

Molded Case Circuit Breakers

Panelboard Mounting with INSTA-WIRE

Selection

1-Pole Bolt-On (120V AC)^⑤

Continuous Current Rating @ 40° C	Type BL ^①	Type BLH ^①	Type HBL
	10,000A IR	22,000A IR	65,000A IR
	Catalog Number	Catalog Number	Catalog Number
10 ^②	B110	—	—
15	B115 ^④	B115H ^④	B115HH ^④
20	B120 ^④	B120H ^④	B120HH ^④
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)^④

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	—	—
60	B260R	—	—
70	B270R	—	—
80	B280R	—	—
90	B290R	—	—
100	B2100R	—	—

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

BL/BLH/HBL 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

Modifications

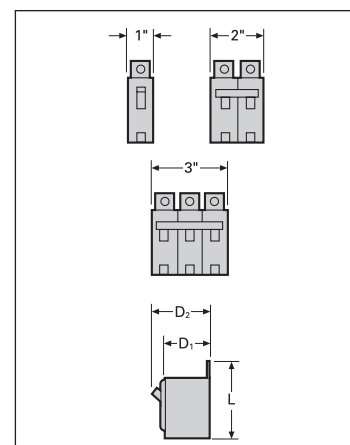
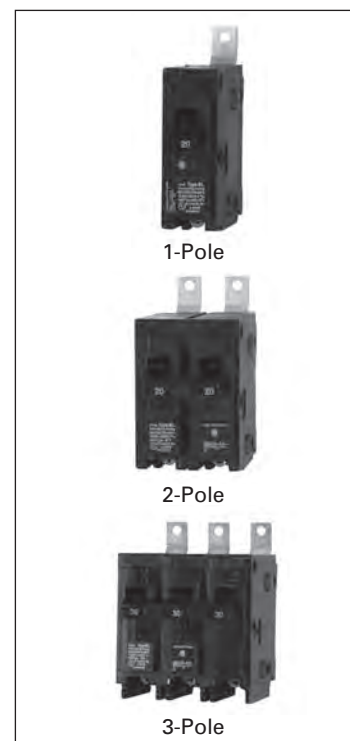
Description	Catalog Number
400Hz Calibration	add suffix...Y ^⑧
Marine 50°C Ambient Calibration	add suffix...M
Fungus Proofing	add suffix...F

For external accessories, please refer to page 7-93

■ 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.



Breaker Type	Amperes	Dimensions		
		L	D ₁	D ₂
BL, BLH	15-50	3%	2%	3
BL, BLH	55-125	3%	2%	3
HBL	15-125	3%	2%	3

Molded Case Circuit Breakers

Panelboard Mounting Circuit Breakers

Selection

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.

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 20	BA115AFC ^① BA120AFC ^①	BA115AFCH■ BA120AFCH■	BA115AFCHH BA120AFCHH
BAF/BAFH 2-Pole 120/240V AC	15 20	B215AFC ^① B220AFC ^①	B215AFCH■ B220AFCH■	— —



1-Pole Combination Type AFCI



2-Pole Combination Type AFCI

Branch-Feeder AFCI

Detects line-to-ground and line-to neutral arcs.

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 20	BA115AF ^① BA120AF ^①	BA115AFH■ ^① BA120AFH■ ^①	BA115AFHH BA120AFHH



1-Pole Branch Feeder AFCI



1-Pole Dual Function AFCI/GFCI

NEW Dual Function AFCI/GFCI

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

Breaker Type	Ampere Rating	10,000 A IR Catalog Number	22,000 A IR Catalog Number	65,000 A IR Catalog Number
BFGA2/BFGAH2/HBFGA2 1-Pole 120V AC	15 20	B115DF B120DF	B115DFH B120DFH	B115DFHH B120DFHH

Ground-Fault Circuit Interrupters (GFCI)

Provides 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	10,000 A IR Catalog No.	22,000 A IR Catalog No.
BLF/BLHF 1-Pole 120V AC Bolt-On	15 20 25 30	BF115 ^① BF120 ^① BF125■ BF130	BF115H ^① BF120H ^① BF125H■ BF130H■
BLF/BLHF 2-Pole 120/240V AC Bolt-On	15 20 30 40 50 60	BF215 BF220 BF230 BF240 BF250 BF260	BF215H BF220H BF230H BF240H BF250H BF260H

