



CIRCUIT BREAKER PANELBOARDS



B7L

Class I, Div. 1 & 2, Groups B, C, D
Class I, Zones 1 & 2, Groups IIB+H2, IIA
Class II, Div. 1 & 2, Groups E, F, G
Class III, Div. 1 & 2
Type 3, 4, 4x, 7 (B, C, D) 9 (E, F, G)



Classified – File E83969

See files for details or call Killark.



Certified – File LR 11713 for B7L
 Indoor/Outdoor

FEATURES-SPECIFICATIONS**Features**

- TYPE 4, 4x rated for protection from hose directed water and corrosion
- Standard electrical components: B7L-Cutler-Hammer Quicklag Breakers B7P-Cutler-Hammer Series C Breakers
- B7L is furnished with copper buss
- Main lugs. Mechanical solderless type, approved for CU or AL conductors
- Solid Neutral standard. Single phase 3 wire. Three phase 4 wire
- Copper ground bar standard
- Main and branch breaker handles can be padlocked in “ON” or “OFF” position
- Top feed panel standard with bottom feed optional
- Hinged cover, installed as standard
- Quick release, captivated coverbolts of 316 stainless steel

Materials

- Enclosure: Copper-free aluminum (less than 1/10 of 1%)
- Main Breaker Handle: Copper-free aluminum
- Cover bolts: 316 grade stainless steel
- Flange Gasket “O” Ring: Buna-N Nitrile
- Branch Breaker Operators: Valox Thermoplastic Polyester handle molded onto 316 stainless steel shaft with neoprene “O” ring

- Hinges: Copper-free aluminum with stainless steel pin and hardware
- Mounting Lugs: 1/4” thick aluminum
- Aluminum lacquer paint finish standard

Panel Selection Factors

Basic information required when specifying panelboards is as follows:

- » Environment
- » Service (Voltage/Frequency/Phase)
- » Interrupting capacity
- » AMP Rating of Main (Lugs only or Breaker)
- » Branch Breaker (Type/Number of Poles/Ampereage)

Ordering Information

Specifying and ordering a complete panelboard assembly requires the selection of three components. (1) **Basic Panel** (2) **Branch Breaker** and (3) **Options** (if required). This method of cataloging permits a wide variety and maximizes circuit flexibility in our panelboard offering. Components supplied in each of these selections include:

1) Basic Panelboard Enclosures

- » Explosion-proof enclosure consisting of box and cover
- » Cover predrilled and plugged for maximum number of branch breaker handles (handles not supplied)
- » Box supplied with conduit openings

- » Main circuit breaker and external handle (when specified)
- » Panelboard internal chassis with buss bars but less branch circuit breakers

2) Branch Circuit Breakers

- » Internal circuit breaker
- » External handle mechanism with internal tripping mechanism
- » Test pushbutton for GFI (when ordered)
- » Lockout shield with on-off-trip-reset identification

3) Options – Accessories**Ordering Example**

Specification is for a 3 phase 120/208 volt panel with 100 Amp main lugs complete with (4) single pole 20 Amp (2) double pole 20 Amp and (1) three pole 30 Amp branch breakers.

Branch Breaker Total =

- (4) 1 Pole = 4 Poles Total
- (2) 2 Pole = 4 Poles Total
- (1) 3 Pole = 3 Poles Total

Total 11 Branch Poles

Specification/Ordering Example

B7L20 - 312 - ML100 (Basic panelboard enclosure) with:

- (4) B7BLA1020 (1 Pole 20 Amp Branch)
- (2) B7BLA2020 (2 Pole 20 Amp Branch)
- (1) B7BLB3030 (3 Pole 30 Amp Branch)

**Cutler-Hammer type BA circuit breaker 1 - 2 or 3 pole.**

Catalog numbers on this page are for the basic panelboard enclosure only with a panel interior chassis containing main lugs or main breaker as illustrated.

Internal branch breakers and external handles are NOT included in the basic enclosure catalog number and must be ordered as separate items.

Branch circuit loads

The interior panel chassis supplied in B7L panel is limited to a maximum of 140 amperes at any one connection point. Breakers of 50 thru 100 amps must be installed opposite breakers of smaller amperage so as not to exceed the 140 ampere limitation.

