

The UL listed heart of the LynTec Lighting Control and Sound Sequencing Panels

Handle functions as a normal circuit breaker.

When switched off or tripped due to overload, the remote control will not turn on power.

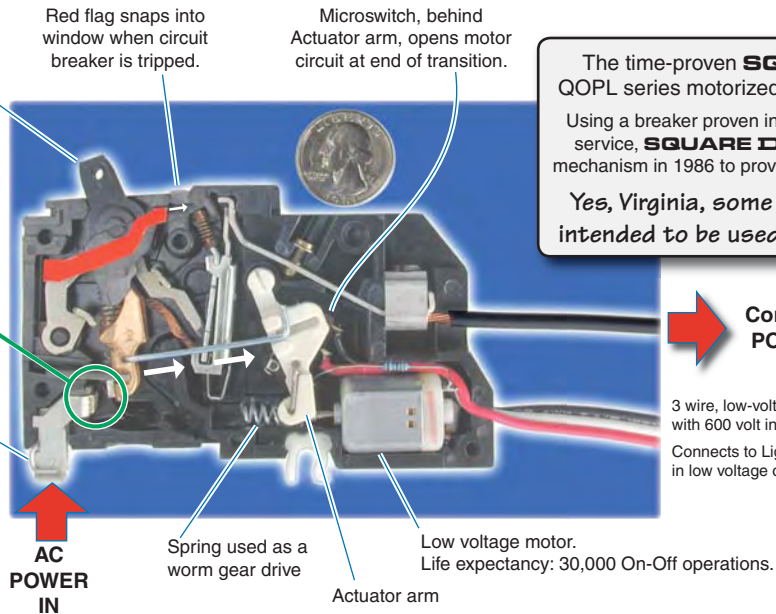
When in the normal ON position, the motorized remote control will turn it off and on.

The motor does not move the handle... it only opens or closes the high current contacts.

Snap on clip with heavy steel force spring. Contact is held tightly in place on panel bus feeder finger.

Under high current stress, magnetic forces actually increase contact pressure.

Also available in Bolt-on versions for Panelboards only.



The time-proven **SQUARE D** QOPL series motorized circuit breaker. Using a breaker proven in over 20 years of service, **SQUARE D** added a motor mechanism in 1986 to provide remote control. *Yes, Virginia, some breakers are intended to be used as switches!*

Controlled AC POWER OUT

3 wire, low-voltage, 60" pigtail with 600 volt insulation. Connects to Lighting Controller in low voltage cabinet.

Field installed, UL & CSA listed, motorized circuit breakers are required to complete the Lighting Control Panel or Sequencing Panel package.

BLUE TYPE = Bolt-on breakers for Panelboards ONLY — Clip-on breakers fit Load Centers or Panelboards

BMB-15 Bolt-on Motorized Breaker, Square D #QOB115PL-5393

MB-15 Clip-on Motorized Breaker, Square D #QO115PL-5393
One pole, 15 Amps. Special 60" leads. Square D trip curve: 730-4

BMB-20 Bolt-on Motorized Breaker, Square D #QOB120PL-5393

MB-20 Clip-on Motorized Breaker, Square D #QO120PL-5393
One pole, 20 Amps. Special 60" leads. Square D trip curve: 730-4
15 and 20 Amp breakers have a HM, (High Magnetic) rating. HM reduces nuisance breaker trips on high inrush loads.

BMB-220 Bolt-on Motorized Breaker, Square D #QOB220PL-5393

MB-220 Clip-on Motorized Breaker, Square D #QO220PL-5393
Two pole, 20 Amps. Special 60" leads. Square D trip curve: 730-4
15 and 20 Amp breakers have a HM, (High Magnetic) rating. HM reduces nuisance breaker trips on high inrush loads.

