7JP41-0AA0	3VA6115-8JP41-0AA0	—
ETU556 LSI(G Alarm) with LCD					
40	3VA6140-5JT41-0AA0	3VA6140-6JT41-0AA0	3VA6140-7JT41-0AA0	3VA6140-8JT41-0AA0	—
100	3VA6110-5JT41-0AA0	3VA6110-6JT41-0AA0	3VA6110-7JT41-0AA0	3VA6110-8JT41-0AA0	—
150	3VA6115-5JT41-0AA0	3VA6115-6JT41-0AA0	3VA6115-7JT41-0AA0	3VA6115-8JT41-0AA0	—
ETU560 LSIG with LCD					
40	3VA6140-5JQ41-0AA0	3VA6140-6JQ41-0AA0	3VA6140-7JQ41-0AA0	3VA6140-8JQ41-0AA0	—
100	3VA6110-5JQ41-0AA0	3VA6110-6JQ41-0AA0	3VA6110-7JQ41-0AA0	3VA6110-8JQ41-0AA0	—
150	3VA6115-5JQ41-0AA0	3VA6115-6JQ41-0AA0	3VA6115-7JQ41-0AA0	3VA6115-8JQ41-0AA0	—
ETU820 LI LCD with Metering					
40	3VA6140-5KL41-0AA0	3VA6140-6KL41-0AA0	3VA6140-7KL41-0AA0	3VA6140-8KL41-0AA0	—
100	3VA6110-5KL41-0AA0	3VA6110-6KL41-0AA0	3VA6110-7KL41-0AA0	3VA6110-8KL41-0AA0	—
150	3VA6115-5KL41-0AA0	3VA6115-6KL41-0AA0	3VA6115-7KL41-0AA0	3VA6115-8KL41-0AA0	—
ETU830 LIG with LCD and Metering					
40	3VA6140-5KM41-0AA0	3VA6140-6KM41-0AA0	3VA6140-7KM41-0AA0	3VA6140-8KM41-0AA0	—
100	3VA6110-5KM41-0AA0	3VA6110-6KM41-0AA0	3VA6110-7KM41-0AA0	3VA6110-8KM41-0AA0	—
150	3VA6115-5KM41-0AA0	3VA6115-6KM41-0AA0	3VA6115-7KM41-0AA0	3VA6115-8KM41-0AA0	—
ETU850 LSI with LCD and Metering					
40	3VA6140-5KP41-0AA0	3VA6140-6KP41-0AA0	3VA6140-7KP41-0AA0	3VA6140-8KP41-0AA0	—
100	3VA6110-5KP41-0AA0	3VA6110-6KP41-0AA0	3VA6110-7KP41-0AA0	3VA6110-8KP41-0AA0	—
150	3VA6115-5KP41-0AA0	3VA6115-6KP41-0AA0	3VA6115-7KP41-0AA0	3VA6115-8KP41-0AA0	—
ETU856 LSI(G Alarm) with LCD and Metering					
40	3VA6140-5KT41-0AA0	3VA6140-6KT41-0AA0	3VA6140-7KT41-0AA0	3VA6140-8KT41-0AA0	—
60	—	—	—	—	3VA6160-0KT41-0AA0
100	3VA6110-5KT41-0AA0	3VA6110-6KT41-0AA0	3VA6110-7KT41-0AA0	3VA6110-8KT41-0AA0	3VA6110-0KT41-0AA0
150	3VA6115-5KT41-0AA0	3VA6115-6KT41-0AA0	3VA6115-7KT41-0AA0	3VA6115-8KT41-0AA0	3VA6115-0KT41-0AA0
ETU860 LSIG with LCD and Metering					
40	3VA6140-5KQ41-0AA0	3VA6140-6KQ41-0AA0	3VA6140-7KQ41-0AA0	3VA6140-8KQ41-0AA0	—
60	—	—	—	—	3VA6160-0KQ41-0AA0
100	3VA6110-5KQ41-0AA0	3VA6110-6KQ41-0AA0	3VA6110-7KQ41-0AA0	3VA6110-8KQ41-0AA0	3VA6110-0KQ41-0AA0
150	3VA6115-5KQ41-0AA0	3VA6115-6KQ41-0AA0	3VA6115-7KQ41-0AA0	3VA6115-8KQ41-0AA0	3VA6115-0KQ41-0AA0

Connectors for 75C wire for 3VA61

Type	Minimum cable size	Maximum cable size	Part Number (kit of 3 lugs)	Part Number (kit of 4 lugs)
Steel Wrap around (Cu cable only) single cable lugs②	AWG 10	3/0	**3VA9143-0JA12**	**3VA9144-0JA12**
	AWG 4	350 kcmil	**3VA9243-0JA12**	**3VA9244-0JA12**
Aluminum Body Lug (Cu/Al cable) single cable lugs①	AWG 14	1/0	**3VA9143-0JB11**	**3VA9144-0JB11**
	AWG 6	350 kcmil	**3VA9243-0JB12**④	**3VA9244-0JB12**④
Aluminum body lug with control wire tap (Cu/Al cable) single cable lugs①	AWG 14	1/0	**3VA9143-0JG11**③	**3VA9144-0JG11**③
	AWG 6	350 kcmil	**3VA9243-0JG12**	**3VA9244-0JG12**
Aluminum body lug large (Cu/Al cable) single cable lugs and 1 ext'd terminal cover①	AWG 2	350 kcmil	**3VA9243-0JJ13**	**3VA9244-0JJ13**
Aluminum body lug large with control wire tap (Cu/Al cable) single cable lugs and 1 extended terminal cover①	AWG 2	350 kcmil	**3VA9243-0JC13**	**3VA9244-0JC13**
Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover①	AWG 4	300 kcmil	**3VA9243-0JJ22**	**3VA9244-0JJ22**
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover①	AWG 4	300 kcmil	**3VA9243-0JC22**	**3VA9244-0JC22**
Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover②	AWG 14	AWG 2	**3VA9243-0JF60**	**3VA9244-0JF60**
Copper body lug (Cu cable only) single cable lugs kit of 3 single lugs①	AWG 14	1/0	**3VA9143-0JD11**	**3VA9144-0JD11**
	AWG 6	350 kcmil	**3VA9243-0JD12**	**3VA9244-0JD12**
Copper body lug (Cu cable only) with control wire tap single cable lugs①	AWG 14	1/0	**3VA9143-0JK11**③	**3VA9144-0JK11**③
	AWG 6	350 kcmil	**3VA9243-0JK12**	**3VA9244-0JK12**

Interrupting Ratings for 3VA61

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MDAE	100	35	35	18	18
H	HDAE	100	65	65	22	22
C	CDAE	200	100	100	35	35
L	LDAE	200	150	150	50	50
E	EDAE	—	200	200	100	100

Enclosures (3-pole only)

Nema Type	Catalog Number
1 surface	**3VAE250N1S**
1 flush	**3VAE250N1F**
3R	**3VAE250N3R**
12	**3VAE250N12**
4X (304)	**3VAE250N4X**
4X (316)	**3VAE250N4X316**
Neutral	**N250X**
200% Neutral	**N2250X**

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA61	3	4.1 (105)	7.8 (198)	3.4 (86)	5.5	2.5
3VA61	4	5.5 (140)	7.8 (198)	3.4 (86)	7.1	3.2

① Meets requirements for 100% rated breakers up to 150A.
② Meets requirements for 100% rated breakers up to 100A.
③ Limited to 150A including the control wire tap.
④ Standard lug installed at the factory when breaker ordered with a "6" in the 12th position.

Trip Settings for 3VA61

ETU320-LI, ETU330-LIG, ETU350-LSI

Continuous Amperage	LI, LIG, LSI			LSI		LIG	LI, LIG, LSI 4P only
I_n (Amp)	I_r(Amp) (L)	t_{Id} (sec) (L)	I_i (Amp) (I)①	I_{sd}= xI_r (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	I_N=xI_r (Amp)
40	15 - 40	0.5 - 17	60-480	1.5 - 10	0.08 - 0.4	15 - 40	1 / OFF
100	40 - 100	0.5 - 17	150-1200	1.5 - 10		20 - 100	0.5 - 1 / OFF
150	60 - 150	0.5 - 17	225-1500	1.5 - 10		30 - 150	0.5 - 1 / OFF

① I_i for ETU350 is fixed at the maximum level shown in table.

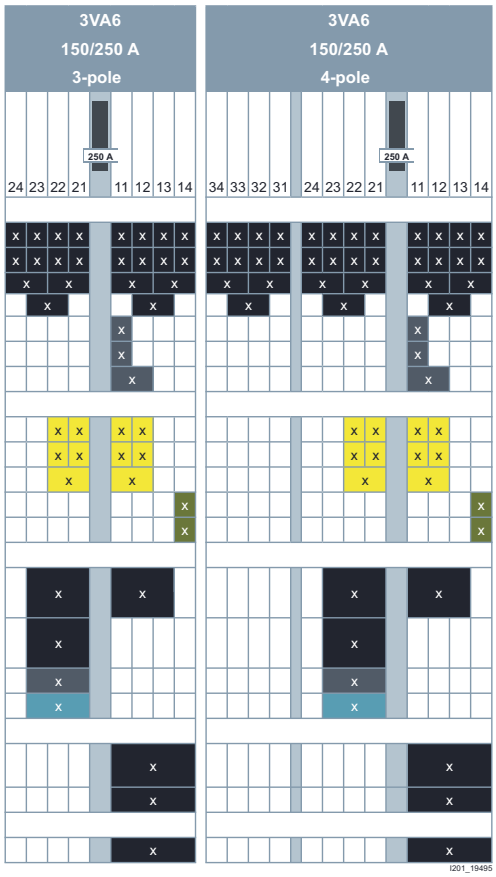
ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU830-LIG, ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

Continuous Amperage	LI, LIG, LSI, LSIG, LSI(G)			LSI, LSIG, LSI(G)		LIG, LSIG, LSI(G)		LSI 3P with External CT	LI, LIG, LSI, LSIG, LSI(G) 4P only
I_n (Amp)	I_r(Amp) (L)②	t_{Id} (sec) (L)	I_i (Amp) (I)	I_{sd} (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (G)	I_N=xI_r (Amp)	I_N (Amp)
40	15 - 40	0.5 - 25	60-480	24 - 400	0.05 - 0.5	15 - 40	0.05 - 0.8	15 - 64 / OFF	15 - 64 / OFF
100	40 - 100	0.5 - 25	150-1200	60 - 1000		20 - 100		20 - 160 / OFF	20 - 150 / OFF
150	60 - 150	0.5 - 20	225-1500	90 - 1500		30 - 150		30 - 240 / OFF	30 - 150 / OFF

② Adjustable in steps of 1A.

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at **https://digitalcontentcenter.compas.siemens-info.com/SIE_IM_3VA6_Systems_Manual.pdf**

Internal accessories **Optional equipment**	Slot No.:
Auxiliary switch	**Type**
Auxiliary switch	AUX_HQ
	AUX_HQ_el
	AUX_HP
Leading changeover switch	LCS_HQ
	LCS_HQ_el
	LCS_HP
Alarm switch	**Type**
Trip alarm switch	TAS_HQ
	TAS_HQ_el
	TAS_HP
Electrical alarm switch	EAS_HQ
	EAS_HQ_el
Auxiliary release	**Type**
Shunt trip flexible	STF
Shunt trip left	STL
Undervoltage release	UVR
Universal release	UNI
ETU/communication	**Type**
Communication module Breaker data server	COM060
24 V module	
Other	
Cylinder lock (type Ronis)	



See page 7-95 for internal accessory part numbers.

3VA52 250 A, 2-Pole in 3-Pole Frame Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MFAS) Catalog Number	H-Interrupting Class (HFAS) Catalog Number	C-Interrupting Class (CFAS) Catalog Number
		TM210 FTFM	
40	**3VA5240-5ED61-0AA0**	**3VA5240-6ED61-0AA0**	**3VA5240-7ED61-0AA0**
45	**3VA5245-5ED61-0AA0**	**3VA5245-6ED61-0AA0**	**3VA5245-7ED61-0AA0**
50	**3VA5250-5ED61-0AA0**	**3VA5250-6ED61-0AA0**	**3VA5250-7ED61-0AA0**
60	**3VA5260-5ED61-0AA0**	**3VA5260-6ED61-0AA0**	**3VA5260-7ED61-0AA0**
70	**3VA5270-5ED61-0AA0**	**3VA5270-6ED61-0AA0**	**3VA5270-7ED61-0AA0**
80	**3VA5280-5ED61-0AA0**	**3VA5280-6ED61-0AA0**	**3VA5280-7ED61-0AA0**
90	**3VA5290-5ED61-0AA0**	**3VA5290-6ED61-0AA0**	**3VA5290-7ED61-0AA0**
100	**3VA5210-5ED61-0AA0**	**3VA5210-6ED61-0AA0**	**3VA5210-7ED61-0AA0**
110	**3VA5211-5ED61-0AA0**	**3VA5211-6ED61-0AA0**	**3VA5211-7ED61-0AA0**
125	**3VA5212-5ED61-0AA0**	**3VA5212-6ED61-0AA0**	**3VA5212-7ED61-0AA0**
150	**3VA5215-5ED61-0AA0**	**3VA5215-6ED61-0AA0**	**3VA5215-7ED61-0AA0**
175	**3VA5217-5ED61-0AA0**	**3VA5217-6ED61-0AA0**	**3VA5217-7ED61-0AA0**
200	**3VA5220-5ED61-0AA0**	**3VA5220-6ED61-0AA0**	**3VA5220-7ED61-0AA0**
225	**3VA5222-5ED61-0AA0**	**3VA5222-6ED61-0AA0**	**3VA5222-7ED61-0AA0**
250	**3VA5225-5ED61-0AA0**	**3VA5225-6ED61-0AA0**	**3VA5225-7ED61-0AA0**
		TM230 FTAM	
70	**3VA5270-5EC61-0AA0**	**3VA5270-6EC61-0AA0**	**3VA5270-7EC61-0AA0**
80	**3VA5280-5EC61-0AA0**	**3VA5280-6EC61-0AA0**	**3VA5280-7EC61-0AA0**
90	**3VA5290-5EC61-0AA0**	**3VA5290-6EC61-0AA0**	**3VA5290-7EC61-0AA0**
100	**3VA5210-5EC61-0AA0**	**3VA5210-6EC61-0AA0**	**3VA5210-7EC61-0AA0**
110	**3VA5211-5EC61-0AA0**	**3VA5211-6EC61-0AA0**	**3VA5211-7EC61-0AA0**
125	**3VA5212-5EC61-0AA0**	**3VA5212-6EC61-0AA0**	**3VA5212-7EC61-0AA0**
150	**3VA5215-5EC61-0AA0**	**3VA5215-6EC61-0AA0**	**3VA5215-7EC61-0AA0**
175	**3VA5217-5EC61-0AA0**	**3VA5217-6EC61-0AA0**	**3VA5217-7EC61-0AA0**
200	**3VA5220-5EC61-0AA0**	**3VA5220-6EC61-0AA0**	**3VA5220-7EC61-0AA0**
225	**3VA5222-5EC61-0AA0**	**3VA5222-6EC61-0AA0**	**3VA5222-7EC61-0AA0**
250	**3VA5225-5EC61-0AA0**	**3VA5225-6EC61-0AA0**	**3VA5225-7EC61-0AA0**

3VA52 250A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

All 3VA52 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA52	2(3-) pole	4.1 (105)	7.3 (185)	3.3 (83)	4.1	1.9
3VA52	3-pole	4.1 (105)	7.3 (185)	3.3 (83)	4.5	2.1

Enclosures (3-pole only)

Nema Type	Catalog Number
1 surface	**3VAE250N1S**
1 flush	**3VAE250N1F**
3R	**3VAE250N3R**
12	**3VAE250N12**
4X (304)	**3VAE250N4X**
4X (316)	**3VAE250N4X316**
Neutral	**N250X**
200% Neutral	**N2250X**

3VA52 250 A Frame, 3-Pole Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MFAS) Catalog Number	H-Interrupting Class (HFAS) Catalog Number	C-Interrupting Class (CFAS) Catalog Number
	TM210 FTFM①		
40	3VA5240-5ED31-0AA0	3VA5240-6ED31-0AA0	3VA5240-7ED31-0AA0
45	3VA5245-5ED31-0AA0	3VA5245-6ED31-0AA0	3VA5245-7ED31-0AA0
50	3VA5250-5ED31-0AA0	3VA5250-6ED31-0AA0	3VA5250-7ED31-0AA0
60	3VA5260-5ED31-0AA0	3VA5260-6ED31-0AA0	3VA5260-7ED31-0AA0
70	3VA5270-5ED31-0AA0	3VA5270-6ED31-0AA0	3VA5270-7ED31-0AA0
80	3VA5280-5ED31-0AA0	3VA5280-6ED31-0AA0	3VA5280-7ED31-0AA0
90	3VA5290-5ED31-0AA0	3VA5290-6ED31-0AA0	3VA5290-7ED31-0AA0
100	3VA5210-5ED31-0AA0	3VA5210-6ED31-0AA0	3VA5210-7ED31-0AA0
110	3VA5211-5ED31-0AA0	3VA5211-6ED31-0AA0	3VA5211-7ED31-0AA0
125	3VA5212-5ED31-0AA0	3VA5212-6ED31-0AA0	3VA5212-7ED31-0AA0
150	3VA5215-5ED31-0AA0	3VA5215-6ED31-0AA0	3VA5215-7ED31-0AA0
175	3VA5217-5ED31-0AA0	3VA5217-6ED31-0AA0	3VA5217-7ED31-0AA0
200	3VA5220-5ED31-0AA0	3VA5220-6ED31-0AA0	3VA5220-7ED31-0AA0
225	3VA5222-5ED31-0AA0	3VA5222-6ED31-0AA0	3VA5222-7ED31-0AA0
250	3VA5225-5ED31-0AA0	3VA5225-6ED31-0AA0	3VA5225-7ED31-0AA0
	TM230 FTAM①		
70	3VA5270-5EC31-0AA0	3VA5270-6EC31-0AA0	3VA5270-7EC31-0AA0
80	3VA5280-5EC31-0AA0	3VA5280-6EC31-0AA0	3VA5280-7EC31-0AA0
90	3VA5290-5EC31-0AA0	3VA5290-6EC31-0AA0	3VA5290-7EC31-0AA0
100	3VA5210-5EC31-0AA0	3VA5210-6EC31-0AA0	3VA5210-7EC31-0AA0
110	3VA5211-5EC31-0AA0	3VA5211-6EC31-0AA0	3VA5211-7EC31-0AA0
125	3VA5212-5EC31-0AA0	3VA5212-6EC31-0AA0	3VA5212-7EC31-0AA0
150	3VA5215-5EC31-0AA0	3VA5215-6EC31-0AA0	3VA5215-7EC31-0AA0
175	3VA5217-5EC31-0AA0	3VA5217-6EC31-0AA0	3VA5217-7EC31-0AA0
200	3VA5220-5EC31-0AA0	3VA5220-6EC31-0AA0	3VA5220-7EC31-0AA0
225	3VA5222-5EC31-0AA0	3VA5222-6EC31-0AA0	3VA5222-7EC31-0AA0
250	3VA5225-5EC31-0AA0	3VA5225-6EC31-0AA0	3VA5225-7EC31-0AA0
	TM240 ATAM		
70	3VA5270-5EF31-0AA0	3VA5270-6EF31-0AA0	3VA5270-7EF31-0AA0
80	3VA5280-5EF31-0AA0	3VA5280-6EF31-0AA0	3VA5280-7EF31-0AA0
100	3VA5210-5EF31-0AA0	3VA5210-6EF31-0AA0	3VA5210-7EF31-0AA0
125	3VA5212-5EF31-0AA0	3VA5212-6EF31-0AA0	3VA5212-7EF31-0AA0
150	3VA5215-5EF31-0AA0	3VA5215-6EF31-0AA0	3VA5215-7EF31-0AA0
175	3VA5217-5EF31-0AA0	3VA5217-6EF31-0AA0	3VA5217-7EF31-0AA0
200	3VA5220-5EF31-0AA0	3VA5220-6EF31-0AA0	3VA5220-7EF31-0AA0
250	3VA5225-5EF31-0AA0	3VA5225-6EF31-0AA0	3VA5225-7EF31-0AA0

Enclosures (3-pole only)

Nema Type	Catalog Number
1 surface	3VAE250N1S
1 flush	3VAE250N1F
3R	3VAE250N3R
12	3VAE250N12
4X (304)	3VAE250N4X
4X (316)	3VAE250N4X316
Neutral	N250X
200% Neutral	N2250X

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA52	2(3-) pole	4.1 (105)	7.3 (185)	3.3 (83)	4.1	1.9
3VA52	3-pole	4.1 (105)	7.3 (185)	3.3 (83)	4.5	2.1

① Available with NAVAL/50C ratings.

3VA52 250A Frame, 4-pole Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MFAS) Catalog Number	H-Interrupting Class (HFAS) Catalog Number	C-Interrupting Class (CFAS) Catalog Number
		TM210 FTFM	
40	3VA5240-5ED41-0AA0	3VA5240-6ED41-0AA0	3VA5240-7ED41-0AA0
45	3VA5245-5ED41-0AA0	3VA5245-6ED41-0AA0	3VA5245-7ED41-0AA0
50	3VA5250-5ED41-0AA0	3VA5250-6ED41-0AA0	3VA5250-7ED41-0AA0
60	3VA5260-5ED41-0AA0	3VA5260-6ED41-0AA0	3VA5260-7ED41-0AA0
70	3VA5270-5ED41-0AA0	3VA5270-6ED41-0AA0	3VA5270-7ED41-0AA0
80	3VA5280-5ED41-0AA0	3VA5280-6ED41-0AA0	3VA5280-7ED41-0AA0
90	3VA5290-5ED41-0AA0	3VA5290-6ED41-0AA0	3VA5290-7ED41-0AA0
100	3VA5210-5ED41-0AA0	3VA5210-6ED41-0AA0	3VA5210-7ED41-0AA0
110	3VA5211-5ED41-0AA0	3VA5211-6ED41-0AA0	3VA5211-7ED41-0AA0
125	3VA5212-5ED41-0AA0	3VA5212-6ED41-0AA0	3VA5212-7ED41-0AA0
150	3VA5215-5ED41-0AA0	3VA5215-6ED41-0AA0	3VA5215-7ED41-0AA0
175	3VA5217-5ED41-0AA0	3VA5217-6ED41-0AA0	3VA5217-7ED41-0AA0
200	3VA5220-5ED41-0AA0	3VA5220-6ED41-0AA0	3VA5220-7ED41-0AA0
225	3VA5222-5ED41-0AA0	3VA5222-6ED41-0AA0	3VA5222-7ED41-0AA0
250	3VA5225-5ED41-0AA0	3VA5225-6ED41-0AA0	3VA5225-7ED41-0AA0
		TM210 FTFM 100% Neutral	
90	3VA5290-5GD41-0AA0	3VA5290-6GD41-0AA0	3VA5290-7GD41-0AA0
100	3VA5210-5GD41-0AA0	3VA5210-6GD41-0AA0	3VA5210-7GD41-0AA0
110	3VA5211-5GD41-0AA0	3VA5211-6GD41-0AA0	3VA5211-7GD41-0AA0
125	3VA5212-5GD41-0AA0	3VA5212-6GD41-0AA0	3VA5212-7GD41-0AA0
150	3VA5215-5GD41-0AA0	3VA5215-6GD41-0AA0	3VA5215-7GD41-0AA0
175	3VA5217-5GD41-0AA0	3VA5217-6GD41-0AA0	3VA5217-7GD41-0AA0
200	3VA5220-5GD41-0AA0	3VA5220-6GD41-0AA0	3VA5220-7GD41-0AA0
225	3VA5222-5GD41-0AA0	3VA5222-6GD41-0AA0	3VA5222-7GD41-0AA0
250	3VA5225-5GD41-0AA0	3VA5225-6GD41-0AA0	3VA5225-7GD41-0AA0
		TM230 FTAM	
70	3VA5270-5EC41-0AA0	3VA5270-6EC41-0AA0	3VA5270-7EC41-0AA0
80	3VA5280-5EC41-0AA0	3VA5280-6EC41-0AA0	3VA5280-7EC41-0AA0
90	3VA5290-5EC41-0AA0	3VA5290-6EC41-0AA0	3VA5290-7EC41-0AA0
100	3VA5210-5EC41-0AA0	3VA5210-6EC41-0AA0	3VA5210-7EC41-0AA0
110	3VA5211-5EC41-0AA0	3VA5211-6EC41-0AA0	3VA5211-7EC41-0AA0
125	3VA5212-5EC41-0AA0	3VA5212-6EC41-0AA0	3VA5212-7EC41-0AA0
150	3VA5215-5EC41-0AA0	3VA5215-6EC41-0AA0	3VA5215-7EC41-0AA0
175	3VA5217-5EC41-0AA0	3VA5217-6EC41-0AA0	3VA5217-7EC41-0AA0
200	3VA5220-5EC41-0AA0	3VA5220-6EC41-0AA0	3VA5220-7EC41-0AA0
225	3VA5222-5EC41-0AA0	3VA5222-6EC41-0AA0	3VA5222-7EC41-0AA0
250	3VA5225-5EC41-0AA0	3VA5225-6EC41-0AA0	3VA5225-7EC41-0AA0
		TM230 FTAM 100% Neutral	
90	3VA5290-5GC41-0AA0	3VA5290-6GC41-0AA0	3VA5290-7GC41-0AA0
100	3VA5210-5GC41-0AA0	3VA5210-6GC41-0AA0	3VA5210-7GC41-0AA0
110	3VA5211-5GC41-0AA0	3VA5211-6GC41-0AA0	3VA5211-7GC41-0AA0
125	3VA5212-5GC41-0AA0	3VA5212-6GC41-0AA0	3VA5212-7GC41-0AA0
150	3VA5215-5GC41-0AA0	3VA5215-6GC41-0AA0	3VA5215-7GC41-0AA0
175	3VA5217-5GC41-0AA0	3VA5217-6GC41-0AA0	3VA5217-7GC41-0AA0
200	3VA5220-5GC41-0AA0	3VA5220-6GC41-0AA0	3VA5220-7GC41-0AA0
225	3VA5222-5GC41-0AA0	3VA5222-6GC41-0AA0	3VA5222-7GC41-0AA0
250	3VA5225-5GC41-0AA0	3VA5225-6GC41-0AA0	3VA5225-7GC41-0AA0
		TM240 ATAM	
70	3VA5270-5EF41-0AA0	3VA5270-6EF41-0AA0	3VA5270-7EF41-0AA0
80	3VA5280-5EF41-0AA0	3VA5280-6EF41-0AA0	3VA5280-7EF41-0AA0
100	3VA5210-5EF41-0AA0	3VA5210-6EF41-0AA0	3VA5210-7EF41-0AA0
125	3VA5212-5EF41-0AA0	3VA5212-6EF41-0AA0	3VA5212-7EF41-0AA0
150	3VA5215-5EF41-0AA0	3VA5215-6EF41-0AA0	3VA5215-7EF41-0AA0
175	3VA5217-5EF41-0AA0	3VA5217-6EF41-0AA0	3VA5217-7EF41-0AA0
200	3VA5220-5EF41-0AA0	3VA5220-6EF41-0AA0	3VA5220-7EF41-0AA0
250	3VA5225-5EF41-0AA0	3VA5225-6EF41-0AA0	3VA5225-7EF41-0AA0
		TM240 ATAM 100% Neutral	
100	3VA5210-5GF41-0AA0	3VA5210-6GF41-0AA0	3VA5210-7GF41-0AA0
125	3VA5212-5GF41-0AA0	3VA5212-6GF41-0AA0	3VA5212-7GF41-0AA0
150	3VA5215-5GF41-0AA0	3VA5215-6GF41-0AA0	3VA5215-7GF41-0AA0
175	3VA5217-5GF41-0AA0	3VA5217-6GF41-0AA0	3VA5217-7GF41-0AA0
200	3VA5220-5GF41-0AA0	3VA5220-6GF41-0AA0	3VA5220-7GF41-0AA0
250	3VA5225-5GF41-0AA0	3VA5225-6GF41-0AA0	3VA5225-7GF41-0AA0

Interrupting Ratings for 3VA52

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA)									
		Volts AC (50/60 Hz)					Volts DC				
		240	480Y/277V	480	600Y/347V	600	250	500	600 (3P)	750	1000 (4P)
M	MFAS	85	35	35	18	18	50	50	50	50	50
H	HFAS	100	65	65	25	25	85	85	85	85	85
C	CFAS	200	100	100	35	35	100	100	100	100	100

Trip Settings for 3VA52

TM210 - FTFM		
I_n (A)	I_r (A)	I_i (A)
40	40	400
50	50	500
60	60	600
70	70	700
80	80	800
90	90	900
100	100	1000
110	110	1100
125	125	1250
150	150	1500
175	175	1750
200	200	2000
225	225	2250
250	250	2500

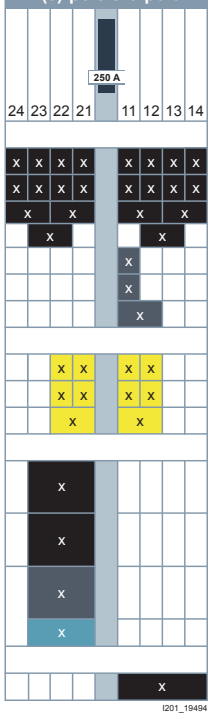
TM230 - FTAM							
I_n (A)	I_r (A)	I_i (A)					
70	70	350	420	490	560	630	700
80	80	400	480	560	640	720	800
90	90	450	540	630	720	810	900
100	100	500	600	700	800	900	1000
110	110	550	660	770	880	990	1100
125	125	625	750	875	1000	1125	1250
150	150	750	900	1050	1200	1350	1500
175	175	875	1050	1225	1400	1575	1750
200	200	1000	1200	1400	1600	1800	2000
225	225	1125	1350	1575	1800	2025	2250
250	250	1250	1500	1750	2000	2250	2500

TM240 - ATAM								
I_n (A)	I_r (A) 90%	I_r (A) 80%	I_i (A)					
70	63	56	350	420	490	560	630	700
80	72	64	400	480	560	640	720	800
100	90	80	500	600	700	800	900	1000
125	113	100	625	750	875	1000	1125	1250
150	135	120	750	900	1050	1200	1350	1500
175	158	140	875	1050	1225	1400	1575	1750
200	180	160	1000	1200	1400	1600	1800	2000
250	225	200	1250	1500	1750	2000	2250	2500

Connectors for 75C Wire for 3VA52

Type	Minimum cable size	Maximum cable size	Part Number (kit of 3 lugs)	Part Number (kit of 4 lugs)
Steel wrap around (Cu cable only), single cable lugs	AWG 10	3/0	**3VA9233-0JA11**	**3VA9234-0JA11**
	AWG 4	350 kcmil	**3VA9233-0JA12**	**3VA9234-0JA12**
Aluminum body lug (Cu/Al cable), single cable lugs	AWG 14	1/0	**3VA9233-0JB11**②	**3VA9234-0JB11**②
	AWG 6	350 kcmil	**3VA9233-0JB12**①③	**3VA9234-0JB12**①③
Aluminum body lug (Cu/Al cable) with control wire tap, single cable lugs	AWG 14	1/0	**3VA9233-0JG11**②	**3VA9234-0JG11**②
	AWG 6	350 kcmil	**3VA9233-0JG12**③	**3VA9234-0JG12**③
Aluminum body lug large (Cu/Al cable) single cable lugs with 1 extended terminal cover	AWG 2	350 kcmil	**3VA9233-0JJ13**③	**3VA9234-0JJ13**③
Aluminum body lug large with control wire tap (Cu/Al cable) single cable lugs and 1 extended terminal cover	AWG 2	350 kcmil	**3VA9233-0JC13**③	**3VA9234-0JC13**③
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	AWG 4	300 kcmil	**3VA9233-0JJ22**③	**3VA9234-0JJ22**③
Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover	AWG 14	AWG 2	**3VA9233-0JF60**	**3VA9234-0JF60**
Copper body lug (Cu cable only) single cable lugs	AWG 14	1/0	**3VA9233-0JD11**	**3VA9234-0JD11**
	AWG 6	350 kcmil	**3VA9233-0JD12**④	**3VA9234-0JD12**④
Copper body lug with control wire tap (Cu cable only) single cable lugs	AWG 14	1/0	**3VA9233-0JK11**	**3VA9234-0JK11**
	AWG 6	350 kcmil	**3VA9233-0JK12**④	**3VA9234-0JK12**④

Internal accessories Optional equipment	Slot No.:	3VA5 250 A 2(3)-pole & 3-pole
Auxiliary switch	**Type**	
Auxiliary switch	AUX_HQ	
	AUX_HQ_el	
	AUX_HP	
Leading changeover switch	LCS_HQ	
	LCS_HQ_el	
	LCS_HP	
Alarm switch	**Type**	
Trip alarm switch	TAS_HQ	
	TAS_HQ_el	
	TAS_HP	
Auxiliary release	**Type**	
Shunt trip flexible	STF	
Shunt trip left	STL	
Undervoltage release	UVR	
Universal release	UNI	
Other		
Cylinder lock (type Ronis)		



See page 7-95 for internal accessory part numbers.

① Standard lug installed at the factory when breaker ordered with a "6" in the 12th position.
② Meets requirements for 100% rated breakers up to 150A.
③ Meets requirements for 100% rated breakers up to 175A.
④ Meets requirements for 100% rated breakers up to 225A, requires the use of 90 degree wire, size to 75 degree ampacity.

3VA62 250A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

For factory installed nut keepers (3VA92430QA00), change the 12th digit of the catalog number to "2" (required to install a breaker in a panelboard or switchboard that has a provision). (For example, a 35KA @480VAC, 250A, 3-pole, 3VA62 with nut keepers would be catalog number 3VA6225-5HL3**2**-0AA0).

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 250A, 3-pole, 3VA62 with lugs would be catalog number 3VA6225-5HL3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

All 3VA62 electronic trip circuit breakers are available with 100% ratings. For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 250A, 3-pole, 100% rated 3VA62 would be catalog number 3VA6225-5HL31-**2**AA0). Requires the use of rated lugs — see lug table below.

Note: 100% option not available for E-interrupting class breakers.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

All 3VA62 electronic trip circuit breakers are UL listed for reverse feed applications.

3VA62 250A Frame 3-Pole Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MFAE) Catalog Number	H-Interrupting Class (HFAE) Catalog Number	C-Interrupting Class (CFAE) Catalog Number	L-Interrupting Class (LFAE) Catalog Number	E-Interrupting Class (EFAE) Catalog Number
ETU320 LI with dials					
100	3VA6210-5HL31-0AA0	3VA6210-6HL31-0AA0	3VA6210-7HL31-0AA0	3VA6210-8HL31-0AA0	—
250	3VA6225-5HL31-0AA0	3VA6225-6HL31-0AA0	3VA6225-7HL31-0AA0	3VA6225-8HL31-0AA0	3VA6225-0HL31-0AA0
ETU330 LIG with dials					
100	3VA6210-5HM31-0AA0	3VA6210-6HM31-0AA0	3VA6210-7HM31-0AA0	3VA6210-8HM31-0AA0	—
250	3VA6225-5HM31-0AA0	3VA6225-6HM31-0AA0	3VA6225-7HM31-0AA0	3VA6225-8HM31-0AA0	3VA6225-0HM31-0AA0
ETU350 LSI with dials					
100	3VA6210-5HN31-0AA0	3VA6210-6HN31-0AA0	3VA6210-7HN31-0AA0	3VA6210-8HN31-0AA0	—
250	3VA6225-5HN31-0AA0	3VA6225-6HN31-0AA0	3VA6225-7HN31-0AA0	3VA6225-8HN31-0AA0	3VA6225-0HN31-0AA0
ETU550 LSI with LCD					
100	3VA6210-5JP31-0AA0	3VA6210-6JP31-0AA0	3VA6210-7JP31-0AA0	3VA6210-8JP31-0AA0	—
250	3VA6225-5JP31-0AA0	3VA6225-6JP31-0AA0	3VA6225-7JP31-0AA0	3VA6225-8JP31-0AA0	—
ETU556 LSI(G Alarm) with LCD					
100	3VA6210-5JT31-0AA0	3VA6210-6JT31-0AA0	3VA6210-7JT31-0AA0	3VA6210-8JT31-0AA0	—
250	3VA6225-5JT31-0AA0	3VA6225-6JT31-0AA0	3VA6225-7JT31-0AA0	3VA6225-8JT31-0AA0	—
ETU560 LSIG with LCD					
100	3VA6210-5JQ31-0AA0	3VA6210-6JQ31-0AA0	3VA6210-7JQ31-0AA0	3VA6210-8JQ31-0AA0	—
250	3VA6225-5JQ31-0AA0	3VA6225-6JQ31-0AA0	3VA6225-7JQ31-0AA0	3VA6225-8JQ31-0AA0	—
ETU820 LI with LCD and Metering					
100	3VA6210-5KL31-0AA0	3VA6210-6KL31-0AA0	3VA6210-7KL31-0AA0	3VA6210-8KL31-0AA0	—
250	3VA6225-5KL31-0AA0	3VA6225-6KL31-0AA0	3VA6225-7KL31-0AA0	3VA6225-8KL31-0AA0	—
ETU830 LIG with LCD and Metering					
100	3VA6210-5KM31-0AA0	3VA6210-6KM31-0AA0	3VA6210-7KM31-0AA0	3VA6210-8KM31-0AA0	—
250	3VA6225-5KM31-0AA0	3VA6225-6KM31-0AA0	3VA6225-7KM31-0AA0	3VA6225-8KM31-0AA0	—
ETU850 LSI with LCD and Metering					
100	3VA6210-5KP31-0AA0	3VA6210-6KP31-0AA0	3VA6210-7KP31-0AA0	3VA6210-8KP31-0AA0	—
250	3VA6225-5KP31-0AA0	3VA6225-6KP31-0AA0	3VA6225-7KP31-0AA0	3VA6225-8KP31-0AA0	—
ETU856 LSI(G Alarm) with LCD and Metering					
100	3VA6210-5KT31-0AA0	3VA6210-6KT31-0AA0	3VA6210-7KT31-0AA0	3VA6210-8KT31-0AA0	—
250	3VA6225-5KT31-0AA0	3VA6225-6KT31-0AA0	3VA6225-7KT31-0AA0	3VA6225-8KT31-0AA0	3VA6225-0KT31-0AA0
ETU860 LSIG with LCD and Metering					
100	3VA6210-5KQ31-0AA0	3VA6210-6KQ31-0AA0	3VA6210-7KQ31-0AA0	3VA6210-8KQ31-0AA0	—
250	3VA6225-5KQ31-0AA0	3VA6225-6KQ31-0AA0	3VA6225-7KQ31-0AA0	3VA6225-8KQ31-0AA0	3VA6225-0KQ31-0AA0

3VA62 250A 4-Pole

3VA62 250A Frame 4-Pole Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MFAE) Catalog Number	H-Interrupting Class (HFAE) Catalog Number	C-Interrupting Class (CFAE) Catalog Number	L-Interrupting Class (LFAE) Catalog Number	E-Interrupting Class (EFAE) Catalog Number
ETU320 LI with dials					
100	3VA6210-5HL41-0AA0	3VA6210-6HL41-0AA0	3VA6210-7HL41-0AA0	3VA6210-8HL41-0AA0	—
250	3VA6225-5HL41-0AA0	3VA6225-6HL41-0AA0	3VA6225-7HL41-0AA0	3VA6225-8HL41-0AA0	3VA6225-0HL41-0AA0
ETU330 LIG with dials					
100	3VA6210-5HM41-0AA0	3VA6210-6HM41-0AA0	3VA6210-7HM41-0AA0	3VA6210-8HM41-0AA0	—
250	3VA6225-5HM41-0AA0	3VA6225-6HM41-0AA0	3VA6225-7HM41-0AA0	3VA6225-8HM41-0AA0	3VA6225-0HM41-0AA0
ETU350 LSI with dials					
100	3VA6210-5HN41-0AA0	3VA6210-6HN41-0AA0	3VA6210-7HN41-0AA0	3VA6210-8HN41-0AA0	—
250	3VA6225-5HN41-0AA0	3VA6225-6HN41-0AA0	3VA6225-7HN41-0AA0	3VA6225-8HN41-0AA0	3VA6225-0HN41-0AA0
ETU550 LSI with LCD					
100	3VA6210-5JP41-0AA0	3VA6210-6JP41-0AA0	3VA6210-7JP41-0AA0	3VA6210-8JP41-0AA0	—
250	3VA6225-5JP41-0AA0	3VA6225-6JP41-0AA0	3VA6225-7JP41-0AA0	3VA6225-8JP41-0AA0	—
ETU556 LSI(G Alarm) with LCD					
100	3VA6210-5JT41-0AA0	3VA6210-6JT41-0AA0	3VA6210-7JT41-0AA0	3VA6210-8JT41-0AA0	—
250	3VA6225-5JT41-0AA0	3VA6225-6JT41-0AA0	3VA6225-7JT41-0AA0	3VA6225-8JT41-0AA0	—
ETU560 LSIG with LCD					
100	3VA6210-5JQ41-0AA0	3VA6210-6JQ41-0AA0	3VA6210-7JQ41-0AA0	3VA6210-8JQ41-0AA0	—
250	3VA6225-5JQ41-0AA0	3VA6225-6JQ41-0AA0	3VA6225-7JQ41-0AA0	3VA6225-8JQ41-0AA0	—
ETU820 LI with LCD and Metering					
100	3VA6210-5KL41-0AA0	3VA6210-6KL41-0AA0	3VA6210-7KL41-0AA0	3VA6210-8KL41-0AA0	—
250	3VA6225-5KL41-0AA0	3VA6225-6KL41-0AA0	3VA6225-7KL41-0AA0	3VA6225-8KL41-0AA0	—
ETU830 LIG with LCD and Metering					
100	3VA6210-5KM41-0AA0	3VA6210-6KM41-0AA0	3VA6210-7KM41-0AA0	3VA6210-8KM41-0AA0	—
250	3VA6225-5KM41-0AA0	3VA6225-6KM41-0AA0	3VA6225-7KM41-0AA0	3VA6225-8KM41-0AA0	—
ETU850 LSI with LCD and Metering					
100	3VA6210-5KP41-0AA0	3VA6210-6KP41-0AA0	3VA6210-7KP41-0AA0	3VA6210-8KP41-0AA0	—
250	3VA6225-5KP41-0AA0	3VA6225-6KP41-0AA0	3VA6225-7KP41-0AA0	3VA6225-8KP41-0AA0	—
ETU856 LSI(G Alarm) with LCD and Metering					
100	3VA6210-5KT41-0AA0	3VA6210-6KT41-0AA0	3VA6210-7KT41-0AA0	3VA6210-8KT41-0AA0	—
250	3VA6225-5KT41-0AA0	3VA6225-6KT41-0AA0	3VA6225-7KT41-0AA0	3VA6225-8KT41-0AA0	3VA6225-0KT41-0AA0
ETU860 LSIG with LCD and Metering					
100	3VA6210-5KQ41-0AA0	3VA6210-6KQ41-0AA0	3VA6210-7KQ41-0AA0	3VA6210-8KQ41-0AA0	—
250	3VA6225-5KQ41-0AA0	3VA6225-6KQ41-0AA0	3VA6225-7KQ41-0AA0	3VA6225-8KQ41-0AA0	3VA6225-0KQ41-0AA0

Connectors for 75C wire for 3VA62

Type	Minimum cable size	Maximum cable size	Part Number (kit of 3 lugs)	Part Number (kit of 4 lugs)
Steel Wrap around (Cu cable only) single cable lugs	AWG 10	3/0	**3VA9143-0JA12**①	**3VA9144-0JA12**①
	AWG 4	350 kcmil	**3VA9243-0JA12**①	**3VA9244-0JA12**①
Steel Wrap around (Cu cable only) single cable lugs with control wire tap	AWG 10	3/0	**3VA9143-0JH12**①	**3VA9144-0JH12**①
	AWG 4	350 kcmil	**3VA9243-0JH12**①	**3VA9244-0JH12**①
Aluminum Body Lug (Cu/Al cable) single cable lugs	AWG 14	1/0	**3VA9143-0JB11**①	**3VA9144-0JB11**①
	AWG 6	350 kcmil	**3VA9243-0JB12**①②	**3VA9244-0JB12**①②
Aluminum body lug with control wire tap (Cu/Al cable) single cable lugs	AWG 14	1/0	**3VA9143-0JG11**①	**3VA9144-0JG11**①
	AWG 6	350 kcmil	**3VA9243-0JG12**①	**3VA9244-0JG12**①
Aluminum body lug large (Cu/Al cable) single cable lugs and 1 ext'd terminal cover	AWG 2	350 kcmil	**3VA9243-0JJ13**①	**3VA9244-0JJ13**①
Aluminum body lug large with control wire tap (Cu/Al cable) single cable lugs and 1 extended terminal cover	AWG 2	350 kcmil	**3VA9243-0JC13**①	**3VA9244-0JC13**①
Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover	AWG 4	300 kcmil	**3VA9243-0JJ22**①	**3VA9244-0JJ22**①
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	AWG 4	300 kcmil	**3VA9243-0JC22**①	**3VA9244-0JC22**①
Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover	AWG 14	AWG 2	**3VA9243-0JF60**①	**3VA9244-0JF60**①
Copper body lug (Cu cable only) single cable lugs	AWG 14	1/0	**3VA9143-0JD11**①	**3VA9144-0JD11**①
	AWG 6	350 kcmil	**3VA9243-0JD12**②③	**3VA9244-0JD12**②③
Copper body lug (Cu cable only) with control wire tap single cable lugs	AWG 14	1/0	**3VA9143-0JK11**①	**3VA9144-0JK11**①
	AWG 6	350 kcmil	**3VA9243-0JK12**③	**3VA9244-0JK12**③

① Meets requirements for 100% rated breakers up to 100A.
② Standard lug installed at the factory when breaker ordered with a "6" in the 12th position.
③ Meets requirements for 100% rated breakers up to 250A, requires the use of 90 degree wire, size to 75 degree ampacity.

Interrupting Ratings for 3VA62

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MFAE	100	35	35	18	18
H	HFAE	100	65	65	22	22
C	CFAE	200	100	100	35	35
L	LFAE	200	150	150	50	50
E	EFAE	—	200	200	100	100

Enclosures (3-pole only)

Nema Type	Catalog Number
1 surface	**3VAE250N1S**
1 flush	**3VAE250N1F**
3R	**3VAE250N3R**
12	**3VAE250N12**
4X (304)	**3VAE250N4X**
4X (316)	**3VAE250N4X316**
Neutral	**N250X**
200% Neutral	**N2250X**

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA62	3	4.1 (105)	7.8 (198)	3.4 (86)	5.5	2.5
3VA62	4	5.5 (140)	7.8 (198)	3.4 (86)	7.1	3.2

Trip Settings for 3VA62

ETU320-LI, ETU330-LIG, ETU350-LSI

Continuous Amperage	LI, LIG, LSI			LSI		LIG	LI, LIG, LSI 4P only
I_n (Amp)	I_r(Amp) (L)	t_{Id} (sec) (L)	I_i (Amp) (I)①	I_{sd}= xIr (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	I_N=xI_r (Amp)
100	40 - 100	0.5 - 17	150-1200	1.5 - 10	0.08 - 0.4	20 - 100	0.5 - 1 / OFF
250	100 - 250	0.5 - 13	375-2500	1.5 - 10		50 - 250	0.5 - 1 / OFF

① I_i for ETU350 is fixed at the maximum level shown in table.

ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU830-LIG, ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

Continuous Amperage	LI, LIG, LSI, LSIG, LSI(G)			LSI, LSIG, LSI(G)		LIG, LSIG, LSI(G)		LSI 3P with External CT	LI, LIG, LSI, LSIG, LSI(G) 4P only
I_n (Amp)	I_r(Amp) (L)②	t_{Id} (sec) (L)	I_i (Amp) (I)	I_{sd} (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (G)	I_N=xI_r (Amp)	I_N (Amp)
100	40 - 100	0.5 - 25	150-1200	60 - 1000	0.05 - 0.5	20 - 100	0.05 - 0.8	20 - 160 / OFF	20 - 160 / OFF
250	100 - 250	0.5 - 13	375-2500	150 - 2500		50 - 250		50 - 400 / OFF	50 - 250 / OFF

② Adjustable in steps of 1A.

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at **https://digitalcontentcenter.compas.siemens-info.com/SIE_IM_3VA6_Systems_Manual.pdf**

Internal accessories / Optional equipment		3VA6 150/250 A 3-pole	3VA6 150/250 A 4-pole
	Slot No.:	24 23 22 21 250 A 11 12 13 14	34 33 32 31 24 23 22 21 250 A 11 12 13 14
Auxiliary switch	**Type**		
Auxiliary switch	AUX_HQ	x x x x x x x x	x x x x x x x x x x x x x x x x
	AUX_HQ_el	x x x x x x x x	x x x x x x x x x x x x x x x x
	AUX_HP	x x x x x x x x	x x x x x x x x
Leading changeover switch	LCS_HQ	x	x
	LCS_HQ_el	x	x
	LCS_HP	x	x
Alarm switch	**Type**		
Trip alarm switch	TAS_HQ	x x x x	x x x x
	TAS_HQ_el	x x x x	x x x x
	TAS_HP	x x	x x
Electrical alarm switch	EAS_HQ	x	x
	EAS_HQ_el	x	x
Auxiliary release	**Type**		
Shunt trip flexible	STF	x x	x x
Shunt trip left	STL	x	x
Undervoltage release	UVR	x	x
Universal release	UNI	x	x
ETU/communication	**Type**		
Communication module Breaker data server	COM060	x	x
24 V module		x	x
Other			
Cylinder lock (type Ronis)		x	x

I201_19495

See page 7-95 for internal accessory part numbers.

3VA53 400A, 2-Pole in 3-Pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MJAS) Catalog Number	H-Interrupting Class (HJAS) Catalog Number	C-Interrupting Class (CJAS) Catalog Number
	TM230 FTAM		
200	3VA5320-5EC61-0AA0	3VA5320-6EC61-0AA0	3VA5320-7EC61-0AA0
225	3VA5322-5EC61-0AA0	3VA5322-6EC61-0AA0	3VA5322-7EC61-0AA0
250	3VA5325-5EC61-0AA0	3VA5325-6EC61-0AA0	3VA5325-7EC61-0AA0
300	3VA5330-5EC61-0AA0	3VA5330-6EC61-0AA0	3VA5330-7EC61-0AA0
350	3VA5335-5EC61-0AA0	3VA5335-6EC61-0AA0	3VA5335-7EC61-0AA0
400	3VA5340-5EC61-0AA0	3VA5340-6EC61-0AA0	3VA5340-7EC61-0AA0

3VA53 400A Frame, 3-Pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MJAS) Catalog Number	H-Interrupting Class (HJAS) Catalog Number	C-Interrupting Class (CJAS) Catalog Number
	TM230 FTAM①		
200	3VA5320-5EC31-0AA0	3VA5320-6EC31-0AA0	3VA5320-7EC31-0AA0
225	3VA5322-5EC31-0AA0	3VA5322-6EC31-0AA0	3VA5322-7EC31-0AA0
250	3VA5325-5EC31-0AA0	3VA5325-6EC31-0AA0	3VA5325-7EC31-0AA0
300	3VA5330-5EC31-0AA0	3VA5330-6EC31-0AA0	3VA5330-7EC31-0AA0
350	3VA5335-5EC31-0AA0	3VA5335-6EC31-0AA0	3VA5335-7EC31-0AA0
400	3VA5340-5EC31-0AA0	3VA5340-6EC31-0AA0	3VA5340-7EC31-0AA0
	TM240 ATAM		
200	3VA5320-5EF31-0AA0	3VA5320-6EF31-0AA0	3VA5320-7EF31-0AA0
225	3VA5322-5EF31-0AA0	3VA5322-6EF31-0AA0	3VA5322-7EF31-0AA0
250	3VA5325-5EF31-0AA0	3VA5325-6EF31-0AA0	3VA5325-7EF31-0AA0
300	3VA5330-5EF31-0AA0	3VA5330-6EF31-0AA0	3VA5330-7EF31-0AA0
350	3VA5335-5EF31-0AA0	3VA5335-6EF31-0AA0	3VA5335-7EF31-0AA0
400	3VA5340-5EF31-0AA0	3VA5340-6EF31-0AA0	3VA5340-7EF31-0AA0

Trip Settings for 3VA53

TM230 - FTAM

I_n (Amp)	I_r(Amp)	I_i (Amp)					
200	200	1000	1200	1400	1600	1800	2000
225	225	1125	1350	1575	1800	2025	2250
250	250	1250	1500	1750	2000	2250	2500
300	300	1500	1800	2100	2400	2700	3000
350	350	1750	2100	2450	2800	3150	3500
400	400	2000	2400	2800	3200	3600	4000

TM240 - ATAM

I_n (Amp)	I_r(Amp) 90%	I_r(Amp) 80%	I_i (Amp)					
200	180	160	1000	1200	1400	1600	1800	2000
225	203	180	1125	1350	1575	1800	2025	2250
250	225	200	1250	1500	1750	2000	2250	2500
300	270	240	1500	1800	2100	2400	2700	3000
350	315	280	1750	2100	2450	2800	3150	3500
400	360	320	2000	2400	2800	3200	3600	4000

① Available with NAVAL/50C ratings.

3VA53 400A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

For factory installed nut keepers (3VA94730QA00), change the 12th digit of the catalog number to "2" (required to install a breaker in a panelboard or switchboard that has a provision). (For example, a 35KA @480VAC, 400A, 3-pole, 3VA53 with nut keepers would be catalog number 3VA5340-5EC3**2**-0AA0).

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 400A, 3-pole, 3VA53 with lugs would be catalog number 3VA5340-5EC3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

Note: Factory installed nut keepers and lugs are only available for 3 Pole breakers.

For NAVAL-rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 400A, 3-pole, NAVAL rated 3VA53 would be catalog number 3VA5340-5EC31-**1**AA0)

3VA53 are available with 100% ratings. For 100% rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 400A, 3-pole, 100% rated 3VA53 would be catalog number 3VA5340-5EC31-**2**AA0). Requires the use of rated lugs — see lug table below.

All 3VA53 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

3VA53 400A Frame, 4-Pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MJAS) Catalog Number	H-Interrupting Class (HJAS) Catalog Number	C-Interrupting Class (CJAS) Catalog Number
TM230 FTAM Unprotected Neutral			
200	3VA5320-5EC41-0AA0	3VA5320-6EC41-0AA0	3VA5320-7EC41-0AA0
225	3VA5322-5EC41-0AA0	3VA5322-6EC41-0AA0	3VA5322-7EC41-0AA0
250	3VA5325-5EC41-0AA0	3VA5325-6EC41-0AA0	3VA5325-7EC41-0AA0
300	3VA5330-5EC41-0AA0	3VA5330-6EC41-0AA0	3VA5330-7EC41-0AA0
350	3VA5335-5EC41-0AA0	3VA5335-6EC41-0AA0	3VA5335-7EC41-0AA0
400	3VA5340-5EC41-0AA0	3VA5340-6EC41-0AA0	3VA5340-7EC41-0AA0
TM240 ATAM Unprotected Neutral			
200	3VA5320-5EF41-0AA0	3VA5320-6EF41-0AA0	3VA5320-7EF41-0AA0
225	3VA5322-5EF41-0AA0	3VA5322-6EF41-0AA0	3VA5322-7EF41-0AA0
250	3VA5325-5EF41-0AA0	3VA5325-6EF41-0AA0	3VA5325-7EF41-0AA0
300	3VA5330-5EF41-0AA0	3VA5330-6EF41-0AA0	3VA5330-7EF41-0AA0
350	3VA5335-5EF41-0AA0	3VA5335-6EF41-0AA0	3VA5335-7EF41-0AA0
400	3VA5340-5EF41-0AA0	3VA5340-6EF41-0AA0	3VA5340-7EF41-0AA0
TM230 FTAM 100% Neutral			
200	3VA5320-5GC41-0AA0	3VA5320-6GC41-0AA0	3VA5320-7GC41-0AA0
225	3VA5322-5GC41-0AA0	3VA5322-6GC41-0AA0	3VA5322-7GC41-0AA0
250	3VA5325-5GC41-0AA0	3VA5325-6GC41-0AA0	3VA5325-7GC41-0AA0
300	3VA5330-5GC41-0AA0	3VA5330-6GC41-0AA0	3VA5330-7GC41-0AA0
350	3VA5335-5GC41-0AA0	3VA5335-6GC41-0AA0	3VA5335-7GC41-0AA0
400	3VA5340-5GC41-0AA0	3VA5340-6GC41-0AA0	3VA5340-7GC41-0AA0
TM240 ATAM 100% Neutral			
200	3VA5320-5GF41-0AA0	3VA5320-6GF41-0AA0	3VA5320-7GF41-0AA0
225	3VA5322-5GF41-0AA0	3VA5322-6GF41-0AA0	3VA5322-7GF41-0AA0
250	3VA5325-5GF41-0AA0	3VA5325-6GF41-0AA0	3VA5325-7GF41-0AA0
300	3VA5330-5GF41-0AA0	3VA5330-6GF41-0AA0	3VA5330-7GF41-0AA0
350	3VA5335-5GF41-0AA0	3VA5335-6GF41-0AA0	3VA5335-7GF41-0AA0
400	3VA5340-5GF41-0AA0	3VA5340-6GF41-0AA0	3VA5340-7GF41-0AA0

3VA53 400A 4-Pole

Internal accessories / Optional equipment	Slot No.:	3VA5 400/600 A 3 & 4-pole (25 24 23 22 21	600 A	11 12 13 14 15)
Auxiliary switch	**Type**			
Auxiliary switch	AUX_HQ	x x x x x		x x x x x
	AUX_HQ_el	x x x x x		x x x x x
	AUX_HP	x x		x x
		x x		x x
Leading changeover switch	LCS_HQ			x
	LCS_HQ_el			x
	LCS_HP			x
Alarm switch	**Type**			
Trip alarm switch	TAS_HQ	x x		x x
	TAS_HQ_el	x x		x x
	TAS_HP	x		x
Auxiliary release	**Type**			
Shunt trip flexible	STF	x		x
Shunt trip left	STL	x		
Undervoltage release	UVR	x		
Universal release	UNI	x		
Other				
Cylinder lock (type Ronis)				x

Dimensions

Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA53	3	5.4 (137)	9.8 (249)	5.4 (137)	11.5	5.2
3VA53	4	7.2 (183)	9.8 (249)	5.4 (137)	15.0	6.8

Interrupting Ratings for 3VA53

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA)									
		Volts AC (50/60 Hz)					Volts DC				
		240	480Y/277V	480	600Y/347V	600	250 (2P)	600 (3P)	750 (3P)	750 (4P)	1000 (4P)
M	MJAS	85	35	35	18	18	50	50	10	50	10
H	HJAS	100	65	65	25	25	85	85	10	85	10
C	CJAS	200	100	100	35	35	100	100	10	100	10

3VA63 400A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

For factory installed nut keepers (3VA94730QA00), change the 12th digit of the catalog number to "2" (required to install a breaker in a panelboard or switchboard that has a provision). (For example, a 35KA @480VAC, 400A, 3-pole, 3VA63 with nut keepers would be catalog number 3VA6340-5HL3**2**-0AA0).

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 400A, 3-pole, 3VA63 with lugs would be catalog number 3VA6340-5HL3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

Note: Factory installed nut keepers and lugs are only available for 3 Pole breakers.

3VA63 electronic trip circuit breakers are available with 100% ratings (up to 250A only in this frame – 400A with 100% ratings can be purchased in the 600A frame). For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 250A, 3-pole, 100% rated 3VA63 would be catalog number 3VA6325-5HL31-**2**AA0). Requires the use of rated lugs — see lug table below.

Note: 100% option not available for E-interrupting class breakers.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

All 3VA63 electronic trip circuit breakers are UL listed for reverse feed applications.

3VA63 400A Frame 3-Pole Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MJAE)	H-Interrupting Class (HJAE)	C-Interrupting Class (CJAE)	L-Interrupting Class (LJAE)	E-Interrupting Class (EJAE)
	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
ETU320 LI with dials					
250	3VA6325-5HL31-0AA0	3VA6325-6HL31-0AA0	3VA6325-7HL31-0AA0	3VA6325-8HL31-0AA0	3VA6325-0HL31-0AA0
400	3VA6340-5HL31-0AA0	3VA6340-6HL31-0AA0	3VA6340-7HL31-0AA0	3VA6340-8HL31-0AA0	3VA6340-0HL31-0AA0
ETU330 LIG with dials					
250	3VA6325-5HM31-0AA0	3VA6325-6HM31-0AA0	3VA6325-7HM31-0AA0	3VA6325-8HM31-0AA0	3VA6325-0HM31-0AA0
400	3VA6340-5HM31-0AA0	3VA6340-6HM31-0AA0	3VA6340-7HM31-0AA0	3VA6340-8HM31-0AA0	3VA6340-0HM31-0AA0
ETU350 LSI with dials					
250	3VA6325-5HN31-0AA0	3VA6325-6HN31-0AA0	3VA6325-7HN31-0AA0	3VA6325-8HN31-0AA0	3VA6325-0HN31-0AA0
400	3VA6340-5HN31-0AA0	3VA6340-6HN31-0AA0	3VA6340-7HN31-0AA0	3VA6340-8HN31-0AA0	3VA6340-0HN31-0AA0
ETU550 LSI with LCD					
250	3VA6325-5JP31-0AA0	3VA6325-6JP31-0AA0	3VA6325-7JP31-0AA0	3VA6325-8JP31-0AA0	—
400	3VA6340-5JP31-0AA0	3VA6340-6JP31-0AA0	3VA6340-7JP31-0AA0	3VA6340-8JP31-0AA0	—
ETU556 LSI(G Alarm) with LCD					
250	3VA6325-5JT31-0AA0	3VA6325-6JT31-0AA0	3VA6325-7JT31-0AA0	3VA6325-8JT31-0AA0	—
400	3VA6340-5JT31-0AA0	3VA6340-6JT31-0AA0	3VA6340-7JT31-0AA0	3VA6340-8JT31-0AA0	—
ETU560 LSIG with LCD					
250	3VA6325-5JQ31-0AA0	3VA6325-6JQ31-0AA0	3VA6325-7JQ31-0AA0	3VA6325-8JQ31-0AA0	—
400	3VA6340-5JQ31-0AA0	3VA6340-6JQ31-0AA0	3VA6340-7JQ31-0AA0	3VA6340-8JQ31-0AA0	—
ETU820 LI with LCD and Metering					
250	3VA6325-5KL31-0AA0	3VA6325-6KL31-0AA0	3VA6325-7KL31-0AA0	3VA6325-8KL31-0AA0	—
400	3VA6340-5KL31-0AA0	3VA6340-6KL31-0AA0	3VA6340-7KL31-0AA0	3VA6340-8KL31-0AA0	—
ETU830 LIG with LCD and Metering					
250	3VA6325-5KM31-0AA0	3VA6325-6KM31-0AA0	3VA6325-7KM31-0AA0	3VA6325-8KM31-0AA0	—
400	3VA6340-5KM31-0AA0	3VA6340-6KM31-0AA0	3VA6340-7KM31-0AA0	3VA6340-8KM31-0AA0	—
ETU850 LSI with LCD and Metering					
250	3VA6325-5KP31-0AA0	3VA6325-6KP31-0AA0	3VA6325-7KP31-0AA0	3VA6325-8KP31-0AA0	—
400	3VA6340-5KP31-0AA0	3VA6340-6KP31-0AA0	3VA6340-7KP31-0AA0	3VA6340-8KP31-0AA0	—
ETU856 LSI(G Alarm) with LCD and Metering					
250	3VA6325-5KT31-0AA0	3VA6325-6KT31-0AA0	3VA6325-7KT31-0AA0	3VA6325-8KT31-0AA0	3VA6325-0KT31-0AA0
400	3VA6340-5KT31-0AA0	3VA6340-6KT31-0AA0	3VA6340-7KT31-0AA0	3VA6340-8KT31-0AA0	3VA6340-0KT31-0AA0
ETU860 LSIG with LCD and Metering					
250	3VA6325-5KQ31-0AA0	3VA6325-6KQ31-0AA0	3VA6325-7KQ31-0AA0	3VA6325-8KQ31-0AA0	3VA6325-0KQ31-0AA0
400	3VA6340-5KQ31-0AA0	3VA6340-6KQ31-0AA0	3VA6340-7KQ31-0AA0	3VA6340-8KQ31-0AA0	3VA6340-0KQ31-0AA0

3VA63 400A 4-Pole

Interrupting Ratings for 3VA63

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MJAE	100	35	35	18	18
H	HJAE	100	65	65	22	22
C	CJAE	200	100	100	35	35
L	LJAE	200	150	150	50	50
E	EJAE	—	200	200	100	100

Dimensions

Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA63	3	5.4 (137)	9.8 (249)	5.4 (137)	11.0	5.2
3VA63	4	7.2 (183)	9.8 (249)	5.4 (137)	15.0	6.8

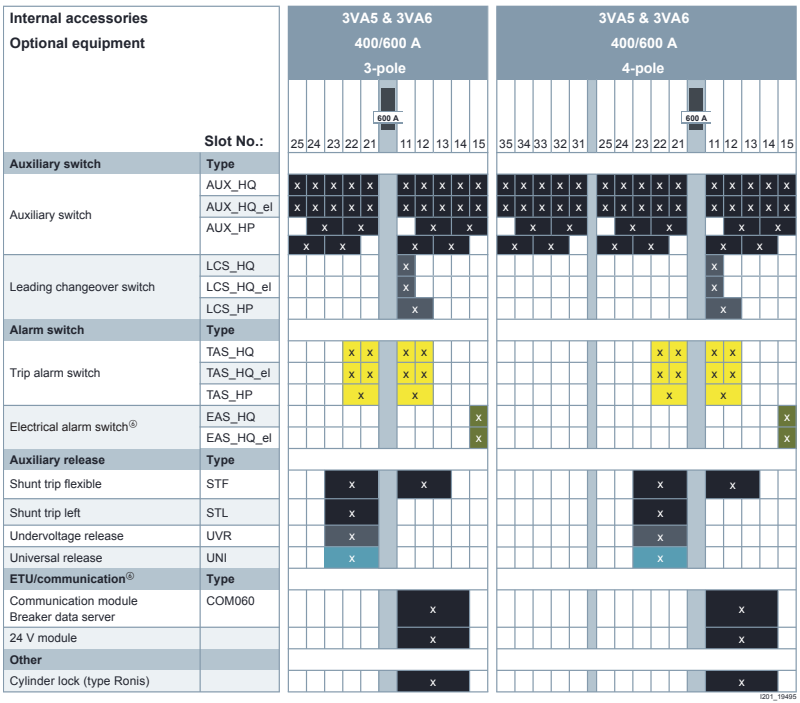
3VA63 400A Frame 4-Pole Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MJAE) Catalog Number	H-Interrupting Class (HJAE) Catalog Number	C-Interrupting Class (CJAE) Catalog Number	L-Interrupting Class (LJAE) Catalog Number	E-Interrupting Class (EJAE) Catalog Number
ETU320 LI with dials					
250	3VA6325-5HL41-0AA0	3VA6325-6HL41-0AA0	3VA6325-7HL41-0AA0	3VA6325-8HL41-0AA0	3VA6325-0HL31-0AA0
400	3VA6340-5HL41-0AA0	3VA6340-6HL41-0AA0	3VA6340-7HL41-0AA0	3VA6340-8HL41-0AA0	3VA6340-0HL31-0AA0
ETU330 LIG with dials					
250	3VA6325-5HM41-0AA0	3VA6325-6HM41-0AA0	3VA6325-7HM41-0AA0	3VA6325-8HM41-0AA0	3VA6325-0HM31-0AA0
400	3VA6340-5HM41-0AA0	3VA6340-6HM41-0AA0	3VA6340-7HM41-0AA0	3VA6340-8HM41-0AA0	3VA6340-0HM31-0AA0
ETU350 LSI with dials					
250	3VA6325-5HN41-0AA0	3VA6325-6HN41-0AA0	3VA6325-7HN41-0AA0	3VA6325-8HN41-0AA0	3VA6325-0HN31-0AA0
400	3VA6340-5HN41-0AA0	3VA6340-6HN41-0AA0	3VA6340-7HN41-0AA0	3VA6340-8HN41-0AA0	3VA6340-0HN31-0AA0
ETU550 LSI with LCD					
250	3VA6325-5JP41-0AA0	3VA6325-6JP41-0AA0	3VA6325-7JP41-0AA0	3VA6325-8JP41-0AA0	—
400	3VA6340-5JP41-0AA0	3VA6340-6JP41-0AA0	3VA6340-7JP41-0AA0	3VA6340-8JP41-0AA0	—
ETU556 LSI(G Alarm) with LCD					
250	3VA6325-5JT41-0AA0	3VA6325-6JT41-0AA0	3VA6325-7JT41-0AA0	3VA6325-8JT41-0AA0	—
400	3VA6340-5JT41-0AA0	3VA6340-6JT41-0AA0	3VA6340-7JT41-0AA0	3VA6340-8JT41-0AA0	—
ETU560 LSIG with LCD					
250	3VA6325-5JQ41-0AA0	3VA6325-6JQ41-0AA0	3VA6325-7JQ41-0AA0	3VA6325-8JQ41-0AA0	—
400	3VA6340-5JQ41-0AA0	3VA6340-6JQ41-0AA0	3VA6340-7JQ41-0AA0	3VA6340-8JQ41-0AA0	—
ETU820 LI with LCD and Metering					
250	3VA6325-5KL41-0AA0	3VA6325-6KL41-0AA0	3VA6325-7KL41-0AA0	3VA6325-8KL41-0AA0	—
400	3VA6340-5KL41-0AA0	3VA6340-6KL41-0AA0	3VA6340-7KL41-0AA0	3VA6340-8KL41-0AA0	—
ETU830 LIG with LCD and Metering					
250	3VA6325-5KM41-0AA0	3VA6325-6KM41-0AA0	3VA6325-7KM41-0AA0	3VA6325-8KM41-0AA0	—
400	3VA6340-5KM41-0AA0	3VA6340-6KM41-0AA0	3VA6340-7KM41-0AA0	3VA6340-8KM41-0AA0	—
ETU850 LSI with LCD and Metering					
250	3VA6325-5KP41-0AA0	3VA6325-6KP41-0AA0	3VA6325-7KP41-0AA0	3VA6325-8KP41-0AA0	—
400	3VA6340-5KP41-0AA0	3VA6340-6KP41-0AA0	3VA6340-7KP41-0AA0	3VA6340-8KP41-0AA0	—
ETU856 LSI(G Alarm) with LCD and Metering					
250	3VA6325-5KT41-0AA0	3VA6325-6KT41-0AA0	3VA6325-7KT41-0AA0	3VA6325-8KT41-0AA0	3VA6325-0KT31-0AA0
400	3VA6340-5KT41-0AA0	3VA6340-6KT41-0AA0	3VA6340-7KT41-0AA0	3VA6340-8KT41-0AA0	3VA6340-0KT31-0AA0
ETU860 LSIG with LCD and Metering					
250	3VA6325-5KQ41-0AA0	3VA6325-6KQ41-0AA0	3VA6325-7KQ41-0AA0	3VA6325-8KQ41-0AA0	3VA6325-0KQ31-0AA0
400	3VA6340-5KQ41-0AA0	3VA6340-6KQ41-0AA0	3VA6340-7KQ41-0AA0	3VA6340-8KQ41-0AA0	3VA6340-0KQ31-0AA0

Connections for 75C wire for 3VA53 and 3VA63

Type	Minimum cable size	Maximum cable size	Part Number (kit of 3 lugs)	Part Number (kit of 4 lugs)
Steel wrap around (Cu cable only) single cable lugs	1/0	500 kcmil	**3VA9473-0JA13**①	**3VA9474-0JA13**①
Steel wrap around (Cu cable only) single cable lugs with control wire tap	1/0	500 kcmil	**3VA9473-0JH13**①	**3VA9474-0JH13**①
Aluminum body lug (Cu/Al cable) single cable lugs	AWG 1	600 kcmil	**3VA9373-0JB13**①⑤	**3VA9374-0JB13**①⑤
Aluminum body lug with control wire tap (Cu/Al cable) single cable lugs	AWG 1	600 kcmil	**3VA9373-0JG13**①	**3VA9374-0JG13**①
Copper body lug (Cu cable only) single cable lugs	AWG 1	600 kcmil	**3VA9373-0JD13**①③	**3VA9374-0JD13**①③
Copper body lug (Cu cable only) with control wire tap single cable lugs	AWG 1	600 kcmil	**3VA9373-0JK13**①③	**3VA9374-0JK13**①③
Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover	2/0	600 kcmil	**3VA9473-0JJ23**①②	**3VA9474-0JJ23**①②
Aluminum body lug, 2 cables (Cu/Al cable) with 1 intermediate terminal cover	250 kcmil or 2× 250 kcmil	750 kcmil	**3VA9373-0JJ24**①③	**3VA9374-0JJ24**①③
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	2/0	600 kcmil	**3VA9473-0JC23**①②	**3VA9474-0JC23**①②
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 intermediate terminal cover	250 kcmil or 2× 250 kcmil	750 kcmil	**3VA9373-0JC24**①③	**3VA9374-0JC24**①③
Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover	AWG 14	2 AWG	**3VA9373-0JF60**①	**3VA9374-0JF60**①
Copper body lug, 2 cables (Cu cable only) with 1 extended terminal cover	2/0	600 kcmil	**3VA9473-0JE23**①④	**3VA9474-0JE23**①④
Copper body lug, 2 cables (Cu cable only) with control wire tap and 1 extended terminal cover	2/0	600 kcmil	**3VA9473-0JL23**①④	**3VA9474-0JL23**①④

① 3VA63 Meets requirements for 100% rated breakers up to 250A.
② 3VA53 Meets requirements for 100% rated breakers up to 300A.
③ 3VA53 Meets requirements for 100% rated breakers up to 400A, requires the use of 90 degree wire, size to 75 degree ampacity.
④ 3VA53 Meets requirements for 100% rated breakers up to 350A, requires the use of 90 degree wire, size to 75 degree ampacity.
⑤ Standard lug installed at the factory when breaker ordered with a "6" in the 12th position.



