Product Guide
Panelboards and Lighting Controls

Assembled Panelboards
Unassembled Panelboards

Panelboards and Lighting Controls

EATON
Powering Business Worldwide

Panelboards and Lighting Control

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Panelboards and Lighting Controls

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Product Selection Guide

Product Types

Type PRL1a

Bolt-on Circuit Breakers 240Vac Maximum

Main Lugs Only
600 amperes maximum.

Main Circuit Breaker
400 amperes maximum.

Branch Circuit Breakers
100 amperes maximum.
(1 pole and 3 pole)
125 amperes maximum.
(2 pole)

Type PRL2a

Bolt-on Circuit Breakers 240V, 480Y/277V or 600Y/347Vac; 125/250Vdc Maximum

Main Lugs Only
600 amperes maximum.

Main Circuit Breaker
400 amperes maximum.

Branch Circuit Breakers
100 amperes maximum,
1-, 2- and 3-pole.

Type PRL3a

Bolt-on Circuit Breakers 240V, 480V or 600Vac; 250Vdc Maximum

Main Lugs Only
600 amperes maximum.

Main Circuit Breaker
600 amperes maximum.

Branch Circuit Breakers
225 amperes maximum,
1-, 2- and 3-pole.

Type PRL4

Circuit Breakers or Fusible Switches 240V, 480V or 600Vac; 250Vdc Maximum

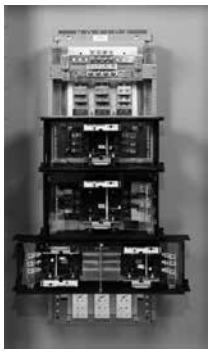
Main Lugs Only
1200 amperes maximum.

Main Circuit Breaker
1200 amperes maximum.

Main Fusible Switch
1200 amperes maximum.

Branch Circuit Breakers
1200 amperes maximum
1-, 2- and 3-pole.

Branch Fusible Switches
1200 amperes maximum,
2- and 3-pole.



PRL4D

Draw-out Circuit Breakers 240V, 480V or 60Vac; 250Vdc Maximum

Main Lugs Only
1200 amperes maximum.

Branch Circuit Breakers
600 amperes maximum.
3-pole

Type PRL1a-LX Column Type

Bolt-on Circuit Breakers 240Vac Maximum

Main Lugs Only
225 amperes maximum.

Main Circuit Breaker
225 amperes maximum.

Branch Circuit Breakers
100 amperes maximum
1-, 2- and 3-pole.

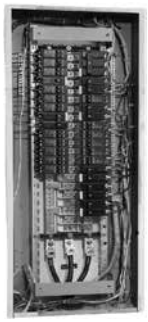
Type PRL2a-LX Column Type

Bolt-on Circuit Breakers 240 V or 600Y/347Vac; 125/250Vdc Maximum

Main Lugs Only
225 amperes maximum.

Main Circuit Breaker
225 amperes maximum.

Branch Circuit Breakers
100 amperes maximum
1-, 2- and 3-pole.



Retrofit Panelboard PRL-1R

Bolt-on Circuit Breakers 240Vac Maximum

Main Lugs Only
400 amperes maximum.

Main Circuit Breaker
225 amperes maximum.

Branch Circuit Breakers
100 amperes maximum,
1-, 2- and 3-pole.

Retrofit Panelboard PRL-2R

Bolt-on Circuit Breakers 600Y/347Vac Maximum

Main Lugs Only
400 amperes maximum.

Main Circuit Breaker
225 amperes maximum.

Branch Circuit Breakers
100 amperes maximum,
1-, 2 and 3-pole.

Retrofit Panelboard PRL4R

Bolt-on Circuit Breakers 600Y/34Vac Maximum

Main Lugs Only
1200 amperes maximum.

Main Circuit Breaker
1200 amperes maximum.

Branch Circuit Breakers
1200 amperes maximum,
1, 2 and 3-poles.

Pow-R-Command Lighting Control

Bolt-on Circuit Breakers 240V or 480Y/277Vac

Main Lugs Only
400 amperes maximum.

Main Circuit Breaker
400 amperes maximum.

Branch Circuit Breakers
225 amperes maximum,
1, 2 and 3-poles.

Integral Power Switching Controls.

Type PRL1a Panelboard

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Product Description

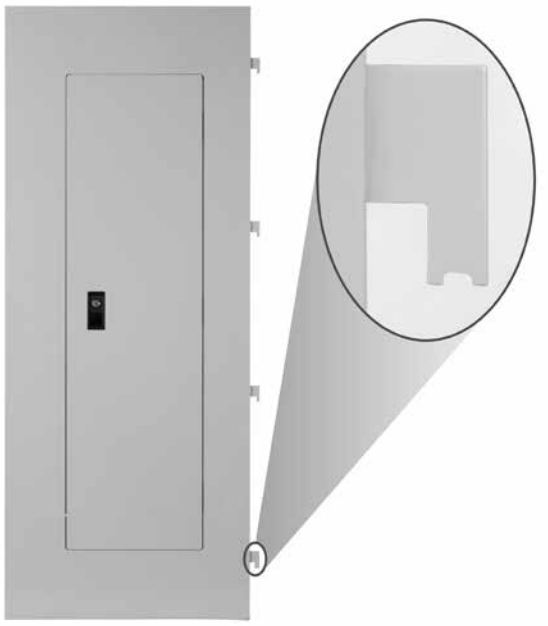
Eaton's new EZ box and EZ trim represents the first significant change in panelboard box and trim designs in more than a half-century. The EZ box and EZ trim have been designed for faster, more secure and safer installations. The new EZ box and EZ trim are provided standard for Pow-R-Line 1a and Pow-R-Line 2a lighting panel- boards, as well as our Pow-R-Line 3a mid-range panelboard.

Flange Detail

Features

- Virtually eliminates sharp edges.
- Trim installs in seconds rather than minutes.
- Door-in-door is standard.
- Ability to adjust flush box to wall irregularities.
- Trim installs without the need for tools.
- No exposed hardware (because there is none).
- Multipoint door latch over breakers.

The EZ box flanges are bent and painted, which virtually eliminates the sharp edges associated with traditional boxes. Additionally, all steel panelboard chassis parts are painted. This significantly reduces potential injury for material handlers and install-ers. Each flange is adjustable outward up to 3/4 inch. This feature allows the installer to adjust flush box applications to be level and flat with the finished wall after the wall material is installed to help correct wall irregularities. The new box flange also provides the means for attaching the EZ trim.



Stand-alone Trim and Bottom Flange Hanger with Notch

Corner Flange Detail

Fast Installation

The EZ trim incorporates a patent pending, ground breaking design that installs in seconds, rather than minutes. The standard trim features include door-in-door construction; no exposed hardware and no tools are required for installation.

Each EZ trim includes hangers attached on the right side. The bottom trim hanger has a notch in its base. To install, the bottom hanger is inserted into the bottom right side box flange opening, resting the notch on the flange.

Trim Hanger Inserted Into Box Flange

The balance of the hangers should be aligned with the other flange openings and pushed in. When all hangers are in the box flange, the trim should be lifted up slightly to clear the notch on the bottom hanger as the trim is self-supported on the EZ box.

The installation is completed by swinging the trim to the closed position, then lifting and pushing slightly to the right. The trim will drop into place totally secured. The multi-point catches on the left side of the trim will lock into the left side box flange openings.

To prevent the trim from being removed by non-authorized persons, a unique sliding means automatically latches in place when the trim door is closed. Along with a new lock, the EZ trim offers a high degree of door security.

Standards and Certifications

When used with Eaton's panelboard chassis, EZ boxes and EZ trims meet the following applicable industry standards.

- CSA C22.2#29 approved.
- Canadian Electrical Code

Trim Hanging on Surface Mounted Box

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Pow-R-Line C Panelboards

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Product Description

Lighting and Distribution Panelboards

Assembled panelboards are designed for sequence phase connection of branch circuit devices. This allows complete flexibility of circuit arrangement (1-, 2- or 3-poles) to allow balance of the electrical load on each phase.

Sturdy, rigid chassis assembly assures accurate alignment of interior with panel front; prevents flexing and minimizes possibility of loosening or damage to current carrying parts during and after installation.

Four-point in-and-out adjustment of panel interior is provided to meet critical depth dimensions on flush installations. This compensates for possible misalignment of box at installation.

Main lugs are mechanical solderless type and approved for copper or aluminum conductors.

Enclosures

Boxes are code-gauge galvanized steel.

Standard panelboard cabinets are designed for indoor use. Alternate types are available for indoor and special purpose applications.

All enclosures are furnished in accordance with Canadian Standards Association and include wiring gutters with proper wire bending space. Special cabinets can be provided at an additional charge.

The box dimensions shown are inside dimensions. For outside dimensions, add 1/4-inch (6.4 mm).

Standard panelboard boxes are supplied without knockouts (blank endwalls).

Fronts

Fronts (trims) for all panelboards are made of code-gauge steel and have a high durability ASA-61 light gray finish applied by a baked-on polyester powder coating paint system.

The fronts for lighting and appliance branch circuit panelboards and small power distribution panelboards include a door with rounded corners and concealed hinges. A flush-type latch and lock assembly is included. All locks are keyed alike. These trims are available in both surface and flush mounted designs.

EZ Trim features standard door-in-door with no exposed hardware or sharp edges (no tools are required for installation)

The three-piece trim for larger power distribution panelboards provides for easy handling and installation

Fronts for power distribution panelboards utilize a unique breaker front cover design in which each device has a dedicated bolt-on steel cover. The individual covers form a single deadfront for the panelboard that is used in conjunction with two wiring gutter covers to complete the trim. A door is not finished as part of the standard oering on these panelboards but can be provided, for an additional charge, using a deeper than standard box.

Application Description

Panelboard Selection Factors

In selecting a panelboard, the following factors must be considered:

- Service (voltage and frequency)
- Interrupting capacity (fully or series rated)
- Ampere rating of main
- Ampere ratings of branches
- Environment

Panelboard Short Circuit Rating

The short circuit rating of Eaton's assembled panelboards are test verified by, and listed with Canadian Standards Association. Generally, these ratings are that of the lowest interrupting rated device in the panel.

Certain exceptions to this rule exist where branch devices have been CSA tested in combination with specific main devices having a higher interrupting rating. Where these defined main devices and branch breaker combinations are utilized, the Series Short Circuit Rating of the assembled panelboard will be the same as the tested rating of the approved rated main device in series with the branches. Available main and branch breaker combinations are tabulated starting on **Page 1-10.** All combinations shown are CSA certified.

These series ratings apply to panels having main devices, or main lug only panelboards fed remotely by the device listed in the series ratings chart as the main, for which CSA tests were conducted.

Standard Entrance Equipment

Standard main breaker panelboards may be configured to meet CSA Service Entrance requirements. This option must be added to the List Price and specified at order entry.

Service entrance rated panelboards require a number of additions:

- CSA service entrance label
- Barrier around the main breaker
- Ground lug inside the service entrance barrier
- A neutral lug inside the service entrance barrier that extends outside to panelboard's box

Service entrance panelboards must be identified during order entry.

Multi-Section Panelboards

Separate fronts for each box are standard. Where the required number of branch circuit devices exceeds the available space in any single panelboard, multiple-section assemblies may be provided. These assemblies consist of two or more close-coupled enclosures with provisions for interconnecting power cables or bus.

Interconnecting Multi-Section Panelboards

When a panelboard, for connection to one feeder, must be furnished in more than one section (Box), each section must be furnished with main bus and terminals of the same rating, unless a main overcurrent device is provided in each section.

Subfeed or throughfeed provision must also be included (and priced) to provide connection capability to the second section.

Note: Subfeed or throughfeed lugs cannot be used on any panelboard that is not protected by a single main overcurrent device either in the panelboard or immediately upstream.

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Sub-Feed Lugs

Sub-feed lugs **(see Figure 1-1)** are one means of interconnecting multi-section panels. The subfeed (second set of) lugs are mounted directly beside the main lugs. These are required in each section except the last panel in the lineup. The feeder cables are brought into the wiring gutter of the first section and connected to the main lugs. Another set of the same size cables are connected to the subfeed lugs (Section 1) and are carried over to the main lugs of the adjacent panel. Cross connection cables are not furnished by Eaton. Subfeed lugs are only available on main lug only panels.

In situations requiring large numbers of overcurrent protective devices, or when site conditions demand panelboards may be supplied in multiple sections.

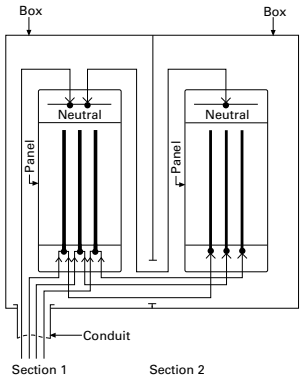


Figure 1.1. Sub-Feed Lugs

Through-Feed Lugs

Through-feed lugs **(see Figure 1-2)** are another method to interconnect multi-section panelboards. The incoming feeder cables are connected to the main lugs or main breaker at the bottom of panel (Section 1). Another set of lugs (through-feed) are located at the opposite end of the main bus. The interconnecting cables are connected to the through-feed lugs in Section 1 and are carried over to the main lugs in Section 2. The connection arrangement could be reversed, i.e., main lugs at top; through-feed lugs at bottom end of panel. Cross cables are not furnished by Eaton.

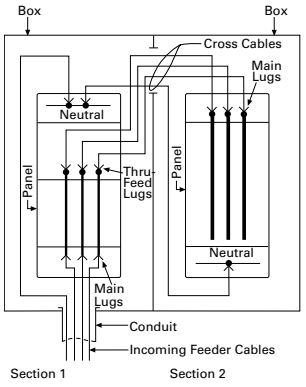
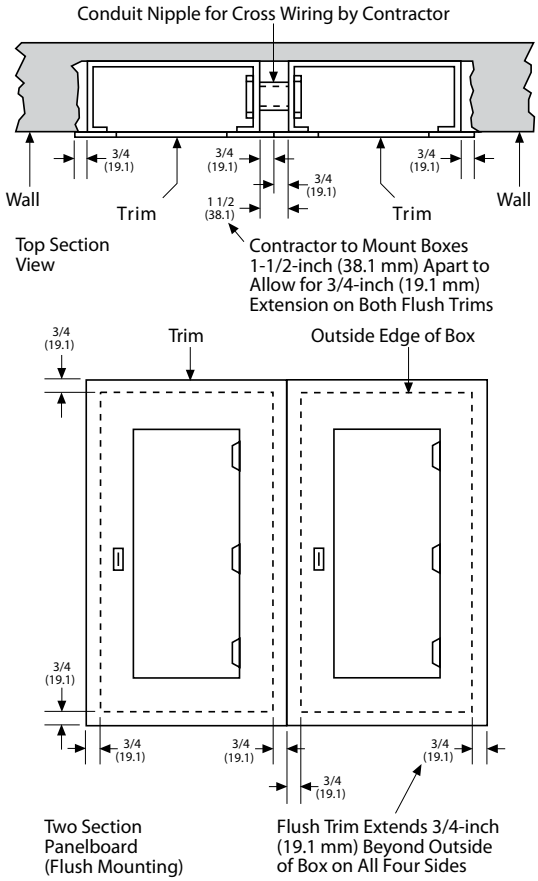


Figure 1.2. Through-Feed Lugs

Multiple Section Panelboard — Flush Mounted

Shown below **(see Figure 1.3**) is the standard method for flush mounting multiple section lighting and distribution panelboards using standard flush trims.



Special Conditions

Standard panelboards, assembled with standard components, are adequate for most applications. However, special consideration should be given to those required for application under special conditions such as:

- Excessive vibration or shock
- Frequencies above 60 cycles
- Altitudes above 6600 feet (2011.7 m)
- Damp environment (possible fungus growth)
- Compliance with federal, state, provincial and municipal electrical codes and standards

Seismic Considerations

Eaton panelboards are seismic qualified at the highest possible level, Seismic Zone 4, and have been tested in accordance with ANSI C37.81. This standard quantifies actual earthquake conditions, as well as equipment seismic capability.

Harmonic Currents

Standard panelboard neutrals are rated or 100% of the panelboard current. However, since harmonic currents can cause overheated neutrals, an option is provided for neutrals to be rated at 200% (1200 ampere maximum neutral for 600 ampere main bus) of the panelboard phase current.

Panelboards with the 200% rated neutral are CSA certified as suitable for use with non-linear loads.

Prior to specifying the 200% rated neutral, Eaton recommends a harmonic survey be conducted of the distribution system, be it new or existing.

Transient Voltage Surge Suppression

The quality of power feeding sensitive electronic loads is critical to the reliable operation of any facility. In modern offices, hospitals, and manufacturing facilities, the most frequent causes of microprocessor-based equipment downtime and damage are voltage transients and electrical noise.

Electrical loads and microprocessor-based equipment are highly susceptible to both high and low energy transients. High energy transients include lightning induced surges and power company switching. These high energy transients can destroy components instantly.

More frequently the electrical system experiences low energy transients and high frequency noise.

The effects of continual low energy transients and high frequency noise can cause erratic equipment performance or sudden failure of electronic circuit board components.

Eaton can provide protective and diagnostic systems integral to panelboards. The surge protection device (SPD) is integrated into the panelboards using a “zero lead length” direct bus bar connection.

The Surge Protection Device (SPD) provides Transient Voltage Surge Suppression (TVSS) and active hybrid filtering. The SPD protects sensitive electronic equipment from the damaging effects of high and low energy transients, as well as high frequency noise.

