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)

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 voltcircuits (UL)

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

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)

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)

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)

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.

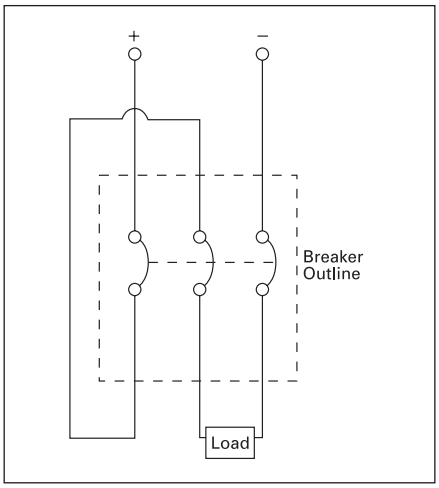
Frame, Trip Unit and Lugs Ordered Together

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 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.

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 (120V 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■	BQ1B045H■	HB1B045■
50	BQ1B050	BQ1B050H	HB1B050■
60	BQ1B060■	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	BQ2B045H■	HB2B045■
50	BQ2B050	BQ2B050H	HB2B050■
60	BQ2B060	BQ2B060H	HB2B060■
70	BQ2B070	BQ2B070H■	HB2B070■
80	BQ2B080	BQ2B080H■	HB2B080
90	BQ2B090	BQ2B090H■	HB2B090■
100	BQ2B100	BQ2B100H	HB2B100
110	BQ2B110	BQ2B110H	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
400Hz Calibration	add suffix...Y ⑧
Marine 50° C Ambient Calibration	add suffix...M
Fungus Proofing	add suffix...F

For external accessories, please refer to page 17/106

BQ / BQH / HBQ Internal Accessories

Description	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■②	Factory

■ 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.

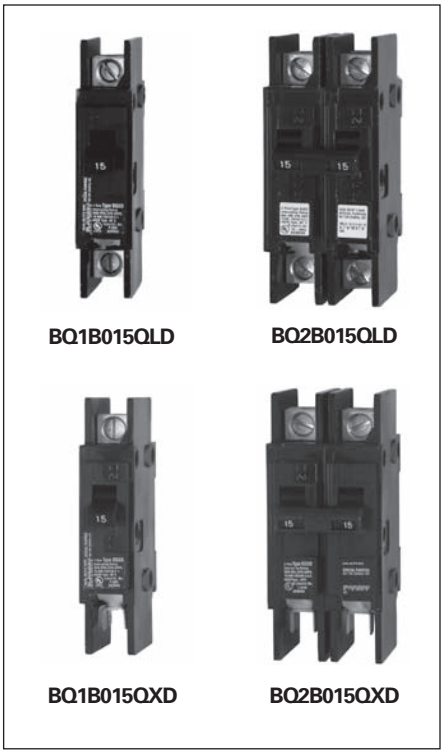
② 1A and 1B contacts.
③ UL Listed for use on 3-phase grounded "B" systems — 10,000 for this application.
④ UL Listed for frequent switching applications (SWD). 120V AC Fluorescent Lighting.

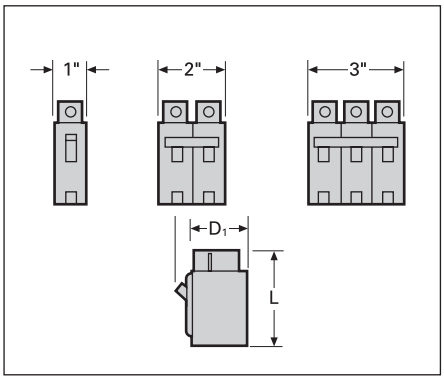
⑤ Shipped 12 per sleeve.
⑥ Shipped 6 per sleeve.
⑦ Shipped 4 per sleeve.
⑧ UL Listed 5KA IR.

DIN Rail Mounted Circuit Breakers

Selection/Dimensions

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





Lugs-For Use with BQ, BQH, HBQ⑥

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**
Load Side			
10	2	#16 Cu	Connectors are Supplied with Circuit Breaker
15–20	1 1	#14–#10 Cu #12–#10 Al	
25–35	1 1	#14–#6 Cu #12–#10 Al	
40–50	1 1	#8–#6 Cu #8–#4 Al	
55–70	1 1	#8–#4 Cu #8–#2 Al	
80–100	1 1	#4–#1/0 Cu #2–#1/0 Al	
110–125	1 1	#2–#1/0 Cu #1/0–#2/0 Al	

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

Enclosures	
Type	**Catalog Number** ④
1	**EB3100S**③⑤
3R	**WB3100**

Breaker Type	Amperes	Dimensions (inches) L	D1	D2
BQ, BQH	15–50	3¾	2⅜	3
BQ, BQH	55–125	4	2⅜	3
HBQ	15–125	4	2⅜	3
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.

For external accessories, please refer to pages 17/106, 17/108 to 17/113

For Use With Type(s)	Circuit Breaker Ampere Rating	Cables Per Lug	Lug Wire Range	Catalog Number
BQ, BQH, BQHF BQE, BQF, BL, BLH, 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	
	40–50	1 1	#8–#6 AWG Cu #8–#4 AWG Al	
	55–70	1 1	#8–#4 AWG Cu #8–#2 AWG Al	
	80–100	1 1	#4–#1/0 AWG Cu #2–#1/0 AWG Al	
	110–125	1 1	#2–#1/0 AWG Cu #1/0–#2/0 AWG Al	
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)
NEG, HEG	15-125	1	#14-3/0 AWG Cu	**3TW1EG30** (pkg. of 3)
	15-125	1	#14-1/0 AWG Cu/Al	**3TA1EG10** (pkg. of 3)
	15-125	1	#6-3/0 AWG Cu/Al	**3TA1EG30** (pkg. of 3)
	15-125	—	Nut Keeper Kit (3-pole)	**TNKE3** (pkg. of 3)
	15-125	—	Nut Keeper Kit (4-pole)	**TNKE4** (pkg. of 4)

Connector wire ranges and cavities are established in conjunction with Table 6.1.4.2.1 of UL 489 standards.

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.