BMB-30 Bolt-on Motorized Breaker, Square D #QOB130PL-5393

MB-30 Clip-on Motorized Breaker, Square D #QO130PL-5393
One pole, 30 Amps. Special 60" leads. Square D trip curve: 730-5

BMB-230 Bolt-on Motorized Breaker, Square D #QOB230PL-5393

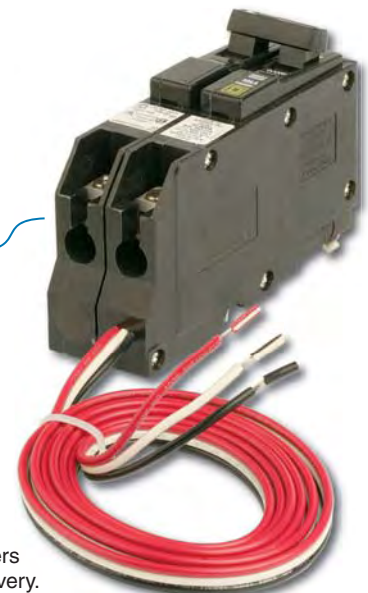
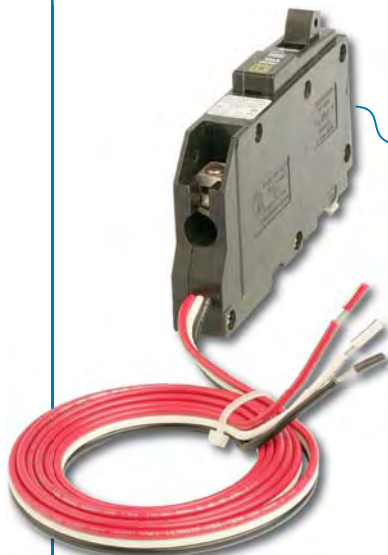
MB-230 Clip-on Motorized Breaker, Square D #QO230PL-5393
Two pole, 30 Amps. Special 60" leads. Square D trip curve: 730-5

2 pole **30A, 40A and 60A** and 3 pole Bolt-on and Clip-on Motorized Breakers are also available on special order. — Call 800-724-4047 for price and delivery.

UnMotorized circuit breakers for un-controlled circuits

BUMB-10, -15, -20 or -30 are Bolt-on, 10, 15, 20 or 30 amp single pole. Square D QOB110, QOB115HM, QOB120HM or QOB130. — 15s & 20s are High Magnetic.

UMB-10, -15, -20 or -30 are Clip-on, 10, 15, 20 or 30 amp single pole. Square D QO110, QO115HM, QO120HM or QO130. — 15s & 20s are High Magnetic.



Instruction Bulletin

QO-PL (Plug-on), QOB-PL (Bolt-on) Powerlink® Remotely Operated Circuit Breakers

(Use in Type QO Load Centers and Type NQO, NQOB, and NQOD Panelboards)

Retain for future use.

REQUIREMENTS

Remotely Operated Circuit Requirements

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, BURN, OR EXPLOSION.

When servicing a branch circuit fed by a remotely operated circuit breaker, move handle of remotely operated circuit breaker to OFF position. Do not rely on remote operation to open circuit breaker.

Failure to follow these instructions will result in personal injury or death.

CIRCUIT BREAKER INSTALLATION

⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must be installed and serviced only by qualified electrical personnel.
- Turn off all power supplying this equipment before working on or inside equipment.
- Always use a properly rated voltage sensing device to confirm power is off.
- Replace all devices, doors, and covers before turning on power to this equipment.

Failure to follow these instructions will result in death, or serious injury.

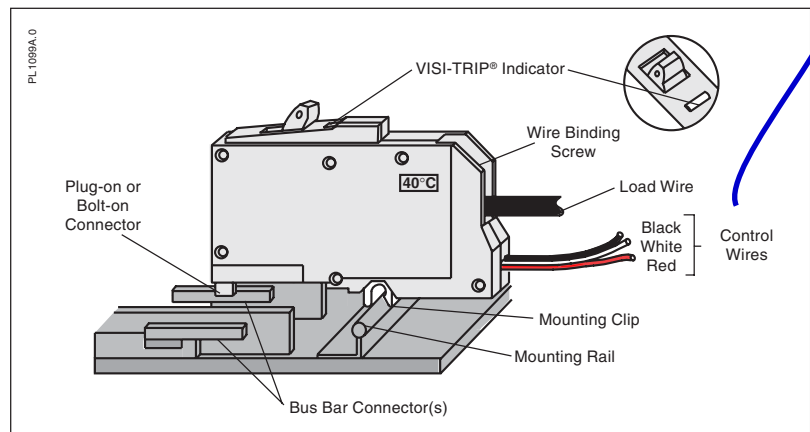
See page 2 for
LynTec
part number explanation

POWERLINK® QO(B)-PL Remotely Operated Circuit Breakers require a power supply capable of delivering at least two amperes at 24 Vdc for a minimum of 50 milliseconds. One-, two-, and three-pole circuit breakers all have one internal motor, and power requirements are the same regardless of the number of poles and ampere ratings.