Pow-R-Line 4

Standards and Certifications

All Eaton panelboards are designed to meet the following applicable industry standards, except where noted:

- Canadian Standards Association
- C22.2 No. 29
- Canadian Electrical Code

Selection Guide

Table 1.1. Panelboard Selection Guide

Panelboard Type	Device Type	Maximum Voltage Rating AC	DC	Maximum Main Rating (Amperes) MLO	Main Device	Branch Circuits Ampere Range	Sub-Feed Breaker Maximum Amperes	AC Interrupting Capacity rms Symmetrical Amperes (kA) Fully Rated	Series Rated
PRL1a	Breaker	240	—	600	400	15-100	400	10-22	22-100
PRL2a	Breaker	240	250	600	400	15-100	400	65	65-200
	Breaker	600Y/347	250	600	400	15-100	400	10	14-100
PRL3a	Breaker	240	250	600	600	15-225	600	10-200	22-200
	Breaker	480	250	600	600	15-225	600	14-100	22-150
	Breaker	600	250	600	600	15-225	600	14-35	18-100
PRL4B	Breaker	240	250	1200	1200	15-1200	—	10-200	22-200
	Breaker	480	250	1200	1200	15-1200	—	14-200	22-150
	Breaker	600	250	1200	1200	15-1200	—	14-200	18100
PRL4F	Fusible	240	250	1200	1200	30-1200	—	100-200	—
	Fusible	600	250	1200	1200	30-1200	—	100-200	—
PRF4D	Breaker	240	250	1200	1200	15-600	—	10-200	22-200
	Breaker	600	250	1200	1200	15-600	—	14-200	22-150
PRL1R	Breaker	240	—	400	225	15-100	—	—	—
PR2R	Breaker	240	250	400	225	15-100	—	—	—
	Breaker	600Y/347	250	400	225	15-100	—	—	—
PRL1a-LX	Breaker	240	—	225	225	15-100	—	10-22	22-100
PRL2a-LX	Breaker	240	250	225	225	15-100	—	65	65-200
	Breaker	600Y/347	250	225	225	15-100	—	10	14-100
PRC 750	Breaker	240	—	400	400	15-225	—	10-68	22-100
/2000 PRC25	Breaker	480Y/277	—	400	400	15-225	—	14	65-100
PRL5P	Breaker	240	250	1200	1200	15-1200	—	10-200	22-200
	Breaker	480	250	1200	1200	15-1200	—	14-200	22-150
	Breaker	600	250	1200	1200	15-1200	—	14-200	18-100

Terminal Wire Ranges, Pressure-Type Al/Cu Terminals Except as Noted

Note: All terminal sizes are based on wire ampacities corresponding to those shown in CEC under the 75°C insulation columns (75°C wire). The use of smaller size, (in circular mills), regardless of insulation temperature rating, is not permitted.

Where copper-aluminum terminals are supplied on designated panelboard types, best results are obtained if a suitable joint compound is applied when aluminum conductors are used.

Check Eaton's standard terminal sizes versus customer requirements. In particular, 400 and 800 ampere breakers often require nonstandard lugs.

Optional 750 kcmil mechanical screw-type terminals are available upon request. Panelboard dimensions may be affected, refer to Eaton.

Table 1.2. Standard Main Lug Terminals

Panel Type	Wire-Size Ranges for Amperes Capacity 100 Ampere	225 Ampere	250 Ampere	400 Ampere	600 Ampere	800 Ampere	1200 Ampere
PLR1a	#12-#1/0	#6-300 kcmil	—	(2) #4-500 kcmil	(2) #4-500 kcmil	—	—
				(2) 1/0-750 kcmil	(2) 1/0-750 kcmil	—	—
				(4) 1/0-250 kcmil	(4) 1/0-250 kcmil	—	—
PRL2a	#12-#1/0	#6-300 kcmil	—	(2) #4-500 kcmil	(2) #4-500 kcmil	—	—
			—	(2) 1/0-750 kcmil	(2) 1/0-750 kcmil	—	—
			—	(4) 1/0-250 kcmil	(4) 1/0-250 kcmil	—	—
PRL3a	#12-#1/0	—	#6-350 kcmil	(2) #4-500 kcmil	(2) #4-500 kcmil	—	—
				(2) 1/0-750 kcmil	(2) 1/0-750 kcmil	—	—
				(4) 1/0-250 kcmil	(4) 1/0-250 kcmil	—	—
PRL3 Suite	—	—	—	(2) #4-500 kcmil	(2) #4-500 kcmil	—	—
				(2) 1/0-750 kcmil	(2) 1/0-750 kcmil	—	—
				(4) 1/0-250 kcmil	(4) 1/0-250 kcmil	—	—

Selection Guide (Cont'd)

Table 1.3. Standard Main Lug Terminals Cont'd

Panel Type	Wire-Size Ranges for Amperes Capacity						
	100 Ampere	225 Ampere	250 Ampere	400 Ampere	600 Ampere	800 Ampere	1200 Ampere
PRL4B/4F/4D	—	—	#4-500	(2) #4-500 kcmil	(2) #4-500 kcmil (2) 1/0-750 kcmil (4) 1/0-250 kcmil	(3) #4-500 kcmil (3) 1/0-750 kcmil (6) 1/0-250 kcmil	(4)#4-500 kcmil (4) 1/0-750 kcmil (8) 1/0-250 kcmil
PRL 1R	#12-#1/0	#6-300 kcmil	—	(2) #4-500 kcmil	(2) #4-500 kcmil	—	—
PRL 2R	#12-#1/0	#6-300 kcmil	—	(2) #4-500 kcmil	(2) #4-500 kcmil	—	—
PRL1a-LX	#12-#1/0	#6-300 kcmil	—	—	—	—	
PRL2a-LX	#12-#1/0	#6-300 kcmil	—	—	—	—	
PRC750E/ 2000E/PRC25	#12-#1/0	—	#6-300 kcmil	(2) #4-500 kcmil	—	—	

Table 1.4. Standard Circuit Breaker Terminals

Breaker Type	Ampere Rating	Wire Range
DNBA	15-30	#14-#4
BAB, QBHW BABRSP	15-70 90-100	#14-#4 #8-#1/0
ED, EDH, EDC	100-225	#4-4/0 or #6-300 kcmil
EHD, FDB, FD, HFD, FDC	15-100 125-225	#14-1/0 #4-4/0
FCL	15-100	#14-1/0
GB, GHB, GBH	15-20 25-100	#14-#10 #10-1/0
JD, HJD, JDC	70-250	#4-350 kcmil
DK	250-350 400	250-500 kcmil (2) 3/0-250 kcmil or (1) 3/0-500kcmil
KD, HKD, KDC, CKD, CHKD	225 350 400	(1) #3-350 kcmil (1) 250-500 kcmil (1) 3/0-250 kcmil (1) 3/0-500 kcmil
LGE, LGH, LGU	250-400 500-600	(1) #2-500 kcmil (2) #2-500 kcmil
LD, HLD, LDC, CLD, CHLD	300-500 600	(2) 250-350 kcmil (2) 400-500 kcmil
MDL, HMDL CMDL, CHMDL	400-600 700-800	(2) #1-500 kcmil (3) 3/0-400 kcmil
NGS, NGH NGC	800-1200	(3) 4/0-500 (4)3/0-400
LCL	125-225 250-400	(1) #6-350 kcmil (1) #4-250 kcmil and (1) 3/0-600 kcmil
FB-P	15-100	#14-1/0
LA-P	70-225 250-400	#6-350 kcmil (1) #4-250 kcmil and (1) 3/0-600 kcmil
NB-P	300-700 800	(2) #1-500 kcmil (3) 3/0-400 kcmil

Note: ND breakers are replaced with NG Series. ND breakers have significantly longer lead time.

Table 1.5 FDPW Switch Terminals

Ampere Rating	Wire Range
30 60 100	#14-1/0 #14-1/0 #14-1/0
200	#4-300 kcmil
400	250-750 kcmil or (2) 3/0-250 kcmil
600	(2) #4-600 kcmil or (4) 3/0-250 kcmil
800	(3) 250-750 kcmil or (6) 3/0-250 kcmil
1200	(4) 250-750 kcmil or (8) 3/0-250 kcmil

Table 1.6. Torque Values for Copper or Aluminum Bus Bar Connections

Bolt Size	Torque Inch lbs.	Torque Foot lbs.
#10	30 Inch lbs.	2.5 Foot lbs.
1/4"	65 Inch lbs.	5.4 Foot lbs.
5/16"	130 Inch lbs.	10.8 Foot lbs.
3/8"	240 Inch lbs.	20.0 Foot lbs.
1/2"*	600 Inch lbs.	50.0 Foot lbs.

Note: For other torque values refer to instruction leaflet for specific component

Note: *Some applications use (2) Belleville washers per bolt. Convex side up. In these cases bolts should be torqued to 70 foot/pounds.

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Table 1.7. Moulded Case Circuit Breaker Ratings

Breaker Type	Continuous Ampere Rating	Number of Poles	Maximum Voltage AC	Interrupting Rating - kA Symmetrical Amperes ac Rating volts 120/240	240	277	480	600	125 dc Rating volts①	250 dc Rating volts①
BAB②③, BAB-H②③	15-70	1	120	10	—	—	—	—	—	—
	15-125	2	120/240	10	—	—	—	—	—	—
	15-100	2, 3	240	—	10	—	—	—	—	—
BABRSP②	15-30	1	120	10	—	—	—	—	—	—
	15-30	2	120-240	10	—	—	—	—	—	—
QBGF, QBGFEP	15-40	1	120	10	—	—	—	—	—	—
	15-50	2	120/240	10	—	—	—	—	—	—
QBCAF	15-20	1	120	10	—	—	—	—	—	—
QBHW②③	15-70	1	120	22	—	—	—	—	—	—
	15-100	2	120/240	22	—	—	—	—	—	—
	15-100	2, 3	240	—	22	—	—	—	—	—
QBHGF, QBHGFEP	15-30	1	120	22	—	—	—	—	—	—
	15-30	2	120/240	22	—	—	—	—	—	—
GHB②③	15-20	1	277	65	—	14	—	—	—	—
	15-100④	1	277	65	—	14	—	—	14	—
	15-100④	2, 3	480Y/277	—	65	—	14	—	—	14
GBH②③	15-70	1	347	65	—	14	—	—	—	—
	15-100	2, 3	600Y/347	—	65	—	14	—	10	—	14
GHBGFEP	15-60	1	277	—	—	14	—	—	—	—
GHQRSP	15-30	1	277	65	—	14	—	—	—	—
	15-30	2	480Y/277	—	65	—	14	—	—	—
EHD②③	15-100	1	277	—	—	14	—	—	10	—
	15-100	2, 3	480	—	18	—	14	—	—	10
FDB	15-100	1	347	—	18	—	—	—	—	—
	15-150	2, 3	600	—	18	—	14	14	14	—	10
FD②③⑤	15-150	1	347	—	—	35	—	18	-	10	-
	15-225	2, 3	600	—	65	—	35	14	18	—	10
FDE	15-225	3	600	—	65	—	35	14	18	—	—
HFD②③	15-150	1	347	—	—	65	—	25	—	10	—
	15-225	2, 3	600	—	100	—	65	25	25	—	22

① DC ratings apply to substantially non-inductive circuits
② 15 and 20 amperes 1-pole switching duty rated for fluorescent applications.
③ 1-, 2- and 3-pole HACR rated.
④ DC rated 1-pole, 15 – 70 amperes only
⑤ 2- and 3-pole HACR rated.

Table 1.8 Moulded Case Circuit Breaker Ratings, continued

Note: Circuit breakers equal or exceed Federal Specification W-C-375b requirements for the particular class associated with each circuit breaker type.

Breaker Type	Continuous Ampere Rating	Number of Poles	Maximum Voltage AC	Interrupting Rating - kA Symmetrical Amperes ac Rating volts 120/240	240	277	480	600	125 dc Rating volts①	250 dc Rating volts①
HFDE⑧	15-225	3	600	—	100	—	65	25	25	—	—
FDC	15-30	1	347	—	—	—	—	30	—	—	—
FDC②	15-225	2, 3	600	—	200	—	100	35	35	—	22
FCL	15-100	2, 3	480	—	200	—	150	—	—	—	—
ED②	100-225	2, 3	240	—	65	—	—	—	—	10	—
EDH②	100-225	2, 3	240	—	100	—	—	—	—	10	—
EDC②	100-225	2, 3	240	—	200	—	—	—	—	10	—
JD②	70-250	2, 3	600	—	65	—	35	—	18	—	10
HJD②	70-250	2, 3	600	—	100	—	65	—	25	—	22
JDC②	70-250	2, 3	600	—	200	—	100	—	35	—	22
DK④	250-400	2, 3	240	—	65	—	—	—	—	—	10
KD, CKD②③	100-400	2, 3	600	—	65	—	35	—	25	—	10⑤
HKD, CHKD②③	100-400	2, 3	600	—	100	—	65	—	35	—	22⑤
KDC④	100-400	2, 3	600	—	200	—	100	—	65	—	22⑤
LCL④	125-400	2, 3	600	—	200	—	200	—	100	—	—
LD④, CLD③④	300-600	2, 3	600	—	65	—	35	—	25	—	22⑤
LGE②	300-600	3	600	—	65	—	35	—	18	—	10
LGH④	300-600	3	600	—	100	—	65	—	35	—	42
LGU④	300-600	3	600	—	200	—	150	—	65	—	50
HLD④, CHLD③④	300-600	2, 3	600	—	100	—	65	—	35	—	25⑤
LDC④, CLDC③④	300-600	2, 3	600	—	200	—	100	—	50	—	25⑤
MDL④, CMDL③④	400-800	2, 3	600	—	65	—	50	—	25	—	22⑤
HMDL④, CHMDL③④	400-800	2, 3	600	—	100	—	65	—	35	—	25⑤
ND④, CND③④	600-1200	2, 3	600	—	65	—	50	—	25	—	—
HND④, CHND③④	600-1200	2, 3	600	—	100	—	65	—	35	—	—
NDC④, CNDC③④	600-1200	2, 3	600	—	200	—	100	—	65	—	—
NGS②	800-1200	3	600	—	65	—	50	25	—	—	—
NGH⑦	800-1200	3	600	—	100	—	65	35	—	—	—
NGC⑦	800-1200	3	600	—	200	—	100	65	—	—	—
Integrally Fused, Current Limiting Circuit Breakers											
FB-P	15-100	2, 3	600	—	200	—	200	—	200	—	⑥
LA-P	70-400	2, 3	600	—	200	—	200	—	200	—	⑥
NB-P	300-800	2, 3	600	—	200	—	200	—	200	—	⑥

① DC ratings apply to substantially non-inductive circuits
② 100% rated circuit breaker.
③ Available with integral ground fault protection.
④ DC rating not available with electronic trip.
⑤ 100k based on NEMA test procedure.
⑥ 50 ampere devices available as 2-pole only.
⑦ ND breakers are replaced with NG Series. ND breakers have significantly longer lead time.

Series Rated Combinations

The electrical standards of Canada provide 2 methods of applying assemblies such as panelboards, switchboards, etc., into an electrical system:

Fully Rated: The short circuit protective devices at all levels have a rating that matches or exceeds the system available fault level.

Series Rated or Integrated Equipment Rated: The electrical standards permit the use of downstream equipment (such as moulded case circuit breaker panelboards) with protective devices having lower interrupting ratings than the available system fault level when protected by an upstream fully rated device. This "series" application of upstream and downstream devices must comply with CSA standards which require that any installation supplied in this fashion makes use of devices which have been tested as a series combination.

Please refer to the latest IER book.

Type PRL1a

Contents

Type PRL1a

Product Description

- 240Vac maximum
- 3-phase 4-wire, 3-phase 3-wire, 1-phase 3-wire, 1-phase 2-wire
- 600 ampere maximum main lugs
- 400 ampere maximum main breaker
- 100 ampere maximum branch breakers (2 Pole 125A)
- Bolt-on branch breakers
- Tin plated aluminum bus or silver plated copper bus
- Factory assembled

Application Description

- Fully rated or series rated
- Interrupting ratings up to 200 kA symmetrical
- Suitable for use as Service Entrance Equipment, when specified on the order

Standards and Certification

- CSA C22.2 No. 29

Options and Accessories

- Refer to **Page 2-44**

Layout and Sizing

- Refer to **Page 2-3**

Product Selection

Type PRL1a

Table 2.1 Base Configurations - PRL1a

Ampere Rating	Interrupting Rating (kA Sym.) 240Vac	Breaker Type
Main Lug Only		
100	—	—
225	—	—
400	—	—
600	—	—
Main Breaker		
100	10	BAB
100	18	EDH/FDB
100	22	QBHW
100	65	ED
100	65	FD
100	100	EDH
100	100	HFD
225	65	ED
225	100	EDH
400	65	DK
400	65	KD
400	100	HKD
400	200	KDC

Table 2.2 Bolt-on BAB, QBHW, QBGF, QBHGF, QBGFEP, QBHGFEP, QBAF, QBAG

Ampere Rating	Interrupting Rating (kA Sym.) 240Vac①②	Breaker Type
15-30	10	DNBA(twin)
15-60	10	BAB⑩
70	10	BAB
80-100	10	BAB
125	10	BAB (2-Pole)
15-50③	10	QBGF④
15-50③	10	QBGFEP⑤
15-20	10	QBCAF⑥
15-60	10	BAB-D⑦
15-30	10	BAB-C⑧
15-30	10	BABRSP⑨
15-60	22	QBHW
70	22	QBHW
80-100	22	QBHW
125	22	QBHW (2 Pole)
15-30	22	QBHGF④
15-30	22	QBHGFEP⑤

① 1-pole breakers are rated 120Vac maximum.
② 240 volt breakers must be used on 3-phase, 3-wire, 240 volt delta systems or on the high leg of a midpoint delta grounded system.
③ 50 ampere devices are available as 2-pole only.
④ GFCI for 5 mA personnel protection.
⑤ GFP for 30 mA equipment protection.
⑥ Combination arc fault circuit breaker.
⑦ HID (High Intensity Discharge) rated breaker.
⑧ Switching Neutral Breaker. 1-pole device requires 2-pole space, 2-pole device requires 3-pole space.
⑨ Solenoid operated breaker.
⑩ BAB breakers are not DC rated.