LIGHTING PANELBOARDS

B7L PANEL WITHOUT MAIN BREAKER (MAIN LUGS ONLY) LESS BRANCH BREAKERS						
ELECTRICAL RATING	MAIN LUG RATING	NUMBER OF BRANCH POLES	CATALOG NUMBER BASIC ENCLOSURE AND CHASSIS	ENCLOSURE BOX SIZE	MAIN WIRE RANGE	LBS
Single phase 3 wire with solid neutral 120/240 VAC	100	12	B7L20 - 112 - ML100	A	E	140
	100	18	B7L29 - 118 - ML100	B	G	190
	225	18	B7L29 - 118 - ML225	B	F	190
	100	24	B7L29 - 124 - ML100	B	G	190
	225	24	B7L41 - 124 - ML225	C	F	250
	100	30	B7L41 - 130 - ML100	C	G	250
	225	30	B7L41 - 130 - ML225	C	F	250
	225	36	B7L41 - 136 - ML225	C	F	250
Three phase 4 wire with solid neutral 120/208 VAC	225	42	B7L41 - 142 - ML225	C	F	250
	100	12	B7L20 - 312 - ML100	A	E	140
	100	18	B7L29 - 318 - ML100	B	G	190
	225	18	B7L29 - 318 - ML225	B	F	190
	100	24	B7L29 - 324 - ML100	B	G	190
	225	24	B7L41 - 324 - ML225	C	F	250
	100	30	B7L41 - 330 - ML100	C	G	250
	225	30	B7L41 - 330 - ML225	C	F	250
	225	36	B7L41 - 336 - ML225	C	F	250
	225	42	B7L41 - 342 - ML225	C	F	250

CIRCUIT BREAKER RATINGS			
TYPE	NO. OF POLES	VOLT	AMPERES SYMMETRICAL
BABⓈ	1	120	10,000 AIC
BABⓈ	2	120/240	10,000 AIC
BABⓈ	3	240	10,000 AIC
BABSWNⓈ	1	120/240	10,000 AIC
BABSWNⓈ	2	120/240	10,000 AIC
QBGF	1	120	10,000 AIC
QBGF	2	120/240	10,000 AIC
QBGFEP	1	120	10,000 AIC
QBGFEP	2	120/240	10,000 AIC
BAB*DⓈ	1	120	10,000 AIC
BAB*DⓈ	2	120/240	10,000 AIC

Ⓢ Type BAB also rated for 80V DC at 5,000 AIC.

Ⓢ Type BAB* D designed for HID lighting applications.

B7L PANEL WITH MAIN BREAKER LESS BRANCH BREAKERS							
ELECTRICAL RATING	MAIN BREAKER FRAME	MAIN BREAKER AND RATING	NUMBER OF BRANCH POLES	CATALOG NUMBER BASIC ENCLOSURE AND CHASSIS	ENCLOSURE BOX SIZE	MAIN WIRE RANGE	LBS
Single phase 3 wire with solid neutral 120/240 VAC	EHD	100	12	B7L29 - 112 - MBE100	B	H	190
	EHD	100	18	B7L41 - 118 - MBE100	C	H	250
	EHD	100	24	B7L41 - 124 - MBE100	C	H	250
	ED	225	24	B7L41 - 124 - MBC225	C	I	250
	EHD	100	30	B7L41 - 130 - MBE100	C	H	250
	ED	225	30	B7L41 - 130 - MBC225	C	I	250
	ED	225	36	B7L50 - 136 - MBC225	D	I	300
	ED	225	42	B7L50 - 142 - MBC225	D	I	300
Three phase 4 wire with solid neutral 120/208 VAC	EHD	100	12	B7L29 - 312 - MBE100	B	H	190
	EHD	100	18	B7L41 - 318 - MBE100	C	H	250
	EHD	100	24	B7L41 - 324 - MBE100	C	H	250
	ED	225	24	B7L41 - 324 - MBC225	C	I	250
	EHD	100	30	B7L41 - 330 - MBE100	C	H	250
	ED	225	30	B7L41 - 330 - MBC225	C	I	250
	ED	225	36	B7L50 - 336 - MBC225	D	I	300
	ED	225	42	B7L50 - 342 - MBC225	D	I	300

B7L PANEL WITH BACK FEED MAIN BREAKER LESS BRANCH BREAKERS							
ELECTRICAL RATING	MAIN BREAKER FRAME	MAIN BREAKER AND RATING	NUMBER OF BRANCH POLES	CATALOG NUMBER BASIC ENCLOSURE AND CHASSIS	ENCLOSURE BOX SIZE	MAIN WIRE RANGE	LBS
Single phase 3 wire with solid neutral 120/240 VAC	BAB	100	12	B7L29 - 112 - MBB100	B	J	190
	BAB	100	18	B7L29 - 118 - MBB100	B	J	190
	BAB	100	24	B7L41 - 124 - MBB100	C	J	250
	BAB	100	30	B7L41 - 130 - MBB100	C	J	250
Three phase 4 wire with solid neutral 120/208 VAC	BAB	100	12	B7L29 - 312 - MBB100	B	J	190
	BAB	100	18	B7L29 - 318 - MBB100	B	J	190
	BAB	100	24	B7L41 - 324 - MBB100	C	J	250
	BAB	100	30	B7L41 - 330 - MBB100	C	J	250

NOTE: Main breaker panel includes main breaker and its price in basic enclosure part number. Refer to page DE15 for branch breaker ordering information.