Enclosures for 3VA53 and 3VA63 (3-pole only)

NEMA Type	Catalog Number
1 Surface	**3VAE6001S**
1 Flush	**3VAE6001F**
3R	**3VAE6003R**
12	**3VAE60012**
4X (304)	**3VAE6004X**
4X (316)	**3VAE6004X316**
Neutral	**HN656ACB**
200% Neutral	**HN678ACB**

Trip Settings for 3VA63

ETU320-LI, ETU330-LIG, ETU350-LSI

Continuous Amperage	LI, LIG, LSI			LSI		LIG	LI, LIG, LSI 4P only
I_n (Amp)	I_r(Amp) (L)	t_{Id} (sec) (L)	I_i (Amp) (I)⑦	I_{sd}= xIr (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	I_N=xI_r (Amp)
250	100 - 250	0.5 - 17	375-3000	1.5 - 10	0.08 - 0.4	50 - 250	0.5 - 1 / OFF
400	150 - 400	0.5 - 17	600-4000	1.5 - 10		80 - 400	0.5 - 1 / OFF

⑦ I_i for ETU350 is fixed at the maximum level shown in table.

ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU830-LIG, ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

Continuous Amperage	LI, LIG, LSI, LSIG, LSI(G)			LSI, LSIG, LSI(G)		LIG, LSIG, LSI(G)		LSI 3P with External CT	LI, LIG, LSI, LSIG, LSI(G) 4P only
I_n (Amp)	I_r(Amp) (L)⑧	t_{Id} (sec) (L)	I_i (Amp) (I)	I_{sd} (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (G)	I_N=xI_r (Amp)	I_N (Amp)
250	100 - 250	0.5 - 25	375-3000	150 - 2500	0.05 - 0.5	50 - 250	0.05 - 0.8	50 - 400 / OFF	50 - 400 / OFF
400	150 - 400	0.5 - 17	600-4000	240 - 4000		80 - 400		80 - 640 / OFF	80 - 400 / OFF

⑧ Adjustable in steps of 1A.

⑥ These accessories are for electronic trip breakers only.

See page 7-95 for internal accessory part numbers.

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at **https://digitalcontentcenter.compas.siemens-info.com/SIE_IM_3VA6_Systems_Manual.pdf**

3VA54 600A, 2-Pole in 3-Pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MLAS) Catalog Number	H-Interrupting Class (HLAS) Catalog Number	C-Interrupting Class (CLAS) Catalog Number
	TM230 FTAM		
450	3VA5445-5EC61-0AA0	3VA5445-6EC61-0AA0	3VA5445-7EC61-0AA0
500	3VA5450-5EC61-0AA0	3VA5450-6EC61-0AA0	3VA5450-7EC61-0AA0
600	3VA5460-5EC61-0AA0	3VA5460-6EC61-0AA0	3VA5460-7EC61-0AA0

3VA54 600A Frame, 3-Pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MLAS) Catalog Number	H-Interrupting Class (HLAS) Catalog Number	C-Interrupting Class (CLAS) Catalog Number
	TM230 FTAM①		
450	3VA5445-5EC31-0AA0	3VA5445-6EC31-0AA0	3VA5445-7EC31-0AA0
500	3VA5450-5EC31-0AA0	3VA5450-6EC31-0AA0	3VA5450-7EC31-0AA0
600	3VA5460-5EC31-0AA0	3VA5460-6EC31-0AA0	3VA5460-7EC31-0AA0
	TM240 ATAM		
450	3VA5445-5EF31-0AA0	3VA5445-6EF31-0AA0	3VA5445-7EF31-0AA0
500	3VA5450-5EF31-0AA0	3VA5450-6EF31-0AA0	3VA5450-7EF31-0AA0
600	3VA5460-5EF31-0AA0	3VA5460-6EF31-0AA0	3VA5460-7EF31-0AA0

3VA54 600A Frame, 4-Pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MLAS) Catalog Number	H-Interrupting Class (HLAS) Catalog Number	C-Interrupting Class (CLAS) Catalog Number
	TM230 FTAM Unprotected Neutral		
450	3VA5445-5EC41-0AA0	3VA5445-6EC41-0AA0	3VA5445-7EC41-0AA0
500	3VA5450-5EC41-0AA0	3VA5450-6EC41-0AA0	3VA5450-7EC41-0AA0
600	3VA5460-5EC41-0AA0	3VA5460-6EC41-0AA0	3VA5460-7EC41-0AA0
	TM240 ATAM Unprotected Neutral		
450	3VA5445-5EF41-0AA0	3VA5445-6EF41-0AA0	3VA5445-7EF41-0AA0
500	3VA5450-5EF41-0AA0	3VA5450-6EF41-0AA0	3VA5450-7EF41-0AA0
600	3VA5460-5EF41-0AA0	3VA5460-6EF41-0AA0	3VA5460-7EF41-0AA0
	TM230 FTAM 100% Neutral		
450	3VA5445-5GC41-0AA0	3VA5445-6GC41-0AA0	3VA5445-7GC41-0AA0
500	3VA5450-5GC41-0AA0	3VA5450-6GC41-0AA0	3VA5450-7GC41-0AA0
600	3VA5460-5GC41-0AA0	3VA5460-6GC41-0AA0	3VA5460-7GC41-0AA0
	TM240 ATAM 100% Neutral		
450	3VA5445-5GF41-0AA0	3VA5445-6GF41-0AA0	3VA5445-7GF41-0AA0
500	3VA5450-5GF41-0AA0	3VA5450-6GF41-0AA0	3VA5450-7GF41-0AA0
600	3VA5460-5GF41-0AA0	3VA5460-6GF41-0AA0	3VA5460-7GF41-0AA0

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA54	3	5.4 (137)	9.8 (249)	5.4 (137)	11.5	5.2
3VA54	4	7.2 (183)	9.8 (249)	5.4 (137)	15.0	6.8

Interrupting Ratings for 3VA54

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA)									
		Volts AC (50/60 Hz)					Volts DC				
		240	480Y/ 277V	480	600Y/ 347V	600	250 (2P)	600 (3P)	750 (3P)	750 (4P)	1000 (4P)
M	MLAS	85	35	35	18	18	50	50	10	50	10
H	HLAS	100	65	65	25	25	85	85	10	85	10
C	CLAS	200	100	100	35	35	100	100	10	100	10

Trip Settings for 3VA54

TM230 - FTAM

I_n (A)	I_r(A)	I_i (A)					
450	450	2250	2700	3150	3600	4050	4500
500	500	2500	3000	3500	4000	4500	5000
600	600	3000	3600	4200	4800	5400	6000

TM240 - ATAM

I_n (A)	I_r(A) 90%	I_r(A) 80%	I_i (A)					
450	405	360	2250	2700	3150	3600	4050	4500
500	450	400	2500	3000	3500	4000	4500	5000
600	540	480	3000	3600	4200	4800	5400	6000

① Available with NAVAL/50C ratings.

3VA54 600A 3-Pole

3VA54 600A 4-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

For factory installed nut keepers (3VA94730QA00), change the 12th digit of the catalog number to "2" (required to install a breaker in a panelboard or switchboard that has a provision). (For example, a 35KA @480VAC, 600A, 3-pole, 3VA54 with nut keepers would be catalog number 3VA5460-5EC3**2**-0AA0).

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 600A, 3-pole, 3VA54 with lugs would be catalog number 3VA5460-5EC3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

Note: Factory installed nut keepers and lugs are only available for 3 Pole breakers.

For NAVAL-rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 600A, 3-pole, NAVAL rated 3VA54 would be catalog number 3VA5460-5EC31-**1**AA0)

All 3VA54 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

3VA64 600A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers without lugs.

For factory installed nut keepers (3VA94730QA00), change the 12th digit of the catalog number to "2" (required to install a breaker in a panelboard or switchboard that has a provision). (For example, a 35KA @480VAC, 600A, 3-pole, 3VA64 with nut keepers would be catalog number 3VA6460-5HL3**2**-0AA0).

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 600A, 3-pole, 3VA64 with lugs would be catalog number 3VA6460-5HL3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

Note: Factory installed nut keepers and lugs are only available for 3 Pole breakers.

3VA64 electronic trip circuit breakers are available with 100% ratings (up to 400A only in this frame – 600A with 100% ratings can be purchased in the 800A frame). For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 400A, 3-pole, 100% rated 3VA64 would be catalog number 3VA6440-5HL31-**2**AA0). Requires the use of rated lugs — see lug table below.

Note: 100% option not available for E-interrupting class breakers.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

All 3VA64 electronic trip circuit breakers are UL listed for reverse feed applications.

3VA64 600A Frame 3-Pole Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MLAE) Catalog Number	H-Interrupting Class (HLAE) Catalog Number	C-Interrupting Class (CLAE) Catalog Number	L-Interrupting Class (LLAE) Catalog Number	E-Interrupting Class (ELAE) Catalog Number
ETU320 LI with dials					
400	3VA6440-5HL31-0AA0	3VA6440-6HL31-0AA0	3VA6440-7HL31-0AA0	3VA6440-8HL31-0AA0	—
600	3VA6460-5HL31-0AA0	3VA6460-6HL31-0AA0	3VA6460-7HL31-0AA0	3VA6460-8HL31-0AA0	3VA6460-0HL31-0AA0
ETU330 LIG with dials					
400	3VA6440-5HM31-0AA0	3VA6440-6HM31-0AA0	3VA6440-7HM31-0AA0	3VA6440-8HM31-0AA0	—
600	3VA6460-5HM31-0AA0	3VA6460-6HM31-0AA0	3VA6460-7HM31-0AA0	3VA6460-8HM31-0AA0	3VA6460-0HM31-0AA0
ETU350 LSI with dials					
400	3VA6440-5HN31-0AA0	3VA6440-6HN31-0AA0	3VA6440-7HN31-0AA0	3VA6440-8HN31-0AA0	—
600	3VA6460-5HN31-0AA0	3VA6460-6HN31-0AA0	3VA6460-7HN31-0AA0	3VA6460-8HN31-0AA0	3VA6460-0HN31-0AA0
ETU550 LSI with LCD					
400	3VA6440-5JP31-0AA0	3VA6440-6JP31-0AA0	3VA6440-7JP31-0AA0	3VA6440-8JP31-0AA0	—
600	3VA6460-5JP31-0AA0	3VA6460-6JP31-0AA0	3VA6460-7JP31-0AA0	3VA6460-8JP31-0AA0	—
ETU556 LSI(G Alarm) with LCD					
400	3VA6440-5JT31-0AA0	3VA6440-6JT31-0AA0	3VA6440-7JT31-0AA0	3VA6440-8JT31-0AA0	—
600	3VA6460-5JT31-0AA0	3VA6460-6JT31-0AA0	3VA6460-7JT31-0AA0	3VA6460-8JT31-0AA0	—
ETU560 LSIG with LCD					
400	3VA6440-5JQ31-0AA0	3VA6440-6JQ31-0AA0	3VA6440-7JQ31-0AA0	3VA6440-8JQ31-0AA0	—
600	3VA6460-5JQ31-0AA0	3VA6460-6JQ31-0AA0	3VA6460-7JQ31-0AA0	3VA6460-8JQ31-0AA0	—
ETU820 LI with LCD and Metering					
400	3VA6440-5KL31-0AA0	3VA6440-6KL31-0AA0	3VA6440-7KL31-0AA0	3VA6440-8KL31-0AA0	—
600	3VA6460-5KL31-0AA0	3VA6460-6KL31-0AA0	3VA6460-7KL31-0AA0	3VA6460-8KL31-0AA0	—
ETU830 LIG with LCD and Metering					
400	3VA6440-5KM31-0AA0	3VA6440-6KM31-0AA0	3VA6440-7KM31-0AA0	3VA6440-8KM31-0AA0	—
600	3VA6460-5KM31-0AA0	3VA6460-6KM31-0AA0	3VA6460-7KM31-0AA0	3VA6460-8KM31-0AA0	—
ETU850 LSI with LCD and Metering					
400	3VA6440-5KP31-0AA0	3VA6440-6KP31-0AA0	3VA6440-7KP31-0AA0	3VA6440-8KP31-0AA0	—
600	3VA6460-5KP31-0AA0	3VA6460-6KP31-0AA0	3VA6460-7KP31-0AA0	3VA6460-8KP31-0AA0	—
ETU856 LSI(G Alarm) with LCD and Metering					
400	3VA6440-5KT31-0AA0	3VA6440-6KT31-0AA0	3VA6440-7KT31-0AA0	3VA6440-8KT31-0AA0	—
600	3VA6460-5KT31-0AA0	3VA6460-6KT31-0AA0	3VA6460-7KT31-0AA0	3VA6460-8KT31-0AA0	3VA6460-0KT31-0AA0
ETU860 LSIG with LCD and Metering					
400	3VA6440-5KQ31-0AA0	3VA6440-6KQ31-0AA0	3VA6440-7KQ31-0AA0	3VA6440-8KQ31-0AA0	—
600	3VA6460-5KQ31-0AA0	3VA6460-6KQ31-0AA0	3VA6460-7KQ31-0AA0	3VA6460-8KQ31-0AA0	3VA6460-0KQ31-0AA0

3VA64 600A 4-Pole

Interrupting Ratings for 3VA64

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MLAE	100	35	35	18	18
H	HLAE	100	65	65	22	22
C	CLAE	200	100	100	35	35
L	LLAE	200	150	150	50	50
E	ELAE	—	200	200	100	100

Dimensions

Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA64	3	5.4 (137)	9.8 (249)	5.4 (137)	11.0	5.2
3VA64	4	7.2 (183)	9.8 (249)	5.4 (137)	15.0	6.8

3VA64 600A Frame 4-Pole Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MLAE) Catalog Number	H-Interrupting Class (HLAE) Catalog Number	C-Interrupting Class (CLAE) Catalog Number	L-Interrupting Class (LLAE) Catalog Number	E-Interrupting Class (ELAE) Catalog Number
ETU320 LI with dials					
400	3VA6440-5HL41-0AA0	3VA6440-6HL41-0AA0	3VA6440-7HL41-0AA0	3VA6440-8HL41-0AA0	—
600	3VA6460-5HL41-0AA0	3VA6460-6HL41-0AA0	3VA6460-7HL41-0AA0	3VA6460-8HL41-0AA0	3VA6460-0HL41-0AA0
ETU330 LIG with dials					
400	3VA6440-5HM41-0AA0	3VA6440-6HM41-0AA0	3VA6440-7HM41-0AA0	3VA6440-8HM41-0AA0	—
600	3VA6460-5HM41-0AA0	3VA6460-6HM41-0AA0	3VA6460-7HM41-0AA0	3VA6460-8HM41-0AA0	3VA6460-0HM41-0AA0
ETU350 LSI with dials					
400	3VA6440-5HN41-0AA0	3VA6440-6HN41-0AA0	3VA6440-7HN41-0AA0	3VA6440-8HN41-0AA0	—
600	3VA6460-5HN41-0AA0	3VA6460-6HN41-0AA0	3VA6460-7HN41-0AA0	3VA6460-8HN41-0AA0	3VA6460-0HN41-0AA0
ETU550 LSI with LCD					
400	3VA6440-5JP41-0AA0	3VA6440-6JP41-0AA0	3VA6440-7JP41-0AA0	3VA6440-8JP41-0AA0	—
600	3VA6460-5JP41-0AA0	3VA6460-6JP41-0AA0	3VA6460-7JP41-0AA0	3VA6460-8JP41-0AA0	—
ETU556 LSI(G Alarm) with LCD					
400	3VA6440-5JT41-0AA0	3VA6440-6JT41-0AA0	3VA6440-7JT41-0AA0	3VA6440-8JT41-0AA0	—
600	3VA6460-5JT41-0AA0	3VA6460-6JT41-0AA0	3VA6460-7JT41-0AA0	3VA6460-8JT41-0AA0	—
ETU560 LSIG with LCD					
400	3VA6440-5JQ41-0AA0	3VA6440-6JQ41-0AA0	3VA6440-7JQ41-0AA0	3VA6440-8JQ41-0AA0	—
600	3VA6460-5JQ41-0AA0	3VA6460-6JQ41-0AA0	3VA6460-7JQ41-0AA0	3VA6460-8JQ41-0AA0	—
ETU820 LI with LCD and Metering					
400	3VA6440-5KL41-0AA0	3VA6440-6KL41-0AA0	3VA6440-7KL41-0AA0	3VA6440-8KL41-0AA0	—
600	3VA6460-5KL41-0AA0	3VA6460-6KL41-0AA0	3VA6460-7KL41-0AA0	3VA6460-8KL41-0AA0	—
ETU830 LIG with LCD and Metering					
400	3VA6440-5KM41-0AA0	3VA6440-6KM41-0AA0	3VA6440-7KM41-0AA0	3VA6440-8KM41-0AA0	—
600	3VA6460-5KM41-0AA0	3VA6460-6KM41-0AA0	3VA6460-7KM41-0AA0	3VA6460-8KM41-0AA0	—
ETU850 LSI with LCD and Metering					
400	3VA6440-5KP41-0AA0	3VA6440-6KP41-0AA0	3VA6440-7KP41-0AA0	3VA6440-8KP41-0AA0	—
600	3VA6460-5KP41-0AA0	3VA6460-6KP41-0AA0	3VA6460-7KP41-0AA0	3VA6460-8KP41-0AA0	—
ETU856 LSI(G Alarm) with LCD and Metering					
400	3VA6440-5KT41-0AA0	3VA6440-6KT41-0AA0	3VA6440-7KT41-0AA0	3VA6440-8KT41-0AA0	—
600	3VA6460-5KT41-0AA0	3VA6460-6KT41-0AA0	3VA6460-7KT41-0AA0	3VA6460-8KT41-0AA0	3VA6460-0KT41-0AA0
ETU860 LSIG with LCD and Metering					
400	3VA6440-5KQ41-0AA0	3VA6440-6KQ41-0AA0	3VA6440-7KQ41-0AA0	3VA6440-8KQ41-0AA0	—
600	3VA6460-5KQ41-0AA0	3VA6460-6KQ41-0AA0	3VA6460-7KQ41-0AA0	3VA6460-8KQ41-0AA0	3VA6460-0KQ41-0AA0

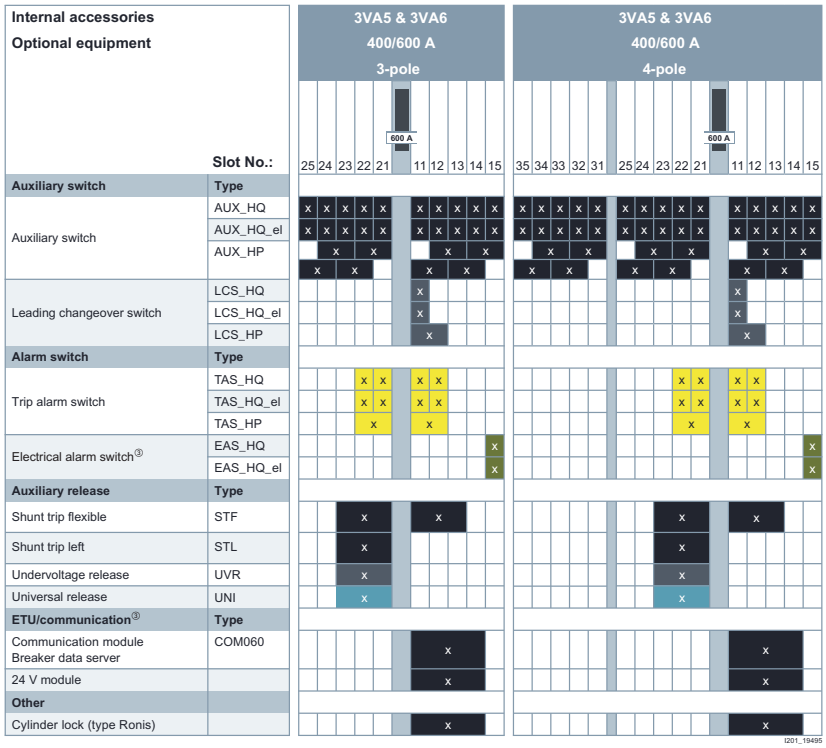
Connections for 75C wire for 3VA54 and 3VA64

Type	Minimum cable size	Maximum cable size	Part Number (kit of 3 lugs)	Part Number (kit of 4 lugs)
Steel Wrap around (Cu cable only) single cable lugs	1/0	500 kcmil	**3VA9473-0JA13**	**3VA9474-0JA13**
Steel Wrap around (Cu cable only) single cable lugs with control wire tap	1/0	500 kcmil	**3VA9473-0JH13**	**3VA9474-0JH13**
Aluminum Body Lug (Cu/Al cable) single cable lugs	AWG 1	600 kcmil	**3VA9373-0JB13**	**3VA9374-0JB13**
Aluminum body lug with control wire tap (Cu/Al cable) single cable lugs	AWG 1	600 kcmil	**3VA9373-0JG13**	**3VA9374-0JG13**
Copper body lug (Cu cable only) single cable lugs	AWG 1	600 kcmil	**3VA9373-0JD13**①⑦	**3VA9374-0JD13**①⑦
Copper body lug (Cu cable only) with control wire tap single cable lugs	AWG 1	600 kcmil	**3VA9373-0JK13**①	**3VA9374-0JK13**①
Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover	2/0	600 kcmil	**3VA9473-0JJ23**⑥	**3VA9474-0JJ23**⑥
Aluminum body lug, 2 cables (Cu/Al cable) with 1 intermediate terminal cover	250 kcmil or 2× 250 kcmil	750 kcmil	**3VA9373-0JJ24**①	**3VA9374-0JJ24**①
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	2/0	600 kcmil	**3VA9473-0JC23**	**3VA9474-0JC23**
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 intermediate terminal cover	250 kcmil or 2× 250 kcmil	750 kcmil	**3VA9373-0JC24**①	**3VA9374-0JC24**①
Distribution lug, 6 Cables (Cu/Al cable) with 1 extended terminal cover	AWG 14	2 AWG	**3VA9373-0JF60**	**3VA9374-0JF60**
Copper body lug, 2 cables (Cu cable only) with 1 extended terminal cover	2/0	600 kcmil	**3VA9473-0JE23**②	**3VA9474-0JE23**②
Copper body lug, 2 cables (Cu cable only) with control wire tap and 1 extended terminal cover	2/0	600 kcmil	**3VA9473-0JL23**②	**3VA9474-0JL23**②

① 3VA64 Meets the requirement for 100% rated breakers up to 400A.
② 3VA64 Meets requirement for 100% rated breakers up to 400A, requires the use of 90 degree wire.
⑥ Standard lug installed at the factory when breaker ordered with a "6" in the 12th position.
⑦ Standard lug installed at the factory on 400A 100% rated breaker when ordered with a "6" in the 12th position.

Enclosures for 3VA54 and 3VA64 (3-pole only)

NEMA Type	Catalog Number
1 Surface	**3VAE6001S**
1 Flush	**3VAE6001F**
3R	**3VAE6003R**
12	**3VAE60012**
4X (304)	**3VAE6004X**
4X (316)	**3VAE6004X316**
Neutral	**HN656ACB**
200% Neutral	**HN678ACB**



Trip Settings for 3VA64

ETU320-LI, ETU330-LIG, ETU350-LSI

Continuous Amperage	LI, LIG, LSI			LSI		LIG	LI, LIG, LSI 4P only
I_n (Amp)	I_r(Amp) (L)	t_{Id} (sec) (L)	I_i (Amp) (I)④	I_{sd}= xIr (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	I_N=xI_r (Amp)
400	150 - 400	0.5 - 17	600-4800	1.5 - 10	0.08 - 0.4	80 - 400	0.5 - 1 / OFF
600	250 - 600	0.5 - 15	900-5400	1.5 - 9		120 - 600	0.5 - 1 / OFF

④ I_i for ETU350 is fixed at the maximum level shown in table.

③ These accessories are for electronic trip breakers only.

See page 7-95 for internal accessory part numbers.

ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU830-LIG, ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

Continuous Amperage	LI, LIG, LSI, LSIG, LSI(G)			LSI, LSIG, LSI(G)		LIG, LSIG, LSI(G)		LSI 3P with External CT	LI, LIG, LSI, LSIG, LSI(G) 4P only
I_n (Amp)	I_r(Amp) (L)⑤	t_{Id} (sec) (L)	I_i (Amp) (I)	I_{sd} (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (G)	I_N=xI_r (Amp)	I_N (Amp)
400	150 - 400	0.5 - 25	600-4800	240 - 4000	0.05 - 0.5	80 - 400	0.05 - 0.8	80 - 640 / OFF	80 - 600 / OFF
600	250 - 600	0.5 - 15	900-5400	360 - 5400		120 - 600		120 - 960 / OFF	120 - 600 / OFF

⑤ Adjustable in steps of 1A.

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at **https://digitalcontentcenter.compas.siemens-info.com/SIE_IM_3VA6_Systems_Manual.pdf**

3VA55 800A, 2-pole in 3-pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MMAS)	H-Interrupting Class (HMAS)	C-Interrupting Class (CMAS)
	Catalog Number	Catalog Number	Catalog Number
	TM230 FTAM		
600	3VA5560-5EC62-0AA0	3VA5560-6EC62-0AA0	3VA5560-7EC62-0AA0
700	3VA5570-5EC62-0AA0	3VA5570-6EC62-0AA0	3VA5570-7EC62-0AA0
800	3VA5580-5EC62-0AA0	3VA5580-6EC62-0AA0	3VA5580-7EC62-0AA0

3VA55 800A, 3-pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MMAS)	H-Interrupting Class (HMAS)	C-Interrupting Class (CMAS)
	Catalog Number	Catalog Number	Catalog Number
	TM230 FTAM①		
600	3VA5560-5EC32-0AA0	3VA5560-6EC32-0AA0	3VA5560-7EC32-0AA0
700	3VA5570-5EC32-0AA0	3VA5570-6EC32-0AA0	3VA5570-7EC32-0AA0
800	3VA5580-5EC32-0AA0	3VA5580-6EC32-0AA0	3VA5580-7EC32-0AA0

3VA55 800A, 4-pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MMAS)	H-Interrupting Class (HMAS)	C-Interrupting Class (CMAS)
	Catalog Number	Catalog Number	Catalog Number
	TM230 FTAM Unprotected Neutral		
600	3VA5560-5EC42-0AA0	3VA5560-6EC42-0AA0	3VA5560-7EC42-0AA0
700	3VA5570-5EC42-0AA0	3VA5570-6EC42-0AA0	3VA5570-7EC42-0AA0
800	3VA5580-5EC42-0AA0	3VA5580-6EC42-0AA0	3VA5580-7EC42-0AA0
	TM230 FTAM 100% Neutral		
600	3VA5560-5GC42-0AA0	3VA5560-6GC42-0AA0	3VA5560-7GC42-0AA0
700	3VA5570-5GC42-0AA0	3VA5570-6GC42-0AA0	3VA5570-7GC42-0AA0
800	3VA5580-5GC42-0AA0	3VA5580-6GC42-0AA0	3VA5580-7GC42-0AA0

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA55	2(3)	8.3 (210)	12.5 (318)	5.8 (147)	29.3	13.3
3VA55	3	8.3 (210)	12.5 (318)	5.8 (147)	29.4	13.4
3VA55	4	11.1 (280)	12.5 (318)	5.8 (147)	37.4	17.0

Interrupting Ratings for 3VA55

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA)									
		Volts AC (50/60 Hz)					Volts DC				
		240	480Y/277V	480	600Y/347V	600	250 (2P)	600 (3P)	750 (3P)	750 (4P)	1000 (4P)
M	MMAS	85	35	35	18	18	50	50	50	50	18
H	HMAS	100	65	65	25	25	85	85	85	85	25
C	CMAS	200	100	100	50	50	100	100	100	100	50

Trip Settings for 3VA55

TM230 - FTAM

I_n (Amp)	I_r(Amp)	I_i (Amp)					
600	600	3000	3600	4200	4800	5400	6000
700	700	3500	4200	4900	5600	6300	7000
800	800	4000	4800	5600	6400	7200	8000

① Available with NAVAL/50C ratings.

3VA55 800A 3-Pole

3VA55 800A 4-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers with nutkeepers on both line and load ends..

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 800A, 3-pole, 3VA55 with lugs would be catalog number 3VA5580-5EC3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

For NAVAL-rated (3-pole only) thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA @480VAC, 800A, 3-pole, NAVAL rated 3VA55 would be catalog number 3VA5580-5EC32-**1**AA0)

3VA55 are available with 100% ratings. For 100% rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 800A, 3-pole, 100% rated 3VA55 would be catalog number 3VA5580-5EC32-**2**AA0). Requires the use of rated lugs.

All 3VA55 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

3VA65 800A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers with nutkeepers on both line and load ends.

For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 800A, 3-pole, 3VA65 with lugs would be catalog number 3VA6580-5HL3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

3VA65 electronic trip circuit breakers are available with 100% ratings. For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 600A, 3-pole, 100% rated 3VA65 would be catalog number 3VA6560-5HL32-**2**AA0). Requires the use of rated lugs — see lug table below.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

All 3VA65 electronic trip circuit breakers are UL listed for reverse feed applications.

3VA65 800A, 3-pole Frame, Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MMAE) Catalog Number	H-Interrupting Class (HMAE) Catalog Number	C-Interrupting Class (CMAE) Catalog Number
ETU320 LI with dials			
600	3VA6560-5HL32-0AA0	3VA6560-6HL32-0AA0	3VA6560-7HL32-0AA0
800	3VA6580-5HL32-0AA0	3VA6580-6HL32-0AA0	3VA6580-7HL32-0AA0
ETU330 LIG with dials			
600	3VA6560-5HM32-0AA0	3VA6560-6HM32-0AA0	3VA6560-7HM32-0AA0
800	3VA6580-5HM32-0AA0	3VA6580-6HM32-0AA0	3VA6580-7HM32-0AA0
ETU350 LSI with dials			
600	3VA6560-5HN32-0AA0	3VA6560-6HN32-0AA0	3VA6560-7HN32-0AA0
800	3VA6580-5HN32-0AA0	3VA6580-6HN32-0AA0	3VA6580-7HN32-0AA0
ETU550 LSI with LCD			
600	3VA6560-5JP32-0AA0	3VA6560-6JP32-0AA0	3VA6560-7JP32-0AA0
800	3VA6580-5JP32-0AA0	3VA6580-6JP32-0AA0	3VA6580-7JP32-0AA0
ETU556 LSI(G Alarm) with LCD			
600	3VA6560-5JT32-0AA0	3VA6560-6JT32-0AA0	3VA6560-7JT32-0AA0
800	3VA6580-5JT32-0AA0	3VA6580-6JT32-0AA0	3VA6580-7JT32-0AA0
ETU560 LSIG with LCD			
600	3VA6560-5JQ32-0AA0	3VA6560-6JQ32-0AA0	3VA6560-7JQ32-0AA0
800	3VA6580-5JQ32-0AA0	3VA6580-6JQ32-0AA0	3VA6580-7JQ32-0AA0
ETU820 LI with LCD and Metering			
600	3VA6560-5KL32-0AA0	3VA6560-6KL32-0AA0	3VA6560-7KL32-0AA0
800	3VA6580-5KL32-0AA0	3VA6580-6KL32-0AA0	3VA6580-7KL32-0AA0
ETU856 LSI(G Alarm) with LCD and Metering			
600	3VA6560-5KT32-0AA0	3VA6560-6KT32-0AA0	3VA6560-7KT32-0AA0
800	3VA6580-5KT32-0AA0	3VA6580-6KT32-0AA0	3VA6580-7KT32-0AA0
ETU860 LSIG with LCD and Metering			
600	3VA6560-5KQ32-0AA0	3VA6560-6KQ32-0AA0	3VA6560-7KQ32-0AA0
800	3VA6580-5KQ32-0AA0	3VA6580-6KQ32-0AA0	3VA6580-7KQ32-0AA0

Enclosures for 3VA55, 3VA65, 3VA66 (3-pole only)

NEMA Type	Catalog Number
1 Surface	**3VAE8001S**
1 Flush	**3VAE8001F**
3R	**3VAE8003R**
12	**3VAE80012**
4X (304)	**3VAE8004X**
4X (316)	**3VAE8004X316**
Neutral	**HN656ACB**
200% Neutral	**HN678ACB**

3VA65 800A 4-Pole

Interrupting Ratings for 3VA65

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MMAE	100	35	35	25	25
H	HMAE	150	65	65	35	35
C	CMAE	200	100	100	50	50

Dimensions / Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA65	3	8.3 (210)	12.5 (318)	5.8 (147)	29.4	13.4
3VA65	4	11.1 (280)	12.5 (318)	5.8 (147)	37.4	17.0

3VA65 800A, 4-pole Frame, Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MMAE) Catalog Number	H-Interrupting Class (HMAE) Catalog Number	C-Interrupting Class (CMAE) Catalog Number
		ETU320 LI with dials	
600	3VA6560-5HL42-0AA0	3VA6560-6HL42-0AA0	3VA6560-7HL42-0AA0
800	3VA6580-5HL42-0AA0	3VA6580-6HL42-0AA0	3VA6580-7HL42-0AA0
		ETU330 LIG with dials	
600	3VA6560-5HM42-0AA0	3VA6560-6HM42-0AA0	3VA6560-7HM42-0AA0
800	3VA6580-5HM42-0AA0	3VA6580-6HM42-0AA0	3VA6580-7HM42-0AA0
		ETU350 LSI with dials	
600	3VA6560-5HN42-0AA0	3VA6560-6HN42-0AA0	3VA6560-7HN42-0AA0
800	3VA6580-5HN42-0AA0	3VA6580-6HN42-0AA0	3VA6580-7HN42-0AA0
		ETU550 LSI with LCD	
600	3VA6560-5JP42-0AA0	3VA6560-6JP42-0AA0	3VA6560-7JP42-0AA0
800	3VA6580-5JP42-0AA0	3VA6580-6JP42-0AA0	3VA6580-7JP42-0AA0
		ETU556 LSI(G Alarm) with LCD	
600	3VA6560-5JT42-0AA0	3VA6560-6JT42-0AA0	3VA6560-7JT42-0AA0
800	3VA6580-5JT42-0AA0	3VA6580-6JT42-0AA0	3VA6580-7JT42-0AA0
		ETU560 LSIG with LCD	
600	3VA6560-5JQ42-0AA0	3VA6560-6JQ42-0AA0	3VA6560-7JQ42-0AA0
800	3VA6580-5JQ42-0AA0	3VA6580-6JQ42-0AA0	3VA6580-7JQ42-0AA0
		ETU820 LI with LCD and Metering	
600	3VA6560-5KL42-0AA0	3VA6560-6KL42-0AA0	3VA6560-7KL42-0AA0
800	3VA6580-5KL42-0AA0	3VA6580-6KL42-0AA0	3VA6580-7KL42-0AA0
		ETU856 LSI(G Alarm) with LCD and Metering	
600	3VA6560-5KT42-0AA0	3VA6560-6KT42-0AA0	3VA6560-7KT42-0AA0
800	3VA6580-5KT42-0AA0	3VA6580-6KT42-0AA0	3VA6580-7KT42-0AA0
		ETU860 LSIG with LCD and Metering	
600	3VA6560-5KQ42-0AA0	3VA6560-6KQ42-0AA0	3VA6560-7KQ42-0AA0
800	3VA6580-5KQ42-0AA0	3VA6580-6KQ42-0AA0	3VA6580-7KQ42-0AA0

Connections for 75C wire for 3VA55, 3VA65 and 3VA66

Type	Minimum cable size	Maximum cable size	Part Number (kit of 3 lugs)	Part Number (kit of 4 lugs)
Aluminum body lug, 2 cables (Cu/Al cable)	4/0	600 kcmil	**3VA9573-0JB23**①④	**3VA9574-0JB23**①④
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap	4/0	600 kcmil	**3VA9573-0JG23**①	**3VA9574-0JG23**①
Aluminum body lug, 2 cables (Cu/Al cable) with 1 extended terminal cover	400 kcmil	750 kcmil	**3VA9673-0JJ24**②⑥	**3VA9674-0JJ24**②⑥
Aluminum body lug, 2 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	400 kcmil	750 kcmil	**3VA9673-0JC24**②⑥	**3VA9674-0JC24**②⑥
Aluminum body lug, 3 cables (Cu/Al cable)	4/0	400 kcmil	**3VA9673-0JB32**①	**3VA9674-0JB32**①
Aluminum body lug, 3 cables (Cu/Al cable) with control wire tap	4/0	400 kcmil	**3VA9673-0JG32**①	**3VA9674-0JG32**①
Aluminum body lug, 3 cables (Cu/Al cable) with 1 extended terminal cover	500 kcmil	750 kcmil	**3VA9673-0JJ34**③	**3VA9674-0JJ34**③
Aluminum body lug, 3 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	500 kcmil	750 kcmil	**3VA9673-0JC34**③	**3VA9674-0JC34**③
Aluminum body lug, 4 cables (Cu/Al cable) with 1 extended terminal cover	4/0	500 kcmil	**3VA9673-0JJ43**③⑤	**3VA9674-0JJ43**③⑤
Aluminum body lug, 4 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	4/0	500 kcmil	**3VA9673-0JC43**③	**3VA9674-0JC43**③
Aluminum body lug, 4 cables (Cu/Al cable) with 1 extended terminal cover	4/0	600 kcmil	**3VA9673-0JJ44**③	**3VA9674-0JJ44**③
Aluminum body lug, 4 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	4/0	600 kcmil	**3VA9673-0JC44**③	**3VA9674-0JC44**③
Copper body lug, 3 cables (Cu/Al cable) with control wire tap	4/0	400 kcmil	**3VA9673-0JK32**③	**3VA9674-0JK32**③
Copper body lug, 4 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	4/0	500 kcmil	**3VA9673-0JL43**③	**3VA9674-0JL43**③

① 3VA55 and 3VA65 Meets requirements for 100% rated breakers up to 600A.
② 3VA55 Meets requirements for 100% rated breakers up to 700A, requires the use of 90 degree wire, size to 75 degree ampacity.
③ 3VA55 and 3VA65 Meets requirements for 100% rated breakers up to 800A, requires the use of 90 degree wire, size to 75 degree ampacity.
④ Standard lug for the 600A and 700A 3VA55 and the 600A 3VA65 will be installed at the factory when the breaker is ordered with a "6" in the 12th position.
⑤ Standard lug for the 800A 3VA55/65 and the 1000A 3VA66 will ship with the breaker from the factory for field installation when the breaker is ordered with a "6" in the 12th position.
⑥ 3VA65 Meets requirements for 100% rated breakers up to 600A.

Trip Settings for 3VA55

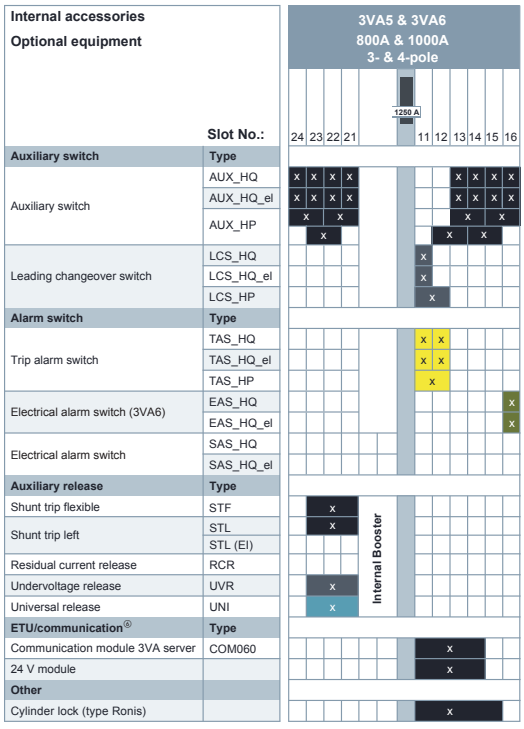
TM230 - FTAM

I_n (Amp)	I_r(Amp)	I_i (Amp)					
600	600	3000	3600	4200	4800	5400	6000
700	700	3500	4200	4900	5600	6300	7000
800	800	4000	4800	5600	6400	7200	8000

Trip Settings for 3VA65 and 3VA66

ETU320-LI, ETU330-LIG, ETU350-LSI

Cont. Amp	LI, LIG, LSI			LSI		LIG	LI, LIG, LSI 4P only
I_n (Amp)	I_r(Amp) (L)	t_{Id} (sec) (L)	I_i (Amp) (I)	I_{sd}= xIr (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	I_N=xI_r (Amp)
600	240 - 600	0.5 - 17	900 - 7200	1.5 - 12	0 - 0.4	120 - 600	0.2 - 1.0
800	320 - 800	0.5 - 17	1200 - 8000	1.5 - 10	0 - 0.4	160 - 800	0.2 - 1.0
1000	400 - 1000	0.5 - 17	1500 - 10000	1.5 - 10	0 - 0.4	200 - 1000	0.2 - 1.0



⑥ These accessories are for electronic trip breakers only.

ETU550-LSI, ETU556 LSI(A), ETU560-LSIG, ETU820-LI, ETU856 LSI(A), ETU860-LSIG

Cont. Amp	LI, LIG, LSI, LSIG, LSI(G)			LSI, LSIG, LSI(G)		LIG, LSIG, LSI(G)		LSI 3P with External CT	LI, LIG, LSI, LSIG, LSI(G) 4P only
I_n (Amp)	I_r(Amp) (L)⑦	t_{Id} (sec) (L)	I_i (Amp) (I)	I_{sd} (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (G)	I_N=xI_r (Amp)	I_N (Amp)
600	240 - 600	0.5 - 25	900 - 7200	360 - 7200	0.05 - 0.5	120 - 600	0.05 - 0.8	120 - 960	120 - 600
800	320 - 800	0.5 - 25	1200 - 8000	480 - 8000	0.05 - 0.5	160 - 800	0.05 - 0.8	160 - 1280	160 - 800
1000	400 - 1000	0.5 - 25	1500 - 10000	600 - 10000	0.05 - 0.5	200 - 1000	0.05 - 0.8	200 - 1600	200 - 1000

⑦ Adjustable in steps of 1A.

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at **https://digitalcontentcenter.compas.siemens-info.com/SIE_IM_3VA6_Systems_Manual.pdf**

3VA66 1000A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangeable trip circuit breakers with nutkeepers on both line and load ends.

To order installed standard line and load lugs which are shipped with the breaker for field installation, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 1000A, 3-pole, 3VA66 with lugs would be catalog number 3VA6610-5HL3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

All 3VA66 electronic trip circuit breakers are UL listed for reverse feed applications.

3VA66 1000A, 3-pole Frame, Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MMNAE) Catalog Number	H-Interrupting Class (HMNAE) Catalog Number	C-Interrupting Class (CMNAE) Catalog Number
		ETU320 LI with dials	
1000	**3VA6610-5HL32-0AA0**	**3VA6610-6HL32-0AA0**	**3VA6610-7HL32-0AA0**
		ETU330 LIG with dials	
1000	**3VA6610-5HM32-0AA0**	**3VA6610-6HM32-0AA0**	**3VA6610-7HM32-0AA0**
		ETU350 LSI with dials	
1000	**3VA6610-5HN32-0AA0**	**3VA6610-6HN32-0AA0**	**3VA6610-7HN32-0AA0**
		ETU550 LSI with LCD	
1000	**3VA6610-5JP32-0AA0**	**3VA6610-6JP32-0AA0**	**3VA6610-7JP32-0AA0**
		ETU556 LSI(G Alarm) with LCD	
1000	**3VA6610-5JT32-0AA0**	**3VA6610-6JT32-0AA0**	**3VA6610-7JT32-0AA0**
		ETU560 LSIG with LCD	
1000	**3VA6610-5JQ32-0AA0**	**3VA6610-6JQ32-0AA0**	**3VA6610-7JQ32-0AA0**
		ETU820 LI with LCD and Metering	
1000	**3VA6610-5KL32-0AA0**	**3VA6610-6KL32-0AA0**	**3VA6610-7KL32-0AA0**
		ETU856 LSI(G Alarm) with LCD and Metering	
1000	**3VA6610-5KT32-0AA0**	**3VA6610-6KT32-0AA0**	**3VA6610-7KT32-0AA0**
		ETU860 LSIG with LCD and Metering	
1000	**3VA6610-5KQ32-0AA0**	**3VA6610-6KQ32-0AA0**	**3VA6610-7KQ32-0AA0**

3VA66 1000A 4-Pole

Interrupting Ratings for 3VA66

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MMNAE	100	35	35	25	25
H	HMNAE	150	65	65	35	35
C	CMNAE	200	100	100	50	50

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA66	3	8.3 (210)	12.5 (318)	5.8 (147)	29.4	13.4
3VA66	4	11.1 (280)	12.5 (318)	5.8 (147)	37.4	17.0

3VA66 1000A, 4-pole Frame, Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MMNAE) Catalog Number	H-Interrupting Class (HMNAE) Catalog Number	C-Interrupting Class (CMNAE) Catalog Number
		ETU320 LI with dials	
1000	**3VA6610-5HL42-0AA0**	**3VA6610-6HL42-0AA0**	**3VA6610-7HL42-0AA0**
		ETU330 LIG with dials	
1000	**3VA6610-5HM42-0AA0**	**3VA6610-6HM42-0AA0**	**3VA6610-7HM42-0AA0**
		ETU350 LSI with dials	
1000	**3VA6610-5HN42-0AA0**	**3VA6610-6HN42-0AA0**	**3VA6610-7HN42-0AA0**
		ETU550 LSI with LCD	
1000	**3VA6610-5JP42-0AA0**	**3VA6610-6JP42-0AA0**	**3VA6610-7JP42-0AA0**
		ETU556 LSI(G Alarm) with LCD	
1000	**3VA6610-5JT42-0AA0**	**3VA6610-6JT42-0AA0**	**3VA6610-7JT42-0AA0**
		ETU560 LSIG with LCD	
1000	**3VA6610-5JQ42-0AA0**	**3VA6610-6JQ42-0AA0**	**3VA6610-7JQ42-0AA0**
		ETU820 LI with LCD and Metering	
1000	**3VA6610-5KL42-0AA0**	**3VA6610-6KL42-0AA0**	**3VA6610-7KL42-0AA0**
		ETU856 LSI(G Alarm) with LCD and Metering	
1000	**3VA6610-5KT42-0AA0**	**3VA6610-6KT42-0AA0**	**3VA6610-7KT42-0AA0**
		ETU860 LSIG with LCD and Metering	
1000	**3VA6610-5KQ42-0AA0**	**3VA6610-6KQ42-0AA0**	**3VA6610-7KQ42-0AA0**

3VA57 1200A, 2-pole in 3-pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MNAS)	H-Interrupting Class (HNAS)	C-Interrupting Class (CNAS)
	Catalog Number	Catalog Number	Catalog Number
		TM230 FTAM①	
800	3VA5780-5EC61-0AA0	3VA5780-6EC61-0AA0	3VA5780-7EC61-0AA0
900	3VA5790-5EC61-0AA0	3VA5790-6EC61-0AA0	3VA5790-7EC61-0AA0
1000	3VA5710-5EC61-0AA0	3VA5710-6EC61-0AA0	3VA5710-7EC61-0AA0
1200	3VA5712-5EC61-0AA0	3VA5712-6EC61-0AA0	3VA5712-7EC61-0AA0

3VA57 1200A, 3-pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MNAS)	H-Interrupting Class (HNAS)	C-Interrupting Class (CNAS)
	Catalog Number	Catalog Number	Catalog Number
		TM230 FTAM①	
800	3VA5780-5EC31-0AA0	3VA5780-6EC31-0AA0	3VA5780-7EC31-0AA0
900	3VA5790-5EC31-0AA0	3VA5790-6EC31-0AA0	3VA5790-7EC31-0AA0
1000	3VA5710-5EC31-0AA0	3VA5710-6EC31-0AA0	3VA5710-7EC31-0AA0
1200	3VA5712-5EC31-0AA0	3VA5712-6EC31-0AA0	3VA5712-7EC31-0AA0

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA57	2(3)	9.0 (229)	16.0 (406)	6.0 (152)	55.1	25.0
3VA57	3	9.0 (229)	16.0 (406)	6.0 (152)	55.1	25.0

Interrupting Ratings for 3VA57

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA)							
		Volts AC (50/60 Hz)					Volts DC		
		240	480Y/ 277V	480	600Y/ 347V	600	250 (2P)	600 (3P)	750 (3P)
M	MNAS	85	35	35	25	25	50	50	50
H	HNAS	100	65	65	35	35	85	85	85
C	CNAS	200	100	100	65	65	100	100	100

① Available with NAVAL/50C ratings.

3VA57 1200A 3-Pole

Ordering Information

The catalog numbers listed here are for complete, non-interchangable trip circuit breakers without lugs. Order required lugs or connection technology separately for field installation.

Option coming soon: For factory installed standard line and load lugs, change the 12th digit to 6 (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 1200A, 3-pole, 3VA57 with lugs would be catalog number 3VA5712-5EC3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

All 3VA57 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

For NAVAL rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA@480VAC, 1200A, 3-pole, rated 3VA57 would be catalog number 3VA5712-5EC31-**1**AA0)

All 3VA57 thermal-magnetic trip circuit breakers can be ordered 100% rated. For 100% rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA@480VAC, 1200A, 3-pole, rated 3VA57 would be catalog number 3VA5712-5EC31-**2**AA0)

3VA67 1200A 3-Pole

Ordering Information

The catalog numbers listed below are for complete, non-interchangable trip circuit breakers without lugs.

Option coming soon: For factory installed standard line and load lugs, change the 12th digit to "6" (standard lugs are identified in the lug table and footnotes in this section of the SpeedFax). (For example, a 35KA @480VAC, 1200A, 3-pole, 3VA67 with lugs would be catalog number 3VA6712-5HL3**6**-0AA0). Alternate connectors can be ordered separately for field installation.

All 3VA67 electronict trip circuit breakers are UL listed for reverse feed applications.

3VA67 electronic trip circuit breakers are available with 100% ratings. For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 1200A, 3-pole, 100% rated 3VA67 would be catalog number 3VA6712-5HL31-**2**AA0). See lug table below.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA67 1200A, 3-pole Frame, Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MNAE) Catalog Number	H-Interrupting Class (HNAE) Catalog Number	C-Interrupting Class (CNAE) Catalog Number
		ETU320 LI with dials	
800	**3VA6780-5HL31-0AA0**	**3VA6780-6HL31-0AA0**	**3VA6780-7HL31-0AA0**
1000	**3VA6710-5HL31-0AA0**	**3VA6710-6HL31-0AA0**	**3VA6710-7HL31-0AA0**
1200	**3VA6712-5HL31-0AA0**	**3VA6712-6HL31-0AA0**	**3VA6712-7HL31-0AA0**
		ETU330 LIG with dials	
800	**3VA6780-5HM31-0AA0**	**3VA6780-6HM31-0AA0**	**3VA6780-7HM31-0AA0**
1000	**3VA6710-5HM31-0AA0**	**3VA6710-6HM31-0AA0**	**3VA6710-7HM31-0AA0**
1200	**3VA6712-5HM31-0AA0**	**3VA6712-6HM31-0AA0**	**3VA6712-7HM31-0AA0**
		ETU350 LSI with dials	
800	**3VA6780-5HN31-0AA0**	**3VA6780-6HN31-0AA0**	**3VA6780-7HN31-0AA0**
1000	**3VA6710-5HN31-0AA0**	**3VA6710-6HN31-0AA0**	**3VA6710-7HN31-0AA0**
1200	**3VA6712-5HN31-0AA0**	**3VA6712-6HN31-0AA0**	**3VA6712-7HN31-0AA0**
		ETU360 LSIG with dials	
800	**3VA6780-5HQ31-0AA0**	**3VA6780-6HQ31-0AA0**	**3VA6780-7HQ31-0AA0**
1000	**3VA6710-5HQ31-0AA0**	**3VA6710-6HQ31-0AA0**	**3VA6710-7HQ31-0AA0**
1200	**3VA6712-5HQ31-0AA0**	**3VA6712-6HQ31-0AA0**	**3VA6712-7HQ31-0AA0**
		ETU850 LSI with LCD and Metering	
800	**3VA6780-5KP31-0AA0**	**3VA6780-6KP31-0AA0**	**3VA6780-7KP31-0AA0**
1000	**3VA6710-5KP31-0AA0**	**3VA6710-6KP31-0AA0**	**3VA6710-7KP31-0AA0**
1200	**3VA6712-5KP31-0AA0**	**3VA6712-6KP31-0AA0**	**3VA6712-7KP31-0AA0**
		ETU856 LSI(G Alarm) with LCD and Metering	
800	**3VA6780-5KT31-0AA0**	**3VA6780-6KT31-0AA0**	**3VA6780-7KT31-0AA0**
1000	**3VA6710-5KT31-0AA0**	**3VA6710-6KT31-0AA0**	**3VA6710-7KT31-0AA0**
1200	**3VA6712-5KT31-0AA0**	**3VA6712-6KT31-0AA0**	**3VA6712-7KT31-0AA0**
		ETU860 LSIG with LCD and Metering	
800	**3VA6780-5KQ31-0AA0**	**3VA6780-6KQ31-0AA0**	**3VA6780-7KQ31-0AA0**
1000	**3VA6710-5KQ31-0AA0**	**3VA6710-6KQ31-0AA0**	**3VA6710-7KQ31-0AA0**
1200	**3VA6712-5KQ31-0AA0**	**3VA6712-6KQ31-0AA0**	**3VA6712-7KQ31-0AA0**

Dimensions / Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA67	3	9.0 (229)	16.0 (406)	6.0 (152)	55.1	25.0

Interrupting Ratings for 3VA67

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MNAE	85	35	35	25	25
H	HNAE	100	65	65	35	35
C	CNAE	200	100	100	65	65

Trip Settings for 3VA67

ETU320-LI, ETU330-LIG, ETU350-LSI

Cont. Amp	LI, LIG, LSI, LSIG			LSI, LSIG		LIG, LSIG	
I_n (Amp)	I_r(Amp) (L)	t_{ld} (sec) (L)	I_i (Amp) (I)	I_{sd}= xIr (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (sec) (S)
800	315–800	2.5 - 30	1200–9600	1.5 - 10	0 - 0.4	160–800	0.1 / 0.3
1000	400–1000	2.5 - 30	1500–12000	1.5 - 10	0 - 0.4	200–1000	
1200	500–1200	2.5 - 30	1800–12000	1.5 - 10	0 - 0.4	240–1200	

ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

Cont. Amp	LSI, LSI(G), LSIG			LSI, LSI(G), LSIG		LSI(G), LSIG		LSI 3P with External CT
I_n (Amp)	I_r(Amp) (L)	t_{ld} (sec) (L)	I_i (Amp) (I)	I_{sd} (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (sec) (S)	I_N=xI_r (Amp)
800	315–800	2.5 - 30	1200–9600	0.6 - 10	0.05 - 0.5	160–800	0.05 - 0.8	160–1280
1000	400–1000	2.5 - 30	1500–12000	0.6 - 10	0.05 - 0.5	200–1000		200–1600
1200	500–1200	2.5 - 30	1800–12000	0.6 - 10	0.05 - 0.5	240–1200		240–1920

Connections for 75C wire for 3VA57 and 3VA67

Type	Minimum cable size	Maximum cable size	Part Number (kit of 2 lugs)	Part Number (kit of 3 lugs)	Mount Lugs to Essential Parts
TA6.1 Aluminum body lug, 3 cables (Cu/Al cable) with 1 extended terminal cover	500 kcmil	750 kcmil	**3VA9772-0JJ34**①	**3VA9773-0JJ34**①	
TA6.2 Aluminum body lug, 4 cables (Cu/Al cable) with 1 extended terminal cover	1/0	500 kcmil	**3VA9772-0JJ43**	**3VA9773-0JJ43**	
TA6.2 Aluminum body lug with CVT, 4 cables (Cu/Al cable) with control wire tap and 1 extended terminal cover	1/0	500 kcmil	—	**3VA9773-0JC43**	
TA6.3 Aluminum body lug, 4 cables (Cu/Al cable) with 1 extended terminal cover, 100% rated	1/0	500 kcmil	—	**3VA9773-0JM43**①	
TC6.2 Copper body lug (Cu cable only) 4 cable lugs	1/0	500 kcmil	—	**3VA9773-0JE43**①	
TA7.1 Aluminum body lug, 6 cables (Cu/Al cable) for lug mounting assembly	1/0	750 kcmil	—	**3VA9773-0JJ64**①②	**3VA9873-0WL00**
CL1.7 Compression lug, 12 pcs, 4 per phase line or load (Cu/Al cable),with extended terminal cover	1/0	500 kcmil	—	**3VA9773-0QK01**	

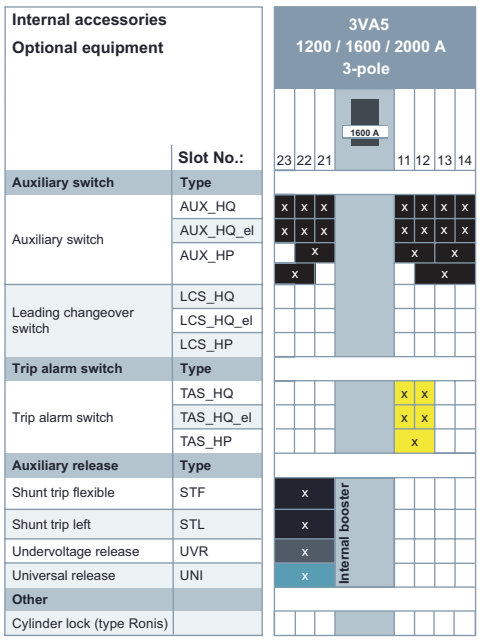
① Meets requirements for 100% rated breakers up to 1200A, requires the use of 90 degree wire, size to 75 degree ampacity.
① Lugs Require Attachment to 3VA9873-0WL00 LMAP (Sold Separately).

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at **https://digitalcontentcenter.compas.siemens-info.com/SIE_IM_3VA6_Systems_Manual.pdf**

Internal Accessories[1]

Auxiliary and Alarm Switches (Form C –> 1 NO and 1 NC)

Switch Type	Width	AC 50/ 60 Hz	DC	Catalog Number
Auxiliary Switch (AUX) HQ	1 slot	240V	250V	**3VA9978-0AA12**
		24V	24V	**3VA9978-0AA23**
Auxiliary Switch (AUX) HP	2 slots	600V	250V	**3VA9978-0AA11**
Trip/Bell Alarm Switch (TAS) HQ	1 slot	240V	250V	**3VA9978-0AB12**
		24V	24V	**3VA9978-0AB13**
Trip/Bell Alarm Switch (TAS) HP	2 slots	600V	250V	**3VA9978-0AB11**



Shunt Trips

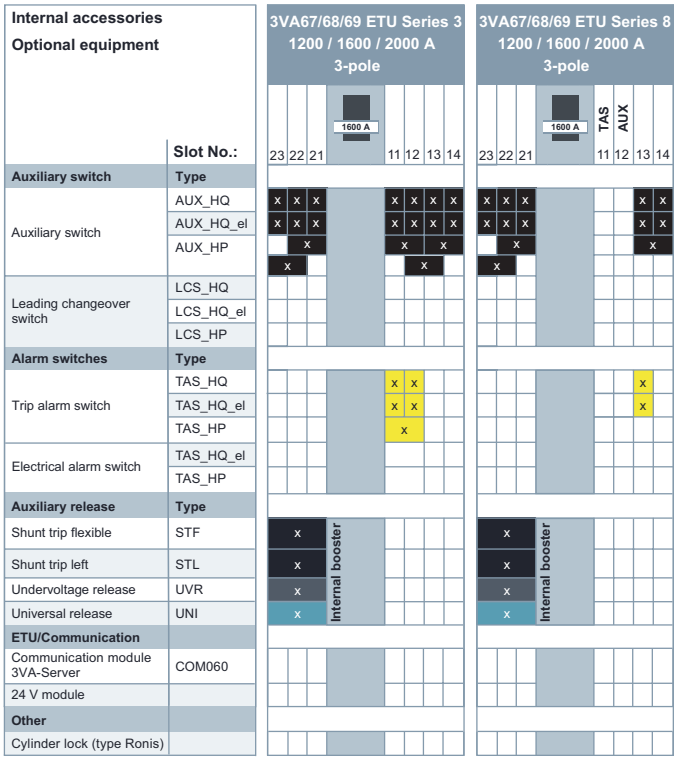
Type	VAC 50/60 Hz	VDC	Catalog Number (3 slots)
Shunt Trip Left (STL)	380 ... 600	—	**3VA9978-0BL20**
	—	12	**3VA9978-0BL10**
	24	24 ... 30	**3V9978-0BL30**
	48 ... 60	48 ... 60	**3VA9978-0BL31**
	110 ... 127	110 ... 127	**3VA9978-0BL32**
	208 ... 277	220 ... 250	**3VA9978-0BL33**
Shunt Trip Flexible (STF)[2]	24	—	**3VA9978-0BA20**
	48 ... 60	—	**3VA9978-0BA21**
	110 ... 127	—	**3VA9978-0BA22**
	208 ... 277	—	**3VA9978-0BA23**
	380 ... 500	—	**3VA9978-0BA24**
	600	—	**3VA9978-0BA25**

Undervoltage Release

Undervoltage Release (UVR)	—	12	**3VA9978-0BB10**
	—	24	**3VA9978-0BB11**
	—	48	**3VA9978-0BB12**
	—	125 ... 127	**3VA9978-0BB14**
	—	250	**3VA9978-0BB16**
	24	—	**3VA9978-0BB20**
	120 ... 127	—	**3VA9978-0BB24**
	208 ... 230	—	**3VA9978-0BB25**
	440 ... 480	—	**3VA9978-0BB27**

Universal Release (Undervoltage and Shunt trip)

Universal Release (UNI)	—	12	**3VA9978-0BD11**
	—	24	**3VA9978-0BD12**
	—	48	**3VA9978-0BD13**



Time-delay Device for Undervoltage Release

Type	VAC 50/60 Hz	VDC	Delay Time	Catalog Number
Time-delay Device (mounted external to circuit breaker)	230	230	Fixed – 100ms min.	**3VA9978-0BF22**
	—	24	Fixed – 100ms min.	**3VA9978-0BF23**

[1] Refer to pages 7-124 and 7-125 for internal accessory electrical requirements.

[2] Shunt trip flexible can be used in the left pocket of the 3VA5 breakers. They can be used in the left or right pocket of the 3VA6 breakers.

3VA58 1600A, 3-pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MPAS) Catalog Number	H-Interrupting Class (HPAS) Catalog Number	C-Interrupting Class (CPAS) Catalog Number
		TM230 FTAM	
1400	3VA5814-5EC31-0AA0	3VA5814-6EC31-0AA0	3VA5814-7EC31-0AA0
1600	3VA5816-5EC31-0AA0	3VA5816-6EC31-0AA0	3VA5816-7EC31-0AA0

3VA58 1600A 3-Pole

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA58	3	9.0 (229)	16.0 (406)	6.0 (152)	69.0	31.3

Mounting Arrangement (Required for Cable Connections)

Bus connections require either "3VA9873-0QB00" or "3VA9873-0QH00"

Description	Catalog Number
Mounting Base for front connection	3VA9873-0WM00
Mounting Base for rear connection	3VA9873-0WN00
Lug Mounting Assembly	3VA9873-0WL00

Interrupting Ratings for 3VA58

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA)							
		Volts AC (50/60 Hz)					Volts DC		
		240	480Y/ 277V	480	600Y/ 347V	600	250 (2P)	600 (3P)	750 (3P)
M	MPAS	85	35	35	25	25	50	50	50
H	HPAS	100	65	65	35	35	85	85	85
C	CPAS	200	100	100	65	65	100	100	100

Ordering Information

The catalog numbers listed here are for 3VA58 1600A thermal-magnetic trip circuit breakers only. Order required mounting arrangement and necessary terminal connections as separate items.

All 3VA58 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

For NAVAL rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA@480VAC, 1600A, 3-pole, rated 3VA58 would be catalog number 3VA5816-5EC31-**1**AA0).

All 3VA58 thermal-magnetic trip circuit breakers can be ordered 100% rated. For 100% rated thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA@480VAC, 1600A, 3-pole, rated 3VA58 would be catalog number 3VA5816-5EC31-**2**AA0).

3VA68 1600A 3-Pole

Ordering Information

The catalog numbers listed below are for 3VA68 1600A Electronic trip circuit breakers only. Order required mounting arrangement and necessary terminal connectors as separate items.

All 3VA68 electronict trip circuit breakers are UL listed for reverse feed applications.

3VA68 electronic trip circuit breakers are available with 100% ratings. For 100% rated electronic trip circuit breakers, change the 13th digit of the catalog number to the number "2". (For example, a 35KA @480VAC, 1600A, 3-pole, 100% rated 3VA68 would be catalog number 3VA6816-5HL31-**2**AA0) Requires the use of copper lugs — see lug table below.

All 3VA6 circuit breakers are certified to UL 489 Supplement SB, are marked "Naval", and are suitable for use at 50C.

3VA68 1600A, 3-pole Frame, Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MPAE) Catalog Number	H-Interrupting Class (HPAE) Catalog Number	C-Interrupting Class (CPAE) Catalog Number
		ETU320 LI with dials	
1600	**3VA6816-5HL31-0AA0**	**3VA6816-6HL31-0AA0**	**3VA6816-7HL31-0AA0**
		ETU330 LIG with dials	
1600	**3VA6816-5HM31-0AA0**	**3VA6816-6HM31-0AA0**	**3VA6816-7HM31-0AA0**
		ETU350 LSI with dials	
1600	**3VA6816-5HN31-0AA0**	**3VA6816-6HN31-0AA0**	**3VA6816-7HN31-0AA0**
		ETU360 LSIG with dials	
1600	**3VA6816-5HQ31-0AA0**	**3VA6816-6HQ31-0AA0**	**3VA6816-7HQ31-0AA0**
		ETU850 LSI with LCD and Metering	
1600	**3VA6816-5KP31-0AA0**	**3VA6816-6KP31-0AA0**	**3VA6816-7KP31-0AA0**
		ETU856 LSI (G Alarm) with LCD and Metering	
1600	**3VA6816-5KT31-0AA0**	**3VA6816-6KT31-0AA0**	**3VA6816-7KT31-0AA0**
		ETU860 LSIG with LCD and Metering	
1600	**3VA6816-5KQ31-0AA0**	**3VA6816-6KQ31-0AA0**	**3VA6816-7KQ31-0AA0**

Mounting Arrangement (Required for Cable Connections)

Bus connections require either "3VA9873-0QB00" or "3VA9873-0QH00"

Description	Catalog Number
Mounting Base for front connection	**3VA9873-0WM00**
Mounting Base for rear connection	**3VA9873-0WN00**
Lug Mounting Assembly	**3VA9873-0WL00**

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA68	3	9.0 (229)	16.0 (406)	6.0 (152)	69.0	31.3

Interrupting Ratings for 3VA68

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MPAE	85	35	35	25	25
H	HPAE	100	65	65	35	35
C	CPAE	200	100	100	65	65

Connections for 75C wire for 3VA58 and 3VA68

Type	Minimum cable size	Maximum cable size	Part Number (kit of 1 lug)	Part Number (kit of 3 lugs)	Mount Lugs to Essential Parts
TA7.2 Aluminum body lug, 4 cables (Cu/Al cable) for mounting base front connection	600 kcmil	750 kcmil	**3VA9771-0JJ44**③④	—	**3VA9873-0WM00 + 3VA9872-0WA00**
TA7.2 Aluminum body lug, 4 cables (Cu/Al cable) for mounting base rear connection	600 kcmil	750 kcmil	**3VA9771-0JJ44**③⑤	—	**3VA9873-0WN00**
TA7.3 Aluminum body lug, 5 cables (Cu/Al cable) for mounting base front connection	300 kcmil	600 kcmil	**3VA9771-0JJ53**③④	—	**3VA9873-0WM00 + 3VA9872-0WA00**
TA7.3 Aluminum body lug, 5 cables (Cu/Al cable) for mounting base rear connection	300 kcmil	600 kcmil	**3VA9771-0JJ53**③⑤	—	**3VA9873-0WN00**
TA7.4 Aluminum body lug, 6 cables (Cu/Al cable) for mounting base front connection	300 kcmil	600 kcmil	**3VA9871-0JJ63**③④	—	**3VA9873-0WM00 + 3VA9872-0WA00**
TC7.3 Copper body lug, 5 cables (Cu cable only) for mounting base front connection	300 kcmil	600 kcmil	**3VA9871-0JE53**①③④	—	**3VA9873-0WM00 + 3VA9872-0WA00**
TC7.3 Copper body lug, 5 cables (Cu cable only) for mounting base rear connection	300 kcmil	600 kcmil	**3VA9871-0JE53**①③⑤	—	**3VA9873-0WN00**
TA7.1 Aluminum body lug, 6 cables (Cu/Al cable) for lug mounting assembly	1/0	750 kcmil	—	**3VA9773-0JJ64**①②	**3VA9873-0WL00**

① Meets requirements for 100% rated breakers up to 1600A, requires the use of 90 degree wire, size to 75 degree ampacity.
② Lugs Require Attachment to 3VA9873-0WL00 LMAP (Sold Separately).
③ Part Number is for kit of 1 lug. Requires customer to purchase Qty. of 3x (kit of 1 lug).
④ Mounting Base Front Connection Requires Lugs to be installed on 3VA9873-0WM00 MBFC (Sold Separately) + 3VA9872-0WA00 Phase Barriers (Sold Separately).
⑤ Mounting Base Rear Connection Requires Lugs to be installed on 3VA9873-0WN00 MBRC (Sold Separately).