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	Amp Rating	10,000 A IR Catalog No.	22,000 A IR Catalog No.
BLE/ BLEH 1-Pole, 120V AC Bolt-On	15 20 30	BE115 ^① BE120 ^① BE130	BE115H ^① BE120H ^① BE130H
BLE/ BLEH 2-Pole 120/240V AC Bolt-On	15 20 30 40 50 60	BE215 BE220 BE230 BE240 BE250 BE260■	BE215H BE220H BE230H BE240H BE250H BE260H■



1-Pole Equipment Protection

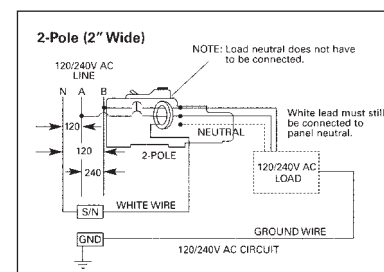
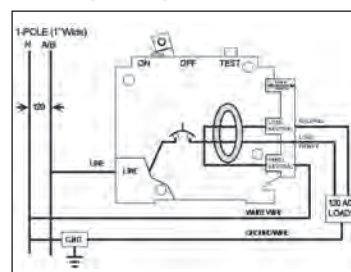


2-Pole Equipment Protection

QAF2/QPF/QE Accessories

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

Wiring Diagrams



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

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

Molded Case Circuit Breakers

Panelboard Mounting Circuit Breakers

• Revised •

07/01/14

Selection

Special Application Breakers

Switching Neutrals^①

Breaker Type	Ampere Rating	Catalog Number
BLG 2-Wire Common Trip	15	BG215■
	20	BG220■
	30	BG230■
BLG 3-Wire Common Trip	15	BG315■
	20	BG320■
	30	BG330■

HID Lighting^①

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

BL 1-Pole	15	B115HID^②■
	20	B120HID^②
	30	B130HID■
BL 2-Pole	15	B215HID^②■
	20	B220HID^②
	30	B230HID■

Tungsten Lighting

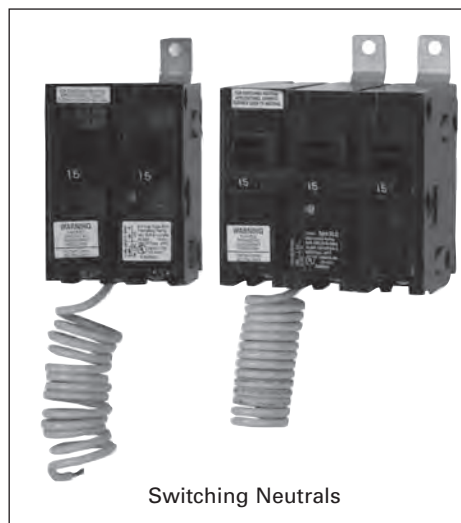
For high wattage, tungsten-lamp loads in-rush currents above the instantaneous trip setting of a standard breaker.

BL 1-Pole	15	B115T^②
	20	B120T^②

Molded Case Switch

For applications that do not require overcurrent protection.

BL 2-Pole	30	B230S
	60	B260S



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

① HACR rated.

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

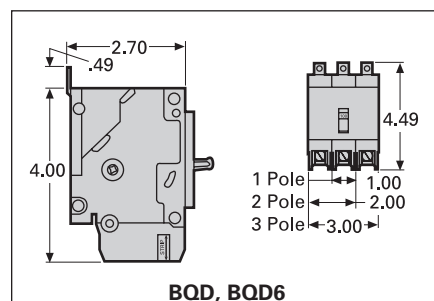
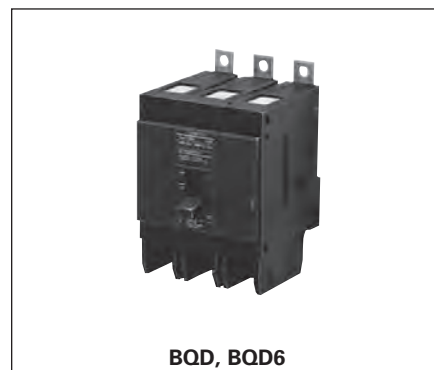
Molded Case Circuit Breakers