BRANCH BREAKERS ACCESSORIES / OPTIONS

BRANCH CIRCUIT BREAKERS						
NUMBER OF POLES PER BREAKER	TRIP AMP RATING	B7L SERIES LIGHTING PANEL				
		BAB FRAME STANDARD	BAB FRAME HID HIGH INTENSITY DISCHARGE	BAB FRAME SWITCH NEUTRAL	QBGF GROUND FAULT 5MA	QBGP EQUIPMENT PROTECTION 30MA
(1) Single Phase 120 Volt	SPACE	B7BLA1000	B7BLD1000	—	B7BLC1000	B7BLE1000
	15	B7BLA1015	B7BLD1015	—	B7BLC1015	B7BLE1015
	20	B7BLA1020	B7BLD1020	—	B7BLC1020	B7BLE1020
	30	B7BLA1030	B7BLD1030	—	B7BLC1030	B7BLE1030
	40	B7BLA1040	B7BLD1040	—	B7BLC1040	B7BLE1040
	50	B7BLA1050	B7BLD1050	—	—	—
	60	B7BLA1060	B7BLD1060	—	—	—
	70	B7BLA1070	—	—	—	—
	90	—	—	—	—	—
	100	B7BLA1100	—	—	—	—
(2) Double Pole 120/240 Volt	SPACE	B7BLA2000	B7BLD2000	B7BLF2000	B7BLC2000	B7BLE2000
	15	B7BLA2015	B7BLD2015	B7BLF2015	B7BLC2015	B7BLE2015
	20	B7BLA2020	B7BLD2020	B7BLF2020	B7BLC2020	B7BLE2020
	30	B7BLA2030	B7BLD2030	B7BLF2030	B7BLC2030	B7BLE2030
	40	B7BLA2040	B7BLD2040	—	B7BLC2040	B7BLE2040
	50	B7BLA2050	B7BLD2050	—	B7BLC2050	B7BLE2050
	60	B7BLA2060	B7BLD2060	—	—	—
	70	B7BLA2070	—	—	—	—
	90	B7BLA2090	—	—	—	—
	100	B7BLA2100	—	—	—	—
(3) Three Pole 120/240 Volt	SPACE	B7BLB3000	—	B7BLF3000	—	—
	15	B7BLB3015	—	B7BLF3015	—	—
	20	B7BLB3020	—	B7BLF3020	—	—
	30	B7BLB3030	—	B7BLF3030	—	—
	40	B7BLB3040	—	—	—	—
	50	B7BLB3050	—	—	—	—
	60	B7BLB3060	—	—	—	—
	70	B7BLB3070	—	—	—	—
	90	B7BLB3090	—	—	—	—
	100	B7BLB3100	—	—	—	—
	110	—	—	—	—	—
	125	—	—	—	—	—
	150	—	—	—	—	—

MODIFICATIONS	
CATALOG NUMBER	DESCRIPTION
SU-3B-4X	Drain/Breather NEMA 4X/7 B,C,D
SU-10B-4X	Drain NEMA 4X/7 B,C,D
SU-11B-4X	Breather NEMA 4X/7 B,C,D
KIT-251	Grounding kit, 100 AMP
KIT-252	Grounding kit, 225 AMP
B7SF	Special baked epoxy finish
B7EYEBOLT	Eye bolts for ease of installation①
B7ML225	Change 100 amp buss to 225 amp B7P series
B7MLBTM	Main lugs at bottom
B7SPNPT	Change standard conduit size and location
B7GSN	Kit to ground neutral bar

* To be ordered as separate item with notation on order for assembly into enclosure.