Product Selection

Table 2.3 Standard Catalogue Numbering

Ampere Rating	Main Device Type	Number of Branch Circuits	Catalogue Number 3Ph, 4W Aluminum	1Ph, 3W Aluminum	3Ph, 4W Copper	1Ph, 3W Copper
Main Lug Only						
100	—	18	**P1aL4A1-18**	**P1aL1A1-18**	**P1aL4C1-18**	**P1aL1C1-18**
	—	24	**P1aL4A1-24**	**P1aL1A1-24**	**P1aL4C1-24**	**P1aL1C1-24**
	—	30	**P1aL4A1-30**	**P1aL1A1-30**	**P1aL4C1-30**	**P1aL1C1-30**
	—	42	**P1aL4A1-42**	**P1aL1A1-42**	**P1aL4C1-42**	**P1aL1C1-42**
225	—	18	**P1aL4A2-18**	**P1aL1A2-18**	**P1aL4C2-18**	**P1aL1C2-18**
	—	24	**P1aL4A2-24**	**P1aL1A2-24**	**P1aL4C2-24**	**P1aL1C2-24**
	—	30	**P1aL4A2-30**	**P1aL1A2-30**	**P1aL4C2-30**	**P1aL1C2-30**
	—	42	**P1aL4A2-42**	**P1aL1A2-42**	**P1aL4C2-42**	**P1aL1C2-42**
	—	60	**P1aL4A2-60**	**P1aL1A2-60**	**P1aL4C2-60**	**P1aL1C2-60**
	—	72	**P1aL4A2-72**	**P1aL1A2-72**	**P1aL4C2-72**	**P1aL1C2-72**
	—	84	**P1aL4A2-84**	**P1aL1A2-84**	**P1aL4C2-84**	**P1aL1C2-84**
400	—	24	**P1aL4A4-24**	**P1aL1A4-24**	**P1aL4C4-24**	**P1aL1C4-24**
	—	30	**P1aL4A4-30**	**P1aL1A4-30**	**P1aL4C4-30**	**P1aL1C4-30**
	—	42	**P1aL4A4-42**	**P1aL1A4-42**	**P1aL4C4-42**	**P1aL1C4-42**
	—	60	**P1aL4A4-60**	**P1aL1A4-60**	**P1aL4C4-60**	**P1aL1C4-60**
	—	72	**P1aL4A4-72**	**P1aL1A4-72**	**P1aL4C4-72**	**P1aL1C4-72**
	—	84	**P1aL4A4-84**	**P1aL1A4-84**	**P1aL4C4-84**	**P1aL1C4-84**
600	—	24			**P1aL4C6-24**	**P1aL1C6-24**
	—	30			**P1aL4C6-30**	**P1aL1C6-30**
	—	42			**P1aL4C6-42**	**P1aL1C6-42**
	—	60			**P1aL4C6-60**	**P1aL1C6-60**
	—	72			**P1aL4C6-72**	**P1aL1C6-72**
	—	84			**P1aL4C6-84**	**P1aL1C6-84**
Main Breaker ②						
100	BAB	15	**P1aB4A1-15BAB**	**P1aB1A1-15BAB**	**P1aB4C1-15BAB**	**P1aB1C1-15BAB**
		21	**P1aB4A1-21BAB**	**P1aB1A1-21BAB**	**P1aB4C1-21BAB**	**P1aB1C1-21BAB**
		27	**P1aB4A1-27BAB**	**P1aB1A1-27BAB**	**P1aB4C1-27BAB**	**P1aB1C1-27BAB**
100	EDH	18	**P1aB4A1-18EHD**	**P1aB1A1-18EHD**	**P1aB4C1-18EHD**	**P1aB1C1-18EHD**
		24	**P1aB4A1-24EHD**	**P1aB1A1-24EHD**	**P1aB4C1-24EHD**	**P1aB1C1-24EHD**
		30	**P1aB4A1-30EHD**	**P1aB1A1-30EHD**	**P1aB1A1-30EHD**	**P1aB1C1-30EHD**
225	ED	24	**P1aB4A2-24ED**	**P1aB1A2-24ED**	**P1aB4C2-24ED**	**P1aB1C2-24ED**
		30	**P1aB4A2-30ED**	**P1aB1A2-30ED**	**P1aB4C2-30ED**	**P1aB1C2-30ED**
		42	**P1aB4A2-42ED**	**P1aB1A2-42ED**	**P1aB4C2-42ED**	**P1aB1C2-42ED**
		60	**P1aB4A2-60ED**	**P1aB1A2-60ED**	**P1aB4C2-60ED**	**P1aB1C2-60ED**
		72	**P1aB4A2-72ED**	**P1aB1A2-72ED**	**P1aB4C2-72ED**	**P1aB1C2-72ED**
400	DK	24	**P1aB4A4-24DK**	**P1aB1A4-24DK**	**P1aB4C4-24DK**	**P1aB1C4-24DK**
		30	**P1aB4A4-30DK**	**P1aB1A4-30DK**	**P1aB4C4-30DK**	**P1aB1C4-30DK**
		42	**P1aB4A4-42DK**	**P1aB1A4-42DK**	**P1aB4C4-42DK**	**P1aB1C4-42DK**
		60	**P1aB4A4-60DK**	**P1aB1A4-60DK**	**P1aB4C4-60DK**	**P1aB1C4-60DK**
		72	**P1aB4A4-72DK**	**P1aB1A4-72DK**	**P1aB4C4-72DK**	**P1aB1C4-72DK**

Pow-R-Line 1a Catalogue Code

P1a	B	4	A	4	-	42	KDC	400
Panelboard Type	L - Main Lugs Only B - Bottom Main Breaker T - Top Main Breaker	1- 1 phase, 3 wire 3 - 3 phase, 3 wire 4 - 3 phase, 4 wire	A - Aluminum C - Copper	1 - 100 Amperes 2 - 225 Amperes 4 - 400 Amperes 6 - 600 Amperes	— — —	Number of Circuits	Main Breaker (if selected)	Breaker Trip Rating

① All possible combinations not shown for alternate main breakers, substitute breaker type suffix from Table 2-1.
② Add breaker trip rating to end of catalogue number.

Box Sizing and Selection

Assembled Circuit Breaker Panelboards box size and box and trim catalogue numbers for all standard panelboard types are found in **Table 2-4**.

Instructions:

1. Using description of the required panelboard, select the rating and type of main required.
2. Count the total number of branch circuit poles, including provisions, required in the panelboard. Do not count main breaker poles. Convert 2- or 3-pole branch breaker to single-poles, i.e., 3-pole breaker, count as 3-poles.

   Determine sub-feed breaker or through-feed lug requirements.
3. Select the main ampere rating section from **Table 2-4.**
4. Select panelboard type from first column.
5. From Step #2, determine the number of branch circuits in Column 2.
6. Read box size, box and trim catalogue numbers across columns to the right. Specify surface or flush mounting on the order.

Cabinets

Fronts are code-gauge steel, ASA-61 light gray painted finish.

Boxes are code-gauge galvanized steel without knockouts. Standard depth is 5-3/4 inches (146.1 mm). Standard width is 20 inches (508.0 mm). An optional 28-inch (711.2 mm) wide box is available.

Top and Bottom Gutters

5-1/2 inches (139.7 mm) minimum.

Table 2.4 PRL1a Panelboard Sizing

Main Ampere (Maximum)	Number Branch Circuit	Box Dimensions (Inches) H	W	D	Box Catalogue Number	Trim Catalogue Number
MAIN LUGS ONLY OR MAIN LUGS WITH SUB-FEED LUGS						
100	18	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	24	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	30	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	42	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
225	18	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	24	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
	30	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
	42	42	20	5.75	**EZB2042RC**	**EZT2042 S or F**
	60	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
	72	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
	84	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
400①/600	24	42	20	5.75	**EZB2024RC**	**EZT2042 S or F**
	30	48	20	5.75	**EZB2030RC**	**EZT2048 S or F**
	42	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
	60	60	50	5.75	**EZB2060RC**	**EZT2060 S or F**
	72	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
	84	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
Main Lugs with Through-Feed Lugs						
100	18	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	24	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	30	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	42	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
225	18	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	24	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
	30	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
	42	42	20	5.75	**EZB2042RC**	**EZT2042 S or F**
	60	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
	72	60	20	5.75	**EZB2072RC**	**EZT2072 S or F**
400/600	24	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
	30	30	20	5.75	**EZB2054RC**	**EZT2054 S or F**
	42	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
	60	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
	72	90	20	5.75	**EZB2072RC**	**EZT2072 S or F**
Main Lugs with Surge Protection Device						
100	18	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	24	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	30	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	42	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
225	18	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
	24	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
	30	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
	42	42	20	5.75	**EZB2042RC**	**EZT2042 S or F**
	60	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
	72	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
	84	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
400/600	24	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
	30	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
	42	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
	60	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
	72	90	20	5.75	**EZB2072RC**	**EZT2072 S or F**

1. ① In a Sub-Feed configuration, maximum incoming and outgoing cables are 1 per phase #500 kcmil.
2. Through-Feed lugs are recommended for 400A applications.
3. Depending on the panel configuration, 72/84cct interiors fit into a 90" H box.

Box Sizing and Selection

Assembled Circuit Breaker Panelboards

Box size and box and trim catalogue numbers for all standard panelboard types are found in **Table 2-5**.

Instructions:

1. Using description of the required panelboard, select the rating and type of main required.
2. Count the total number of branch circuit poles, including provisions, required in the panelboard. Do not count main breaker poles. Convert 2- or 3-pole branch breaker to single-poles, i.e., 3-pole breaker, count as 3 poles.

   Determine sub-feed breaker or through-feed lug requirements.
3. Select the main ampere rating section from **Table 2-5.**
4. Select panelboard type from first column, main breaker frame from second column.
5. From Step #2, determine the number of branch circuits in Column 3.
6. Read box size, box and trim catalogue numbers across columns to the right. Specify surface or flush mounting on the order.

Cabinets

Fronts are code-gauge steel, ASA-61 light gray painted finish.

Boxes are code-gauge galvanized steel without knockouts. Standard depth is 5-3/4 inches (146.1 mm). Standard width is 20 inches (508.0 mm). An optional 28-inch (711.2 mm) wide box is available.

Top and Bottom Gutters

5-1/2 inches (139.7 mm) minimum.

Table 2.5 PRL1a Panelboard Sizing

Ampere Rating	Main Breaker Types and Positions	Number Branch Cct. Spaces	Box Dimensions (Inches) H	W	D	Box Catalogue Number	Trim Catalogue Number
100	BAB, QBHW (Horizontal)	15, 21, 27	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
100/225	EHD, ED, EDH, FD (Vertical)	18, 24	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
		30	42	20	5.75	**EZB2042RC**	**EZT2042 S or F**
		42	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
		60	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
		72, 84	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
400	DK, KD, HKD, KDC (Vertical)	24	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
		30	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
		42	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
		60, 72	72, 90	20	5.75	**EZB2072RC**	**EZT2072 S or F**
Main Breaker with Through-Feed Lugs							
100	BAB, QBHW (Horizontal)	15, 21, 27	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
100/225	EHD, HFD, FD (Vertical)	18	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
		24, 30	42	20	5.75	**EZB2042RC**	**EZT2042 S or F**
		42	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
		60	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
		72	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
400	DK, KD, HKD, KDC (Vertical)	24	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
		30	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
		42	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
Main Breaker with Surge Protection Device							
100	BAB, QBHW (Horizontal)	15, 21, 27	42	20	5.75	**EZB2042RC**	**EZT2042 S or F**
100/225	EHD, ED, EDH, FD (Vertical)	18	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
		24	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
		30	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
		42	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
		60	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
		72	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
400	DK, KD, HKD, KDC (Vertical)	24	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
		30, 42	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
		60	90	20	5.75	**EZB2090RC**	**EZT2090 S or F**
		72, 90	90	20	5.75	**EZB2090RC**	**EZT2090 S or F**

Note: Depending on the panel configuration, 72/84 cct interiors fit into a 90" H box.

Table 2.6 Metric box dimensions:

Box Catalogue Number	Height	Width	Depth
EZB2030RC	762	508.0	146
EZB2036RC	914	508.0	146
EZB2042RC	1067	508.0	146
EZB2048RC	1219	508.0	146
EZB2054RC	1372	508.0	146
EZB2060RC	1524	508.0	146
EZB2072RC	1828	508.0	146
EZB2090RC	2286	508.0	146

Type PRL2a

Contents

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Type PRL1a

Product Description

- 600Y/347Vac
- 480Y/277Vac
- 125Vdc
- 3-phase 4-wire
- 1-phase 3-wire, 1-phase 2-wire
- 3-phase 3-wire
- 600 ampere maximum main lugs
- 400 ampere maximum main breaker
- 100 ampere maximum branch breakers
- Bolt-on branch breakers
- Tin plated aluminum bus or silver plated copper bus
- Factory assembled

Application Description

- Fully rated or series rated
- Interrupting ratings up to 200 kA symmetrical
- Suitable for use as Service Entrance Equipment, when specified on the order

Standards and Certification

- CSA C22.2 No. 29

Options and Accessories

- Refer to **Page 2-44**

Layout and Sizing

- Refer to **Page 2-7**

Product Selection

Table 2.7 Base Configuration - PRL2a

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480/277Vac	600Y/347Vac	125/250V DC	Breaker Type
Main Lug Only					
100	—	—	—	—	—
225	—	—	—	—	—
400	—	—	—	—	—
600	—	—	—	—	—
Main Breaker					
100	65	14	—	14	GHB
100	65	14	10	14	GBH
100	18	14	—	10	EDH
100	18	14	14	10	FDB
100	65	35	18	10	FD
100	100	65	25	22	HFD
100	200	100	35	22	FDC
225	20	—	—	—	ED
225	18	14	14	10	FDB
225	65	35	18	10	FD
225	100	65	25	22	HFD
225	200	100	35	22	JDC
400	65	35	23	10	KD
400	100	65	35	22	HKD
400	200	100	65	22	KDC

Table 2.8 Branch Circuit Breakers - PRL2a

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac②	480/277Vac	600Y/347Vac	125/250V DC	Breaker Type
15-60	65	14	—	14	GHB②
15-60	65	14	10	14	GBH⑥
70-100	65	14	—	14	GHB②
70-100	65	14	10	14	GBH⑥
15-30	65	14	—	—	GHQRSP②③
15-60	—	14	—	—	GHBGFEP②④
15-20	—	14	—	—	GHBHID②⑤
Provision	—	—	—	—	—

① Interrupting ratings in this column are applicable to 120Vac for 1-pole breakers.
② At 480V, must be used on 480Y/277V grounded wye systems only.
③ Solenoid operated breaker.
④ GFP for 30 mA equipment protection. Requires 2-pole spaces. 277Vac only.
⑤ HID (High Intensity Discharge) rated breaker.
⑥ At 600V, must be used on 600Y/347V grounded wye systems only.
⑦ 3 phase/3 wire, 1 phase/3 wire, 1 phase/2 wire must be used on 600/347V grounded wye systems only.

Product Selection

Table 2.9 Standard Catalogue Numbering

Ampere Rating	Main Device Type	Number of Branch Circuits	Catalogue Number 3Ph, 4W Aluminum	1Ph, 3W Aluminum	3Ph, 4W Copper	1Ph, 3W Copper
Main Lug Only						
100	—	18	**P2aL4A1-18**	—	**P2aL4C1-18**	—
	—	24	**P2aL4A1-24**	—	**P2aL4C1-24**	—
	—	30	**P2aL4A1-30**	—	**P2aL4C1-30**	—
	—	42	**P2aL4A1-42**	—	**P2aL4C1-42**	—
225	—	24	**P2aL4A2-24**	—	**P2aL4C2-24**	—
	—	30	**P2aL4A2-30**	—	**P2aL4C2-30**	—
	—	42	**P2aL4A2-42**	—	**P2aL4C2-42**	—
	—	60	**P2aL4A2-60**	—	**P2aL4C2-60**	—
	—	72	**P1aL4A2-72**	—	**P2aL4C2-72**	—
400	—	24	**P2aL4A4-24**	—	**P2aL4C4-24**	—
	—	30	**P2aL4A4-30**	—	**P2aL4C4-30**	—
	—	42	**P2aL4A4-42**	—	**P2aL4C4-42**	—
	—	60	**P2aL4A4-60**	—	**P2aL4C4-60**	—
	—	72	**P2aL4A4-72**	—	**P2aL4C4-72**	—
600	—	24	—	—	**P2aL4C6-24**	—
	—	30	—	—	**P2aL4C6-30**	—
	—	42	—	—	**P2aL4C6-42**	—
	—	60	—	—	**P2aL4C6-60**	—
	—	72	—	—	**P2aL4C6-72**	—
Main Breaker②						
100	GBH	15	**P2aB4A1-15GBH**	—	**P2aB4C1-15GBH**	—
		21	**P2aB4A1-21GBH**	—	**P2aB4C1-21GBH**	—
		27	**P2aB4A1-27GBH**	—	**P2aB4C1-27GBH**	—
100	FDB	18	**P2aB4A1-18FDB**	—	**P2aB4C1-18FDB**	—
		24	**P2aB4A1-24FDB**	—	**P2aB4C1-24FDB**	—
		30	**P2aB4A1-30FDB**	—	**P2aB4C1-30FDB**	—
225	FDB	24	**P2aB4A2-24FDB**	—	**P2aB4C2-24FDB**	—
		30	**P2aB4A2-30FDB**	—	**P2aB4C2-30FDB**	—
		42	**P2aB4A2-42FDB**	—	**P2aB4C2-42FDB**	—
		60	**P2aB4A2-60FDB**	—	**P2aB4C2-60FDB**	—
		72	**P2aB4A2-72FDB**	—	**P2aB4C2-72FDB**	—
400	KD	24	**P2aB4A4-24KD**	—	**P2aB4C4-24KD**	—
		30	**P2aB4A4-30KD**	—	**P2aB4C4-30KD**	—
		42	**P2aB4A4-42KD**	—	**P2aB4C4-42KD**	—
		60	**P2aB4A4-60KD**	—	**P2aB4C4-60KD**	—
		72	**P2aB4A4-72KD**	—	**P2aB4C4-72KD**	—

Pow-R-Line 2a Catalogue Code

P2a	B	4	A	4	-	42	KDC	400
Panelboard Type	L - Main Lugs Only B - Bottom Main Breaker T - Top Main Breaker	1- 1 phase, 3 wire 3 - 3 phase, 3 wire 4 - 3 phase, 4 wire	A - Aluminum C - Copper	1 - 100 Amperes 2 - 225 Amperes 4 - 400 Amperes 6 - 600 Amperes	— — —	Number of Circuits	Main Breaker (if selected)	Breaker Trip Rating

① All possible combinations not shown for alternate main breakers, substitue breaker type suffix from Table 2-7.
② Add breaker trip rating to end of catalogue number.