Trip Settings for 3VA68

ETU320-LI, ETU330-LIG, ETU350-LSI, ETU360-LSIG

Cont. Amp	LI, LIG, LSI, LSIG			LSI, LSIG		LIG, LSIG	
I_n (Amp)	I_r(Amp) (L)	t_{ld} (sec) (L)	I_i (Amp) (I)	I_{sd}= xIr (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (sec) (S)
1600	600–1600	2.5 - 30	2400–12000	1.5–10	0 - 0.4	250–1600	0.1 / 0.3

ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

Cont. Amp	LSI, LSIG, LSI(G)			LSI, LSIG, LSI(G)		LSIG, LSI(G)		LSI 3P with External CT
I_n (Amp)	I_r(Amp) (L)	t_{ld} (sec) (L)	I_i (Amp) (I)	I_{sd} (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (sec) (S)	I_N=xI_r (Amp)
1600	600–1600	2.5 - 30	2400–12000	0.6–10	0.05 - 0.5	320–1600	0.05-0.8	320–2560

For specific trip settings refer to the Electronic Trip Unit section of the 3VA Systems Manual, which can be found in the document download center at **https://digitalcontentcenter.compas.siemens-info.com/SIE_IM_3VA6_Systems_Manual.pdf**

Internal Accessories[1]

Auxiliary and Alarm Switches (Form C –> 1 NO and 1 NC)

Switch Type	Width	AC 50/ 60 Hz	DC	Catalog Number
Auxiliary Switch (AUX) HQ	1 slot	240V	250V	**3VA9978-0AA12**
		24V	24V	**3VA9978-0AA23**
Auxiliary Switch (AUX) HP	2 slots	600V	250V	**3VA9978-0AA11**
Trip/Bell Alarm Switch (TAS) HQ	1 slot	240V	250V	**3VA9978-0AB12**
		24V	24V	**3VA9978-0AB13**
Trip/Bell Alarm Switch (TAS) HP	2 slots	600V	250V	**3VA9978-0AB11**

Shunt Trips

Type	VAC 50/60 Hz	VDC	Catalog Number (3 slots)
Shunt Trip Left (STL)	380 ... 600	—	**3VA9978-0BL20**
	—	12	**3VA9978-0BL10**
	24	24 ... 30	**3V9978-0BL30**
	48 ... 60	48 ... 60	**3VA9978-0BL31**
	110 ... 127	110 ... 127	**3VA9978-0BL32**
	208 ... 277	220 ... 250	**3VA9978-0BL33**
Shunt Trip Flexible (STF)[2]	24	—	**3VA9978-0BA20**
	48 ... 60	—	**3VA9978-0BA21**
	110 ... 127	—	**3VA9978-0BA22**
	208 ... 277	—	**3VA9978-0BA23**
	380 ... 500	—	**3VA9978-0BA24**
	600	—	**3VA9978-0BA25**

Undervoltage Release

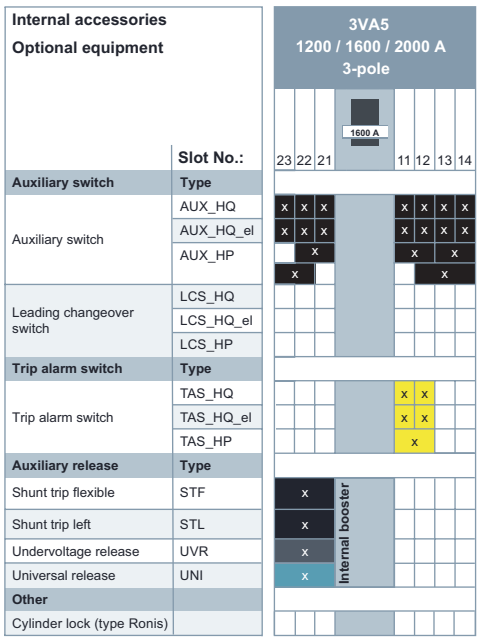
Undervoltage Release (UVR)	—	12	**3VA9978-0BB10**
	—	24	**3VA9978-0BB11**
	—	48	**3VA9978-0BB12**
	—	125 ... 127	**3VA9978-0BB14**
	—	250	**3VA9978-0BB16**
	24	—	**3VA9978-0BB20**
	120 ... 127	—	**3VA9978-0BB24**
	208 ... 230	—	**3VA9978-0BB25**
	440 ... 480	—	**3VA9978-0BB27**

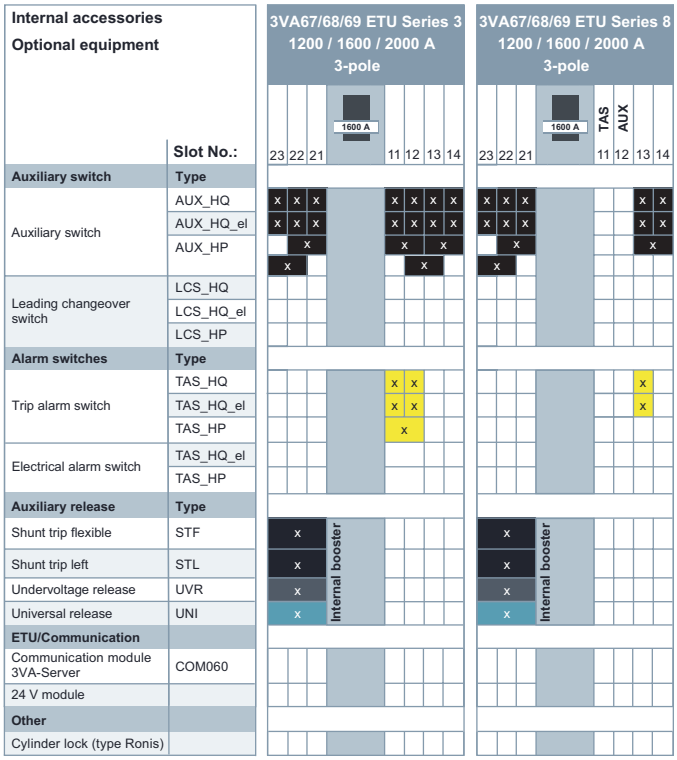
Universal Release (Undervoltage and Shunt trip)

Universal Release (UNI)	—	12	**3VA9978-0BD11**
	—	24	**3VA9978-0BD12**
	—	48	**3VA9978-0BD13**

Time-delay Device for Undervoltage Release

Type	VAC 50/60 Hz	VDC	Delay Time	Catalog Number
Time-delay Device (mounted external to circuit breaker)	230	230	Fixed – 100ms min.	**3VA9978-0BF22**
	—	24	Fixed – 100ms min.	**3VA9978-0BF23**





[1] Refer to pages 7-124 and 7-125 for internal accessory electrical requirements.

[2] Shunt trip flexible can be used in the left pocket of the 3VA5 breakers. They can be used in the left or right pocket of the 3VA6 breakers.

3VA59 2000A, 3-pole Frame, Thermal-Magnetic Trip Unit

Cont. Ampere Rating	M-Interrupting Class (MRAS)	H-Interrupting Class (HRAS)	C-Interrupting Class (CRAS)
	Catalog Number	Catalog Number	Catalog Number
		TM230 FTAM	
1800	3VA5918-5EC31-0AA0	3VA5918-6EC31-0AA0	3VA5918-7EC31-0AA0
2000	3VA5920-5EC31-0AA0	3VA5920-6EC31-0AA0	3VA5920-7EC31-0AA0

Dimensions / Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA59	3	9.0 (229)	16.0 (406)	6.0 (152)	69.0	31.3

Mounting Arrangement (Required)

Description	Catalog Number
Mounting Base for front connection	3VA9873-0WM00
Mounting Base for rear connection	3VA9873-0WN00

Interrupting Ratings for 3VA59

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA)							
		Volts AC (50/60 Hz)					Volts DC		
		240	480Y/ 277V	480	600Y/ 347V	600	250 (2P)	600 (3P)	750 (3P)
M	MRAS	85	35	35	25	25	50	50	50
H	HRAS	100	65	65	35	35	85	85	85
C	CRAS	200	100	100	65	65	100	100	100

3VA59 2000A 3-Pole

Ordering Information

The catalog numbers listed here are for 3VA59 2000A thermal-magnetic trip circuit breakers only. Order required mounting base assembly and necessary terminal connections as separate items.

All 3VA59 thermal-magnetic trip circuit breakers are UL listed for reverse feed applications.

For NAVAL rated (3-pole only) thermal-magnetic trip circuit breakers, change the 13th digit of the catalog number to the number "1". (For example, a 35KA@480VAC, 2000A, 3-pole, rated 3VA59 would be catalog number 3VA5920-5EC31-**1**AA0)

3VA69 2000A, 3-pole Frame, Electronic Trip Unit

Continuous Ampere	M-Interrupting Class (MRAE) Catalog Number	H-Interrupting Class (HRAE) Catalog Number	C-Interrupting Class (CRAE) Catalog Number
ETU850 LSI with LCD and Metering			
2000	3VA6920-5KP31-0AA0	3VA6920-6KP31-0AA0	3VA6920-7KP31-0AA0
ETU856 LSI (G Alarm) with LCD and Metering			
2000	3VA6920-5KT31-0AA0	3VA6920-6KT31-0AA0	3VA6920-7KT31-0AA0
ETU860 LSIG with LCD and Metering			
2000	3VA6920-5KQ31-0AA0	3VA6920-6KQ31-0AA0	3VA6920-7KQ31-0AA0

3VA69 2000A 3-Pole

Mounting Arrangement (Required)

Description	Catalog Number
Mounting Base for front connection	3VA9873-0WM00
Mounting Base for rear connection	3VA9873-0WN00

Dimensions — Shipping Weight

Breaker	Poles	W in. (mm)	H in. (mm)	D in. (mm)	lbs.	kg
3VA69	3	9.0 (229)	16.0 (406)	6.0 (152)	69.0	31.3

Interrupting Ratings for 3VA69

Interrupting Class	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480Y/277V	480	600Y/347V	600
M	MRAE	85	35	35	25	25
H	HRAE	100	65	65	35	35
C	CRAE	200	100	100	65	65

Ordering Information

The catalog numbers listed below are for 3VA69 2000A Electronic trip circuit breakers only. Order required mounting base assembly and necessary terminal connectors as separate items.

All 3VA69 electronict trip circuit breakers are UL listed for reverse feed applications.

ETU850-LSI, ETU856 LSI(A), ETU860-LSIG

Cont. Amp	LSI, LSIG, LSI(G)			LSI, LSIG, LSI(G)		LSIG, LSI(G)		LSI 3P with External CT
I_n (Amp)	I_r(Amp) (L)	t_{Id} (sec) (L)	I_i (Amp) (I)	I_{sd} (Amp) (S)	t_{sd} (sec) (S)	I_g (Amp) (G)	t_g (sec) (S)	I_N=xI_r (Amp)
2000	800–2000	2.5 - 30	3000–12000	0.6–10	0.05 - 0.5	400–2000	0.05–0.8	400–3200

Connections for 75C wire for 3VA59 and 3VA69

Type	Minimum cable size	Maximum cable size	Part Number (kit of 1 lugs)	Mount Lugs to Essential Parts
TA7.4 Aluminum body lug, 6 cables (Cu/Al cable) for mounting base front connection, only for UL applications	300 kcmil	600 kcmil	3VA9871-0JJ63①②	3VA9873-0WM00 + 3VA9872-0WA00
TC7.3 Copper body lug, 5 cables (Cu cable only) for mounting base front connection, only for UL applications	300 kcmil	600 kcmil	3VA9871-0JE53①②	3VA9873-0WM00 + 3VA9872-0WA00
TC7.3 Copper body lug, 5 cables (Cu cable only) for mounting base rear connection, only for UL applications	300 kcmil	600 kcmil	3VA9871-0JE53①③	3VA9873-0WN00

① Part Number is for kit of 1 lug. Requires customer to purchase Qty. of 3x (kit of 1 lug).
② Mounting Base Front Connection Requires Lugs to be installed on 3VA9873-0WM00 MBFC (Sold Separately) + 3VA9872-0WA00 Phase Barriers (Sold Separately).
③ Mounting Base Rear Connection Requires Lugs to be installed on 3VA9873-0WN00 MBRC (Sold Separately).

Internal Accessories[1]

Auxiliary and Alarm Switches (Form C –> 1 NO and 1 NC)

Switch Type	Width	AC 50/ 60 Hz	DC	Catalog Number
Auxiliary Switch (AUX) HQ	1 slot	240V	250V	**3VA9978-0AA12**
		24V	24V	**3VA9978-0AA23**
Auxiliary Switch (AUX) HP	2 slots	600V	250V	**3VA9978-0AA11**
Trip/Bell Alarm Switch (TAS) HQ	1 slot	240V	250V	**3VA9978-0AB12**
		24V	24V	**3VA9978-0AB13**
Trip/Bell Alarm Switch (TAS) HP	2 slots	600V	250V	**3VA9978-0AB11**

Shunt Trips

Type	VAC 50/60 Hz	VDC	Catalog Number (3 slots)
Shunt Trip Left (STL)	380 ... 600	—	**3VA9978-0BL20**
	—	12	**3VA9978-0BL10**
	24	24 ... 30	**3V9978-0BL30**
	48 ... 60	48 ... 60	**3VA9978-0BL31**
	110 ... 127	110 ... 127	**3VA9978-0BL32**
	208 ... 277	220 ... 250	**3VA9978-0BL33**
Shunt Trip Flexible (STF)[2]	24	—	**3VA9978-0BA20**
	48 ... 60	—	**3VA9978-0BA21**
	110 ... 127	—	**3VA9978-0BA22**
	208 ... 277	—	**3VA9978-0BA23**
	380 ... 500	—	**3VA9978-0BA24**
	600	—	**3VA9978-0BA25**

Undervoltage Release

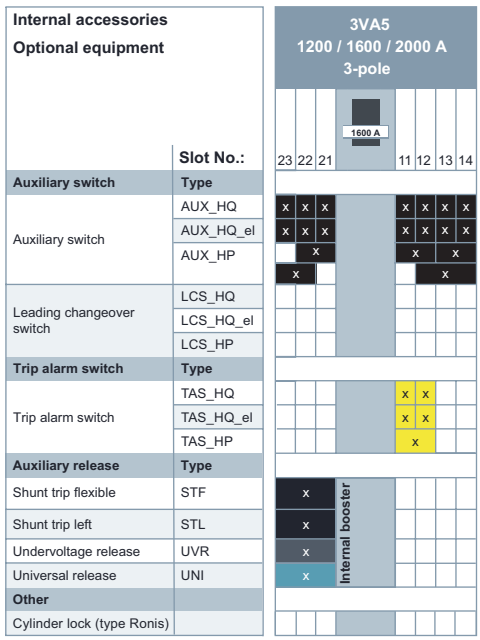
Undervoltage Release (UVR)	—	12	**3VA9978-0BB10**
	—	24	**3VA9978-0BB11**
	—	48	**3VA9978-0BB12**
	—	125 ... 127	**3VA9978-0BB14**
	—	250	**3VA9978-0BB16**
	24	—	**3VA9978-0BB20**
	120 ... 127	—	**3VA9978-0BB24**
	208 ... 230	—	**3VA9978-0BB25**
	440 ... 480	—	**3VA9978-0BB27**

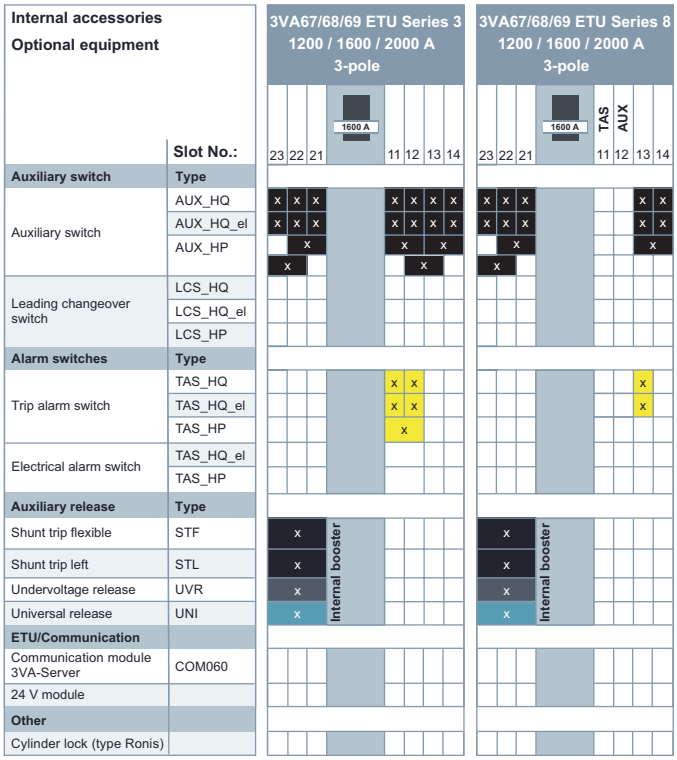
Universal Release (Undervoltage and Shunt trip)

Universal Release (UNI)	—	12	**3VA9978-0BD11**
	—	24	**3VA9978-0BD12**
	—	48	**3VA9978-0BD13**

Time-delay Device for Undervoltage Release

Type	VAC 50/60 Hz	VDC	Delay Time	Catalog Number
Time-delay Device (mounted external to circuit breaker)	230	230	Fixed – 100ms min.	**3VA9978-0BF22**
	—	24	Fixed – 100ms min.	**3VA9978-0BF23**





[1] Refer to pages 7-124 and 7-125 for internal accessory electrical requirements.

[2] Shunt trip flexible can be used in the left pocket of the 3VA5 breakers. They can be used in the left or right pocket of the 3VA6 breakers.

Ordering Information

Breaking capacity (the SCCR rating) is the maximum permissible short circuit current at the installation location of the MCS in combination with an appropriate overload protective device.

For factory installed nut keepers for molded case switches and motor circuit protectors, change the 12th digit of the catalog number to "2" (required for panelboard or switchboard installation).

For factory installed standard lugs, change the 12th digit to "6" (standard lugs are identified in the lug table in the accessory section of the SpeedFax). Alternate connection technology need to be ordered separately for field installation.

Note: Factory installed nut keepers and lugs are only available for 3 Pole breakers.

Magnetic switch

Electronic Trip Unit switch

Molded Case Switch Magnetic

Frame (Breaker Type)	Max. Amp Rating	2-Pole	3-Pole	Short-Circuit Current Rating (AC)			Short-Circuit Current Rating (DC)				Instantaneous short circuit protection
		Catalog Number	Catalog Number	240V	480V	600V	125V	250V②	500V③	600V③	
3VA51 (HEAS)	100	**3VA5110-1BB21-0AA0**	**3VA5110-1BB31-0AA0**	150k	65k	25k①	30k	100k	100k	—	1600 A

		Catalog Number	Catalog Number	240V	480V	600V	250V	500V②	600V③	750V③	
3VA52 (HFAS)	150	**3VA5215-0BB61-0AA0**	**3VA5215-0BB31-0AA0**	100k	65k	25k	85k	85k	—	85k	2400 A
	250	**3VA5225-0BB61-0AA0**	**3VA5225-0BB31-0AA0**	100k	65k	25k	85k	85k	—	85k	2500 A
3VA53 (HJAS)	400	**3VA5340-0BB61-0AA0**	**3VA5340-0BB31-0AA0**	100k	65k	25k	85k	85k	85k	10k	6000 A
3VA54 (HLAS)	600	**3VA5460-0BB61-0AA0**	**3VA5460-0BB31-0AA0**	100k	65k	25k	85k	85k	85k	10k	6000 A
3VA55 (HMAS)	800	**3VA5580-0BB62-0AA0**	**3VA5580-0BB32-0AA0**	100k	65k	25k	85k	85k	85k	85k	8000 A
3VA57 (HNAS)	1000	**3VA5710-6BB61-0AA0**	**3VA5710-6BB31-0AA0**	100k	65k	25k	85k	85k	85k	85k	12000 A
	1200	**3VA5712-6BB61-0AA0**	**3VA5712-6BB31-0AA0**	100k	65k	25k	85k	85k	85k	85k	12000 A
3VA58 (HPAS)	1600	—	**3VA5816-6BB31-0AA0**	100k	65k	25k	85k	85k	85k	85k	12000 A
3VA59 (HRAS)	2000	—	**3VA5920-6BB31-0AA0**	100k	65k	25k	—	—	—	—	12000 A

Frame (Breaker Type)	Max. Amp Rating	2-Pole	3-Pole	Short-Circuit Current Rating (AC)			Short-Circuit Current Rating (DC)				Instantaneous short circuit protection
		Catalog Number	Catalog Number	240V	480V	600V	250V	500V②	600V③	750V③	
3VA52 (CFAS)	100	**3VA5210-1BB61-0AA0**	**3VA5210-1BB31-0AA0**	200k	100k	35k	100k	100k	—	100k	2500 A
	150	**3VA5215-1BB61-0AA0**	**3VA5215-1BB31-0AA0**	200k	100k	35k	100k	100k	—	100k	2400 A
	250	**3VA5225-1BB61-0AA0**	**3VA5225-1BB31-0AA0**	200k	100k	35k	100k	100k	—	100k	2500 A
3VA53 (CJAS)	400	**3VA5340-1BB61-0AA0**	**3VA5340-1BB31-0AA0**	200k	100k	35k	100k	100k	100k	10k	6000 A
3VA54 (CLAS)	600	**3VA5460-1BB61-0AA0**	**3VA5460-1BB31-0AA0**	200k	100k	35k	100k	100k	100k	10k	6000 A
3VA55 (CMAS)	800	**3VA5580-1BB62-0AA0**	**3VA5580-1BB32-0AA0**	100k	100k	50k	100k	100k	100k	100k	8000 A
3VA57 (CNAS)	1000	**3VA5710-7BB61-0AA0**	**3VA5710-7BB31-0AA0**	200k	100k	65k	100k	100k	100k	100k	12000 A
	1200	**3VA5712-7BB61-0AA0**	**3VA5712-7BB31-0AA0**	200k	100k	65k	100k	100k	100k	100k	12000 A
3VA58 (CPAS)	1600	—	**3VA5816-7BB31-0AA0**	200k	100k	65k	100k	100k	100k	100k	12000 A
3VA59 (CRAS)	2000	—	**3VA5920-7BB31-0AA0**	200k	100k	65k	—	—	—	—	12000 A

Molded Case Switch Electronic

Frame (Breaker Type)	Max. Ampere Rating	2-Pole	3-Pole	Short-Circuit Current Rating			Instantaneous short circuit protection
		Catalog Number	Catalog Number	240V	480V	600V	
3VA63 (CJAE)	400	—	**3VA6340-1BB31-0AA0**	200k	100k	35k	5600 A
3VA64 (CLAE)	600	—	**3VA6460-1BB31-0AA0**	200k	100k	35k	5400 A

① Rated at 600 Y/347 V AC.

② Two poles in series.

③ Three poles in series.

Motor circuit protector TM120M AM③

Frame (Breaker Type)	Maximum Ampere Rating	3-Pole Catalog Number	Instantaneous short circuit protection
3VA51 (HEAP)	1	**3VA5181-1MU31-0AA0**	3 ... 7
		3VA5181-1MH31-0AA0	5 ... 12
	2	**3VA5102-1MU31-0AA0**	6 ... 14
		3VA5102-1MH31-0AA0	10 ... 24
	3	**3VA5103-1MU31-0AA0**	9 ... 21
		3VA5103-1MH31-0AA0	15 ... 36
	5	**3VA5105-1MU31-0AA0**	15 ... 35
		3VA5105-1MH31-0AA0	25 ... 60
	7	**3VA5107-1MU31-0AA0**	21 ... 49
		3VA5107-1MH31-0AA0	35 ... 84
	10	**3VA5191-1MU31-0AA0**	30 ... 70
		3VA5191-1MH31-0AA0	50 ... 120
	15	**3VA5195-1MU31-0AA0**	45 ... 105
		3VA5195-1MH31-0AA0	75 ... 180
	25	**3VA5125-1MU31-0AA0**	75 ... 175
		3VA5125-1MH31-0AA0	125 ... 300
	30	**3VA5130-1MU31-0AA0**	90 ... 210
		3VA5130-1MH31-0AA0	150 ... 360
	40	**3VA5140-1MU31-0AA0**	120 ... 280
		3VA5140-1MH31-0AA0	200 ... 480
	50	**3VA5150-1MU31-0AA0**	150 ... 350
		3VA5150-1MH31-0AA0	250 ... 600
	70	**3VA5170-1MU31-0AA0**	210 ... 490
		3VA5170-1MH31-0AA0	350 ... 840
	80	**3VA5180-1MU31-0AA0**	240 ... 560
		3VA5180-1MH31-0AA0	400 ... 960
	90	**3VA5190-1MU31-0AA0**	270 ... 630
		3VA5190-1MH31-0AA0	450 ... 1080
	100	**3VA5110-1MU31-0AA0**	300 ... 700
		3VA5110-1MH31-0AA0	500 ... 1200
	110	**3VA5111-1MU31-0AA0**	330 ... 770
		3VA5111-1MH31-0AA0	550 ... 1320
	125	**3VA5112-1MU31-0AA0**	375 ... 875
		3VA5112-1MH31-0AA0	625 ... 1500
3VA52 (HFAP)	150	**3VA5215-0MU31-0AA0**	450 ... 900
		3VA5215-0MH31-0AA0	900 ... 1800
	200	**3VA5220-0MU31-0AA0**	600 ... 1200
		3VA5220-0MH31-0AA0	1200 ... 2400
	250	**3VA5225-0MU31-0AA0**	750 ... 900
		3VA5225-0MH31-0AA0	1250 ... 2500
3VA53 (HJAP)	250	**3VA5325-0MU31-0AA0**	750 ... 1500
		3VA5325-0MH31-0AA0	1500 ... 3000

Motor circuit protector TM120M AM②

Frame (Breaker Type)	Maximum Ampere Rating	3-Pole Catalog Number	Instantaneous short circuit protection
3VA54 (HLAP	400	**3VA5440-0MU31-0AA0**	750 ... 1500
		3VA5440-0MH31-0AA0	1200 ... 2400
	500	**3VA5450-0MU31-0AA0**	1500 ... 3000
		3VA5450-0MH31-0AA0	3000 ... 6000
	600	**3VA5460-0MU31-0AA0**	1800 ... 3600
		3VA5460-0MH31-0AA0	3000 ... 6000
3VA55 (HMAP)	600	**3VA5560-0MH32-0AA0**	4800 ... 9600
3VA52 (CFAP)	150	**3VA5215-1MU31-0AA0**	450 ... 900
		3VA5215-1MH31-0AA0	900 ... 1800
	200	**3VA5220-1MU31-0AA0**	600 ... 1200
		3VA5220-1MH31-0AA0	1200 ... 2400
	250	**3VA5225-1MH31-0AA0**	750 ... 900
		3VA5225-1MU31-0AA0	1250 ... 2500
3VA53 (CJAP)	250	**3VA5325-1MU31-0AA0**	750 ... 1500
		3VA5325-1MH31-0AA0	1500 ... 3000
3VA54 (CLAP)	400	**3VA5440-1MU31-0AA0**	750 ... 1500
		3VA5440-1MH31-0AA0	2400 ... 4800
	500	**3VA5450-1MU31-0AA0**	1500 ... 3000
		3VA5450-1MH31-0AA0	3000 ... 6000
	600	**3VA5460-1MU31-0AA0**	1500 ... 3000
		3VA5460-1MH31-0AA0	3000 ... 6000
3VA55 (CMAP)	600	**3VA5560-1MH32-0AA0**	4800 ... 9600

Motor circuit protector ETU310M②

3VA61 (CDAR)	25	**3VA6125-1MS31-0AA0**	75 ... 375
	30	**3VA6130-1MS31-0AA0**	90 ... 450
	40	**3VA6140-1MS31-0AA0**	120 ... 600
	50	**3VA6150-1MS31-0AA0**	150 ... 750
	70	**3VA6170-1MS31-0AA0**	210 ... 1050
	80	**3VA6180-1MS31-0AA0**	240 ... 1200
	90	**3VA6190-1MS31-0AA0**	270 ... 1350
	100	**3VA6110-1MS31-0AA0**	300 ... 1500
3VA62 (CFAR-Y)	110	**3VA6211-1MS31-0AA0**	330 ... 1650
	125	**3VA6212-1MS31-0AA0**	375 ... 1875
	150	**3VA6215-1MS31-0AA0**	450 ... 2250
	200	**3VA6220-1MS31-0AA0**	600 ... 2400
3VA63 (CJAR)	200	**3VA6320-1MS31-0AA0**	600 ... 3000
	250	**3VA6325-1MS31-0AA0**	750 ... 3750
3VA64 (CLAR)	400	**3VA6440-1MS31-0AA0**	1200 ... 5200
	500	**3VA6450-1MS31-0AA0**	1500 ... 6000
3VA65 (CMAR)	800	**3VA6580-1MS32-0AA0**	2400 ... 12000

Interrupting Ratings

Frame	Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz) 240	480	600Y/347V	600
3VA51	HEAP	150	65	25	—
3VA52	HFAP	100	65	25	25
	CFAP	200	100	35	35
3VA53	HJAP	100	65	25	25
	CHAP	200	100	35	35
3VA54	HLAP	100	65	25	25
	CLAP	200	100	35	35
3VA55	HMAP	100	65	25	—
	CMAP	200	100	50	—
3VA61	CDAR	200	100	35	35
3VA62	CFAR	200	100	35	35
3VA63	CJAR	200	100	35	35
3VA64	CLAR	200	100	35	35
3VA65	CMAR	200	100	42	—

Motor Circuit Protector

① Rated at 600 Y/347 V AC.
② SCCR is 100kA at 480 V. SCCR rating is the maximum permissible short circuit current of the MCP in combination with an appropriate overload protection device.
③ SCCR is 65kA at 480 V. SCCR rating is the maximum permissible short circuit current of the MCP in combination with an appropriate overload protection device.

Internal Accessories[3]

Auxiliary and Alarm Switches (Form C –> 1 NO and 1 NC)

Switch Type	Width	AC 50/ 60 Hz	DC	Catalog Number
Auxiliary Switch (AUX) HQ	1 slot	24 … 300V	24 … 250V	3VA9978-0AA12
Leading Changeover Switch (LCS) HQ				3VA9978-0AA22
Trip/Bell Alarm Switch (TAS) HQ				3VA9978-0AB12
Electronic Alarm (EAS) HQ electronic[1]				3VA9978-0AB22
Auxiliary Switch (AUX) HP	2 slots	24 … 600V	24 … 250V	3VA9978-0AA11
Leading Changeover Switch (LCS) HP				3VA9978-0AA21
Trip/Bell Alarm Switch (TAS) HP				3VA9978-0AB11
Electronic Alarm (EAS) HP[1]				—
Auxiliary Switch (AUX) HQ electronic	1 slot	24	24	3VA9978-0AA13
Leading Changeover Switch (LCS) HQ electronic				3VA9978-0AA23
Trip/Bell Alarm Switch (TAS) HQ electronic				3VA9978-0AB13
Electronic Alarm (EAS) HQ electronic[1]				3VA9978-0AB23

Shunt Trips

Type	VAC 50/60 Hz	VDC	Catalog Number (3 slots)
Shunt Trip Left (STL)	380 … 600	—	3VA9978-0BL20
	—	12	3VA9978-0BL10
	24	24 … 30	3VA9978-0BL30
	48 … 60	48 … 60	3VA9978-0BL31
	110 … 127	110 … 127	3VA9978-0BL32
	208 … 277	220 … 250	3VA9978-0BL33
Shunt Trip Flexible (STF)[2]	24	—	3VA9978-0BA20
	48 … 60	—	3VA9978-0BA21
	110 … 127	—	3VA9978-0BA22
	208 … 277	—	3VA9978-0BA23
	380 … 500	—	3VA9978-0BA24
	600	—	3VA9978-0BA25

Undervoltage Release

Undervoltage Release (UVR)	—	12	3VA9978-0BB10
	—	24	3VA9978-0BB11
	—	48	3VA9978-0BB12
	—	125 … 127	3VA9978-0BB14
	—	250	3VA9978-0BB16
	24	—	3VA9978-0BB20
	120 … 127	—	3VA9978-0BB24
	208 … 230	—	3VA9978-0BB25
	440 … 480	—	3VA9978-0BB27

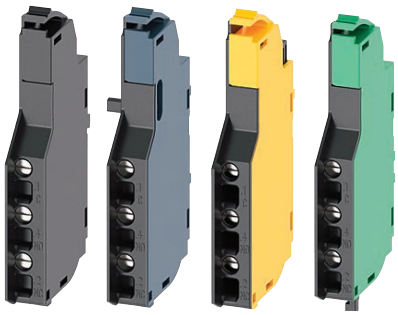
Universal Release (Undervoltage and Shunt trip)

Universal Release (UNI)	—	12	3VA9978-0BD11
	—	24	3VA9978-0BD12
	—	48	3VA9978-0BD13

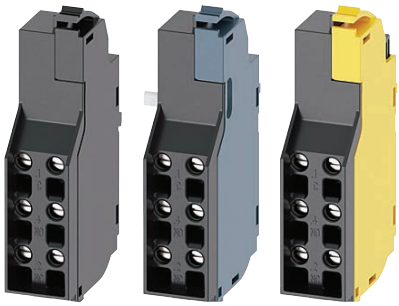
Time-delay Device for Undervoltage Release

Type	VAC 50/60 Hz	VDC	Delay Time	Catalog Number
Time-delay Device (mounted external to circuit breaker)	230	230	Fixed – 100ms minimum	3VA9978-0BF22
	—	24	Fixed – 100ms minimum	3VA9978-0BF23

Auxiliary switches and alarm switches HQ



Auxiliary switches and alarm switches HP



Shunt trip left STL

Undervoltage releases UVR

Universal release UNI

Time-delay device for undervoltage releases

[1] Use only with 3VA6.

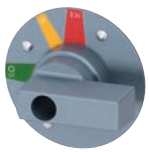
[2] Shunt trip flexible can be used in the left pocket of the 3VA5 breakers. They can be used in the left or right pocket of the 3VA6 breakers.

[3] Refer to pages 7-124 and 7-125 for internal accessory electrical requirements.

Front Mounted Rotary Operator

	Type	Color	3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A-2000A	Catalog Number
 Degree of protection NEMA 1	Standard without illumination kit	Gray	√	—	—	—	—	—	3VA9137-0EK11
			—	√	√	—	—	—	3VA9277-0EK11
			—	—	—	√	—	—	3VA9447-0EK11
			—	—	—	—	√	—	3VA9677-0EK11
			—	—	—	—	—	√	3VA9877-0EK11
	Standard with illumination kit	Gray	√	—	—	—	—	—	3VA9137-0EK13
			—	√	√	—	—	—	3VA9277-0EK13
			—	—	—	√	—	—	3VA9447-0EK13
	EMERGENCY-OFF without illumination kit	Yellow-Red	√	—	—	—	—	—	3VA9137-0EK15
			—	√	√	—	—	—	3VA9277-0EK15
			—	—	—	√	—	—	3VA9447-0EK15
			—	—	—	—	√	—	3VA9677-0EK15
			—	—	—	—	—	√	3VA9877-0EK15
	EMERGENCY-OFF with illumination kit	Yellow-Red	√	—	—	—	—	—	3VA9137-0EK17
			—	√	√	—	—	—	3VA9277-0EK17
			—	—	—	√	—	—	3VA9447-0EK17
	Standard with door interlock	Gray	√	—	—	—	—	—	3VA9137-0EK21
			—	√	√	—	—	—	3VA9277-0EK21
			—	—	—	√	—	—	3VA9447-0EK21
			—	—	—	—	√	—	3VA9677-0EK21
	Standard with door interlock, with illumination kit	Gray	√	—	—	—	—	—	3VA9137-0EK23
			—	√	√	—	—	—	3VA9277-0EK23
			—	—	—	√	—	—	3VA9447-0EK23
	EMERGENCY-OFF with door interlock	Yellow-Red	√	—	—	—	—	—	3VA9137-0EK25
			—	√	√	—	—	—	3VA9277-0EK25
			—	—	—	√	—	—	3VA9447-0EK25
			—	—	—	—	√	—	3VA9677-0EK25
	EMERGENCY-OFF with door interlock, with illumination kit	Yellow-Red	√	—	—	—	—	—	3VA9137-0EK27
			—	√	√	—	—	—	3VA9277-0EK27
			—	—	—	√	—	—	3VA9447-0EK27
	Standard with door interlock, with door open function	Gray	√	—	—	—	—	—	3VA9137-0EK31
			—	√	√	—	—	—	3VA9277-0EK31
			—	—	—	√	—	—	3VA9447-0EK31
			—	—	—	—	√	—	3VA9677-0EK31
	Standard with door interlock, with door open function, with illumination kit	Gray	√	—	—	—	—	—	3VA9137-0EK33
			—	√	√	—	—	—	3VA9277-0EK33
			—	—	—	√	—	—	3VA9447-0EK33
	EMERGENCY-OFF with door interlock, with door open function	Yellow-Red	√	—	—	—	—	—	3VA9137-0EK35
			—	√	√	—	—	—	3VA9277-0EK35
			—	—	—	√	—	—	3VA9447-0EK35
			—	—	—	—	√	—	3VA9677-0EK35
	EMERGENCY-OFF with door interlock, with door open function, with illumination kit	Yellow-Red	√	—	—	—	—	—	3VA9137-0EK37
			—	√	√	—	—	—	3VA9277-0EK37
			—	—	—	√	—	—	3VA9447-0EK37

Door Mounted Rotary Operator①②

	Type	Color	3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A - 2000A	Catalog Number
 Degree of protection Type 1, 12, 3R and 4X	Standard	Gray	√	—	—	—	—	—	3VA9137-0FK21
			—	√	√	—	—	—	3VA9277-0FK21
			—	—	—	√	—	—	3VA9447-0FK21
			—	—	—	—	√	—	3VA9677-0FK21
			—	—	—	—	—	√	3VA9877-0FK21
	Standard with illumination kit	Gray	√	—	—	—	—	—	3VA9137-0FK23
			—	√	√	—	—	—	3VA9277-0FK23
			—	—	—	√	—	—	3VA9447-0FK23
			—	—	—	—	√	—	3VA9677-0FK23
	EMERGENCY-OFF without illumination kit	Yellow-Red	√	—	—	—	—	—	3VA9137-0FK25
			—	√	√	—	—	—	3VA9277-0FK25
			—	—	—	√	—	—	3VA9447-0FK25
			—	—	—	—	√	—	3VA9677-0FK25
			—	—	—	—	—	√	3VA9877-0FK25
	EMERGENCY-OFF with illumination kit	Yellow-Red	√	—	—	—	—	—	3VA9137-0FK27
			—	√	√	—	—	—	3VA9277-0FK27
			—	—	—	√	—	—	3VA9447-0FK27
			—	—	—	—	√	—	3VA9677-0FK27
	Standard with door interlock, with open door function	Gray	√	—	—	—	—	—	3VA9137-0FK31
			—	√	√	—	—	—	3VA9277-0FK31
			—	—	—	√	—	—	3VA9447-0FK31
			—	—	—	—	√	—	3VA9677-0FK31
	Standard with door interlock, with open door function with illumination kit	Gray	√	—	—	—	—	—	3VA9137-0FK33
			—	√	√	—	—	—	3VA9277-0FK33
			—	—	—	√	—	—	3VA9447-0FK33
			—	—	—	—	√	—	3VA9677-0FK33
	EMERGENCY-OFF with door interlock, with open door function	Yellow-Red	√	—	—	—	—	—	3VA9137-0FK35
			—	√	√	—	—	—	3VA9277-0FK35
			—	—	—	√	—	—	3VA9447-0FK35
			—	—	—	—	√	—	3VA9677-0FK35
	EMERGENCY-OFF with door interlock, with open door function, with illumination kit	Yellow-Red	√	—	—	—	—	—	3VA9137-0FK37
			—	√	√	—	—	—	3VA9277-0FK37
			—	—	—	√	—	—	3VA9447-0FK37
			—	—	—	—	√	—	3VA9677-0FK37
 NFPA-79 Supplementary Handles	Standard	Gray	√	—	—	—	—	—	3VA9137-0GC01
			—	√	√	—	—	—	3VA9477-0GC01
			—	—	—	√	—	—	3VA9477-0GC11
			—	—	—	—	√	—	3VA9677-0GC01
			—	—	—	—	—	√	3VA9877-0GC01
	EMERGENCY-OFF	Yellow-Red	√	—	—	—	—	—	3VA9137-0GC05
			—	√	√	—	—	—	3VA9477-0GC05
			—	—	—	√	—	—	3VA9477-0GC15
			—	—	—	—	√	—	3VA9677-0GC05
			—	—	—	—	—	√	3VA9877-0GC05

① Lockable with up to three padlock hasps.

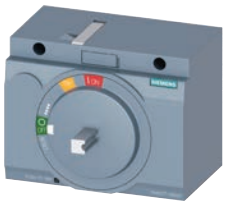
② All door mounted rotary operators include the tolerance compensation feature.

Side Mounted Rotary Operator①

	Type	Color	3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	Catalog Number
 ▪ Without mounting plate ▪ Rotary operator with shaft 300 mm ▪ Handle with masking plate 75 x 75 mm ▪ Degree of protection Type 1, 12, 3R, 4X	Standard	Gray	√	—	—	—	—	3VA9137-0PK11
			—	√	√	—	—	3VA9277-0PK11
	Standard with illumination kit	Gray	√	—	—	—	—	3VA9137-0PK13
			—	√	√	—	—	3VA9277-0PK13
	EMERGENCY-OFF	Yellow-Red	√	—	—	—	—	3VA9137-0PK15
			—	√	√	—	—	3VA9277-0PK15
	EMERGENCY-OFF with illumination kit	Yellow-Red	√	—	—	—	—	3VA9137-0PK17
			—	√	√	—	—	3VA9277-0PK17
 ▪ With mounting plate ▪ Rotary operator with short shaft ▪ Handle with masking plate 75 x 75 mm ▪ Degree of protection Type 1, 12, 3R, 4X	Standard with mounting plate	Gray	√	—	—	—	—	3VA9137-0PK51
			—	√	√	—	—	3VA9277-0PK51
	Standard with mounting plate, with illumination kit	Gray	√	—	—	—	—	3VA9137-0PK53
			—	√	√	—	—	3VA9277-0PK53
	EMERGENCY-OFF with mounting plate	Yellow-Red	√	—	—	—	—	3VA9137-0PK55
			—	√	√	—	—	3VA9277-0PK55
	EMERGENCY-OFF with mounting plate, with illumination kit	Yellow-Red	√	—	—	—	—	3VA9137-0PK57
			—	√	√	—	—	3VA9277-0PK57
 Side Mounted Rotary Operator Door Interlock	Standard for use with the side wall mounted rotary operators ▪ Without mounting plate	Gray	√	—	—	—	—	3VA9177-0VF40
			—	√	√	—	—	3VA9277-0VF40

① Lockable with up to three padlock hasps.

Breaker Operator

	Type	Color	3VA5 125A	3VA5 250A	3VA6 150A–250A	3VA5 3VA6 400A–600A	3VA5 3VA6 800A–1000A	3VA5 3VA6 1200A–2000A	Catalog Number
 3VA9277-0GK00  3VA9677-0GK00	Without handle, without shaft adapter	Gray	√	—	—	—	—	—	3VA9137-0GK00
			—	√	√	—	—	—	3VA9277-0GK00
			—	—	—	√	—	—	3VA9447-0GK00
	Without handle, with shaft adapter	Gray	—	—	—	—	√	—	3VA9677-0GK00
			—	—	—	—	—	√	3VA9877-0GK00

Handles with Masking Plate (Purchase breaker operator, shaft and shaft adapter separately)

	Type	Color	Tolerance Compen-sation	Door Open Function	3VA5 125A	3VA5 250A	3VA6 150A–250A	3VA5 3VA6 400A–600A	3VA5 3VA6 800A–1000A	3VA5 3VA6 1200A–2000A	Catalog Number
 ▪ Degree of protection Type 1, 12, 3R and 4X	Standard	Gray	Without	Without	√	√	√	—	—	—	8UD1721-0AB11
			With	Without	√	√	√	—	—	—	8UD1721-0AB21
			Without	Without	—	—	—	√	—	—	8UD1731-0AB11
			With	Without	—	—	—	√	—	—	8UD1731-0AB21
			Without	With	√	√	√	—	—	—	8UD1721-0AC11
			With	With	√	√	√	—	—	—	8UD1721-0AC21
			Without	With	—	—	—	√	—	—	8UD1731-0AC11
			With	With	—	—	—	√	—	—	8UD1731-0AC21
			Without	With	—	—	—	—	√	√	8UD1741-0AB11
			With	With	—	—	—	—	√	√	8UD1741-0AB21
	Emergency	Yellow-Red	Without	Without	√	√	√	—	—	—	8UD1721-0AB15
			With	Without	√	√	√	—	—	—	8UD1721-0AB25
			Without	Without	—	—	—	√	—	—	8UD1731-0AB15
			With	Without	—	—	—	√	—	—	8UD1731-0AB25
			Without	With	√	√	√	—	—	—	8UD1721-0AC15
			With	With	√	√	√	—	—	—	8UD1721-0AC25
			Without	With	—	—	—	√	—	—	8UD1731-0AC15
			With	With	—	—	—	√	—	—	8UD1731-0AC25
			Without	With	—	—	—	—	√	√	8UD1741-0AB15
			With	With	—	—	—	—	√	√	8UD1741-0AB25

Metal Rotary Handles (Purchase breaker operator, shaft and shaft adapter separately)

 ▪ Large, degree of protection Type 1, 3, 3R, 12	Metal	Black	—	With	√	√	√	√	√	√	RHOH
▪ Large, degree of protection Type 4, 4X	Metal	Stainless	—	With	√	√	√	√	√	√	RHOH4
▪ Compact, degree of protection Type 1,3,3R,12	Compact	Black	—	With	√	√	√	√	—	—	RHOHC
▪ Compact, degree of protection Type 4, 4X	Compact	Stainless	—	With	√	√	√	√	—	—	RHOH4C
▪ Long, degree of protection 1,3,3R,12	Emergency	Red	—	With	√	√	√	√	√	√	RHVPEMH
▪ Compact, degree of protection 1,3,3R,12	Emergency	Red	—	With	√	√	√	√	—	—	RHVMEMH

For additional information for selecting handle and breaker operator combinations, please refer to the brochure:
https://digitalcontentcenter.compas.siemens-info.com/SIE_FL_3VA_Handles.pdf

Pistol Grip Handles (Purchase breaker operator, shaft and shaft adapter separately)

	Degree of Protection	Handle Type	Color	Tolerance Compen-sation	Door Open Function	3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	Catalog Number
	Type 1,3R,12	Plastic	Gray	—	With	√	√	√	√	—	**3VA9477-0FH11**
	Type 4X	Plastic (metal padlock hasp)	Gray	—	With	√	√	√	√	—	**3VA9477-0FH41**
	Type 1,3R,12	Emergency	Red	—	With	√	√	√	√	—	**3VA9477-0FH15**
	Type 4X	Emergency (metal padlock hasp)	Red	—	With	√	√	√	√	—	**3VA9477-0FH45**

Door Mounted Rotary Operator Accessories

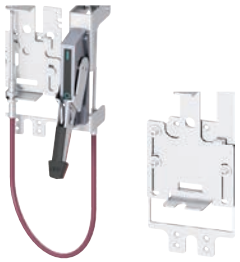
	Type	3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A–2000A	Catalog Number
	8 mm Shaft 300 mm/12 in long for 8UD plastic handles (Fixing bracket optional)	√	√	√	√	—	—	**8UD1900-2WA00**
	8 mm Shaft 600 mm/24 in long for 8UD plastic handles (Fixing bracket required)	√	√	√	√	—	—	**8UD1900-2WB00**
	12 mm Shaft 300 mm/12 in long for 8UD plastic handles	—	—	—	—	√	√	**8UD1900-4WA00**
	12 mm Shaft 600 mm/24 in long for 8UD plastic handles	—	—	—	—	√	√	**8UD1900-4WB00**
	8 mm Shaft 300 mm/12 in long for metal handles (Fixing bracket optional)	√	√	√	√	—	—	**3VA9477-0GF20**
	8 mm Shaft 600 mm/24 in long for metal handles (Fixing bracket required)	√	√	√	√	—	—	**3VA9477-0GF21**
	12 mm Shaft 300/12 in mm long for metal handles (Fixing bracket optional)	—	—	—	—	√	√	**3VA9877-0GF22**
	12 mm Shaft 600 mm/24 in long for metal handles (Fixing bracket required)	—	—	—	—	√	√	**3VA9877-0GF23**
	8 mm Shaft 300/12 in mm long for pistol grip handles (Fixing bracket optional)	√	√	√	√	—	—	**3VA9477-0GF10**
	8 mm Shaft 600 mm long/24 in for pistol grip handles (Fixing bracket required)	√	√	√	√	—	—	**3VA9477-0GF11**
	Adapter for 8 mm Shaft for door mounted operator	√	√	√	√	—	—	**8UD1900-2DA00**
	Adapter for 12 mm Shaft for door mounted operator	—	—	—	—	√	√	**8UD1900-4DA00**
	Fixing bracket for Shaft	√	—	—	—	—	—	**3VA9137-0GA80**
		—	√	√	√	—	—	**3VA9477-0GA80**
	Fixing bracket for 12 mm x 12 mm shaft	—	—	—	—	√	—	**3VA9677-0GA80**
		—	—	—	—	—	√	**3VA9877-0GA80**
	Variable depth adapter 8 x 8 mm	√	√	√	√	—	—	**3VA9487-0GB10**
	Door Coupling 8 mm x 8 mm (for 8UD plastic handles)	√	√	√	—	—	—	**8UD1900-2HA00**
	Door coupling 12 mm x 12 mm (for 8UD plastic handles)	—	—	—	√	√	√	**8UD1900-4HA00**
	Mounting tolerance compensation 8 x 8 mm (for 8UD plastic handles)	√	√	√	√	—	—	**8UD1900-2GA00**
	Mounting tolerance compensation 12 mm x 12 mm (for 8UD plastic handles)	—	—	—	—	√	√	**8UD1900-4GA00**

General Accessories for Manual Operators

	Type	Details		Part Number
	Labeling plate for manual operators	—		**3VA9087-0SX10**
	Illumination kit for manual operators 24 V DC voltage	For Molded Case Circuit Breakers		
		3VA5, 125...250 A	Front mounted rotary operators	**8UD1900-0KA10**
		3VA6, 150...600 A		**8UD1900-0KA20**
		3VA5, 3VA6, 125...600 A	Door mounted rotary operators	**8UD1900-0KA20**
		3VA5, 3VA6, 800..1000A		**8UD1900-0KA30**
	Cylinder Lock (type Kaba) ▪ For 8UD plastic door mounted rotary operators (in masking plate) ▪ Standard masking plate	Key 1		**8UD1900-0MB01**
		Key 2		**8UD1900-0NB01**
		Key 3		**8UD1900-0PB01**
		Key 4		**8UD1900-0QB01**
	Cylinder Lock (type Kaba)① ▪ For 8UD plastic door mounted rotary operators (in masking plate) ▪ Standard masking plate	Key 1		**8UD1900-0MC01**
		Key 2		**8UD1900-0NC01**
		Key 3		**8UD1900-0PC01**
		Key 4		**8UD1900-0QC01**
	Cylinder Lock (type Kaba) ▪ For 8UD plastic door mounted rotary operators (in masking plate) ▪ EMERGENCY-OFF masking plate	Key 1		**8UD1900-0MB05**
		Key 2		**8UD1900-0NB05**
		Key 3		**8UD1900-0PB05**
		Key 4		**8UD1900-0QB05**
	Cylinder Lock (type Kaba)① ▪ For 8UD plastic door mounted rotary operators (in masking plate) ▪ EMERGENCY-OFF masking plate	Key 1		**8UD1900-0MC05**
		Key 2		**8UD1900-0NC05**
		Key 3		**8UD1900-0PC05**
		Key 4		**8UD1900-0QC05**
	Cylinder Lock (type Ronis) ▪ includes 2 keys ▪ for locking or interlocking ▪ installation in all rotary operators w/ shaft stub	Key 1		**3VA9980-0VL10**
		Key 3		**3VA9980-0VL30**
		Key 4		**3VA9980-0VL40**
	Cylinder lock adapter for 8UD rotary operator ▪ to mount in rotary operator			**3VA9980-0LF20**
	Cylinder lock adaptor for front mounted rotary operator 3VA9677-0EK.. and door mounted rotary operator 3VA9677-0FK.. 3VA55/3VA65/3VA66			**3VA9670-0LF20**

① With door open function

Max Flex Operator

	Type	3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A 1600A 2000A	Catalog Number
 **Complete kit and spare mechanism**	Complete Kit ▪ Operating mechanism ▪ Plastic handle, NEMA 1/12, black=OFF, green=ON ▪ Bowden Cable 36 inches (0.9m) long	√	—	—	—	—	—	**3VA9137-0CK12**
		—	√	√	—	—	—	**3VA9277-0CK12**
		—	—	—	√	—	—	**3VA9477-0CK12**
	Complete Kit ▪ Operating mechanism ▪ Steel handle, epoxy coated NEMA 1/3R/12, black=OFF, red=ON, ▪ Bowden Cable 36 inches (0.9m) long The 800/1000/1200/1600/2000A kit comes with a 48" (1.2m) cable	√	—	—	—	—	—	**3VA9137-0CK72**
		—	√	√	—	—	—	**3VA9277-0CK72**
		—	—	—	√	—	—	**3VA9477-0CK72**
		—	—	—	—	√	—	**3VA9677-0CK72**
		—	—	—	—	—	√	**3VA9877-0CK72**
	Operating Mechanism (spare) ▪ Operating mechanism ▪ Screws ▪ Hex nut ▪ Spring ▪ Spring adjuster	√	—	—	—	—	—	**3VA9137-0CB10**
		—	√	√	—	—	—	**3VA9277-0CB10**
		—	—	—	√	—	—	**3VA9477-0CB10**
		—	—	—	—	√	—	**3VA9677-0CB10**
		—	—	—	—	—	√	**3VA9877-0CB10**
	Handle - Plastic, NEMA 1/12, black = OFF, green = ON	√	√	√	√	—	—	**3VA9977-0CH12**
	Handle - Steel, Epoxy coated, NEMA 1/3R/12, black = OFF, red = ON	√	√	√	√	—	—	**3VA9977-0CH72**
		—	—	—	—	√	√	**3VA9877-0CH72**
	Handle - Steel, Epoxy coated, NEMA 1/3R/12, black = OFF, black = ON	√	√	√	√	—	—	**3VA9977-0CH74**
		—	—	—	—	√	√	**3VA9877-0CH74**
	Handle - Steel, chrome-plated, NEMA 4/4X, black = OFF, red = ON	√	√	√	√	—	—	**3VA9977-0CH82**
	Handle - Steel, chrome-plated, NEMA 4/4X, black = OFF, black = ON	√	√	√	√	—	—	**3VA9977-0CH84**
	Handle - Stainless steel, NEMA 4, 4X, red = ON, black =OFF	—	—	—	—	√	√	**3VA9877-0CH82**
	Bowden Cable, 36 inches (0.9m)	√	√	√	—	—	—	**3VA9278-0CC10**
	Bowden Cable, 48 inches (1.2m)	√	√	√	—	—	—	**3VA9278-0CC20**
	Bowden Cable, 60 inches (1.5m)	√	√	√	—	—	—	**3VA9278-0CC30**
	Bowden Cable, 72 inches (1.8m)	√	√	√	—	—	—	**3VA9278-0CC40**
	Bowden Cable, 84 inches (2.1m)	√	√	√	—	—	—	**3VA9278-0CC50**
	Bowden Cable, 96 inches (2.4m)	√	√	√	—	—	—	**3VA9278-0CC60**
	Bowden Cable, 120 inches (3.0m)	√	√	√	—	—	—	**3VA9278-0CC70**
	Bowden Cable, 144 inches (3.6m)	√	√	√	—	—	—	**3VA9278-0CC80**
	Bowden Cable, 36 inches (0.9m)	—	—	—	√	—	—	**3VA9578-0CC10**
	Bowden Cable, 48 inches (1.2m)	—	—	—	√	—	—	**3VA9578-0CC20**
	Bowden Cable, 60 inches (1.5m)	—	—	—	√	—	—	**3VA9578-0CC30**
	Bowden Cable, 72 inches (1.8m)	—	—	—	√	—	—	**3VA9578-0CC40**
	Bowden Cable, 84 inches (2.1m)	—	—	—	√	—	—	**3VA9578-0CC50**
	Bowden Cable, 96 inches (2.4m)	—	—	—	√	—	—	**3VA9578-0CC60**
	Bowden Cable, 120 inches (3.0m)	—	—	—	√	—	—	**3VA9578-0CC70**
	Bowden Cable, 144 inches (3.6m)	—	—	—	√	—	—	**3VA9578-0CC80**
	Bowden Cable, 48 inches (1.2m)	—	—	—	—	√	√	**3VA9877-0CC20**
	Bowden Cable, 60 inches (1.5m)	—	—	—	—	√	√	**3VA9877-0CC30**
	Bowden Cable, 72 inches (1.8m)	—	—	—	—	√	√	**3VA9877-0CC40**
	Bowden Cable, 96 inches (2.4m)	—	—	—	—	√	√	**3VA9877-0CC60**
	Bowden Cable, 120 inches (3.0m)	—	—	—	—	√	√	**3VA9877-0CC70**
	Bowden Cable, 144 inches (3.6m)	—	—	—	—	√	√	**3VA9877-0CC80**
	MaxFlex Auxiliary switch (leading from On to Off) ▪ 1 CO	√	√	√	√	√	√	**3VA9478-0CX10**
	MaxFlex Auxiliary switch (leading from On to Off) ▪ 2 CO	√	√	√	√	√	√	**3VA9478-0CX20**

Variable depth flange mounted operator kit

	Type	3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	Catalog Number
	Complete kit comprising: ▪ Switching mechanism adjustable depth 200mm to 400mm ▪ Epoxy coated steel handle, NEMA 1/3R/12, black = OFF, red = ON	√	—	—	—	3VA9138-0DK72
		—	√	√	—	3VA9278-0DK72
		—	—	—	√	3VA9478-0DK72
	Complete kit comprising: ▪ Switching mechanism adjustable depth 200mm to 400mm ▪ Stainless steel handle, chrome-plated NEMA 4/4X, black=OFF, red=ON	√	—	—	—	3VA9138-0DK82
		—	√	√	—	3VA9278-0DK82
		—	—	—	√	3VA9478-0DK82
	Complete kit comprising: ▪ Swithching mechanism adjustable depth 200mm to 400mm ▪ Handle stainless steel, chrome-plated NEMA 4/4X, black=OFF, black=ON	√	—	—	—	3VA9138-0DK84
		—	√	√	—	3VA9278-0DK84
		—	—	—	√	3VA9478-0DK84

Motor Operators①

	Type	3VA5 125 A	3VA5 250 A	3VA6 150 A 250 A	3VA5 3VA6 400A 600A	Part Number
	**Motor Operator without Stored Energy Feature**					
	24 ... 60 V DC	√	—	—	—	3VA9137-0HA10
		—	√	√	—	3VA9277-0HA10
		—	—	—	√	3VA9447-0HA10
	110 ... 230 V AC 110 ... 250 V DC	√	—	—	—	3VA9137-0HA20
		—	√	√	—	3VA9277-0HA20
		—	—	—	√	3VA9447-0HA20
	**Motor Operator with Stored Energy Feature**					
	24 V DC	—	√	√	—	3VA9277-0HC10
		—	—	—	√	3VA9447-0HC10
	42 ... 60 V AC/DC	—	√	√	—	3VA9277-0HC20
		—	—	—	√	3VA9447-0HC20
	110 ... 230 V AC / 110 ... 250 V DC	—	√	√	—	3VA9277-0HC30
		—	—	—	√	3VA9447-0HC30
	Motor Operator with Stored Energy Feature with Communication					
	24 V DC	—	√	√	—	3VA9277-0HC15
		—	—	—	√	3VA9447-0HC15
	110 ... 230 V AC / 110 ... 250 V DC	—	√	√	—	3VA9277-0HC35
		—	—	—	√	3VA9447-0HC35

① Lockable with up to three padlock hasps.

Box Terminals

	Type	Minimum cable cross-section (standard) Class B	Maximum cable cross-section (standard) Class B	For molded case circuit breakers/rated current					Part Number
				3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	
	Steel wrap-around lug (Cu cable only) kit of 3 single lugs	AWG 14	3/0	√	—	—	—	—	3VA9133-0JA11
		AWG 10	3/0	—	√	—	—	—	3VA9233-0JA11
		AWG 4	350 kcmil	—	√	—	—	—	3VA9233-0JA12
		AWG 10	3/0	—	—	√	—	—	3VA9143-0JA12
		AWG 4	350 kcmil	—	—	√	—	—	3VA9243-0JA12
		1/0	500 kcmil	—	—	—	√	—	3VA9473-0JA13
	Steel wrap-around lug (Cu cable only) kit of 4 single lugs	AWG 14	3/0	√	—	—	—	—	3VA9134-0JA11
		AWG 10	3/0	—	√	—	—	—	3VA9234-0JA11
		AWG 4	350 kcmil	—	√	—	—	—	3VA9234-0JA12
		AWG 10	3/0	—	—	√	—	—	3VA9144-0JA12
		AWG 4	350 kcmil	—	—	√	—	—	3VA9244-0JA12
		1/0	500 kcmil	—	—	—	√	—	3VA9474-0JA13
	Steel wrap-around lug with control wire tap (Cu cable only) kit of 3 single lugs	AWG 10	3/0	—	√	—	—	—	3VA9233-0JH11
		AWG 4	350 kcmil	—	√	—	—	—	3VA9233-0JH12
		AWG 10	3/0	—	—	√	—	—	3VA9143-0JH12
		AWG 4	350 kcmil	—	—	√	—	—	3VA9243-0JH12
		1/0	500 kcmil	—	—	—	√	—	3VA9473-0JH13
	Steel wrap-around lug with control wire tap (Cu cable only) kit of 4 single lugs	AWG 10	3/0	—	√	—	—	—	3VA9234-0JH11
		AWG 4	350 kcmil	—	√	—	—	—	3VA9234-0JH12
		AWG 10	3/0	—	—	√	—	—	3VA9144-0JH12
		AWG 4	350 kcmil	—	—	√	—	—	3VA9244-0JH12
		1/0	500 kcmil	—	—	—	√	—	3VA9474-0JH13

Aluminum Wire Connectors

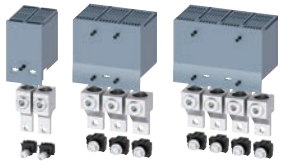
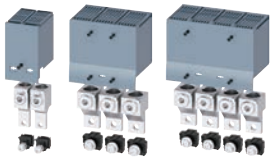
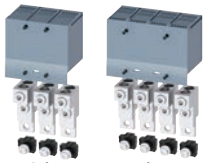
	Aluminum body lug small (Cu/Al cable) kit of 3 single lugs	AWG 14	AWG 8	√	—	—	—	—	3VA9133-0JB10③⑤
	Aluminum body lug small (Cu/Al cable) kit of 4 single lugs	AWG 14	AWG 8	√	—	—	—	—	3VA9134-0JB10③⑤
	Aluminum body lug small with control wire tap (Cu/Al cable)	AWG 14	AWG 8	√	—	—	—	—	3VA9133-0JG10③
	Aluminum body lug small with control wire tap (Cu/Al cable)	AWG 14	AWG 8	√	—	—	—	—	3VA9134-0JG10③
	Aluminum body lug (Cu/Al cable) kit of 3 single lugs	AWG 8	3/0	√	—	—	—	—	3VA9133-0JB11④⑤
		AWG 14	1/0	—	√	—	—	—	3VA9233-0JB11
		AWG 6	350 kcmil	—	√	—	—	—	3VA9233-0JB12②⑤
		AWG 14	1/0	—	—	√	—	—	3VA9143-0JB11②
		AWG 6	350 kcmil	—	—	√	—	—	3VA9243-0JB12⑤
		2/0	600 kcmil	—	—	—	√	—	3VA9373-0JB13①⑤
	Aluminum body lug (Cu/Al cable) kit of 4 single lugs	AWG 8	3/0	√	—	—	—	—	3VA9134-0JB11④⑤
		AWG 14	1/0	—	√	—	—	—	3VA9234-0JB11
		AWG 6	350 kcmil	—	√	—	—	—	3VA9234-0JB12⑤
		AWG 14	1/0	—	—	√	—	—	3VA9144-0JB11②
		AWG 6	350 kcmil	—	—	√	—	—	3VA9244-0JB12②⑤
		2/0	600 kcmil	—	—	—	√	—	3VA9374-0JB13①⑤
	Aluminum body lug with control wire tap (Cu/Al cable) kit of 3 single lugs	AWG 8	3/0	√	—	—	—	—	3VA9133-0JG11④
		AWG 14	1/0	—	√	—	—	—	3VA9233-0JG11
		AWG 6	350 kcmil	—	√	—	—	—	3VA9233-0JG12
		AWG 14	1/0	—	—	√	—	—	3VA9143-0JG11②
		AWG 6	350 kcmill	—	—	√	—	—	3VA9243-0JG12②
		2/0	600 kcmil	—	—	—	√	—	3VA9373-0JG13①
	Aluminum body lug with control wire tap (Cu/Al cable) kit of 4 single lugs	AWG 8	3/0	√	—	—	—	—	3VA9134-0JG11④
		AWG 14	1/0	—	√	—	—	—	3VA9234-0JG11
		AWG 6	350 kcmil	—	√	—	—	—	3VA9234-0JG12
		AWG 14	1/0	—	—	√	—	—	3VA9144-0JG11②
		AWG 6	350 kcmil	—	—	√	—	—	3VA9244-0JG12②
		2/0	600 kcmil	—	—	—	√	—	3VA9374-0JG13①
	Aluminum body lug two cables (Cu/Al cable) kit of 3 single lugs	4/0	600 kcmil	—	—	—	—	√	3VA9573-0JB23⑥

① This conductor is ampere-rated at 380A with copper wire and 310A with aluminum wire.
② Meets requirements of 100% rated breakers up to 150A.
③ Use these lugs on 15A to 40A breakers.
④ Use these lugs on 45A to 125A breakers.
⑤ Standard lug installed at the factory when the breaker is ordered with a "6" in the 12th position of the catalog number.
⑥ Standard lug installed at the factory on 600/700A 3VA55 and 600A 3VA65 breakers when the breaker is ordered with "6" in the 12th position of the catalog number.

Aluminum Wire Connectors (cont.)