The required power supply ampacity and control device contact rating are determined by the number of circuit breakers to be switched simultaneously (i.e., four circuit breakers switched simultaneously require a power supply and a control device contact rated 8 amperes minimum). The control device may be either a normally-open (NO)/normally-closed (NC) contact; a single-pole, double-throw switch (SPDT); or other three-wire control device.

1. Turn off all power supplying this equipment before working on or inside equipment.
2. Before installing circuit breaker turn circuit breaker handle to OFF position.
3. Remove panelboard cover and deadfront. Verify power is off with voltage meter before proceeding.

Installation of circuit breaker into panelboard/load center (refer to figure below)



4. Except for remotely operated connections, QO(B)-PL remotely operated circuit breakers are installed in a panelboard/load center the same as conventional QO(B) circuit breakers.

Connection of remotely operated circuit (refer to the figure on next page)

5. Assure that power supply and control device meet requirements listed under "Remotely Operated Circuit Requirements."

All LynTec supplied breakers have special 60" control wires. (Square D standards are 18".)

CIRCUIT BREAKER INSTALLATION

CAUTION

HAZARD OF CIRCUIT BREAKER DAMAGE.

Connect the 24 Vdc remote control wiring as shown on this page.

Failure to follow these instructions can permanently damage the remotely operated circuit breaker.

6. All wiring and splicing must comply with applicable code requirements for Class 1 circuits. Refer to paragraph 373-8 and article 725 of the National Electrical Code.
7. Three #18 AWG control wires are attached to the remotely operated circuit breaker for connection to the power supply and remote control device and should be cut to the required length to reach the splice connections. Use #18 AWG or larger conductors with 600 V insulation and approved wire connectors for splices.
8. Connect the black lead of the remotely operated circuit breaker to the negative (-) terminal of the 24 Vdc power supply. Connect the red lead of the remotely operated circuit breaker to the positive (+) terminal of the 24 Vdc power supply. Connect the white lead of the remote control device. The remote control device provides connections between either positive or negative potential of the power supply and the white wire of the remotely operated circuit breaker, as appropriate.
9. Applying the positive potential of the power supply to the white wire (contact closure between the red wire and white wire) will operate the remote mechanism of the circuit breaker to the OFF position. Applying the negative potential of the power supply to the white wire (contact closure between the black wire and the white wire) will operate the remote mechanism of the circuit breaker to the ON position. A control circuit utilizing a normally open (NO)/normally closed (NC) contact is illustrated below.

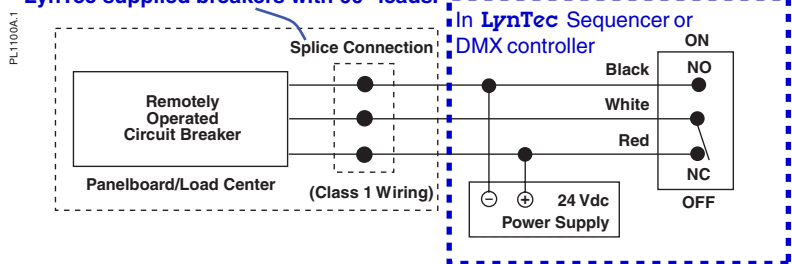
NOTE: The remote mechanism will not move the circuit breaker handle. Also, the remote mechanism cannot turn power ON when the circuit breaker is tripped (VISI-TRIP® flag indicator showing) or when the circuit breaker handle is in the OFF position.

Installation of the trim and operational checks

10. Remove corresponding twist-out from panelboard trim and replace trim.
11. Turn power to panelboard on.
12. Turn remotely operated circuit breaker handle to the ON position.
13. Turn power to the remotely operated circuit on and test this circuit, turning remotely operated circuit breaker off remotely, then on remotely. If power to remote controlled circuit breaker load does not switch off and on, turn off power to remotely operated circuit and panelboard and check wiring.

NOTE: A power supply is available from Square D Company, Cat. No. QOPLPS (plug-on) or QOBPLPS (bolt-on).

Splice not normally required with LynTec supplied breakers with 60" leads.



Electrical equipment should be installed, operated, serviced and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

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LynTec

part numbers

MB series motorized circuit breakers (Snap-On)

May be used in LCLC, LCP, MSLC, MSP, SLC or SP series panels.

