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.

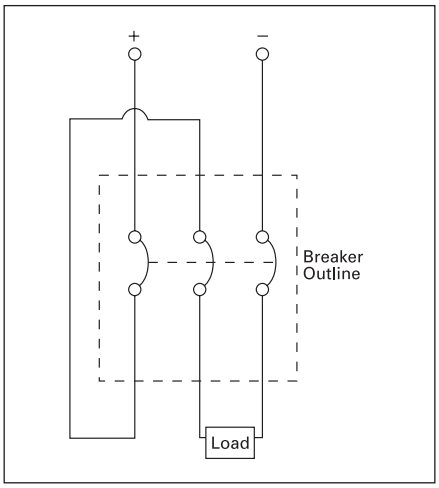
Frame, Trip Unit and Lugs Ordered Together

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.

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.

				X	D			

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
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
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

NOTE:

□ — Position omitted if not used.

Continuous Current Rating @ 40°C	2-Pole 240V AC Catalog Number	3-Pole 240V AC Catalog Number
Type QJ2②		
60	QJ22B060■	QJ23B060
70	QJ22B070■	QJ23B070
80	QJ22B080■	QJ23B080■
90	QJ22B090■	QJ23B090■
100	QJ22B100	QJ23B100
110	QJ22B110■	QJ23B110
125	QJ22B125	QJ23B125
150	QJ22B150	QJ23B150
175	QJ22B175	QJ23B175
200	QJ22B200	QJ23B200
225	QJ22B225	QJ23B225
Type QJH2②		
60	QJH22B060■	QJH23B060■
70	QJH22B070■	QJH23B070■
80	QJH22B080■	QJH23B080■
90	QJH22B090■	QJH23B090■
100	QJH22B100■	QJH23B100
110	QJH22B110■	QJH23B110
125	QJH22B125	QJH23B125
150	QJH22B150	QJH23B150
175	QJH22B175■	QJH23B175
200	QJH22B200	QJH23B200
225	QJH22B225	QJH23B225
Type QJ2H②		
60	QJ22B060H■	QJ23B060H■
70	QJ22B070H■	QJ23B070H■
80	QJ22B080H■	QJ23B080H■
90	QJ22B090H■	QJ23B090H■
100	QJ22B100H■	QJ23B100H
110	QJ22B110H■	QJ23B110H■
125	QJ22B125H	QJ23B125H
150	QJ22B150H	QJ23B150H
175	QJ22B175H■	QJ23B175H
200	QJ22B200H	QJ23B200H
225	QJ22B225H	QJ23B225H
Type HQJ2②		
100	—	HQJ23B100▲
110	—	HQJ23B110▲
125	—	HQJ23B125▲
150	—	HQJ23B150▲
175	—	HQJ23B175▲
200	—	HQJ23B200▲
225	—	HQJ23B225▲

QJ2

Internal Accessories (Factory installed only) (3-pole only)③
Add suffix to catalog number.

Control Voltage		Shunt Trip	Auxiliary Switches		Shunt Trip and 1A and 1B Auxiliary Switch
			1A and 1B	2A and 2B	
AC	DC	Suffix	Suffix	Suffix	Suffix
120/240		00S01■	A01■	A02■	01S01■
	24	00S07■	A01■	A02■	01S07■
	48	00S09■	A01■	A02■	01S09■

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

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

① See **Note: A** page 17/42.
Note: QJ breakers are UL Listed for reverse feed applications.

② HACR rated.
③ Internal accessories are not available on 2-pole QJ breakers.

Ordering Information

Load side TA1Q300 lugs are mounted and included when circuit breaker is ordered. For line and load lugs (TA1Q300) installed at no additional charge, add suffix "L" to catalog number.

50°C Calibration - See page 17/104.
400HZ. - See page 17/104.

Shipping Weights

QJ2, QJH2, QJ2H, HQJ2		
Number of Poles	Number per Carton	Shipping Weight (lbs.)
2	10	30
3	10	41

Lugs For 75°C Wire①

Catalog Number	Lug Body	Lug Wire Range
TA1Q300	Al	(1) #6—300 kcmil Cu (1) #4—300 kcmil Al
TC1Q250	Cu	(1) #6—250 kcmil Cu

Enclosures (Neutral Included)

Type	Catalog Number
1	EB3225(S)(F)
3R (2-pole)	WB2225
3R (3-pole)	WB3225

UL 489 Interrupting Ratings

Breaker Type	RMS Symmetrical Amperes (kA) Volts AC (50/60 Hz)	
	240	208Y/120
QJ2	10	—
QJH2	22	—
QJ2H	42	—
HQJ2	65	100



4.5″ 3-pole

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

Modifications

General Selection

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, QJ2, and ED Frame Circuit Breakers
— Replace 'B' in catalog number with 'M' ..... No Charge
(Example: BQ3M060, QJ23M200, 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

UL Listed (5KA IR)

For BQ & BL Type Circuit Breakers (200A max.) ..... Add 25% to list price
— Add suffix 'Y' to catalog number

Not UL Listed
For all other Circuit Breakers, see derating tables on page 6-152 and order standard circuit breakers.

Fungus Proofing

All BQD, CQD, GB, GG, ED, FD, JD, LD, LMD, MD, ND, PD, RD, DG, FG, JG, LG, 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.

Siemens molded case breakers, including BL, NGB and Sentron ED through RD frames can be labeled "NAVAL" in compliance with UL 489 Supplement SB.

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.

Types	UL File
BQD/CQD	E10848, Vol 10, Sec 1
GG	E10848, Vol 10, Sec 2
GB	E10848, Vol 10, Sec 3
ED2, ED4, ED6, IIED4, HED6	E10848, Vol 4, Sec 11
CED6	E10848, Vol 4, Sec 13
FD6, FXD6, HFD6, HFXD6	E10848, Vol 4, Sec 17
CFD6	E10848, Vol 4, Sec 18
JXD2, JD6, JXD6, LXD6, LD6, HJD6, HJXD6, HLD6, HLXD6	E10848, Vol 4, Sec 8
HHJD6, HHJXD6, HHLD6, HHLXD6	E10848, Vol 4, Sec 20
CJD6, CLD6	E10848, Vol 4, Sec 14
MD6, MXD6, HMD6, HMXD6, CMD6, ND6, NXD6, HND6, HNXD6, CND6	E10848, Vol 4, Sec 15
PD6, PXD6, HPD6, HPXD6, CPD6, RD6, RXD6, HRD6, HRXD6	E10848, Vol 4, Sec 19