Box Sizing and Selection

Assembled Circuit Breaker Panelboards

Box size and box and trim catalogue numbers for all standard panelboard types are found in **Table 2-10** and **2-11**.

Instructions:

1. Select the rating and types of main required from Tables.
2. Count the total number of branch circuit poles, including spaces, required in the panelboard. Do not count main breaker poles. Convert 2- or 3-pole branch breaker to single-poles, i.e., 3-pole breaker, count as 3 poles. (140 amps per connector maximum).
3. Using the correct table, type of mains and ampere rating per step 1 above, find total on the table, use the next higher number.
4. Read box size, box and trim catalogue numbers across columns to the right. On trim catalogue numbers, specify surface or flush mounting on the order.

Cabinets

Fronts are code-gauge steel, ASA-61 light gray painted finish.

Boxes are code-gauge galvanized steel without knockouts. Standard depth is 5-3/4 inches (146.1 mm). Standard width is 20 inches (508.0 mm).

Top and Bottom Gutters

5-1/2 inches (139.7 mm) minimum.

Table 2.10 PRL2a Panelboard Sizing

Main Lugs Only or Main Lugs with Sub-Feed Lugs

Main Ampere Rating	Number of Branch Circuit Poles	Box Dimensions (Inches) H	W	D	Box Catalogue Number	Trim Catalogue Number
100 Amp Main Lugs	18, 24, 30	30	20	5-3/4	**EZB2030RC**	**EZT2030 S or F**
	42	36	20	5-3/4	**EZB2036RC**	**EZT2036 S or F**
225 Amp Main Lugs	18	30	20	5-3/4	**EZB2030RC**	**EZT2030 S or F**
	24, 30	36	20	5-3/4	**EZB2036RC**	**EZT2036 S or F**
	42	42	20	5-3/4	**EZB2042RC**	**EZT2042 S or F**
	60	54	20	5-3/4	**EZB2054RC**	**EZT2054 S or F**
	72	60	20	5-3/4	**EZB2060RC**	**EZT2060 S or F**
	84	72	20	5-3/4	**EZB2072RC**	**EZT2072 S or F**
400/600 Amp Main Lugs	24	42	20	5-3/4	**EZB2042RC**	**EZT2042 S or F**
	30	48	20	5-3/4	**EZB2048RC**	**EZT2048 S or F**
	42	54	20	5-3/4	**EZB2054RC**	**EZT2054 S or F**
	60	60	20	5-3/4	**EZB2060RC**	**EZT2060 S or F**
	72, 84	72, 90	20	5-3/4	**EZB2072RC**	**EZT2072 S or F**
Main Lugs with Through-Feed Lugs						
100 Amp Main Lugs	18, 24, 30	30	20	5-3/4	**EZB2030RC**	**EZT2030 S or F**
	42	36	20	5-3/4	**EZB2036RC**	**EZT2036 S or F**
225 Amp Main Lugs	18, 24	36	20	5-3/4	**EZB2036RC**	**EZT2036 S or F**
	30	42	20	5-3/4	**EZB2042RC**	**EZT2042 S or F**
	42	48	20	5-3/4	**EZB2048RC**	**EZT2048 S or F**
	60	60	20	5-3/4	**EZB2060RC**	**EZT2060 S or F**
	72	72	20	5-3/4	**EZB2072RC**	**EZT2072 S or F**
400/600 Amp Main Lugs	24	48	20	5-3/4	**EZB2048RC**	**EZT2048 S or F**
	30	54	20	5-3/4	**EZB2054RC**	**EZT2054 S or F**
	42	60	20	5-3/4	**EZB2060RC**	**EZT2060 S or F**
	60, 72	72	20	5-3/4	**EZB2072RC**	**EZT2072 S or F**

Note: Depending on the panel configuration, 72/84 cct interiors fit into a 90" H box.

Box Sizing and Selection Cont'd

Table 2.11 PRL2a Panelboard Sizing

Ampere Rating	Main Breaker Types	Number Branch Circuit Poles	Box Dimensions (Inches) H	W	D	Box Catalogue Number	Trim Catalogue Number
100	GBH, GHB (Horizontal)	15, 21, 27	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
100/225	FDB, FD,	18, 24	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
	HFD, FDC	30	42	20	5.75	**EZB2042RC**	**EZT2042 S or F**
	EHD①	42	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
	(Vertical)	60	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
		72, 84	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
400	KD	24	48	20	5.75	**EZB2048RC**	**EZT2048 S or F**
	HKD	30	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
	KDC	42	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
	(Vertical)	60, 72	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
Main Breaker with Through-Feed Lugs							
100	GBH, GHB①	15, 21, 27	30	20	5.75	**EZB2030RC**	**EZT2030 S or F**
100/225	FDB, FD	18, 24	36	20	5.75	**EZB2036RC**	**EZT2036 S or F**
	HFD, FDC	30	42	20	5.75	**EZB2042RC**	**EZT2042 S or F**
	EHD①	42	54	20	5.75	**EZB2054RC**	**EZT2054 S or F**
	(Vertical)	60	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
		72	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
400	KD	24	60	20	5.75	**EZB2060RC**	**EZT2060 S or F**
	HKD, KDC	30	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**
	(Vertical)	42	72	20	5.75	**EZB2072RC**	**EZT2072 S or F**

1. ① In a Sub-Feed configuration, maximum incoming and outgoing cables are 1 per phase 4/0.

2. Through-Feed lugs are recommended for 400A applications.

3. Depending on the panel configuration, 72/84 cct interiors fit into a 90" H box.

Table 2.12 Metric box dimensions:

Box Catalogue Number	Height	Width	Depth
EZB2030RC	762	508.0	146
EZB2036RC	914	508.0	146
EZB2042RC	1067	508.0	146
EZB2048RC	1219	508.0	146
EZB2054RC	1372	508.0	146
EZB2060RC	1524	508.0	146
EZB2072RC	1828	508.0	146
EZB2090RC	2286	508.0	146

Type PRL3a

Contents

Type PRL3a

Product Description

- 600Vac maximum (250V DC)
- 3-phase 4-wire, 3-phase 3-wire, 1-phase 3-wire, 1-phase 2-wire
- 600 ampere maximum main lugs
- 600 ampere maximum main breaker
- 225 ampere maximum branch breakers
- Bolt-on branch breakers
- Factory assembled

Application Description

- Lighting and appliance branch panelboard or power distribution panelboard
- Fully rated or series rated.
- Interrupting ratings up to 200 kA symmetrical
- Suitable for use as Service Entrance Equipment, when specified on the order

Standards and Certification

- CSA C22.2 No. 29

Options and Accessories

- Refer to **Page 2-44**

Layout and Sizing

- Refer to **Page 2-14**

Product Selection

Table 2.13 Base Configuration - PRL3a

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
Main Lug Only					
100	—	—	—	—	—
250	—	—	—	—	—
400	—	—	—	—	—
600	—	—	—	—	—
Main Breaker					
100	18	14	—	10	EHD
100	18	14	14	10	FDB
100	65	—	—	—	ED
100	100	—	—	—	EDH
100	65	35	18	10	FD
100	100	65	25	22	HFD
100	200	100	35	22	FDC
225	65	—	—	—	ED
225	100	—	—	—	EDH
225	200	—	—	—	EDC
225	65	35	18	10	FD
225	100	65	25	22	HFD
225	200	100	35	22	FDC
250	65	35	18	10	JD
250	100	65	25	22	HJD
250	200	100	35	22	JDC
400	65	—	—	10	DK
400	65	35	25	10	KD
400	100	65	35	22	HKD
400	200	100	65	22	KDC
600	65	35	18	22	LGE
600	100	65	35	42	LGH

Pow-R-Line 3a Catalogue Code

P3a	B	4	A	4	-	21	KD	400
Panelboard Type	L - Main Lugs Only B - Bottom Main Breaker T - Top Main Breaker	1- 1 phase, 3 wire 3 - 3 phase, 3 wire 4 - 3 phase, 4 wire	A - Aluminum C - Copper	1 - 100 Amperes 2 - 225 Amperes 4 - 400 Amperes 6 - 600 Amperes	— — —	Feeder Breaker x-space	Main Breaker (if selected)	Breaker Trip Rating

Product Selection

Table 2.14 Base Configuration - PRL3a

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
15-30	10①	—	—	—	DNBA (Twins)
15-60	10①②	—	—	—	BAB
15-60	10	—	—	—	BAB-H
70	10①②	—	—	—	BAB
70	10	—	—	—	BAB-H
80-100	10①②	—	—	—	BAB
80-100	10	—	—	—	BAB-H
15-50③	10①②	—	—	—	QBGF
15-50③	10①②	—	—	—	QBGFEP
15-50③	10①	—	—	—	GFCBB
15-20	10①	—	—	—	QBCAF④
15-60	10①②	—	—	—	BAB-D⑤
15-30	10①②	—	—	—	BAB-C⑥
15-30	10①	—	—	—	BABRSP⑦
15-60	22①②	—	—	—	QBHW
15-60	22	—	—	—	QBHW-H
70	22①②	—	—	—	QBHW
70	22	—	—	—	QBHW-H
80-100	22①②	—	—	—	QBHW
80-100	22	—	—	—	QBHW-H
15-30	22	—	—	—	QBHGF
15-30	22	—	—	—	QBHGFEP
15-20	65	14⑧⑨	—	—	GHQ
15-60	65	14⑧⑨	—	14	GHB
15-60	65	14⑧⑨	10⑫⑬	14	GBH
70-100	65	14⑧⑨	—	14	GHB
70-100	65	14⑧⑨	10⑫⑬	14	GBH
15-30	65	14⑧⑨	-—	14	GHQRSP⑧
15-60	—	14⑧⑨	—	—	GHBGFEP
15-20	—	14⑧⑨	—	—	GHBHID⑤

Table 2.15 Base Configuration - PRL3a cont'd

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
15-60	18⑩	14⑧	—	10	EHD
70-100	18⑩	14⑧	—	10	EHD
15-60	18	14	14	10	FDB
15-150	—	—	14	—	FDB
70-100	18	14	14	10	FDB
110-150	18	14	14	10	FDB
15-60	65⑩	35⑧	18	10	FD
15-150	—	—	18	—	FD
70-100	65⑩	35⑧	18	10	FD
110-225	65⑩	25	18	10	FD⑪
15-60	100⑩	65⑧	25	22	HFD
70-100	100⑩	65⑧	25	22	HFD
110-225	100⑩	65	25	22	HFD⑪
15-60	200	100	35	22	FDC
70-100	200	100	35	22	FDC
110-225	200	100	35	22	FDC⑪
100-225	65	—	—	—	ED⑪
100-225	100	—	—	—	EDH⑪
100-225	200	—	—	—	EDC⑪
100-255	65	35	18	—	FDE322533 LS⑭
100-225	65	35	18	—	FDE322532 LSI⑭
60-150	65	35	18	—	FDE316033 LS⑭
60-150	65	35	18	—	FDE316032 LSI⑭
15-80	65	35	18	—	FDE308033 LS⑭
15-80	65	35	18	—	FDE308032 LSI⑭
100-255	100	65	25	—	HFDE322533 LS⑭
100-225	100	65	25	—	HFDE322532 LSI⑭
60-150	100	65	25	—	HFDE316033 LS⑭
60-150	100	65	25	—	HFDE316032 LSI⑭
15-80	100	65	25	—	HFDE308033 LS⑭
15-80	100	65	25	—	HFDE308032 LSI⑭

① 1-pole breaker rated 120Vac.
② 2-pole breaker rated 120/240Vac.
③ 50 ampere devices are available as 2-pole only.
④ Combination arc fault circuit breaker.
⑤ HID (High Intensity Discharge) rated breaker.
⑥ Switching Neutral Breaker. 1-pole device requires 2-pole space, 2-pole device requires 3-pole space.
⑦ Solenoid operated breaker.
⑧ 1-pole breaker rated 277Vac.
⑨ For use on 480Y/277V systems only.
⑩ AIC rating for 2- and 3-pole breakers only.
⑪ Maximum of six breakers per panel, 175 – 225 amperes.
⑫ 1-Pole breaker rated 347Vac.
⑬ For use on 600Y/347V systems only
⑭ 3-Pole only

2

Panel Layout Instructions

1. Select:
   a. Required mains (lugs or breaker).
   b. Neutral where required.
   c. Branch circuits as required.

2. Layout panel as shown in **Figure 1-4**, using appropriate "X" dimensions.

3. Using total X units (panel height) find box height in inches (mm) and box catalogue number from **Table 2-15**. (When total X units come out to an uneven number, use next highest number; i.e., if total X comes out 25X, use 31X.)

Layout Example

1. Description of Panel Type PRL3a 3-phase, 4-wire, 120/208Vac flush mounting. Panel to have short circuit rating of 22,000 symmetrical amperes. Main breaker 400 amperes, 3-pole, bottom mounting. Branch circuits bolt-on as follows:

   12 – 20 ampere 1-pole QBHW
   1 – 200 ampere 3-pole ED
   1 – 225 ampere 3-pole ED
   2 – 125 ampere 3-pole ED

2. From Table 2-15:
   a. 34X Height (use 40X box)
   b. Box Height . . . . . .72 inches (1828.8 mm)
   c. Box Catalogue Number EZB2072RC

Cabinets

Fronts are code-gauge steel, ASA-61 light gray painted finish.

Boxes are code-gauge galvanized steel without knockouts. Standard depth is 5-3/4 inches (146.1 mm).

Standard widths are: 20-inch (508.0 mm) 100 – 600 amperes.

Standard Depth

5-3/4 inches (146.1 mm).

Top and Bottom Gutters

5-1/2 inches (139.7 mm) minimum.

Side Gutters

4 inches (101.6 mm) minimum.

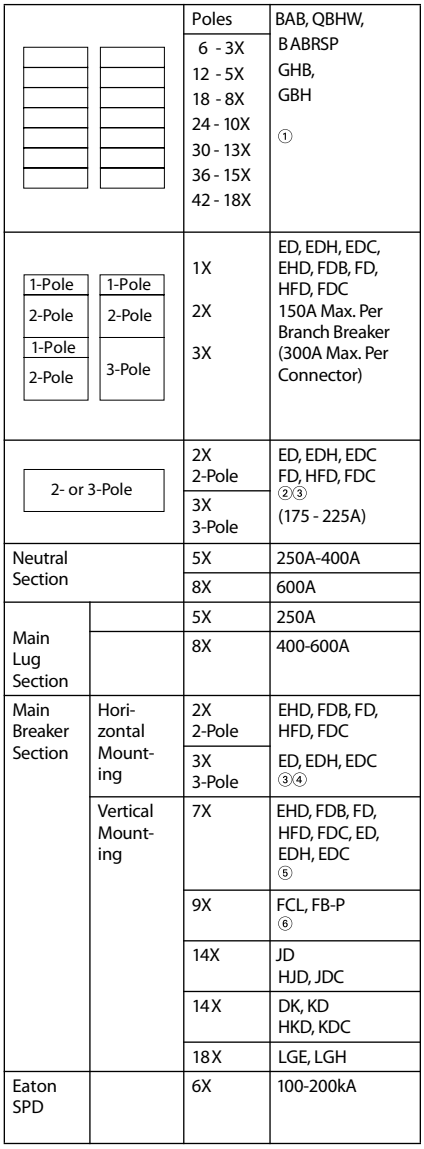


Figure 1-4. PRL3a Layout

[1] GHB and GBH breakers cannot be mixed on same connector as BAB, QBHW and BABRSP.
[2] Maximum of six breakers per panel.
[3] If optional terminal kit 3TA225FDK is required, must use 28-inch (711.2 mm) box.
[4] Horizontal mounted 15 – 150 ampere main breakers EHD, FDB, FD, HFD and FDC, will be furnished as branch breaker construction branch breakers 1-, 2- or 3-pole as required, may be located opposite these main breakers.

Table 2.16. Box Tabulation — PRL3a

'X' Units	Inches(mm)	Box Catalogue Number	Trim Catalogue Number[1]
250-400 Amperes			
23X	48 (1219)	**EZB2048RC**	**EZT2048S or F**
31X	60 (1524)	**EZB2060RC**	**EZT2060S or F**
40X	72 (1828)	**EZB2072RC**	**EZT2072S or F**
53X	90 (2286)	**EZB2090RC**	**EZT2090S or F**
600 Amperes			
23X	48 (1219)	**EZB2048RC**	**EZT2048S or F**
31X	60 (1524)	**EZB2060RC**	**EZT2060S or F**
40X	72 (1828)	**EZB2072RC**	**EZT2072S or F**
53X	90 (2286)	**EZB2090RC**	**EZT2090S or F**

[1] 600 ampere panels are optionally available with 28-inch (610 mm) wide box. Consult Eaton for availability.