BMB series motorized circuit breakers (Bolt-On)

Use only in LCP, MSP or SP Panelboards

All BMB & MB series breakers have Square D part number suffix of -5393 indicating a special 60 inch lead length for remote control wires required to connect to LynTec control boards in low voltage cabinet.

** = Stocked items

**MB-15 = 15 Amp. Square D QO-115PL-5393

**BMB-15 = 15 Amp. Square D QOB-115PL-5393

**MB-20 = 20 Amp. Square D QO-120PL-5393

**BMB-20 = 20 Amp. Square D QOB-120PL-5393

**MB-30 = 30 Amp. Square D QO-130PL-5393

**BMB-30 = 30 Amp. Square D QOB-130PL-5393

Two pole motorized - call for pricing & delivery

MB-215 = 15 Amp. Square D QO-215PL-5393

BMB-215 = 15 Amp. Square D QOB-215PL-5393

**MB-220 = 20 Amp. Square D QO-220PL-5393

**BMB-220 = 20 Amp. Square D QOB-220PL-5393

MB-230 = 30 Amp. Square D QO-230PL-5393

BMB-230 = 30 Amp. Square D QOB-230PL-5393

40A, 50A or 60A, Two pole also available on Special Order

Three pole motorized - call for pricing & delivery

MB-315 = 15 Amp. Square D QO-315PL-5393

BMB-315 = 15 Amp. Square D QOB-315PL-5393

MB-320 = 20 Amp. Square D QO-320PL-5393

BMB-320 = 20 Amp. Square D QOB-320PL-5393

MB-330 = 30 Amp. Square D QO-330PL-5393

BMB-330 = 30 Amp. Square D QOB-330PL-5393

LynTec also stocks UMB & BUMB (un-motorized) QO series circuit breakers including HM (High Magnetic). Recommended for eliminating nuisance trips in high inrush applications. [All BMB & MB-x15's and BMB & MB-x20's are HM breakers.]

800-724-4047

LynTec ■ www.LynTec.com

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Voice 913-529-2233 • Fax 888-722-4157 or 913-529-4157

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Square D Company
 3700 Sixth Street SW
 Cedar Rapids IA 52404 USA
 1-888-SquareD (1-888-778-2733)
 www.SquareD.com



Series Ratings

For NQOD and NF Panelboards
Class 1630, 1670

This page contains UL Tested and Certified series combination ratings for panelboards. These ratings apply to either an integral main located in the same enclosure or a remote main located in a separate enclosure.