	Type	Minimum cable cross-section (standard) Class B	Maximum cable cross-section (standard) Class B	For molded case circuit breakers/rated current					Part Number
				3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	
	Aluminum body lug two cables (Cu/Al cable) kit of 4 single lugs	4/0	600 kcmil	—	—	—	—	√	3VA9574-0JB23②
	Aluminum body lug two cables with control wire tap (Cu/Al cable) kit of 3 single lugs	4/0	600 kcmil	—	—	—	—	√	3VA9673-0JG32
	Aluminum body lug two cables with control wire tap (Cu/Al cable) kit of 4 single lugs	4/0	600 kcmil	—	—	—	—	√	3VA9674-0JG32
 3 lug kit pictured	Aluminum body lug three cables (Cu/Al cable) kit of 3 single lugs	4/0	400 kcmil	—	—	—	—	√	3VA9673-0JB32
	Aluminum body lug three cables (Cu/Al cable) kit of 4 single lugs	4/0	400 kcmil	—	—	—	—	√	3VA9674-0JB32
 4 lug kit pictured	Aluminum body lug three cables with control wire tap (Cu/Al cable) kit of 3 single lugs	4/0	400 kcmil	—	—	—	—	√	3VA9673-0JG32
	Aluminum body lug three cables with control wire tap (Cu/Al cable) kit of 4 single lugs	4/0	400 kcmil	—	—	—	—	√	3VA9674-0JG32

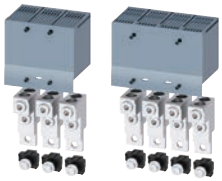
Aluminum Wire Connectors and Terminal Covers

Type	Description	Min. cable cross-section (std.) Class B	Max. cable cross-section (std.) Class B	For molded case circuit breakers/ rated current					Part Number	Terminal Cover with Probe Holes Part Number
				3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A		
Aluminum body lug large (Cu/Al cable)  2 lug 3 lug 4 lug	Kit of 2 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	√	—	—	—	—	3VA9132-0JJ12	
	Kit of 3 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	√	—	—	—	—	3VA9133-0JJ12	
		AWG 2	350 kcmil	—	√	—	—	—	3VA9233-0JJ13	
		AWG 2	350 kcmil	—	—	√	—	—	3VA9243-0JJ13①	
	Kit of 4 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	√	—	—	—	—	3VA9134-0JJ12	
		AWG 2	350 kcmil	—	√	—	—	—	3VA9234-0JJ13	
		AWG 2	350 kcmil	—	—	√	—	—	3VA9244-0JJ13①	
Aluminum body lug large with control wire tap (Cu/Al cable)  2 lug 3 lug 4 lug	Kit of 2 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	√	—	—	—	—	3VA9132-0JC12	
	Kit of 3 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	√	—	—	—	—	3VA9133-0JC12	3VA9133-0JC18
		AWG 2	350 kcmil	—	√	—	—	—	3VA9233-0JC13	3VA9233-0JC18
		AWG 2	350 kcmil	—	—	√	—	—	3VA9243-0JC13①	3VA9243-0JC18
	Kit of 4 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	√	—	—	—	—	3VA9134-0JC12	
		AWG 2	350 kcmil	—	√	—	—	—	3VA9234-0JC13	
		AWG 2	350 kcmil	—	—	√	—	—	3VA9244-0JC13①	
Aluminum body lug, 2 Cables (Cu/Al cable)  3 lug 4 lug	Kit of 3 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	—	√	—	—	—	3VA9233-0JJ22	
		AWG 4	300 kcmil	—	—	√	—	—	3VA9243-0JJ22①	
		2/0	600 kcmil	—	—	—	√	—	3VA9473-0JJ23	
	Kit of 4 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	—	√	—	—	—	3VA9234-0JJ22	
		AWG 4	300 kcmil	—	—	√	—	—	3VA9244-0JJ22①	
		2/0	600 kcmil	—	—	—	√	—	3VA9474-0JJ23	

① Meets requirements of 100% rated breakers up to 250A.

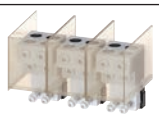
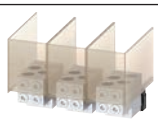
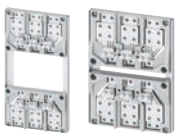
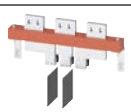
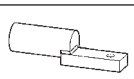
② Standard lug installed at the factory on 600/700A 3VA55 and 600A 3VA65 breakers when the breaker is ordered with "6" in the 12th position of the catalog number.

Aluminum Wire Connectors and Terminal Covers (cont.)

Type	Description	Min. cable cross-section (std.) Class B	Max. cable cross-section (std.) Class B	For molded case circuit breakers/ rated current					Part Number	Terminal Cover with Probe Holes Part Number
				3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A		
Aluminum body lug, 2 Cables with control wire tap (Cu/Al cable)  3 lug 4 lug	Kit of 3 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	—	√	—	—		3VA9233-0JC22	3VA9233-0JC28
		AWG 4	300 kcmil	—	—	√	—		3VA9243-0JC22①	3VA9243-0JC28
		2/0	600 kcmil	—	—	—	√		3VA9473-0JC23	3VA9473-0JC28
	Kit of 4 single lugs and 1 extended terminal cover	AWG 4	300 kcmil	—	√	—	—		3VA9234-0JC22	
		AWG 4	300 kcmil	—	—	√	—		3VA9244-0JC22①	
		2/0	600 kcmil	—	—	—	√		3VA9474-0JC23	
Aluminum body lug two cables (Cu/Al cable) 3 lug kit pictured 	Kit of 3 single lugs and 1 extended terminal cover	400 kcmil	750 kcmil	—	—	—	—	√	3VA9673-0JJ24	
	Kit of 4 single lugs and 1 extended terminal cover	400 kcmil	750 kcmil	—	—	—	—	√	3VA9674-0JJ24	
Aluminum body lug two cables with control wire tap (Cu/Al cable) 3 kit lug pictured 	Kit of 3 single lugs and 1 extended terminal cover	400 kcmil	750 kcmil	—	—	—	—	√	3VA9673-0JC24	
	Kit of 4 single lugs and 1 extended terminal cover	400 kcmil	750 kcmil	—	—	—	—	√	3VA9674-0JC24	
Aluminum body lug three cables (Cu/Al cable)	Kit of 3 single lugs and 1 extended terminal cover	500 kcmil	750 kcmil	—	—	—	—	√	3VA9673-0JJ34	
	Kit of 4 single lugs and 1 extended terminal cover	500 kcmil	750 kcmil	—	—	—	—	√	3VA9674-0JJ34	
Aluminum body lug three cables with control wire tap (Cu/Al cable)	Kit of 3 single lugs and 1 extended terminal cover	500 kcmil	750 kcmil	—	—	—	—	√	3VA9673-0JC34	
	Kit of 4 single lugs and 1 extended terminal cover	500 kcmil	750 kcmil	—	—	—	—	√	3VA9674-0JC34	
Aluminum body lug four cables (Cu/Al cable) 4 lug kit pictured 	Kit of 3 single lugs and 1 extended terminal cover	4/0	500 kcmil	—	—	—	—	√	3VA9673-0JJ43④	
	Kit of 4 single lugs and 1 extended terminal cover	4/0	500 kcmil	—	—	—	—	√	3VA9674-0JJ43④	
Aluminum body lug four cables with control wire tap (Cu/Al cable) 4 lug kit pictured 	Kit of 3 single lugs and 1 extended terminal cover	4/0	500 kcmil	—	—	—	—	√	3VA9673-0JC43	
	Kit of 4 single lugs and 1 extended terminal cover	4/0	500 kcmil	—	—	—	—	√	3VA9674-0JC43	
Aluminum body lug four cables (Cu/Al cable)	Kit of 3 single lugs and 1 extended terminal cover	4/0	600 kcmil	—	—	—	—	√	3VA9673-0JJ44	
	Kit of 4 single lugs and 1 extended terminal cover	4/0	600 kcmil	—	—	—	—	√	3VA9674-0JJ44	
Aluminum body lug four cables with control wire tap (Cu/Al cable)	Kit of 3 single lugs and 1 extended terminal cover	4/0	600 kcmil	—	—	—	—	√	3VA9673-0JC44	
	Kit of 4 single lugs and 1 extended terminal cover	4/0	600 kcmil	—	—	—	—	√	3VA9674-0JC44	
Distribution lug, 6 Cables (Cu/Al cable)  2 lug 3 lug 4 lug	Kit of 2 single lugs and 1 extended terminal cover	AWG 14	AWG 2	√	—	—	—		3VA9132-0JF60	
	Kit of 3 single lugs and 1 extended terminal cover	AWG 14	AWG 2	√	—	—	—		3VA9133-0JF60	3VA9133-0JF68
			AWG 2	—	√	—	—		3VA9233-0JF60	3VA9233-0JF68
			AWG 2	—	—	√	—		3VA9243-0JF60②	3VA9243-0JF68
			AWG 2	—	—	—	√		3VA9373-0JF60③	3VA9373-0JF68
	Kit of 4 single lugs and 1 extended terminal cover	AWG 14	AWG 2	√	—	—	—		3VA9134-0JF60	
			AWG 2	—	√	—	—		3VA9234-0JF60	
			AWG 2	—	—	√	—		3VA9244-0JF60②	
			AWG 2	—	—	—	√		3VA9374-0JF60③	

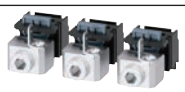
① Meets requirements of 100% rated breakers up to 250A.
② Meets requirements of 100% rated breakers up to 100A.
③ Meets requirements of 100% rated breakers up to 100A.
④ Standard lug shipped from the factory with the breaker for field installation on 800A 3VA55 and 800/1000A 3VA65 and 3VA66 when the breaker is ordered with a "6" in the 12th position of the catalog number.

Aluminum & Copper Wire Connectors and Terminal Covers (cont.)

	Description	LUG Material	Number of Wires, per pole	UL 486A - 486B Cu/AL stranded	Min cable cross-section (std.) Class B	Max cable cross-section (std.) Class B	For molded case circuit breakers/rated current			Part Number
							3VA57 3VA67 1200A	3VA58 3VA68 1600A	3VA59 3VA69 2000A	
	Kit of 2 single lugs and 1 extended terminal cover	Aluminum body	3-Conductor	Cu/Al cable	500 kcmil	750 kcmil	√	—	—	**3VA9772-0JJ34**⑤
	Kit of 3 single lugs and 1 extended terminal cover	Aluminum body	3-Conductor	Cu/Al cable	500 kcmil	750 kcmil	√	—	—	**3VA9773-0JJ34**⑤
	Kit of 2 single lugs and 1 extended terminal cover	Aluminum body	4-Conductor	Cu/Al cable	1/0	500 kcmil	√	—	—	**3VA9772-0JJ43**
	Kit of 3 single lugs and 1 extended terminal cover	Aluminum body	4-Conductor	Cu/Al cable	1/0	500 kcmil	√	—	—	**3VA9773-0JJ43**
	Kit of 3 single lugs with control wire tap and 1 extended terminal cover	Aluminum body	4-Conductor with control wire tap	Cu/Al cable	1/0	500 kcmil	√	—	—	**3VA9773-0JC43**
	Kit of 3 single lugs and 1 extended terminal cover	Aluminum body	4-Conductor	Cu/Al cable	1/0	500 kcmil	√	—	—	**3VA9773-0JM43**⑤
	Kit of 1 single lug	Aluminum body	4-Conductor	Cu/Al cable	600 kcmil	750 kcmil	—	√	—	**3VA9771-0JJ44**①③
	Kit of 1 single lug	Aluminum body	5-Conductor	Cu cable only	300 kcmil	600 kcmil	—	√	—	**3VA9771-0JJ53**①③
	Kit of 1 single lug	Aluminum body	6-Conductor	Cu/Al cable	300 kcmil	600 kcmil	—	√	√	**3VA9871-0JJ63**③④
	Kit of 3 single lugs	Aluminum body	6-Conductor	Cu/Al cable	1/0	750 kcmil	√	√	—	**3VA9773-0JJ64**②⑤
	Kit of 3 single lugs and 1 extended terminal cover	Copper body	4-Conductor	Cu cable only	1/0	500 kcmil	√	—	—	**3VA9773-0JE43**⑤
	Kit of 1 single lug	Copper body	5-Conductor	Cu/Al cable	300 kcmil	600 kcmil	—	√	√	**3VA9871-0JE53**①③④
	MBFC = Mounting base: Front connection	MBFC Requires the use of Essential Parts Sold Separately: 3x Single lugs + 1x 3VA9872-0WA00 kit of 2 Phase barriers.					—	√	√	**3VA9873-0WM00**
	MBRC = Mounting base: Rear connection	MBRC Requires the use of Essential Parts Sold Separately: 3x Single lugs					—	√	√	**3VA9873-0WN00**
	LMAP = Lug mounting assembly (Essential Part 3VA9773-0JJ64 Sold Separately)	Aluminum body	6-Conductor	Cu/Al cable	1/0	750 kcmil	√	√	—	**3VA9873-0WL00**②
	Kit of 12 Compression lugs and	Aluminum body	4-Conductor	Cu/Al cable	N/A	500 kcmil	√	—	—	**3VA9773-0QK01**

① Lug Kit Require Attachment to Essential Parts: mounting base MBFC or MBRC (Sold Separately).
② 3VA9773-0JJ64 Lugs Require Attachment to 3VA9873-0WL00 LMAP (Sold Separately).
③ Part Number is for kit of 1 lug. Requires customer to purchase Qty. of 3x (kit of 1 lug).
④ Lugs Require Attachment to Essential Parts MBFC (Sold Separately).
⑤ Meets requirements for 100% rated breakers, requires the use of 90 degree wire, size to 75 degree ampacity.

Copper Wire Connectors

	Type	Minimum cable cross-section (standard) Class B	Maximum cable cross-section (standard) Class B	For molded case circuit breakers/ rated current					Part Number
				3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	
	Copper body lug, small (Cu cable only) Kit of 3 single lugs	AWG 14	AWG 8	√	—	—	—	—	3VA9133-0JD10①
	Copper body lug (Cu cable only) Kit of 3 single lugs	AWG 8	2/0	√	—	—	—	—	3VA9133-0JD11②
		AWG 14	1/0	—	√	—	—	—	3VA9233-0JD11
		AWG 6	350 kcmil	—	√	—	—	—	3VA9233-0JD12
		AWG 14	1/0	—	—	√	—	—	3VA9143-0JD11
		AWG 6	350 kcmil	—	—	√	—	—	3VA9243-0JD12③
		2/0	600 kcmil	—	—	—	√	—	3VA9373-0JD13④
	Copper body lug, small (Cu cable only) Kit of 4 single lugs	AWG 14	AWG 8	√		—	—	—	3VA9134-0JD10①
	Copper body lug (Cu cable only) kit of 4 single lugs	AWG 8	2/0	√	—	—	—	—	3VA9134-0JD11②
		AWG 14	1/0	—	√	—	—	—	3VA9234-0JD11
		AWG 6	350 kcmil	—	√	—	—	—	3VA9234-0JD12
		AWG 14	1/0	—	—	√	—	—	3VA9144-0JD11
		AWG 6	350 kcmil	—	—	√	—	—	3VA9244-0JD12③
		2/0	600 kcmil	—	—	—	√	—	3VA9374-0JD13④
	Copper body lug, three cables (Cu cable) Kit of 3 single lugs	4/0	400 kcmil	—	—	—	—	√	3VA9673-0JD32
	Copper body lug, three cables (Cu cable) Kit of 4 single lugs	4/0	400 kcmil	—	—	—	—	√	3VA9674-0JD32
	Copper body lug, small with control wire tap (Cu cable only) Kit of 3 single lugs	AWG 14	AWG 8	√		—	—	—	3VA9133-0JK10①
	Copper body lug with control wire tap (Cu cable only) Kit of 3 single lugs	AWG 8	2/0	√	—	—	—	—	3VA9133-0JK11②
		AWG 14	1/0	—	√	—	—	—	3VA9233-0JK11
		AWG 6	350 kcmil	—	√	—	—	—	3VA9233-0JK12
		AWG 14	1/0	—	—	√	—	—	3VA9143-0JK11
		AWG 6	350 kcmil	—	—	√	—	—	3VA9243-0JK12
		2/0	600 kcmil	—	—	—	√	—	3VA9373-0JK13
	Copper body lug, small with control wire tap (Cu cable only) Kit of 4 single lugs	AWG 14	AWG 8	√		—	—	—	3VA9134-0JK10①
	Copper body lug with control wire tap (Cu cable only) Kit of 4 single lugs	AWG 8	2/0	√	—	—	—	—	3VA9134-0JK11②
		AWG 14	1/0	—	√	—	—	—	3VA9234-0JK11
		AWG 6	350 kcmil	—	√	—	—	—	3VA9234-0JK12
		AWG 14	1/0	—	—	√	—	—	3VA9144-0JK11
		AWG 6	350 kcmil	—	—	√	—	—	3VA9244-0JK12
		2/0	600 kcmil	—	—	—	√	—	3VA9374-0JK13
	Copper body lug, three cables with control wire tap (Cu cable) Kit of 3 single lugs	400 kcmil	600 kcmil	—	—	—	—	√	3VA9673-0JK32
	Copper body lug, three cables with control wire tap (Cu cable) Kit of 4 single lugs	400 kcmil	600 kcmil	—	—	—	—	√	3VA9674-0JK32

① Use these lugs on 15A to 40A breakers.
② Use these lugs on 45A to 125A breakers.

③ Standard lug installed at the factory on 100% rated 250A 3VA62 breakers when ordered with a "6" in the 12th position of the catalog number.

④ Standard lug installed at the factory on 100% rated 400A 3VA64 breakers when ordered with a "6" in the 12th position of the catalog number.

Copper Wire Connectors (cont.)

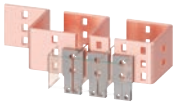
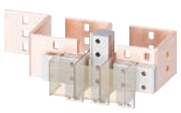
	Type	Minimum cable cross-section (standard) Class B	Maximum cable cross-section (standard) Class B	For molded case circuit breakers/ rated current					Part Number
				3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	
	Copper body lug, 2 Cables (Cu cable only) Kit of 3 single lugs and 1 extended terminal cover	2/0	600 kcmil	—	—	—	√	—	3VA9473-0JE23
	Copper body lug 2 Cables (Cu cable only) Kit of 4 single lugs and 1 extended terminal cover	2/0	600 kcmil	—	—	—	√	—	3VA9474-0JE23
	Copper body lug, four cables (Cu cable) Kit of 3 single lugs and 1 extended terminal cover	4/0	500 kcmil	—	—	—	—	√	3VA9673-0JL43
	Copper body lug, four cables (Cu cable) Kit of 4 single lugs and 1 extended terminal cover	4/0	500 kcmil	—	—	—	—	√	3VA9674-0JL43

Nut Keeper Kits

	Type	Maximum terminal width	Maximum terminal thickness	For molded case circuit breakers/ rated current						Part Number
				3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A 1600A	
	Nut keeper kit kit of 3 single lugs	17 mm / 0.7 inch	6.5 mm /0.25 inch	√	—	—	—	—	—	3VA9133-0QA00
		25 mm / 1 inch	8 mm / 0.3 inch	—	√	—	—	—	—	3VA9233-0QA00
		25 mm / 1 inch	8 mm / 0.3 inch	—	—	√	—	—	—	3VA9243-0QA00
		35 mm / 1.4 inch	10 mm / 0.4 inch	—	—	—	√	—	—	3VA9473-0QA00
	Nut keeper kit kit of 4 single lugs	17 mm / 0.7 inch	6.5 mm /0.25 inch	√	—	—	—	—	—	3VA9134-0QA00
		25 mm / 1 inch	8 mm / 0.3 inch	—	√	—	—	—	—	3VA9234-0QA00
		25 mm / 1 inch	8 mm / 0.3 inch	—	—	√	—	—	—	3VA9244-0QA00
		35 mm / 1.4 inch	10 mm / 0.4 inch	—	—	—	√	—	—	3VA9474-0QA00
 3 lug kit pictured	Nut keeper kit kit of 3 single lug and terminal covers	50 mm / 2.0 inch	30 mm / 1.18 inch	—	—	—	—	√	—	3VA9673-0QA00
	Nut keeper kit kit of 4 single lug and terminal covers	50 mm / 2.0 inch	30 mm / 1.18 inch	—	—	—	—	√	—	3VA9674-0QA00
	Metric Nut Keeper Kit kit of 3 single lugs	50 mm/1.96 inch	15…20 mm / 0.6…0.8 inch	—	—	—	—	—	√	3VA9803-0QA00①
	SAE Nut Keeper Kit kit of 3 single lugs	50 mm / 2.0 inch	15…20 mm / 0.6…0.8 inch	—	—	—	—	—	√	3VA9873-0QA00①

① Nut keeper kit is for 1200A breakers only.

Bus Connector Extensions

	Type	Maximum terminal width	Maximum terminal thickness	For molded case circuit breakers/rated current							Part Number
				3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A	3VA5 3VA6 1600A	
	Front bus connectors, extended 1 single connector	22 mm / 0.9 inch	8 mm / 0.3 inch	√	—	—	—	—	—	—	3VA9131-0QB00
	Front bus connectors, extended kit of 3 single connectors, 2 phase barriers, and 1 insulating plate	22 mm / 0.9 inch	8 mm / 0.3 inch	√	—	—	—	—	—	—	3VA9133-0QB00
	Front bus connectors extended kit of 4 single connectors, 3 phase barriers, and 1 insulating plate	22 mm / 0.9 inch	8 mm / 0.3 inch	√	—	—	—	—	—	—	3VA9134-0QB00
	Front bus connectors extended kit of 3 single connectors and 1 insulating plate	32 mm / 1.3 inch	10 mm / 0.4 inch	—	√	√	—	—	—	—	3VA9273-0QB00
		40 mm / 1.6 inch	12.5 mm / 0.5 inch	—	—	—	√	—	—	—	3VA9473-0QB00
		50.8 mm / 2.0 inch	30 mm / 1.18 inch	—	—	—	—	√	—	—	3VA9673-0QB00
	Front bus connectors extended kit of 4 single connectors and 1 insulating plate	32 mm / 1.3 inch	10 mm / 0.4 inch	—	√	√	—	—	—	—	3VA9274-0QB00
		40 mm / 1.6 inch	12.5 mm / 0.5 inch	—	—	—	√	—	—	—	3VA9474-0QB00
		50.8 mm / 2.0 inch	30 mm / 1.18 inch	—	—	—	—	√	—	—	3VA9674-0QB00
	Front bus connectors offset kit of 3 single connectors. 1 insulating plate Distance between pole centers: 400/600 A = 70 mm / 2.76 inches	60 mm / 2.4 inch	12.5 mm / 0.5 inch	—	—	—	√	—	—	—	3VA9473-0QC00
		80 mm / 3.15 inch	30 mm / 1.18 inch	—	—	—	—	√	—	—	3VA9673-0QC00
	Front bus connectors offset kit of 4 single connectors, 1 insulating plate, Distance between pole centers: 400/600 A = 70 mm / 2.76 inches	60 mm / 2.4 inch	12.5 mm / 0.5 inch	—	—	—	√	—	—	—	3VA9474-0QC00
		80 mm / 3.15 inch	30 mm / 1.18 inch	—	—	—	—	√	—	—	3VA9674-0QC00
	Front bus connectors offset kit of 3 single terminals 2 phase barriers ▪ For mounting onto the circuit breaker ▪ For mounting on plug-in and withdrawable units	60 mm / 2.4 inch	12.5 mm / 0.5 inch	—	—	—	—	—	√	—	3VA9603-0QC00①
	Front bus connectors kit of 3 single connectors and 1 terminal cover Note: The bent connection brackets shown in the picture must be provided by the customer. Dimensions can be found in the manual.			—	—	—	—	—	√	√	3VA9873-0QB00
	Front bus connectors, for 100% rated MCCB kit of 3 single connectors and 1 terminal cover Note: The bent connection brackets shown in the picture must be provided by the customer. Dimensions can be found in the manual.			—	—	—	—	—	√	√	3VA9873-0QH00

① IEC only.

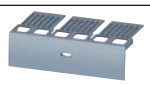
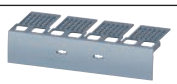
Rear connection studs flat

	Type	For molded case circuit breakers/ rated current						Part Number
		3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A	
	Rear connection studs flat kit of 2 short flat studs and 1 long flat stud	√	—	—	—	—	—	3VA9133-0QE00
		—	√	—	—	—	—	3VA9233-0QE00
		—	—	√	—	—	—	3VA9243-0QE00
		—	—	—	√	—	—	3VA9473-0QE00
	Rear connection studs flat kit of 2 short flat studs and 2 long flat studs	√	—	—	—	—	—	3VA9134-0QE00
		—	√	—	—	—	—	3VA9234-0QE00
		—	—	√	—	—	—	3VA9244-0QE00
		—	—	—	√	—	—	3VA9474-0QE00
	Rear connection studs flat 1 short flat stud	√	—	—	—	—	—	3VA9131-0QE10
		—	√	—	—	—	—	3VA9231-0QE10
		—	—	√	—	—	—	3VA9241-0QE10
		—	—	—	√	—	—	3VA9471-0QE10
	Rear connection studs flat 1 long flat stud	√	—	—	—	—	—	3VA9131-0QE20
		—	√	—	—	—	—	3VA9231-0QE20
		—	—	√	—	—	—	3VA9241-0QE20
		—	—	—	√	—	—	3VA9471-0QE20
	Rear connectors vertical 1 pole, 1 rear connector	—	—	—	—	—	√	3VA9773-0QE10
	Rear connectors vertical 3 pole, 3 rear connectors	—	—	—	—	—	√	3VA9773-0QE00

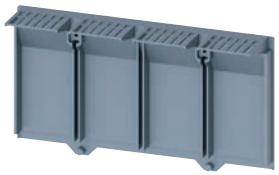
Rear connection studs round

	Rear connection studs round kit of 1 long round stud and 2 short round studs	√	—	—	—	—	—	3VA9133-0QF00
		—	√	—	—	—	—	3VA9233-0QF00
		—	—	√	—	—	—	3VA9243-0QF00
		—	—	—	√	—	—	3VA9473-0QF00
	Rear connection studs round kit of 2 long round studs and 2 short round studs	√	—	—	—	—	—	3VA9134-0QF00
		—	√	—	—	—	—	3VA9234-0QF00
		—	—	√	—	—	—	3VA9244-0QF00
		—	—	—	√	—	—	3VA9474-0QF00
	Rear connection studs round 1 short round studs	√	—	—	—	—	—	3VA9131-0QF10
		—	√	—	—	—	—	3VA9231-0QF10
		—	—	√	—	—	—	3VA9241-0QF10
		—	—	—	√	—	—	3VA9471-0QF10
	Rear connection studs round 1 long round stud	√	—	—	—	—	—	3VA9131-0QF20
		—	√	—	—	—	—	3VA9231-0QF20
		—	—	√	—	—	—	3VA9241-0QF20
		—	—	—	√	—	—	3VA9471-0QF20
	Rear horizontal bus connections, 3-pole, 3VA65 and 3VA66	—	—	—	—	√	—	3VA9673-0QE60
	Rear horizontal bus connections, 4-pole, 3VA65 and 3VA66	—	—	—	—	√	—	3VA9674-0QE60
	Rear vertical bus connections, 3-pole, 3VA65 and 3VA66	—	—	—	—	√	—	3VA9673-0QE00
	Rear vertical bus connections, 4-pole, 3VA65 and 3VA66	—	—	—	—	√	—	3VA9674-0QE00

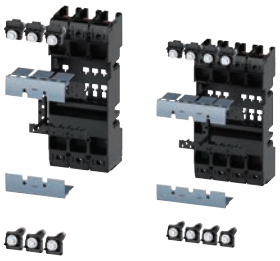
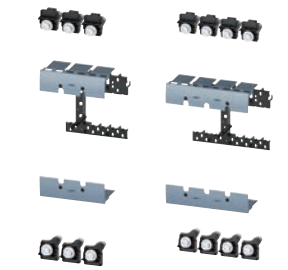
Phase barriers, terminal covers, and insulating plates

	Type	For molded case circuit breakers/ rated current								Part Number	Terminal Cover with Probe Holes Part Number
		3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A	3VA5 3VA6 1600A	3VA5 3VA6 2000A		
	Phase barriers kit of 2 phase barriers	√	—	—	—	—	—	—	—	3VA9132-0WA00	
		—	√	√	—	—	—	—	—	3VA9272-0WA00	
		—	—	—	√	—	—	—	—	3VA9472-0WA00	
		—	—	—	—	√	—	—	—	3VA9672-0WA00	
		—	—	—	—	—	√	√	√	3VA9872-0WA00	
	Terminal cover for 1-pole breakers	√	—	—	—	—	—	—	—	3VA9131-0WD10	
	Terminal cover for 2-pole breakers	√	—	—	—	—	—	—	—	3VA9131-0WD20	
	Terminal cover for 3-pole breakers	√	—	—	—	—	—	—	—	3VA9131-0WD30	3VA9131-0WD31
		—	√	√	—	—	—	—	—	3VA9271-0WD30	3VA9271-0WD31
		—	—	—	√	—	—	—	—	3VA9471-0WD30	3VA9471-0WD31
		—	—	—	—	√	—	—	—	3VA9671-0WD30	
		—	—	—	—	—	√	√	√	3VA9871-0WD30	
	Terminal cover for 4-pole breakers	√	—	—	—	—	—	—	—	3VA9131-0WD40	
		—	—	√	—	—	—	—	—	3VA9271-0WD40	
		—	—	—	√	—	—	—	—	3VA9471-0WD40	
		—	—	—	—	√	—	—	—	3VA9671-0WD40	
	Terminal cover intermediate for 3-pole breakers	—	—	—	—	√	—	—	—	3VA9671-0WE30	
	Terminal cover intermediate for 4-pole breakers	—	—	—	—	√	—	—	—	3VA9671-0WE40	
	Terminal cover extended for 2-pole breakers	√	—	—	—	—	—	—	—	3VA9131-0WF20	
	Terminal cover extended for 3-pole breakers	√	—	—	—	—	—	—	—	3VA9131-0WF30	3VA9131-0WF31
		—	√	√	—	—	—	—	—	3VA9271-0WF30	3VA9271-0WF31
		—	—	—	√	—	—	—	—	3VA9471-0WF30	3VA9471-0WF31
		—	—	—	—	√	—	—	—	3VA9671-0WF30	
	Terminal cover extended for 4-pole breakers	√	—	—	—	—				3VA9131-0WF40	
		—	√	√	—	—				3VA9271-0WF40	
		—	—	—	√	—				3VA9471-0WF40	
		—	—	—	—	√				3VA9671-0WF40	
	Terminal cover offset for 3-pole breakers	—	—	—	√	—				3VA9471-0WG30	
	Terminal cover offset for 4-pole breakers	—	—	—	√	—				3VA9471-0WG40	
	Terminal cover extended for 3-pole breakers	—	—	—	—	—	√	—	—	3VA9771-0WP30	
		—	—	—	—	—	√	√	—	3VA9871-0WP30	
		—	—	—	—	—	√	√	—	3VA9871-0WF30	

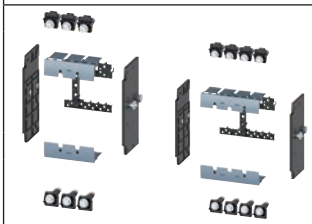
Phase barriers, terminal covers, and insulating plates

	Type	For molded case circuit breakers / rated current				Part Number
		3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	
	Rear insulating plate extended for 2-pole breakers	√	—	—	—	**3VA9131-0WJ20**
	Rear insulating plate extended for 3-pole breakers	√	—	—	—	**3VA9131-0WJ30**
		—	√	√	—	**3VA9271-0WJ30**
		—	—	—	√	**3VA9471-0WJ30**
	Rear insulating plate extended for 4-pole breakers	√	—	—	—	**3VA9131-0WJ40**
		—	—	√	—	**3VA9271-0WJ40**
		—	—	—	√	**3VA9471-0WJ40**
	Rear insulating plate offset for 3-pole breakers	—	—	—	√	**3VA9471-0WK30**
	Rear insulating plate offset for 4-pole breakers	—	—	—	√	**3VA9471-0WK40**
	Control wire tap for busbar (for fixed mounting)	—	√	√	—	**3VA9270-0WC00**
		—	—	—	√	**3VA9470-0WC00**

Plug-in socket

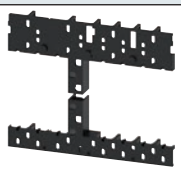
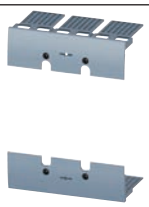
	Type	For molded case circuit breakers / rated current			Part Number
		3VA61/62 150A/250A	3VA63 400A	3VA64 600A	
 3 pole 4 pole	Plug-in unit, 3-pole, complete kit Consists of: Plug-in socket, Plug-in unit, conversion kit, Mounting screw kit	√	—	—	**3VA9143-0KP00**
		—	√	—	**3VA9343-0KP00**
		—	—	√	**3VA9443-0KP00**
	Plug-in unit, 4-pole, complete kit Consists of: Plug-in socket, Plug-in unit, conversion kit, Mounting screw kit	√	—	—	**3VA9144-0KP00**
		—	√	—	**3VA9344-0KP00**
		—	—	√	**3VA9444-0KP00**
 3 pole 4 pole	Plug-in unit, 3-pole, conversion kit Consists of: Screw-fastened terminal covers for molded case circuit breakers, Plug-in contacts, Cable cage, Autotrip plunger	√	—	—	**3VA9143-0KP10**
		—	√	√	**3VA9343-0KP10**
	Plug-in unit, 4-pole, conversion kit Consists of: Screw-fastened terminal covers for molded case circuit breakers, Plug-in contacts, Cable cage, Autotrip plunger	√	—	—	**3VA9144-0KP10**
		—	√	√	**3VA9344-0KP10**

Draw-out units

	Type	For molded case circuit breakers / rated current			Part Number
		3VA61/62 150A/250A	3VA63 400A	3VA64 600A	
	Draw-out unit, 3-pole, complete kit Consists of: Draw-out socket, Draw-out unit, conversion kit, Mounting screw kit	√	—	—	**3VA9143-0KD00**
		—	√	—	**3VA9343-0KD00**
		—	—	√	**3VA9443-0KD00**
	Draw-out unit, 4-pole, complete kit Consists of: Draw-out socket, Draw-out unit, conversion kit, Mounting screw kit	√	—	—	**3VA9144-0KD00**
		—	√	—	**3VA9344-0KD00**
		—	—	√	**3VA9444-0KD00**
 3 pole 4 pole	Draw-out unit, 3-pole, conversion kit Consists of: Screw-fastened terminal covers, Side wall, Plug-in contacts, Cable cage, Autotrip plunger	√	—	—	**3VA9143-0KD10**
		—	√	√	**3VA9343-0KD10**
	Draw-out unit, 4-pole, conversion kit Consists of: Screw-fastened terminal covers, Side wall, Plug-in contacts, Cable cage, Autotrip plunger	√	—	—	**3VA9144-0KD10**
		—	√	√	**3VA9344-0KD10**

Note: Crank handle for the drawout unit must be ordered seperately.

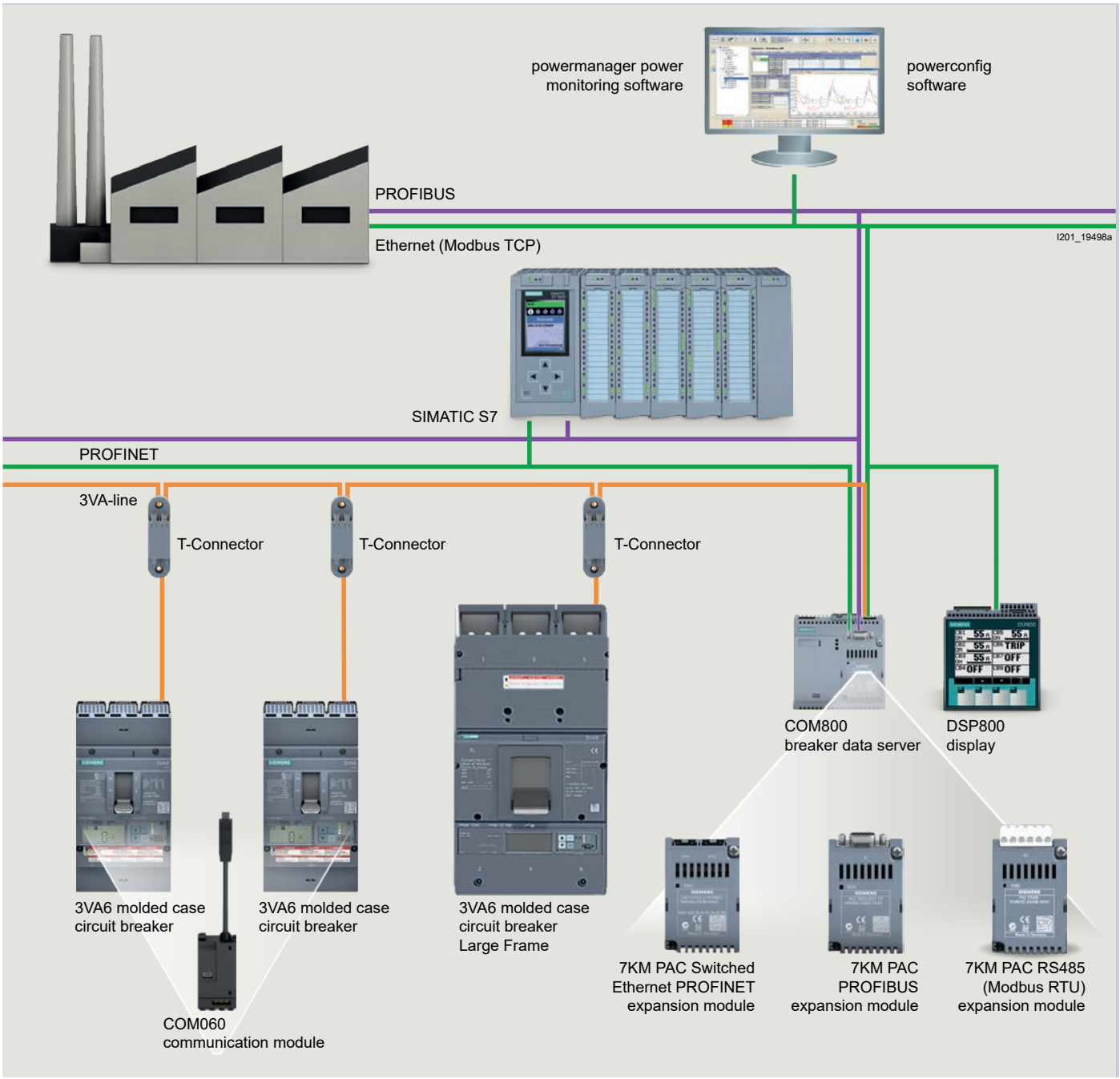
Accessories

	Type	For molded case circuit breakers / rated current		Part Number
		3VA61/62 150A/250A	3VA63/64 400A/600A	
	Cable cage for plug-in/draw-out unit 3-/4-pole (spare part) Cable duct for routing of the required cables from the internal acc. on the back of the breaker.	√	—	**3VA9167-0KB02**
		—	√	**3VA9367-0KB02**
	Door feedthrough	√	—	**3VA9147-0KT00**
		—	√	**3VA9347-0KT00**
	Autotrip plunger Plug-in unit	√	—	**3VA9267-0KP81**
		—	√	**3VA9457-0KP81**
	Autotrip plunger Draw-out unit	√	—	**3VA9267-0KD81**
		—	√	**3VA9457-0KD81**
	Terminal cover for plug-in/draw-out unit, 3-pole (spare part) To provide circuit breaker touch protection, for mounting on the molded case cicuit breaker	√	—	**3VA9143-0KB01**
		—	√	**3VA9343-0KB01**
	Terminal cover for plug-in/draw-out unit, 4-pole (spare part) To provide circuit breaker touch protection, for mounting on the molded case cicuit breaker	√	—	**3VA9144-0KB01**
		—	√	**3VA9344-0KB01**
	Crank handle for draw-out unit Insulated, including crank holder			**3VA9987-0KD81**

Other Accessories

	Type	Part Number
	Communication link for draw-out unit Consists of: Cable kit with 3 special position signaling switches, connecting cable 3VA9987-0KC10	**3VA9977-0KC00**
	Position signaling switches For draw-out unit	**3VA9977-0KB00**
	Spare connecting cable To connect the position signaling switches for communication with the COM060	**3VA9987-0KC10**
	Auxiliary circuit connector ▪ For draw-out units	**3VA9977-0KD80**
	Auxiliary circuit connector ▪ For plug-in units	**3VA9977-0KP80**
	Cylinder lock (type Ronis) ▪ Includes a lock with 2 keys ▪ For locking ▪ For installation in all rotary operators with shaft stub ▪ For mounting in the adapter kit for the accessories component	**3VA9980-0VL10** **3VA9980-0VL30** **3VA9980-0VL40**
	Cylinder locks (type RONIS) ▪ For 3VA9877-0EK1 front mounted rotary operators ▪ For 3VA877-0FK2 door mounted rotary operators	**3VA9870-0VL10**
	Cylinder lock adapter for draw-out unit ▪ For fitting a cylinder lock in the right-hand side wall of the draw-out unit ▪ To prevent unauthorized withdrawl or insertion of the circuit breaker; ▪ Circuit breaker can be locked in the CONNECT, TEST, or DISCONNECT position	**3VA9970-0LF40**
	Auxiliary switches ▪ For 3VA9877-0EK1. front mounted rotary operators and ▪ For 3VA877-0FK2 door mounted rotary operators 1× leading to "ON“	**3VA9877-0GX31**
	2× leading to "ON"	**3VA9877-0GX32**
	1× leading to "OFF"	**3VA9877-0GX41**
	2× leading to "OFF"	**3VA9877-0GX42**

Communications overview



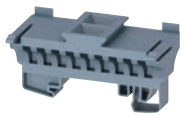
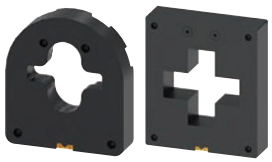
Modules

	Type	For molded case circuit breakers / rated current		Part Number
		3VA61/62 150A/250 A	3VA63/64/65/66 400A/600A 800A/1000A	
	24 V Module ▪ 24 V DC ▪ For mounting in the right-hand accessories compartment of the 3VA6 ▪ Optional energy supply for the ETU, also includes contiunous operation of the ETU display and the metering function of the ETU 8-series	√	—	**3VA9177-0TB50**
		—	√	**3VA9377-0TB50**
	COM060 communication module ▪ For mounting in the right-hand accessories compartment of the 3VA6 molded case circuit breaker (including ETU power supply) ▪ Communication with the COM800/COM100 breaker data server via the 3VA-line ▪ Including a T-Connector	√	—	**3VA9177-0TB10**
		—	√	**3VA9377-0TB10**
	Spare SLC adapter COM060, 24 V module accessory for: ▪ 3VA61/62 100/150/250	√	—	**3VA9187-0TB60**
	Spare SLC adapter COM060, 24 V module accessory for: ▪ 3VA63/64 400/600	—	√	**3VA9387-0TB60**

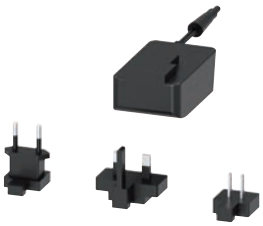
Breaker data server

	Type	Part Number
	COM800 breaker data server ▪ 2 terminating resistors ▪ Central communication module for connecting up to eight 3VA6 molded case circuit breakers via the 3VA-line ▪ Ethernet 10/100 Mbit/s interface ▪ Communication via Ethernet (Modbus TCP) ▪ Module slot for plugging on an optional PROFIBUS DP, PROFINET or RS485 module	**3VA9977-0TA10**
	COM100 breaker data server ▪ 2 terminating resistors ▪ Central communication module for connecting one 3VA6 molded case circuit breaker ▪ Ethernet 10/100 Mbit/s interface ▪ Communication via Ethernet (Modbus TCP) ▪ Module slot for plugging on an optional PROFIBUS DP, PROFINET or RS485 module	**3VA9977-0TA20**
	7KM PAC PROFIBUS DP expansion module ▪ The 7KM PAC PROFIBUS DP expansion module is used for connecting the COM800/COM100 breaker data server, and the 3VA molded case circuit breakers conneccted to it, to PROFIBUS DPV1 ▪ The 7KM PAC PROFIBUS DP expansion module provides the status and measured quantities of the 3VA molded case circuit breaker for the PROFIBUS DP master. It receives information (e.g. commands) from the PROFIBUS DP master, and forwards this information to the 3VA molded case circuit breaker	**7KM9300-0AB01-0AA0**
	7KM PAC Switched Ethernet PROFINET expansion module ▪ The 7KM PAC Switched Ethernet PROFINET expansion module is used to connect the COM800/COM100 breaker data server, and the connected 3VA molded case circuit breaker, to PROFINET via two Ethernet interfaces ▪ The 7KM PAC Switched Ethernet PROFINET expansion module provides the status and measured quantities of the 3VA molded case circuit breaker to PROFINET via the PROFINET IO, PROFIenergy and Modbus TCP protocols	**7KM9300-0AE01-0AA0**
	7KM PAC RS485 Modbus RTU expansion module ▪ The 7KM PAC RS485 Modbus expansion module is used to connect the COM800/COM100 breaker data server, and the 3VA molded case circuit breaker connected to it, to Modbus RTU ▪ The 7KM PAC RS485 Modbus expansion module provides the status and measured quantities of the 3VA molded case circuit breaker for the Modbus RTU master. It receives information (e.g. commands) from the Modbus RTU master, and forwards this information to the 3VA molded case circuit breaker	**7KM9300-0AM00-0AA0**

Accessories for Communication

	Type	Part Number
	T-Connector ▪ Spare part ▪ Provides spur line feeder to COM060 and loops to the nextcircuit breaker ▪ Includes a connection adapter for mounting on the 3VA6 breaker enclosure	**3VA9987-0TG10**
	DIN rail adapter For snapping the T-Connector onto a DIN rail	**3VA9987-0TG11**
	Preassembled T-Connector-to-T-Connector or T-Connector-to-COM800/ COM100 connecting cable ▪ 0.4 m long	**3VA9987-0TC10**
	▪ 1 m long	**3VA9987-0TC20**
	▪ 2 m long	**3VA9987-0TC30**
	▪ 4 m long	**3VA9987-0TC40**
	Preassembled connecting cable for extending the COM060-to-T-Connector spur line connection ▪ 0.4 m long	**3VA9987-0TF20**
	▪ 0.8 m long	**3VA9987-0TF10**
	Additional bus terminating resistors	**3VA9987-0TE10**
	Voltage tap to external N conductor Cable for connecting the neutral point for the metering function of the 8-Series ETU, length 1.5 m	**3VA9987-0UC10**
	External current transformer. Connection of an external current transformer for the N conductor for 3-pole 3VA6 molded case circuit breakers for 3-series, 5-series, and 8-series ETUs, including connecting cable ▪ 3VA61	**3VA9077-0NA10**
	▪ 3VA62	**3VA9177-0NA10**
	▪ 3VA63/64	**3VA9377-0NA10**
	▪ 3VA65/66/67	**3VA9677-0NA10**
	▪ 3VA68/69	**3VA9877-0NA10**
	DSP800 display ▪ For displaying the status, measured values and parameters of up to 8 3VA6 molded cases circuit breakers ▪ Connection to the COM800/COM100 via Ethernet for displaying information of the COM800/COM100 and the connected 3VA6 molded case circuit breaker	**3VA9977-0TD10**
	EFB300 ▪ External function box for connection to the ETU of the 3VA6 molded case circuit breaker ▪ 4 digital outputs for information output, 1 digital input ▪ ZSI functionality ▪ S0 interface ▪ Including cable 1.5 m in length	**3VA9977-0UA10**
	Connecting cable for EFB300 and MMB300. Spare part ▪ 1.5 m long	**3VA9987-0UB10**
	▪ 3.0 m long	**3VA9987-0UB20**
	▪ 3.0 m long for 3VA with EFB and RCD820	**3VA9987-0UB30**

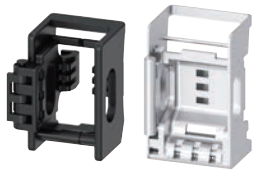
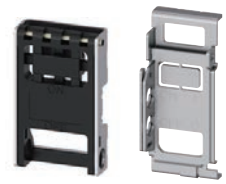
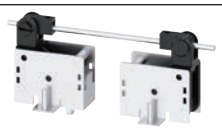
Test devices

	Type	Part Number
	TD300 ▪ Connection to the front interface of the ETU ▪ Test device for activating the ETU and triggering a test trip	**3VA9977-0MA10**
	TD500 ▪ Connection to the front interface of the ETU ▪ Initiation of various test trips (LSING) ▪ USB interface for connection of a PC using powerconfig ▪ ETU parameterization ▪ Including external power supply unit with adapter for Europe, UL and GB ▪ Including connecting cable to the 3VA6 molded case circuit breaker	**3VA9977-0MB10**
	Spare part: External power supply for TD500 110 ... 240 V AC	**3VA9987-0MX10**
	Spare part: Cable for connecting to the TD500 to the 3VA6 molded case circuit breaker	**3VA9977-0MY10**

Maintenance Mode Box

	MMB300 ▪ Realization of the NEC 240.87 (Arc Energy Reduction) -> personal protection during maintenance work ▪ Switch into maintenance mode by changing the I- and G-protection to the lowest possible value through an external signal (e.g. door contact) ▪ Available for all 3VA6 circuit breakers with electronic trip unit ▪ Daisy chain up to 8 circuit breakers equipped with MMB300 ▪ Additional digital output (D01) for ETU signals available ▪ Capable of DIN rail mounting ▪ Includes cable 1.5m in length	**3VA9977-0UF10**

Locking, Blocking, & Interlocking

	Type	For molded case circuit breakers/ rated current							Part Number
		3VA4 125A	3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A 2000A	
 3VA51	Blocking device for the handle	—	√	—	—	—	—	—	3VA9038-0LB10
		—	—	√	√	√	—	—	3VA9378-0LB10
		—	—	—	—	—	—	√	3VA9877-0LB10
 3VA5/3VA6 3VA4	Padlock device for the handle	—	√	—	—	—	—	—	3VA9037-0LB11
		√	—	—	—	—	—	—	3VA9038-0LB11
		—	—	√	√	—	—	—	3VA9138-0LB11
		—	—	—	—	√	—	—	3VA9338-0LB11
		—	—	—	—	—	√	—	3VA9578-0LB10
		—	—	—	—	—	—	√	3VA9877-0LB11
 2 pole 3 pole	3VA4 Handle tie & padlock 2-inch	√	—	—	—	—	—	—	3VA9032-0LB20
	3VA4 Handle tie & padlock 3-inch	√	—	—	—	—	—	—	3VA9033-0LB20
	Adapter kit for mounting the cylinder lock (type Ronis) in the accessories compartment of the molded case circuit breaker Comprising 2 cylinder lock casings (one for locking and one for interlocking) and the appropriate mounting module ▪ To implement an interlock or a lock: select suitable cylinder lock(s) ▪ For an interlock: select the same cylinder lock number	—	√	—	—	—	—	—	3VA9137-0LF10
		—	—	√	—	—	—	—	3VA9237-0LF10
		—	—	—	√	—	—	—	3VA9147-0LF10
		—	—	—	—	√	—	—	3VA9347-0LF10
		—	—	—	—	—	√	—	3VA9577-0LF10
	Cylinder lock (type Ronis) ▪ Includes a lock with 2 keys ▪ For locking or interlocking ▪ For installation in all rotary operators with shaft stub ▪ For mounting in the adapter kit for the accessories compartment							—	
	▪ Key 1 (lock number 1)	—	√	√	√	√	√	—	3VA9980-0VL10
	▪ Key 3 (lock number 3)	—	√	√	√	√	√	—	3VA9980-0VL30
	▪ Key 4 (lock number 4)	—	√	√	√	√	√	—	3VA9980-0VL40
	Sliding bar Complete kit for interlocking 2 circuit breakers ▪ The article number must be ordered 2X to implement an interlock between 3 breakers of the same size	—	√	—	—	—	—	—	3VA9138-0VF30
		—	—	√	—	—	—	—	3VA9238-0VF30
		—	—	—	√	—	—	—	3VA9148-0VF30
		—	—	—	—	√	—	—	3VA9348-0VF30
	Module for handle interlock using a bowden cable ▪ A separate handle interlock module is required for each switching device ▪ A Bowden cable must be ordered separately	—	√	—	—	—	—	—	3VA9137-0VF10
		—	—	√	—	—	—	—	3VA9237-0VF10
		—	—	—	√	—	—	—	3VA9147-0VF10
		—	—	—	—	√	—	—	3VA9347-0VF10
		—	—	—	—	—	√	—	3VA9577-0VF10
		—	—	—	—	—	—	√	3VA9877-0VF10
	Rear interlock with rod Complete Kit ▪ Mounting frames are not included in scope of supply	—	√	√	√	√	—	—	3VA9078-0VM10

Locking, Blocking, & Interlocking

	Type	For molded case circuit breakers/rated current						Part Number
		3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A 2000A	
	Rear interlock with rod Complete Kit ▪ Mounting frames are included in scope of supply	—	—	—	—	√	—	3VA9578-0VM10
	Rear interlock with rod Complete Kit for plug-in/draw-out unit ▪ Mounting frames are not included in scope of supply	√	√	√	√	—	—	3VA9078-0VM30
	Rear interlock with rod Complete Kit for Circuit breaker, fixed-mounted	—	—	—	—	—	√	3VA9873-0VM10
	Bowden cable ▪ Length 0.6 m	√	√	√	√	√	—	3VA9980-0VC10
	▪ Length 1.0 m	√	√	√	√	√	—	3VA9980-0VC20
	▪ Length 1.5 m	√	√	√	√	√	—	3VA9980-0VC30
	Mounting frame for rear interlock with rod①② Required for the complete mounting frame kit: ▪ Profile poles	√	√	√	√	—	—	3VA9078-0VK10
	▪ Mounting Plates	√	—	—	—	—	—	3VA9138-0VK20
		—	√	—	—	—	—	3VA9238-0VK20
		—	—	√	—	—	—	3VA9248-0VK20
		—	—	—	√	—	—	3VA9448-0VK20

Cover frame for door cut-out

	Cover frame for door cut-out for molded case circuit breaker ▪ 3-pole, door cut-out without trip unit	√	—	—	—	—	—	3VA9033-0SB10
		—	√	√	—	—	—	3VA9143-0SB10
		—	—	—	√	—	—	3VA9373-0SB10
		—	—	—	—	√	—	3VA9583-0SB10
		—	—	—	—	—	√	3VA9877-0SB10
	Cover frame for door cut-out for molded case circuit breaker ▪ 3-pole, door cut-out with trip unit	√	—	—	—	—	—	3VA9033-0SB20
		—	√	—	—	—	—	3VA9233-0SB20
		—	—	√	—	—	—	3VA9143-0SB20
		—	—	—	√	—	—	3VA9343-0SB20
		—	—	—	—	√	—	3VA9583-0SB20
		—	—	—	—	—	√	3VA9877-0SB20
	▪ 3-pole, door cut-out with trip unit and connection area	—	—	—	—	—	√	3VA9877-0SB60
	Cover frame for door cut-out for molded case circuit breaker ▪ 4-pole, door cut-out without trip unit	√	—	—	—	—	—	3VA9034-0SB10
		—	√	√	—	—	—	3VA9144-0SB10
		—	—	—	√	—	—	3VA9374-0SB10
		—	—	—	—	√	—	3VA9584-0SB10
	Cover frame for door cut-out for molded case circuit breaker ▪ 4-pole, door cut-out with trip unit	√	—	—	—	—	—	3VA9034-0SB20
		—	√	—	—	—	—	3VA9234-0SB20
		—	—	√	—	—	—	3VA9144-0SB20
		—	—	—	√	—	—	3VA9344-0SB20
		—	—	—	—	√	—	3VA9584-0SB20
	Cover frame for door cut-out for MO320 motor operators	√	—	—	—	—	—	3VA9033-0SB10
		—	√	√	—	—	—	3VA9237-0SB30
		—	—	—	√	—	—	3VA9377-0SB30
	Cover frame for door cut-out for front mounted rotary operators	√	—	—	—	—	—	3VA9033-0SB10
		—	√	√	—	—	—	3VA9143-0SB10
		—	—	—	√	—	—	3VA9373-0SB10
	Cover frame for door cut-out for front mounted rotary operator with door interlock	—	—	—	√	—	—	3VA9377-0SB30
		—	—	—	—	√	—	3VA9583-0SB50
		—	—	—	—	—	√	3VA9877-0SB30
	Cover frame for door cut-out for door feedthrough	—	√	√	—	—	—	3VA9233-0SB20
		—	—	—	√	—	—	3VA9333-0SB20
	Labeling plate for cover frame							3VA9087-0SX10

① 2 mounting plates are required. They are screwed onto the profile rail that can be ordered above. Different breakers can be mutually interlocked.

② Breakers with plug-in unit can be mounted on the mounting plates, but the profile rails cannot be used.

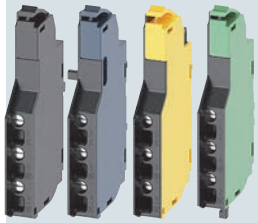
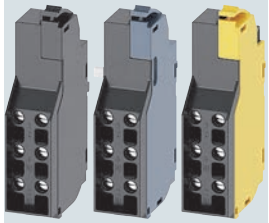
Other accessories

	Type	For molded case circuit breakers/rated current						Part Number
		3VA5 125A	3VA5 250A	3VA6 150A 250A	3VA5 3VA6 400A 600A	3VA5 3VA6 800A 1000A	3VA5 3VA6 1200A 2000A	
	Busbar adapter system with 60 mm busbar center-to-center spacing 3-pole	√	—	—	—	—	—	8US1211-4SS00①
		—	√	√	—	—	—	8US1213-4AP03②
		—	—	—	√	—	—	8US1213-4AH04②
	Busbar adapter system with 60 mm busbar center to center spacing, bottom connection, 3-pole Busbar adapter designed for 3VA breaker used as a main	√	—	—	—	—	—	8US1215-4SS00
	Metric mounting screw kit For fixed mounted breakers 1-pole	√	—	—	—	—	—	3VA9151-0SS10
	Metric mounting screw kit (2 pcs) For fixed mounted breakers 2-pole	√	—	—	—	—	—	3VA9116-0SS10
	Metric mounting screw kit (4 pcs) For fixed mounted breakers 3-,4-pole	√	√	—	—	—	—	3VA9114-0SS10
	Metric mounting screw kit For fixed mounted breakers 3-pole	—	—	√	—	—	—	3VA9126-0SS10
	Metric mounting screw kit For fixed mounted breakers 4-pole	—	—	√	—	—	—	3VA9124-0SS10
	Metric mounting screw kit For fixed mounted breakers 3-,4-pole	—	—	—	√	—	—	3VA9328-0SS10
	Metric mounting Screw kit (4pcs) For fixed mounted breakers 3-, 4-pole	—	—	—	—	√	—	3VA9517-0SS10
	Metric mounting screw kit For plug-in and draw-out unit	—	—	√	—	—	—	3VA9124-0SS10
	Metric mounting screw kit For plug-in and draw-out unit	—	—	—	—	—	√	3VA9874-0SS10
	SAE mounting screw kit (2 pcs) For fixed mounted breakers 1-pole	√	—	—	—	—	—	3VA9151-0SS00
	SAE Mounting screw kit (2 pcs) For fixed mounted breakers 2-,3-pole	√	—	—	—	—	—	3VA9156-0SS00
	SAE Mounting screw kit (4 pcs) For fixed mounting breakers 4-pole	√	—	—	—	—	—	3VA9154-0SS00
	SAE Mounting screw kit (4 pcs) For fixed mounted breakers 3-,4-pole and 3VA6 150/250 plug-in and draw-out units	—	√	√	—	—	—	3VA9164-0SS00
	SAE Mounting screw kit (2 pcs) For fixed mounted breakers 2-,3-pole	—	√	√	—	—	—	3VA9166-0SS00
	SAE Mounting screw kit (4 pcs) For fixed mounted breakers 2-,3-,4-pole and 3VA6 400/600 plug-in and draw-out units	—	—	—	√	—	—	3VA9368-0SS00
	SAE mounting screw kit For plug-in and draw-out unit	—	—	—	—	—	√	3VA9874-0SS00
	Replacement handle extension accessory	—	—	—	√	—	—	3VA9487-0SC10
		—	—	—	—	√	—	3VA9987-0SC10
		—	—	—	—	—	√	3VA9877-0SC10

① Busbar adapter designed for 3VA breaker used as a feeder.

② Busbar adapter designed for 3VA breaker used as either a main or feeder.

Auxiliary switches electrical requirements

				Auxiliary switches and alarm switches HQ				Auxiliary switches and alarm switches HQ_electronic				Auxiliary switches and alarm switches HP		
														
				AUX	LCS	TAS	EAS	AUX	LCS	TAS	EAS	AUX	LCS	TAS
Rated operational voltage		U_e	V AC 50 Hz	240				24				600		
			V DC	250				24				250		
Conventional free-air thermal current		$I_{th} = I_e$	A	6				0.3				10		
IEC Ratings Listed	AC-12	12 V	A	6				0.3				10		
		24 V	A	6				0.3				10		
		48 V	A	6				--				10		
		125 V	A	6				--				10		
		220/240 V	A	6				--				10		
		380/440 V	A	--				--				6		
		600 V	A	--				--				2		
	AC-15	12 V	A	3				0.3				6		
		2/4 V	A	3				0.3				6		
		48 V	A	3				--				6		
		125 V	A	3				--				6		
		220/240 V	A	3				--				6		
		380/440 V	A	--				--				2		
		600 V	A	--				--				0.6		
	DC-12	12 V	A	6				0.1				6		
		24 V	A	4				0.1				6		
		48 V	A	2				--				2		
		110 V	A	0.5				--				0.6		
		250 V	A	0.25				--				0.3		
	DC-13	12 V	A	1				0.07				3		
		24 V	A	0.8				0.07				3		
		48 V	A	0.4				--				0.8		
		110 V	A	0.2				--				0.2		
		250 V	A	0.1				--				0.1		
Max. rated current (UL)	Inductive load (0.75-0.8 AC)	24 V	A	3				0.3				6		
		300 V	A	3				--				6		
		600 V	A	--				--				6		
	Pilot duty (AC)	24 V	A	3				--				6		
		127 V	A	3				--				6		
		240 V	A	3				--				3		
		480 V	A	--				--				1.5		
		600 V	A	--				--				1.2		
	Resistive load (DC)	24 V	A	0.25				0.1				0.3		
		250 V	A	0.25				--				0.3		
	Resistive load - pilot duty sequence (DC)	125 V	A	0.6				--				0.9		
		250 V	A	0.3				--				0.55		
Minimum load		At 24 V DC	mA	70				0.5				70		
		At 5 V DC	mA	--				1				--		

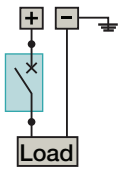
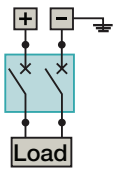
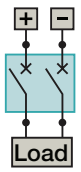
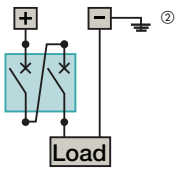
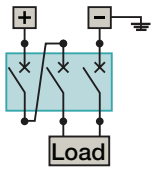
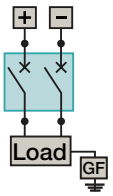
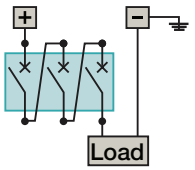
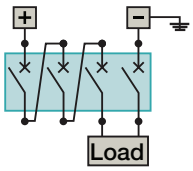
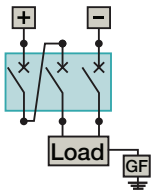
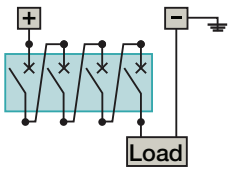
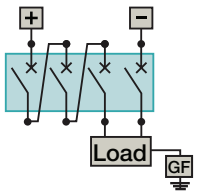
Shunt trip/undervoltage electrical requirements

					Shunt trip left STL	Shunt trip flexible STF	Undervoltage releases UVR	Universal release UNI
								
Power consumption U_e	12	V DC	W	50	--	--	--
	24	50 V AC/60 Hz	VA	50	--	--	--
	24 ... 30	V DC	W	7 ... 50	--	--	--
	48 ... 60	50 V AC/60 Hz	VA	15 ... 20	--	--	--
	48 ... 60	V DC	W	20 ... 30	--	--	--
	110 ... 127	50 V AC/60 Hz	VA	30 ... 40	--	--	--
	110 ... 127	V DC	W	30 ... 40	--	--	--
	208 ... 277	50 V AC/60 Hz	VA	16 ... 35	--	--	--
	220 ... 250	V DC	W	28 ... 35	--	--	--
	380 ... 600	50 V AC/60 Hz	VA	10 ... 30	--	--	--
	24	50 V AC/60 Hz	VA	--	300	--	--
	48 ... 60	50 V AC/60 Hz	VA	--	340 ... 600	--	--
	110 ... 127	50 V AC/60 Hz	VA	--	500 ... 650	--	--
	208 ... 277	50 V AC/60 Hz	VA	--	360 ... 650	--	--
	380 ... 500	50 V AC/60 Hz	VA	--	330 ... 600	--	--
	600	50 V AC/60 Hz	VA	--	300	--	--
	12 ... 250	V DC	W	--	--	< 2.5	--
	24 ... 230	50 V AC/60 Hz	VA	--	--	< 2	--
	380 ... 480	50 V AC/60 Hz	VA	--	--	< 2.5	--
	12	V DC (Cat II; PELV/SELV)	W	--	--	--	UVR: < 2.5 SHT: 20
	24	V DC (Cat II; PELV/SELV)	W	--	--	--	UVR: < 2.5 SHT: 20
	48	V DC (Cat II; PELV/SELV)	W	--	--	--	UVR: < 2.5 SHT: 20
Rated impulse withstand voltage		U_{imp}	kV	6		4	0.5
Making current		I_{max}	at V	1.5 A/24 V AC	18 A/24 V AC	5 mA/480 V	1.5 A/24 V
Maximum tripping time			ms	< 10			
Service life	Electrical trips			8500			
	Mechanical switching cycles of the circuit breaker			25000			
Priority over other control signals				Given			
Degree of protection	Lid of the accessories compartment closed			IP40			
	Lid of the accessories compartment open			IP 20			
Minimum signal duration			ms	40	40	--	40
Response voltage shunt trip	Pick-up (circuit breaker trips)	Us/V	%	70 ... 110		--	70 ... 110
Undervoltage release response voltage	Pick-up (circuit breaker can be switched on)	Us/V	%	--	--	85 ... 110	
	Pick-up (circuit breaker trips)	Us/V	%	--	--	35 ... 70	
Tripping frequency	Trips per hour			Unlimited	120	Unlimited	
Can be used for electrical interlocking of molded case circuit breakers				No	No	Yes	

Motor operator electrical requirements

MO320 motor operator	3VA5 125 A	3VA5 250 A	3VA6 150 A/ 250 A	3VA5 3VA6 400 A/ 600 A
Degree of protection	NEMA 1			
Rated control supply voltage (operating range of control supply voltage)	24 V ... 60 V DC (0.85 ... 1.26) 110 V ... 230 V AC/ 110 V ... 250 V DC (0.85 ... 1.1)			
Rating	250 W, max. 500 W (60 ms)			
Make time, typically	< 800 ms	< 1000 ms		< 1700 ms
Break time, typically	< 800 ms	< 1000 ms		< 1400 ms

DC breaking capacity according to UL489

3VA51			3VA52			3VA53			3VA54			DC single-pole disconnection	DC all-pole disconnection	
125 A (15- 125 A)			250 A (40 – 250 A)			400 A (200 - 400 A)			600 A (450 – 600 A)			Grounded①	Grounded①	Isolated
DC breaking capacity acc. UL489 in kA														
S	M	H	M	H	C	M	H	C	M	H	C			
125 V			250 V			250 V			250 V					
14	25	30	50	85	100	50	85	100	50	85	100			
250 V			500 V			500 V			500 V					
50	85	100	50	85	100	50	85	100	50	85	100			
500 V			750 V			600 V			600 V					
						50	85	100	50	85	100			
						750 V			750 V					
50	85	100	50	85	100	6	6	10	6	6	10			
600 V			1000 V			750 V			750 V				—	
						50	85	100	50	85	100			
						1000 V			1000 V					
50	85	100	50	85	100	6	6	10	6	6	10			

Applies to MCCBs in line protection and MCS (if protected by a suitable overcurrent protection device).

With an non-grounded system, all poles must disconnect such that the load is isolated when switched off.

The grounded pole must always be assigned to the individual conducting path, so that in the event of a ground fault there are always 2 conducting paths in series in a circuit with 3-pole molded case circuit breakers, and 3 conducting paths in series in a circuit with 4-pole molded case circuit breakers.

Additional wiring configurations are available on request.

GF ground fault monitoring
① Minus pole grounded
② Also covers 1-pole circuit breaker in 2-pole frame

If used on 250A frame and above means non-interchangeable trip breaker with factory assembled frame and trip. Solid state trip and current limiting (S or C in first character) are non-interchangeable only, and the "X" is omitted.

Trip Unit Type
□ — Omitted – Thermal-Magnetic
S — Sensitrip® Electronic Trip (obsolete)

Sentron Series Type/Interrupting Range
□ — Omitted – Standard Rating
H — High IC Rating
HH — Extra High IC Rating
C — Highest IC Rating and Current Limiting

Frame Identifier
E — Type ED
F — Type FD
J — Type JD
L — Type LD
LM — Type LMD
M — Type MD
N — Type ND
P — Type PD
R — Type RD

Maximum Voltage
2 — 240 Vac
4 — 480 Vac
6 — 600 Vac

Number of Poles
1
2
3
A — used to indicate advanced electronic trip unit with maintenance mode capability (always 3 poles)
B — used to indicate basic electronic trip unit (always 3 poles)

(Specific Application Type)
B — Standard 40°C Breaker
M — Calibrated for 50°C Application
F — Frame Only
T — 40°C Trip Unit Only
W — 50°C Trip Unit Only
S — Molded Case Switch
L — Low Instantaneous Range ETI Breaker
A — Standard Range ETI Breaker
H — High Instantaneous Range ETI Breaker

Maximum Continuous Current Rating
ED Frame — 015, 020, 025, 030, 035, 040, 045, 050, 060, 070, 080, 090, 100, 110, 125
FD Frame — 070, 080, 090, 100, 110, 125, 150, 175, 200, 225, 250
JD Frame — 200, 225, 250, 300, 350, 400
LD Frame — 250, 300, 350, 400, 450, 500, 600
LMD Frame — 500, 600, 700, 800
MD Frame — 500, 600, 700, 800
ND Frame — 900, 100 (1000A), 120 (1200A)
PD Frame — 120 (1200A), 140 (1400A), 160 (1600A)
RD Frame — 160 (1600A), 180 (1800A), 200 (2000A)

Suffix
L — where applicable indicates a breaker shipped with line/loads lugs installed
A — used with a switch to show automatic self protection
Y — 400 Hertz
H — 100% rated
P — Load side lugs only
NAV — Naval Ratings

NOTE:

□ — Position omitted if not used.