Type PRL4

Contents

Type PRL4a

Product Description

- 600Vac maximum (250Vdc)
- 3-phase 4-wire, 3-phase 3-wire, 1-phase 3-wire, 1-phase 2-wire
- PRL4B circuit breaker panelboard
- PRL4F fusible switch panelboard
- 1200 ampere maximum mains
- 1200 ampere maximum branch devices
- Bolt-on branch devices
- Factory assembled

Application Description

- Power distribution panelboard
- Fully rated or series rated
- Interrupting ratings up to 200 kA symmetrical
- Suitable for use as Service Entrance Equipment, when specified on the order

Standards and Certification

- CSA C22.2 No. 29

Options and Accessories

- Refer to **Page 2-44**

Pow-R-Line 4a Catalogue Code

P4a	B	4	A	4	-	21	KD	400
Panelboard Type	L - Main Lugs Only B - Bottom Main Breaker T - Top Main Breaker S - Main Switch	1- 1 phase, 3 wire 3 - 3 phase, 3 wire 4 - 3 phase, 4 wire	A - Aluminum C - Copper	1 - 100 Amperes 2 - 225 Amperes 4 - 400 Amperes 6 - 600 Amperes 8 - 800 Amperes 12 - 1200 Amperes	— — —	Feeder Breaker x-space	Main Breaker (if selected)	Breaker Trip Rating

Product Selection

Table 2.17 Base Configuration - PRL4

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
Main Lug Only					
250	—	—	—	—	—
400	—	—	—	—	—
600	—	—	—	—	—
800	—	—	—	—	—
1200	—	—	—	—	—
Main Breaker					
250	65	35	18	10	JD
250	100	65	25	22	HJD
250	200	100	35	22	JDC
250	200	200	—	—	LCL
400	65	—	—	10	DK
400	65	35	25	10	KD
400	65	35	25	—	CKD①②
400	100	65	35	22	HKD
400	100	65	35	—	CHKD①②
400	200	100	65	22	KDC
400	200	200	—	—	LCL
400	200	200	200	—	LA-P
600	65	35	18	10	LGE
600	100	65	35	42	LGH
600	200	100	65	—	LGU
500	65	35	25	22	LD
600	65	35	25	—	CLD①
600	100	65	35	25	HLD
600	100	65	35	—	CHLD①
600	200	100	50	25	LDC
600	200	100	50	—	CLDC①
800	65	50	25	22	MDL
800	100	65	35	25	HMDL
800	65	50	25	—	CMDL①
800	100	65	35	—	CHMDL①
800	200	200	200	—	NB-P
800	65	50	25	—	NGS
800	100	65	35	—	NGH
800	200	100	50	—	NGC
800	65	50	25	—	NGS①③
800	100	65	35	—	NGH①③
800	200	100	50	—	NGC①③
1200	65	50	25	—	NGS
1200	100	65	35	—	NGH
1200	200	100	65	—	NGC
1200	65	50	25	—	NGS①③
1200	100	65	35	—	NGH①③
1200	200	100	65	—	NGC①③

Table 2.18 Base Configuration - PRL4 Main Fusible Switches

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac/600Vac	Breaker Type
Main Fusible Switch 240Vac, 250Vdc④⑤⑥			
200	See **Table 2-20**		FDPB
400			FDPW
600⑥			FDPW
800⑥			FDPW
1200⑥			FDPW
Main Fusible Switch 600Vac④⑤			
200	See **Table 2-20**		FDPB
400			FDPW
600⑥			FDPW
800⑥			FDPW
1200⑥			FDPW

ND series breakers are replaced with NG Series. Only some styles of ND are available at a significantly reduced volume.

① 100% rated breaker. Requires copper bus.
② Breaker only available in 3-pole frame.
③ Requires 44-inch (1117.6 mm) wide box.
④ Fuses not included. **Specify required fuse clips on all switches.**
⑤ Class J Fuse provisions are applicable only to 600 volt units. When required, use price and dimensions of 600 volt units for all voltages 600 and below.
⑥ No DC rating on 600, 800 and 1200 ampere switches.

Product Selection

Table 2.19 Branch Devices - PRL4

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
15-30	10③	—	—	—	DNBA (twin)
15-60	10③④	—	—	—	BAB
15-60	10	—	—	—	BAB-H
70-100	10③④	—	—	—	BAB
70-100	10	—	—	—	BAB-H
15-50②	10③④	—	—	—	QBGF
15-60	22③④	—	—	—	QBHW
15-60	22	—	—	—	QBHW-H
70-100	22③④	—	—	—	QBHW
70-100	22	—	—	—	QBHW-H
15-30	22③④	—	—	—	QBHGF
15-60	65③	14⑤	—	14	GHB⑥
70-100	65③	14⑤	—	14	GHB⑥
15-60	65③	14⑤	10⑪	14	GBH⑫
70-100	65③	14⑤	10⑪	14	GBH⑫
15-60	18⑦	14⑤	—	10	EHD
70-100	18⑦	14⑤	—	10	EHD
15-60	18	14	14	10	FDB
70-100	18	14	14	10	FDB
110-150	18	14	14	10	FDB
15-60	65⑦	35⑤	18	10	FD
70-100	65⑦	35⑤	18	10	FD
110-225	65⑦	35	18	10	FD
15-60	100⑦	65⑤	25	22	HFD
70-100	100⑦	65⑤	25	22	HFD
110-225	100⑦	65	25	22	HFD
15-60	200	100	35	22	FDC
70-100	200	100	35	22	FDC
110-225	200	100	35	22	FDC
15-100	200	150	—	—	FCL
100-225	65	—	—	—	ED
100-225	100	—	—	—	EDH
100-225	200	—	—	—	EDC

Table 2.20 Branch Devices - PRL4 cont'd

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
100-225	65	35	18	—	FDE322533 LS①
100-225	65	35	18	—	FDE322532 LSI①
100-225	65	35	18	—	FDE322535 LSG①
100-225	65	35	18	—	FDE322536 LSIG①
60-150	65	35	18	—	FDE316033 LS①
60-150	65	35	18	—	FDE316032 LSI①
60-100	65	35	18	—	FDE316035 LSG①
60-100	65	35	18	—	FDE316036 LSIG①
15-80	65	35	18	—	FDE308033 LS①
15-80	65	35	18	—	FDE308032 LSI①
15-80	65	35	18	—	FDE308035 LSG①
15-80	65	35	18	—	FDE308036 LSIG①
100-225	100	65	25	—	HFDE322533 LS①
100-225	100	65	25	—	HFDE322532 LSI①
100-225	100	65	25	—	HFDE322535 LSG①
100-225	100	65	25	—	HFDE322536 LSIG①
60-150	100	65	25	—	HFDE316033①
60-150	100	65	25	—	HFDE316032①
60-150	100	65	25	—	HFDE316035①
60-150	100	65	25	—	HFDE316036①
15-80	100	65	25	—	HFDE308033①
15-80	100	65	25	—	HFDE308032①
15-80	100	65	25	—	HFDE308035①
15-80	100	65	25	—	HFDE308036①
Ground available in PRL4 panels only.					
Ammeter	DigiView	DigiView Ammeter (PRL4 only)			

① For use on 3ph, 3w or 3ph, 4w only.
② 50 ampere devices are available as 2-pole only.
③ 1-pole breakers rated 120Vac.
④ 2-pole breakers rated 120/240Vac.
⑤ 1-pole breakers rated 277Vac.
⑥ At 480V, must be used on 480Y/277V grounded wye systems only.
⑦ AIC rating for 2- and 3-pole breakers only.
⑧ 100% rated breaker. Requires copper bus. Not available in Type 12, 4 and 4X enclosures.
⑨ Breaker only available in 3-pole frame.
⑩ Available in single branch mounting only.
⑪ 1-pole breakers rated at 347Vac.
⑫ At 600V, must be used on 600Y/347V grounded wye systems only.

Product Selection

Table 2.21 Branch Devices - PRL4 cont'd

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
70-225	65	35	18	10	JD
250	65	35	18	10	JD
70-225	100	65	25	22	HJD
250	100	65	25	22	HJD
70-225	200	100	35	22	JDC
250	200	100	35	22	JDC
125-250	200	200	-	-	LCL
250-400	65	-	-	10	DK
100-400	65	35	25	10	KD
100-400	65	35	25	-	CKD⑧⑨⑩
100-400	100	65	35	22	HKD
100-400	100	65	35	-	CHKD⑧⑨⑩
100-400	200	100	65	22	KDC
200-400	200	200	-	-	LCL
300-600	65	35	18	10	LGE
300-600	100	65	35	42	LGH
300-600	200	100	65	-	LGU
300-600	65	35	25	22	LD
300-600	65	35	25	-	CLD⑧
300-600	100	65	35	25	HLD
300-600	100	65	35	-	CHLD⑧
300-600	200	100	50	25	LDC
300-600	200	100	50	25	CLDC⑧
400-800	65	50	25	-	NGS
400-800	100	65	35	-	NDH
400-800	200	100	65	-	NGC
400-800	65	50	25	-	NGS①
400-800	100	65	35	-	NGH①
400-800	200	100	65	-	NGC①

Table 2.22 Branch Devices - PRL4 cont'd

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
600-1200	65	50	25	-	NGS
600-1200	100	65	35	-	NDH
600-1200	200	100	65	-	NGC
600-1200	65	50	25	-	NGS①②
600-1200	100	65	35	-	NGH①②
600-1200	200	100	65	-	NGC①②
Integrally Fused, Current Limiting Circuit Breaker					
15-100	200	200	200	③	FB-P
125-225	200	200	200	③	LA-P
250-400	200	200	200	③	LA-P
400-600	200	200	200	③	NB-P
700-800	200	200	200	③	NB-P

① For use on 3ph, 3w or 3ph, 4w only.
② 50 ampere devices are available as 2-pole only.
③ 1-pole breakers rated 120Vac.
④ 2-pole breakers rated 120/240Vac.
⑤ 1-pole breakers rated 277Vac.
⑥ At 480V, must be used on 480Y/277V grounded wye systems only.
⑦ AIC rating for 2- and 3-pole breakers only.
⑧ 100% rated breaker. Requires copper bus. Not available in Type 12, 4 and 4X enclosures.
⑨ Breaker only available in 3-pole frame.
⑩ Available in single branch mounting only.
⑪ 1-pole breakers rated at 347Vac.
⑫ At 600V, must be used on 600Y/347V grounded wye systems only.

Table 2.23 Branch Devices - PRL4

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480Vac	600Vac	250Vdc	Breaker Type
Fusible Switches 240Vac, 250Vdc④					
30/30⑤	**See Table 2-20**				FDPW-Twin
60/60⑤					FDPW-Twin
100/100⑤					FDPW-Twin
200/200					FDPB-Twin
200					FDPB-Single
400	**See Table 2-20**				FDPW-Single
600⑥					FDPW-Single
800⑥					FDPW-Single
1200⑥					FDPW-Single
Fusible Switches 600Vac④					
30/30⑤	**See Table 2-20**				FDPW-Twin
60/60⑤					FDPW-Twin
100/100⑤					FDPW-Twin
200/200⑦					FDPB-Twin
200					FDPB-Single
400	**See Table 2-20**				FDPW-Single
600⑥					FDPW-Single
800⑥					FDPW-Single
1200⑥					FDPW-Single

Table 2.24 FDPW and FDPB Switch Ratings, 240Vac or 600Vac

Ampere Rating	Fuse Class Used	Short Circuit Ratings (Sym. Amperes)
30-100	R, J⑨	200,000
200 Single	R, J⑨	200,000
200 Twin	R⑩, J⑨, T	200,000
400, 600⑧	R⑩, J⑨, T	200,000
800, 1200⑧	L	200,000

① 100% rated breaker.
② Requires 44-inch (1117.6 mm) wide box.
③ 100,000 AIC based on NEMA test procedure..
④ Fuses not included. **Specify required fuse clips on all switches. For T fuse clips, specify as an option (T fuse clips not available for 200/200 twin switches).**
⑤ When branches of a twin unit are of different ampere ratings, as a 30 – 60 twin unit and layout as a 60 – 60 twin unit; when a 60 – 100 twin unit layout as a 100 – 100 twin unit.
⑥ No DC rating on 600, 800 and 1200 ampere switches.
⑦ Twin 200 ampere switches are not available with Class R fuse clips at 600 volts.
⑧ No DC rating on 600, 800 and 1200 ampere switches.
⑨ Class J fuse provisions are applicable to 600 volt units. When required, use price and dimensions of 600 volt units for all voltages 600 volts and below.
⑩ Twin 200 ampere switches are not available with Class R fuse clips at 600 volts.
⑪ When shunt trip is required, 400 – 600 ampere switches used with Class R fuses are rated 100,000 AIC.

Layout and Sizing — PRL4B

Main Lug (MLO), Main Breaker, Neutral, Through-Feed (TFL) and Sub-Feed Lug (SFL) "X" Space Requirements. (For other configurations not shown, refer to Eaton.)

* = Space available for branch devices. For device sizing, see **Figure 2-4** on **Page 2-18**..
• = Blank means no bus under cover, to meet cable bending space requirements.

2

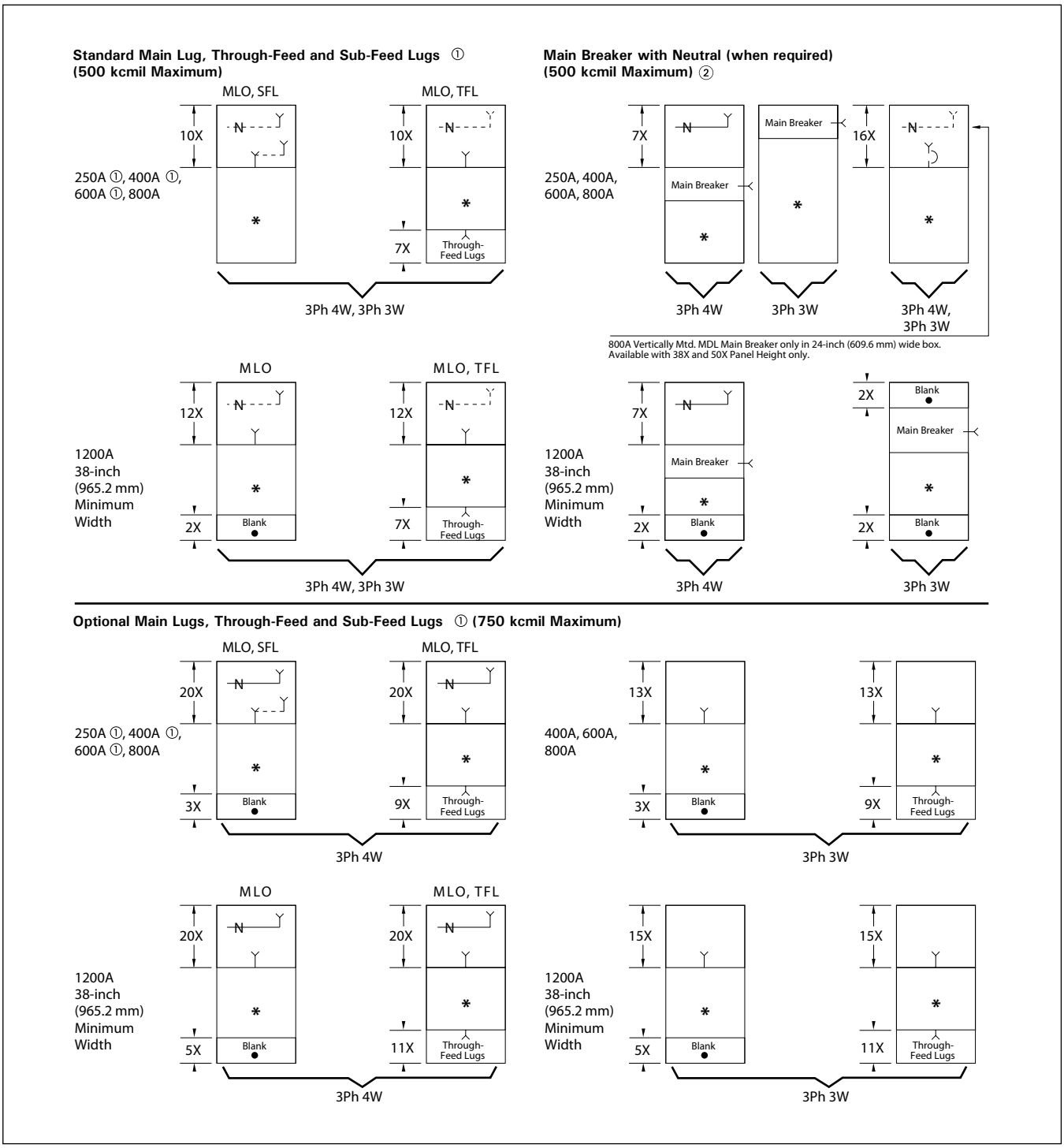


Figure 2-2. PRL4B Layout

① Sub-Feed lugs are available 250 – 600 amperes. For 600 ampere use 1200 ampere space.
② 750 kcmil lugs available on some Main Breaker arrangements.
Consult Eaton.

Panel Layout and Dimensions

To determine the dimensions of a given panelboard enclosure, make a layout sketch by fitting together the main, branch and lug modules according to the appropriate tables in the layout guide. Assign "X" units to each module as shown and obtain a total "X" number.

The height of the enclosure is related to the total "X" units in the layout as shown in **Table 2-21**. Three standard box heights are available to accommodate any and all layout arrangements. "X" unit totals that do not exactly match those in **Table 2-21** must be rounded off to the next highest standard (26X, 38X, 50X).

If a calculated "X" total for a panel exceeds 50X, the panel must be split into two or more separate sections with "X" space for through-feed lugs figured in for all but one section. If a neutral is required, a separate neutral bar and appropriate "X" space must be included in each section.

Layout Example

1 – PRL4B panelboard, 600Y/347V, 3-phase 4-wire 25 kA, 800 amperes, main lug, consisting of:

- 12 – 20A/1P HFD
- 2 – 250A/3P HJD
- 1 – 400A/3P KD

Reference Figure 2-3

1. From layout guide, total "X" height of panel = 26X, (which is a design standard and no rounding off is necessary).
2. From **Table 1-27,** enclosure height for 26X panel = 57 inches (1447.8 mm).
3. Width = 24 inches (609.6 mm) — directly from layout guide.
4. Enclosure depth = 11-5/16 inches (287.0 mm) — standard for all PRL4 panelboards.