NQOD Series Ratings

Maximum System Voltage AC ^c	Maximum Short Circuit Current Rating (RMS Symmetrical)	Integral or Remote Main Circuit Breakers and Remote Main Fuses	Branch Circuit Breaker Designations and Allowable Ampere Ranges ^{ab}			
			Type	1-pole	2-pole	3-pole
120/240 1Ø	22k	MG	QO (B)	15-30 A	...	...
	42k	HD, JD	QO (B) PL	15-30 A	15-60 A	15-30 A
	65k	HG, JG	QO (B) PL	15-30 A	15-60 A	15-30 A
	100k	HJ, JJ	QO (B) PL	15-30 A	15-60 A	15-30 A
	125k	HL, JL	QO (B) PL	15-30 A	15-60 A	15-30 A
120/240 1Ø 208Y/120	100k	DJ 400 A	QO (B)	15-70 A	15-125 A	...
			QO (B) GFI	15-30 A	40-60 A	...
			QO (B) VH	...	150 A	15-150 A
			QO (B) PL	15-30 A	...	...
			QO (B) AFI	15-20 A	...	...
	QJ	QO (B)	15-70 A	15-125 A	15-30 A	...
		QO (B) AS	15-30 A	15-30 A	15-30 A	...
		QO (B) GFI	15-30 A	15-60 A	...	...
		QO (B) PL	15-30 A	15-60 A	15-30 A	...
		QO (B) VH	...	150 A	35-150 A	...
18k	LA/LH (L) 34200MC LA/LH (L) 34225MC LA/LH (L) 34250MC LA/LH (L) 34400MC	QO (B)	15-30 A	15-30 A	15-30 A	
		QO (B)	15-30 A	15-30 A	15-30 A	
208Y/120	22k	QO (B) VH	UMB-xx	15-70 A	15-125 A	15-100 A
			MB-xx	15-30 A	15-30 A	15-30 A
			QO (B) AS	15-30 A	15-60 A	...
			QO (B) GFI	15-30 A	15-30 A	...
			QO (B) PL	15-30 A	15-30 A	...
	25k	QD	UMB-xx	15-70 A	15-125 A	15-30 A
			MB-xx	15-30 A	15-60 A	15-30 A
			QO (B) AS	15-30 A	15-60 A	...
			QO (B) GFI	15-30 A	15-60 A	...
			QO (B) PL	15-30 A	150 A	35-150 A
240	25k	ED, Fdf	QO (B)	15-70 A	15-125 A	15-100 A
			QO (B) GFI	15-30 A	15-60 A	...
			QO (B) PL	15-20 A	...	...
			QO (B) VH	...	...	...
			QO (B) AFI	15-20 A	...	...
	42k	LA, MA	Q2L-Hf	...	110-225 A	110-225 A
			QDL	...	70-225 A	70-225 A
			QO (B) VH	15-30 A	15-30 A	15-30 A
			QO (B) PL	15-30 A	15-60 A	15-30 A
			QO (B)	15-70 Ad	...	...
240	42k	LC 600 A Maximum	QO (B) VH	15-30 A	15-125 A	15-100 A (3P 208 V Max.)
			QO (B) GFI	15-30 Ae	15-60 A	...
			QO (B) PL	15-20 A	...	...
			QO (B) VH	15-30 A	15-125 A	15-100 A (3P 208 V Max.)
			QO (B) GFI	15-30 Ae	...	...
	65k	DJ 400 A	QO (B)	15-70 A	15-125 A	15-100 A
			QO (B) VH	...	150 A	15-150 A
			QO (B) H	...	15-100 A	...
			QO (B) GFI	15-30 A	15-60 A	...
			QO (B) PL	15-20 A	...	...
240	65k	EG, Fgf, KGf	QO (B)	15-70 A	15-125 A	15-100 A
			QO (B) GFI	15-30 A	15-60 A	...
			QO (B) PL	15-20 A	...	...
			QO (B) VH	...	...	...
			QO (B) AFI	15-20 A	...	...
	100k	400 A Max. Class J or T6 Fuses	QO (B) VH	15-30 A	15-125 A	15-100 A
			QO (B) GFI	15-30 A	15-60 A	...
			QO (B) PL	15-30 A	15-60 A	15-30 A
			QO (B) AFI	15-20 A	...	...
			QO (B) VH	15-70 A	15-100 A	15-100 A
100k	200 A Max. Class T3 Fuses	QO (B) AS	15-30 A	15-30 A	15-30 A	
		QO (B) GFI	15-30 A	15-30 A	...	
		QO (B) PL	15-30 A	15-30 A	...	
		QO (B) AFI	15-20 A	...	...
		QO (B) GFI	15-30 A	15-60 A	15-100 A	

LynTec models
LCLC 326
MSLC 326
MSLC 338
MSP 338
MSP 139

LynTec models
LCLC 341
MSLC 341

LynTec models
MSLC 127
MSLC 129
are series rated 22k AIR.
see QO130Mxx on pg 1-3 of Digest 173.

NQOD Series Ratings (Continued)

Maximum System Voltage AC ^c	Maximum Short Circuit Current Rating (RMS Symmetrical)	Integral or Remote Main Circuit Breakers and Remote Main Fuses	Branch Circuit Breaker Designations and Allowable Ampere Ranges ^{ab}			
			Type	1-pole	2-pole	3-pole
240	100k	HJ, JJ	QO (B)	15-70 A	15-125 A	15-100 A
			QO (B) VH	...	...	35-150 A
			QO (B) GFI	15-30 A	15-60 A	...
			QO (B) PL	15-30 A	15-60 A	15-30 A
			QO (B) AFI	15-20 A	...	...
	125k	HL, JL	QO (B) H	15-20 A	...	...
			QO (B) VH	...	150 A	...
			QO (B) GFI	15-30 A	15-60 A	...
			QO (B) PL	15-30 A	15-60 A	15-30 A
			QO (B) AFI	15-20 A	...	...
200k	FI, KI	QO (B)	15-70 A	15-125 A	15-100 A	
		QO (B) AS	15-30 A	15-30 A	15-30 A	
200k	Maximum Fuses 200 A Class J or T6 400 A Class T3	QO (B) AS	15-70 A	15-125 A	15-100 A	
		QO (B) GFI	15-30 A	15-60 A	15-30 A	