Ordering Instructions

- All ED Frame Sentron circuit breakers are supplied with load side lugs. If line side lugs are required, add "L" suffix to catalog number. Consult Siemens sales office for any addditional charge
- 50°C Calibration, 400HZ - see page 7-167. All ED frame circuit breakers may be reverse connected

Type ED2⑤

Blue Label

Continuous Current Rating @ 40°C	1-Pole 120V AC 125V DC	2-Pole 240V AC 125V DC 250V DC	3-Pole 240V AC
	Catalog Number	Catalog Number	Catalog Number
15	ED21B015④■	ED22B015	ED23B015
20	ED21B020④■	ED22B020	ED23B020
25	ED21B025■	ED22B025■	ED23B025■
30	ED21B030■	ED22B030	ED23B030
35	ED21B035■	ED22B035■	ED23B035■
40	ED21B040■	ED22B040	ED23B040
45	ED21B045■	ED22B045■	ED23B045■
50	ED21B050■	ED22B050	ED23B050
60	ED21B060■	ED22B060	ED23B060
70	ED21B070■	ED22B070	ED23B070
80	ED21B080■	ED22B080■	ED23B080
90	ED21B090■	ED22B090■	ED23B090■
100	ED21B100■	ED22B100	ED23B100

Type ED4⑤

Blue Label

Continuous Current Rating @ 40°C	1-Pole 120V AC 277V AC 125V DC	2-Pole 480V AC 250V DC	3-Pole 480V AC
	Catalog Number	Catalog Number	Catalog Number
15	ED41B015④	—	ED43B015
20	ED41B020④	ED42B020	ED43B020
25	ED41B025	ED42B025	ED43B025
30	ED41B030	ED42B030	ED43B030
35	ED41B035■	ED42B035■	ED43B035
40	ED41B040	ED42B040	ED43B040
45	ED41B045■	ED42B045■	ED43B045
50	ED41B050	ED42B050	ED43B050
60	ED41B060	ED42B060	ED43B060
70	ED41B070	ED42B070	ED43B070
80	ED41B080■	ED42B080■	ED43B080
90	ED41B090■	ED42B090■	ED43B090
100	ED41B100	ED42B100	ED43B100
110	ED41B110	ED42B110■	ED43B110
125	—	ED42B125	ED43B125

Type ED6⑤

Blue Label

Continuous Current Rating @ 40°C	1-Pole① 347V AC	2-Pole 600V AC 250V DC	3-Pole 600V AC 500V DC	3-Pole 600V DC
	Catalog Number	Catalog Number	Catalog Number	Catalog Number
15	ED61B015	—	—	ED63D015L
20	ED61B020	ED62B020	ED63B020	ED63D020L
25	ED61B025	ED62B025■	ED63B025	ED63D025L
30	ED61B030	ED62B030	ED63B030	ED63D030L
35	ED61B035	—	ED63B035	ED63D035L
40	ED61B040	—	ED63B040	ED63D040L
45	ED61B045■	—	ED63B045	ED63D045L
50	ED61B050	—	ED63B050	ED63D050L
60	ED61B060	—	ED63B060	ED63D060L
70	ED61B070■	—	ED63B070	—
80	ED61B080	—	ED63B080	—
90	ED61B090	—	ED63B090	—
100	ED61B100■	—	ED63B100	—
110	—	—	ED63B110	—
125	—	—	ED63B125	—

Note: ED frame circuit breakers qualified to UL 489 Supplement SB "Naval"— See page 7-167 for additional information

■ Built to order. Allow 2–3 weeks for delivery.

①CSA Certified only (Not UL)

②For CED types and all 110–125 ampere ED frames.

③See **Note: A,** page 7-164.

④SWD rated.

⑤HACR rated.

⑥Not for use with HHED6 breakers.

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
ED2, ED4, ED6, HED4, HHED6		
1	30	38
2	10	25
3	10	38
CED6		
2	5	20
3	5	30

Lugs

Ampere Rating	No. of Poles	Catalog Number	Wire Range
Aluminum Body Lugs			
All 15–25A	1, 2, 3	Line/Load **SA1E025**	#14–#10 Cu #12–#10 Al
All 30–100A	1, 2, 3	Line Side **LN1E100**	#10–1/0 Cu/Al
ED2, 4, 6, HED4 30-60A	1	Load Side **LD1E060**	#10–#4 Cu/Al
ED2, 4, 6, HED4 70-100A	1	Load Side **LD1E100**	#6–#1/0 Cu/Al
ED2, 4, 6, HED4, HHED6 30-100A	2, 3	Load Side **LN1E100**	#10–1/0 Cu/Al
All 110, 125A	2, 3	Line/Load **TA1E6125**	#3–3/0 Cu #1–2/0 Al
Copper Body Lugs			
All 30–125A	1, 2, 3	Line/Load **TC1ED6150**③	#10–1/0 Cu only
Compression Lugs			
All ED, HED, HHED, CED		**CCE125**	2/0

Enclosures (Neutral Included)⑥

Type	Catalog Number
1 (Surface)	**E2N1S** (15–100A)
1 (Flush)	**E2N1F** (15–100A)
3R	**E2N3R** (15–100A)
4–4X	**ED6SS4** (15–125A)
7–9	**EA** (15–60A)
7–9	**EB** (70–100A)
12	**E2N12** (15–100A)
1 (Surface)	**CED6N1S**②
1 (Flush)	**CED6N1F**②
3R	**CED6N3R**②
12	**CED6N12**②

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Enclosures Section 6
Accessoriespages7-130and7-171to7-176

Type HED4⑤ Black Label

Continuous Current Rating @ 40°C	1-Pole 277V AC 125V DC	2-Pole 480V AC 250V DC	3-Pole 480V AC
	Catalog Number	Catalog Number	Catalog Number
15	HED41B015①	HED42B015	HED43B015
20	HED41B020①	HED42B020	HED43B020
25	HED41B025	HED42B025■	HED43B025
30	HED41B030	HED42B030	HED43B030
35	HED41B035■	HED42B035■	HED43B035
40	HED41B040	HED42B040	HED43B040
45	HED41B045■	HED42B045■	HED43B045
50	HED41B050■	HED42B050	HED43B050
60	HED41B060■	HED42B060■	HED43B060
70	HED41B070■	HED42B070■	HED43B070
80	HED41B080■	HED42B080■	HED43B080
90	HED41B090■	HED42B090■	HED43B090
100	HED41B100■	HED42B100■	HED43B100
110	—	HED42B110■	HED43B110
125	—	HED42B125■	HED43B125

Fuseless Current Limiting

Type HHED6⑤ Black Label Type CED6⑤ Red Label

Continuous Current Rating @ 40°C	3-Pole 600V AC	2-Pole 600V AC, 250V DC	3-Pole 600V AC, 500V DC②
	Catalog Number⑥	Catalog Number	Catalog Number
15	HHED63B015A	CED62B015	CED63B015
20	HHED63B020	CED62B020■	CED63B020
25	HHED63B025	—	—
30	HHED63B030	CED62B030■	CED63B030
35	HHED63B035	—	—
40	HHED63B040	—	CED63B040
45	HHED63B045	—	—
50	HHED63B050	—	CED63B050
60	—	CED62B060■	CED63B060
70	—	CED62B070■	CED63B070
80	—	CED62B080■	CED63B080
90	—	CED62B090■	CED63B090
100	—	CED62B100■	CED63B100
110	—	—	CED63B110■
125	—	CED62B125■	CED63B125

FIGURE1 - ED, HED, HHED

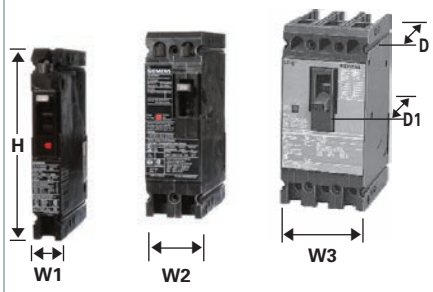
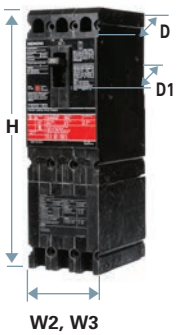


FIGURE 2 - CED (3-Pole shown)



Dimensions (in inches)

Breaker Type	W1	W2	W3	H	D	D1
Figure 1 ED2, ED4, ED6, HED4, ED6 ETI③	1	2	3	6.35	3.92	4.56
Figure 1 HHED6	—	2	3	6.53	3.92	4.56
Figure 2 CED6, CED6 ETI③	—	2	3	9.58	3.92	4.56

Interrupting Ratings

Breaker Type	UL 489 AIR (File #E10848) RMS Symmetrical Amperes (KA) Volts AC 120	240	277	347	480	600	Volts DC 125	250	500②	600	IEC 947-2 Volts AC (50/60Hz) 220/240 Icu	Ics	380/415 Icu	Ics	500 Icu	Ics
ED2 (1-P)	10	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—
ED2 (2, 3-P)	—	10	—	—	—	—	—	5 (2-P)	—	—	—	—	—	—	—	—
ED4 (1-P)	65	—	22	—	—	—	30	—	—	—	—	—	—	—	—	—
ED4 (2, 3-P)	—	65	—	—	18	—	—	30 (2-P)	—	—	—	—	—	—	—	—
ED6 (1P)	—	—	—	30④	—	—	—	30	—	—	—	—	—	—	—	—
ED6 (2, 3-P)	—	65	—	—	25	18	—	—	18 (3-P)	—	65	17	35	9	18	5
ED6 (3-P)	—	—	—	—	—	—	—	—	—	10⑦	—	—	—	—	—	—
HED4 (1-P) (15–30A)	100	—	65	—	—	—	30	—	—	—	—	—	—	—	—	—
HED4 (1-P) (35–100A)	100	—	25	—	—	—	30	—	—	—	—	—	—	—	—	—
HED4 (2, 3-P)	—	100	—	—	42	—	—	30 (2-P)	—	—	—	—	—	—	—	—
HHED6 (2, 3-P)	—	100	—	—	65	18⑥	—	—	—	—	—	—	—	—	—	—
CED6 (2, 3-P)	—	200	—	—	200	100	—	50 (2-P)	30 (3-P)	—	—	—	—	—	—	—

■ Built to order. Allow 2–3 weeks for delivery.

①SWD rated.

②When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems.

③ED6-ETI, CED6-ETI, see page 7-153 for ordering information.

④Single Pole 15-30A 30KA @ 347V non-UL.
35-100A 18KA @ 347V non-UL.

⑤HACR rated.

⑥HHED63B015A is rated 18KAIC at 600/347V.

⑦600VDC only applies to ED63D___ breakers

Accessories for:

ED 125A Frame

Combinations

Available only when ordered together. Only one module can be added to a breaker. Additional accessories, which always attach to the left pole, cannot be added to the combination later. Adds 1 inch pole space.

Equipment Ground Sensing

A field addable kit containing 30mA or 5 mA ground fault accessory module, current transformer with 24 inch leads, and current transformer mounting equipment. Current transformer to mount in gutter of lighting panel or any control panel. Accessory module operates from separate 120V control power source.

Both 30MA and 5MA devices are equipment protection devices only. Do not use for personnel protection.

GF01ED60

Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch	1 Shunt Trip 1 Auxiliary Switch and 1 Alarm Switch	1 Shunt Trip and 1 Alarm Switch	1 Shunt Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
24		S17ED60	—	—	—	—
48		S18ED60	—	—	—	—
120		S01ED60	S01ED62A	S01ED62AB	S01ED62B	S01ED62AA
208		—	S02ED62A▲	S02ED62AB▲	S02ED62B▲	S02ED62AA▲
240		S03ED60	S03ED62A	S03ED62AB	S03ED62B▲	S03ED62AA▲
277		S15ED60▲	S15ED64A▲	S15ED64AB▲	S15ED64B▲	—
480		S04ED60	S04ED64A▲	S04ED64AB▲	S04ED64B▲	—
	12	S16ED60▲	S16ED62A▲	—	—	—
	24	S07ED60	S07ED62A	S07ED62AB▲	S07ED62B▲	S07ED62AA▲
	48	S09ED60▲	S09ED62A▲	S09ED62AB▲	S09ED62B▲	S09ED62AA▲
	125	S11ED60▲	S11ED62A▲	S11ED62AB▲	S11ED62B▲	S11ED62AA▲
	250	S13ED60▲	S13ED62A▲	S13ED62AB▲	S13ED62B▲	S13ED62AA▲

Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch	1 Undervoltage Trip and 1 Auxiliary Switch and 1 Alarm Switch	1 Undervoltage Trip and 1 Alarm Switch	1 Undervoltage Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number	Catalog Number	Catalog Number
120		U01ED60	U01ED62A	U01ED62AB▲	U01ED62B▲	U01ED62AA▲
208		U02ED60▲	U02ED62A▲	U02ED62AB▲	U02ED62B▲	U02ED62AA▲
240		U03ED60	U03ED62A▲	U03ED62AB▲	U03ED62B▲	U03ED62AA▲
277		U16ED60▲	U16ED64A▲	U16ED64AB▲	U16ED64B▲	—
480		U06ED60▲	U06ED64A▲	U06ED64AB▲	U06ED64B▲	—
600		U08ED60▲	—	—	—	—
	24	U13ED60	U13ED62A▲	U13ED62AB▲	U13ED62B▲	U13ED62AA▲
	48	U14ED60▲	U14ED62A▲	U14ED62AB▲	U14ED62B▲	U14ED62AA▲
	125	U10ED60▲	U10ED62A▲	U10ED62AB▲	U10ED62B▲	U10ED62AA▲
	250	U12ED60▲	U12ED62A▲	—	—	U12ED62AA▲

Auxiliary Switch Combinations

Maximum Voltage		1 Auxiliary Switch	1 Alarm Switch and 1 Auxiliary Switch	2 Auxiliary Switches	1 Alarm Switch and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number	Catalog Number
240	250	A01ED62	A01ED62B	A02ED62	A02ED62B
480		A01ED64	A01ED64B	—	—

Maximum Voltage		1 Auxiliary Switch	
AC	DC	Catalog Number	
	24	A01EDLV	Gold Plated Contacts—for PLC use

Alarm Switch Only

Maximum Voltage		1 Alarm Switch
AC	DC	Catalog Number
240	250	B00ED62
480		B00ED64

Ground Fault Sensing Relay Kit — Equipment Protection Only

For Use With Breaker Frame	Number of Poles	Description	Catalog Number	
			30mA	5mA
CED6, ED2, ED4 ED6, EFC, EFF, HED4, HHED6	1, 2, 3	Basic Kit	GF01ED60	GF01ED65
		Basic Kit with Normally Open Bell Alarm	GF01ED60B0	GF01ED65B0▲
		Basic Kit with Normally Closed Bell Alarm	GF01ED60BC	GF01ED65BC▲

▲ Built to order. Allow 6–8 weeks for delivery.

Type FXD6-A①⑥

Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker – Without Lugs)

Continuous Current Rating @ 40°C	2-Pole Catalog Number	3-Pole Catalog Number
70	FXD62B070■	FXD63B070
80	FXD62B080■	FXD63B080
90	FXD62B090■	FXD63B090
100	FXD62B100	FXD63B100
110	FXD62B110■	FXD63B110
125	FXD62B125	FXD63B125
150	FXD62B150	FXD63B150
175	FXD62B175	FXD63B175
200	FXD62B200	FXD63B200
225	FXD62B225	FXD63B225
250	FXD62B250	FXD63B250

Type FD6-A⑥

Blue Label

Interchangeable Trip

Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/Lugs Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
2-Pole 600V AC, 250V DC②			
70	FD62B070■	FD62F250	FD62T070■
80	FD62B080■		FD62T080■
90	FD62B090■		FD62T090■
100	FD62B100■		FD62T100■
110	FD62B110■		FD62T110■
125	FD62B125■		FD62T125■
150	FD62B150		FD62T150
175	FD62B175■		FD62T175■
200	FD62B200		FD62T200
225	FD62B225■		FD62T225■
250	FD62B250■		FD62T250■
3-Pole 600V AC, 500V DC③			
70	FD63B070■	FD63F250	FD63T070■
80	FD63B080■		FD63T080■
90	FD63B090■		FD63T090■
100	FD63B100		FD63T100
110	FD63B110■		FD63T110■
125	FD63B125		FD63T125
150	FD63B150		FD63T150
175	FD63B175		FD63T175
200	FD63B200		FD63T200
225	FD63B225		FD63T225
250	FD63B250		FD63T250

Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (KA)											
	UL 489 AIR (File E10848)					IEC 947-2⑦						
	Volts AC (50/60Hz)			Volts DC		Volts AC (50/60Hz)						
	240	480	600	250	500③	220/240		380/415		500	
						Icu	Ics	Icu	Ics	Icu	Ics
FXD6-A, FD6-A	65	35	22	30 (2-P)	18 (3-P)	65	33	35	18	—	—
HFXD6, HFD6	100	65	25	30 (2-P)	25 (3-P)	100	50	65	33	—	—
HHFD6, HHFXD6	200	100	25	—	—	—	—	—	—	—	—
CFD6	200	200	100	30 (2-P)	50 (3-P)	—	—	—	—	—	—

Instantaneous Adjustment Trip Range

Breaker Ampere Rating	Nominal Instantaneous Values							
	±20% Tolerance Low	2	3	4	5	6	7	±20% Tolerance High
70-90	600	640	690	730	770	810	850	900
100-110	700	770	840	920	990	1060	1140	1200
125-150	800	900	1000	1100	1200	1300	1400	1500
175-200	900	1060	1210	1370	1520	1780	1930	2000
225-250	1100	1300	1500	1700	1900	2100	2300	2500

Note: FD frame qualified to UL489 supplement SB "NAVAL". See page 7-167 for additional information.

Ordering Information

Complete Breaker Unassembled with Lugs

Prices of FD6, HFD6, and HHFD6 breakers includes frame, trip and both line and load lugs (TA1FD350A). When ordered by these catalog numbers, the customer will receive the frame, trip, and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of FXD6, HFXD6, HHFXD6, and CFD6 includes frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA1FD350A) installed, add suffix "L" to catalog number (add 2 times list price of lugs for each pole).

50°C Applications see page 7-167.

400 Hz Applications see page 7-167.

Lugs For 75°C Wire⑤

Catalog Number	Wire Range
TA1FD350A	#6—350 kcmil Cu #4—350 kcmil Al
TC1FD350	#6—350 kcmil Cu
Compression Lug	
CCF250	350 kcmil Cu/Al

Enclosures

Type	Catalog Number
1	F6N1S(F)
3R	F6N3R
4-4X	FD6SS4
7-9	EC2
12	F6N12
Neutral④	N250

Modifications page 7-167
Enclosures Section 6
Accessories pages 7-133 and 7-171 to 7-176

■ Built to order. Allow 2–3 weeks for delivery.

①Type FXD6-A circuit breakers are UL Listed for reverse fed applications.
②2-pole units are 3-pole width.
③When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.
④Order neutral as separate item.
⑤See **Note: A**, page 7-164.
⑥HACR rated.
⑦Only applicable to non-interchangeable trip unit types: FXD6A, HFXD6A.

Type HFD6, Type HFXD6②③④⑤

Black Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/Lugs Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
2-Pole 600V AC, 250V DC (3-Pole Width)			
70	HFD62B070■	HFD62F250	FD62T070■
80	HFD62B080■		FD62T080■
90	HFD62B090■		FD62T090■
100	HFD62B100■		FD62T100■
110	HFD62B110■		FD62T110■
125	HFD62B125■		FD62T125■
150	HFD62B150■		FD62T150■
175	HFD62B175■		FD62T175■
200	HFD62B200■		FD62T200■
225	HFD62B225■		FD62T225■
250	HFD62B250■		FD62T250■
3-Pole 600V AC, 500V DC①			
70	HFD63B070■	HFD63F250	FD63T070■
80	HFD63B080■		FD63T080■
90	HFD63B090■		FD63T090■
100	HFD63B100		FD63T100
110	HFD63B110■		FD63T110■
125	HFD63B125		FD63T125
150	HFD63B150		FD63T150
175	HFD63B175		FD63T175
200	HFD63B200		FD63T200
225	HFD63B225		FD63T225
250	HFD63B250		FD63T250

Type HHFD, HHFXD6②③⑤

3-Pole 600V AC, Extra High Interrupting

70	HHFD63B070■	HHFD63F250	FD63T070■
80	HHFD63B080■		FD63T080■
90	HHFD63B090■		FD63T090■
100	HHFD63B100		FD63T100
110	HHFD63B110■		FD63T110■
125	HHFD63B125		FD63T125
150	HHFD63B150		FD63T150
175	HHFD63B175		FD63T175
200	HHFD63B200		FD63T200
225	HHFD63B225		FD63T225
250	HHFD63B250		FD63T250

Type CFD6-A③⑤

Fuseless Current Limiting — **Red Label**

Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs)	
Continuous Current Rating @ 40°C	3-Pole 600V AC/500V DC Catalog Number
70	CFD63B070■
80	CFD63B080■
90	CFD63B090■
100	CFD63B100■
110	CFD63B110■
125	CFD63B125■
150	CFD63B150
175	CFD63B175
200	CFD63B200
225	CFD63B225
250	CFD63B250

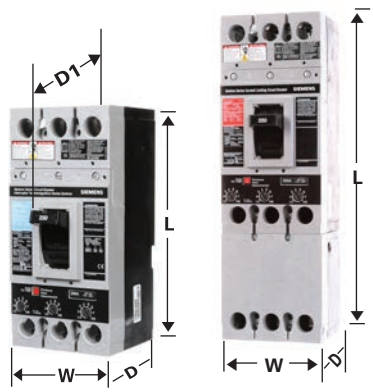


Figure 1 Figure 2

Dimensions (in inches)

Breaker Type	W	L	D	D1 (to handle)
Figure 1 FXD6-A, FD6-A, HFD6, HFXD6, HHFD6, FD6-ETI④	4.50	9.50	4	5.25
Figure 2 CFD6, CFD6-ETI④	4.50	14.25	4	5.25

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
FD6-A, HFD6, HHFD6, FXD6-A Assembled Circuit Breaker (less connectors)		
2	1	8.6
3	1	10
FD6-A, HFD6, HHFD6 Frame Only		
2	1	7.5
3	1	8.7
FD6 Trip Unit Only		
2	1	1.1
3	1	1.3
CFD6 Assembled Circuit Breaker (less terminals)		
3	1	16

■ Built to order. Allow 2–3 weeks for delivery.

① When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems.

② For non-interchangeable trip 3-pole HFD6 type circuit breaker, change prefix identifier from HFD6 to HFXD6. Price equals frame and trip prices combined, e.g. price of HFXD63B250 equals price of HFD63F250 plus price of FD63T250. Order lugs separately.

③ Type HFXD6, HHFXD6, CFD6 are UL Listed for reverse feed applications.

④ FXD6, ETI, CFD6, ETI — See page 7-153 for ordering information.

⑤ HACR rated.

Accessories:
for FD, FFC & FFF 250A Frames

S01FD60

Shunt Trip Combinations

Control Voltage		1 Shunt Trip
AC	DC	Catalog Number
24		S17FD60
120		S01FD60
240		S03FD60
277		S15FD60▲
480		S04FD60
600		S06FD60▲
	12	S16FD60▲
	24	S07FD60
	48	S09FD60▲
	125	S11FD60
	250	S13FD60▲

Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
120		U01FD60	W01FD64
208		U02FD60▲	W02FD64▲
240		U03FD60	W03FD64▲
277		U16FD60▲	W16FD64▲
480		U06FD60▲	W06FD64▲
	24	U13FD60	W13FD64
	48	U14FD60▲	W14FD64▲
	125	U10FD60▲	W10FD64▲

Auxiliary Switch Combinations

Voltage		1 Auxiliary Switch	2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number
240		A01FD62	A02FD62
480		A01FD64	A02FD64
	24	A01FDLV	Gold Plated Contacts - for PLC use

Alarm Switch Combinations

Maximum Voltage		1 Alarm Switch	1 Alarm Switch and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
480	250	B00FD64	C01FD64

▲ Built to order. Allow 6–8 weeks for delivery.

①Auxiliary switch application is for 480V AC maximum.

Note: Old F-frame accessories cannot be used in new Sentron line. Likewise, new FD-frame accessories cannot be used on old F-frame circuit breakers.

Type JXD2-A④

240V AC, 2-Pole 250V DC Only — Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs)		
Continuous Current Rating @ 40°C	2-Pole (3-Pole Width) Catalog Number	3-Pole Catalog Number
200	JXD22B200■	JXD23B200
225	JXD22B225■	JXD23B225
250	JXD22B250■	JXD23B250
300	JXD22B300	JXD23B300
350	JXD22B350■	JXD23B350
400	JXD22B400	JXD23B400

Type JXD6-A①④

600V AC, 2-Pole 250V DC, 3-Pole 500V DC② — Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs)		
200	JXD62B200■	JXD63B200
225	JXD62B225■	JXD63B225
250	JXD62B250■	JXD63B250
300	JXD62B300	JXD63B300
350	JXD62B350■	JXD63B350
400	JXD62B400	JXD63B400

Type JD6-A④

Blue Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/Lugs Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
2-Pole 600V AC, 250V DC (3-Pole Width)			
200	JD62B200■	JD62F400	JD62T200■
225	JD62B225■		JD62T225■
250	JD62B250■		JD62T250■
300	JD62B300■		JD62T300■
350	JD62B350■		JD62T350■
400	JD62B400		JD62T400
3-Pole 600V AC, 500V DC②			
200	JD63B200	JD63F400	JD63T200
225	JD63B225		JD63T225
250	JD63B250		JD63T250
300	JD63B300		JD63T300
350	JD63B350		JD63T350
400	JD63B400		JD63T400

Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (KA)											
	UL 489 AIR (File E10848)					IEC 947-2⑤					
	Volts AC (50/60Hz)			Volts DC		Volts AC (50/60Hz)					
						220/240		380/415		500	
	240	480	600	250	500②	Icu	Ics	Icu	Ics	Icu	Ics
JXD2-A	65	—	—	30 (2-P)	—	—	—	—	—	—	—
JXD6-A, JD6-A	65	35	25	30 (2-P)	25 (3-P)	65	33	40	20	—	—
HJD6-A, HJXD6-A	100	65	35	30 (2-P)	35 (3-P)	100	50	65	33	—	—
HHJD6, HHJXD6	200	100	50	—	—	—	—	—	—	—	—
CJD6-A	200	150	100	30 (2-P)	50 (3-P)	—	—	—	—	—	—

Instantaneous Adjustment Trip Range

Breaker Ampere Rating	Nominal Instantaneous Values							
	±20% Tolerance Low	2	3	4	5	6	7	±20% Tolerance High
200-300	1250	1430	1610	1790	1960	2140	2320	2500
350-400	2000	2290	2570	2860	3140	3430	3710	4000

■ Built to order. Allow 2–3 weeks for delivery.

①Type JXD2 and JXD6 circuit breakers are UL Listed for reverse feed applications.

②When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

③See **Note: A**, page 7-164.

④ HACR rated.

⑤ Only applicable to non-interchangeable trip unit types: JXD6-A, HJXD6-A.

Note: JD frame qualified to UL489 supplement B "NAVAL." See page 7-167 for additional information.

Ordering Information

Complete Breaker Unassembled with Lugs

Prices of JD6, HJD6, and HHJD6 breakers include frame, trip and both line and load lugs (TA2J6500). When ordered by these catalog numbers, the customer will receive the frame, trip, and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of JXD6, HJXD6, HHJXD6, and CJD6 include frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA2J6500) installed, add suffix "L" to catalog number (add 2 times list price of lugs for each pole).

100% Rated (3-pole only)

Types JXD6 and HJXD6 breakers are available with 100% ratings. To order add suffix "H" to catalog number, and 10% to list price.■ 100% rated JD breakers require the use of 90°C Cu cable sized at 75°C ampacity and lugs TC1J6600 or TC2J6500.

50°C Applications see page 7-167.

400Hz Applications see page 7-167.

Lugs For 75°C Wire③

Catalog Number	Cables per Lug	Wire Range
TA2J6500	1, 2 2	#3/0-500 kcmil Cu #4/0-500 kcmil Al
TA1L6750	1 1	500-750 kcmil Al 500-600 kcmil Cu
TC1J6600	1	#3/0-600 kcmil Cu
TC2J6500	1, 2	#3/0-500 kcmil Cu
Compression Lug		
CCL600	1	500 kcmil Cu/Al

Modifications page 7-167
Enclosures Section 6
Accessories pages 7-136 and 7-171 to 7-176

Type HJD6-A, HJXD6-A②④⑥

Black Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	**Complete Breaker Unassembled w/Lugs**	**Frame Only**	**Trip Unit Only**
	Catalog Number	**Catalog Number**	**Catalog Number**
2-Pole 600V AC, 250V DC (3-Pole Width)			
200	**HJD62B200■**		**JD62T200■**
225	**HJD62B225■**		**JD62T225■**
250	**HJD62B250■**	**HJD62F400■**	**JD62T250■**
300	**HJD62B300■**		**JD62T300■**
350	**HJD62B350■**		**JD62T350■**
400	**HJD62B400■**		**JD62T400**
3-Pole 600V AC, 500V DC①②⑤			
200	**HJD63B200**		**JD63T200**
225	**HJD63B225**		**JD63T225**
250	**HJD63B250**	**HJD63F400**	**JD63T250**
300	**HJD63B300**		**JD63T300**
350	**HJD63B350**		**JD63T350**
400	**HJD63B400**		**JD63T400**

Type HHJD6, HHJXD6②④⑥

Black Label

2-Pole 600V AC (3-Pole Width)			
200	**HHJD62B200■**		**JD62T200■**
225	**HHJD62B225■**		**JD62T225■**
250	**HHJD62B250■**	**HHJD62F400■**	**JD62T250■**
300	**HHJD62B300■**		**JD62T300■**
350	**HHJD62B350■**		**JD62T350■**
400	**HHJD62B400■**		**JD62T400**
3-Pole 600VAC			
200	**HHJD63B200**		**JD63T200**
225	**HHJD63B225**		**JD63T225**
250	**HHJD63B250**	**HHJD63F400**	**JD63T250**
300	**HHJD63B300**		**JD63T300**
350	**HHJD63B350**		**JD63T350**
400	**HHJD63B400**		**JD63T400**

Type CJD6-A ⑤⑥

Fuseless Current Limiting

Red Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)		
Continuous Current Rating @ 40°C	**2-Pole 600V AC/250V DC**	**3-Pole 600V AC/500V DC**
	Catalog Number	**Catalog Number**
200	For 2-pole application use outside poles of 3-pole circuit breaker	**CJD63B200■**
225		**CJD63B225■**
250		**CJD63B250■**
300		**CJD63B300■**
350		**CJD63B350■**
400		**CJD63B400**

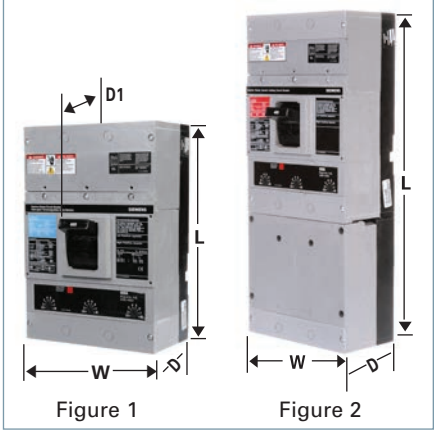


Figure 1 Figure 2

Dimensions (in inches)

Breaker Type	W	L	D	To Handle D1
Figure 1 JXD2-A, JXD6-A, JD6-A HJD6-A, HJXD6-A, HHJD6, HJD6, HJXD6, HHJXD6, JXD6-ETI,③ SJD6, SHJD6	7.5	11	4	5.44
Figure 2 CJD6, CJD6-ETI,③ SCJD6	7.5	17.86	4	5.44

Enclosures (Except SCJD6)

Type	Catalog Number
1	**J6N1**
3R	**J6N3R**
12	**J6N12**
4X	**LD6SS4**
7, 9 (200-250A)	**EC4**
7, 9 (300-400A)	**EE**
Neutral	**W60992**

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
JXD2, JXD6, JD6, HJD6, HHJD6 Assembled Breaker (less terminals)		
2	1	17.5
3	1	19.5
JD6, HJD6, HHJD6 Frame Only		
2	1	14
3	1	15.5
JD6 Trip Unit Only		
2	1	3.5
3	1	4
CJD6 Complete Assembled Breaker (less terminals)		
3	1	31.5

For inches / millimeters conversion, see Application Data section.

■ Built to order. Allow 2–3 weeks for delivery.

2-pole units available in 3-pole construction.

① When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

② For non-interchangeable 3-pole HJD6 or HHJD6 type circuit breaker change the prefix identifier to HJXD6 or HHJXD6. Price equals price of frame plus price of trip, e.g. price of HJXD63B400 equals price of HJD63F400 plus price of JD63T400. Order lugs separately.

③ JXD6-ETI, CJD6-ETI see page 7-153 for ordering information.

④ Type HJXD6, HHJXD6 Circuit Breakers are UL listed for reverse fed applications.

⑤ CE applies to non-interchangeable type HJXD6-A only.

⑥ HACR rated.

Accessories for:

JD 400A Frame
LD 600A Frame
LMD 800A Frame
SJD 400A Frame
SLD 600A Frame

S01JLD6

Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
24		S17JLD6	—
48		S18JLD6▲	—
120		S01JLD6	S01JLD62A
240		S03JLD6	S03JLD62A
277		S15JLD6▲	S15JLD64A▲
480		S04JLD6	—
	12	S16JLD6▲	S16JLD62A▲
	24	S07JLD6	S07JLD62A
	48	S09JLD6▲	S09JLD62A
	125	S11JLD6	S11JLD62A▲
	250	S13JLD6▲	S13JLD62A▲

Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch	1 Undervoltage Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
120		U01JLD6	U01JLD62A	U01JLD62AA
208		U02JLD6▲	U02JLD62A▲	U02JLD62AA▲
240		U03JLD6	U03JLD62A▲	U03JLD62AA▲
480		U06JLD6	U06JLD64AA▲	U06JLD64AA▲
	24	U13JLD6	U13JLD62A	U13JLD62AA
	48	U14JLD6▲	U14JLD62A▲	U14JLD62AA▲
	125	U10JLD6▲	U10JLD62A▲	U10JLD62AA▲

Auxiliary Switch Combinations

Maximum Voltage		1 Form C	2 Form C
AC	DC	Catalog Number	Catalog Number
480	250	A01JLD64	A02JLD64
—	24	A01JLDLV	A02JLDLV

Alarm Switch Combinations

Maximum Voltage		1 Alarm Switch	1 Alarm Switch and 1 Auxiliary Switch	1 Alarm Switch and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	CatalogNumber
480	250	B01JLD64	A01JLD64B	A02JLD64B

Note: Accessory modules can only be added to right side pole of solid state SJD and SLD frame circuit breakers. No accessories can be added if mechanical interlock is used. All accessories on this page are useable on superseded JD2, JJ6, JL6, HJ6, SJL, LJ6, LL6, HL6 and SLL circuit breakers.

▲ Built to order. Allow 6–8 weeks for delivery.

Type LXD6-A①④

Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs)

Continuous Current Rating @ 40°C	2-Pole (3-Pole Width) 600V AC 250V DC Catalog Number	3-Pole 600V AC 500V DC Catalog Number
450	LXD62B450■	LXD63B450
500	LXD62B500■	LXD63B500
600	LXD62B600	LXD63B600

Type LD6-A④

Blue Label

Interchangeable Trip

Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/Lugs Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
2-Pole 600V AC, 250V DC (3-Pole Width)			
250	LD62B250■	LD62F600	JD62T250■
300	LD62B300■		JD62T300■
350	LD62B350■		JD62T350■
400	LD62B400		JD62T400
450	LD62B450■		LD62T450■
500	LD62B500■		LD62T500■
600	LD62B600		LD62T600
3-Pole 600V AC, 500V DC②			
250	LD63B250	LD63F600	JD63T250
300	LD63B300		JD63T300
350	LD63B350		JD63T350
400	LD63B400		JD63T400
450	LD63B450		LD63T450
500	LD63B500		LD63T500
600	LD63B600		LD63T600

Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (KA)											
	UL 489 AIR (File E10848)					IEC 947-2⑤					
	Volts AC (50/60Hz)			Volts DC		Volts AC (50/60Hz)					
	240	480	600	250	500③	220/240		380/415		500	
						(Icu)	(Ics)	(Icu)	(Ics)	(Icu)	(Ics)
LD6-A, LXD6-A	65	35	25	30 (2-P)	25 (3-P)	65	33	40	20	—	—
HLD6-A, HLXD6-A	100	65	35	30 (2-P)	35 (3-P)	100	50	65	33	—	—
HHLD6, HHLXD6	200	100	50	—	—	—	—	—	—	—	—
CLD6-A	200	150	100	—	50 (3-P)	—	—	—	—	—	—

Instantaneous Adjustment Trip Range

Breaker Ampere Rating	Nominal Instantaneous Values ±20% Tolerance Low	2	3	4	5	6	7	±20% Tolerance High
250-300	1250	1430	1610	1790	1960	2140	2320	2500
350-450	2000	2290	2570	2860	3140	3430	3710	4000
500-600	3000	3430	3800	4290	4710	5140	5570	6000

■ Built to order. Allow 2–3 weeks for delivery.

①Type LXD6A circuit breakers are UL Listed for reverse fed applications.

②When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

③See **Note: A**, page 7-164.

④HACR rated.

⑤Only applicable to non-interchangeable trip unit types: LXD6, HLXD6.

Note: LD frame qualified to UL489 supplement SB "NAVAL". See page 7-167 for additional information.

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Enclosures Section 6
Accessories pages 7-139 and 7-171 to 7-176

Ordering Information

Complete Breaker Unassembled with Lugs
Prices of LD6, HLD6, and HHLD6 breakers include frame, trip, and both line and load lugs (TA2J6500). When ordered by these catalog numbers, the customer will receive the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs
Prices of LXD6, HLXD6, HHLXD6, and CLD6 include frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA2J6500) installed, add suffix "L" to catalog number (add 2 times list price of lugs for each pole).

100% Rated (3-pole only)
Types LXD6 and HLXD6 breakers are available with 100% ratings. To order add suffix "H" to catalog number, and 10% to list price. 100% rated LD breakers require the use of 90°C Cu cable sized at 75°C ampacity and lugs TC1J6600 or TC2J6500.

50°C Applications see page 7-167.

400Hz Applications see page 7-167.

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
LXD6, LD6, HLD6, HHLD6 Assembled Breaker (less terminals)		
2	1	17.5
3	1	19.5
LD6, HLD6, HHLD6 Frame Only		
2	1	14
3	1	15.5
LD6, HHLD6 Trip Unit Only		
2	1	3.5
3	1	4
CLD6 Complete Assembled Breaker (less terminals)		
3	1	31.5

Lugs For 75°C Wire③

Catalog Number	Cables per Lug	Wire Range
TA2J6500	1, 2	#3/0 500 kcmil Cu
	2	#4/0 500 kcmil Al
TC2J6500	2	#3/0-500 kcmil Cu
TA1L6750	1	500-750 kcmil Al
	1	500-600 kcmil Cu
TC1J6600	1	#3/0-600 kcmil Cu
Compression Lug		
CCL600	1	500 kcmil Cu/Al

Type HLD6-A, HLXD6-A②③⑥

Black Label

Interchangeable Trip

Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/Lugs Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
2-Pole 600V AC, 250V DC (3-Pole Width)			
250	HLD62B250■		JD62T250■
300	HLD62B300■		JD62T300■
350	HLD62B350■		JD62T350■
400	HLD62B400■	HLD62F600■	JD62T400
450	HLD62B450■		LD62T450■
500	HLD62B500■		LD62T500■
600	HLD62B600■		LD62T600
3-Pole 600V AC, 500V DC①⑤			
250	HLD63B250		JD63T250
300	HLD63B300		JD63T300
350	HLD63B350		JD63T350
400	HLD63B400	HLD63F600	JD63T400
450	HLD63B450		LD63T450
500	HLD63B500		LD63T500
600	HLD63B600		LD63T600

Type HHLD6, HHLXD6②③⑥

Black Label

2-Pole 600V AC (3-Pole Width)			
250	HHLD62B250■		JD62T250■
300	HHLD62B300■		JD62T300■
350	HHLD62B350■		JD62T350■
400	HHLD62B400■	HHLD62F600■	JD62T400
450	HHLD62B450■		HHLD62T450■
500	HHLD62B500■		HHLD62T500■
600	HHLD62B600■		HHLD62T600■
3-Pole 600V AC			
250	HHLD63B250		JD63T250
300	HHLD63B300		JD63T300
350	HHLD63B350		JD63T350
400	HHLD63B400	HHLD63F600	JD63T400
450	HHLD63B450■		HHLD63T450■
500	HHLD63B500■		HHLD63T500■
600	HHLD63B600■		HHLD63T600■

Type CLD6-A③⑥

Fuseless Current Limiting

Red Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)

Continuous Current Rating @ 40°C	2-Pole 600V AC/250V DC Catalog Number	3-Pole 600V AC/500V DC Catalog Number
450	For 2-pole application use outside poles of 3-pole circuit breaker	CLD63B450■
500		CLD63B500
600		CLD63B600

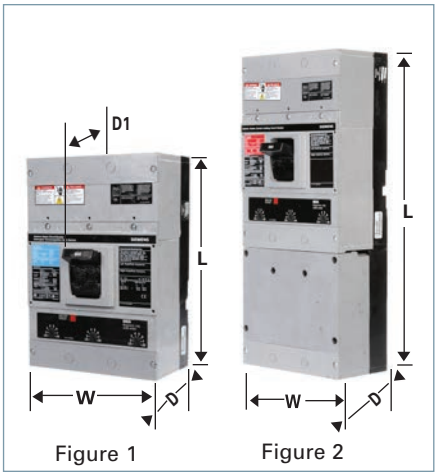


Figure 1 Figure 2

Dimensions (in inches)

Breaker Type	W	L	D	To Handle D1
Figure 1 LXD6-A, LD6-A HLD6-A HHLD6, HHLXD6, LXD6–ETI,④ SLD6, SHLD6	7.5	11	4	5.44
Figure 2 CLD6, CLD6-ETI,④ SCLD6	7.5	17.86	4	5.44

Enclosures: (except SCLD6)

Type	Catalog Number
1	LD6N1
3R	LD6N3R
12	LD6N12
4X	LD6SS4
7,9	ED6
Neutral	W60993

For inches / millimeters conversion, see Application Data section.

■ Built to order. Allow 2–3 weeks for delivery.

① When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

② For complete assembled 3-pole HLD6 or HHLD6 type circuit breaker change the prefix identifier HLD6 or HHLD6 to HLXD6 or HHLXD6. Price is sum of frame and trip units prices, e.g. price of HLXD63B400 is the price of HLD63F600 plus the price of LD63T600. Order the terminal connectors separately.

③ Type HLXD6, HHLXD6, & CLD6 Circuit Breakers are UL Listed for reverse feed applications.

④ LXD6-ETI, CLD6-ETI see page 7-153 for ordering information.

⑤ CE Applies to non-interchangeable type HLXD only.

⑥ HACR rated.

Accessories for:

JD 400A Frame
LD 600A Frame
LMD 800A Frame
SJD 400A Frame
SLD 600A Frame

S01JLD6

Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
24		S17JLD6	—
48		S18JLD6▲	—
120		S01JLD6	S01JLD62A
240		S03JLD6	S03JLD62A
277		S15JLD6▲	S15JLD64A▲
480		S04JLD6	—
	12	S16JLD6▲	S16JLD62A▲
	24	S07JLD6	S07JLD62A
	48	S09JLD6▲	S09JLD62A
	125	S11JLD6	S11JLD62A▲
	250	S13JLD6▲	S13JLD62A▲

Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch	1 Undervoltage Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
120		U01JLD6	U01JLD62A	U01JLD62AA
208		U02JLD6▲	U02JLD62A▲	U02JLD62AA▲
240		U03JLD6	U03JLD62A▲	U03JLD62AA▲
480		U06JLD6	U06JLD64AA▲	U06JLD64AA▲
	24	U13JLD6	U13JLD62A	U13JLD62AA
	48	U14JLD6▲	U14JLD62A▲	U14JLD62AA▲
	125	U10JLD6▲	U10JLD62A▲	U10JLD62AA▲

Auxiliary Switch Combinations

Maximum Voltage		1 Form C	2 Form C
AC	DC	Catalog Number	Catalog Number
480	250	A01JLD64	A02JLD64
—	24	A01JLDLV	A02JLDLV

Alarm Switch Combinations

Maximum Voltage		1 Alarm Switch	1 Alarm Switch and 1 Auxiliary Switch	1 Alarm Switch and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	CatalogNumber
480	250	B01JLD64	A01JLD64B	A02JLD64B

Note: Accessory modules can only be added to right side pole of solid state SJD and SLD frame circuit breakers. No accessories can be added if mechanical interlock is used. All accessories on this page are useable on superseded JD2, JJ6, JL6, HJ6, SJL, LJ6, LL6, HL6 and SLL circuit breakers.

▲ Built to order. Allow 6–8 weeks for delivery.

Type LMXD6①④

Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker without Lugs)

Continuous Current Rating @ 40°C	2-Pole (3-Pole Width) Catalog Number	3-Pole Catalog Number
500	—	LMXD63B500■
600	LMXD62B600■	LMXD63B600
700	LMXD62B700■	LMXD63B700
800	LMXD62B800	LMXD63B800

Type LMD6④

Blue Label

Interchangeable Trip

Continuous Current Rating @ 40°C	Complete Breaker Unassembled w/Lugs Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
2-Pole 600V AC, 250V DC (3-Pole Width)			
500	LMD62B500■	LMD62F800■	LMD62T500■
600	LMD62B600■		LMD62T600■
700	LMD62B700■		LMD62T700■
800	LMD62B800■		LMD62T800■
3-Pole 600V AC, 500V DC②			
500	LMD63B500■	LMD63F800	LMD63T500■
600	LMD63B600■		LMD63T600■
700	LMD63B700■		LMD63T700■
800	LMD63B800		LMD63T800

Instantaneous Adjustment Trip Range

Ampere Rating	Nominal Instantaneous Values							
	Low +/- 20% Tolerance	2	3	4	5	6	7	High +/- 20% Tolerance
500-600	3000	3430	3860	4290	4710	5140	5570	6000
700-800	3200	3500	3700	4200	4700	6400	7300	8000

Ordering Information

Complete Breaker Unassembled with Lugs
Prices of LMD6 and HLMD6 breakers include frame, trip, and both line and load lugs (TA3K500). These catalog numbers include the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs
Prices of LMXD6 and HLMXD6 include frame with non-interchangeable trip unit installed only. Order required lugs separately. For line and load lugs (TA3K500) installed, add suffix "L" to catalog number (add 2 times list price of lugs for each pole).

50°C Applications see page 7-167.

400Hz Applications see page 7-167.

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
LMD6, HLMD6, LMXD6, HLMXD6 Complete Breaker (less terminals)		
2	1	53
3	1	61.5
LMD6, HLMD6 Frame Only		
2	1	42.25
3	1	46
LMD6, HLMD6 Trip Unit Only		
2	1	4.5
3	1	6.5

Lugs③ for 75°C Wire

Catalog Number	Cables per Lug	Wire Range
TA2K500	1, 2	#1-500 kcmil Cu/Al
TA3K500	1-3	#1/0-500 kcmil Cu/Al
TA2N750	1, 2	500-750 kcmil Cu/Al

■ Built to order. Allow 2–3 weeks for delivery.

① LMXD6 circuit breakers are UL Listed for reverse connected applications.

② When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500VDC ungrounded UPS systems only.

③ See **Note: A**, page 7-164.

④ HACR rated.

Modifications page 7-167
Enclosures Section 6
Accessories pages 7-142 and 7-171 to 7-176

Type HLMXD6①④

Black Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)		
Continuous Current Rating @ 40°C	**2-Pole 600V AC/250V DC**	**3-Pole 600V AC/500V DC**
	Catalog Number	**Catalog Number**
500	For 2-pole application use outside poles of 3-pole circuit breaker	**HLMXD63B500■**
600		**HLMXD63B600■**
700		**HLMXD63B700■**
800		**HLMXD63B800**

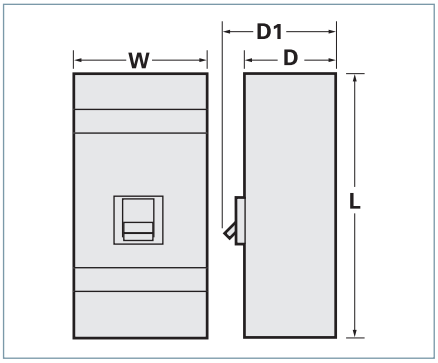
Type HLMD6④

Black Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	**Complete Breaker Unassembled**	**Frame Only**	**Trip Unit Only**
	Catalog Number	**Catalog Number**	**Catalog Number**
2-Pole 600V AC, 250V DC (3-Pole Width)			
500	**HLMD62B500■**	**HLMD62F800■**	**LMD62T500■**
600	**HLMD62B600■**		**LMD62T600■**
700	**HLMD62B700■**		**LMD62T700■**
800	**HLMD62B800■**		**LMD62T800■**
3-Pole 600V AC, 500V DC③			
500	**HLMD63B500**	**HLMD63F800**	**LMD63T500■**
600	**HLMD63B600**		**LMD63T600■**
700	**HLMD63B700**		**LMD63T700■**
800	**HLMD63B800**		**LMD63T800**

Interrupting Ratings

Breaker Type	UL 489A IR RMS Symmetrical Amperes (KA)				
	Volts AC			Volts DC	
	240	480	600	250	500
LMD6, LMXD6	65	50	25	30 (2-P)	25 (3-P)
HLMD6, HLMXD6	100	65	50	30 (2-P)	50 (3-P)



Dimensions (in inches)

Breaker Type	W	L	D	D1
LMD6, LMXD6, HLMD6, HLMXD6 LMXD6-ETI②	7.5	16	4.5	5.93

Enclosures

Type	Catalog Number
1	**LMD1**
3R	**LMD3R**
12	**LMD12■**
Neutral	**W63623**

For inches / millimeters conversion, see Application Data section.

■ Built to order. Allow 2–3 weeks for delivery.

①HLMXD6 circuit breakers are UL Listed for reverse connection applications.

②LMXD6-ETI, see page 7-153 for catalog information.

③ When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500VDC ungrounded UPS systems only.

④ HACR rated.

Accessories for:

JD 400A Frame
LD 600A Frame
LMD 800A Frame
SJD 400A Frame
SLD 600A Frame

S01JLD6

Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
24		S17JLD6	—
48		S18JLD6▲	—
120		S01JLD6	S01JLD62A
240		S03JLD6	S03JLD62A
277		S15JLD6▲	S15JLD64A▲
480		S04JLD6	—
	12	S16JLD6▲	S16JLD62A▲
	24	S07JLD6	S07JLD62A
	48	S09JLD6▲	S09JLD62A
	125	S11JLD6	S11JLD62A▲
	250	S13JLD6▲	S13JLD62A▲

Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch	1 Undervoltage Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
120		U01JLD6	U01JLD62A	U01JLD62AA
208		U02JLD6▲	U02JLD62A▲	U02JLD62AA▲
240		U03JLD6	U03JLD62A▲	U03JLD62AA▲
480		U06JLD6	U06JLD64A▲	U06JLD64AA▲
	24	U13JLD6	U13JLD62A	U13JLD62AA
	48	U14JLD6▲	U14JLD62A▲	U14JLD62AA▲
	125	U10JLD6▲	U10JLD62A▲	U10JLD62AA▲

Auxiliary Switch Combinations

Maximum Voltage		1 Form C	2 Form C
AC	DC	Catalog Number	Catalog Number
480	250	A01JLD64	A02JLD64
—	24	A01JLDLV	A02JLDLV

Alarm Switch Combinations

Maximum Voltage		1 Alarm Switch	1 Alarm Switch and 1 Auxiliary Switch	1 Alarm Switch and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	CatalogNumber
480	250	B01JLD64	A01JLD64B	A02JLD64B

Note: Accessory modules can only be added to right side pole of solid state SJD and SLD frame circuit breakers. No accessories can be added if mechanical interlock is used. All accessories on this page are useable on superseded JD2, JJ6, JL6, HJ6, SJL, LJ6, LL6, HL6 and SLL circuit breakers.

▲ Built to order. Allow 6–8 weeks for delivery.

Type MXD6①⑥ — Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)

Continuous Current Rating @ 40°C	2-Pole② Catalog Number	3-Pole Catalog Number
600	MXD62B600■	MXD63B600
700	MXD62B700■	MXD63B700
800	MXD62B800■	MXD63B800

Type MD6⑥ — Blue Label

Interchangeable Trip

Continuous Current Rating @ 40°C	Complete Breaker Unassembled with Lugs Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
2-Pole 600V AC, 250V DC②			
500	MD62B500■	MD62F800■	MD62T500■
600	MD62B600■		MD62T600■
700	MD62B700■		MD62T700■
800	MD62B800■		MD62T800■
3-Pole 600V AC, 500V DC③			
500	MD63B500	MD63F800	MD63T500
600	MD63B600		MD63T600
700	MD63B700		MD63T700
800	MD63B800		MD63T800

Lugs④

Catalog Number	Cables Per Lug	Lugs Per Kit	Wire Range
TA2K500	1-2	1	#1-500 kcmil Cu/Al
TA3K500	1-3	1	1/0-500 kcmil Cu/Al
TC2K500	1-2	1	#1-500 kcmil Cu
Kits			
2TA2N8750	1-2	2	500-750 kcmil Cu/Al
3TA2N8750		3	
2TA3N8750	1-3	2	500-750 kcmil Cu/Al
3TA3N8750		3	
2TA4N8500	1-4	2	250-500 kcmil Cu/Al
3TA4N8500		3	
2TA4P8500	1-4	2	250-500 kcmil Cu/Al
3TA4P8500		3	

Instantaneous Adjustment Trip Range

Ampere Rating	Nominal Instantaneous Values							
	Low +/- 20% Tolerance	2	3	4	5	6	7	High +/- 20% Tolerance
500	3000	3430	3860	4280	4710	5140	5570	6000
600–800	4000	4570	5140	5710	6280	6850	7420	8000

■ Built to order. Allow 2–3 weeks for delivery.

①MXD6 circuit breakers are UL Listed for reverse connection applications.
②2-pole units available in 3-pole width only.
③ When the power is connected in a "zig-zag" through the breaker, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS system.

④ See **Note: A**, page 7-164.
⑤ 80% rated breakers with the CE mark will also be marked in the 100% rated version.
⑥ HACR rated.
Note: MD frame qualified to UL489 supplement B "NAVAL". See page 7-167 for additional information.

Ordering Information

Complete Breaker Unassembled with Lugs
Pricing information for MD6 and HMD6 breakers includes frame, trip, and both line and load lugs (TA3K500). When ordered by these catalog numbers, the customer will receive the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs
Prices of MXD6, HMXD6 and CMD6 include frame with non-interchangeable trip units installed only. Order required lugs separately. For line and load lugs (TA3K500) installed, add suffix "L" to catalog number (add 2 times list price of lugs for each pole).

100% Rated⑤ 3-Pole Only
Types MXD6, HMXD6 and CMD6 breakers are available with 100% ratings. To order add suffix "H" to catalog number, and 10% to list price. 100% rated MD breakers require the use of 90°C cable sized at 75°C ampacity and lugs 3TA4P8500 or 3TA2N8750.

50°C Applications see page 7-167.

400Hz Applications see page 7-167.

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
MD6, HMD6, HMXD6, CMD6 Complete Breaker Assembled (less lugs)		
2	1	53
3	1	61.5
MD6, HMD6 Frame Only		
2	1	42.25
3	1	46
MD6, HMD6 Trip Unit Only		
2	1	4.5
3	1	6.5
SMD6 Breaker		
3	1	61.5

Enclosures

Type	Catalog Number
1	MND61
3R	MND63
Neutral	W63623

Modifications page 7-167
Enclosures Section 6
Accessories pages 7-145 and 7-171 to 7-176

Type HMXD6①⑤

Black Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)		
Continuous Current Rating @ 40°C	**2-Pole 600V AC/250V DC**	**3-Pole 600V AC/500V DC**
	Catalog Number	**Catalog Number**
600	For 2-pole application use outside poles of 3-pole circuit breaker	**HMXD63B600■**
700		**HMXD63B700■**
800		**HMXD63B800**

Type HMD6⑤

Black Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	**Complete Breaker Unassembled w/Lugs**	**Frame Only**	**Trip Unit Only**
	Catalog Number	**Catalog Number**	**Catalog Number**
2-Pole 600V AC, 250V DC②			
500	**HMD62B500■**	**HMD62F800■**	**MD62T500■**
600	**HMD62B600■**		**MD62T600■**
700	**HMD62B700■**		**MD62T700■**
800	**HMD62B800■**		**MD62T800■**
3-Pole 600V AC, 500V DC④			
500	**HMD63B500**	**HMD63F800**	**MD63T500**
600	**HMD63B600**		**MD63T600**
700	**HMD63B700**		**MD63T700**
800	**HMD63B800**		**MD63T800**

Type CMD6①⑤

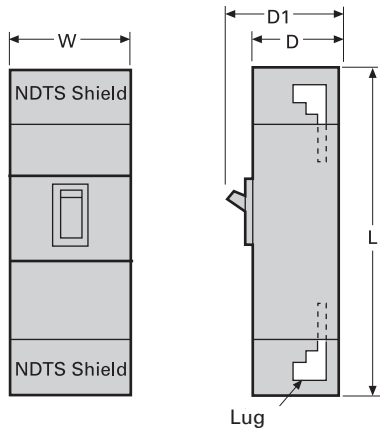
Fuseless Current Limiting

Red Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)		
Continuous Current Rating @ 40°C	**2-Pole 600V AC/250V DC**	**3-Pole 600V AC/500V DC**
	Catalog Number	**Catalog Number**
600	For 2-pole application use outside poles of 3-pole circuit breaker	**CMD63B600■**
700		**CMD63B700■**
800		**CMD63B800**

Interrupting Ratings

Breaker Type	UL 489 AIR—File E10848 RMS Symmetrical Amperes (KA) Volts AC 240	480	600	Volts DC 250	500④	IEC 947-2 AIR⑥ Volts AC (50/60HZ) 220/240 (Icu)	(Ics)	380/415 (Icu)	(Ics)	500 (Icu)	(Ics
MD6, MXD6	65	50	25	30 (2-P)	25 (3-P)	65	33	40	20	—	—
HMD6, HMXD6	100	65	50	30 (2-P)	50 (3-P)	100	50	65	33	—	—
CMD6	200	100	65	—	50 (3-P)	—	—	—	—	—	—



When wire lug shield NDTS is used.

Note: NDTS lug shields are required when oversized lugs are used. The kits include the NDTS shield.

Dimensions (in inches)

Breaker Type	W	L	D	(To Handle) D1
MD6, MXD6, HMD6, HMXD6, CMD6, MXD6-ETI, CMD6-ETI, SMD6-B, SHMD6-B, and SCMD6-B	9	16	6	8.25
with lug shields	9	24	6	8.25

For inches / millimeters conversion, see Application Data section.

■ Built to order. Allow 2–3 weeks for delivery.

①HMXD6 and CMD circuit breakers are UL listed for reverse connection applications.
②2-pole units available in 3-pole width only.
③MXD6-ETI, CMD6-ETI see page 7-153 for catalog information.
④When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.
⑤HACR rated.
⑥Only applicable to non-interchangeable trip unit types: MXD6, HMXD6

Accessories for:

MD/SMD 800A Frame
ND/SND 1200A Frame
PD/SPD 1600A Frame
RD 2000A Frame

S01MN6

Accessory modules can mount in either left hand or right hand poles of all circuit breakers, including solid state. Exception: when mechanical interlock is used. Accessories cannot be mounted in left pole.

Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
120		S01MN6	S01MN64A
208		S02MN6▲	—
240		S03MN6	S03MN64A▲
277		S15MN6▲	S15MN64A▲
480		S04MN6▲	S04MN64A▲
600		S06MN6▲	—
	12	S16MN6▲	S16MN64A▲
	24	S07MN6	S07MN64A
	48	S09MN6▲	—
	125	S11MN6	S11MN64A▲
	250	S13MN6▲	S13MN64A▲

Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch	1 Undervoltage Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
120		U01MN6	U01MN64A	U01MN64AA
208		U02MN6▲	U02MN64A▲	U02MN64AA▲
240		U03MN6▲	U03MN64A▲	U03MN64AA▲
277		U15MN6▲	U15MN64A▲	U15MN64AA▲
480		U04MN6▲	U04MN64A▲	U04MN64AA▲
600		U06MN6▲	—	—
	24	U07MN6	U07MN64A	U07MN64AA
	48	U09MN6▲	U09MN64A▲	U09MN64AA▲
	125	U11MN6▲	U11MN64A▲	U11MN64AA▲

Auxiliary Switch Combinations

Maximum Voltage		1 Form C	2 Form C
AC	DC	Catalog Number	Catalog Number
480	250	A01MN64	A02MN64
—	24	A01MNDLV▲	A02MNDLV▲

Alarm Switch Combinations

Maximum Voltage		1 Alarm Switch	1 Alarm Switch and 1 Auxiliary Switch	1 Alarm Switch and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
480	250	B00MN64	A01MN64B	A02MN64B

▲ Built to order. Allow 6–8 weeks for delivery.

Type NXD6①⑧ — Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)

Continuous Current Rating @ 40°C	2-Pole 600V AC/250V DC Catalog Number	3-Pole 600V AC/500V DC Catalog Number
900	NXD62B900■	NXD63B900
1000	NXD62B100■	NXD63B100
1200	NXD62B120■	NXD63B120

Type ND6⑧ — Blue Label

Interchangeable Trip

Continuous Current Rating @ 40°C	Complete Breaker Unassembled with Lugs Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number
2-Pole 600V AC, 250V DC②			
800	ND62B800■	ND62F120	MD62T800■
900	ND62B900■		ND62T900■
1000	ND62B100■		ND62T100■
1200	ND62B120		ND62T120
3-Pole 600V AC, 500V DC③			
800	ND63B800	ND63F120	MD63T800
900	ND63B900		ND63T900
1000	ND63B100		ND63T100
1200	ND63B120		ND63T120

Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (KA)											
	UL 489 A IR					IEC 947-2⑨						
	Volts AC			Volts DC		Volts AC (50/60HZ)						
	240	480	600	250	500③	220/240		380/415		500	
						(Icu)	(Ics)	(Icu)	(Ics)	(Icu)	(Ics)
ND6, NXD6	65	50	25	30 (2-P)	25 (3-P)	65	33	40	20	—	—
HND6, HNXD6	100	65	50	30 (2-P)	50 (3-P)	100	50	65	33	—	—
CND6	200	100	65	—	50 (3-P)	—	—	—	—	—	—

Instantaneous Adjustment Trip Range

Breaker Ampere Rating	Nominal Instantaneous Values							
	±20% Tolerance Low	2	3	4	5	6	7	±20% Tolerance High
800	4000	4570	5140	5710	6280	6850	7420	8000
900-1200	5000	5715	6430	7145	7860	8575	9290	10000

Ordering Information

Complete Breaker Unassembled with Lugs
Prices of ND6 and HND6 breakers include frame, trip, and both line and load lugs (3TA4N8500). These catalog numbers are the frame, trip and lugs separately packaged. For applications requiring different lugs, order individual items as needed.

Complete Breaker Assembled without Lugs
Prices of NXD6, HNXD6, and CND6 include frame with non-interchangeable trip units installed only. Order required terminal connectors separately. For line and load lugs (3TA4N8500) installed, add suffix "L" to catalog number (add 2 times list price of lug kit).

100% Rated (3-Pole only)⑦
Types NXD6, HNXD6 and CND6 breakers are available with 100% ratings. To order, add suffix "H" to catalog number, and add 10% to list price. 100% rated ND breakers require 90°C cable sized at 75°C ampacity and lug kit 3TA4P8500 or 3TA3N8750.

50°C Applications see page 7-167.

400Hz Applications see page 7-167.

Lugs⑥

Catalog Number	Cables per Lug	Wire Range
TA2K500	2	#1-500 kcmil Cu/Al
TA3K500	3	#1-500 kcmil Cu/Al
TC2K500	2	#1-500 kcmil Cu
Kits (2 Kits required per breaker)		
2TA4P8500④	4	250-500 kcmil Cu/Al
3TA4P8500④		
2TA4N8500⑤	4	250-500 kcmil Cu/Al
3TA4N8500⑤		
2TA2N8750	2	500-750 kcmil Cu/Al
3TA2N8750		
2TA3N8750	3	500-750 kcmil Cu/Al
3TA3N8750		

Enclosures

Type	Catalog Number
1	**MND61**
3R	**MND63**
Neutral	**W63623**

■ Built to order. Allow 2–3 weeks for delivery.

①NXD6 circuit breakers are UL listed for reverse connection applications.
②2-pole units available in 3-pole width only.
③When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500VDC ungrounded UPS systems only.
④Use 2 – 3TA4P8500 kits for 3-pole, or 2 – 2TA4P8500 kits for 2-pole. Rated for 90° C cable. Use for 100% rated breakers.
⑤Use 2 – 3TA4N8500 for 3-pole or 2 – 2TA4N8500 for 2-pole. Rated for 75°C cable.
⑥See **Note: A**, page 7-164.
⑦80% rated breakers with the CE mark will also be marked in the 100% rated version.
⑧HACR rated.
⑨ Only applicable to non-interchangeable trip unit types: NXD6, HNXD6.
Note: ND frame qualified to UL489 supplement B "NAVAL". See page 7-167 for additional information.

Modifications page 7-167
Enclosures Section 6
Accessories pages 7-148 and 7-171 to 7-176

Type HNXD6①④

Black Label

Non-Interchangeable Trip (Assembled Circuit Breaker Without Lugs)		
Continuous Current Rating @ 40°C	**2-Pole 600V AC/250V DC**	**3-Pole 600V AC/500V DC**
	Catalog Number	**Catalog Number**
900 1000 1200	For 2-pole application use outside poles of 3-pole circuit breaker	**HNXD63B900** **HNXD63B100** **HNXD63B120**

Type HND6④

Black Label

Interchangeable Trip			
Continuous Current Rating @ 40°C	**Complete Breaker Unassembled with Lugs**	**Frame Only**	**Trip Unit Only**
	Catalog Number	**Catalog Number**	**Catalog Number**
2-Pole 600V AC, 250V DC②			
800 900 1000 1200	For 2-pole application use outside poles of 3-pole circuit breaker		
3-Pole 600V AC, 500V DC③			
800	**HND63B800**	**HND63F120**	**MD63T800**
900	**HND63B900**		**ND63T900**
1000	**HND63B100**		**ND63T100**
1200	**HND63B120**		**ND63T120**

Type CND6①④

Fuseless Current Limiting

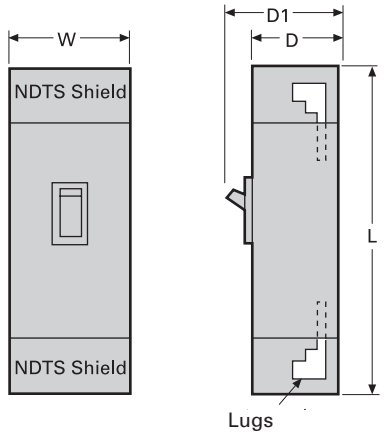
Red Label

Non-Interchangeable Trip (Assembled Circuit Breaker)		
Continuous Current Rating @ 40°C	**2-Pole**	**3-Pole**
	Catalog Number	**Catalog Number**
900 1000 1200	For 2-pole application, use outside poles of 3-pole circuit breaker	**CND63B900■** **CND63B100** **CND63B120**

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
ND6, HND6, NXD6, HNXD6, CND6 Assembled Breaker (less terminals)		
2	1	53
3	1	61.5
ND6, HND6 Frame Only		
2	1	42.25
3	1	46
ND6, HND6 Trip Unit Only		
2	1	4.5
3	1	6.5

NXD63B120



When lugs shield NDTS is used.

Note: NDTS lug shields are required when oversized lugs TA4P8500 or TA4N8500 are used. The kits include the NDTS shield.

Dimensions (in inches)

Breaker Type	W	L	D	D1
ND6, NXD6, HND6, HNXD6, CND6, SND6-B, SHND6-B, and SCND6-B	9	16	6	8.25
with NDTS lug shield	9	24	6	8.25

For inches / millimeters conversion, see Application Data section.

■ Built to order. Allow 2–3 weeks for delivery.

①HNXD6 and CND6 circuit breakers are UL Listed for reverse connection applications.

②2-pole units available in 3-pole width only.

③When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

④HACR rated.

Accessories for:

MD/SMD 800A Frame
ND/SND 1200A Frame
PD/SPD 1600A Frame
RD 2000A Frame

S01MN6

Accessory modules can mount in either left hand or right hand poles of all circuit breakers, including solid state. Exception: when mechanical interlock is used. Accessories cannot be mounted in left pole.

Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
120		S01MN6	S01MN64A
208		S02MN6▲	—
240		S03MN6	S03MN64A▲
277		S15MN6▲	S15MN64A▲
480		S04MN6▲	S04MN64A▲
600		S06MN6▲	—
	12	S16MN6▲	S16MN64A▲
	24	S07MN6	S07MN64A
	48	S09MN6▲	—
	125	S11MN6	S11MN64A▲
	250	S13MN6▲	S13MN64A▲

Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch	1 Undervoltage Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
120		U01MN6	U01MN64A	U01MN64AA
208		U02MN6▲	U02MN64A▲	U02MN64AA▲
240		U03MN6▲	U03MN64A▲	U03MN64AA▲
277		U15MN6▲	U15MN64A▲	U15MN64AA▲
480		U04MN6▲	U04MN64A▲	U04MN64AA▲
600		U06MN6▲	—	—
	24	U07MN6	U07MN64A	U07MN64AA
	48	U09MN6▲	U09MN64A▲	U09MN64AA▲
	125	U11MN6▲	U11MN64A▲	U11MN64AA▲

Auxiliary Switch Combinations

Maximum Voltage		1 Form C	2 Form C
AC	DC	Catalog Number	Catalog Number
480	250	A01MN64	A02MN64
—	24	A01MNDLV▲	A02MNDLV▲

Alarm Switch Combinations

Maximum Voltage		1 Alarm Switch	1 Alarm Switch and 1 Auxiliary Switch	1 Alarm Switch and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
480	250	B00MN64	A01MN64B	A02MN64B

▲ Built to order. Allow 6–8 weeks for delivery.

Type PXD6② Non-Interchangeable Trip⑤

3-Pole 600V AC, 250-500V DC①

Blue Label

Continuous Current Rating @ 40°C	Complete Breaker Assembled (Frame/Trip Unit Only) Catalog Number	Mounting Assembly Catalog Number	Lugs (6 required) Catalog Number
1200	PXD63B120■	MB9301	TA5P600
1400	PXD63B140■	-or-	
1600	PXD63B160	MBR9302	

Type PD6 Interchangeable Trip⑤

3-Pole 600V AC, 250-500V DC①

Blue Label

Continuous Current Rating @ 40°C	Complete Breaker Unassembled Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number	Mounting Assembly Catalog Number	Lugs (6 required) Catalog Number
1200	PD63B120■	PD63F160	PD63T120■	MB9301	TA5P600
1400	PD63B140		PD63T140	-or-	
1600	PD63B160		PD63T160	MBR9302	

Type HPXD6② Non-Interchangeable Trip⑤

3-Pole 600V AC, 250-500V DC①

Blue Label

Continuous Current Rating @ 40°C	Complete Breaker Assembled (Frame/Trip Unit Only) Catalog Number
1200	HPXD63B120■
1400	HPXD63B140■
1600	HPXD63B160

Type HPD6 Interchangeable Trip⑤

3-Pole 600V AC, 250-500V DC①

Black Label

Continuous Current Rating @ 40°C	Complete Breaker Unassembled Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number	Mounting Assembly Catalog Number	Lugs (6 required) Catalog Number
1200	HPD63B120■	HPD63F160	PD63T120■	MB9301	TA5P600
1400	HPD63B140		PD63T140	-or-	
1600	HPD63B160		PD63T160	MBR9302	

Type CPD6 Non-Interchangeable Trip⑤

Fuseless Current Limiting
3-Pole 600V AC, 250-500V DC①

Red Label

Continuous Current Rating @ 40°C	Complete Breaker Assembled (Frame/Trip Unit Only) Catalog Number
1200	CPD63B120■
1400	CPD63B140■
1600	CPD63B160■

Interrupting Ratings

Breaker Type	UL 489 A IR RMS Symmetrical KA				
	Volts AC			Volts DC⑥	
	240	480	600	250	500
PD6, PXD6	65	50	25	30 (2P)	25 (3P)
HPD6, HPXD6	100	65	50	30 (2P)	50 (3P)
CPD6	200	100	65	30 (2P)	50 (3P)

■ Built to order. Allow 2–3 weeks for delivery.