Top and Bottom Gutters

10-5/8-inch (269.9 mm) minimum.

Side Gutters — Minimum

24-inch (609.6 mm) wide box — 5-inch (127.0 mm).
38-inch (914.4 mm) wide box — 7-inch (177.8 mm).
44-inch (1117.6 mm) wide box — 8-inch (203.2 mm).

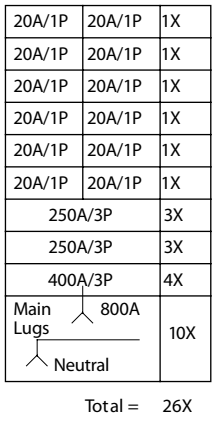


Figure 2-3. PRL4B Layout Example

Table 2-25. Box Dimensions — PRL4B In(mm)

"X" Units	Catalogue Number	Height	Width	Depth[1]
26X	**BX2457**	57(1447.8)	24(609.6)	11.5/16(287.0)
38X	**BX2473**	73.5(1866.9)	24(609.6)	11.5/16(287.0)
50X	**BX2490**	90(2286.0)	24(609.6)	11.5/16(287.0)
38X	**BX3873**	73.5(1866.9)	38(965.2)	11.5/16(287.0)
50X	**BX3890**	90(2286.0)	38(965.2)	11.5/16(287.0)
38X	**BX4473**	73.5(1866.9)	44(1117.6)	11.5/16(287.0)
50X	**BX4490**	90(2286.0)	44(1117.6)	11.5/16(287.0)

[1] Box depth is 10.4 inches (264.2 mm), cover adds .9 inches (22.9 mm) to depth.

Note: 800 ampere maximum bus size in 24-inch (609.6 mm) wide box. Flush trims not available on PRL4B panels.

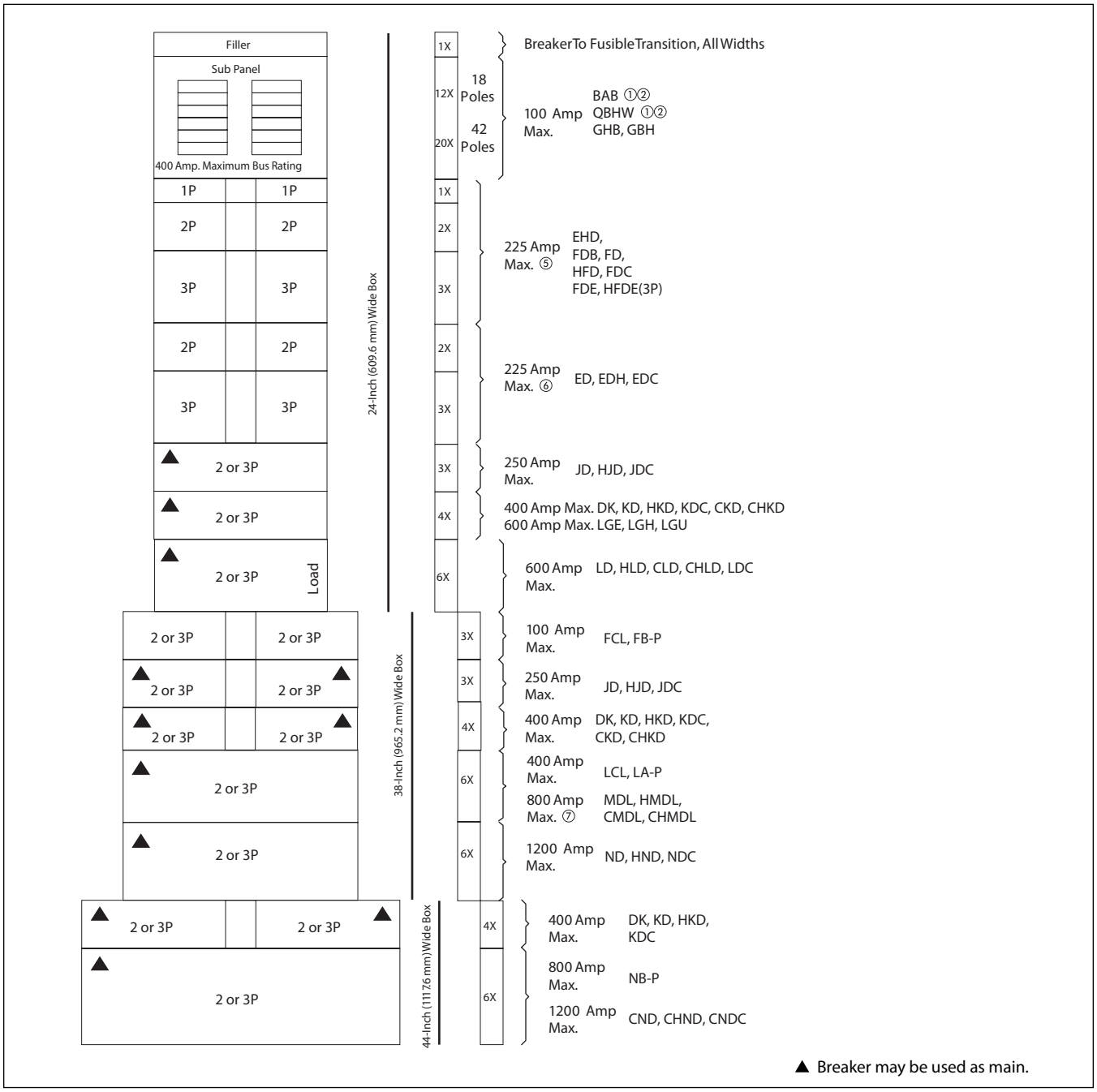


Figure 2-4. Layout for Branch and Horizontally Mounted Main Devices — PRL4B

① BAB and QBHW breakers with shunt trips require one additional pole space, i.e., 1-pole is 2-pole size, 2-pole is 3-pole size, and 3-pole is 4-pole size.
② If panel contains only BAB or QBHW branch breakers, use a PRL1a panelboard.
③ GHB and GBH breakers cannot be mixed on same subchassis as BAB, QBHW.
④ If panel contains only GHB and GBH branch breakers, use a PRL2a panelboard.
⑤ When only one single-pole breaker of the group is required on either side of chassis, the single-pole breaker space required changes from 1X to 2X.
⑥ Minimum 38-inch (965.2 mm) wide box is required if optional #6 – 300 kcmil lug is required.

Layout and Sizing — PRL4F

Main Lug (MLO), Main Switch, Neutral, Through-Feed (TFL) and Sub-Feed Lug (SFL) "X" Space Requirements. (For other configurations not shown, refer to Eaton.)

* = Space available for branch devices. For device sizing, see **Figure 2-7** on **Page 2-21.**
• = Blank means no bus under cover, to meet cable bending space requirements.

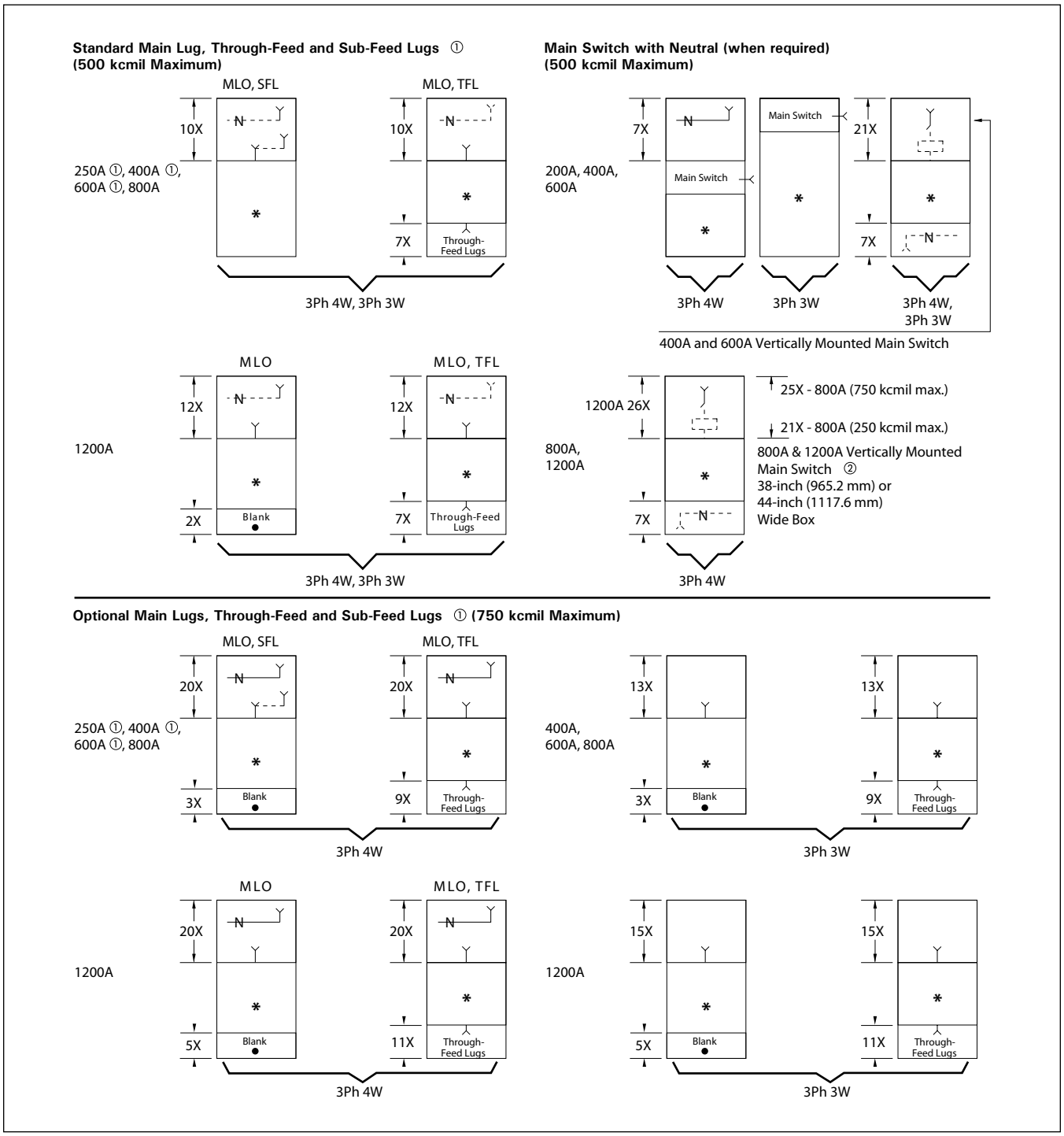


Figure 2-5. PRL4F Layout

① Sub-Feed lugs are available 250 – 600 amperes, for 600 ampere use 1200 ampere "A" space.
② 800 ampere and 1200 ampere mains available only in vertical mounting.

Panel Layout and Dimensions - PRL4F

To determine the dimensions of a given panelboard enclosure, make a layout sketch by fitting together the main, branch and lug modules according to the appropriate tables in the layout guide. Assign "X" units to each module as shown and obtain a total "X" number.

The height of the enclosure is related to the total "X" units in the layout as shown in **Table 2-22**. Two standard fusible box heights are available to accommodate any and all layout arrangements. "X" unit totals that do not exactly match those in **Table 2-22** must be rounded off to the next higher standard (50X).

If a calculated "X" total for a panel exceeds 50X, the panel must be split into two or more separate sections with "X" space for through-feed lugs figured in for all but one section. If a neutral is required, a separate neutral bar and appropriate "X" space must be included in each section.

Layout Example

1 – PRL4F, 3-phase 4-wire, 208Y/120V complete with 400 ampere main switch and the following branches:

- 1 – 200A/3P
- 2 – 100A/3P
- 1 – 30A/3P

Reference Figure 2-6

1. From layout guide, total "X" height of panel = 43X.
2. Rounded off to next higher standard = 50X.
3. From **Table 2-22**, enclosure height for 50X panel = 90 inches (2286.0 mm).
4. Width = 38 inches (965.2 mm).
5. Enclosure depth is standard for all PRL4 panelboards = 11-5/16 inches (287.0 mm).

Top and Bottom Gutters

10-5/8 inches (269.9 mm) minimum.

Side Gutters — Minimum

38-inch (965 mm) wide box:

- 8-inch (203.2 mm) — 200 ampere maximum
- 8-inch (152.4 mm) 400 — 1200 ampere maximum

44-inch (1117.6 mm) wide box:

- 10-inch (254.0 mm) 200 — ampere maximum
- 7-inch (203.2 mm) 400 — 1200 ampere

400A Neutral		7X
30A/3P	30A/3P	4X
100A/3P	100A/3P	5X
200A/3P		6X
400A 3-Pole Main Switch (Vert. Mounted)		21X
	Total =	43X

Figure 2-6. PRL4F Layout Example

Note: In the above example if a horizontally mounted 400 ampere main switch were used, the enclosure size would be 73-1/2 H x 44 W x 11-5/16 D (1866.9 mm H x 1117.6 mm W x 287.0 mm D)

Table 2-26. Box Dimensions — PRL4F In(mm)

"X" Units	Catalogue Number	Height	Width	Depth[1]
38X	**BX3873**	73.5(1866.9)	38(965.2)	11.5/16(287.0)
50X	**BX3890**	90(2286.0)	38(965.2)	11.5/16(287.0)
38X	**BX4473**	73.5(1866.9)	44(1117.6)	11.5/16(287.0)
50X	**BX4490**	90(2286.0)	44(1117.6)	11.5/16(287.0)

[1] Box depth is 10.4-inch (264.2 mm) cover adds .9-inch (22.8 mm) to depth.

Note: Flush trims not available on PRL4F panels.

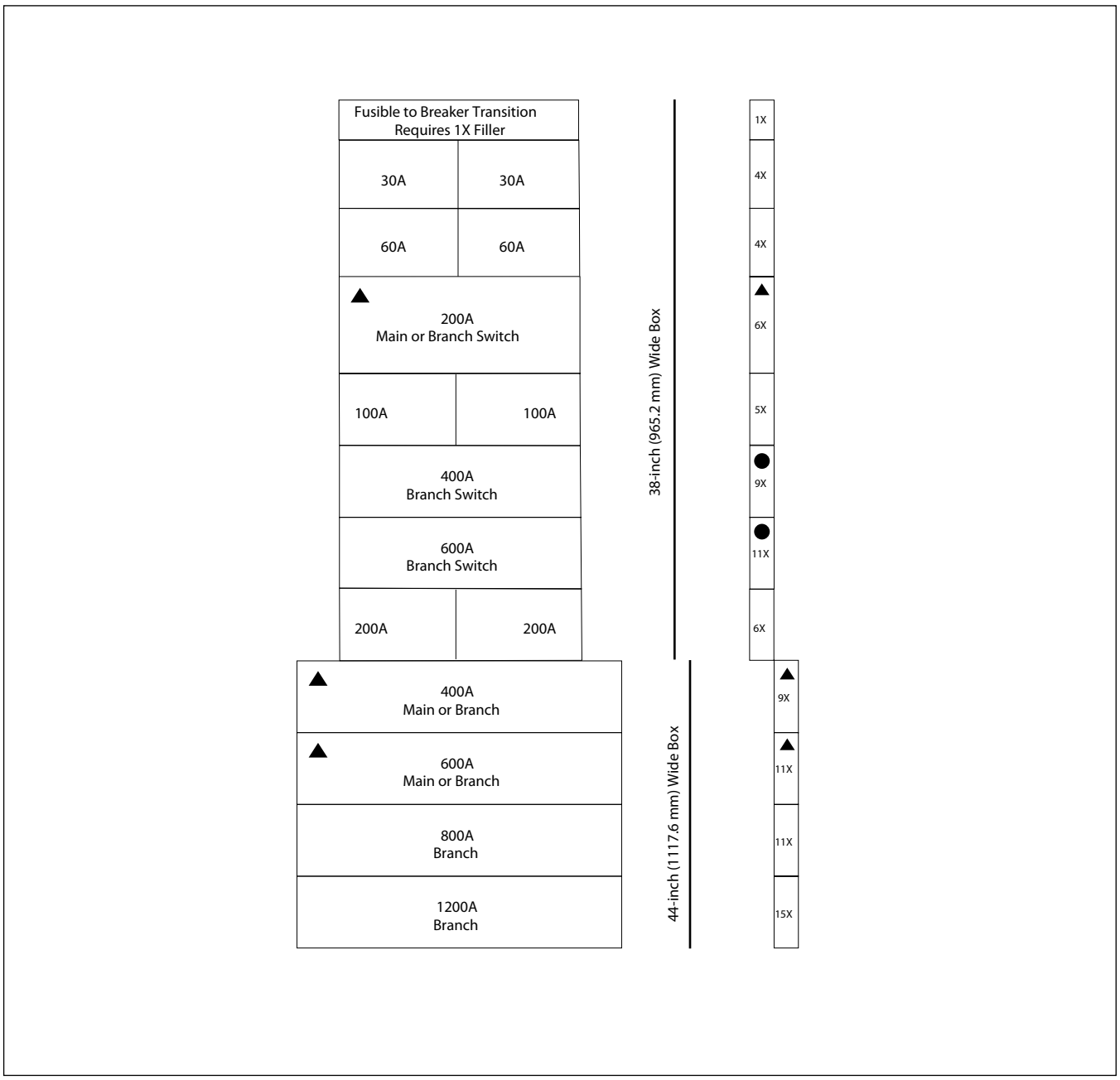


Figure 2-7. Branch and Horizontally Mounted Main Device Layout — PRL4F
▲ Fusible switch may be used as horizontal main.
● 400 and 600 ampere horizontally mounted feeder switches in 38-inch (965 mm) or 44-inch (1117.6 mm) wide box. 400 and 600 ampere horizontally mounted main switches only in 44-inch (1117.6 mm) wide box. For vertically mounted main see **Page 2-19** for sizing.
Note: See **Page 2-19** for MLO or Neutral and Vertically Mounted Main space requirements.