- ▲ Suffixes HID, SWD and SWN may also be applied to the applicable branch circuit breakers shown above, except suffix SWN may NOT be applied in combination with LC main circuit breakers.
 - Where QO (B) circuit breakers are shown above, QO (B) H, QO (B) VH, and QH (B) circuit breakers may also be used.
 - ◆ For shown circuit breakers rated less than this maximum voltage, the indicated short circuit current rating also applies, but at the voltage rating of the circuit breaker.
 - ★ Only 15-30 A circuit breakers may be used when the LC circuit breaker is rated 450, 500 or 600 A.
 - ▼ Circuit breakers may not be used when the LC circuit breaker is rated 450, 500 or 600 A.
 - △ Obsolete. Contact your nearest Square D/Schneider Electric sales office for replacement circuit breaker. One-pole FJ circuit breakers are still available.
- Where QO(B) GFI circuit breakers are shown above, QO(B), EPD circuit breakers may also be used.

NF Series Ratings

Maximum System Voltage AC	Maximum Short Circuit Current Rating (RMS Symmetrical)	Main Type	Branch Type	Poles			
240	65,000	EG, FH, FGF, KH, LH, MH, MX, HG, JG	EDB, EDB-EPD	1, 2 & 3			
		EG	ECB-G3				
		EJ, FC, FJf, KC, LC, LX, HJ, JJ	EDB, EDB-EPD, EGB				
		EJ, FC, KC, HJ, JJ	ECB-G3				
		HL, JL	EDB, EDB-EPD, EGB, ECB-G3				
	100,000	125,000	FI, KI, LI, LXI	EDB, EDB-EPD, EGB, EJB			
			FI, KI	ECB-G3			
			EG, FGF, KH, LH, HG, JG	EDB, EDB-EPD			
			EG, HG, JG	ECB-G3			
			EJ, FC, FJf, KC, LC, LX, HJ, JJ	EDB, EDB-EPD, EGB			
480Y/277	65,000	EJ, FC, KC, HJ, JJ	ECB-G3	1, 2 & 3			
		HL, JL	EDB, EDB-EPD, EGB				
		FI, KI, LI, LXI	EDB, EDB-EPD, EGB, EJB				
		FI, KI	ECB-G3				
		EG, FGF, KH, LH, HG, JG	EDB, EDB-EPD				
	100,000	200,000	EG, HG, JG	ECB-G3			
			EJ, FC, FJf, KC, LC, LX, HJ, JJ	EDB, EDB-EPD, EGB			
			EJ, FC, KC, HJ, JJ	ECB-G3			
			HL, JL	EDB, EDB-EPD, EGB			
			FI, KI, LI, LXI	EDB, EDB-EPD, EGB, EJB			
600Y/347	18,000	HG, JG, MG	EDB, EDB-EPD	1, 2, 3			
		EJ, FI, KH, KL, LC, LE, LX, LI, LXI, HJ, JJ	EDB, EDB-EPD, EGB				
		LH	EDB(15-70 A), EGB				
		LC, LE	EDB, EDB-EPD, EGB, EJB				
		HL, JL	EDB, EDB-EPD, EGB				
	35,000	50,000	FI, KI	EDB, EDB-EPD, EGB, EJB			
			LI, XI	EJB			
			Remote Main Fuse				
			240	200,000	200 Ampere Maximum Class J or T (600V)	ECB-G3	1, 2 & 3
			480Y/277	200,000	400 Ampere Maximum Class J or T (600V)	EDB, EDB-EPD, EGB, EJB	1, 2 & 3
200,000	200 Ampere Maximum Class J or T (600V)	EDB, EDB-EPD, EGB, EJB					
600Y/347	200,000	200 Ampere Maximum Class J or T (600V)	ECB-G3	1, 2 & 3			

QOPLxxx-5393 = BMB series Bolt-on, Motorized. (REMOTELY OPERATED)
-xxx = poles. xxx = trip current. -5393 suffix denotes special 60" control wires.

- [1 pole] BMB-15, BMB-20, BMB-30
- [2 pole] BMB-215, BMB-220, BMB-230, BMB-240, BMB-250, BMB-260
- [3 pole] BMB-315, BMB-320, BMB-330

QOPLxxx-5393 = MB series clip-on, Motorized. (REMOTELY OPERATED)
-xxx = poles. xxx = trip current. -5393 suffix denotes special 60" control wires.