▲ Built to order. Allow 6–8 weeks for delivery.

①Use two outside poles of a 3-pole circuit breaker for 250V

②When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

③PXD6, HPXD6 and CPD6 type circuit breakers are UL Listed for reverse feed applications.

④For additional information See **Note: A**, page 7-164.

⑤HACR rated.

Note: PD frame qualified to UL489 supplement B "NAVAL". See page 7-167 for additional information.

Ordering Instructions

Complete Breaker Unassembled with Lugs

Prices of PD6, HPD6, RD6, and HRD6 type breakers include frame, trip, mounting base (MB9301), and both line and load lugs (PD Frame – TA5P600, RD Frame – TC5R600). When ordered by these catalog numbers, the customer will receive the frame, trip, mounting assembly and lugs separately packaged. For applications requiring different mounting base or lugs, order individual items as needed.

Complete Breaker Assembled without Lugs

Prices of PXD6, HPXD6, RXD6, HRXD6 and CPD6 type breakers include frame with non-interchangeable trip unit installed only. Order required mounting base and lugs separately.

100% Rated (3-Pole only)

Types PXD6, HPXD6 breakers are available with 100% ratings. To order add suffix "H" to catalog number, and 10% to list price. 100% PD breakers require 90° C cable sized at 75° C ampacity and TC5R600 lugs. RD 2000A Frames not available with 100% ratings.

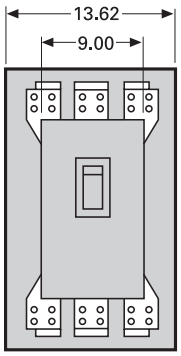
50°C Applications see page 7-167.

400HZ Applications see page 7-167.

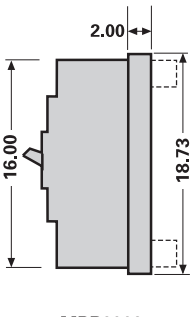
Lugs (6 required per breaker)④

Catalog Number	No of Cables per Connector	Wire Range
TA5P600	1-5	300-600 kcmil Cu/Al
TC5R600	1-5	300-600 kcmil Cu only
TA4P750▲	1-4	600-750 kcmil Cu/Al
TA6R600	1-6	300-600 kcmil Cu/Al

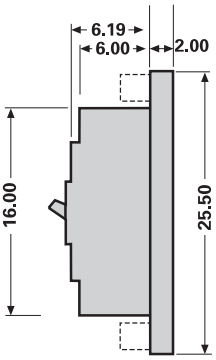
All PD, RD Frames:



MB9301 (shown)
MBR9302



MBR9302



MB9301

MBR9302

MB9301

For inches / millimeters conversion, see Application Data section.

Accessories for:

MD/SMD 800A Frame
ND/SND 1200A Frame
PD/SPD 1600A Frame
RD 2000A Frame

S01MN6

Accessory modules can mount in either left hand or right hand poles of all circuit breakers, including solid state. Exception: when mechanical interlock is used. Accessories cannot be mounted in left pole.

Shunt Trip Combinations

Control Voltage		1 Shunt Trip	1 Shunt Trip and 1 Auxiliary Switch
AC	DC	Catalog Number	Catalog Number
120		S01MN6	S01MN64A
208		S02MN6▲	—
240		S03MN6	S03MN64A▲
277		S15MN6▲	S15MN64A▲
480		S04MN6▲	S04MN64A▲
600		S06MN6▲	—
	12	S16MN6▲	S16MN64A▲
	24	S07MN6	S07MN64A
	48	S09MN6▲	—
	125	S11MN6	S11MN64A▲
	250	S13MN6▲	S13MN64A▲

Undervoltage Trip Combinations

Control Voltage		1 Undervoltage Trip	1 Undervoltage Trip and 1 Auxiliary Switch	1 Undervoltage Trip and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
120		U01MN6	U01MN64A	U01MN64AA
208		U02MN6▲	U02MN64A▲	U02MN64AA▲
240		U03MN6▲	U03MN64A▲	U03MN64AA▲
277		U15MN6▲	U15MN64A▲	U15MN64AA▲
480		U04MN6▲	U04MN64A▲	U04MN64AA▲
600		U06MN6▲	—	—
	24	U07MN6	U07MN64A	U07MN64AA
	48	U09MN6▲	U09MN64A▲	U09MN64AA▲
	125	U11MN6▲	U11MN64A▲	U11MN64AA▲

Auxiliary Switch Combinations

Maximum Voltage		1 Form C	2 Form C
AC	DC	Catalog Number	Catalog Number
480	250	A01MN64	A02MN64
—	24	A01MNDLV▲	A02MNDLV▲

Alarm Switch Combinations

Maximum Voltage		1 Alarm Switch	1 Alarm Switch and 1 Auxiliary Switch	1 Alarm Switch and 2 Auxiliary Switches
AC	DC	Catalog Number	Catalog Number	Catalog Number
480	250	B00MN64	A01MN64B	A02MN64B

▲ Built to order. Allow 6–8 weeks for delivery.

Type RXD6④

3-Pole 600V AC, 250-500V DC① — Blue Label

Non-Interchangeable Trip (Assembled Circuit Breaker Only Without Lugs)			
Continuous Current Rating @ 40°C	Complete Breaker Assembled (Frame/Trip Unit Only) Catalog Number	Mounting Assembly Catalog Number	Lugs (6 required) Catalog Number
1600	RXD63B160	MB9301	
1800	RXD63B180	-or-	TC5R600
2000	RXD63B200	MBR9302	

Type RD6④

3-Pole 600V AC, 250-500V DC① — Blue Label

Interchangeable Trip (Unassembled Circuit Breaker with Lugs)					
Continuous Current Rating @ 40°C	Complete Breaker Unassembled Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number	Mounting Assembly Catalog Number	Lugs (6 required) Catalog Number
1600	RD63B160■		RD63T160■	MB9301	
1800	RD63B180	RD63F200	RD63T180	-or-	TC5R600
2000	RD63B200		RD63T200	MBR9302	

Type HRXD6④ — Black Label

Continuous Current Rating @ 40°C	Complete Breaker Assembled (Frame/Trip Unit Only) Catalog Number
1600	HRXD63B160■
1800	HRXD63B180■
2000	HRXD63B200

Type HRD6④ — Black Label

Continuous Current Rating @ 40°C	Complete Breaker Unassembled Catalog Number	Frame Only Catalog Number	Trip Unit Only Catalog Number	Mounting Assembly Catalog Number	Lugs (6 required) Catalog Number
1600	HRD63B160■		RD63T160■	MB9301	
1800	HRD63B180	HRD63F200	RD63T180	-or-	TC5R600
2000	HRD63B200		RD63T200	MBR9302	

Interrupting Ratings

Breaker Type	UL 489 A IR RMS Symmetrical KA Volts AC 240	480	600	Volts DC① 250	500
RD6, RXD6	65	50	25	30 (2P)	25 (3P)
HRD6, HRXD6	100	65	50	30 (2P)	50 (3P)

Instantaneous Adjustment Trip Range (PD / RD Frames)

Breaker Ampere Rating	Nominal Instantaneous Values ±20% Tolerance Low	2	3	4	5	6	7	±20% Tolerance High
1200-2000	5000	5715	6430	7145	7860	8575	9790	10,000

RXD63B200

Mounting Block⑥

Catalog Number	Connection Points
MB9301	Front
MBR9302	Rear

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight (lbs.)
PXD6, HPXD6, RXD6, HRXD6, CPD6 Assembled Breakers		
3	1	61.5
PD6, HPD6, RD6, HRD6 Frame Only		
3	1	55.0
PD6, RD6 Trip Unit Only		
3	1	6.5
Mounting Assembly		
MB9301	1	53.0
MBR9302	1	50.9

Lugs (6 required per breaker)⑤

Catalog Number	No of Cables per Connector	Wire Range
TC5R600	1-5	300-600 kcmil Cu only
TA6R600	1-6	300-600 kcmil Cu/Al

■ Built to order. Allow 2–3 weeks for delivery.

▲ Built to order. Allow 6–8 weeks for delivery.

① Use two outside poles of a 3-pole circuit breaker for 250V DC applications.

② When wired as shown on page 7-4, this circuit breaker is UL listed and rated for use on 500V DC ungrounded UPS systems only.

③ RXD6 and HRXD6 type circuit breakers are UL Listed for reverse feed applications.

④ HACR rated.

⑤ For additional information See **Note: A**, page 7-164.

Note: RD frame qualified to UL489 supplement B "NAVAL". See page 7-167 for additional information.

⑥ For required mounting base (MB9301 or MBR9302) see page 7-150.

Breaker Type	Ampere Rating	Instantaneous Trip Range②		Complete Circuit Breaker Without Lugs⑤	
		Minimum③	Maximum③	Catalog Number 2-Pole	Catalog Number 3-Pole
ED6-A 600V AC 250V DC	1	2.6	9	—	**ED63A001**
	2	7	22	—	**ED63A002**
	3	10	35	—	**ED63A003**
	5	16	54	—	**ED63A005**
	10	30	100	—	**ED63A010**
	25	55	180	—	**ED63A025**
	30	80	270	—	**ED63A030**
	40	115	375	—	**ED63A040**
	50	180	600	—	**ED63A050**
	100	315	1000	—	**ED63A100**
	125	500	1250	—	**ED63A125**
	SHIPPING:				3.8 lbs. each
CED6-A 600V AC 250V DC	1	2.6	9	—	**CED63A001■**
	2	7	22	—	**CED63A002■**
	3	10	35	—	**CED63A003■**
	5	16	54	—	**CED63A005■**
	10	30	100	—	**CED63A010■**
	25	55	180	—	**CED63A025■**
	30	80	270	—	**CED63A030■**
	40	115	375	—	**CED63A040■**
	50	180	600	—	**CED63A050■**
	100	315	1000	—	**CED63A100■**
	125	500	1250	—	**CED63A125■**
	SHIPPING:				6 lbs. each
FXD6④ 600V AC 250V DC	150	400	800	—	**FXD63L150■**
	150	800	1500	—	**FXD63A150**
	150	1100	2500	—	**FXD63H150**
	250	1100	2500	—	**FXD63A250**
	SHIPPING:				9 lbs. each
CFD6④ 600V AC 250V DC	150	400	800	—	**CFD63L150■**
	150	800	1500	—	**CFD63A150■**
	150	1100	2500	—	**CFD63H150■**
	250	1100	2500	—	**CFD63A250■**
	SHIPPING:			12 lbs. each	12 lbs. each
JXD6(A)① 600V AC 250V DC	400	1250	2500	—	**JXD63L400**
	400	2000	4000	**JXD62H400■**	**JXD63H400**
	SHIPPING:			16 lbs. each	20 lbs. each
CJD6① 600V AC 250V DC	400	1250	2500	—	**CJD63L400■**
	400	2000	4000	—	**CJD63H400■**
	SHIPPING:			29.5 lbs. each	31.5 lbs. each
LXD6(A)① 600V AC 250V DC	600	2000	4000	**LXD62L600■**	**LXD63L600■**
	600	3000	6000	—	**LXD63H600**
	SHIPPING:			16 lbs. each	20 lbs. each
CLD6① 600V AC 250V DC	600	2000	4000	—	**CLD63L600■**
	600	3000	6000	—	**CLD63H600■**
	SHIPPING:				31.5 lbs. each
LMXD6④ 600V AC 250V DC	800	2800	6000	—	**LMXD63L800■**
	800	3200	8000	—	**LMXD63A800**
	SHIPPING:				35 lbs. each
MXD6④ 600V AC 250V DC	800	3000	6000	—	**MXD63L800■**
	800	4000	8000	—	**MXD63A800■**
	800	5000	10000	—	**MXD63H800**
	SHIPPING:				33 lbs. each
CMD6④ 600V AC 250V DC	800	3000	6000	—	**CMD63L800■**
	800	4000	8000	—	**CMD63A800■**
	800	5000	10000	—	**CMD63H800■**
	SHIPPING:				80 lbs. each

Important Information

ETI interrupting ratings are determined through combination tests with properly sized overload relays and contactors.

⑤ Connectors included when ordering by circuit breaker catalog number for HEM, ED and CED6 ETIs. Order ETI circuit breaker and lugs (2 per pole) separately for the FXD6, CFD6, MXD6, CMD6, JXD6, CJD6, LXD6 and CLD6 ETI's.

Lug Information pages 7-164 to 7-166
Enclosures Section 6
Accessories pages 7-171 to 7-176
Application data pages 7-154 to 7-155

■ Built to order. Allow 2–3 weeks for delivery.

① 2-pole available in 3-pole width only.

② When applied on DC Circuits — Trip levels will increase approximately +15 to 20%.

③ Tolerance -20%/+30% for lowest setting. All other settings are -20%/+20%

④ For 2-pole application use outside poles of 3-pole circuit breaker.

General

Protection of Motor Circuits

Molded case circuit breakers are used in motor circuits as a disconnecting means and for short-circuit protection. They should be used in conjunction with motor-running, over-current-protection devices, and should permit the motor to start without nuisance tripping from motor-inrush current. The circuit breaker should have a continuous-current rating of not less than 115% of the motor full-load current.

The recommended motor circuit protectors (Siemens ETI instantaneous only circuit breakers) listed have continuous-current ratings of at least 115% of motor full-load currents. The trip-setting positions are approximately 11 times motor full-load currents. The suggested trip settings may have to be adjusted upward to no higher than 1300% of full-load current for non-design E type motors, and no greater than 1700% of full load current for design E motors, to allow for motor start-up due to inrush currents.

Breaker Mounted Immediately Ahead of Motor Starter

Siemens ETI motor circuit protectors are recommended for use in combination motor starters to provide selective short-circuit protection for the motor branch circuit. The adjustable instantaneous-trip feature of the Siemens ETI motor circuit protector provides for a trip setting slightly above the peak motor-inrush current. With this setting, no delay is introduced in opening the circuit when a fault occurs. This circuit breaker has no time-delay trip element. Therefore it must be used in conjunction with, and immediately ahead of, the motor-running overcurrent protective device.

Important: The information below does not apply to all motor applications: it is recommended that the user refer to the National Electrical Code (NEC) for specific needs.

Table 1 (When Breaker is Mounted Immediately Ahead of Motor Starter)

3-Phase Induction Type Motors (Siemens ETI motor circuit protectors for branch circuit use with alternating-current combination, full voltage motor starters).

Motor Full Load Amperes	Catalog Number	ETI Trip Setting	
		Adjustment	Amperes
.20 – .33	ED63A001 CED63A001	Low	2.6
.34 – .45		2	4.5
.46 – .56		3	6
.57 – .68		4	7.5
.69 – .81		High	9
.53 – .83	ED63A002 CED63A002	Low	7
.84 – 1.14		2	11
1.15 – 1.45		3	15
1.46 – 1.68		4	19
1.69 – 2.00		High	22
.76 – 1.29	ED63A003 CED63A003	Low	10
1.30 – 1.75		2	17
1.76 – 2.29		3	23
2.30 – 2.68		4	30
2.69 – 3.18		High	35
1.23 – 1.99	ED63A005 CED63A005	Low	16
2.00 – 2.75		2	26
2.76 – 3.52		3	36
3.53 – 4.14		4	46
4.15 – 4.90		High	54
2.30 – 3.83	ED63A010 CED63A010	Low	30
3.84 – 5.37		2	50
5.38 – 6.52		3	70
6.53 – 7.68		4	85
7.69 – 9.10		High	100
4.23 – 6.91	ED63A025 CED63A025	Low	55
6.92 – 9.61		2	90
9.62 – 11.91		3	125
11.92 – 13.83		4	155
13.84 – 16.40		High	180
6.15 – 10.37	ED63A030 CED63A030	Low	80
10.38 – 14.22		2	135
14.23 – 18.06		3	185
18.07 – 20.75		4	235
20.76 – 24.50		High	270
8.84 – 14.22	ED63A040 CED63A040	Low	115
14.23 – 19.60		2	185
19.61 – 24.99		3	255
25.00 – 28.83		4	325
28.84 – 34.00		High	375
13.84 – 23.06	ED63A050 CED63A050	Low	180
23.07 – 31.52		2	300
31.53 – 39.99		3	410
40.00 – 46.14		4	520
46.15 – 54.50		High	600
24.23 – 41.52	ED63A100 CED63A100	Low	315
41.53 – 56.91		2	540
56.92 – 68.45		3	740
68.46 – 76.91		4	890
76.92 – 90.90		High	1000
38.46 – 55.37	ED63A125 CED63A125	Low	500
55.38 – 70.75		2	720
70.76 – 84.60		3	920
84.61 – 96.14		4	1100
96.15 – 113.60		High	1250
30.76 – 35.37	FXD63L150 CFD63L150	Low	400
35.38 – 39.99		2	460
44.51 – 49.23		4	580
53.84 – 58.45		6	700
58.46 – 63.06		7	760
63.07 – 74.50		High	820
61.53 – 69.22	FXD63A150 CFD63A150	Low	800
69.23 – 76.91		2	900
84.61 – 92.29		4	1100
100.00 – 108.00		6	1300
108.00 – 115.00		7	1400
115.00 – 136.00		High	1500
85.00 – 100.00	FXD63A250 CFD63A250	Low	1100
100.00 – 115.00		2	1300
131.00 – 146.00		4	1700
162.00 – 177.00		6	2100
177.00 – 192.00		7	2300
192.00 – 227.00		High	2500
95.00 – 110.00	JXD63L400 CJD63L400	Low	1250
110.00 – 124.00		2	1430
138.00 – 151.00		4	1790
165.00 – 178.00		6	2140
178.00 – 192.00		7	2320
192.00 – 227.00		High	2500
154.00 – 176.00	JXD63H400 CJD63H400	Low	2000
176.00 – 198.00		2	2290
220.00 – 242.00		4	2860
264.00 – 285.00		6	3430
285.00 – 308.00		7	3710
308.00 – 326.00		High	4000
155.00 – 176.00	LXD63L600 CLD63L600	Low	2000
176.00 – 198.00		2	2290
220.00 – 242.00		4	2860
264.00 – 285.00		6	3430
285.00 – 308.00		7	3710
308.00 – 326.00		High	4000
231.00 – 264.00	LXD63H600 CLD63H600	Low	3000
264.00 – 292.00		2	3430
330.00 – 362.00		4	4290
395.00 – 428.00		6	5140
428.99 – 462.00		7	5570
462.00 – 490.00		High	6000
215.00 – 238.00	LMXD63L800	Low	2800
238.00 – 261.00		2	3100
261.00 – 284.00		3	3400
308.00 – 369.00		5	4000
369.00 – 423.00		6	4800
423.00 – 462.00		7	5500
462.00 – 490.00		High	6000
246.00 – 269.00	LMXD63A800	Low	3200
269.00 – 284.00		2	3500
284.00 – 323.00		3	3700
362.00 – 492.00		5	4700
492.00 – 562.00		6	6400
562.00 – 616.00		7	7300
616.00 – 660.00		High	8000
231.00 – 264.00	MXD63L800 CMD63L800	Low	3000
264.00 – 292.00		2	3430
292.00 – 330.00		3	3800
362.00 – 395.00		5	4710
428.00 – 462.00		7	5570
462.00 – 490.00		High	6000
308.00 – 352.00	MXD63A800 CMD63A800	Low	4000
352.00 – 442.00		2	4570
442.00 – 447.00		3	5740
483.00 – 527.00		5	6280
571.00 – 616.00		7	7240
616.00 – 660.00		High	8000
385.00 – 440.00	MXD63H800 CMD63H800	Low	5000
495.00 – 550.00		3	6430
605.00 – 660.00		5	7860
660.00 – 695.00		6	8575

Note: Lowest instantaneous settings have a -20%/+30% tolerance and all other settings have a -20%/+20% tolerance.

Breaker Mounted at a Distance From Motor Starter

ET thermal-magnetic circuit breakers conform to the National Electrical Code table 430-52 requirements for motor branch and feeder circuit protection when properly applied in conjunction with motor-running overcurrent protective devices. The recommended circuit-breaker ratings in Table 2 provide adequate time delay for starting the majority of three phase induction motors.

To determine the ampere ratings of the ET breaker to protect a motor feeder, add the rating of the ET breaker used to protect the largest motor branch circuit in the group to the full-load currents of the remaining motors in the group.

Interrupt Ratings

For normal commercial purposes, available fault current can conveniently be obtained in the Interrupting Selector Tables.

Table 2 (When Breaker is Mounted at a Distance From Motor Starter)

3-Phase Induction Type Motors (EQ and ET circuit breakers (thermal-magnetic trip) for branch breaker use with alternating-current combination motor starters).

Motor Horse-power Rating	200 and 208V Motors			230V Motors			460V Motors			575V Motors		
	240V Circuit Breaker Data①			240V Circuit Breaker Data①			480V Circuit Breaker Data①			600V Circuit Breaker Data①		
	Breaker Type	Catalog Number	Ampere Rating	Breaker Type	Catalog Number	Ampere Rating	Breaker Type	Catalog Number	Ampere Rating	Breaker Type	Catalog Number	Ampere Rating
½	BQ②	**BQ3B015**	15	BQ②	**BQ3B015**	15	ED4	**ED43B015**	15	ED6	**ED63B015**	15
¾		**BQ3B015**	15		**BQ3B015**	15		**ED43B015**	15		**ED63B015**	15
1		**BQ3B015**	15		**BQ3B015**	15		**ED43B015**	15		**ED63B015**	15
1½		**BQ3B015**	15		**BQ3B015**	15		**ED43B015**	15		**ED63B015**	15
2		**BQ3B020**	20		**BQ3B015**	15		**ED43B015**	15		**ED63B015**	15
3		**BQ3B030**	30		**BQ3B020**	20		**ED43B015**	15		**ED63B015**	15
5	BQ②	**BQ3B040**	40	BQ②	**BQ3B030**	30	ED4	**ED43B015**	15	ED6	**ED63B015**	15
7½		**BQ3B060**	60		**BQ3B050**	50		**ED43B030**	30		**ED63B020**	20
10		**BQ3B070**	70		**BQ3B070**	70		**ED43B030**	30		**ED63B030**	30
15		**BQ3B100**	100		**BQ3B090**	90		**ED43B040**	40		**ED63B035**	35
20					**BQ3B100**	100		**ED43B050**	50		**ED63B050**	50
25	FXD6	**FXD63B125**	125	FXD6	**FXD63B125**	125	FXD6	**FXD63B090**	90	FXD6	**FXD63B060**	60
30		**FXD63B150**	150		**FXD63B150**	150		**FXD63B100**	100		**FXD63B070**	70
40		**FXD63B175**	175		**FXD63B175**	175		**FXD63B125**	125		**FXD63B090**	90
50		**FXD63B200**	200		**FXD63B200**	200		**FXD63B150**	150		**FXD63B100**	100
		FXD63B225	225									
60	JXD2	**JXD23B300**	300	—	**—**	**—**	FXD6, FD6	**FXD63B150**	150	FXD6	**FXD63B100**	100
75	JXD2	**JXD23B400**	400	JXD2	**JXD23B350**	350	FXD6, FD6	**FXD63B200**	200	FXD6, FD6	**FXD63B125**	125
100	JXD2	**JXD23B400**	400	JXD2	**JXD23B400**	400	FD6③ JD6③	**FD63B250** **JD63B250**	250 250	FXD6, FD6	**FD63B175**	175
125	LD6③ or LMD6	**LD63B600** **LMD63B600**	600	LD6③ or LMD6	**LD63B500** or **LMD63B500**	500	JD6③	**JD63B300**	300	FXD6, FD6 OR JD6③	**FXD63B200** **JD63B200**	200 200
150	LD6③ or LMD6	**LD63B600** or **LMD63B600**	600	LMD6	**LD63B600** or **LMD63B600**	600	JD6③	**JD63B300**	300	FXD6 or JD6③	**FXD63B225** **JD63B225**	225 225
200	LMD6	**LMD63B800**	800	LMD6	**LMD63B800**	800	JD6③	**JD63B350**	350	JD6③	**JD63B300**	300
250	—	**—**	—	—	**—**	—	JD6③	**JD63B400**	400	JD6③	**JD63B400**	400
300	—	**—**	—	—	**—**	—	LD6③ or LMD6	**LD63B600** or **LMD63B600**	600	JD6③	**JD63B400**	400
350	—	**—**	—	—	**—**	—	LMD6	**LMD63B700**	700	LD6③ or LMD6	**LD63B500** or **LMD63B500**	500
400	—	**—**	—	—	**—**	—	LMD6	**LMD63B800**	800	LD6③ or LMD6	**LD63B600** or **LMD63B600**	600
500	—	**—**	—	—	**—**	—	—	**—**	—	LMD6	**LMD63B800**	800

①The selection of breakers for this table is in accordance with Article 430, 2005 National Electric Code. Recommended circuit breakers are for full voltage starting, special consideration is necessary for reduced voltage starting.

②For panelboard applications, substitute the BL breaker for the BQ, ED2 circuit breakers may also be used.

③For non-interchangeable trip applications, substitute the FXD6 for the FD6, the JXD6 for the JD6, or the LXD6 for the LD6.

Molded Case Circuit Breakers

Adjustable Installments Magnetic Trip Settings

Application

Breaker Type	Maximum Continuous Amperes	Nominal AC Adjustable Trip Range								ETI Motor Circuit Protector Catalog Number	Thermal Magnetic Catalog Number	
		Low	2	3	4	5	6	7	High	3-Pole	2-Pole	3-Pole
ED6	1	2.6	4.5	6	7.5	—	—	—	9	ED63A001	—	—
	2	7	11	15	19	—	—	—	22	ED63A002	—	—
	3	10	17	23	30	—	—	—	35	ED63A003	—	—
	5	16	26	36	46	—	—	—	54	ED63A005	—	—
	10	30	50	70	85	—	—	—	100	ED63A010	—	—
	25	55	90	125	155	—	—	—	180	ED63A025	—	—
	30	80	135	185	235	—	—	—	270	ED63A030	—	—
	40	115	185	255	325	—	—	—	375	ED63A040	—	—
	50	180	300	410	520	—	—	—	600	ED63A050	—	—
	100	315	540	740	890	—	—	—	1000	ED63A100	—	—
	125	500	720	920	1100	—	—	—	1250	ED63A125	—	—
CED6	1	2.6	4.5	6	7.5	—	—	—	9	CED63A001■	—	—
	2	7	11	15	19	—	—	—	22	CED63A002■	—	—
	3	10	17	23	30	—	—	—	35	CED63A003■	—	—
	5	16	26	36	46	—	—	—	54	CED63A005■	—	—
	10	30	50	70	85	—	—	—	100	CED63A010■	—	—
	25	55	90	125	155	—	—	—	180	CED63A025■	—	—
	30	80	135	185	235	—	—	—	270	CED63A030■	—	—
	40	115	185	255	325	—	—	—	375	CED63A040■	—	—
	50	180	300	410	520	—	—	—	600	CED63A050	—	—
	100	315	540	740	890	—	—	—	1000	CED63A100	—	—
	125	500	720	920	1100	—	—	—	1250	CED63A125	—	—
FXD6-A	70	600	640	690	730	770	810	850	900	—	FXD62B070	FXD63B070
	80	600	640	690	730	770	810	850	900	—	FXD62B080	FXD63B080
	90	600	640	690	730	770	810	850	900	—	FXD62B090	FXD63B090
	100	700	770	840	920	990	1060	1140	1200	—	FXD62B100	FXD63B100
	110	700	770	840	920	990	1060	1140	1200	—	FXD62B110	FXD63B110
	125	800	900	1000	1100	1200	1300	1400	1500	—	FXD62B125	FXD63B125
	150	400	460	520	580	640	700	760	820	FXD63L150	—	—
	150	800	900	1000	1100	1200	1300	1400	1500	FXD63A150	FXD62B150	FXD63B150
	150	1100	1300	1500	1700	1900	2100	2300	2500	FXD63H150	—	—
	175	900	1060	1210	1370	1520	1780	1930	2000	—	FXD62B175	FXD63B175
	200	900	1060	1210	1370	1520	1780	1930	2000	—	FXD62B200	FXD63B200
	225	1100	1300	1500	1700	1900	2100	2300	2500	—	FXD62B225	FXD63B225
	250	1100	1300	1500	1700	1900	2100	2300	2500	FXD63A250	FXD62B250	FXD63B250
FD6-A	70	600	640	690	730	770	810	850	900	—	FD62B070	FD63B070
	80	600	640	690	730	770	810	850	900	—	FD62B080	FD63B080
	90	600	640	690	730	770	810	850	900	—	FD62B090	FD63B090
	100	700	770	840	920	990	1060	1140	1200	—	FD62B100	FD63B100
	110	700	770	840	920	990	1060	1140	1200	—	FD62B110	FD63B110
	125	800	900	1000	1100	1200	1300	1400	1500	—	FD62B125	FD63B125
	150	800	900	1000	1100	1200	1300	1400	1500	—	FD62B150	FD63B150
	175	900	1060	1210	1370	1520	1780	1930	2000	—	FD62B175	FD63B175
	200	900	1060	1210	1370	1520	1780	1930	2000	—	FD62B200	FD63B200
	225	1100	1300	1500	1700	1900	2100	2300	2500	—	FD62B225	FD63B225
	250	1100	1300	1500	1700	1900	2100	2300	2500	—	FD62B250	FD63B250
HFD6	70	600	640	690	730	770	810	850	900	—	HFD62B070	HFD63B070
	80	600	640	690	730	770	810	850	900	—	HFD62B080	HFD63B080
	90	600	640	690	730	770	810	850	900	—	HFD62B090	HFD63B090
	100	700	770	840	920	990	1060	1140	1200	—	HFD62B100	HFD63B100
	110	700	770	840	920	990	1060	1140	1200	—	HFD62B110	HFD63B110
	125	800	900	1000	1100	1200	1300	1400	1500	—	HFD62B125	HFD63B125
	150	800	900	1000	1100	1200	1300	1400	1500	—	HFD62B150	HFD63B150
	175	900	1060	1210	1370	1520	1780	1930	2000	—	HFD62B175	HFD63B175
	200	900	1060	1210	1370	1520	1780	1930	2000	—	HFD62B200	HFD63B200
	225	1100	1300	1500	1700	1900	2100	2300	2500	—	HFD62B225	HFD63B225
	250	1100	1300	1500	1700	1900	2100	2300	2500	—	HFD62B250	HFD63B250
HHFD6	70	600	640	690	730	770	810	850	900	—	—	HHFD63B070
	80	600	640	690	730	770	810	850	900	—	—	HHFD63B080
	90	600	640	690	730	770	810	850	900	—	—	HHFD63B090
	100	700	770	840	920	990	1060	1140	1200	—	—	HHFD63B100
	110	700	770	840	920	990	1060	1140	1200	—	—	HHFD63B110
	125	800	900	1000	1100	1200	1300	1400	1500	—	—	HHFD63B125
	150	800	900	1000	1100	1200	1300	1400	1500	—	—	HHFD63B150
	175	900	1060	1210	1370	1520	1780	1930	2000	—	—	HHFD63B175
	200	900	1060	1210	1370	1520	1780	1930	2000	—	—	HHFD63B200
	225	1100	1300	1500	1700	1900	2100	2300	2500	—	—	HHFD63B225
	250	1100	1300	1500	1700	1900	2100	2300	2500	—	—	HHFD63B250
CFD6	70	600	640	690	730	770	810	850	900	—	CFD62B070	CFD63B070
	80	600	640	690	730	770	810	850	900	—	CFD62B080	CFD63B080
	90	600	640	690	730	770	810	850	900	—	CFD62B090	CFD63B090
	100	700	770	840	920	990	1060	1140	1200	—	CFD62B100	CFD63B100
	110	700	770	840	920	990	1060	1140	1200	—	CFD62B110	CFD63B110
	125	800	900	1000	1100	1200	1300	1400	1500	—	CFD62B125	CFD63B125
	150	400	460	520	580	640	700	760	820	CFD63L150	—	—
	150	800	900	1000	1100	1200	1300	1400	1500	CFD63A150	CFD62B150	CFD63B150
	150	1100	1300	1500	1700	1900	2100	2300	2500	CFD63H150	—	—
	175	900	1060	1210	1370	1520	1780	1930	2000	—	CFD62B175	CFD63B175
	200	900	1060	1210	1370	1520	1780	1930	2000	—	CFD62B200	CFD63B200
	225	1100	1300	1500	1700	1900	2100	2300	2500	—	CFD62B225	CFD63B225
	250	1100	1300	1500	1700	1900	2100	2300	2500	CFD63A250	CFD62B250	CFD63B250

Note: Tolerances for instantaneous trip points meet UL 489 (7.3). Nominal AC instantaneous trip points are given in the tables. For DC instantaneous trip points, add 15% to nominal values.

Instantaneous trip adjustment is made through the breaker cover on all frame breakers. To change instantaneous trip point on circuit breaker, depress indicating knob, then rotate to desired position.

■ Built to order. Allow 2–3 weeks for delivery.

Breaker Type	Maximum Continuous Amperes	Nominal AC Adjustable Trip Range								ETI Motor Circuit Protector Catalog Number	Thermal Magnetic Catalog Number	
		Low	2	3	4	5	6	7	High	3-Pole	2-Pole	3-Pole
JXD2(A)	200	1250	1430	1610	1790	1960	2140	2320	2500	—	JXD22B200	JXD23B200
	225	1250	1430	1610	1790	1960	2140	2320	2500	—	JXD22B225	JXD23B225
	250	1250	1430	1610	1790	1960	2140	2320	2500	—	JXD22B250	JXD23B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	JXD22B300	JXD23B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	JXD22B350	JXD23B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	—	JXD22B400	JXD23B400
JXD6(A)	200	1250	1430	1610	1790	1960	2140	2320	2500	—	JXD62B200	JXD63B200
	225	1250	1430	1610	1790	1960	2140	2320	2500	—	JXD62B225	JXD63B225
	250	1250	1430	1610	1790	1960	2140	2320	2500	—	JXD62B250	JXD63B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	JXD62B300	JXD62B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	JXD62B350	JXD23B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	—	JXD62B400	JXD23B400
JD6(A)	200	1250	1430	1610	1790	1960	2140	2320	2500	—	JD62B200	JD63B200
	225	1250	1430	1610	1790	1960	2140	2320	2500	—	JD62B225	JD63B225
	250	1250	1430	1610	1790	1960	2140	2320	2500	—	JD62B250	JD63B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	JD62B300	JD63B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	JD62B350	JD63B350
	400	1250	1430	1610	1790	1960	2140	2320	2500	JXD63L400	—	—
	400	2000	2290	2570	2860	3140	3430	3710	4000	JXD63H400	JD62B400	JD63B400
HJD6(A)	200	1250	1430	1610	1790	1960	2140	2320	2500	—	HJD62B200	HJD63B200
	225	1250	1430	1610	1790	1960	2140	2320	2500	—	HJD62B225	HJD63B225
	250	1250	1430	1610	1790	1960	2140	2320	2500	—	HJD62B250	HJD63H250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	HJD62B300	HJD63B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	HJD62B350	HJD63B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	—	HJD62H400	HJD63B400
HHJD6	200	1250	1430	1610	1790	1960	2140	2320	2500	—	HHJD62B200	HHJD63B200
	225	1250	1430	1610	1790	1960	2140	2320	2500	—	HHJD62B225	HHJD63B225
	250	1250	1430	1610	1790	1960	2140	2320	2500	—	HHJD62B250	HHJD63B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	HHJD62B300	HHJD63B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	HHJD62B350	HHJD63B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	—	HHJD62B400	HHJD63B400
CJD6	200	1250	1430	1610	1790	1960	2140	2320	2500	—	—	CJD63B200
	225	1250	1430	1610	1790	1960	2140	2320	2500	—	—	CJD63B225
	250	1250	1430	1610	1790	1960	2140	2320	2500	—	—	CJD63B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	—	CJD63B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	—	CJD63B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	CJD63H400	—	CJD63B400
	400	1250	1450	1610	1790	1960	2140	2320	2500	CJD63L400	—	—
LXD6(A)	450	2000	2290	2570	2860	3140	3430	3710	4000	—	LXD62B450	LXD63B450
	500	3000	3430	3860	4290	4710	5140	5570	6000	—	LXD62B500	LXD63B500
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	LXD62B600	LXD63B600
LD6(A)	250	1250	1430	1610	1790	1960	2140	2320	2500	—	LD62B250	LD63B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	LD62B300	LD63B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	LD62B350	LD63B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	—	LD62B400	LD63B400
	450	2000	2290	2570	2860	3140	3430	3710	4000	—	LD62B450	LD63B450
	500	3000	3430	3800	4290	4710	5140	5570	6000	—	LD62B500	LD63B500
	600	2000	2290	2570	2860	3140	3430	3710	4000	LXD63L600	—	—
	600	3000	3430	3800	4290	4710	5140	5570	6000	LXD63H600	LD62B600	LD63B600
HLD6(A)	250	1250	1430	1610	1790	1960	2140	2320	2500	—	HLD62B250	HLD63B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	HLD62B300	HLD63B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	HLD62B350	HLD63B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	—	HLD62B400	HLD63B400
	450	2000	2290	2570	2860	3140	3430	3710	4000	—	HLD62B450	HLD63B450
	500	3000	3430	3860	4290	4710	5140	5570	6000	—	HLD62B500	HLD63B500
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	HLD62B600	HLD63B600
HHLD6	250	1250	1430	1610	1790	1960	2140	2320	2500	—	HHLD62B250	HHLD63B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	HHLD62B300	HHLD63B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	HHLD62B350	HHLD63B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	—	HHLD62B400	HHLD63B400
	450	2000	2290	2570	2860	3140	3430	3710	4000	—	HHLD62B450	HHLD63B450
	500	3000	3430	3860	4290	4710	5140	5570	6000	—	HHLD62B500	HHLD63B500
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	HHLD62B600	HHLD63B600
CLD6	250	1250	1430	1610	1790	1960	2140	2320	2500	—	—	CJD63B250
	300	1250	1430	1610	1790	1960	2140	2320	2500	—	—	CJD63B300
	350	2000	2290	2570	2860	3140	3430	3710	4000	—	—	CJD63B350
	400	2000	2290	2570	2860	3140	3430	3710	4000	—	—	CLD63B400
	450	2000	2290	2570	2860	3140	3430	3710	4000	—	—	CLD63B450
	500	3000	3430	3860	4290	4710	5140	5570	6000	—	—	CLD63B500
	600	2000	2290	2570	2860	3140	3430	3710	4000	CLD63L600	—	—
	600	3000	3430	3860	4290	4710	5140	5570	6000	CLD63H600	—	CLD63B600
LMXD6	500	3000	3430	3860	4290	4710	5140	5570	6000	—	—	LMXD63B500
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	LMXD62B600	LMXD63B600
	700	3200	3500	3700	4200	4700	6400	7300	8000	—	LMXD62B700	LMXD63B700
	800	2800	3100	3400	3700	4000	4800	5500	6000	LMXD63L800	—	—
	800	3200	3500	3700	4200	4700	6400	7300	8000	LMXD63A800	LMXD62B800	LMXD63B800
LMD6	500	3000	3430	3860	4290	4710	5140	5570	6000	—	LMD62B500	LMD63B500
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	LMD62B600	LMD63B600
	700	3200	3500	3700	4200	4700	6400	7300	8000	—	LMD62B700	LMD63B700
	800	3200	3500	3700	4200	4700	6400	7300	8000	—	LMD62B800	LMD63B800

Breaker Type	Maximum Continuous Amperes	Nominal AC Adjustable Trip Range								ETI Motor Circuit Protector Catalog Number	Thermal Magnetic Catalog Number	
		Low	2	3	4	5	6	7	High	3-Pole	2-Pole	3-Pole
HLMXD6	500	3000	3430	3860	4290	4710	5140	5570	6000	—	—	HLMXD63B500
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	—	HLMXD63B600
	700	3200	3500	3700	4200	4700	6400	7300	8000	—	—	HLMXD63B700
	800	3200	3500	3700	4200	4700	6400	7300	8000	—	—	HLMXD63B800
HLMD6	500	3000	3430	3860	4290	4710	5140	5570	6000	—	HLMD62B500	HLMD63B500
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	HLMD62B600	HLMD63B600
	700	3200	3500	3700	4200	4700	6400	7300	8000	—	HLMD62B700	HLMD63B700
	800	3200	3500	3700	4200	4700	6400	7300	8000	—	HLMD62B800	HLMD63B800
MD6	500	3000	3430	3860	4290	4710	5140	5570	6000	—	MD62B500	MD63B500
	600	3000	3430	3860	4290	4710	5140	5570	6000	—	MD62B600	MD63B600
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	MD62B700	MD63B700
	800	3000	3430	3860	4280	4710	5140	5570	6000	MXD63L800	—	—
	800	4000	4570	5140	5710	6280	6850	7420	8000	MXD63A800	MD62B800	MD63B800
	800	5000	5715	6430	7145	7860	8575	9290	10000	MXD63H800	—	—
MXD6	500	3000	3430	3860	4280	4710	5140	5570	6000	—	MXD62B500	MXD63B500
	600	3000	3430	3860	4280	4710	5140	5570	6000	—	MXD62B600	MXD63B600
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	MXD62B700	MXD63B700
	800	3000	3430	3860	4280	4710	5140	5570	6000	MXD63L800	—	—
	800	4000	4570	5140	5710	6280	6850	7420	8000	MXD63A800	MXD62B800	MXD63B800
	800	5000	5715	6430	7145	7860	8575	9290	10000	MXD63H800	—	—
HMD6	500	3000	3430	3860	4280	4710	5140	5570	6000	—	HMD62B500	HMD63B500
	600	3000	3430	3860	4280	4710	5140	5570	6000	—	HMD62B500	HMD63B600
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	HMD62B700	HMD63B700
	800	4000	4570	5140	5710	6280	6850	7420	8000	—	HMD62B800	HMD63B800
HMXD6	500	3000	3430	3860	4280	4710	5140	5570	6000	—	—	HMXD63B500
	600	3000	3430	3860	4280	4710	5140	5570	6000	—	—	HMXD63B600
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	—	HMXD63B700
	800	4000	4570	5140	5710	6280	6850	7420	8000	—	—	HMXD63B800
CMD6	400	3000	3430	3860	4280	4710	5140	5570	6000	—	—	
	500	3000	3430	3860	4280	4710	5140	5570	6000	—	—	
	600	3000	3430	3860	4280	4710	5140	5570	6000	—	—	CMD63B600
	700	4000	4570	5140	5710	6280	6850	7420	8000	—	—	CMD63B700
	800	3000	3430	3860	4280	4710	5140	5570	6000	CMD63L800	—	—
	800	4000	4570	5140	5710	6280	6850	7420	8000	CMD63A800	—	CMD63B800
	800	5000	5715	6430	7145	7860	8575	9290	10000	CMD63H800	—	—
ND6	800	4000	4570	5140	5710	6280	6850	7420	8000	—	ND62B800	ND63B800
	900	5000	5715	6430	7145	7860	8575	9290	10000	—	ND62B900	ND63B900
	1000	5000	5715	6430	7145	7860	8575	9290	10000	—	ND62B100	ND63B100
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	ND62B120	ND63B120
NXD6	900	5000	5715	6430	7145	7860	8575	9290	10000	—	NXD62B900	NXD63B900
	1000	5000	5715	6430	7145	7860	8575	9290	10000	—	NXD62B100	NXD63B100
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	NXD62B120	NXD63B120
HND6	800	4000	4570	5140	5710	6280	6850	7420	8000	—	HND62B800	HND63B800
	900	5000	5715	6430	7145	7860	8575	9290	10000	—	HND62B900	HND63B900
	1000	5000	5715	6430	7145	7860	8575	9290	10000	—	HND62B100	HND63B100
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	HND62B120	HND63B120
HNXD6	900	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HNXD63B900
	1000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HNXD63B100
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HNXD63B120
CND6	800	4000	4570	5140	5710	6280	6850	7420	8000	—	—	CND63B800
	900	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CND63B900
	1000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CND63B100
	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CND63B120
PD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PD63B120
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PD63B140
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PD63B160
PXD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PXD63B120
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PXD63B140
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	PXD63B160
HPD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPD63B120
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPD63B140
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPD63B160
HPXD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPXD63B120
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPXD63B140
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HPXD63B160
CPD6	1200	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CPD63B120
	1400	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CPD63B140
	1600	5000	5715	6430	7145	7860	8575	9290	10000	—	—	CPD63B160
RD6	1800	5000	5715	6430	7145	7860	8575	9290	10000	—	—	RD63B180
	2000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	RD63B200
RXD6	1800	5000	5715	6430	7145	7860	8575	9290	10000	—	—	RXD63B180
	2000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	RXD63B200
HRD6	1800	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HRD63B180
	2000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HRD63B200
HRXD6	1800	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HRXD63B180
	2000	5000	5715	6430	7145	7860	8575	9290	10000	—	—	HRXD63B200

Maximum Frame Amp Rating	2-Pole Catalog Number	3-Pole Catalog Number	Self-Protective Instantaneous Override ±20%③
100	**BQ2S060■** **BQ2S100■**	**BQ3S060■** **BQ3S100■**	1000 1000
125	**ED22S100A■** **ED42S100A■** **ED42S125A■** **ED62S100A■** — **CED62S100A■** **CED62S125A■**	**ED23S100A** **ED43S100A** **ED43S125A** **ED63S100A** **ED63S125A** **CED63S100A■** **CED63S125A■**	1000 1000 1000 1000 1000 1000 1000
250	— **FXD62S250A** **HFXD62S250A■** ①	**HQR23S250HA** **FXD63S250A** **HFXD63S250A■** **CFD63S250A■**	2000 3200 3200 3200
400	**JXD22S400A■** — — ①	**JXD23S400A** **JXD63S400A** **HJXD63S400A■** **CJD63S400A■**	6000 6000 6000 6000
600	— — ①	**LXD63S600A** **HLXD63S600A■** **CLD63S600A■**	6000 6000 6000
800	— — ①	**LMXD63S800A■** **MXD63S800A** **CMD63S800A**	8000 8000 8000
1200	— ①	**NXD63S120A** **CND63S120A■**	10000 10000
1600	①	**PXD63S160A⑤**	10000
2000	①	**RXD63S200A■⑤**	10000

Ordering Information

Order by catalog number. Switches include frame and self protective trip unit only. Order lugs separately from pages 7-164 to 7-166.

■ Built to order. Allow 2–3 weeks for delivery.

① For 2-pole application use outside poles of 3-pole circuit breaker.

② For additional lugs see pages 7-164 to 7-166.

③ Molded case switches up to R frame contain a self protecting instantaneous element, which may open circuit above their override set point.

④ UL file E57556 Volume 1, section 2 and CSA LR 42022-51.

⑤ Requires mounting block MB9301 or MBR9302.

Lugs pages 7-164 to 7-166
Enclosures Section 6
Accessories pages 7-171 to 7-176

Breaker Description

The ever-increasing use of plant and energy management systems has intensified the demand for circuit breakers supporting multiple open protocols to monitor and control the flow of energy in the power system. The extensive and modular WL family of circuit breakers and accessories provides this for applications from 200A to 6000A.

Applications

WL breakers can be applied as main, tie, feeder or distribution breakers in low-voltage electrical power systems.

Versions

- Frame ratings: 800A to 6000A
- 3 physical frame sizes
- Rated nominal operating voltage up to 635VAC
- Seven interrupting classes from 50kA to 200kA at 480V
- Circuit breaker or non-automatic switch
- WL Circuit Breakers are delivered as complete assembled breakers or individual frames, guide frames, and accessories

Installation Types

Fixed-mounted or Draw-out version.

Standards

- WL ANSI / UL 1066 Circuit Breakers will satisfy: C37.13, C37.16, C37.17, C37.50, NEMA SG3
- WL UL 489 Circuit Breakers will satisfy: UL 489
- WL Circuit Breakers are suitable for use in UL 1558 LV Switchgear and UL 891 LV Switchboards

Conditions of Application

WL Circuit Breakers are designed to meet standard Industrial and Commercial application requirements.

Uniform Dimensions

WL Circuit Breaker dimensions differ only in the device width, which varies by frame size. With the exception of the 200kA ANSI Frame Size II which has an additional 5" in depth to accommodate integral fuses and the UL489 Frame Size I which measures only 15" in height to allow six-high stacking in switchboards.

Minimal Space Requirements

The WL design is extremely compact without sacrificing performance and does not use energy-wasting heat sinks.

Trip Units

The electronic, micro processor-based trip unit is auxiliary voltage-independent for all protective functions and enables adaptation to the different protection requirements of distribution systems, motors, transformers and generators.

Non-Automatic Switch

A special version of the circuit breaker is used as a non-automatic switch.
The non-automatic switch is constructed without a trip unit and has no protective function. A possible application is for use as a tie in systems with parallel feeds.

Main Bus Connectors

Breakers are equipped with standard vertical main bus connections. Horizontal bus connections are available as an option in Frame Size 1 and 2 up to 2000A.

Communication Capability

MODBUS or PROFIBUS communications transmit the acquired and metered data, such as current values, breaker status, trip log, etc. to a central monitoring computer. With a factory installed metering function option, the WL acquires data useful for power management and can contribute to a significant savings in energy costs. A new, internal circuit breaker bus enables the expansion of breaker functionality through the integration of many secondary functions which were previously separate, including:

- Control of analog displays
- Options for testing the communication setup
- Display of breaker status and reason for trip
- Input modules for reading other external signals and transmitting these signalsvia PROFIBUS or MODBUS communication
- A selection of output modules to provide contact closures based on events or measured-value setpoints. It is not only possible to monitor the breaker remotely, it is also possible to open and close the breaker as well as setting parameters remotely

Operating Mechanisms

Circuit breakers can be optionally delivered with different operating mechanisms, including:

- Manual operating mechanism with mechanical closing (standard)
- Manual operating mechanism with mechanical and electrically interlocked closing
- Motorized operating mechanism with mechanical and electrically interlocked closing. Operating mechanisms with electrically interlocked closing are suitable for synchronizing tasks

Auxiliary Contacts

Auxiliary switches can be added according to the type of installation. They are easily mounted via front, top mounted terminal blocks.

Modularity

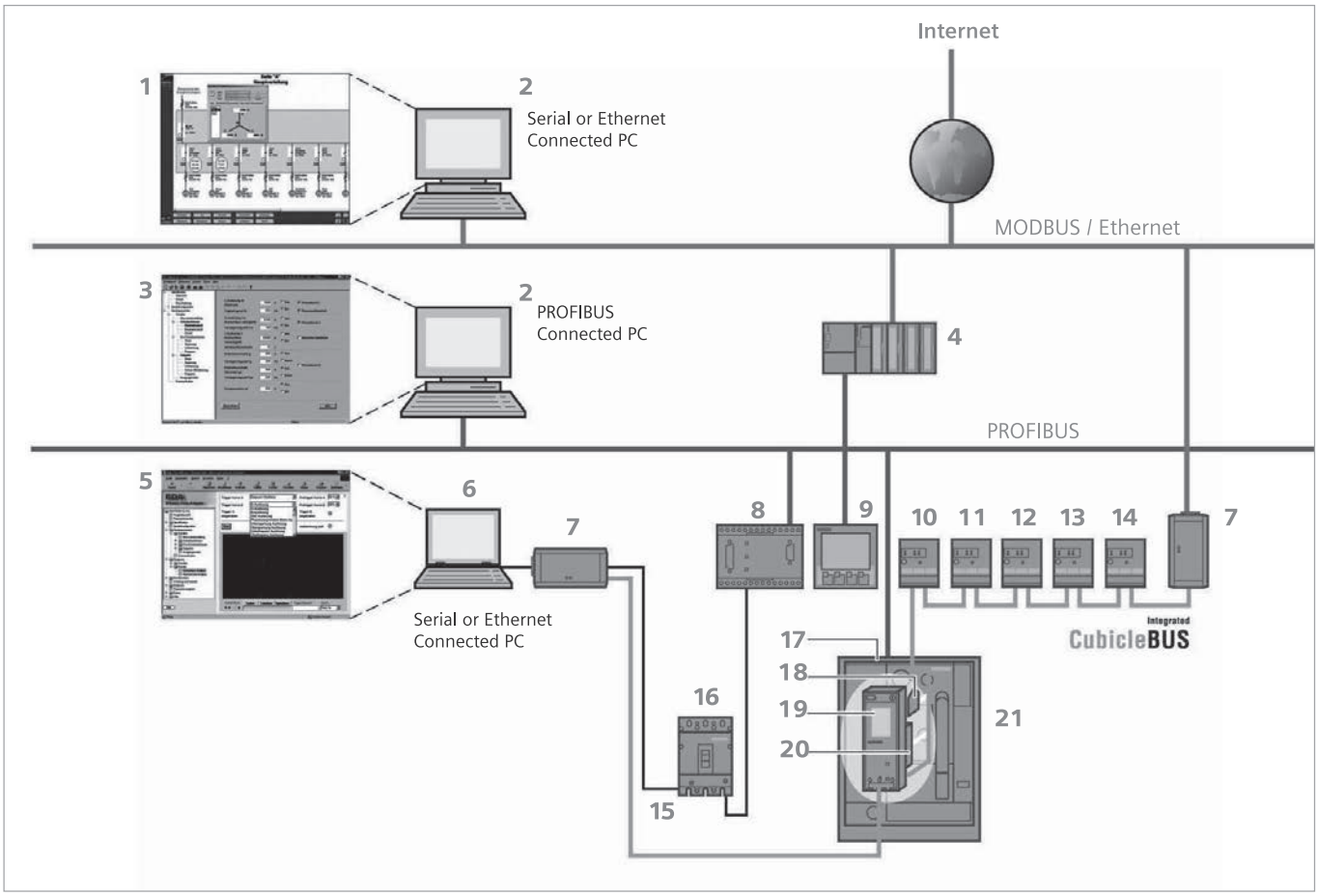
Common guide frames for the draw-out version make them completely interchangeable between the UL 489 and ANSI / UL 1066 rated circuit breakers. Components, such as auxiliary releases, motorized operating mechanisms, trip units, current sensors, auxiliary signal switches, automatic reset devices or interlocks can be used to modify or retrofit any circuit breaker to meet changing requirements. The main contacts can be replaced to extend the life of the circuit breaker and feature integrated contact wear indicators.

Electronic Trip Unit Modularity

Modularity is the outstanding feature of the new WL Circuit Breakers. The trip units themselves can be retrofitted with special LCDs, ground fault modules, rating plugs and communication modules.100% Rated Circuit Breaker WL circuit breakers are designed for continuous operation at 100% of their current rating without the need for external heat sinks.

Conditions of Application

WL Circuit Breakers are designed to meet standard Industrial and Commercial application requirements.



A spectrum of power distribution communication

1 WinPM.Net software
2 Server or desktop PC
3 Switch ES power software
4 PLC
5 BDA web server
6 Portable PC
7 Breaker data adapter (BDA)
8 COM10 PROFIBUS module or COM11 MODBUS module
9 Power metering device
10 Zone selective interlock
11 Digital input module
12 Analog output module
13 Digital output module
14 Relay output module
15 VL CubicleBus network
16 VL feeder breaker
17 Input power and communication terminals
18 Breaker status sensor (BSS)
19 Trip unit display
20 Metering function
21 WL power breaker

Trip Unit Functions

Basic Protective Functions		ETU745	ETU748	ETU776
Long-time overcurrent protection	L	●	●	●
Short-time delayed overcurrent protection	S	●	●	●
Instantaneous overcurrent protection	I	●	●	●
Neutral conductor protection	N	●	●	●
Ground fault protection	G	○	○	○
Additional Functions				
Selectable neutral protection		●	●	●
Defeatable short-time protection		●	—	●
Defeatable instantaneous protection		●	—	●
Selectable thermal memory		●	●	●
Zone selective interlocking		●	●	●
Selectable I2t or fixed short-time delay		●	●	●
Adjustable instantaneous pick-up		●	—	●
Selectable I2t or I4t long-time delay		●	●	●
Adjustable short-time delay and pick-up		●	●	●
Selectable and adjustable neutral protection		●	●	●
Dual protective setting capability		—	—	●
Dynamic arc-flash sentry		—	—	●
Extended instantaneous protection		●	●	●
Parameterization and Displays				
Parameterization by rotary switches (10 steps)		●	●	—
Parameterization by communication (absolute values)		—	●	●
Parameterization by menu/keypad (absolute values)		—	—	●
Remote parameterization of the basic functions		—	—	●
Remote parameterization of the additional functions		—	—	●
Alphanumeric LCD		○	○	—
Graphical LCD		—	—	●
Metering Function				
Metering function		○	○	○
Metering function Plus		○	○	○
Communication				
CubicleBUS		●	●	●
Communication via PROFIBUS-DP		○	○	○
Communication via the MODBUS		○	○	○
Communication via the Ethernet (BDA)		○	○	○

● Standard — Not available ○ Optional

Rating Plug

It is no longer necessary to replace the current transformer to change the rated current of the breaker. Instead, you simply replace the rating plug which is easily accessible on the front of the trip unit. The circuit breaker is set to the new rated current quickly and is already correctly labeled.

Long Time Overcurrent Protection with Switchable I2t/I4t Characteristics

The long time overcurrent protection in the ETU745, ETU755 and ETU776 trip units can be switched between an I2t and I4t characteristic to improve coordination between upstream circuit breakers and fuses.

Front Panel

The front panel is designed so that it can be accessed through a cutout in the door, which means that all controls and displays are accessible even when the cubicle door is closed. The front panels of all Frame Size II and Frame Size III circuit breakers are identical, and allow for two different through-door access designs: Trip unit and front panel controls or front panel controls only. The degree of protection of the front panel is IP 20.

Environmental Protection

The plastics used are halogen-free and recyclable.

Safety and Reliability

In order to help protect the electrical distribution system and circuit breaker against unauthorized breaker operations, a wide range of locking devices can be installed or retrofit, including:

- Lockable drawout version to protect against unauthorized removal (standard)
- High degree of protection through Plexiglas cover
- Mechanical reclosing lockout after long-time, short-time or instantaneous trip (optional)
- Devices with trip unit ETU745 or higher are equipped with temperature sensors on the BSS and COM15/COM16 (standard)
- Lock provision for locking the breaker in the OPEN position
- Lockable covers for the CLOSE button
- Lockable racking handle prevents moving the breaker
- Lockable charging handle prevents charging the springs

Standard Version Features

WL Circuit Breakers have the following standard equipment:

- Mechanical CLOSE and mechanical OPEN push buttons
- Manual operating mechanism with mechanical closing
- Contact position indicator
- Front panel ready-to-close indicator
- Spring charge indicator
- Rear vertical main contacts
- Main contact replacement flag
- Auxiliary plug system with bare wire pressure screw terminals. Delivery includes all auxiliary plugs necessary for both factory installed and future field installed accessories
- Mechanical trip indicator of the overcurrent release system
- Automatic reset after trip
- The front panel cannot be removed if the circuit breaker closed
- Laminated main contact fingers as part of the breaker contact strip on the drawout circuit breaker
- Breaker position display in the operator's panel
- Captive crank handle for racking out the breaker
- Guide frame with guide rails for easy handling of draw-out version
- Breaker cannot be moved in the CLOSED state
- Rated current coding between the guide frame and the breaker
- Suitable for reverse feed applications
- The breaker is always equipped with the required number of secondary disconnect blocks

Exclusive Features

Generator/Utility Protection Sets

24/7/365 power availability is critical for some systems. On-site generation capability is growing more and more common in many systems. All of the WL digital electronic trip units allow the system designer to precisely tailor trip settings for the most demanding requirements. However, the 776 trip unit allows one set of trip settings for a fully loaded utility feed and with a simple contact closure, the trip unit toggles to a second trip set tailored to provide optimal generator protection. The wide range of settings allows the WL to provide protection for a minimal generator capacity for only essential loads, through full backup for an entire facility. This dual utility/generator protection capability in a single circuit breaker allows the system designer unparalleled, cost effective, flexibility.

Dynamic Arc-Flash Sentry

A unique feature of the WL trip unit allows the system designer to achieve lower levels of arc flash energy and delayed tripping for selective trip coordination purposes. Dynamic Arc-Flash Sentry (DAS) employs the unique dual protective setting capability of the 776 trip unit, coupled with the ability to easily toggle to a lower arc flash parameter set. A normal operation parameter set can be optimized for selective trip coordination, while the second set is optimized for lower arc flash energy levels. The dynamic action comes from the ability to switch from the normal operation set to the arc flash limiting set based on the presence of personnel as they approach the flash protection boundary. A wide variety of switching methods may be used based on the needs of a particular facility. The capabilities range from fully automatic switching using appropriate occupancy sensors to manual switching via a key operation.

Extended Instantaneous Protection

Extended Instantaneous protection (EIP), another unique feature of the WL trip unit, allows the system designer to achieve full selective trip coordination up to the short-time rating of the frame while also allowing application of the breaker up to the interrupting rating of the frame. The typical power circuit breaker with an 'LS' trip unit, or when the instantaneous function is switched off on an 'LSI' trip unit, can only be applied up to it's short-time rating, commonly 85kA or less. For application on systems with levels of available fault current above the short-time rating, the typical 'LS' power circuit breaker cannot be applied or must employ an instantaneous override. This instantaneous override is set at as much as 20% below the short-time rating and can seriously compromise selective trip coordination with downstream breakers.

The WL, equipped with EIP, overcomes these limitations by providing full withstand capability, and full coordination, with a minus 0% short-time band tolerance up to 85kA on frame Size II and 100kA on Size III. Above fault currents of 20% higher than the full short-time rating, the WL breaker is self-protecting, and the EIP function will trip the breaker instantly to protect the frame and the system from these extremely high currents, as high as 150kA on frame Size III. One added benefit is that arc flash energy is greatly reduced in this high current region due to the instantaneous trip response that EIP provides.

For Use With Type(s)	Circuit Breaker Ampere Rating	Cables Per Lug	Lug Wire Range	Catalog Number
BQ, BQH, BQHF BQE, BQF, BL, BLH, BT④, BTH④, HBL, HBQ Switching Neutrals BG, BLG	**Line Side**			
	15–40	1 1	#14–#6 AWG Cu #12–#6 AWG Al	**TC1Q1**①②
	45–125	1 1	#8–#1 AWG Cu #6–#1/0 AWG Al	**TA1Q1**②
	Load Side			
	15–20	1 1	#14–#10 AWG Cu #12–#10 AWG Al	Lugs are integral to Circuit Breaker
	25–35	1 1	#14–#6 AWG Cu #12–#6 AWG Al	Lugs are integral to Circuit Breaker
	40–50	1 1	#8–#6 AWG Cu #8–#4 AWG Al	Lugs are integral to Circuit Breaker
	55–70 *exceptions in Table A	1 1	#8–#4 AWG Cu #8–#2 AWG Al	Lugs are integral to Circuit Breaker
	80–100	1 1	#4–#1/0 AWG Cu #2–#1/0 AWG Al	Lugs are integral to Circuit Breaker
	110–125	1 1	#2–#1/0 AWG Cu #1/0–#2/0 AWG Al	Lugs are integral to Circuit Breaker
BQD, CQD BQD6, CQD6	**Line Side (CQD, CQD6) & Load Side**			
	15–40	1	#14–#6 AWG Cu #12–#6 AWG Al	Integral
	45–100	1	#8–#1 AWG Cu #6–#1/0 AWG Al	Integral
NGG, HGG, LGG	15–30	1	#14–#6 AWG Cu #12–#6 AWG Al	**TC1Q1**
	15–30	1	#14–#6 AWG Cu #12–#6 AWG Al	**3TC1Q1** (pkg. of 3)
	35–125	1	#8–#1/0 AWG Cu #8–#2/0 AWG Al	**3TC1GG20** (pkg. of 3)
	15–125	—	NUT KEEPER PLATE	**TNKG3**③ (pkg. of 3)

Connector wire ranges and cavities are established in conjunction with Table 6.1.4.2.1 of UL 489 standards.

Table A

For Use With Type(s)	Circuit Breaker Ampere Rating	Cables Per Lug	Lug Wire Range	Number of Poles
BQ, BL, QP	**Load Side**			
	55-60	1	#8–#4 AWG Cu-Al #3 AWG requires 22 or 65 kAIC	This exception is applicable to 1- and 2-pole only

Note:

(A) Molded case circuit breakers having a rated ampacity of 125 amperes or less are to be connected with 60 or 75°C wire. Circuit breakers having a rated ampacity greater than 125 amperes shall only be cabled with 75°C cable unless otherwise indicated on the circuit breaker label. Exceptions to this rule are outlined in article 110-14 C(1)(2) of the 2005 National Electrical Code.

(B) Connector wire ranges and cavities are established in conjunction with Table 6.1.4.2.1 of UL 489 standards.

① Lug is steel.
② Sold in package of six.
③ One nut keeper plate is required with each lug on the NGG breaker.
④ BT and BTH lug wire range is limited to #14 - #12 AWG for Copper.

For Use With Type(s)	Circuit Breaker Ampere Rating	Cables Per Lug	Lug Wire Range	Catalog Number
QR2, QR2H, HQR2, HQR2H	100-250	1	#3–300 Kcmil Al/C	**3TA1QR300** (3 lugs per kit)
All 2, 3-pole ED2, ED4, ED6, ED6 ETI, HED4, HHED6	15–25	1	#14–#10 AWG (Cu) #12–#10 AWG (Al)	**SA1E025**
	30–100	1	#10–#1/0 (Cu or Al)	**LN1E100**
	110–125	1	#3-3/0 (Cu) #1-2/0 (Al)	**TA1E6125**
CED6 All 1-pole ED, HED	30–60	1	#10–4 (Cu or Al)	**LD1E060** (Load Side)
	70–100	1	#4–#1/0 (Cu or Al)	**LD1E100** (Load Side)
FXD6-A, FD6-A, HFD6, CFD6 HHFD6	70–250	1	#6 AWG–350 kcmil (Cu) #4 AWG–350 kcmil (Al)	**TA1FD350A**
SJD6-B, SHJD6-B SCJD6-B	65-200	1–2	#4 AWG–3/0 (Cu or Al)	**TA2J630**
JXD2(A), JXD6(A), JD6(A), SJD6-B, HJD6(A), HJXD6(A) HHJXD6, HHJD6, SHJD6-B, CJD6, SCJD6-B	200–400	1–2	3/0–500 kcmil (Cu) 4/0–500 kcmil (Al)	**TA2J6500**
LXD6(A), LD6(A), SLD6-B, HLD6(A), HLXD6(A), HHLXD6, HHLD6, SHLD6-B, CLD6, SCLD6-B	250–600	1–2	3/0–500 kcmil (Cu) 4/0–500 kcmil (Al)	**TA2J6500**
LMD6①, LMXD6①, HLMD6①, HLMXD6①, MD6, MXD6, SMD6-B, HMD6, HMXD6, SHMD6-B, CMD6, SCMD6-B	500–600	1–2	#1–500 kcmil (Cu or Al)	**TA2K500**
		1–3	1/0–500 kcmil (Cu or Al)	**TA3K500**
	500–800	1–2	500–750 kcmil (Cu or Al)	**TA2N750**②
ND6, NXD6, SND6-B, HND6, HNXD6, SHND6-B, CND6, SCND6-B	800–1200	1–4	250–500 kcmil (Cu or Al)	**2TA4P8500**②③ **3TA4P8500**②④
			250–500 kcmil (Cu or Al)	**2TA4N8500**③ **3TA4N8500**④
PD6, HPD6, CPD6 PXD6, HPXD6, SPD6-B, SHPD6-B	1200–1600	1–5	300–600 kcmil (Cu or Al)	**TA5P600**
PD6, PXD6, HPD6, HPXD6, SPD6-B, SHPD6-B, RD6, RXD6, HRD6, HRXD6, STD	1200–2000	1–6	300–600 kcmil (Cu or Al)	**TA6R600**

①Use TA2K500 or TA3K500 only.
②Used for 100% rated MD/ND frame breakers. Rated for 90° C cable.
③Contains 2 connectors plus 1 NDTS end barrier.
④Contains 3 connectors plus 1 NDTS end barrier.