Type PRL4D

2

Contents

Type PRL4D

Product Description

- Drawout moulded case circuit breaker power panelboard
- Front accessible
- Front connected
- Through-the-door design drawout mechanism
- Visual indication of breaker status and position
- Large grab handles for easy removal
- 600 Vac maximum
- 1200A maximum mains
- 600A maximum drawout moulded case feeder breakers

Application Description

- Interrupting ratings up to 200 kAIC symmetrical at 240Vac
- Feeder power panelboard
- Ideal for:
  - Data centres
  - Industrial facilities
  - Process equipment manufacturing
  - Anywhere that requires quick change of feeder devices is needed

Benefits

- Ease of maintenance
- Faster to remove and install
- Less downtime

Standards and Certification

- CSA C22.2 No.29

PRL4D Main Lugs and Main Breakers

Table 2.27 PRL4D Main Lugs and Main Breakers

Ampere Rating	Interrupting Rating (kA Symmetrical) 240 Vac	480 Vac	600 Vac	Breaker Type	'X' Space
Main Lugs Only (Fixed-Mounted Only)					
400	—	—	—	—	10X
900	—	—	—	—	10X
800	—	—	—	—	10X
1200	—	—	—	—	10X
Main Circuit Breaker (Drawout Only)①					
600	65	35	18	LGE	9X
600	100	65	35	LGH	9X
600	200	100	50	LGU	9X
Main Circuit Breaker (Fix-Mounted Only)①					
600	65	35	18	LGE	4X
600	100	65	35	LGH	4X
600	200	100	50	LGU	4X
600	65	35	25	CLD②	6X
600	100	65	35	CHLD②	6X
600	200	100	50	CLDC②	6X
800	65	50	25	MDL	6X
800	100	65	35	HMDL	6X
800	65	50	25	CMDL②	6X
800	100	65	35	CHMDL②	6X
1200	85	50	25	NGS	6X
1200	100	65	35	NGH	6X
1200	200	100	65	NGC	6X
1200	65	50	25	CND②	6X
1200	100	65	35	CHND②	6X
1200	200	100	65	CNDC②	6X

① For ground fault protection on main devices, see Modification 10—applies to 310 and 310+ trip units only.
② 100% rated circuit breaker.

PRL4D Drawout Branch/Feeder Breakers

Table 2.28 Single Mount Two-Pole and Three-Pole

Ampere Rating	Interrupting Rating (kA Symmetrical) 240 Vac	480 Vac	600 Vac	Breaker Type	'X' Space
Single-Mount Breakers with Thermal-Magnetic Tip Units					
70-250	85	35	18	JGS	7X
70-250	100	65	25	JGH	7X
70-250	200	100	65	JGC	7X
250-600	85	35	18	LGS	9X
250-600	100	65	35	LGH	9X
250-600	200	100	50	LGC	9X
Single-Mount Breakers with Electronics 310+ Trip Units (3-Pole Only)					
20-50	85	35	18	JGS	7X
20-50	100	65	25	JGH	7X
20-50	200	100	35	JGC	7X
40-100	85	38	18	JGS	7X
40-100	100	65	25	JGH	7X
40-100	200	100	35	JGC	7X
80-150	85	35	18	JGS	7X
80-150	100	65	25	JGH	7X
80-150	200	100	35	JGC	7X
100-250	85	35	18	JGS	7X
100-250	100	65	25	JGH	7X
100-250	200	100	35	JGC	7X
100-250	85	35	18	LGS	9X
100-250	100	65	35	LGH	9X
100-250	200	100	50	LGC	9X
200-400	85	35	18	LGS	9X
200-400	100	65	35	LGH	9X
200-400	200	100	50	LGC	9X
250-600	85	35	18	LGS	9X
250-600	100	65	35	LGH	9X
250-600	200	100	65	LGU	9X
Provisions for Future (Includes Factory-Installed Base Cassette)					
20-250	Any JG family branch/feeder breaker				7X
100-600	Any LG family branch/feeder breaker				9X

For Dual/Twin feeder breakers, select any two breakers within the same 'Breaker Type.'

Table 2.29 Dual/Twin Mount Two-Pole and Three-Pole

Ampere Rating	Interrupting Rating (kA Symmetrical) 240 Vac	480 Vac	600 Vac	Breaker Type	'X' Space
Dual-/Twin-Mount Breakers with Thermal-Magnetic Trip Units					
70-250	85	35	18	JGS	7X
70-250	100	65	25	JGH	7X
70-250	200	100	65	JGC	7X
Dual-/Twin- Mount Breakers With Electronic 310+ Trip Units (3-Pole only)					
20-50	85	35	18	JGS	7X
20-50	100	65	25	JGH	7X
20-50	200	100	35	JGC	7X
40-100	85	35	18	JGS	7X
40-100	100	65	25	JGH	7X
40-100	200	100	65	JGC	7X
80-150	85	35	18	JGS	7X
80-150	100	65	25	JGH	7X
80-150	200	100	35	JGC	7X
100-250	85	35	18	JGS	7X
100-250	100	65	25	JGH	7X
100-250	200	100	35	JGC	7X
Provisions for Future (Includes Factory-Installed Base Cassette)					
20-250	Any JG family branch/feeder breaker				7X
100-600	Any LG family branch/feeder breaker				9X

Note: Twin mount must be in 48" wide cell.

Box Sizing and Selection — PRL4D

Approximate Dimensions in Inches (mm)

Main Lug (MLO), Main Breaker, Neutral, Through-Feed Lug (TFL) and Sub-Feed Lug (SFL) "X" Space Requirements. (For other configurations not shown, refer to Eaton.)

* = Space available for branch devices. For device sizing, see **xxxxxx**
• = Blank means no bus under cover, to meet cable bending space requirements.

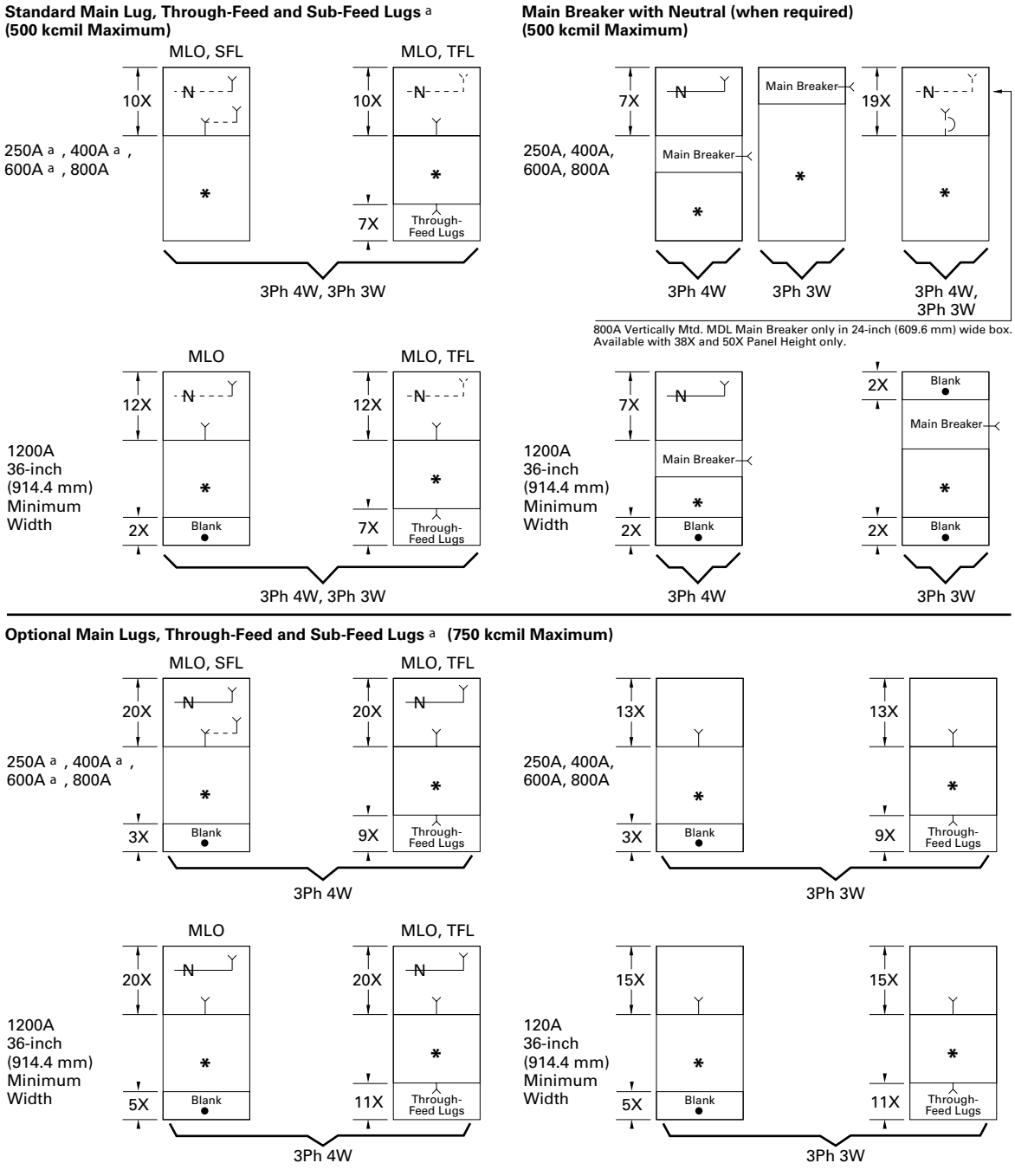


Figure 2-8. PRL4D Layout

① Sub-Feed lugs are available 250 – 600 amperes, for 600 ampere use 1200 ampere "A" space.

2

Panel Layout and Dimensions

To determine the dimensions of a given panelboard enclosure, make a layout sketch by fitting together the main, branch and lug modules according to the appropriate tables in the layout guide. Assign "X" units to each module as shown and obtain a total "X" number.

The height of the enclosure is related to the total "X" units in the layout as shown in table on right. Three standard box heights are available to accommodate any and all layout arrangements. "X" unit totals that do not exactly match those in table on right must be rounded off to the next higher standard (38X, 50X).

If a calculated "X" total for a panel exceeds 50X, the panel must be split into two or more separate sections with "X" space for through-feed lugs figured in for all but one section. If a neutral is required, a separate neutral bar and appropriate "X" space must be included in each section.

Layout Example

One PRL4D panelboard, 480Y/277Vac, three phase, four-wire, 65 kA, 800A main lugs only with:

- One JGS 200A/three-pole
- One LGS 400A/three-pole
- One JGS 150A/three-pole dual mount
- One JGS 100A/three-pole dual mount

Reference PRL4D Layout Example

1. From layout guide, total "X" height of panel = 33X.
2. From table on right, 33X must use minimum 38X dimensions. Minimum box height is 73.50 inches (1866.9 mm).
3. From the layout for branch and main devices, find minimum box width requirements for mains and branch/feeder devices.
   - JGS single minimum width: 38 inches
   - LGS single minimum width: 38 inches
   - JGS dual minimum width: 44 inches

As the JGS duals require a minimum of a 44-inch-wide box, the minimum box width is 44 inches.

4. From PRL4D Layout Example, the correct minimum box selection is BX4473, which is 73.50 inches H x 44.00 inches W x 11.31 inches D (1866.9 mm H x1117.6 mm W x 287.0 mm D).

Table 2-30. Box Dimensions — PRL4D In(mm)

"X" Units	Catalogue Number	Height	Width	Depth①
38X	**BX3673**	73.5(1866.9)	38(965.2)	11.31(287.0)
50X	**BX3690**	90(2286.0)	36 (914.4)	11.31(287.0)
38X	**BX4473**	73.5(1866.9)	44(1117.6)	11.31(287.0)
50X	**BX4490**	90(2286.0)	44(1117.6)	11.31(287.0)

① Box depth is 10.4-inch (264.2 mm) cover adds .9-inch (22.8 mm) to depth.

Note: Flush trims not available on PRL4D panels.
Door-to-door option not available on PRL4D panels.

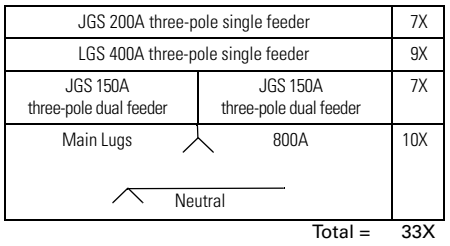
Top and Bottom Gutters

10.63 inches (269.9 mm) minimum.

Side Gutters—Minimum

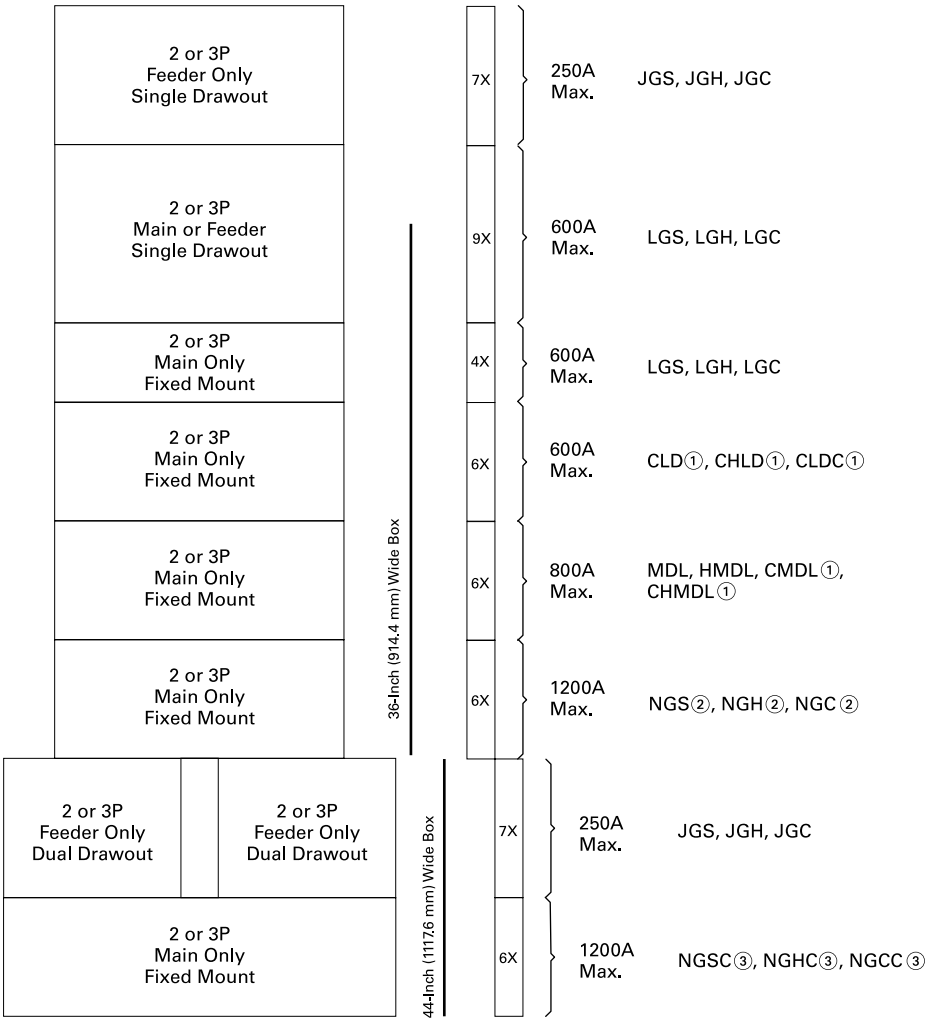
- 36-inch (914.4 mm) wide box: 6-inch (152.4 mm)
- 44-inch (1117.6 mm) wide box: 8-inch (203.2 mm)

Type PRL4D Layout Example



Layout for Branch and Horizontally Mounted Main Devices—PRL4D

Instructions
Determine box size by locating all main and feeder devices in your panel. The width of box is determined by the maximum box size shown for each device.



① 100% rated breaker.
② Optional 750 kcmil terminal requires 44-inch (1117.6 mm) wide box.
③ Contact Eaton for availability.

Accessories and Modifications

Table 2.31. PRL4D Modifications

Modification	Item Number
Ambient compensating breakers	1
Breaker accessories—internal	2
Complete assembly	3
Compression type lugs	4
Conduit covers	5
Copper lugs/terminals	6
Copper main bus	7
Density rated bus	8
Directory frame—metal	9
Electronic trip units	10
Ground bars	11
Ground fault protection	12
Infrared (IR) viewing windows	13
Handle lock-off device	14
Nameplates	15
Permanent circuit numbers	16
Seismically qualified	17
Service entrance equipment rated	18
Shunt trips	19
Sub-feed lugs	20
Surge protective devices	21
Through-feed lugs	22
Touchup paint	23

1. Ambient Compensating Breakers
For ambient compensating breakers (where available) in lieu of standard breakers, add 10% to panelboard branch breaker and to main breaker list prices, if required. (Not UL Listed.)