- [1 pole] MB-15, MB-20, MB-30
- [2 pole] MB-215, MB-220, MB-230, MB-240, MB-250, MB-260
- [3 pole] MB-315, MB-320, MB-330

QOxxx (B) = BUMB series Bolt-on, UnMotorized Breaker
-xxx = poles. xxx = trip current.

- [1 pole] BUMB-15, BUMB-20, BUMB-30
- [2 pole] BUMB-215, BUMB-220, BUMB-230
- [3 pole] BUMB-315, BUMB-320, BUMB-330

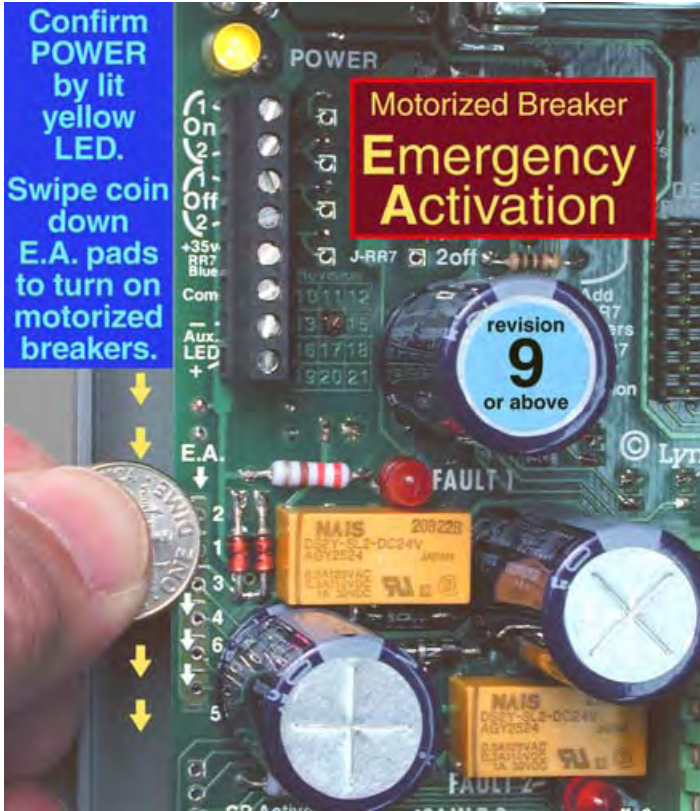
QOxxx = UMB series clip-on, UnMotorized Breaker
-xxx = poles. xxx = trip current.

- [1 pole] UMB-15, UMB-20, UMB-30
- [2 pole] UMB-215, UMB-220, UMB-230
- [3 pole] UMB-315, UMB-320, UMB-330

All 15 & 20 A breakers are HM (High Magnetic)

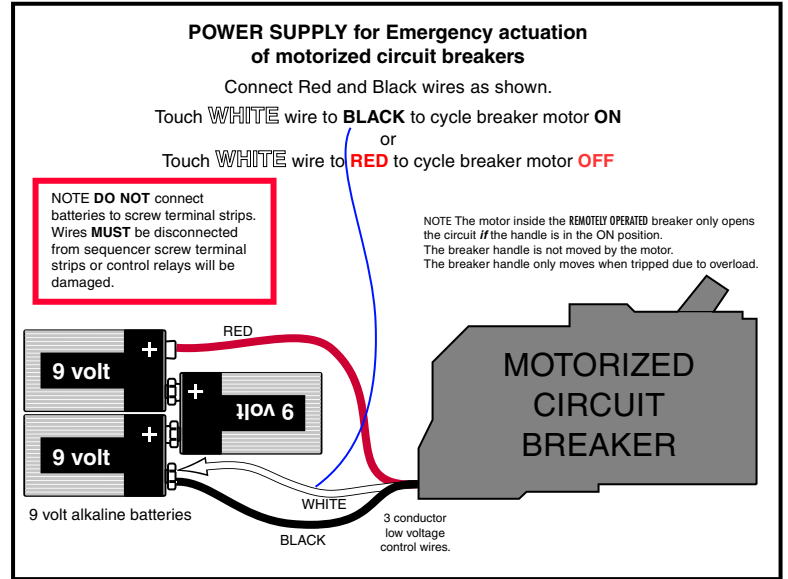
Emergency circuit breaker activation

for
MSLC or MSP systems using
motorized circuit breakers.



OR

for all systems using motorized
circuit breakers.



LynTec

800-724-4047

Emergency RR7 relay activation for LCRP or PDS-8 series