For Use With Type	Circuit Breaker Ampere Rating	Cables Per Lug	Lug Material	Lug Wire Range	Qty Per Catalog No	Catalog Number
QR2, QR2H, HQR2, HQR2H	100-250	1	Cu	#3 - 300 Kcmil Cu ONLY)	3	**3TC1QR2520** (3 lugs per kit)
ED, HED 1, 2 & 3-pole	1, 2 & 3-pole 30-125	1	Cu	#10–#1/0 (Cu)	1	**TC1ED6150**
HFD6, HHFD6, CFD6, F(X)D6-A	70–250	1	Cu	#6 AWG–350 kcmil (Cu)	1	**TC1FD350**
J(X)D2(A), J(X)D6(A), HJD6(A), HHJD6, SHJD6-B, L(X)D6(A), HHLD6, SCD6-B, HLD6(A), SHLD6-B, CJD6, CLD6, SCJD6-B, SCLD6-B	200–600	1 1–2	Cu	3/0–600 kcmil (Cu) 3/0–500 kcmil (Cu)	1 1	**TC1J6600**① **TC2J6500**①
	250–600	1 1	Al	500–750 kcmil (Al) 500–600 kcmil (Cu)	1	**TA1L6750**
SMD6-B, M(X)D6, HM(X)D6, HMD6, CMD6, SCMD6-B, SND6-B, N(X)D6, HN(X)D6, SHND6-B, CND6, SCND6-B	500–600	1–2	Cu	#1 AWG–500 kcmil (Cu)	1	**TC2K500**
	700–800	1–2	Al	500–750 kcmil (Cu) 500–750 kcmil (Al)	2 3	**2TA2N8750** **3TA2N8750**
	800–1200	1–3	Al	500–750 kcmil (Cu) 500–750 kcmil (Al)	2 3	**2TA3N8750** **3TA3N8750**
R(X)D6, HR(X)D6	1600–2000	1–5	Cu	300–600 kcmil (Cu)	1	**TC5R600**
P(X)D6, HP(X)D6, CPD6, SPD6-B, SHPD6-B	1200–1600	1–4	Al	600–750 kcmil (Cu/Al)	1	**TA4P750**▲

Compression Lugs

For Circuit Breaker Types	Ampere Rating	Poles	Lugs Per Kit	Lug Wire Size	Catalog Number
Lugs (contains indicated number of lugs and necessary hardware per kit)					
ED2, ED4, ED6, HED4, HHED6, CED6	15–125	1, 2, 3	1	#2/0 AWG Cu/Al	**CCE125**
QR2, QR2H, HQR2, HQR2H	100-250	2-3	1	#6 - 350kcmil Al/Cu	**CCQ250**
F(X)D6-A, HF(X)D6, HHF(X)D6, CFD6	125–250	2, 3	1	350 kcmil	**CCF250**
JXD2-A, J(X)D6-A, HJ(X)D6-A, HHJ(X)D6-A, CJD6, SJD6-B, SHJD6-B, SCJD6-B, L(X)D6-A, HL(X)D6-A, CLD6, SLD6-B, SHLD6-B, SCLD6-B	200–600	2, 3	1	500 kcmil	**CCL600**
Kits (contain lugs and hardware for complete line or load end of 2 or 3-pole breaker)					
M(X)D6, HM(X)D6, CMD6, SMD6-B, SHMD6-B, SCMD6-B	500–800	2	6	500 kcmil	**CCM800K2**
		3	9		**CCM800K3**
N(X)D6, HN(X)D6, CND6, SND6-B, SHND6-B, SCND6-B	900–1200	2	8		**CCN1200K2**
		3	12		**CCN1200K3**

Distribution Lugs②

For Circuit Breaker Types	Ampere Rating	Poles	Lugs Per kit	Wires Per Lug	Lug Wire Size	Catalog Number
ED2, ED4, ED6, HED4, HHED6, CED6	15-125	1,2,3	1	6	#14-#4 AWG Cu #6-#4 AWG Al	**TA6ED06**
F(X)D6-A, HF(X)D6, HHF(X)D6, CFD6	70-250	2,3	1	6	#14-#4 AWG Cu #6-#4 AWG Al	**TA6FD04**
JXD2-A, J(X)D6-A, HJ(X)D6-A, HHJ(X)D6-A, CJD6-A, SJD6-B, SHJD6-B, SCJD6-B, L(X)D6-A, HL(X)D6-A, CLD6-A, SLD6-B, SHLD6-B, SCLD6-B	200-600	2,3	1	6	#14-2/0 AWG Cu #6-2/0 AWG Al	**TA6JD20**

▲ Built to order. Allow 6–8 weeks for delivery.

①Used for 100% rated JD/LD frame circuit breakers.
② Special purpose wire connectors, not for general use.

A variety of internal and external accessories, as well as modifications, are available to adapt Siemens circuit breakers to special installation requirements. UL listed internal accessories for 100 through 2000A circuit breakers are field-addable.

Internal accessories fine tune an electrical distribution system, allowing control of the circuit breakers to meet special application requirements. For example, emergency situations may dictate tripping critically placed circuit breakers quickly. Shunt trips accomplish this conveniently and efficiently. Or, when voltage drops are a concern, undervoltage trips automatically open the circuit breaker at a predetermined voltage level.

A wide range of external operating and mounting accessories is also available. For example, face, shallow, and back mounting plates are ideal for tailoring BQ circuit breakers to OEM applications. A complete line of operating handles and handle-blocking devices meet switchboard, enclosure and safety needs. Plug-in mounting assemblies, which simplify switchboard mounting of circuit breakers and permit breaker removal without disconnecting bus or cable connections, are available.

50°C Ambient Calibration — Not UL listed and not available for solid state, 100% rated breakers or 400HZ calibrated breakers.

For BL Type Circuit Breakers
— Add suffix 'M' to catalog number
(Example: B120M) ..... No Charge

For BQ and ED Frame Circuit Breakers
— Replace 'B' in catalog number with 'M' ..... No Charge
(Example: BQ3M060, ED63M060)

For FD, JD, LD, LMD, MD, ND, PD, and RD Frame Circuit Breakers
Non-Interchangeable Trip (3–pole only) ..... No Charge
— Replace 'B' in catalog number with 'M'
(Example: FXD63M225, JXD63M400)

400 HZ Calibration

Not UL Listed
For all Not UL Listed Circuit Breakers, see derating tables on page 7-177 and order standard circuit breakers

Fungus Proofing

All 3VA, BQD, CQD, GB, GG, ED, FD, JD, LD, LMD, MD, ND, PD, RD, MG, NG, and PG Frame Circuit Breakers are inherently fungus resistant and do not require special treatment.

For BL, and BQ Type Circuit Breakers ..... Add $10.00 net per pole
— Consult Sales Office for Availability

For all other Circuit Breaker Types ..... Add $160.00 net per device
— Consult Sales Office for Availability

Certificate of Compliance with Test Report (catalog number CERT OF COMP.) Add $210.00 net
Certificate of compliance testing must be performed on the actual device being shipped. The certificate cannot be provided after initial shipment. Order for devices with COC requirement must be placed directly with the factory by the sales office and shipped directly to the end user.

UL 489 Supplement SB Naval Use Breakers

Breakers tested to UL 489 Supplement SB are qualified for use on non combat and auxiliary naval vessels.

Various Siemens molded case breakers can be labeled "NAVAL" in compliance with UL 489 Supplement SB. See table to the right for specific breaker types and UL file references.

Supplement SB testing comprises two sets of vibration tests. The first is to find mechanical resonances in the product and to subject the breaker to extreme testing at each resonant frequency. The second is a swept frequency test, in which the frequency of excitation is changed in intervals of 1Hz, and held at each frequency for five minutes. The excitation frequencies run from 4 to 33Hz, and the test is conducted in each of the three orthogonal axes of the breaker.

During these tests, the breaker must not trip from the closed position, nor may the contacts touch from the open position. Calibration and insulation resistance are also verified during the test.

For detailed information, refer to UL 489, Supplement SB.

Ordering Information

For "NAVAL" label, add **$75.** net per catalog number per order. Order must be placed directly with the factory by Siemens Sales Office.

Breaker Type	UL File
BL	E82615, Vol 1, Sec 1 & 4
NGB	E10848, Vol 10, Sec 3
CED6	E10848, Vol 4, Sec 13
HED4, ED6	E10848, Vol 4, Sec 11
FXD6, HFD6, HHFD6	E10848, Vol 4, Sec 17
HHJD6	E10848, Vol 4, Sec 20

Feature Combinations

The available feature combinations are shown in the chart below. For applications requiring combinations of features not listed in this chart, consult the sales office for availability.

Breakers	Modules Per Breaker	Avail. On Breaker Poles	ST	ST/ AUX	ST/ ALSW	ST/ AUX/ ALSW	UVT	UVT/ AUX	UVT/ ALSW	UVT/ AUX/ ALSW	AUX	AUX/ ALSW	ALSW	Elect. Bell Alarm	Ground fault	Grd fault w/Bell
QP, BQ, BL①	1	1, 2, 3	1	—	—	—	—	—			1,2	—	—	—	—	—
BQD, CQD, GB, GG	1	2, 3	1	1/1	—	—	—	—			1,2	1/1	1	—	—	—
QR	1, 2	2, 3	1	1/1	—	—	—	—			2	—	—	—	—	—
All ED	1	1, 2, 3	1	1/1,1/2	1/1	1/1/1	1	1/1, 1/2	1/1	1/1/1	1, 2	1/1, 2/1	1	—	1	1
All FD	2	2, 3	1	—	—	—	1	1/1	—	—	1, 2	1/1	1	—	—	—
All JD, LD, LMD②	2	2, 3	1	1	—	—	1	1/1, 1/2	—	—	1, 2	1/1, 1/2	1, 2	—	—	—
SJD, SHJD, SCJD,SLD, SHLD, SCLD③	1	3	1	1	—	—	1	1/1, 1/2	—	—	1, 2	1/1, 1/2	1, 2	—	—	—
All MD, ND, PD, RD Including Electronic trip④	2	2, 3	1	1/1	—	—	1	1/1, 1/2	—	—	1, 2	1/1, 2/1	1, 2	—	—	—

Shunt Trip (ST)

One or all critical circuit breakers may be tripped from a distant control point by use of a shunt trip device. A shunt trip operates through an auxiliary switch contact; when the breaker opens, current is not maintained on the shunt trip coil.

Undervoltage Trip (UVT)

When voltage drops to a value below 35% of the nominal coil rating, the undervoltage trip device automatically opens the breaker. The operation is instantaneous, and the circuit breaker cannot be reclosed until the voltage returns to 85% of line voltage. The undervoltage trip, which is continuously energized, must be energized before the circuit breaker can be closed.

Auxiliary Switch (AUX)

For applications requiring remote "on" or "off" indication (or electrical interlocking), auxiliary switches are available. Each switch comprises an "A" (open when circuit breaker is open) and a "B" (closed when circuit breaker is open) contact with a common connection. (Form C)

Alarm Switch (ALSW)

The alarm switch contact is closed when the circuit breaker is opened automatically by an overload, short circuit, shunt trip or undervoltage trip. The alarm switch contact is open when the circuit breaker is reset.

For ED Frames

S01FD60

For FD Frames

S01FD60

For JD and LD Frames

①Factory assembled only
②If mechanical interlock is installed, no accessory module can be installed in the right pocket.
③If mechanical interlock is installed, no accessory module can be installed.
④If mechanical interlock is installed, no accessory module can be installed in the left pocket.

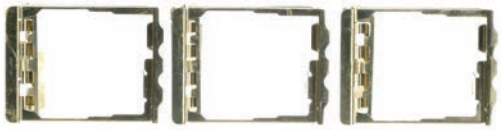
Circuit Breaker Accessories ④⑤⑥⑦⑧⑨

Catalog Number	For Use With Breaker Type	Number of Poles	Standard Package
Padlocking Device For locking breaker in "OFF" position. Note "ON" position does not affect breaker fuctionally			
ECPLD1	Type QP, BL, QAF2, QPF2, QE, QT-Duplex, BQ, BQXD	1P	3 Pieces
ECPLD1R	Type QP, BL, QAF2, QPF, QE, QT-Duplex, BQ, BQXD (Red Color)	1P	3 Pieces
ECPLD2	Type QP, BL, QAF2, QPF, QE, QT-Triplex & Quadplex, BQ, BQXD	2P	3 Pieces
ECPLD2R	Type QP, BL, QAF2, QPF, QE, QT-Triplex & Quadplex, BQ, BQXD (Red Color)	2P	3 Pieces
ECPLD3	Type QP, BL, QAF2, QPF, QE, BQ	3P	1 Piece
US2:ECPLD3R	Type QP, BL, QAF2, QPF, QE, BQ (Red Color)	3P	1 Piece
ECQLD3	Type QP, BL, BQ, BQXD	1P	10 Pieces
ECQLD4	Type QT-Duplex	QT-Duplex Breakers	10 Pieces
ECQLN3②	150-225 MBKA, QN, QNR	n/a	1 Piece
ECQTH4	Type QP, BL, BQH	Designed for (3) 1P Breakers	1 Piece
Handle Tie Provide simultaneous swiching of 2 adjacent handles.			
ECQAFC	Type QAF2, QAFN	2P	10 Pieces
ECQTH2	Type QT Duplex, BT Duplex, BTH Duplex, QTA, QTAN	Designed for (2) QT Duplex Breakers	25 Pieces
ECQTH3	Type QP, BL	2P	50 Pieces
Mechanical Interlock①			
ECQML12	Type QP, BL, BQ Interlock Bracket	Designed for 1" Breaker	10 Pieces
Handle Blocking Device For holding breaker in "ON" or "OFF" position. Not a lockout/tagout device			
ECQL1	Type QP, BL, BQ, BQXD	1P	10 Pieces
ECBX231M	Type QT-Duplex	1/2" Breakers	10 Pieces
Main Breaker Retainer			
ECMBR1③	EQ Load Centers		1 Piece
ECMBR2	PL, ES, and Ultimate Load Centers: 2-pole QP		1 Piece
ECMBR3	PL, ES, and Ultimate Load Centers: 3-pole QP		1 Piece
Mounting Accessories			
MB120	Type BQ, BQH Mounting Clips	1P	20 Pieces
FP9508	Type BQ, BQH FACE MOUNT PLATE	1P	10 Pieces
FP9555	Type BQ, BQH FACE MOUNT PLATE	2P	10 Pieces
FP9556	Type BQ, BQH FACE MOUNT PLATE	3P	10 Pieces
SMB6R	Type BQ MOUNTING BRACKET	1P, 2P, 3P	6 Pieces
TCH65K	Type BQ MOUNTING ADAPTER		500 Pieces
BR2	Type BQ, BQH, BQXD Back Mounting Plates	2P	10 Pieces
BR3	Type BQ, BQH, BQXD Back Mounting Plates	3P	10 Pieces
BR4	Type BQ, BQH, BQXD Back Mounting Plates	4P	10 Pieces
I0204ML1125CU	Type QP Back Mounting Plates	1P, 2P	10 Pieces
I0303ML3100CU	Type QP Back Mounting Plates	3P	10 Pieces
Replacement Lugs			
TA1Q1	Type BQ, NGG 100A Al Cu LGS	n/a	6 Pieces
TC1Q1	Type BQ, NGG 40A Al Cu LUGS	n/a	6 Pieces
Finger Shield			
BQFS1K	Type BQXD Finger Shield (Bulk Pack)	n/a	1000 Pieces
BQFS2	Type BQXD Finger Shield	n/a	2 Pieces
Filler Plate			
ECQF3	1" Filler Plate	n/a	5 Pieces

① For a complete list of standby power mechanical interlock kits, see page 1-25
② For use with Ultimate Load Center Main Breakers
③ Not suitable for use on 15-50A, 10 AIC Type QP Circuit Breakers
④ QP Type includes QPH, HQP
⑤ BL Type includes BLH, HBL
⑥ BQ Type includes BQH, HBQ
⑦ QAF2 Type includes QAFH2, BAF2, BAFH2, QFGA2, QFGAH2, BFGA2, BFGAH2
⑧ QPF Type includes QPHF, BLF, BLHF
⑨ QE Type includes QEH, BLE, BLEH

Padlocking Device

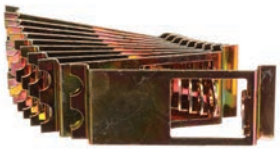
ECPLD1



ECPLD2

ECPLD1R/2R/3R (Single pole pictured. 2-/3-pole available)

ECQLD3



ECQLD4

ECQTH4

Handle Tie

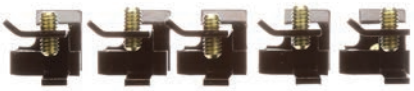
ECQAFC

ECQTH2

ECQTH3

Handle Blocking Device

ECQL1



ECBX231M

Main Breaker Retainer

ECMBR1

ECMBR2

Mechanical Interlock

ECQML12

Mounting Accessories

MB120

SMB6R

I0204ML1125

FP9508

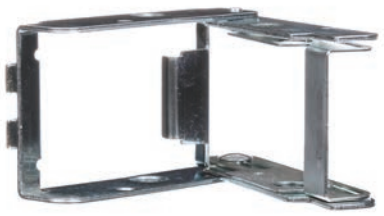
FP9555

FP9556

Handle Ties with Padlock Device

Provide simultaneous switching of 2 or 3 adjacent handles.
Do not provide common trip.

For Use With Breaker Frame(s)	Catalog Number	Standard Package	Wt Lb/ Std Pkg
BQD, NGB, HGB, LGB	**BQDHT2**	10	½
	BQDHT3	10	½



FD Padlocking Device
FD6PLI

Padlocking Devices

For locking breaker in "OFF" position.

All QR	**HPLQR**	1	¼
All BQD, CQD, NGB, HGB, LGB	**BQDPLD**	1	⅛
NGG, HGG, LGG	**HPLG**	1	¼
All ED	**ED2HPL**	1	¼
All FD	**FD6PL1**	1	¼
All JD, LD, LMD	**JD6HPL**	1	¼
All MD, ND, PD, RD	**MN6PLD**	1	¼

Handle Blocking Devices

For holding breaker in "ON" or "OFF" position.
Not a lockout/tagout device.

All QR	**HBLQR**	1	1
All BQD, CQD, GG, GB	**BQDHBD**	1	¼
All ED	**E2HBL**	1	¼
All FD	**FD6HB1**	1	½
All JD, LD, LMD	**JD6HBL**	1	½
All MD, ND, PD, RD	**MN6BL**	1	½

FD Handle Blocking Device
FD6HB1

Handle Extensions

For replacement. One extension shipped with breaker.

All MD, ND, PD, RD	**EX11**	1	2

Terminal Shields

Breaker Type	Poles	Catalog Number	Standard Package
HGG, LGG, NGG	3	**TSSG3A**	1
JD, LD	3	**JDTERMSHIELD**	1
MD, ND, PD, RD	3	**MDTERMSHIELD**	1

Handle Extension
EX11

■ Built to order. Allow 2–3 weeks for delivery.
① Sold only in standard package quantities.

Face Mounting Plates

For Use With Breaker Frame(s)	Number of Poles	Catalog Number	Standard Package	Wt Lb/ Std Pkg
CQD, CQD6	1 2 3	**CQDFMB1** **CQDFMB2■** **CQDFMB3■**	1 1 1	¼ ¼ ¼
NGG, HGG, LGG	1 2 3	**FMPG1** **FMPG2** **FMPG3**	**1** **1** **1**	¼ ¼ ¼

Back Mounting Plates

ED2, ED4, ED6, HED4, HED6	1	**E2BMB**	1	¼

Mounting Screw Kits

CQD, CQD6	**CQDSMK**①	1	1¼
NGG, HGG, LGG	**MSKG4**①	1	¼
All QR	**MSQR3**	1	⅛
All ED (CED6 requires 2 kits)	**MSE6**① **MSE6100**②	1 100⑥	¼ 1
All FD (CFD6 requires 2 kits)	**MSF6**① **MSF650**③	1 50⑥	¼ 1
All JD, LD	**MSJ6**①	1	¼
All LMD	**MSLMD**	1	¼
All MD, ND,	**MSMN**	1	¼
All PD, RD	**MSPR6**	1	2

Mounting Screw Kit
MSE6

Mechanical Interlock
MI5444

"MI" Mechanical Interlocks

For Use With Breaker Type(s)	Panel⑦ Mounted	Plug-in Mounted	Standard Package	Wt Lb Std Pkg
All QR (Sliding Bar)	**SBMIQR**	—	1	1½
All FD	**MI5444**	**MI5444**	1	—
All JD, LD	**MI5413**④	—	1	1
All LMD	**MI5406**④■	—	1	1
All MD	**MI5404**⑤■	—	1	3
All ND	**MI5404**⑤■	—	1	3
All PD, RD	**MI5405**⑤▲	—	—	—

Service Entrance Barriers

For Use With Breaker Frames	Description	Catalog Number
All Enclosed ED Frame Breakers	Service Entrance Barrier Kit for 3-pole only 15A-100A ED Line side only 15-125A CED6 Line or load side	**SEBENED63**
All Enclosed FD Frame Breakers	Service Entrance Barrier Kit for 2- or 3-pole Line or Load side	**SEBENFD63**
All Enclosed JD & LD Frame Breakers	Service Entrance Barrier Kit for 2- or 3-pole Line or Load side	**SEBENJD63**
All Enclosed LMD Frame Breakers	Service Entrance Barrier Kit for 2- or 3-pole Line or Load side	**SEBENLMD63**
All Enclosed MD & ND Frame Breakers	Service Entrance Barrier Kit for 2- or 3-pole breakers with oversize lugs and NDTS shield Line or load side	**SEBENMND63EXT**
All Enclosed PD & RD Frame Breakers	Service Entrance Barrier Kit for 2- or 3-pole Line or Load side	**SEBENPRD63**

■ Built to order. Allow 2–3 weeks for delivery.

▲ Built to order. Allow 6–8 weeks for delivery.

①Kit consists of 4 screws and washers.
②Consists of 1 screw and washers (order 100).
③Consists of 1 screw and washers (order 50).

④With mechanical interlock in place, no accessory can be installed into circuit breaker right pole.
⑤Addition of the mechanical interlock will prevent accessory installation in the left pole.
⑥Sold only in standard package quantities. Multiply List Price Each times package quantity for full price.

⑦Mechanical interlock is not designed for use within Siemens panelboards.

Rotary Door Mounted Operating Handles
Types 1, 3, 3R , 12, 4 4X

For Use With Breaker Frames	Complete Mechanism Catalog Number		Handle Only	Breaker Operator	Shaft Only	
	Standard Depth	Variable Depth	Catalog Number	Catalog Number	Length (inches)	Catalog Number
ED①	CRHOESD	CRHOEVD	CRHOH③	RHOEBO	2	RHOSSD
FD	CRHOFSD	CRHOFVD		RHOFBO	12	RHOSVD
JD, LD	CRHOJSD	CRHOJVD		RHOJBO	16	RHOSXD
LMD	CRHOLMSD	CRHOLMVD		RHOLMBO		
MD, ND PD, RD	RHONSD	RHONVD	RHOH③	RHONBO④	3 12 24	RHONSSD▲ RHONSVD RHONSXD

RHOH

Rotary Door Mounted Operating Handles
Types 1 & 12

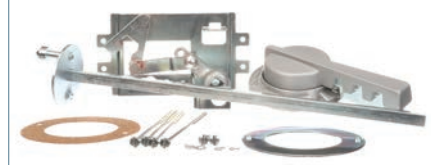
For Use With Breaker Frames	Standard Depth Catalog Number	Variable Depth Catalog Number	Handle and Shaft Catalog Number	Breaker Operator Catalog Number
CQD, NGG, HGG, LGG	—	RHOCQVD	RHOH62⑤	CQDOP
ED	D11CEU1	D11CEU2	—	—
FD	D11CFU1▲	D11CFU2	—	—
JD, LD	—	D11CJU2	—	—

For CQD, NGG, HGG and LGG red emergency handle, order assembly **RHOCQVDE** (includes handle and operator).▲
For CQD, NGG, HGG and LGG in a NEMA 3R enclosure, order **CQDOP34** operator, **RHOH** handle and **RHOSVD** shaft.
For CQD, NGG, HGG and LGG in a NEMA 4 or 4X enclosure, order **CQDOP34** operator, **RHOH4** handle and **RHOSVD** shaft.

CRHOH

Through Door Mounted Operating Handles②
Types 1 & 12

For Use With Breaker Frames	Standard Depth Catalog Number	Variable Depth Catalog Number
CQD, NGG, HGG, LGG	FMHOS	—
ED	E2RH1	E2RHV9
FD	F6RH1	F6RHV9

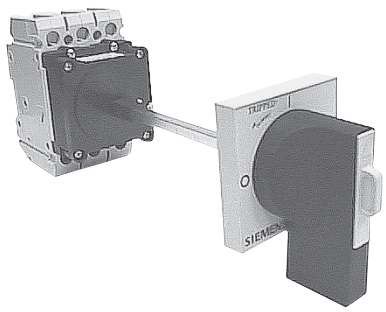


D11CEU2

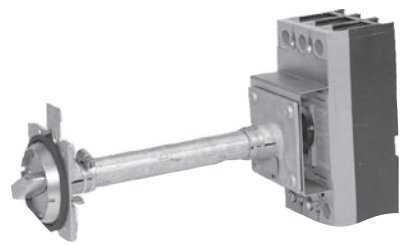
Door Latch Kits

Type	Catalog Number Right Hand	Catalog Number Left Hand
2 point latch	DKR2	DKL2■
3 point latch	DKR3	DKL3■

Standard Depth F6RH1



Rotary Handle **RHOCQVD**



Variable Depth **F6RHV9**

■ Built to order. Allow 2–3 weeks for delivery.

▲ Built to order. Allow 6–8 weeks for delivery.

① For use on 3-pole ED frame only.

② Meets the requirements of NFPA 79, section 5.3.3.1 for locking external operator disconnecting devices.

③ For 3 or 3R, order shaft and breaker operator as shown, and handle RHOH. For 4 & 4X, order handle **RHOH4**. Consult sales office for additional EG operator shaft lengths.

④ For extended shaft support order catalog number **RHONSB2**.

⑤ Length of shaft is 300mm (11.8 inches).

Max-Flex™, Flange Mounted Variable Depth Operators③

Frames	NEMA Type	Complete Kit Catalog Number	Handle Only Catalog Number	Breaker Operator Catalog Number	36" Cable Catalog Number
GG	1, 3 (R), 12	MFKG3R3	MFHG3R	MFMG	MFCF036
	4 (x)	MFKG4X3	MFHG4X		
ED	1, 3 (R), 12	FHOE036①	FHOH	FHOEBO①	FHOEC036
	4 (x)	—	FHOH4		
FD	1, 3 (R), 12	FHOF036	FHOH	FHOFBO	FHOFC036
	4 (x)	—	FHOH4		
JD, LD, SJD, SLD	1, 3 (R), 12	FHOJ036	FHOH	FHOJBO	FHOJC036
	4 (x)	—	FHOH4		
LMD	1, 3 (R), 12	FHOLM036	FHOH	FHOLMBO	FHOJC036
	4 (x)	—	FHOH4		
MD, ND, PD, RD, SMD, SND, SPD	1, 3 (R), 12	FHON048	FHOHN	FHONBO	FHONC048②
	4 (x)	—	FHOHN4		

Max-Flex™ handles are available with solid black handles instead of the customary "red for on" flange handle. These are preferred for use in IECmarkets, where red handles have specific meaning. Order components separately, appending the letter "i" to the catalog number (e.g. FHOHI).

Alternate Length Cable Only

Inches	ED Catalog Number	FD Catalog Number	JD/LD/LMD Catalog Number	MD/ND/PD/RD Catalog Number
48	FHOEC048	FHOFC048	FHOJC048	FHONC048
60	FHOEC060	FHOFC060	FHOJC060	FHONC060
72	FHOEC072	FHOFC072	FHOJC072	FHONC072
96	FHOEC096	FHOFC096	FHOJC096	FHONC096
120	FHOEC120▲	FHOFC120	FHOJC120▲	FHONC120▲
144	FHOEC144▲	FHOFC144▲	FHOJC144▲	FHONC144▲

Handle Auxiliary Switch

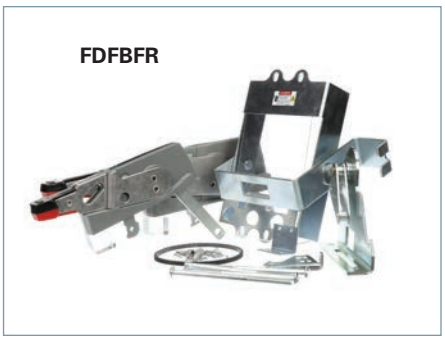
For use with Max-Flex and Rotary Door operators (FHOH and RHOH). 1 NO and 1 NC contact (Form C).

For Use With	Catalog Number
ED, FD, JD, LD, LMD, ND, PD, RD, SD, Max Flex	HAS1

Fixed Depth Flange Mounting

Frames	Minimum Enclosure Depth	NEMA Type	Left Hand Mount Catalog Number	Right Hand Mount Catalog Number
ED⑤	6.44	1, 3R, 12	FDFBEL▲	FDFBER▲
		4, 4X	FDFBEL4▲	FDFBER4▲
FD	6.44	1, 3R, 12	FDFBFL▲	FDFBFR▲
		4, 4X	FDFBFL4▲	FDFBFR4▲

Max-Flex™ handles are available with solid black handles instead of the customary "Red for On" flange handle. These are preferred for use in IECmarkets, where red handles have specific meaning. Order components separately, appending the letter "i" to the catalog number (e.g. FHOHI).



▲ Built to order. Allow 6–8 weeks for delivery.

①For 1- or 2-pole breaker order FHOED036 complete kit or FHOEDBO breaker operator only. Use MFHM3R handle.

②48 inch cable is standard length for M through R frame Max-Flex operators.

③Meets requirements of NFPA 79, section 5.3.3.1 for locking external operator disconnecting devices

④Consult sales office for additional cable lengths for EG Flex Shaft Operators. For 3-Pole only.

⑤3-Pole ED only.

Telemand® Motor Operator

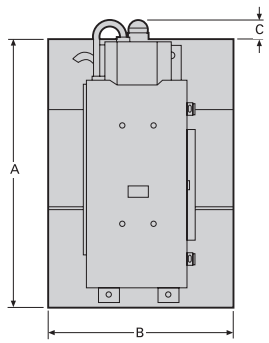
Breaker Frame	AC Voltage	Hinged to Open Right Catalog Number
FD	120	**MOF6120**
	240	**MOF6240**
JD, LD	120	**MOJ6120**
	240	**MOJ6240**
LMD	120	**MOLMD6120**
	240	**MOLMD6240**
MD, ND, PD, RD	120	**EMOPL120MN**
	240	**EMOPL240MN**

Telemand Motor Operator

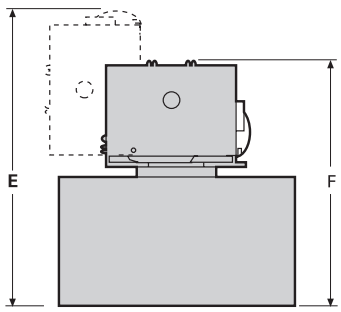
Dimensions

Frame	A	B	C	D	E	F
ED	7.04	4.31	—	4.31	13.84	8.84
FD	9.50	4.55	1.60	6.84	9.70	7.58
JD, LD, LMD	11.00	7.50	0.79	8.34	9.85	7.74
MD, ND, PD, RD	16.00	9.00	—	9.83	13.13	10.13

FD, JD, LD, LMD, MD, ND, PD, RD
Frames



Front View



Bottom View

Operating Currents

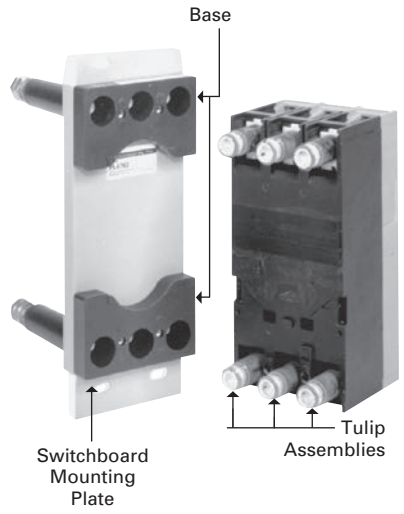
Catalog Number	On			Off			Reset (Amps)
	In-Rush (Amps)	Running (Amps)	Time (msec)	In-Rush (Amps)	Running (Amps)	Time (msec)	
MOF6120/L	13.6	5.5	200	13.6	5.5	175	5.5
MOF6240/L	7.6	3.5	200	7.6	3.5	185	3.5
MOLMD6120/L	13.6	6	210	13.6	6	185	6
MOJ6120/L	13.6	6	210	13.6	6	185	6
MOJ6240/L	7.6	3.5	217	7.6	3.5	185	3.5
EMOPL120MN	15	5.5	500	15	5.5	500	5.5
EMOPL240MN	7.6	3.25	500	7.6	3.25	500	3.25

For inches / millimeters conversion, see Application Data section.

▲ Built to order. Allow 6–8 weeks for delivery.

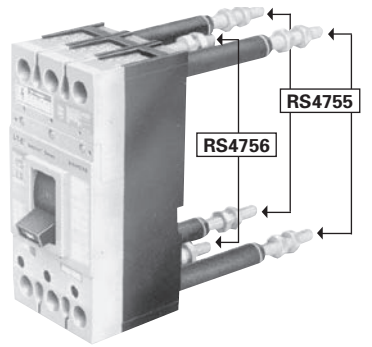
Plug-In Mounting Assemblies, Including Base and Tulip Assemblies

For Use With Breaker Frames	Poles	Line Side Catalog Number[2]	Load Side Catalog Number[2]	Steel Switchboard Mounting Plate[1] Catalog Number
All ED except CED	2	PC2637▲	PC2638▲	PL2616
	3	PC2657	PC2658	
CED	2	PC2637▲	PC2638▲	PL2617
	3	PC2657	PC2658	
All FD except CFD	2	PC4753▲	PC4753▲	PL4762
	3	PC4754	PC4754	
CFD	2	PC4753▲	PC4753▲	PL4763
	3	PC4754	PC4754	
All JD except CJD	2	PC5777▲	PC5777▲	PL5796
	3	PC5778	PC5778	
All LD except CLD	2	PC5660▲	PC5660▲	PL5680
	3	PC5661	PC5661	
All MD	2	PC5662▲	PC5662▲	PL9698
	3	PC5663	PC5663	
All ND	2	PC5664[3]▲	PC5664[3]▲	PL9699
	3	PC5666[3]	PC5666[3]	



Tulip Assemblies Separately

For Frame	3-Pole Catalog Number
ED	TCE3▲
FD	TCF3▲
JD	TCJ3▲
LD	TCL3▲
MD	TCM3▲
ND	TCN3▲



Circuit Breaker With Rear-Connecting Studs

Rear-Connecting Studs

For Use With Breaker Frames	Ampere Rating	Description	Extension Behind Breaker (inches)	Line Side Catalog Number[4]	Load Side Catalog Number[4]
All ED	100	Line Side (Short)	2.38	RS2643[5]▲	—
	100	Load Side (Short)	2.38	—	RS2644[5]▲
	100	Line Side (Long)	4.88	RS2641[5]▲	—
	100	Load Side (Long)	4.88	—	RS2642[5]▲
All FD	250	Short	3.12	RS4756[5]▲	RS4756[5]▲
	250	Long	7.06	RS4755[5]▲	RS4755[5]▲
All JD	400	Short	5.85	RS5774▲	RS5774▲
	400	Long	11.20	RS5773▲	RS5773▲
All LD	600	Short	5.85	RS5784▲	RS5784▲
	600	Long	11.20	RS5783▲	RS5783▲
CJD, SCJD CLD, SCLD	Add required shield kit.				CLRSJL3
LM(X)D6, HLM(X)D6	800	Short	5.85	RS5788▲	RS5788▲
		Long	11.20	RS5787▲	RS5787▲
All MD, ND	1200	Short	5.50	RS5786▲	RS5786▲
	1200	Long	8.00	RS5785▲	RS5785▲

▲ Built to order. Allow 6–8 weeks for delivery.

[1] Must be ordered separately with other plug-in assemblies.

[2] Each piece catalog number consists of (1) mounting block assembly and required tulip assemblies (2) for 2-pole, (3) for 3-pole

[3] For vertical bus mounting — for horizontal, substitute PC5665 for PC5664 and PC5667 for PC5666.

[4] Price includes one current stud, insulating tube, stud nuts and terminal shields, when required.

[5] For proper electrical clearance, studs must alternate between short and long stud lengths on circuit breaker poles (e.g. SLSLSL or LSLSLS).

[6] Plug-in assembly for EG breakers include line and load side in one assembly.

Note: The information provided on this and the next page is intended for reference and recommendation only. Because several variables can act on a circuit breaker's performance at the same time, the data below is based less on controlled testing, than on experience and engineering judgment. Contact Siemens for further information on special conditions and treatment.

High Ambient Temperatures

Because thermal-magnetic trip breakers are temperature sensitive and calibrated for a specific ambient of 40° C (104° F) (average enclosure temperature), a higher ambient will cause the breaker to trip at lower current than its nameplate rating, in other words, causing the breaker to "derate" (see Table 1). Similarly, the current carrying capacity of a circuit conductor is based upon a certain ambient temperature, a higher ambient will reduce its current carrying capacity, causing it to "derate." Thus, with a fluctuating temperature, a thermal-magnetic breaker will derate nearly parallel with its connected circuit conductors and maintain close circuit protection. If the application temperature exceeds 40° C (104° F) and is known, either a breaker specially calibrated for the higher ambient or one oversized according to Table 1 may be selected. In a case such as this, the circuit conductors should be oversized as well.

Siemens Sensitrip® IV and Type SB Encased Systems Breakers are insensitive to temperature changes. However, they do include circuitry to protect the components from abnormally high temperatures.

Moisture — Corrosion

For atmospheres having high moisture content and / or where fungus growth is prevalent, a special preventive treatment may be required.

Where the air is heavily laden with corrosive elements, breakers made with special corrosion-resistant finishes may be required.

Altitude

Reduced air density at altitudes greater than 6600 ft. (2000 meters) affects the ability of a molded case circuit breaker to transfer heat and interrupt faults. Therefore, circuit breakers applied at these altitudes should have interrupting, insulation and continuous currents derated as indicated in Figure 1.

Table 1 — Temperature Derating Data for Thermal-Magnetic Breakers

Reference Ampere Rating at 40°C (104°F)	Ampere Rating at: 50°C (122°F)	60°C (140°F)	Siemens Breaker Frames
15	13	11	BQ, BL, BQD, CQD, GG, GB, ED
20	18	16	
25	23	21	
30	28	26	
35	30	28	
40	37	34	
50	46	42	
60	56	52	
70	65	60	
90	84	78	
100	94	87	
125	114	100	
150	136	120	QR
175	159	140	
200	182	160	FD
225	205	180	
250	235	220	
300	276	252	JD
350	325	301	
400	372	340	LD
500	468	435	
600	564	525	MD
700	658	613	
800	754	704	ND
900	828	749	
1000	900	825	PD
1200	1090	1000	
1400	1304	1148	RD
1600	1500	1320	
1800	1690	1485	
2000	1880	1650	

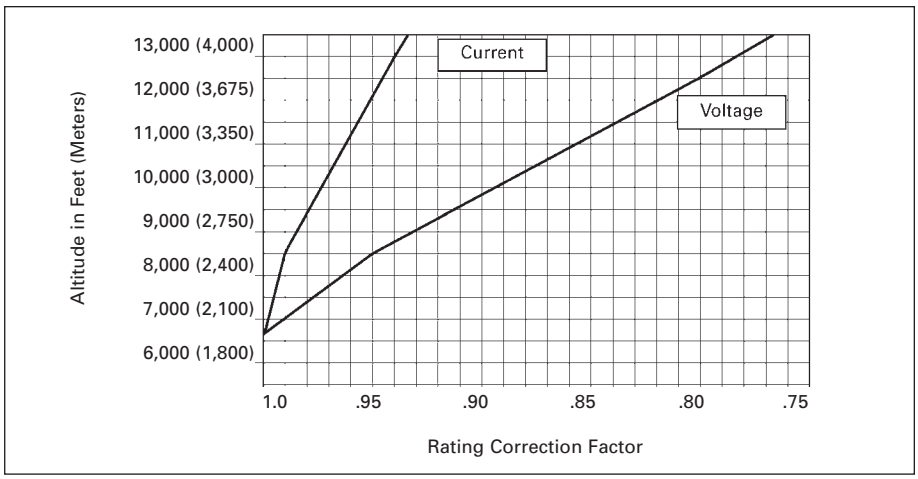


Figure 1 — Altitude Adjustment

400 Hz Systems①

Siemens molded case circuit breakers can be applied for overcurrent protection on 400Hz systems, commonly used to power computer installations, aircraft, military and other specialty equipment. Below are basic guidelines.

Circuit Breaker Derating Required

This table lists the maximum continuous current carrying capacity for Siemens breakers at 400Hz. Due to the increased resistance of the copper sections resulting from the skin effect produced by eddy currents at these frequencies, circuit breakers in many cases require derating. The thermal derating on these devices is based upon 100%, three phase application in open air in a maximum of 40° C (104° F) with 48 in. (1219 mm) of the specified cable or bus at the line and load side. Additional derating of not less than 20% will be required if the circuit breaker is to be utilized in an enclosure. Further derating may be required if the enclosure ambient temperature exceeds 40° C (104° F).

Cable and Bus Sizing

The cable and bus sizes to be utilized at 400Hz are not based on standard National Electric Codes tables for 60Hz application. Larger cross sections are necessary at 400Hz. All bus bars specified are based upon mounting the bars in the vertical plane to allow maximum air flow. All bus bars are spaced at a minimum of 0.25 in. (6 mm) apart. Mounting of bus bars in the horizontal plane will necessitate additional drafting. Edgewise orientation of the bus may change the maximum ratings indicated. If additional information is required for other connections of cable or bus, contact Siemens for information.

Application Recommendations

It is recommended that temperatures be measured on the line and load terminals or T-connectors of the center pole. These are usually the hottest terminals with a balanced load. A maximum temperature of 75° C (35° C over a maximum ambient of 40° C) would verify the particular application. Temperature profiles taken on these breakers can be correlated to ensure that the hottest points within the breaker are within the required temperature limits.

Factory Configuration

When required, molded case circuit breakers may be factory calibrated for 400Hz application. These breakers are specially labeled for 400Hz usage and their nameplate current rating will include the necessary derating factory. The highest "Maximum Continuous Amperes" rating at 400Hz, found in the table below approximates the highest specially calibrated 400Hz nameplate ampere rating available for a given frame size. Contact Siemens for ordering information on other breakers applied in 400Hz systems.

400Hz Breakers

Siemens Breaker Type	Maximum Continuous Ampere Rating At 40° C (104° F)②			75° C (167° F) Copper Cable per Pole	
	60HZ	400HZ			
	Open Air	Open Air③	Enclosed After Derating	No of Pieces	Wire Size
ED2, ED4, ED6, BQD, HED4, HED6, CED6, GG, GB	15	15	12	1	#14
	20	20	16	1	#12
	25	25	20	1	#10
	30	30	24	1	#10
	35	35	28	1	#10
	40	40	32	1	#8
	45	43	34	1	#8
	50	48	38	1	#8
	60	57	46	1	#6
	70	67	54	1	#4
	80	76	61	1	#4
	90	86	69	1	#3
	100	95	76	1	#3
	110	105	84	1	#2
	125	119	95	1	#1
QR2, QR2H, HQR2, HQR2H, FD6, FXF6, HFD6, HFXD6, CFD6	70	63	50	1	#4
	80	72	58	1	#4
	90	80	64	1	#3
	100	90	72	1	#3
	110	95	75	1	#2
	125	105	84	1	#1
	150	125	100	1	#1/0
	175	140	112	1	#2/0
	200	160	128	1	#3/0
	225	180	144	1	#4/0
	250	200	160	1	250 kcmil
JXD2, JD6, JXD6, HJD6, HJXD6, HHJD6, HHJXD6, CJD6	200	170	136	1	#3/0
	225	190	152	1	#4/0
	250	210	168	1	250 kcmil
	300	240	192	1	350 kcmil
	350	260	208	1	500 kcmil
	400	300	240	2	#3/0
JD6, JXD6, HJD6, HJXD6 100% Rated	200	170	170	2	#3/0
	225	190	190	2	#4/0
	250	210	210	1	250 kcmil
	300	240	240	1	350 kcmil
	350	260	260	1	500 kcmil
	400	300	300	2	#3/0

Siemens Breaker Type	Maximum Continuous Ampere Rating At 40° C (104° F)②			75° C (167° F) Copper Cable per Pole	
	60HZ	400/415HZ			
	Open Air	Open Air③	Enclosed After Derating	No of Pieces	Wire Size
LD6, LXD6, HLD6, HLXD6, HHLD6, HHLXD6, CLD6	250	210	168	1	250 kcmil
	300	240	192	1	350 kcmil
	350	260	208	1	500 kcmil
	400	300	240	2	#3/0
	450	340	272	2	#4/0
	500	375	300	2	250 kcmil
	600	420	336	2	350 kcmil
LD6, LXD6, HLD6, HLXD6, 100% Rated	250	210	210	1	250 kcmil
	300	240	240	1	350 kcmil
	350	260	260	1	500 kcmil
	400	300	300	2	#3/0
	450	340	340	2	#4/0
	500	375	375	2	250 kcmil
	600	420	420	2	350 kcmil
MD6, MXD6, HMD6, HMXD6, CMD6	500	400	320	2	250 kcmil
	600	430	360	2	350 kcmil
	700	500	400	3	250 kcmil
	800	560	448	3	300 kcmil
MD6, MXD6, HMD6, HMXD6, CMD6 100% Rated	500	400	400	2	250 kcmil
	600	430	430	2	350 kcmil
	700	500	500	3	250 kcmil
	800	560	560	3	300 kcmil
ND6, NXD6 HND6, HNXD6, CND6	800	560	448	3	300 kcmil
	900	600	480	3	350 kcmil
	1000	650	520	3	400 kcmil
	1200	780	624	4	350 kcmil
ND6, NXD6 HND6, HNXD6, CND6 100% Rated	900	600	600	3	350 kcmil
	1000	650	650	3	400 kcmil
	1200	780	780	4	350 kcmil
PD6, PXD6, HPD6, HPXD6, CPD6,	1200	780	624	4	400 kcmil
	1400	850	680	4	500 kcmil
	1600	960	768	5	500 kcmil
PD6, PXD6, HPD6, HPXD6, CPD6 100% Rated	1200	780	780	4	400 kcmil
	1400	850	850	4	500 kcmil
	1600	960	960	5	500 kcmil
RD6, RXD6, HRD6, HRXD6 80% Rated	1600	960	768	5	500 kcmil
	1800	1080	864	5	500 kcmil
	2000	1200	960	6	500 kcmil

①The information provided on this page is intended for reference and recommendation only. Because several variables can act on a circuit breaker's performance at the same time, the data above is based less on controlled testing, than on experience and engineering judgment. Contact Siemens for further information on special conditions and treatment.

②Additional derating may be required if the ambient temperature is greater than 40°C (104°F).

③Calculated after derating to compensate for the heating of the copper conductor, caused by the skin effect generated by eddy currents produced at 400/415HZ.

The term "Series Connected Short Circuit Rating" refers to the application of series circuit breakers in a combination that allows downstream breakers to have lower individual interrupting ratings than the available fault current.

This is permitted as long as the series combination has been tested and certified by UL.

The tables on these pages list specific main and branch breaker combinations that may be used for the short circuit interrupting ratings shown.

No substitutions are permitted. All combinations shown have been tested and are UL Listed. This information is provided as a reference tool only. **For verification of specific combination ratings consult the UL Recognized Components Directory**.

240V Breaker Series Ratings

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
22,000	70 125 100	QPH, BQH, BLH 70 (1P) 125 (2P) 100 (3P)	QP, BQ, BL	1 2 3	15-70 15-125 15-100	120/240 240 240
			QE, BLE, QPF, BLF	2	15-60	120/240
			QE, BE, BLE, QE2, BLE2, QPF, BQF, BLF QPF2, QPF2N, BLF2	1	15-30	120
			QG, BG, BLG	1, 2	15-30	120/240
			BAF, QAF, QAF2, QAF2N, BAF2, QFGA2, QFGA2N, BFGA2, QTA, QTAN	1	15-20	120
			BAF, QAF, QAFN	2	15-20	120/240
			QT	1, 2	15-50	120/240
			BT	1	15-20	120/240
	125	EQ868# (2P)	BT	1	15-20	120/240
			QAF, BAF, QAF2, BAF2, QAF2N, QFGA2, BFGA2, QFGA2N, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN	2	15-20	120/240
			QPF, BLF, BQF, QE, BE, BLE, QPF2, BLF2, QPF2N, QE2, BLE2	1	15-30	120
			QG, BG, BLG	1, 2	15-30	120/240
			QPF, BLF, QE, BE, BLE	2	15-60	120/240
			QT	1, 2	15-50	120/240
			QP, BQ, BL	1 2	15-70 15-125	120/240 120/240
		EQ967# (2P)	BT	1	15-20	120/240
			QAF, BAF, QAF2, BAF2, QAF2N, QFGA2, BFGA2, QFGA2N, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN	2	15-20	120/240
			QPF, BLF, BQF, QE, BE, BLE, QPF2, BLF2, QPF2N, QE2, BLE2	1	15-30	120
			QPF, BLF, QE, BE, BLE	2	15-60	120/240
			QT	1, 2	15-50	120/240
			QP, BQ, BL	1 2	15-70 15-125	120/240 120/240
	200	QNH, QNRH (2P)	QE, BE, BLE, QE2, BLE2, QPF, BQF, BLF QPF2, QPF2N, BLF2	1	15-30	120
			QE, BE, BLE, QPF, BLF	2	15-60	120/240
			BAF, QAF, QAF2, QAF2N, BAF2, QFGA2, QFGA2N, BFGA2, QTA, QTAN	1	15-20	120
			BAF, QAF, QAFN	2	15-20	120/240
			QP, BQ, BL	1 2	15-70 15-125	120/240 120/240
			QPP	2	125-200	120/240
			QT	1, 2	15-50	120/240
			BT	1	15-20	120/240
		EQ968# (2P)	BT	1	15-20	120/240
			QAF, BAF, QAF2, BAF2, QAF2N, QFGA2, BFGA2, QFGA2N, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN	2	15-20	120/240
			QPF, BLF, BQF, QE, BE, BLE, QPF2, BLF2, QPF2N, QE2, BLE2	1	15-30	120
			QPF, BLF, QE, BE, BLE	2	15-60	120/240
			QT	1, 2	15-50	120/240
			QP, BQ, BL	1 2	15-70 15-125	120/240 120/240
	225	QJH2 (2,3P)	QP, BQ, BL	1 2 3	15-70 15-125 60-100	120/240 240 240
			QPH, BQF, BLF, BG, BLG, QE, BE, BLE, QPF2, BLF2	1	15-30	120
			QPF, BLF, BG, BLG, QE BE, BLE	2	15-60	120/240
			BAF, QAF, QAF2, BAF2	1	15-20	120
			BAF, QAF	2	15-20	120/240
			QT	1, 2	15, 20, 40	120/240
			QR2	2, 3	100-225	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
22,000	225	EQ869# (2P)	BT	1	15-20	120/240
			QAF, BAF, QAF2, BAF2, QAF2N, QFGA2, BFGA2, QFGA2N, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN	2	15-20	120/240
			QPF, BLF, BQF, QE, BE, BLE, QPF2, BLF2, QPF2N, QE2, BLE2	1	15-30	120
			QG, BG, BLG	1, 2	15-30	120/240
			QPF, BLF, QE, BE, BLE	2	15-60	120/240
			QT	1, 2	15-50	120/240
			QP, BQ, BL	1 2	15-70 15-125	120/240 120/240
		EQ998# (2P)	BT	1	15-20	120/240
			QAF, BAF, QAF2, BAF2, QAF2N, QFGA2, BFGA2, QFGA2N, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN	2	15-20	120/240
			QPF, BLF, BQF, QE, BE, BLE, QPF2, BLF2, QPF2N, QE2, BLE2	1	15-30	120
			QG, BG, BLG	1, 2	15-30	120/240
			QPF, BLF, QE, BE, BLE	2	15-60	120/240
			QT	1, 2	15-50	120/240
			QP, BQ, BL	1 2	15-70 15-125	120/240 120/240
		QPPH (2P)	BT	1	15-20	120/240
			QE, BE, BLE, QE2, BLE2, QPF, BQF, BLF QPF2, QPF2N, BLF2	1	15-30	120
			QE, BE, BLE, QPF, BLF	2	15-60	120/240
			BAF, QAF, QAF2, QAF2N, BAF2, QFGA2, QFGA2N, BFGA2, QTA, QTAN	1	15-20	120
			BAF, QAF, QAFN	2	15-20	120/240
			QPP	2	125-225	120/240
			QT	1, 2	15-50	120/240
			QP, BQ, BL	1 2	15-70 15-125	120/240 120/240
			EQ948#	2	125-200	120/240
		QSH (2P)	QP, BQ, BL	1 2	15-70 15-125	120/240 120/240
			QE, BE, BLE, QE2, BLE2, QPF, BQF, BLF QPF2, QPF2N, BLF2	1	15-30	120
			QE, BE, BLE, QPF, BLF	2	15-60	120/240
			BAF, QAF, QAF2, QAF2N, BAF2, QFGA2, QFGA2N, BFGA2, QTA, QTAN	1	15-20	120
			BAF, QAF, QAFN	2	15-20	120/240
			QPP	2	125-225	120/240
			QT	1, 2	15-50	120/240
			BT	1	15-20	120/240
	250	QRH2 (2,3P)	QP, BQ, BL	1 2 3	15-70 15-125 15-100	120/240 240 240
			QG, BG, BLG	1 2	15-30 15-30	120 120/240
			QE, BE, BLE, QE2, BLE2, QPF, BQF, BLF QPF2, BLF2, QPF2N	1	15-30	120
			BT	1	15-20	120/240
			BAF, QAF, QAF2, QAF2N, BAF2, QFGA2, QFGA2N, BFGA2, QTA, QTAN	1	15-20	120
			BAF, QAF, QAFN	2	15-20	120/240
			QT	1, 2	15-50	120/240
			QPF, BLF, QE, BLE	2	15-60	120/240
			QN, QNR	2	150-200	120/240
			QS	2	100-225	120/240
			QR2	2	100-250	120/240
			EQ948#	2	125-225	120/240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
42,000	225	QJ2H (2,3P)	QP, BQ, BL	1 2 3	15-70 15-125 60-100	120/240 120/240 240
			QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QR2, QRH2	2, 3	100-225	240
			QJH2	2, 3	60-225	240
		QSHH (2P)	QPF2N, QE2, BLE2	1	15-30	120
			QAF2N, QFGA2N, QTA, QTAN	1	15-20	120
			QAFN	2	15-20	120/240
			BT, BTH	1	15-20	120/240
65,000	70 (1P) 125 (2P) 100 (3P)	HQP, HBQ, HBL	QP, BQ, BL, QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 240 240
			QPF, BLF, BQF, QE, BE, BLE, QPHF, BLHF, BQHF, QEH, BLEH, QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, QEH2, BLE2, BLEH2	1	15-30	120
			QEH, BLEH, QE, QPHF, BLHF, BLE, QPF, BLF	2	15-60	120/240
			QT	1, 2	15-50	120/240
			BT, BTH	1	15-20	120/240
			QG, BG, BLG	1, 2	15-30	120/240
			BAF, QAF, BQAF, QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN	2	15-20	120/240
	125 (2P)	HQP, HBQ, HBL	EQ967#	2	100-125	120/240
	100 125	ED4 [100 (1P)] ED4, ED6 [125 (2, 3P)]	QP, BQ, BL QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 240 240
			QPF, BLF, BQF, QE, BE, BLE, QPHF, BLHF, BQHF, QEH, BLEH, QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, QEH2, BLE2, BLEH2	1	15-30	120
			QEH, BLEH, QE, QPHF, BLHF, BLE, QPF, BLF	2	15-60	120/240
			QAF2, QAF2N, BAF2, BAF, QAF, BQAF, QAFH2, BAFH2, QAFH, BQAFH, BAFH, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QAF, QAFN, BAF, QAFH, BAFH	2	15-20	120/240
			ED2	1, 2, 3	15-100	120/240
			QT	1, 2	15-50	120/240
			BT, BTH	1	15-20	120/240
	125	SEAS, SEAB (3VA) (2,3P)	QPH, BLH, BQH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, BFGA2, QFGAH2, QFGA2N, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QE2, QEH2, BLE2, BLEH2	1	15-30	120
		SEAB (3VA) (2,3P)	QP, BQ, BL, QPH, BQH, BLH	1 2	15-70 15-125	120/240 120/240
			QPF, BLF, QPHF, BLHF, QE, BLE, QEH, BLEH	2	15-60	120/240
			BT, BTH	1	15-20	120/240
	150	NDGB (2P,3P)	QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 240 240
	200	HQN, HQNR (2P)	QPF2N, QE2, BLE2, BLE2, BLEH2	1	15-30	120
			QAF2N, QFGA2N, QTA, QTAN	1	15-20	120
			QAFN	2	15-20	120/240
			BT, BTH	1	15-20	120/240
			EQ868#	2	100	120/240
			EQ967#	2	100-125	120/240
			EQ869#, EQ968#	2	150-200	120/240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
65,000	225	HQPP (2P)	QP, BQ, BL, QPH, BQH, BLH	1 2	15-70 15-125	120/240 120/240
			QPF, BQF, BLF, QPHF, BQHF, BLHF, QEH, BLEH, QE, BLE, BE, BLF2, QPF2, QPF2N, QFGA2, BFGA2	1	15-30	120/240
			QFP, BLF, QPHF, BLHF, QE, BLE, QEH, BLEH	2	15-60	120/240
			BAF, QAF, BQAF, QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2	1	15-20	120
			QAF, QAFN, BAF, QAFH, BAFH	2	15-20	120/240
			QT	1, 2	15-40	120
			QPPH, QPP	2	125-225	120/240
		HQS (2P)	QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QAF2N, QFGA2N, QTA, QTAN	1	15-20	120
			QAFN	2	15-20	120/240
			BT, BTH	1	15-20	120/240
	250	FD6-A, FXD6-A (2,3P)	QP, BQ, BL QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QPF, QPHF, BLF, BLHF	2	15-60	120/240
			QPF2, QPF2N, BLF2, BLHF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120/240
			QAF, BAF, QAF2, QAF2N, BAF2, BQAF, QAFH2, BAFH2, QAFH, BQAFH, BAFH, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QAF, QAFN, BAF, QAFH, BAFH	2	15-20	120/240
			BT, BTH	1	15-20	120/240
			QR2, QRH2	2, 3	100-225	240
			QJ2H, QJ2, QJH2	2, 3	60-225	240
			QPPH	2	125-225	120/240
			EQ868#	2	100-125	120/240
			EQ869#	2	150-225	120/240
		NFGB (2,3P)	QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QR2, QRH2	2, 3	100-250	240
		HQR2 (2,3P)	QP, BQ, BL	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QT	1, 2	15-50	120/240
			BT, BTH	1	15-20	120/240
			QAF, BAF, QAF2, QAF2N, BAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QAFH2, BAFH2, QAFH, BAFH, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN	2	15-20	120/240
			QPF2, QPF2N, BLF2, QPF, BQF, BLF, QE, BLE, BE, QPHF, BLHF, QPHF2, BLHF2, QEH, BLEH, QE2, QEH2, BLE2, BLEH2	1	15-30	120
			QPF, BLF, QE, BLE	2	15-60	120/240
			QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QAFH, BAFH	2	15-20	120/240
			QEH, BLEH, QPHF, BLHF	2	15-60	120/240
			QN, QNH, QNR, QNRH	2	150-200	120/240
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
	400	JXD2-A, JD6-A JXD6-A (2,3P)	QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, BFGA2, QFGAH2, QFGA2N, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2	2, 3	100-250	240
			QJ2H, QJH2	2, 3	60-225	240
			BT, BTH	1	15-20	120/240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
65,000	400	NJGA, NJJA (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QR2, QRH2	2, 3	100-250	240
			QN, QNH	2	150-200	120/240
			QNR, QNRH	2	150-200	120/240
			BT, BTH	1	15-20	120/240
		HJGA (2,3P)	BT, BTH	1	15-20	120/240
		SJD6-B (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, BFGA2, QFGAH2, QFGA2N, BFGAH2, QTA, QTAN	1	15-20	120
			BT, BTH	1	15-20	120/240
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
		HJD6-A*, HJXD6* (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, BFGA2, QFGAH2, QFGA2N, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
	600	LD6-A, LXD6-A (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QR2, QRH2	2, 3	100-250	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QJ2H, QJH2	2, 3	60-225	240
		NLGB (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QR2, QRH2	2, 3	100-250	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QN, QNH	2	150-200	120/240
			QNR, QNRH	2	150-200	120/240
		SLD6-B (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
		HLD6-A*, HLXD6-A* (2,3P)	QPH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
	800	MD6, MXD6 (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2	2, 3	100-250	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
65,000	800	NMG, HMG (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2	2, 3	100-250	240
			QN, QNH	2	150-200	120/240
			QNR, QNRH	2	150-200	120/240
		SMD6-B (3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
		HMXD6*, HMD6* (2,3P)	QPH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
	1200	ND6, NXD (2,3P)		1	15-70	120/240
			QPH, BQH, BLH	2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2	2, 3	100-250	240
		NNG, HNG (2,3P)		1	15-70	120/240
			QPH, BQH, BLH	2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, BLF2, QPHF2, BLHF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2	2, 3	100-250	240
			QN, QNH	2	150-200	120/240
			QNR, QNRH	2	150-200	120/240
		SND6-B (3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, BLF2, QPHF2, BLHF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QN, QNR, QNH, QNRH	2	150-200	120/240
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
		SHND6-B (3P)	QAF2N, QFGA2N, QTA, QTAN	1	15-20	120
			QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
		HND6*, HNXD6* (2,3P)	QPH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
65,000	1200	MNAS*, MNAE* (3VA) (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QN, QNR, QNH, QNRH	2	150-200	120/240
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
		HNAS*, HNAE* (3VA) (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH	2	100-225	120/240
	1600	PD6, PXD6, SPD6, SPD6-B (2,3P)	QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QN, QNR, QNH, QNRH	2	150-200	120/240
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
		HPD6*, HPXD6* (2,3P)	QPH	1 2	15-70 15-125	120/240 120/240
		NPG (2,3P)	QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QR2, QRH2	2, 3	100-250	240
			QN, QNH	2	150-200	120/240
			QNR, QNRH	2	150-200	120/240
		MPAS*, MPAE* (3VA) (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QN, QNR, QNH, QNRH	2	150-200	120/240
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
		HPAS*, HPAE* (3VA) (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QS, QSH, QSHH	2	100-225	120/240
	2000	RD6, RXD6 (2,3P)	QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QR2, QRH2	2, 3	100-250	240
		HRD6*, HRXD6* (2,3P)	QPH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
		MRAS*, MRAE* (3VA) (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QN, QNR, QNH, QNRH	2	150-200	120/240
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2	2, 3	100-250	240
		HRAS*, HRAE* (3VA) (2,3P)	QPH, BQH, BLH	1	15-70	120/240
				2	15-125	120/240
				3	15-100	240
			QS, QSH, QSHH	2	100-225	120/240
85,000	125	MEAS, MEAB (3VA) (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			SEAS, SEAB (3VA)	1,2,3	15-125	120/240
		MEAB (3VA) (2,3P)	QP, BQ, BL, QPH, BQH, BLH	1 2	15-70 15-125	120/240 120/240
			QPF, BLF, QPHF, BLHF, QE, BLE, QEH, BLEH	2	15-60	120/240
			BT, BTH	1	15-20	120/240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
85,000	250	MFAS (3VA) (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN, QAFH, BAFH	2	15-20	120/240
			QT	1, 2	15-50	120/240
			QPF2, BLF2, QPHF2, BLHF2, QPF2N, HQPF2, HBLF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPF, BLF, QE, BLE, QPHF, BLHF, QEH, BLEH	2	15-60	120/240
			QP, BL, BQ, QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 240 240
			QN, QNR, QNH, QNRH	2	150-200	120/240
			EQ868#	2	100-125	120/240
			EQ948#	2	125-225	120/240
			EQ869#	2	150-225	120/240
			QPP, QPPH, HQPP	2	125-225	120/240
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			NGB, HGB, LGB	1,2,3	15-125	120/240
			ED2	1,2,3	15-100	120/240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			SEAS, SEAB (3VA)	1,2,3	15-125	120/240
	400	MJAS (3VA) (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 240 240
			BT, BTH	1	15-20	120/240
			QT	1, 2	15-50	120/240
			QN, QNR, QNRH, HQNR	2	150-200	120/240
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, SJD6-A, SJD6-B	2, 3	200-400	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2,3	250-400	240
			SEAS, SEAB (3VA)	1,2,3	15-125	120/240
	600	MLAS (3VA) (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 240 240
			BT, BTH	1	15-20	120/240
			QT	1, 2	15-50	120/240
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, SJD6-A, SJD6-B	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-B	3	450-600	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			SEAS, SEAB (3VA)	1,2,3	15-125	120/240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
85,000	800	MMAS (3VA) (2,3P)	QAF2, BAF2, QAF2N, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, BFGAH2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QFGA2N, QTA, QTAN	1	15-20	120
			QPF2, BLF2, QPHF2, BLHF2, QPF2N, HQPF2, HBLF2, HQFGA2, HBFGA2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			MD6, MXD6	2,3	500-800	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2,3	600-800	240
			SEAB, MEAB (3VA)	1,2,3	15-125	120/240
	1200	MNAS, MNAE (3VA) (2,3P)	SEAS, SEAB (3VA)	1,2,3	15-125	120/240
	1600	MPAS, MPAE (3VA) (2,3P)	SEAS, SEAB (3VA)	1,2,3	15-125	120/240
	2000	MRAS, MRAE (3VA) (2,3P)	SEAS, SEAB (3VA)	1,2,3	15-125	120/240
100,000	100	HED4 (1P)	ED2, ED4	1	15-100	120
	125	HQPH (2P)	QAF2N, QFGA2N, QTA, QTAN	1	15-20	120
			QAFN	2	15-20	120/240
			QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
		HED4, HED6 (2,3P)	QP, BQ, BL, QPH, BQH, BLH, HQP, HBQ, HBL,	1 2 3	15-70 15-125 15-100	120/240 240 240
			QAF2, QAF2N, BAF2, QAF, BQAF, BAF, QAFH2, BAFH2, HQAF2, HBAF2, QAFH, BQAFH, BAFH, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFH, BAFH, QAFN	2	15-20	120/240
			QE, BE, QEH, BLE, BLEH, QE2, BLE2, QEH2, BLEH2, QPHF, BQHF, BLHF, QPF, BLF, BQF, QPF2, BLF2, QPHF2, QPF2N, BLHF2, HQPF2, HBLF2	1	15-30	120
			QT	1, 2	15-50	120/240
			BT, BTH	1	15-20	120/240
			QEH, BLEH, QPHF, QE, BLHF,QPF,BLF, BLE	2	15-60	120/240
			ED2	1,2,3	15-100	120/240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
		NGB, HGB, LGB (1P, 2P, 3P)	QAF2, QAF2N, BAF2, QAF, BQAF, BAF, QAFH2, BAFH2, HQAF2, HBAF2, QAFH, BQAFH, BAFH, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QAF, QAFN, BAF, QAFH, BAFH	2	15-20	120/240
			QPF, BQF, BLF, QPHF, BQHF, BLHF, QPF2, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPF, BLF	2	15-60	120/240
		NGB, HGB, LGB (2,3P)	QP, BQ, BL, QPH, BQH, BLH, HQP, HBQ,HBL	1 2 3	15-70 15-125 15-100	120 120/240 240
			BT, BTH	1	15-20	120/240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	125	HEAS (3VA) (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
	150	HDGB (2,3P)	ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			NDGB	2, 3	50-150	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
		MDAE, HDAE (3VA)	QPF2, BLF2, QPF2N, QPHF2, BLHF2, HQPF2, HBLF2	1	15-30	120
			QAF2, BAF2, QAF2N, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, BFGA2, QFGA2N, QFGAH2, BFGAH2, HQFGA2, HBFGA2	1	15-20	120
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			NDGB	2, 3	50-150	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
	225	HQPPH (2P)	QP, BQ, BL, QPH, BQH, BLH, HQP, HBQ, HBL	1 2	15-70 15-125	120/240 120/240
			HQPP, QPPH, QPP	2	125-225	120/240
			QAF2, BAF2, QAF, BQAF, BAF, QAFH2, BAFH2, HQAF2, HBAF2, QAFH, BQAFH, BAFH, QFGA2, BFGA2 HQFGA2, HBF- GA2, QFGAH2, BFGAH2	1	15-20	120
			QAF, BAF, QAFH, BAFH	2	15-20	120/240
			QEH, BLEH, QE, BE, QPHF, BQHF, BLHF, QPF, BQF, BLF, BLE, QPF2, BLF2, QPFH2, BLHF2, HQPF2, HBLF2	1	15-30	120
			QE, QEH, BLEH, QPHF, BLHF, QPF, BLF, BLE	2	15-60	120/240
			QR2, QRH2, HQR2	2	100-225	120/240
			QT	1, 2	15-40	120/240
		HQJ2H (2,3P)	QP, BP, QL	1 2 3	15-25 35-70 15-25 35-125 15-100	120/240 120/240 240
			QR2, QRH2, HQR2	2, 3	100-225	240
			QPH, BQH, BLH, HQP, HBQ ,HBL	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QAF2, BAF2, QAF, BQAF, BAF, QAFH2, BAFH2, HQAF2, HBAF2, QAFH, BQAFH, BAFH, QFGA2, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2	1	15-20	120
			QAF, BAF, QAFH, QAFH	2	15-20	120/240
			QEH, BLEH, QE, BE, QPHF, BQHF, BLHF, QPF, BQF, BLF, BLE, QPF2, BLF2, HQPF2, HBLF2, QPHF2, BLHF2	1	15-30	120
			QEH, BLEH, QPHF, BLE, BLHF, QE, QPF, BLF	2	15-60	120/240
			QT	1	15-50	120/240
		HQSH (2P)	QAF2N, QFGA2N, QTA, QTAN	1	15-20	120
			QAFN	2	15-20	120/240
			QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			BT, BTH	1	15-20	120/240
	250	HFD6, HFXD6 (2,3P)	QP, BQ, BL, QPH, BQH, BLH, HQP, HBQ, HBL	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QAF2, QAF2N, BAF2, QAF, BQAF, BAF, QAFH2, BAFH2, HQAF2, HBAF2, QAFH, BQAFH, BAFH, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2	1	15-20	120
			QAF, BAF, QAFH, BAFH, QAFN, QTA, QTAN	2	15-20	120/240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	250	HFD6, HFXD6 (2,3P)	QE, BE, QEH, BLE, BLEH, QE2, BLE2, QEH2, BLEH2, QPHF, BQHF, BLHF, QPF, BLF, BQF, QPF2, BLF2, QPHF2, QPF2N, BLHF2, HQPF2, HBLF2	1	15-30	120
			BT, BTH	1	15-20	120/240
			QT	1, 2	15-50	120/240
			QPF, BLF, BLE, BLEH, QPHF, BLHF, QEH, QE	2	15-60	120/240
			EQ868#	2	100-125	120/240
			EQ948#	2	125-225	120/240
			EQ869#	2	150-225	120/240
			QJ2, QJH2, QJ2H	2, 3	60-225	240
			HQPP, QPPH, QPP	2	125-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
		HFGB (2,3P)	ED4, ED6	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			NFGB	2, 3	100-250	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2, HQR2	2, 3	100-250	240
			FD6, FXD6	2, 3	70-250	240
			FD6-A, FXD6-A	2, 3	70-250	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
		HQR2H (2,3P)	QP, BQ, BL, QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QT	1, 2	15-50	120/240
			QAF2, QAF2N, QAFH2, QAF, BQAF, BAF, BAF2, BAFH2, HQAF2, HBAF2, QAFH, BQAF, BQAFH, BAFH, QFGA2, QFGA2N, BFGA2 HQFGA2, HBFGA2, QFGAH2, BFGAH2	1	15-20	120
			QAF, BAF, QAFH, BAFH, QAFN, QTA, QTAN	2	15-20	120/240
			QPF2, QPF2N, BLF2, QPF, BQF, BLF, QE, BLE, BE, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPF, BLF, QE, BLE	2	15-60	120/240
			QPHF, BLHF, QPHF2, BLHF2, QEH, BLEH, HQPF2, HBLF2	1	15-30	120
			QEH, BLEH, QPHF, BLHF	2	15-60	120/240
			HQP, HBQ, HBL	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			BT, BTH	1	15-20	120/240
			SEAS, SEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2,3	40-250	240
		HFAS, MFAE, HFAE (3VA) (2,3P)	QP, BL, BQ, QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 240 240
			QT	1, 2	15-50	120/240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QAF, BAF, QAFN, QAFH, BAFH	2	15-20	120/240
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPF, BLF, QE, BLE, QPHF, BLHF, QEH, BLEH	2	15-60	120/240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	250	HFAS, MFAE, HFAE (3VA) (2,3P)	EQ868#	2	100-125	120/240
			EQ948#	2	125-225	120/240
			EQ869#	2	150-225	120/240
			QPP, QPPH	2	125-225	120/240
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED2	1,2,3	15-100	120/240
			ED4	1	15-100	240
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
	400	HJD6-A, HJXD6-A (2,3P)	ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2, HQR2	2, 3	100-250	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JD6-A, JXD6-A, JXD2-A, SJD6-A, SJD6-B	2, 3	200-400	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
		SHJD6-A, SHJD6-B (3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, SJD6-A, SJD6-B	2, 3	200-400	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
		HJGA (2,3P)	ED4, ED6	1	15-100	240
			ED4, ED6	2, 3	15-125	240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, BFGA2, QFGA2N, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			NFGB	2, 3	100-250	240
			FD6, FXD6	2, 3	70-250	240
			FD6-A, FXD6-A	2, 3	70-250	240
			QR2, QRH2, HQR2	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			JD6-A, JXD6-A	2, 3	200-400	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
		HJAS MJAE, HJAE (3VA) (2,3P)	QT	1, 2	15-50	120/240
			BT, BTH	1	15-20	120/240
			QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 120/240 240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	400	HJAS MJAE, HJAE (3VA) (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QN, QNR, QNH, QNRH, HQN, HQNR	2	150-200	120/240
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, SJD6-A, SJD6-B	2, 3	200-400	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2,3	250-400	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2,3	40-250	240
			MJAS (3VA)	2,3	200-400	240
	600	HLD6-A, HLXD6-A (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JD6-A, JXD6-A, JXD2-A, SJD6-A, SJD6-B	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-A, SLD6-B	3	300-600	240
			QR2, QRH2, HQR2	2, 3	100-250	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		SHLD6-A, SHLD6-B (3P)	QAF2, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, BLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, SJD6-A, SJD6-B	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-A, SLD6-B	3	300-600	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HLGB (2,3P)	ED4, ED6	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			NFGB	2, 3	100-250	240
			FD6, FXD6, FD6-A, FXD6-A	2, 3	70-250	240
			NJGA, NJJA	2, 3	250-400	240
			JD6-A, JXD6-A	2, 3	200-400	240
			NLGB	2, 3	400-600	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	600	HLGB (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2, HQR2	2, 3	100-250	240
			LXD6, LXD6-A	2, 3	450-600	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	400-600	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HLAS MLAE, HLAE (3VA) (2,3P)	QT	1, 2	15-50	120/240
			BT, BTH	1	15-20	120/240
			QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, SJD6-B	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLXD6-B	2, 3	300-600	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2,3	250-400	240
			NLGB	2, 3	400-600	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2,3	400-600	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		CLAS (3VA) (2,3P)	SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
	800	HMD6, HMXD6 (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, SJD6-A, SJD6-B	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-A, SLD6-B	3	300-600	240
			MD6, MXD6	2, 3	500-800	240
			SMD6, SMD6-B	3	600-800	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		SHMD6, SHMD6-B (3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	800	SHMD6, SHMD6-B (3P)	QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A,	2, 3	400-600	240
			SJD6-A, SJD6-B	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-A, SLD6-B	3	300-600	240
			MD6, MXD6	2, 3	500-800	240
			SMD6, SMD6-B	3	600-800	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HMG (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JD6-A, JXD6-A	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			LMD6, LMXD6	2, 3	500-800	240
			MD6, MXD6	2, 3	500-800	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HMAS, MMAE (3VA) (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			MD6, MXD6	2, 3	500-800	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
			MMAS (3VA)	2,3	600-800	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	1000	MMNAE (3VA) (3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			MD6, MXD6	2, 3	500-800	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
			MMAS (3VA)	2,3	600-800	240
	1200	HND6, HNXD6 (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			SJD6-B	3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-B	3	300-600	240
			LMD6, LMXD6	2, 3	600-800	240
			MD6, MXD6	2, 3	400-800	240
			SMD6-B	3	600-800	240
			ND6, NXD6	2, 3	500-1200	240
			SND6-B	3	500-1200	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			NNG	2, 3	600-1200	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		SHND6 SHND6-B (3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPH, BQH, BLH	1 2 3	15-70 15-125 15-100	120/240 240 240
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			SJD6-A, SJD6-B	3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-A, SLD6-B	3	300-600	240
			LMD6, LMXD6	2, 3	600-800	240
			MD6, MXD6	2, 3	400-800	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	1200	SHND6 SHND6-B (3P)	SMD6, SMD6-B	3	600-800	240
			ND6, NXD6	2, 3	500-1200	240
			SND6, SND6-B	3	500-1200	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			NNG	2, 3	600-1200	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HNG (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JD6-A, JXD6-A	2, 3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			LMD6, LMXD6	2, 3	600-800	240
			MD6, MXD6	2, 3	400-800	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			NNG	2, 3	600-1200	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HNAS, HNAE (3VA) (2,3P)	QAF2, QAF2N, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, QFGA2N, BFGA2, QFGAH2, BFGAH2, HQFGA2, HBFGA2, QTA, QTAN	1	15-20	120
			QPF2, QPF2N, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			SJD6-B	3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-B	3	300-600	240
			MD6, MXD6	2, 3	400-800	240
			SMD6-B	3	600-800	240
			ND6, NXD6	2, 3	500-1200	240
			SND6-B	3	500-1200	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			NNG	2, 3	600-1200	240
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	120/240
			MDAE (3VA)	3	40-150	240
			MFAS (3VA)	2,3	40-250	240
			MFAE (3VA)	3	100-250	240
			MJAS (3VA)	2,3	200-400	240
			MJAE (3VA)	3	250-400	240
			MLAS (3VA)	2,3	450-600	240
			MLAE (3VA)	3	400-600	240
			MMAS (3VA)	2,3	600-800	240
			MMAE (3VA)	3	600-800	240
			MMNAE (3VA)	3	1000	240
			MNAS (3VA)	2,3	800-1200	240
			MNAE (3VA)	3	800-1200	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	1600	HPD6, HPXD6, SHPD6, SHPD6-B (3P)	QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			SJD6-B	3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-B	3	300-600	240
			MD6, MXD6	2, 3	400-800	240
			SMD6-B	3	600-800	240
			ND6, NXD6	2, 3	500-1200	240
			SND6-B	3	500-1200	240
			PD6, PXD6	2, 3	1200-1600	240
			SPD6-B	3	1400-1600	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			NNG	2, 3	600-1200	240
			NPG	2, 3	1200-1600	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HPG (2,3P)	QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JD6-A, JXD6-A	2, 3	200-400	240
			SJD6-B	3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			LMD6, LMXD6	2, 3	600-800	240
			MD6, MXD6	2, 3	400-800	240
			SMD6-B	3	600-800	240
			ND6, NXD6	2, 3	500-1200	240
			PD6, PXD6	2, 3	1200-1600	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			NNG	2, 3	600-1200	240
			NPG	2, 3	1200-1600	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HPAS, HPAE (3VA) (2,3P)	QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			SJD6-B	3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-B	3	300-600	240
			MD6, MXD6	2, 3	400-800	240
			SMD6, SMD6-B	3	600-800	240
			ND6, NXD6	2, 3	500-1200	240
			SND6, SND6-B	3	500-1200	240
			PD6, PXD6	2, 3	1200-1600	240
			SPD6-B	3	1400-1600	240
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	120/240
			MDAE (3VA)	3	40-150	240
			MFAS (3VA)	2,3	40-250	240
			MFAE (3VA)	3	100-250	240
			MJAS (3VA)	2,3	200-400	240
			MJAE (3VA)	3	250-400	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
100,000	1600	HPAS, HPAE (3VA) (2,3P)	MLAS (3VA)	2,3	450-600	240
			MLAE (3VA)	3	400-600	240
			MMAS (3VA)	2,3	600-800	240
			MMAE (3VA)	3	600-800	240
			MMNAE (3VA)	3	1000	240
			MNAS (3VA)	2,3	800-1200	240
			MNAE (3VA)	3	800-1200	240
			MPAS (3VA)	2,3	1400-1600	240
			MPAE (3VA)	3	1600	240
	2000	HRD6, HRXD6 (3P)	QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			SJD6-B	3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-B	3	300-600	240
			MD6, MXD6	2, 3	400-800	240
			SMD6-B	3	600-800	240
			ND6, NXD6	2, 3	500-1200	240
			SND6-B	3	500-1200	240
			PD6, PXD6	2, 3	1200-1600	240
			SPD6-B	3	1400-1600	240
			RD6, RXD6	2, 3	1600-2000	240
			NDGB	2, 3	50-150	240
			NFGB	2, 3	100-250	240
			NJGA, NJJA	2, 3	250-400	240
			NLGB	2, 3	400-600	240
			NMG	2, 3	600-800	240
			NNG	2, 3	600-1200	240
			NPG	2, 3	1200-1600	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MFAS (3VA)	2, 3	40-250	240
			MJAS (3VA)	2,3	200-400	240
			MLAS (3VA)	2,3	450-600	240
		HRAS, HRAE (3VA) (2,3P)	QS, QSH, QSHH, HQS	2	100-225	120/240
			QR2, QRH2, HQR2	2, 3	100-250	240
			ED4	1	15-100	120
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A	2, 3	200-400	240
			SJD6-B	3	200-400	240
			LD6-A	2, 3	250-600	240
			LXD6-A	2, 3	450-600	240
			SLD6-B	3	300-600	240
			MD6, MXD6	2, 3	400-800	240
			SMD6, SMD6-B	3	600-800	240
			ND6, NXD6	2, 3	500-1200	240
			SND6, SND6-B	3	500-1200	240
			PD6, PXD6	2, 3	1200-1600	240
			SPD6-B	3	1400-1600	240
			RD6, RXD6	2, 3	1600-2000	240
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	120/240
			MDAE (3VA)	3	40-150	240
			MFAS (3VA)	2,3	40-250	240
			MFAE (3VA)	3	100-250	240
			MJAS (3VA)	2,3	200-400	240
			MJAE (3VA)	3	250-400	240
			MLAS (3VA)	2,3	450-600	240
			MLAE (3VA)	3	400-600	240
			MMAS (3VA)	2,3	600-800	240
			MMAE (3VA)	3	600-800	240
			MMNAE (3VA)	3	1000	240
			MNAS (3VA)	2,3	800-1200	240
			MNAE (3VA)	3	800-1200	240
			MPAS (3VA)	2,3	1400-1600	240
			MPAE (3VA)	3	1600	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
150,000	125	HEAB (3VA) (2,3P)	QP, BL, BQ, QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 120/240 240
			BT, BTH	1	15-20	120/240
			QPF2, BLF2, QPHF2, BLHF2, HQPF2, HBLF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPF, BLF, QPHF, BLHF, QE, BLE, QEH, BLEH	2	15-60	120/240
			QFGA2, BFGA2, QFGA2N, QFGAH2, BFGAH2, HQFGA2, HBFGA2	1	15-20	120
	800	HMAE (3VA) (3P)	HFD6, HFXD6	2, 3	70-250	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, NJJA, HJGA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
			MMAS, HMAS (3VA)	2,3	600-800	240
			MMAE (3VA)	3	600-800	240
	1000	HMNAE (3VA) (3P)	HFD6, HFXD6	2, 3	70-250	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, NJJA, HJGA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
			MMAS, HMAS (3VA)	2,3	600-800	240
			MMAE (3VA)	3	600-800	240
			MMNAE (3VA)	3	1000	240
200,000	125	CED6 (2,3P)	QP, BQ, BL, QPH, BQH, BLH, HQP, HBQ, HBL,	1 2 3	15-70 15-125 15-100	120/240 240 240
			QAF2, QAF2N, BAF2, QAF, BQAF, BAF, QAFH2, BAFH2, HQAF2, HBAF2, QAFH, BQAFH, BAFH, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2	1	15-20	120
			QAF, BAF, QAFH, BAFH, QAFN	2	15-20	120/240
			QEH, BLEH, QE, BE, QPHF, BQHF, BLHF, QPF, BLF, BQF, BLE, QPF2, BLF2, QPHF2, BLHF2, HQPF2, HBLF2	1	15-30	120
			QEH, BLEH, QPHF, QE, BLHF,QPF,BLF, BLE	2	15-60	120/240
			QT	1, 2	15-50	120/240
			NGB, HGB, LGB	1,2,3	15-125	240
			ED4, HED4	1	15-100	120
			ED4, ED6, HED4, HED6	2, 3	15-125	240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
	150	LDGB (2,3P)	NGB, HGB, LGB	1,2,3	15-125	240
			NDGB, HDGB	2, 3	50-150	240
			MDAE, HDAE (3VA)	3	40-150	240
		CDAE, LDAE (3VA) (3P)	NDGB, HDGB	2, 3	50-150	240
			MDAE, HDAE (3VA)	3	40-150	240
	250	HHFD6, HHFXD6 (2,3P)	NGB, HGB, LGB	1,2,3	15-125	240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
		CFD6-A (2,3P)	QP, BQ, BL, QPH, BQH, BLH, HQP, HBQ, HBL,	1 2 3	15-70 15-125 15-100	120/240 240 240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
200,000	250	CFD6-A (2,3P)	QAF2, QAF2N, BAF2, QAF, BQAF, BAF, QAFH2, BAFH2, HQAF2, HBAF2, QAFH, BQAFH, BAFH, QFGA2, QFGA2N, BFGA2, HQFGA2, HBFGA2, QFGAH2, BFGAH2	1	15-20	120
			QAF, BAF, QAFH, BAFH, QAFN	2	15-20	120/240
			QEH, BLEH, QE, BE, QPHF, BQHF, BLHF, QPF, BLF, BQF, BLE, QPF2, BLF2, QPHF2, BLHF2, HQPF2, HBLF2	1	15-30	120
			QEH, BLEH, QPHF, QE, BLHF,QPF,BLF, BLE	2	15-60	120/240
			QT	1, 2	15-50	120/240
			QPPH, QPP	1, 2	125-225	120/240
			QJ2, QJH2, QJ2H	2	125-225	120/240
			QR2, QRH2, HQR2, HQR2H	2, 3	100-250	240
			NGB, HGB, LGB	1,2,3	15-125	240
			ED2	1,2,3	15-100	240
			ED4, HED4	1	15-100	120
			ED4, ED6, HED4, HED6	2, 3	15-125	240
			FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			BT, BTH	1	15-20	120/240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
		LFGB (2,3P)	QJ2, QJH2	3	60-225	240
			HFD6, HFXD6	2, 3	70-250	240
			NGB, HGB, LGB	1,2,3	15-125	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			MDAE, HDAE (3VA)	3	40-150	240
		CFAS, CFAE, LFAE (3VA) (2,3P)	QT	1, 2	15-50	120/240
			QAF2, BAF2, QAF2N, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, BFGA2, QFGA2N, QFGAH2, BFGAH2, HQFGA2, HBFGA2	1	15-20	120
			QAF, BAF, QAFH, BAFH, QAFN	2	15-20	120/240
			QPF2, BLF2, QPF2N, QPHF2, BLHF2, HQPF2, HBLF2, QE2, BLE2, QEH2, BLEH2	1	15-30	120
			QPF, BLF, QE, BLE, QPHF, BLHF, QEH, BLEH	2	15-60	120/240
			QP, BQ, BL, QPH, BQH, BLH, HQP, HBQ, HBL	1 2 3	15-70 15-125 15-100	120/240 240 240
			EQ948#	2	125-225	120/240
			QPP, QPPH	2	125-225	120/240
			QR2, QRH2, HQR2, HQR2H	2, 3	100-250	240
			NGB, HGB, LGB	1,2,3	15-125	240
			ED2	1,2,3	15-100	240
			ED4	1	15-100	240
			ED4, ED6	2, 3	15-125	240
			HFD6, HFXD6	2, 3	70-250	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
	400	HHJD6, HHJXD6 (2,3P)	FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, NJJA, HJGA	2, 3	250-400	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2, 3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
		CJD6-A (2,3P)	QPH, BLH, BQH, HQP, HBL, HBQ	2 3	100-125 100	120/240
			QT	1, 2	15-30	120/240
			NGB, HGB, LGB	1,2,3	15-125	240
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, HJD6-A, HJXD6-A	1, 2	200-400	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
200,000	400	CJD6-A (2,3P)	NJGA, NJJA, HJGA	2, 3	250-400	240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
		LJGA (2,3P)	NGB, HGB, LGB	1,2,3	15-125	240
			HFD6, HFXD6	2, 3	70-250	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, NJJA, HJGA	2, 3	250-400	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
		CJAS, CJAE, LJAE (3VA) (2,3P)	QT	1, 2	15-50	120/240
			QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 240 240
			NGB, HGB, LGB	1,2,3	15-125	240
			QR2, QRH2, HQR2, HQR2H	2, 3	100-250	240
			ED2	1,2,3	15-100	240
			ED4	1	15-100	120
			ED4	2, 3	15-125	240
			FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, NJJA, HJGA	2, 3	250-400	240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
	600	HHLD6, HHLXD6 (2,3P)	NGB, HGB, LGB	1,2,3	15-125	240
			FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, MLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		CLD6-A (2,3P)	QPH, BQH, BLH HQP, HBQ, HBL	2 3	100-125 100	120/240 240
			QT	1, 2	15-50	120/240
			ED4, ED6	2, 3	15-125	240
			FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, HJD6-A, HJXD6-A	2, 3	200-400	240
			LD6-A, HLD6-A	2, 3	250-600	240
			LXD6-A, HJXD6-A	2, 3	450-600	240
			NGB, HGB, LGB	1,2,3	15-125	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2 - 3	100-250	240
			NJGA, HJGA, NJJA	2 - 3	250-400	240
			NLGB, HLGB	2 - 3	400-600	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, MLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		LLGB (2,3P)	NGB, HGB, LGB	1,2,3	15-125	240
			HFD6, HFXD6	2, 3	70-250	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
200,000	600	CLAS CLAE, LLAE (3VA) (2,3P)	QT	1, 2	15-50	120/240
			QPH, BLH, BQH, HQP, HBL, HBQ	1 2 3	15-70 15-125 15-100	120/240 240 240
			NGB, HGB, LGB	1,2,3	15-125	240
			QR2, QRH2, HQR2, HQR2H	2, 3	100-250	240
			FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, NJJA, HJGA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
	800	CMD6 (2,3P)	ED4, ED6, HED4, HED6	2, 3	15-125	240
			FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, HJD6-A HJXD6-A	2, 3	200-400	240
			LD6-A, HLD6-A	2, 3	250-600	240
			LXD6-A, HLXD6-A	2, 3	450-600	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		SCMD6, SCMD6-A, SCMD6-B (3P)	MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		LMG (2,3P)	HFD6, HFXD6	2, 3	70-250	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		CMAS, CMAE (3VA) (2,3P)	HFD6, HFXD6	2, 3	70-250	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, NJJA, HJGA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
			MMAS, HMAS (3VA)	2,3	600-800	240
			MMAE, HMAE (3VA)	3	600-800	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
200,000	1000	CMNAE (3VA) (3P)	HFD6, HFXD6	2, 3	70-250	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, NJJA, HJGA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	120/240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
			MMAS, HMAS (3VA)	2,3	600-800	240
			MMAE, HMAE (3VA)	3	600-800	240
			MMNAE, HMNAE (3VA)	3	1000	240
	1200	CND6 (3P)	ED4, ED6, HED4, HED6	2, 3	15-125	240
			FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, HJD6-A, HJXD6-A	2, 3	200-400	240
			LD6-A, HLD6-A	2, 3	250-600	240
			LXD6-A, HLXD6-A	2, 3	450-600	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			ND6, NXD6, HND6,HNXD6	2, 3	800-1200	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		SCND6-A, SCND6-B (3P)	MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			SMD6, SHMD6, SMD6-B, SHMD6-B	3	600-800	240
			ND6,NXD6, HND6, HNXD6	2, 3	800-1200	240
			SND6, SHND6, SND6-B, SHND6-B	3	800-1200	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		LNG (2,3P)	HFD6, HFXD6	2, 3	70-250	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			ND6, NXD6, HND6, HNXD6	2, 3	800-1200	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		CNAS, CNAE (3VA) (2,3P)	MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			ND6, NXD6, HND6, HNXD6	2, 3	800-1200	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2,3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240