BQD 100A Frame Panelboard Mounting Circuit Breakers

Selection/Dimensions

BQD^④

Continuous Current Rating @ 40°C	1-Pole	2-Pole ^①	3-Pole ^③
	277V AC–125V DC	480Y/277V AC–125/250V DC	480Y/277V AC
	Catalog Number	Catalog Number	Catalog Number
15	BQD115 ^{①②}	BQD215 ^③	BQD315 ^③
20	BQD120 ^{①②}	BQD220 ^③	BQD320 ^③
25	BQD125 ^②	BQD225 ^③	BQD325 ^③
30	BQD130 ^②	BQD230 ^③	BQD330 ^③
35	BQD135 ^②	BQD235 ^③	BQD335 ^③
40	BQD140 ^②	BQD240 ^③	BQD340 ^③
45	BQD145 ^{②■}	BQD245 ^③	BQD345 ^③
50	BQD150 ^②	BQD250 ^③	BQD350 ^③
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	2-Pole ^①	3-Pole ^③
	347V AC	600/347V AC	600/347V AC
	Catalog Number	Catalog Number	Catalog Number
15	BQD6115 ^①	BQD6215	BQD6315
20	BQD6120 ^①	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

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

Lugs For 60/75°C Wire

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

Interrupting Ratings

Breaker Type	Number of Poles	RMS Symmetrical Amperes (KA)							
		Volts AC						Volts DC	
		120	240	277	480/277	347	600/347	125	125/250
BQD (UL)	1	65	—	14	—	—	—	14	—
	2	—	65	—	14	—	—	—	14
	3	—	65	—	14	—	—	—	—
BQD6 (CSA)	1	65	—	—	—	10	—	14	—
	2	—	65	—	—	—	10	—	14
	3	—	65	—	—	—	10	—	—

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

①SWD rated for switching fluorescent lighting.
②HID rated at 277V AC.
③Not suitable for 3-phase delta 480V applications.
④HACR rated.
⑤HID rated at 480Y/277V AC.

For external accessories, please refer to pages 7-95 to 7-100
For internal accessories, please refer to page 7-34

Molded Case Circuit Breakers

• Revised •
08/02/13

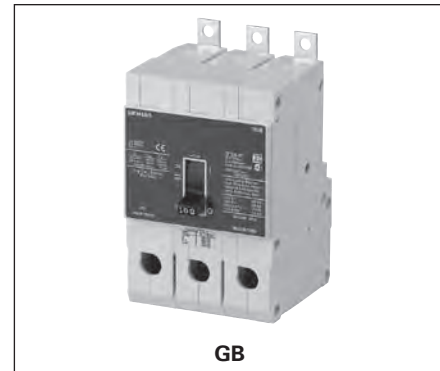
GB Frame

Selection

Type NGB Frame (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	NGB1B015B ^{①②}	NGB2B015B ^②	NGB3B015B ^②
20	NGB1B020B ^{①②}	NGB2B020B ^②	NGB3B020B ^②
25	NGB1B025B ^②	NGB2B025B ^②	NGB3B025B ^②
30	NGB1B030B ^②	NGB2B030B ^②	NGB3B030B ^②
35	NGB1B035B ^②	NGB2B035B ^②	NGB3B035B ^②
40	NGB1B040B ^②	NGB2B040B ^②	NGB3B040B ^②
45	NGB1B045B ^②	NGB2B045B ^②	NGB3B045B ^②
50	NGB1B050B ^②	NGB2B050B ^②	NGB3B050B ^②
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.