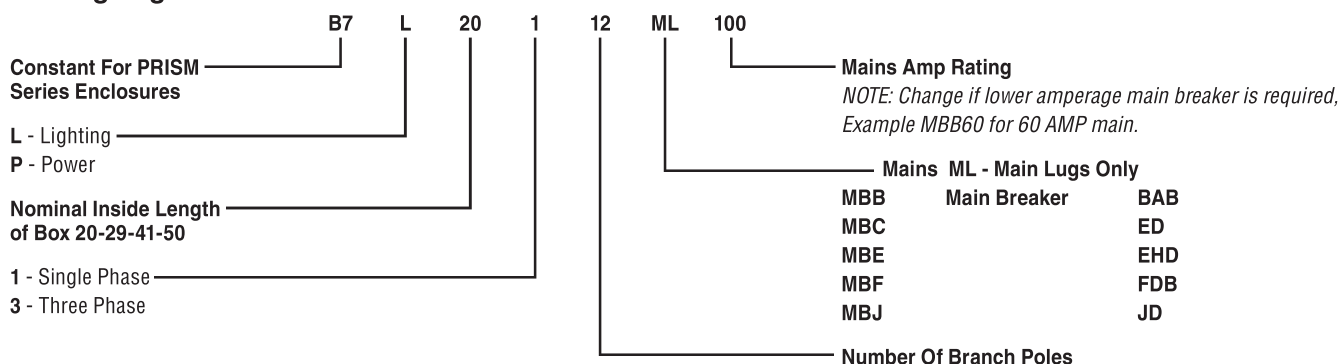
① Lifting eyebolts are installed in two conduit openings located in top of box and are to be removed after installation.

Branch Breaker Notes:

- 1) B7L panels are factory drilled for maximum number of single pole branch breaker handles and B7P for maximum number of 3 pole branch breaker handles as standard.
- 2) Part numbers illustrated above include external handle, trip mechanism, locking tab and internal breaker. Refer to page DE12 for complete ordering information and examples.
- 3) Space = External handle, shaft and trip mechanism installed to allow for future installation of breaker.
- 4) Ground Fault & Equipment protection breakers include external pushbutton for each breaker to test ground fault sensing circuit and the mechanical operation of breaker.
- 5) Switch Neutral Breaker note. A two pole breaker has one pole for breaking from main buss and one pole that breaks neutral. Three pole breaker consists of two poles for breaking from main buss and one pole that breaks neutral.

**B7L SERIES**

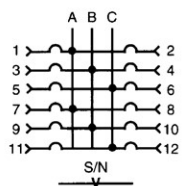
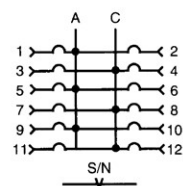
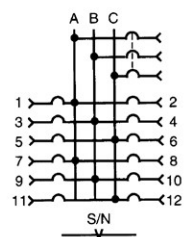
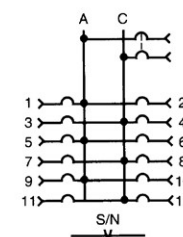
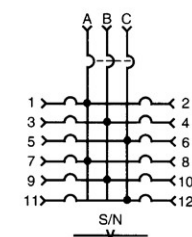
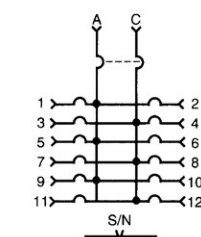
CATALOG LOGIC / WIRING / DATA DIMENSIONS

Catalog Logic – for basic Panelboard Enclosures**WIRE SIZES**

E	F	G	H	I	J	K	L	M	N
#12-#1	#6-250MCM	#12-1/0	#14-1/0	2/0-250MCM	#14-#1	#6-2/0	#6-4/0	#2-4/0	#2-2/0

Wiring Diagrams B7L Series

(Note: B7P Series are single column)

**Main Lug Only
Three Phase 4-Wire
Solid Neutral
120/208 VAC****Main Lug Only
Single Phase 3-Wire
Solid Neutral
120/240 VAC****Back Feed
Main Breaker
Three Phase 4-Wire
Solid Neutral
120/208 VAC****Back Feed
Main Breaker
Single Phase 3-Wire
Solid Neutral
120/240 VAC****Vertical
Main Breaker
Three Phase 4-Wire
Solid Neutral
120/208 VAC****Vertical
Main Breaker
Single Phase 3-Wire
Solid Neutral
120/240 VAC****DIMENSIONS**

ENCLOSURE BOX SIZE		X	Y	CONDUIT SIZE		Z	CONDUIT QUANTITY			
LETTER	BASE BOX NUMBER①			A	B, C, D		A	B	C	D
A	MXB-13207	24-3/4" (629)	13" (330)	2"	1"	6-7/8" (175)	2	3	3	4
B	MXB-13297	33-3/8" (848)	21" (533)	2-1/2"	1"	10-7/8" (276)	2	3	4	5
C	MXB-13417	45-3/8" (1153)	33" (838)	3"	1"	16-7/8" (429)	2	3	5	6
D	MXB-13507	54-3/8" (1381)	42" (1067)	3"	1"	21-3/8" (543)	2	3	6	7

① See pages DE13 and DE14 for complete enclosure ordering information.

Dimensions