

Molded Case Circuit Breakers

Industrial Controls Product Catalog 2017

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240V Circuit Breakers



BQ Breakers

Selection and ordering data

	240V
BQ	10KAIC
BQH	22KAIC
HBQ	65KAIC

1-, 2- & 3-pole up to 125A for circuit protection up to 240 volt circuits (UL)

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QJ Breakers

Selection and ordering data

	240V
QJ2	10KAIC
QJH-2	22KAIC
QJ2-H	42KAIC
HQJ2	65KAIC

2- & 3-pole up to 225A for circuit protection up to 240 volt circuits (UL)

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600/347V Circuit Breakers



CQD Breakers

Selection and ordering data

	480/277V	600/347V
CQD	14KAIC	—
CQD-6	—	10KAIC

1-, 2- & 3-pole up to 100A for circuit protection up to 600/347V (CSA) & 480/277V (UL) circuits

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600/347V Circuit Breakers



GG Breakers

Selection and ordering data

	480V	600/347V
NGG	25KAIC	14KAIC
HGG	35KAIC	14KAIC
LGG	65KAIC	14KAIC

1-, 2- & 3-pole up to 125A for circuit protection up to 600/347 volt circuits (UL/CSA/IEC)

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600V Circuit Breakers



DG VL Breakers

Selection and ordering data

	480V	600Y/347V
NDG	35KAIC	18KAIC
HDG	65KAIC	18KAIC
LDG	100KAIC	18KAIC

2- & 3-pole up to 150A for circuit protection up to 600 volt circuits (UL/CSA/IEC)

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FG VL Breakers

Selection and ordering data

	480V	600V
NFG	35KAIC	18KAIC
HFG	65KAIC	20KAIC
LFG	100KAIC	25KAIC

2- & 3-pole up to 150A for circuit protection up to 600 volt circuits (UL/CSA/IEC)

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Introduction

Ordering

In the FD through RD frames, you may order molded case circuit breakers three basic ways:

- As separately ordered frames, trip units and lugs
- As frame, trip unit and lugs ordered as one catalog number and shipped unassembled or assembled
- As Frame and Trip Unit shipped assembled and with the trip unit made non-removable, in compliance with UL 489 requirements that to be reverse fed the circuit breaker must not have an interchangeable trip unit.

These two options are described in the following:

Components Ordered Separately

To get the components for a 3-pole, 400 Amp standard interrupting circuit breaker, you would order the frame (JD63F400), the trip unit (JD63T400) and six lugs (TA2J6500). This option is normally useful only if you stock and use large volumes of product and wish to reduce your inventory cost. You may stock, for example, a smaller number of frames (JD63F400) and a variety of trip units (JD63T300, JD63T350, etc.) and assemble breakers as you need them.

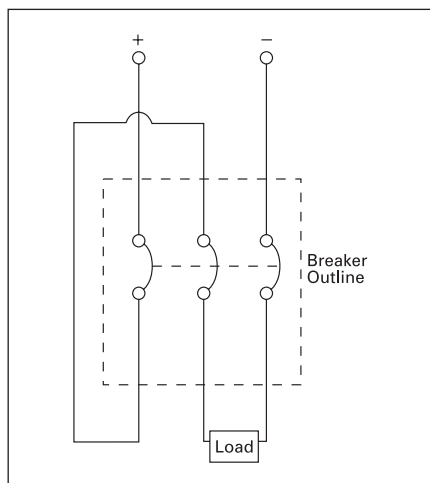
Frame, Trip Unit and Lugs Ordered Together

If you order the catalog number JD63B400, you will receive a frame, a trip unit and 6 lugs in separate packages. By suffixing this number with "L" (e.g. JD63B400L), you will receive frame, trip unit and lugs assembled in one container. Pursuant to UL 489, a product ordered thus will have the markings "LINE" and "LOAD", and may not be "reverse fed" (with power flowing from the "OFF" end of the breaker toward the "ON" end).