240V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Type	Max. Amperes	Type	Number of Poles	Voltage	Amperes
200,000	1200	CNAS, CNAE (3VA) (2,3P)	MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
			MMAS, HMAS (3VA)	2,3	600-800	240
			MMAE, HMAE (3VA)	3	600-800	240
			MMNAE, HMNAE (3VA)	3	1000	240
			MNAS, HNAS (3VA)	2,3	800-1200	240
			MNAE, HNAE (3VA)	3	800-1200	240
	1600	CPD6 (3P)	FD6-A, FXD6-A, HFD6, HFXD6	2, 3	70-250	240
			JXD2-A, JD6-A, JXD6-A, HJD6-A, HJXD6-A	2, 3	200-400	240
			LD6-A, HLD6-A	2, 3	250-600	240
			LXD6-A, HLXD6-A	2, 3	450-600	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			ND6, NXD6, HND6,HNXD6	2, 3	800-1200	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		LPG (2,3P)	HFD6, HFXD6	2, 3	70-250	240
			MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			ND6, NXD6, HND6, HNXD6	2, 3	800-1200	240
			PD6, PXD6, HPD6 HPXD6	2, 3	1200-1600	240
			NDGB, HDGB	2, 3	50-150	240
			NFGB, HFGB	2, 3	100-250	240
			NJGA, HJGA, NJJA	2, 3	250-400	240
			NLGB, HLGB	2, 3	400-600	240
			NMG, HMG	2, 3	600-800	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2, 3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
		CPAS, CPAE (3VA) (2,3P)	MD6, MXD6, HMD6, HMXD6	2, 3	500-800	240
			ND6, NXD6, HND6,HNXD6	2, 3	800-1200	240
			MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2,3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
			MMAS, HMAS (3VA)	2,3	600-800	240
			MMAE, HMAE (3VA)	3	600-800	240
			MMNAE, HMNAE (3VA)	3	1000	240
			MNAS, HNAS (3VA)	2,3	800-1200	240
			MNAE, HNAE (3VA)	3	800-1200	240
			MPAS, HPAS (3VA)	2,3	1400-1600	240
			MPAE, HPAE (3VA)	3	1600	240
	2000	CRAS, CRAE (3VA) (2,3P)	MDAE, HDAE (3VA)	3	40-150	240
			MFAS, HFAS (3VA)	2,3	40-250	240
			MFAE, HFAE (3VA)	3	100-250	240
			MJAS, HJAS (3VA)	2,3	200-400	240
			MJAE, HJAE (3VA)	3	250-400	240
			MLAS, HLAS (3VA)	2,3	450-600	240
			MLAE, HLAE (3VA)	3	400-600	240
			MMAS, HMAS (3VA)	2,3	600-800	240
			MMAE, HMAE (3VA)	3	600-800	240
			MMNAE, HMNAE (3VA)	3	1000	240
			MNAS, HNAS (3VA)	2,3	800-1200	240
			MNAE, HNAE (3VA)	3	800-1200	240
			MPAS, HPAS (3VA)	2,3	1400-1600	240
			MPAE, HPAE (3VA)	3	1600	240
			MRAS, HRAS (3VA)	2,3	1800-2000	240
			MRAE, HRAE (3VA)	3	2000	240

*Main Breaker Series Rated below Listed Interrupting Rating

480V Breaker Series Ratings

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
18,000	125	ED4 (2,3P)	BQD, CQD	1,2,3	15-100	480Y/277
25,000	125	ED6 (2,3P)	BQD, CQD	1,2,3	15-100	480Y/277
		NGB, HGB*, LBG* (2,3P)	BQD, CQD	1,2,3	15-100	480Y/277
35,000	125	MEAS (3VA) (2,3P)	NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS	1,2,3	15-125	480Y/277
	250	FD6-A, FXD6-A (2,3P)	NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
		MFAS, MFAE (3VA) (2,3P)	BQD, CQD	1,2,3	15-100	480Y/277
			ED4	1	15-100	277
			ED4, ED6	2,3	15-125	480
			NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
	400	JD6-A, JXD6-A (2,3P)	NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
		MJAS, MJAE (3VA) (2,3P)	BQD, CQD	1,2,3	15-30	480Y/277
			ED4	1	15-100	277
			NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
	600	MLAS, MLAE (3VA) (2,3P)	ED4	1	15-100	277
			NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
	800	MMAS, MMAE (3VA) (2,3P)	NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
	1000	MMNAE (3VA) (2,3P)	NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
	1200	MNAS, MNAE (3VA) (2,3P)	NGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
	1600	MPAS, MPAE (3VA) (2,3P)	SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
	2000	MRAS, MRAE (3VA) (2,3P)	SEAB, SEAS (3VA)	1,2,3	15-125	480Y/277
42,000	125	HED4 (2,3P)	BQD, CQD	1,2,3	15-100	480Y/277
			ED4	1	15-100	277
			ED4, ED6	2,3	15-125	480
	400	HJD6-A*, HJXD6-A* (2,3P)	NGB, HGB	1,2,3	15-125	480Y/277
50,000	250	HFD6, HFXD6 (2,3P)	NGB, HGB, NGB2	1,2,3	15-125	480Y/277
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
	400	HJD6-A*, HJXD6-A* (2,3P)	HED4	2,3	15-50	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MJAS (3VA)	2,3	200-400	480
	600	HLD6-A*, HLXD6-A* (2,3P)	HED4	2,3	15-50	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MJAS (3VA)	2,3	200-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
			MLAS (3VA)	2,3	450-600	480
	800	MD6, MXD6 (2,3P)	FD6-A, FXD6-A	2,3	70-250	480
			JD6-A,JXD6-A	2,3	200-400	480
			SJD6-A, SJD6-B	3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			SLD6-A, SLD6-B	3	400-600	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
50,000	800	MD6, MXD6 (2,3P)	MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		SMD6, SMD6-B (3P)	JD6-A, JXD6-A	2,3	200-400	480
			SJD6-A, SJD6-B	3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			SLD6-A, SLD6-B	3	400-600	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
	1200	ND6, NXD6 (2,3P)	FD6-A, FXD6-A	2,3	70-250	380
			JD6-A, JXD6-A	2,3	200-400	480
			SJD6-A, SJD6-B	3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			SLD6-A, SLD6-B	3	400-600	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		SND6, SND6-B (3P)	JD6-A, JXD6-A	2,3	200-400	480
			SJD6-A, SJD6-B	3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			SLD6-A, SLD6-B	3	400-600	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
	1600	PD6, PXD6 (3P)	FD6-A, FXD6-A	2,3	70-250	480
			JD6-A, JXD6-A	2,3	200-400	480
			SJD6-A, SJD6-B	3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			SLD6-A, SLD6-B	3	400-600	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
50,000	1600	PD6, PXD6 (3P)	NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			NNG	2,3	800-1200	480
			NPG	2,3	1200-1600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAE (3VA)	3	250-400	480
			MJAS (3VA)	2,3	200-400	480
			MLAE (3VA)	3	400-600	480
			MLAS (3VA)	2,3	450-600	480
		SPD6, SPD6-B (3P)	JD6-A, JXD6-A	2,3	200-400	480
			SJD6-A, SJD6-B	3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			SLD6-A, SLD6-B	3	400-600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAE (3VA)	3	250-400	480
			MJAS (3VA)	2,3	200-400	480
			MLAE (3VA)	3	400-600	480
			MLAS (3VA)	2,3	450-600	480
	2000	RD6, RXD6 (3P)	FD6-A, FXD6-A	2,3	70-250	480
			JD6-A, JXD6-A	2,3	200-400	480
			SJD6-A, SJD6-B	3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			SLD6-A, SLD6-B	3	400-600	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			NNG	2,3	800-1200	480
			NPG	2,3	1200-1600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAE (3VA)	3	250-400	480
			MJAS (3VA)	2,3	200-400	480
			MLAE (3VA)	3	400-600	480
			MLAS (3VA)	2,3	450-600	480
65,000	125	HEAS (3VA) (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
	150	HDGB (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			NDGB	2,3	50-150	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
		HDGB (3P)	MDAE (3VA)	3	40-150	480
		HDAE (3VA) (3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			NDGB	3	50-150	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
65,000	250	HFD6, HFXD6 (2,3P)	BQD, CQD	1,2,3	15-100	480Y/277
			NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			ED4, HED4	1	15-100	277
			ED4, ED6, HED4	2,3	15-125	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
		HFGB (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
		HFAS, HFAE (3VA) (2,3P)	BQD, CQD	1,2,3	15-100	480Y/277
			NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			ED4	1	15-100	277
			ED4, ED6	2,3	15-125	480
			FD6-A, FXD6-A	2,3	70-250	480
			HFD6, HFXD6	2,3	70-250	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
	400	HJD6-A, HJXD6-A (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			HED4, ED4	1	15-100	277
			FD6-A, FXD6-A	2,3	70-250	480
			JD6-A, JXD6-A	2,3	200-400	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAE (3VA)	3	250-400	480
			MJAS (3VA)	2,3	200-400	480
		HHJD6*, HHJXD6* (2,3P)	NGB, HGB	1,2,3	15-125	480Y/277
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
		HJGA (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
		HJAS, HJAE (3VA) (2,3P)	BQD, CQD	1,2,3	15-30	480Y/277
			NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			ED4	1	15-100	277
			FD6-A, FXD6-A	2,3	70-250	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
65,000	600	HLD6-A, HLXD6-A (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			ED4, HED4	1	15-100	277
			FD6-A, FXD6-A	2,3	70-250	480
			JD6-A, JXD6-A	2,3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		HHLD6*, HHLXD6* (2,3P)	NGB, HGB	1,2,3	15-125	480Y/277
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
		HLGB (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		HLAS, HLAE (3VA) (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			ED4	1	15-100	277
			FD6-A, FXD6-A	2,3	70-250	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
	800	HMD6, HMXD6 (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			FD6-A, FXD6-A	2,3	70-250	480
			JD6-A, JXD6-A	2,3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			LMD6, LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	400-800	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		HMG (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			LMD6,LMXD6	2,3	500-800	480
			MD6,MXD6	2,3	500-800	480
			SMD6, SMD6-B	3	600-800	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
65,000	800	HMG (2,3P)	NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		HMAS, HMAE (3VA) (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			LMD6, LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	400-800	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
			MMAS (3VA)	2,3	600-800	480
			MMAE (3VA)	3	600-800	480
	1000	HMNAE (3VA) (3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			LMD6, LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	400-800	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
			MMAS (3VA)	2,3	600-800	480
			MMAE (3VA)	3	600-800	480
			MMNAE (3VA)	3	1000	480
	1200	HND6, HNXD6 (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			FD6-A, FXD6-A	2,3	70-250	480
			JD6-A, JXD6-A	2,3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			LMD6, LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	500-800	480
			SMD6, SMD6-B	3	600-800	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			NNG	2,3	800-1200	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
65,000	1200	HNG (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			LMD6,LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	400-800	480
			ND6, NXD6	2,3	800-1200	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			NNG	2,3	800-1200	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		HNAS, HNAE (3VA) (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			LMD6,LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	400-800	480
			SMD6, SMD6-B	3	600-800	480
			ND6, NXD6	2,3	800-1200	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			NNG	2,3	800-1200	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
			MMAS (3VA)	2,3	600-800	480
			MMAE (3VA)	3	600-800	480
			MMNAE (3VA)	3	1000	480
			MNAS (3VA)	2,3	800-1200	480
			MNAE (3VA)	3	800-1200	480
	1600	HPD6, HPXD6 (3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			FD6-A, FXD6-A	2,3	70-250	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			NNG	2,3	800-1200	480
			NPG	2,3	1200-1600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		HPG (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			LMD6, LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	400-800	480
			ND6, NXD6	2,3	800-1200	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
65,000	1600	HPG (2,3P)	NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			NNG	2,3	800-1200	480
			NPG	2,3	1200-1600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		HPAS, HPAE (3VA) (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			LMD6,LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	400-800	480
			SMD6, SMD6-B	3	600-800	480
			ND6, NXD6	2,3	800-1200	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
			MMAS (3VA)	2,3	600-800	480
			MMAE (3VA)	3	600-800	480
			MMNAE (3VA)	3	1000	480
			MNAS (3VA)	2,3	800-1200	480
			MNAE (3VA)	3	800-1200	480
			MPAS (3VA)	2,3	1400-1600	480
			MPAE (3VA)	3	1600	480
	2000	HRD6, HRXD6 (3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			FD6-A, FXD6-A	2,3	70-250	480
			JD6-A, JXD6-A	2,3	200-400	480
			LD6-A	2,3	250-600	480
			LXD6-A	2,3	450-600	480
			NDGB	2,3	50-150	480
			NFGB	2,3	100-250	480
			NJGA	2,3	250-400	480
			NLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			NNG	2,3	800-1200	480
			NPG	2,3	1200-1600	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480
			MLAE (3VA)	3	400-600	480
		HRAS, HRAE (3VA) (2,3P)	NGB, HGB, NGB2, HGB2	1,2,3	15-125	480Y/277
			LMD6,LMXD6	2,3	500-800	480
			MD6, MXD6	2,3	400-800	480
			SMD6, SMD6-B	3	600-800	480
			ND6, NXD6	2,3	800-1200	480
			SEAB, MEAB, SEAS, MEAS (3VA)	1,2,3	15-125	480Y/277
			MDAE (3VA)	3	40-150	480
			MFAS (3VA)	2,3	40-250	480
			MFAE (3VA)	3	100-250	480
			MJAS (3VA)	2,3	200-400	480
			MJAE (3VA)	3	250-400	480
			MLAS (3VA)	2,3	450-600	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
65,000	2000	HRAS, HRAE (3VA) (2,3P)	MLAE (3VA)	3	400-600	480
			MMAS (3VA)	2,3	600-800	480
			MMAE (3VA)	3	600-800	480
			MMNAE (3VA)	3	1000	480
			MNAS (3VA)	2,3	800-1200	480
			MNAE (3VA)	3	800-1200	480
			MPAS (3VA)	2,3	1400-1600	480
			MPAE (3VA)	3	1600	480
100,000	150	LDGB (2,3P)	NGB, HGB, LBG	1,2,3	15-125	480Y/277
		CDAE (3VA) (3P)	MDAE, HDAE (3VA)	3	40-150	480
	250	HHFD6, HHFXD6 (2,3P)	NGB, HGB, LBG	1,2,3	15-125	480Y/277
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
		CFD6 (2,3P)	BQD, CQD	1	15-100	480Y/277
				2,3	15-30	480Y/277
		LFGB (2,3P)	NGB, HGB, LBG	1,2,3	15-125	480Y/277
			HFD6, HFXD6	2, 3	70-250	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
		CFAS, CFAE (3VA) (2,3P)	BQD, CQD	1,2,3	15-100	480Y/277
			NGB, HGB, LBG	1,2,3	15-125	480Y/277
			HFD6, HFXD6	2, 3	70-250	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
	400	HHJXD6, HHJD6 (2,3P)	ED4, HED4	1	15-100	277
			FD6-A, FXD6-A, HFD6, HFXD6	2,3	70-250	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
		CJD6-A* (2,3P)	NGB, HGB, LBG	1,2,3	15-125	480Y/277
		LJGA (2,3P)	NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			HFD6, HFXD6	2,3	70-250	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
100,000	400	CJAS, CJAE (3VA) (2,3P)	ED4	1	15-100	277
			FD6-A, FXD6-A, HFD6, HFXD6	2,3	70-250	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
	600	HHLD6, HHLXD6 (2,3P)	ED4, HED4	1	15-100	277
			FD6-A, FXD6-A HFD6-A, HFXD6-A	2,3	70-250	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		LLGB (2,3P)	HFD6, HFXD6	2,3	70-250	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA , HJGA	2,3	250-400	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		CLAS, CLAE (3VA) (2,3P)	ED4	1	15-100	277
			FD6-A, FXD6-A, HFD6, HFXD6	2,3	70-250	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
100,000	800	CMD6 (3P)	FD6-A, FXD6-A HFD6-A, HFXD6-A	2,3	70-250	480
			JD6-A, JXD6-A, HJD6-A, HJXD6-A	2,3	200-400	480
			LD6-A, HLD6-A	2,3	250-600	480
			LXD6-A, HLXD6-A	2,3	450-600	480
			MD6, MXD6, HMD6, HMXD6	2,3	500-800	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		SCMD6-A, SCMD6-B (3P)	HFD6, HFXD6	2,3	70-250	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		LMG (2,3P)	HFD6, HFXD6	2,3	70-250	480
			MD6, MXD6, HMD6, HMXD6	2,3	500-800	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		CMAS, CMAE (3VA) (2,3P)	HFD6, HFXD6	2,3	70-250	480
			MD6, MXD6, HMD6, HMXD6	2,3	500-800	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
100,000	800	CMAS, CMAE (3VA) (2,3P)	MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
			MMAS, HMAS (3VA)	2,3	600-800	480
			MMAE, HMAE (3VA)	3	600-800	480
	1000	CMNAE (3VA) (3P)	HFD6, HFXD6	2,3	70-250	480
			MD6, MXD6, HMD6, HMXD6	2,3	500-800	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			NMG	2,3	600-800	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
			MMAS, HMAS (3VA)	2,3	600-800	480
			MMAE, HMAE (3VA)	3	600-800	480
			MMNAE, HMNAE (3VA)	3	1000	480
	1200	CND6 (3P)	FD6-A, FXD6-A, HFD6, HFXD6	2,3	70-250	480
			JD6-A, JXD6-A, HJD6-A, HJXD6-A	2,3	200-400	480
			LD6-A, HLD6-A	2,3	250-600	480
			LXD6-A, HLXD6-A	2,3	450-600	480
			MD6, MXD6, HMD6, HMXD6	2,3	500-800	480
			ND6, NXD6, HND6, HNXD6	2,3	500-1200	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		SCND6-A, SCND6-B (3P)	HFD6, HFXD6	2,3	70-250	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
100,000	1200	LNG (2,3P)	HFD6, HFXD6	2,3	70-250	480
			MD6, MXD6, HMD6 HMXD6	2,3	400-800	480
			ND6, NXD6, HND6, HNXD6	2,3	600-1200	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		CNAS, CNAE (3VA) (2,3P)	MD6, MXD6, HMD6, HMXD6	2,3	500-800	480
			ND6, NXD6, HND6, HNXD6	2,3	800-1200	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
			MMAS, HMAS (3VA)	2,3	600-800	480
			MMAE, HMAE (3VA)	3	600-800	480
			MMNAE, HMNAE (3VA)	3	1000	480
			MNAS, HNAS (3VA)	2,3	800-1200	480
			MNAE, HNAE (3VA)	3	800-1200	480
	1600	CPD6 (3P)	FD6-A, FXD6-A HFD6-A, HFXD6-A	2,3	70-250	480
			NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		LPG (2,3P)	NDGB, HDGB	2,3	50-150	480
			NFGB, HFGB	2,3	100-250	480
			HFD6, HFXD6	2,3	70-250	480
			NJGA, HJGA	2,3	250-400	480
			NLGB, HLGB	2,3	400-600	480
			MD6, MXD6, HMD6, HMXD6	2,3	500-800	480
			ND6, NXD6, HND6 HNXD6	2,3	500-1200	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
100,000	1600	LPG (2,3P)	PD6,PXD6, HPD6 HPXD6	2,3	1200-1600	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
		CPAS, CPAE (3VA) (2,3P)	MD6, MXD6, HMD6, HMXD6	2,3	500-800	480
			ND6, NXD6, HND6, HNXD6	2,3	800-1200	480
			MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
			MMAS, HMAS (3VA)	2,3	600-800	480
			MMAE, HMAE (3VA)	3	600-800	480
			MMNAE, HMNAE (3VA)	3	1000	480
			MNAS, HNAS (3VA)	2,3	800-1200	480
			MNAE, HNAE (3VA)	3	800-1200	480
			MPAS, HPAS (3VA)	3	1400-1600	480
			MPAE, HPAE (3VA)	3	1600	480
	2000	CRAS, CRAE (3VA) (2,3P)	MDAE, HDAE (3VA)	3	40-150	480
			MFAS, HFAS (3VA)	2,3	40-250	480
			MFAE, HFAE (3VA)	3	100-250	480
			MJAS, HJAS (3VA)	2,3	200-400	480
			MJAE, HJAE (3VA)	3	250-400	480
			MLAS, HLAS (3VA)	2,3	450-600	480
			MLAE, HLAE (3VA)	3	400-600	480
			MMAS, HMAS (3VA)	2,3	600-800	480
			MMAE, HMAE (3VA)	3	600-800	480
			MMNAE, HMNAE (3VA)	3	1000	480
			MNAS, HNAS (3VA)	2,3	800-1200	480
			MNAE, HNAE (3VA)	3	800-1200	480
			MPAS, HPAS (3VA)	3	1400-1600	480
			MPAE, HPAE (3VA)	3	1600	480
			MRAS, HRAS (3VA)	3	1800-2000	480
			MRAE, HRAE (3VA)	3	2000	480

480V Breaker Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker			
	Max. Amperes	Type	Type	Number of Poles	Amperes	Volts
150,000	150	LDAE (3VA) (3P)	MDAE, HDAE, CDAE (3VA)	3	40-150	480
	250	LFAE (3VA) (3P)	MDAE, HDAE, CDAE (3VA)	3	40-150	480
			MFAE, HFAE, CFAE (3VA)	3	100-250	480
	400	CJD6-A (2,3P)	ED4	1	15-100	277
			HFD6, HFXD6	2,3	70-250	480
			JD6-A, HJD6-A, JXD6-A, HJXD6-A	2,3	200-400	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE, CDAE (3VA)	3	40-150	480
			MFAE, HFAE, CFAE (3VA)	3	100-250	480
			MJAE, HJAE, CJAE (3VA)	3	250-400	480
		LJAE (3VA) (3P)	HFD6, HFXD6	2,3	70-250	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE, CDAE (3VA)	3	40-150	480
			MFAE, HFAE, CFAE (3VA)	3	100-250	480
			MJAE, HJAE, CJAE (3VA)	3	250-400	480
	600	CLD6-A (2,3P)	ED4	1	15-100	277
			HFD6, HFXD6	2,3	70-250	480
			JD6-A, HJD6-A, JXD6-A, HJXD6-A	2,3	200-400	480
			LD6-A, HLD6-A	2,3	250-600	480
			LXD6-A, HLXD6-A	2,3	450-600	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE, CDAE (3VA)	3	40-150	480
			MFAE, HFAE, CFAE (3VA)	3	100-250	480
			MJAE, HJAE, CJAE (3VA)	3	250-400	480
			MLAE, HLAE, CLAE (3VA)	3	400-600	480
		LLAE (3VA) (3P)	HFD6, HFXD6	2,3	70-250	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
			MDAE, HDAE, CDAE (3VA)	3	40-150	480
			MFAE, HFAE, CFAE (3VA)	3	100-250	480
			MJAE, HJAE, CJAE (3VA)	3	250-400	480
			MLAE, HLAE, CLAE (3VA)	3	450-600	480
200,000	125	CED6 (2,3P)	BQD, CQD	1 2,3	15-100 20-30	277 480Y/277
			NGB, HGB, LBG	1,2,3	15-125	480Y/277
			ED4, HED4	1	15-100	277
			ED4, ED6, HED4	2,3	15-125	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277
	250	CFD6 (2,3P)	BQD, CQD	1 2,3	15-100 20-30	277 480Y/277
			NGB, HGB, LBG	1,2,3	15-125	480Y/277
			ED4, ED6	2,3	15-50	277
			ED4, HED4	1	15-100	480
			HED4	2,3	15-125	480
			FD6-A, FXD6-A, HFD6, HFXD6	2,3	70-250	480
			SEAB, MEAB, HEAB (3VA)	1,2,3	15-125	480Y/277

*Main Breaker Series Rated below Listed Interrupting Rating

240V Fuse Series Ratings

Series Rating kAIR	Main Breaker		Branch Breaker		
	Type	Max. Amperes	Type	Number of Poles	Amperes
65,000	R, J	15-600	QAF2N, QFGA2N, QTA, QTAN	1	15-20
		15-600	QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30
		15-600	QPH, BQH, BLH	1,2,3	15-125
		150-600	QN, QNR, QNH, QNRH	2	150-200
	T	15-1200	QAF2, BAF2, QAFH2, BAFH2, QFGA2, BFGA2, QFGAH2, BFGAH2, QAF2N, QFGA2N, QTA, QTAN	1	15-20
		15-1200	QPF2, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30
		15-1200	QPH, BQH, BLH	1,2,3	15-125
		150-1200	QN, QNR, QNH, QNRH	2	150-200
	L	601-6000	QPH, BQH, BLH	1,2,3	15-125
			QN, QNR, QNH, QNRH	2	150-200
100,000	R	15-200	BT, BTH	1	15-20
	J	15-400			
	R, J	15-600	QAF2, BAF2, QAFH2, BAFH2, QFGA2, BFGA2, QFGAH2, BFGAH2, QAF2N, QFGA2N, QTA, QTAN	1	15-20
			QPF2, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30
			ED4, HED4	1	15-100
			ED4, ED6, HED4, HED6	2,3	15-125
		70-600	FD6-A, FXD6-A	2,3	70-250
		100-600	QS, QSH, QSHH, HQS	2	100-225
		100-600	QR2, QRH2, HQR2	2,3	100-250
		200-600	JD6-A, JXD6-A, JXD2-A, SJD6-B	2,3	200-400
			LD6-A	2,3	200-600
		300-600	SLD6-B	3	300-600
		450-600	LXD6-A	2,3	450-600
		200-600	MJAS (3VA)	2,3	200-400
		450-600	MLAS (3VA)	2,3	450-600
	T (300V)	15-200	QPF, BQF, BLF, QHPF, QE, BE, BLE, QEH, BLEH, BLHF, BQHF, QAF, BAF, QAFH, BAFH	1	15-30
			QEH, BLEH, QE, QPF, QPHF, BLHF, BLE, BLF, QAF, BAF, QAFH, BAFH	2	15-60
			QP, BL, BQ	1,2,3	15-125
			QPH, BLH, BQH, HQP, HBL, HBQ	3	15-100
			QT	1,2	15-50
			QN, QNR, QNH, QNRH	2	15-200
		15-600	QAF2N, QFGA2N, QTA, QTAN	1	15-20
			QAFN	2	15-20
			QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30
			BT, BTH	1	15-20
			QAF2, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, BFGA2, QFGAH2, BFGAH2	1	15-20
			QPF2, BLF2, HQPF2, HBLF2, QPHF2, BLHF2	1	15-30
			QPH, BQH, BLH, HQP, HBQ, HBL	1,2	15-125
			EQ868#	2	15-125
			EQ869#	2	15-200
			SEAS, MEAS, SEAB, MEAB (3VA)	1,2,3	15-125
	T	15-400	BT, BTH	1	15-20
		15-1200	QAF2, BAF2, QAFH2, BAFH2, HQAF2, HBAF2, QFGA2, BFGA2, QFGAH2, BFGAH2, QAF2N, QFGA2N, QTA, QTAN	1	15-20
			QPF2, BLF2, HQPF2, HBLF2, QPHF2, BLHF2, QPF2N, QE2, BLE2, QEH2, BLEH2	1	15-30
			ED4, HED4	1	15-100
			ED4, ED6, HED4, HED6	2,3	15-125
		70-1200	FXD6-A, FD6-A	2,3	70-250
		100-1200	QS, QSH, QSHH, HQS	2	100-225
			QR2, QRH2, HQR2	2,3	100-250
		200-1200	JD6-A, JXD6-A, JXD2-A	2,3	200-400
			SJD6-B	3	200-400
			LD6-A	2,3	200-600
		300-1200	SLD6-B	3	300-600
		450-1200	LXD6-A	2,3	450-600
		200-1200	MJAS (3VA)	2,3	200-400
		450-1200	MLAS (3VA)	2,3	450-600

240V Fuse Series Ratings (continued)

Series Rating kAIR	Main Breaker		Branch Breaker		
	Type	Max. Amperes	Type	Number of Poles	Amperes
100,000	L	601-6000	ED4, HED4	1	15-100
			ED4, ED6, HED4, HED6	2,3	15-125
			QS, QSH, QSHH, HQS	2	100-225
			QR2, QRH2, HQR2	2,3	100-250
			FD6-A, FXD6-A	2,3	70-250
			JD6-A, JXD6-A, JXD2-A	2,3	200-400
			SJD6-B	3	200-400
			LD6-A	2,3	200-600
			LXD6-A	2,3	450-600
			SLD6-B	3	300-600
			SMD6	3	500-800
			SND6	3	500-1200
			PD6, PXD6, SPD6	3	1200-1600
			RD6, RXD6	3	1600-2000
			MJAS (3VA)	2,3	200-400
			MLAS (3VA)	2,3	450-600
200,000	R, J	15-100	BQD, CQD	1,2,3	15-100
		15-600	NGB,HGB,LBG	1,2,3	15-125
		70-600	HFD6, HFXD6	2,3	70-250
		50-600	NDGB, HDGB	2,3	50-150
		70-600	NFGB, HFGB	2,3	70-250
		200-600	NJGA, NJJA, HJGA	2,3	200-400
		400-600	NLGB, HLGB	2,3	400-600
		15-600	SEAB, MEAB, HEAB (3VA)	1,2,3	15-125
		50-600	MDAE, HDAE (3VA)	3	40-150
		70-600	MFAS, HFAS (3VA)	3	70-250
		100-600	MFAE, HFAE (3VA)	3	100-250
		200-600	MJAS, HJAS (3VA)	2,3	200-400
		250-600	MJAE, HJAE (3VA)	3	250-400
		450-600	MLAS, HLAS (3VA)	2,3	450-600
		400-600	MLAE, HLAE (3VA)	3	400-600
	T	15-1200	NGB, HGB, LBG	1,2,3	15-125
		70-1200	HFD6, HFXD6	2,3	70-250
		50-1200	NDGB, HDGB	2,3	50-150
		70-1200	NFGB, HFGB	2,3	70-250
		200-1200	NJGA, HJGA	2,3	200-400
		400-1200	NLGB, HLGB	2,3	400-600
		600-1200	NMG, HMG	2,3	600-800
		15-1200	SEAB, MEAB, HEAB (3VA)	1,2,3	15-125
		40-1200	MDAE, HDAE (3VA)	3	40-150
		70-1200	MFAS, HFAS (3VA)	3	70-250
		100-1200	MFAE, HFAE (3VA)	3	100-250
		200-1200	MJAS, HJAS (3VA)	2,3	200-400
		250-1200	MJAE, HJAE (3VA)	3	250-400
		450-1200	MLAS, HLAS (3VA)	2,3	450-600
		400-1200	MLAE, HLAE (3VA)	3	400-600
	L	601-6000	HFD6, HFXD6	2,3	70-250
			MD6, MXD6, HMD6, HMXD6	2,3	500-800
			ND6, NXD6, HND6, HNXD6	2,3	500-1200
			NDGB, HDGB	2,3	50-150
			NFGB, HFGB	2,3	70-250
			NJGA, NJJA, HJGA	2,3	200-400
			NLGB, HLGB	2,3	400-600
			NMG, HMG	2,3	600-800
			MDAE, HDAE (3VA)	3	40-150
			MFAS, HFAS (3VA)	3	70-250
			MFAE, HFAE (3VA)	3	100-250
			MJAS, HJAS (3VA)	2,3	200-400
			MJAE, HJAE (3VA)	3	250-400
			MLAS, HLAS (3VA)	2,3	450-600
			MLAE, HLAE (3VA)	3	400-600

480V Fuse Series Ratings

Series Rating kAIR	Main Fuse		Branch Breaker		
	Type	Max. Amperes	Type	Number of Poles	Max. Amperes
50,000	J	60-400	ED4	1	60-100
		15-400	ED4	2,3	15-100
100,000	J	15-600	SEAB, MEAB, HEAB (3VA)	1,2,3	15-125
		15-400	ED4	1	15-50
	R, J	70-600	HFD6, HFXD6	2,3	70-250
		200-600	JD6-A, JXD6-A, HJD6-A, HJXD6-A	2,3	200-400
			LD6-A, HLD6-A	2,3	200-600
		450-600	LXD6-A, HLXD6-A	2,3	450-600
		50-600	NDGB, HDGB	2,3	50-150
		70-600	NFGB, HFGB	2,3	70-250
		200-600	NJGA, HJGA	2,3	200-400
		400-600	NLGB, HLGB	2,3	400-600
		40-600	MDAE, HDAE (3VA)	3	40-150
		70-600	MFAS, HFAS (3VA)	3	70-250
		100-600	MFAE, HFAE (3VA)	3	100-250
		200-600	MJAS, HJAS (3VA)	2,3	200-400
		250-600	MJAE, HJAE (3VA)	3	250-400
		450-600	MLAS, HLAS (3VA)	2,3	450-600
		400-600	MLAE, HLAE (3VA)	3	400-600
	T	70-600	FD6-A, FXD6-A	2,3	70-250
		70-1200	HFD6, HFXD6	2,3	70-250
		200-1200	JD6-A, JXD6-A, HJD6-A, HJXD6-A	2,3	200-400
		200-1200	LD6-A, HLD6-A	2,3	200-600
		450-1200	LXD6-A, HLXD6-A	2,3	450-600
		50-1200	NDGB, HDGB	2,3	50-150
		70-1200	NFGB, HFGB	2,3	70-250
		250-1200	NJGA, HJGA	2,3	200-400
		400-1200	NLGB, HLGB	2,3	400-600
		15-600	SEAB, MEAB, HEAB (3VA)	1,2,3	15-125
		40-1200	MDAE, HDAE (3VA)	3	40-150
		70-1200	MFAS, HFAS (3VA)	3	70-250
		100-1200	MFAE, HFAE (3VA)	3	100-250
		200-1200	MJAS, HJAS (3VA)	2,3	200-400
		250-1200	MJAE, HJAE (3VA)	3	250-400
		450-1200	MLAS, HLAS (3VA)	2,3	450-600
		400-1200	MLAE, HLAE (3VA)	3	400-600
	L	601-6000	HFD6, HFXD6	2,3	70-250
		601-1200	JD6-A, JXD6-A, HJD6-A, HJXD6-A	2,3	200-400
			LD6-A, HLD6-A	2,3	200-600
			LXD6-A, HLXD6-A	2,3	450-600
			MD6, MXD6, HMD6, HMXD6	2,3	500-800
			ND6, NXD6, HND6, HNXD6	2,3	500-1200
		1200-6000	PD6, PXD6, HPD6, HPXD6	3	1200-1600
		601-6000	NDGB, HDGB	2,3	50-150
			NFGB, HFGB	2,3	70-250
			NJGA, HJGA	2,3	200-400
			NLGB, HLGB	2,3	400-600
			MDAE, HDAE (3VA)	3	40-150
			MFAS, HFAS (3VA)	3	70-250
			MFAE, HFAE (3VA)	3	100-250
			MJAS, HJAS (3VA)	2,3	200-400
			MJAE, HJAE (3VA)	3	250-400
			MLAS, HLAS (3VA)	2,3	450-600
			MLAE, HLAE (3VA)	3	400-600

Ampere Rating	Breaker Frame	Breaker Type	220/240 Volts		380/415 Volts		500 Volts	
			Icu	Ics	Icu	Ics	Icu	Ics
600-800	MD	MXD6	65	33	40	20	—	—
		HMXD6	100	50	65	33	—	—
800-1200	ND	NXD6	65	33	40	20	—	—
		HNXD6	100	50	65	33	—	—

General Specifications

Molded case circuit breakers shall provide circuit overcurrent protection with inverse time and instantaneous tripping characteristics and shall be Siemens Sentron, Sensitrip or approved equal.

All circuit breakers shall be listed by Underwriters' Laboratories, Inc., conform to applicable requirements of NEMA Standard Publication No. AB1 and meet appropriate classifications of Federal Specifications W C 375B/Gen.

All circuit breakers shall have a quick-make, quick-break over center toggle type mechanism and the handle mechanism shall be trip free to prevent holding contacts closed against a short circuit or sustained overload. All circuit breaker handles shall assume a position between "ON" and "OFF when tripped automatically. Multi-pole circuit breakers shall be common-trip such that an overload or short circuit on any one pole will result in all poles opening simultaneously. Arc extinction is to be accomplished by magnetic arc chutes. All ratings are to be clearly visible. When reverse feed is indicated on the drawings, in accordance with UL, circuit breakers with sealed trip units shall be supplied.

Thermal Magnetic Specifications

Unless otherwise noted on the drawings, all Circuit breakers 2000 Ampere and below shall have thermal-magnetic trip units, with inverse time-current characteristics. Automatic operation of these circuit breakers shall be obtained by means of thermal-magnetic tripping devices located in each pole providing inverse time delay and instantaneous circuit protection. Circuit breakers shall be ambient compensating in that, as the ambient temperature increases over 40°C, the circuit breaker automatically derates itself so as to better protect its associated conductor. Thermal magnetic breakers from 250 to 2000A frames shall have thermal interchangeable trip units, with instantaneous magnetic trip settings that are adjustable and accessible from the front of all circuit breakers on frame sizes 250 Amperes and above. Where indicated, provide circuit breakers UL listed for application at 100% of their continuous ampere rating in their intended enclosure.

Motor Circuit Protectors

Where indicated on the drawings and in the combination motor starter/motor control center schedule, furnish instantaneous magnetic trip only circuit breakers for motor short circuit protection. The magnetic trips shall be adjustable and accessible from the front of all circuit breakers frames. The continuous current rating shall be between 1 and 800 Amperes as indicated on the drawing.

The interrupting rating of the circuit breakers shall be as indicated in the specifications, and shown on the drawing or single line diagram. The interrupting rating of the circuit breakers shall be at least equal to the available short circuit current at the line terminals of the circuit breaker and correspond to the UL listed integrated short circuit current rating specified.

Internal Accessories

Provide shunt trips, bell alarms, and auxiliary switches as shown on the contract drawings. Gold plated auxiliary switches shall be supplied for PLC connection. Internal accessories for all breakers shall be UL listed for field installation and modification.

Connection Accessories

Unless otherwise noted, Mechanical lugs shall be provided with all Molded Case Breakers. Where indicated on the drawings, compression lugs shall be provided on 1200 Ampere frame and below circuit breakers. All compression lugs shall be supplied by the Circuit Breaker Manufacturer. Where indicated on the drawings, UL listed plug-in or rear connectors shall be supplied.

Solid State Sensing Specifications

As indicated on the drawings, circuit breaker frames 400 Ampere through 3200-Ampere shall have microprocessor-based RMS sensing trip units, with the capability to measure through to the 21st harmonic. Automatic operation of all circuit breaker frames 400A and larger shall be obtained by means of solid state tripping elements providing inverse time delay and (instantaneous) and/or (short-time delay) circuit protection. Continuous current ratings shall be adjustable from 20% to 100% of the trip unit rating, without the need for a rating plug. Long-time delay and instantaneous trip shall be adjustable. The optional short-time trip function shall have adjustable pick-up settings, three fixed times, and I^2t ramp. Circuit breaker frames 400A and larger, and where indicated on the drawings, shall be 100% equipment rated.

Integral Ground Fault Option

Main and feeder circuit breakers, as indicated on the drawings, shall be provided with integral ground fault protection. Ground fault pick-up shall be adjustable from 20% to 70% of the circuit breakers maximum continuous current rating. Ground fault time delay shall be adjustable with three 1^2t ramps.

Metering Option

When indicated on the drawings, solid state trip breakers shall be furnished with a plug-in or panel mounted metering device. This device shall simultaneously display all three phase currents, as well as average current, ground current, and phase unbalance. In addition it shall display breaker status, a max log, and a trip log. The trip log will retain and display date, time and type of trip (overload, short circuit or ground fault) for the most recent 5 trip events.

Current Limiting Specifications

Where indicated on the drawings, Siemens current limiting circuit breakers are to be furnished. Current limiting circuit breakers shall limit the let-through I^2t to a value less than the I^2t of one-half cycle wave of the symmetrical prospective current without any fusible elements when operating within its current range.

Series Connected Combination Specifications

Where protective devices are applied in series combination, such that the prospective available fault current exceeds the interrupting rating (AIR) of the downstream protective devices, such combinations shall be UL recognized combinations. All electrical equipment using these UL recognized circuit breaker combinations shall be clearly marked in accordance with NEC Section 240-83(c).

Sentron Series	Note	Superseded	Note	Superseded
CED62B015-CED62B125	①	CLE62B015-CLE62B100	③	CE2B015-CE2B100
CED62S100A	①	CLE62S100	③	CE2S100
CED63A001-CED63A125	①	CLE63A001-CLE63A125		
CED63B015-CED63B125	①	CLE63B015-CLE63B100	③	CE3B015-CEB100
CED63S100A	①	CLE63S100	③	CE3S100
HHED63B015-HHED63B125	①	HED63B015-HED63B125		
CFD62A150, CFD62L150, CFD62A250	①	CLF62A150, CLF62A250		
CFD62B070-CFD62B250	①	CLF62B070-CLF62B240	③	CJ2B125-CJ2B250
CFD62S250A	①	CLF62S250		
CFD63A150, CFD63L150, CFD63A250	①	CLF63A150, CLF63A250		
CFD63B070-CFD63B250	①	CLF63B070-CLF63B250	③	CJ3B125-CJ3B250
CFD63S250A	①	CLF63S250		
CJD62B200-CJD62B400	①	CLJ62B100-CLJ62B400	④	CJ2B300-CJ2B400
CJD62H400, CJD62L400	①	CLJ62L400, CLJ62H400		
CJD62S400A	①	CLJ62S400	④	CJ2S400
CJD63B200-CJD63B400	①	CLJ63B200-CLJ63B400	④	CJ3B300-CJ3B400
CJD63H400, CJD63L400	①	CLJ63L400, CLJ63H400		
CJD63S400A	①	CLJ63S400	④	CJ3S400
CPD63B120-CPD63B160	⑤	CP3B120-CP3B160		
ED21B015-ED21B100	①	E21B015-E21B100	②	EE1B015-EE1B100
ED22B015-ED22B100	①	E22B015-E22B100	②	EE2B015-EE2B100
ED22S100A	①	E22S100A	②	EE2S100
ED23B015-ED23B100	①	E23B015-E23B100	②	EE3B015-EE3B100
ED23S100A	①	E23S100A	②	EE3S100
ED41B015-ED41B100	①	E41B015-E41B100	②	EH1B015-EH1B100
ED42B015-ED42B125	①	E42B015-E42B100	②	EH2B015-ED2B125
ED42S100A	①	E42S100	②	EH2S100
ED43B015-ED43B125	①	E43B015-E43B100	②	EH3B015-EH3B100
ED43S100A	①	E43S100	②	EH3S100
ED61B015-ED61B100	①	E61B015-E61B100	②	EF1B015-EF1B020
ED62B015-ED62B125	①	E62B015-E62B100	②	EF2B015-EF2B100
ED62S100A	①	E62S100A	②	EF2S100
ED63A001-ED63A125	①	E63A001-E63A125	②	EF3A003, EF3J050, EF3L050-EF3A100, EF3H1
ED63B015-ED63B125	①	E63B015-E63B100	②	EF3B015-EF3B100
ED63S100A	①	E63S100A	②	EF3S100
HHED63B015-HHED63B125	①	HED63B015-HED63B125		
FD62B070-FD62B250⑥	①	F62B070, F62B250		
FD63B070-FD63B250⑥	①	F63B070-F63B250		
FXD62A150, FXD62L150, FXD62A250	①	FJ62A150, FJ62L150-FJ62A250		
FXD62B070-FXD62B250⑥	①	FJ62B070-FJ62B250	②	FJ2B070-FJ2B225
FXD62S250A	①	FJ62S250	②	FJ2S225
FXD63A150, FXD63L150, FXD63A250	①	FJ63A150, FJ63L150-FJ63A250	②	FJ3A225
FXD63B070-FXD63B250⑥	①	FJ63B070-FJ63B250	②	FJ3B070-FJ3B225
FXD63S250A	①	FJ63S250	②	FJ3S225
HED41B015-HED41B100	①	HE41B015-HE41B100		
HED42B015-HED42B125	①	HE42B015-HE42B100		
HED43B015-HED43B125	①	HE43B015-HE43B100		
HED61B015-HED61B100	①	HE61B015-HE61B100	②	HE2B015-HE2B100
HED63B015-HED63B125	①	HE63B015-HE63B100	②	HE3B015-HE3B100
HFD62B070-HFD62B250	①	HF62B070-HF62B250		
HFD63B070-HFD63B250	①	HF63B070-HF63B250		
HHED63B015-HHED63B125	①	HED63B015-HED63B125		
HJD63B200-HJD63B400	①	HJ63B200-HJ63B400	②	HJ3B125-HJ3B400
HLD63B250-HLD63B600	①	HL63B450-HL63B600	②	HL3B450-HL3B600
HMD63B500-HMD63B800	②	HN3B500-HN3B800		
HND63B100-HND63B120	②	HK3B100-HK3B120		
HPD63B120-HPD63B160	②	HP3B120-HP3B160		
HRD63B160-HRD63B200	②	HR3B160-HR3B200		

①Mechanically and electrically interchangeable.
②Electrically interchangeable only, refer to sales office for further details.
③Electrically interchangeable only if the system interrupting capacity is less than or equal to:
200 kA at 240V AC
200 kA at 480V AC
100 kA at 600V AC

④Electrically interchangeable only if the system interrupting capacity is less than or equal to:
200 kA at 240V AC
150 kA at 480V AC
100 kA at 600V AC
⑤Refer to local sales office for replacement information.

⑥Effective 1994 — The FD6 and FXD6 types have been replaced by FD6-A and FXD6-A type thermal / magnetic circuit breakers — mechanically and electrically interchangeable with the exception that FXD6-A and FD6-A have 22kA at 600V AC ratings versus 18kA at 600V AC for types FXD6 and FD6.

Sentron Series	Note	Superseded	Note	Superseded
JD62B200-JD62B400	①	JLB200-JL62B400	②	JL2B070-JL2B400
JD63B200-JD63B400	①	JL63B200-JL63B400	②	JL3B0L0-JL3B400
JXD22B200-JXD22B400	①	JD22B200-JD22B400	②	JD2B250-JD2B400
JXD22S400A	①	JD22S400	②	JD2S400
JXD23B200-JXD23B400	①	JD23B200-JD23B400	②	JD3B250-JD3B400
JXD23S400A	①	JD23S400	②	JD3S400
JXD62B200-JXD62B400	①	JJ62B200-JJ62B400	②	JJ2B250-JJ2B400
JXD62H400, JXD62L400	①	JL62L400, JL62H400	②	JL2L400-JL2H400
JXD62S400A	①	JJ62S400A		
JXD63B200-JXD63B400	①	JJ63B200-JJ63B400	②	JJ3B200-JJ3B400
JXD63H400, JXD63L400	①	JL63A400, JL63H400, JL63L400	②	JL3H400, JL3L400, JL3A225
JXD63S400A	①	JJ63S400A		
LD62B250-LD62B500	①	LL63B250-LL62B600	②	LL2B450-LL2B600
LD62B250-LD63B600	①	LL63B250-LL63B600	②	LL3B450-LL3B600
LXD62B450-LXD62B600	①	LJ62B450-LJ62B600		
LXD62J600, LXD62L600	②	LL2H600, LL2U600, LL2X600		
LXD62S600A	①	LJ62S600		
LXD63B450-LXD63B600	①	LJ63B450-LJ63B600		
LXD64H600, LXD63L600	①	LL63H600, LL63L600	②	LL3A450, LL3H600
LXD63S600A	①	LJ63S600A	②	LL3S600
MD62B500-MD62B800	②	KM2B500-KM2B800		
MD63B500-MD63B800	②	KM3B500-KM3B800		
MXD62A800, MXD62H800, MXD62L800	②	KM2A800, KM2H800, KM2L800		
MXD62S800A	②	KM2S800		
MXD63A800, MXD63H800, MXD63L800	②	KM3A600, KM3H800, KM3L800		
MXD63S800A	②	KM3S800		
ND63B100-ND63B900	②	KP3B100-KP3B900		
NXD63S120A	②	KP3S120		
PD63B120-PD63B160	②	HP3B120-HP3B160		
PXD63S160A	②	HP3S160		
RD63B160-RD63B200	②	HR3B160-HR3B200		
QR22B100 – QR22B225		QJ22B060-QJ22B225		
QR22B100H – QR22B225H		QJ22B060H-QJ22B225H		
HQR23S250HA		QJ22S225		
QJ23B100 – QR23B225		QJ23B060-QJ23B225		
QR23B100H – QR23B225H		QJ23B060H-QJ23B225H		
QRH22B100 – QRH22B225		QJH22B060-QJH22B225		
QRH23B100 – QRH23B225		QJH23B060-QJH23B225		
HQR23S250HA		QJH23S225	①	
QJH22B060-QJH22B225	①	QJ2H125-QJ2B225		
QJH23B060-QJH23B225	①	QJ3H125-QJ3H225		
QJH23S225	①	QJ3S225		
RD63B160-RD63B200	②	HR3B160-HR3B200		
RXD63S200A	②	HR3S200		
— —	④	BQCC1B015-BQC1B030		
— —	④	CC1B015-CC1B030		
— —	④	CC2B015-CC2B030		
— —	④	CC3B015-CC3B030		
— —	④	EF2A003, EF2H050, EF2L050, EF2A100		
— —	④	EF2H150, EF2L150		
— —	④	EH1B015-EH1B100		
— —	④	EH2B015-EH2B100		
— —	④	EH3B015-EH3B100		
— —	③	HE2A003, HE2H050, HE2L050-HE2A100		
— —	③	HE3A003, HE3H050, HE3L050-HE3A100		
— —	③	HE3B015-HE3B100		

①Mechanically and electrically interchangeable.
②Electrically interchangeable only, refer to sales office for further details.

③These units are for replacement purposes only. Consult sales office for availability.

④These units are no longer manufactured, and no replacement is available.