Type HGB (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	HGB1B015B ^{①②}	HGB2B015B ^②	HGB3B015B ^②
20	HGB1B020B ^{①②}	HGB2B020B ^②	HGB3B020B ^②
25	HGB1B025B ^②	HGB2B025B ^②	HGB3B025B ^②
30	HGB1B030B ^②	HGB2B030B ^②	HGB3B030B ^②
35	HGB1B035B ^②	HGB2B035B ^②	HGB3B035B ^②
40	HGB1B040B ^②	HGB2B040B ^②	HGB3B040B ^②
45	HGB1B045B ^②	HGB2B045B ^②	HGB3B045B ^②
50	HGB1B050B ^②	HGB2B050B ^②	HGB3B050B ^②
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 LGB (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	LGB1B015B ^{①②}	LGB2B015B ^②	LGB3B015B ^②
20	LGB1B020B ^{①②}	LGB2B020B ^②	LGB3B020B ^②
25	LGB1B025B ^②	LGB2B025B ^②	LGB3B025B ^②
30	LGB1B030B ^②	LGB2B030B ^②	LGB3B030B ^②
35	LGB1B035B ^②	LGB2B035B ^②	LGB3B035B ^②
40	LGB1B040B ^②	LGB2B040B ^②	LGB3B040B ^②
45	LGB1B045B ^②	LGB2B045B ^②	LGB3B045B ^②
50	LGB1B050B ^②	LGB2B050B ^②	LGB3B050B ^②
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

NGB		
Ampere Rating	Wire Size	Catalog Number
15-30A	#14-#6 AWG Cu #12-#6 AWG Al	Integral with breaker
35-125A	#8-1/0 AWG Cu #8-2/0 AWG Al	Integral with breaker

Interrupting Ratings (max. RMS symmetrical amperes kA)

	Poles	UL489							
		Volts AC						Volts DC	
		120	240	277	347	480Y/347	600Y/347	125	125/250
NGB	1	100	—	25	14	—	—	14	—
	2,3	—	100	—	—	25	14	—	14 ^④
HGB	1	100	—	35	14	—	—	14	—
	2,3	—	100	—	—	35	14	—	14 ^④
LGB	1	100	—	65	14	—	—	14	—
	2,3	—	100	—	—	65	14	—	14 ^④

①SWD rated.
②HID rated.

③2-pole only.
④2-pole only or two outer poles of 3-pole breaker

For external accessories, please refer to pages 7-95 to 7-100
For internal accessories, please refer to page 7-34

Molded Case Circuit Breakers

Accessories^①

• Revised •

08/02/13

Selection

Shunt Trip

Control Voltage		Catalog Number
V AC	V DC	
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	Catalog Number
AC	DC		
240	125	1A-1B	CQDA1
240	125	2A-2B	CQDA2



CQD with Accessory Installed

Alarm Switch

Maximum Voltage		Catalog Number
AC	DC	
240	125	CQDBA

Shunt Trip and Auxiliary Switch Combinations

Shunt Trip Voltage		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 and LGB	CQDA1BA▲

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

① Adds 1-pole space for accessory.

Molded Case Circuit Breakers

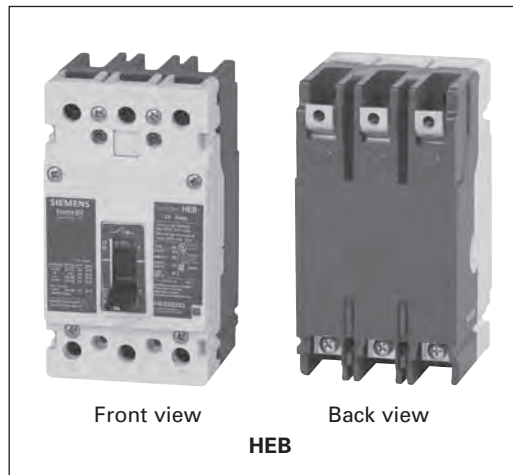
NEB & HEB Frame

• Revised •
06/20/13

Selection

Type NEB (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	NEB1B015B ^{①②}	NEB2B015B ^②	NEB3B015B
20	NEB1B020B ^{①②}	NEB2B020B ^②	NEB3B020B
25	NEB1B025B ^②	NEB2B025B ^②	NEB3B025B
30	NEB1B030B ^②	NEB2B030B ^②	NEB3B030B
35	NEB1B035B ^②	NEB2B035B ^②	NEB3B035B
40	NEB1B040B ^②	NEB2B040B ^②	NEB3B040B
45	NEB1B045B ^②	NEB2B045B ^②	NEB3B045B
50	NEB1B050B ^②	NEB2B050B ^②	NEB3B050B
60	NEB1B060B	NEB2B060B	NEB3B060B
70	NEB1B070B	NEB2B070B	NEB3B070B
80	NEB1B080B	NEB2B080B	NEB3B080B
90	NEB1B090B	NEB2B090B	NEB3B090B
100	NEB1B100B	NEB2B100B	NEB3B100B
110	NEB1B110B	NEB2B110B	NEB3B110B
125	NEB1B125B	NEB2B125B	NEB3B125B