Non-Interchangeable Trip Breakers

If you place an "X" after the frame size designator (e.g. JXD63B400), you will receive a frame and trip unit assembled, with the trip unit made non-removable. If you suffix an "L" to this catalog number (e.g. JXD63B400L), you will receive the breaker, non-removable trip unit and lugs assembled. Unless you anticipate a specific need to change the breaker's ampere rating in the future, this is the preferred ordering method, as the products are assembled to Siemens' specifications in our factories. These breakers are suitable for use reverse fed according to UL 489, since the trip unit is not removable.

The smaller frames (QJ, ED and below) do not have removable trip units, and consequently are shipped only as assembled products. To add lugs, see the ordering instructions on each product's catalog page.

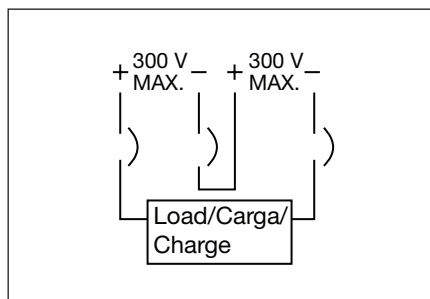


500V DC Wiring Configuration

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 underground 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 Sentron breakers with the DC ratings, please refer to pages Speedfax pages 7-11 to 7-16.



Catalog Numbering System

Selection/Application

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

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

Maximum Voltage

- 2 — 240 Vac
4 — 480 Vac
6 — 600 Vac

Number of Poles

- 1
2
3
9 used to indicate the max. functions for an electronic trip circuit breaker (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 — Navel Ratings

NOTE:

- — Position omitted if not used.

CQD 100A Frame

Selection/Dimensions

Type CQD (Cable In - Cable Out) DIN Rail Mount^③

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	277V AC 125V DC	480V/277V AC 125/250V DC	480V/277V AC
	Catalog Number	Catalog Number	Catalog Number
15	CQD115 ^{①②}	CQD215 ^②	CQD315 ^②
20	CQD120 ^{①②}	CQD220 ^②	CQD320 ^②
25	CQD125 ^②	CQD225 ^②	CQD325 ^②
30	CQD130 ^②	CQD230 ^②	CQD330 ^②
35	CQD135 ^② ■	CQD235 ^② ■	CQD335 ^②
40	CQD140 ^② ■	CQD240 ^②	CQD340 ^②
45	CQD145 ^② ■	CQD245 ^② ■	CQD345 ^② ■
50	CQD150 ^② ■	CQD250 ^②	CQD350 ^②
60	CQD160 [■]	CQD260	CQD360
70	CQD170 [■]	CQD270	CQD370
80	CQD180 [■]	CQD280	CQD380
90	CQD190 [■]	CQD290 [■]	CQD390
100	CQD1100 [■]	CQD2100	CQD3100

Interrupting Ratings

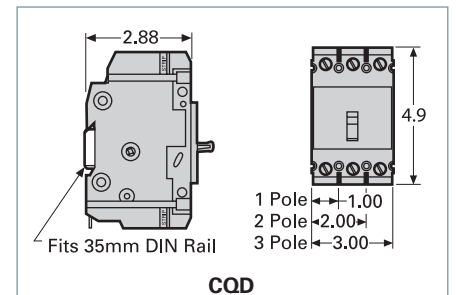
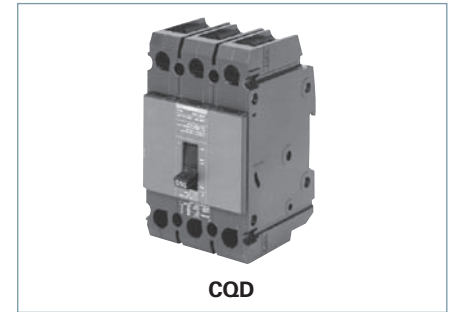
Breaker Type	Number of Poles	RMS Symmetrical Amperes (KA)						
		Volts AC (50/60 Hz)					Volts DC	
		120	240	277	480/277	600/347	125	125/250
CQD (UL)	1	65	—	14	—	—	14	—
	2	—	65	—	14	—	—	14
	3	—	65	—	14	—	—	—

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



For inches / millimeters conversion, see Application Data section.

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

② HID rated.

① SWD rated.

③ HACR rated.

Note: CQD breakers are UL Listed for reverse feed applications.Accessories pages 17/14
and 17/108 to 17/113