Type HEB (Panelboard Mount)

Continuous Current Rating @ 40°C	1-Pole	2-Pole	3-Pole
	Catalog Number	Catalog Number	Catalog Number
15	HEB1B015B ^{①②}	HEB2B015B ^②	HEB3B015B
20	HEB1B020B ^{①②}	HEB2B020B ^②	HEB3B020B
25	HEB1B025B ^②	HEB2B025B ^②	HEB3B025B
30	HEB1B030B ^②	HEB2B030B ^②	HEB3B030B
35	HEB1B035B ^②	HEB2B035B ^②	HEB3B035B
40	HEB1B040B ^②	HEB2B040B ^②	HEB3B040B
45	HEB1B045B ^②	HEB2B045B ^②	HEB3B045B
50	HEB1B050B ^②	HEB2B050B ^②	HEB3B050B
60	HEB1B060B	HEB2B060B	HEB3B060B
70	HEB1B070B	HEB2B070B	HEB3B070B
80	HEB1B080B	HEB2B080B	HEB3B080B
90	HEB1B090B	HEB2B090B	HEB3B090B
100	HEB1B100B	HEB2B100B	HEB3B100B
110	HEB1B110B	HEB2B110B	HEB3B110B
125	HEB1B125B	HEB2B125B	HEB3B125B

Load lugs are included as standard.
HACR rated.

Shipping Weights

Number of Poles	Number per Carton	Shipping Weight lbs. (kg)
1	1	1.4 (0.5)
2	1	2.4 (0.9)
3	1	3.7 (1.4)

Lugs For 60/75°C Wire

NEB/HEB		
Ampere Rating	Wire Size	Catalog Number
15–100A	#14–1/0	3TA1EG10 (kit of 3)
110–125A	#6–3/0	3TA1EG30 (kit of 3)

Interrupting Ratings (max. RMS symmetrical amperes kA)

Breaker Type	Number of Poles	UL489/CSA						IEC 60947-2 (Ics = 50% Icu)			
		Volts AC						Volts AC		Volts DC	
		240	277	347	480	600Y/347	125/250	240	415	125	125/250
NEB	1	85	35	22	—	—	35	85	—	35	—
	2, 3	85	—	—	35	22	35	85	40	—	35
HEB	1	100	65	25	—	—	42	100	—	42	—
	2, 3	100	—	—	65	25	42	100	70	—	42

40°C, 50/60Hz.

① SWD Rated
② HID Rated

For external accessories, please refer to pages 7-95 to 7-100
For internal accessories, please refer to page 7-36

Molded Case Circuit Breakers

Internal Accessories for NEG & HEG 125A Frame, NEB & HEB 125A Frame

Selection

Shunt Trip

Control Voltage		NEG, HEG, NEB, HEB Catalog Number
V AC	V DC	
110-240	—	STRER240A
—	125	STRED125D
380-600	—	STREV600
24-60	24-60	STREM60D

Auxiliary Switch

Maximum Voltage		Number of Contacts	NEG, HEG, NEB, HEB Catalog Number
AC	DC		
240	125	1A-1B	ASKE2
240	125	2A-2B	ASKE3

Alarm Switch

Maximum Voltage		Number of Contacts	NEG, HEG, NEB, HEB Catalog Number
AC	DC		
240	125	1A-1B	ASKE1
240	125	2A-2B	ASKE5

Undervoltage Trip

Control Voltage		NEG, HEG, NEB, HEB Catalog Number
AC	DC	
24		UVREB24A
60		UVREM60▲
120		UVREN120
240		UVRER240
480		UVREU480▲
600		UVREV600▲
	24	UVREB24D
	48	UVREC48D▲
	125	UVRED125D▲
	250	UVREE250D▲

Alarm and Auxiliary Switch Combinations

For Breaker	Catalog Number
NEG, HEG	ASKE6

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