2. Breaker Accessories—Internal (Only One Accessory Per Position)

Table 2-32. Accessories

Breaker Type	Device Mounting	Internal Breaker Accessory
JG family	Drawout①	Auxiliary switch 1A-1B
JG family	Drawout①	Auxiliary switch 2A-2B
JG family	Drawout①	Bell alarm
JG family	Drawout①	High load alarm w/trip
JG family	Drawout①	Ground fault alarm w/trip
JG family	Drawout②	Undervoltage release
JG family	Drawout②	Zone selective interlock
LG family	Drawout①	Auxiliary switch 1A-1B
LG family	Drawout①	Auxiliary switch 2A-2B
LG family	Drawout①	Bell alarm
LG family	Drawout①	High load alarm w/trip
LG family	Drawout①	Ground fault alarm w/trip
LG family	Drawout②	Undervoltage release③
LG family	Drawout②	Zone selective interlock
LG family	Fixed	Auxiliary switch 1A-1B
LG family	Fixed	Auxiliary switch 2A-2B
LG family	Fixed	Bell alarm
LG family	Fixed	High load alarm w/trip
LG family	Fixed	Ground fault alarm w/trip
LG family	Fixed	Undervoltage release③
LG family	Fixed	Zone selective interlock
MDL family	Fixed	Auxiliary switch 1A-1B
MDL family	Fixed	Auxiliary switch 2A-2B
MDL family	Fixed	Auxiliary switch 1A-1B w/alarm
MDL family	Fixed	Auxiliary switch 2A-2B w/alarm
NG family	Fixed	Auxiliary switch 1A-1B
NG family	Fixed	Auxiliary switch 2A-2B
NG family	Fixed	Bell alarm
NG family	Fixed	High load alarm w/trip
NG family	Fixed	Ground fault alarm w/trip
NG family	Fixed	Undervoltage release③
NG family	Fixed	Zone selective interlock

① Accessories wired to a pull-apart terminal block. Right position only.
② Accessories wired to a pull-apart terminal block. Left position only.
③ Not available when breaker is equipped with ARMS trip unit.

3. Complete Assembly

Complete assembly of panelboard box, interior and trim prior to shipment, when requested on order.

4. Compression Main Lugs

Al/Cu Burndy Range Taking Type.

Modification 4

Main Amperes	PRL4D Lug Wire Range
800	(3) 500-750 kcmil
1200	(4) #2-600 kcmil (4) 500-750 kcmil

5. Conduit Covers

Fabricated sheet metal to cover open conduits above and/or below standard Type 1 box.

Modification 5

Description
Conduit enclosing shield—open back
Conduit enclosing shield—solid back l

6. Copper Lugs/Terminals

Optional copper mechanical main lugs only and includes main incoming neutral lug.

Modification 6

Main Amperes	PRL4D Wire Range
600	(2) 1/0–600 kcmil
800	(2) 1/0–600 kcmil
1200	(3) 1/0–600 kcmil

7. Copper Main Busbars

Optional copper busbars are available in all ampere ratings.

Modification 7

Ampere Range	Silver-Copper Chassis Bus	Tin-Plated Copper Bus
600		
800		
1000		
1200		

8. Density Rated Bus

Standard main bus ampere rating is determined by UL listed temperature rise testing. Density rated bus is defined at 750A per square inch for aluminum bus and 1000A per square inch for copper bus. Adder for aluminum density rated bus is in addition to the base price. Adder for copper density rated bus is in addition to the base price plus the appropriate adder for copper bus. See Modification 7.

Modification 8

Ampere Rating
Aluminum—750A per Square Inch
600
800
1000
1200
Copper—1000A per Square Inch
600
800
1000
1200

9. Directory Frame—Metal

Metal directory frame in lieu of standard non-metallic pocket directory holder.

Modification 9

Directory Frame Type
Metal Frame, plastic cover

10. Electronic Trip Units

Thermal-magnetic trip units are standard. For electronic trip units, select appropriate breaker from the electronic trip section of Pages **xxx and xxx.** See selection below for electronic trip units.

Modification 10

Breaker Frame Family	Trip Unit Type
Drawout Feeder JGS, JGH, JGC	Digitrip 310+ LS Digitrip 310+ LSI Digitrip 310+ LSG Digitrip 310+ LSIG
Drawout Feeder or Main LGS, LGH LGC, LGU	Digitrip 310+ LS Digitrip 310+ LSI Digitrip 310+ LSG Digitrip 310+ LSIG

The following electronic trip units integrate Eaton's Arc Flash Reduction Maintenance System within the trip unit.

Breaker Frame Family	Trip Unit Type
Drawout Feeder or Main LGS, LGH, LGC . LGU	Digitrip 310+ ALSI Digitrip 310+ ALSIG

Electronic Trip Units for Fixed-Mounted Mains Only.

Breaker Frame Family	Trip Unit Type	Trip Unit Functionality①
LGS, LGH, LGC. LGU	Digitrip 310+ Digitrip 310+ Digitrip 310+ Digitrip 310+ Digitrip 310+ Digitrip 310+	LS LSI LSG LSIG ALSI② ALSIG②
CLD, CHLD, CLDC	Digitrip 310 Digitrip 310 Digitrip 310 Digitrip 310	LS LSI LSG LSIG
MDL, HMDL, CMDL, CHMDL	Digitrip 310 Digitrip 310 Digitrip 310 Digitrip 310	LS LSI LSG LSIG
NSG, NGH, NGC	Digitrip 310+③ Digitrip 310+③ Digitrip 310+③ Digitrip 310+③ Digitrip 310+③ Digitrip 310+③	LS LSI LSG LSIG ALSI② ALSIG②
CND, CHND, CNDC	Digitrip 310④ Digitrip 310④ Digitrip 310④ Digitrip 310④	LS LSI LSG LSIG

11. Ground Bars

Modification 11

Description	Bar Type
Aluminum bar for aluminum and copper conductors	Standard, attached to box Insulated/isolated ground bar
Copper bar for use with copper only conductors	Standard, attached to box Insulated/isolated bar

① L = Adjustable long delay pickup
S = Adjustable short delay pickup w/fixed short delay
I = Adjustable instantaneous pickup
G = Adjustable ground fault pickup
A = Arc Flash Reduction Maintenance System
② Trip unit includes Arc Flash Reduction Maintenance System.
③ Digitrip 310+ is standard for the NGS, NGH and NGC.
④ Digitrip 310 is standard for CND, CHND and CNDC.

12. Ground Fault Protection

Refer to Modification 10 for ground fault trip units.

13. Infrared (IR) Viewing Windows

Infrared viewing windows for main devices and drawout single-mounted feeder devices.

Modification 13

Overcurrent Device	IR Window Manufacturer
All fixed mount mains	Iriss Hawk (Fluke)
Single drawout feeder breakers①	Iriss Hawk (Fluke)

14. Handle Lock-Off Devices for Breakers

Contact Eaton for a list of padlockable and nonpadlockable circuit breaker handle lock-offs.

15. Nameplates, Engraved

Field-attached nameplates.

Modification 15

Description
Mastic back, engraved, black with white lettering
Mastic back, engraved, colours other than black
Nameplates, screw attached

16. Permanent Circuit Numbers

Permanently attached micarta circuit numbering.

17. Seismically Qualified

For seismically qualified PRL4D panelboards, request seismic labeling on order.

① Available on only single-mounted drawout. Not available on dual-mounted feeder devices.

18. Service Entrance Equipment

Service Entrance labeling as detailed under the "Service Entrance Equipment" per UL and NEC. Only panelboards meeting these requirements may be labeled as such. The requirement or service entrance labeling must be noted on the order. Includes neutral disconnect link and labeling "Suitable For Use as Service Equipment" (SUSE). Ground bar must be ordered separately. See Modification 11.

19. Shunt Trip for Main or Feeder Breakers

For tripping breaker from remote point. Voltage and frequency must be specified when ordering shunt trips. Wiring to terminal block is included with the drawout moulded case product as standard. For all others wired to terminal block, contact Eaton.

20. Sub-Feed Lugs

Available only on main lug only panelboards.

Not available on service entrance panelboards with main lugs using the six disconnect rule.

Mechanical Al/Cu lugs. Compression or copper body lugs require additional price adder from Modification 4 or Modification 6, as appropriate.

Modification 20

Panel Ampere Rating	Box Height Addition
600	4X
800	6X

21. Surge Protective Devices (SPD)

Package includes SPD unit and integral circuit breaker disconnect (30A) connected to the chassis bus.

Modification 21

Surge Current Rating	50	80	100	120	160	200	250	300	400
SPD Package Options—Basic Package									
LED monitor, L-N, L-G, L-L and N-G	■	■	■	■	■	■	■	■	■
Standard Package									
LED monitor, L-N, L-G, L-L and N-G. EMI/RFI filtering. Audible alarm with disable switch. Form C relay contact.	■	■	■	■	■	■	■	■	■
Premium Package									
LED monitor, L-N, L-G, L-L and N-G. EMI/RFI filtering. Audible alarm with disable switch. Form C relay contact. Six-digit LCD display. Counts surges in all modes. Nonvolatile memory (no battery backup). Reset button designed to prevent accidental resets.	■	■	■	■	■	■	■	■	■

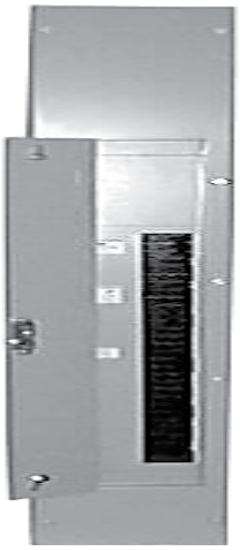
22. Through-Feed Lugs

Mechanical Al/Cu lugs. Compression or copper lugs require additional price adder from Modification 4 Compression Lug or Modification 6 Copper Lugs/ Terminals.

Modification 22

Panel Main Ampere Rating	Box Height Addition
600	7X
800	7X
1200	9X

Type PRL1a-LX



Contents

Type PRL1a-LX

Product Description

- 240Vac maximum
- 3-phase 4-wire, 3-phase 3-wire, 1-phase 3-wire, 1-phase 2-wire
- 3-phase 4-wire
- 225 ampere maximum mains
- 100 ampere maximum branch breakers
- Bolt-on branch breakers
- Factory assembled

Application Description

- Lighting and appliance branch panelboard
- Column mounting width
- Fully rated or series rated
- Interrupting ratings up to 200 kA symmetrical

Standards and Certification

- CSA C22.2 No. 29

Options and Accessories

- Pullbox and trough extensions

Product Selection

Table 2.33 PRL1a-LX

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	Breaker Type
Main Lug Only		
100	—	—
225	—	—
Main Breaker		
100	10	BAB
100	18	EHD
100	22	QBHW
100	65	ED
100	65	FD
100	100	EDH
100	100	HFD
225	65	ED
225	100	EDH

Table 2.34 Branch Circuit Breaker - PRL1a-LX

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac①	Breaker Type
15-60	10	BAB
70	10	BAB
80-100	10	BAB
15-50③	10	QBGF④
15-50③	10	QBGFEP⑤
15-20	10	QBAF⑥
15-20	10	QBAG⑦
15-30	10	BABR⑧
15-30	10	BABRS⑧
15-60	22	QBHW
70	22	QBHW
80-100	22	QBHW
15-30	22	QBHGF④
15-30	22	QBHGFEP⑤

① 1-pole breakers are rated 120Vac maximum.
② 240 volt breakers must be used on 3-phase, 3- wire, 240 volt delta systems or on the high leg of a midpoint delta grounded system.
③ 50 ampere devices are available as 2-pole only.
④ GFCI for 5 mA personnel protection.
⑤ GFP for 30 mA equipment protection.
⑥ Arc fault circuit breaker.
⑦ Arc fault circuit breaker with GFCI.
⑧ Solenoid operated breaker.

Table 2.35 Pull box with Trough Extension

Includes pull box with trough extension. For additional trough extensions.

Description	Catalogue Number
Pullbox with 36" Trough	**XCTXB036**
Pullbox with 48" Trough	**XCTXB048**
Pullbox with 60" Trough	**XCTXB060**
Pullbox with 72" Trough	**XCTXB072**
Pullbox with 84" Trough	**XCTXB084**

Table 2.36 Additional Trough Extensions

Width and depth are the same as the panelboard.

Length Inches	mm	Catalogue Number
36	914.4	**CTXB036**
48	1219.2	**CTXB048**
60	1524.0	**CTXB060**
72	1828.8	**CTXB072**
84	2133.6	**CTXB084**

Neutral Bars

When Column Type panels are furnished with trough extensions and pull box, the neutral bar will be placed in the pull box unless otherwise specified.

When troughs and pull box are not furnished, the neutral bar will be located on the panel at the same end as the main.

Box Sizing and Selection

Assembled Circuit Breaker Panelboards

Box size, box and trim catalogue numbers for standard Column Type panelboards listed are available from **Tables 2- 28** and **2-29**.

Instructions:

1. Using description of the required panelboard, select the rating and type of main required.

   a. 100 ampere panelboards - **Table 2-28.**
   b. 225 ampere panelboards - **Table 2.29**

2. Count the total number of branch circuit poles, including provisions, required in the panelboard. Do not count main breaker poles. Convert 2- or 3-pole branch breaker to single poles, i.e., 3-pole breaker, count as 3 poles. Determine sub-feed breaker or through-feed lug requirements.

3. Select the panelboard main ampere rating from **Tables 2-28** or **2-29.**

4. Panelboard Type from first column, main breaker Frame and Designation, if applicable from second column, and sub-feed breaker Frame and Designation, if applicable, from the third column.

5. From Step #2, determine the number of branch circuits in Column 4.

6. Read box size, box and trim catalogue numbers across columns to the right. All panels are surface mounted.

Cabinets

Boxes and trims are code-gauge steel, ASA-61 light gray painted finish.

Boxes are furnished without knockouts. Standard depth is 6 inches (152.4 mm). Standard width is 8-5/8 inches (219.1 mm).

Top and Bottom Gutters

4-1/2 inches (114.3 mm minimum.

Left Side Gutter

4-3/8 inches (111.2 mm) minimum.

Pull Box

Pull box is furnished without knockouts. Standard dimensions

Table 2.37 Pull Box Dimensions

Height	Width	Depth
12(304.8)	16(406.4)	6(152.4)

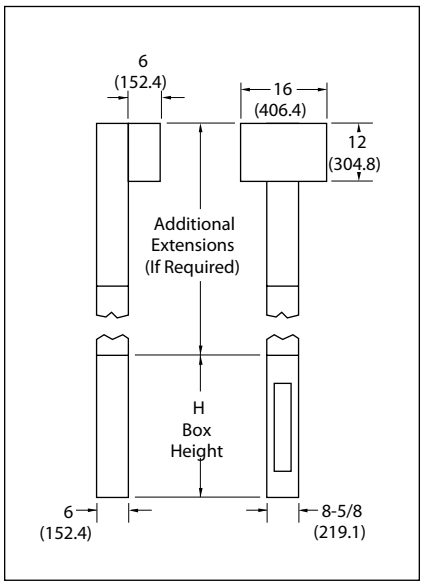


Figure 2.10 PRL1a-LX Trough Extension, Dimensions in Inches(mm)

Box Sizing and Selection (Cont'd)

Table 2.38. 100 Ampere Maximum PRL1a-LX Column Type Panelboard Sizing

Panelboard Types	Main Breaker Types Mounting: (H)=Horizontal (V)=Vertical	Sub-Feed Breaker Types Vertical Mounting	Maximum Number of Branch Circuits Including Provisions	Box Dimensions Inches(mm) H	W	D	Box Catalogue Number	Trim Catalogue Number[1]
Main Breaker	BAB, QBHW	—	27	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	**YSC969**	**LTC969S**
	(H)	—	39	81 (2057.4)	8-5/8 (219.2)	6 (152.4)	**YSC981**	**LTC981S**
Main Lugs or Main Breaker	EHD, ED	—	30	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	**YSC969**	**LTC969S**
	FD, HFD	—	42	81 (2057.4)	8-5/8 (219.2)	6 (152.4)	**YSC981**	**LTC981S**
	(V)							
Main Lugs or Main Breaker with 100A Through-Feed Lugs or Sub-Feed Breaker	EHD, ED	EHD, FD, HFD	30	78 (1981.2)	8-5/8 (219.2)	6 (152.4)	**YSC978**	**LTC978S**
	FD		42	90 (2286.0)	8-5/8 (219.2)	6 (152.4)	**YSC990**	**LTC990S**
	HFD							
	(V)							

[1] Add suffix B to trim catalogue number for bottom fed panelboards (i.e., LTC969SB).

Table 2.39. 225 Ampere Maximum PRL1a-LX Column Type Panelboard Sizing

Panelboard Types	Main Breaker Types Vertical Mounting	Sub-Feed Breaker Types Vertical Mounting	Maximum Number of Branch Circuits Including Provisions	Box Dimensions Inches(mm) H	W	D	Box Catalogue Number	Trim Catalogue Number[1]
Main Lugs or Main Breaker	ED, EDH	—	30	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	**YSC969**	**LTC969S**
		—	42	81 (2057.4)	8-5/8 (219.2)	6 (152.4)	**YSC981**	**LTC981S**
Main Lugs or Main Breaker with 100A Through-Feed Lugs or Sub-Feed Breaker	ED, EDH	EHD, FD, HFD	30	78 (1981.2)	8-5/8 (219.2)	6 (152.4)	**YSC978**	**LTC978S**
		ED, EDH	42	90 (2286.0)	8-5/8 (219.2)	6 (152.4)	**YSC990**	**LTC990S**

[1] Add suffix B to trim catalogue number for bottom fed panelboards (i.e., LTC969SB).

Type PRL2a-LX

Contents

Type PRL2a-LX

Product Description

- 600Y/347Vac maximum (125Vdc)
- 3-phase 4-wire, 3-phase 3-wire, 1-phase 3-wire, 1-phase 2-wire
- 225 ampere maximum mains
- 100 ampere maximum branch breakers
- Bolt-on branch breakers
- Factory assembled

Application Description

- Lighting and appliance branch panelboard
- Column mounting width
- Fully rated or series rated
- Interrupting ratings up to 200 kA symmetrical

Standards and Certification

- CSA C22.2 No. 29

Options and Accessories

- Pullbox and trough extensions

Product Selection

Table 2.40 Base Prices - PRL2a-LX

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	600Y/347Vac	125/250Vac	Breaker Type
Main Lug Only				
100	—	—	—	—
225	—	—	—	—
Main Breaker				
100	65	10	14	GBH
100	18	14	10	FDB
100	65	18	10	FD
100	100	25	22	HFD
100	200	35	22	FDC
225	65	—	—	ED
225	18	14	10	FDB
225	65	18	10	FD
225	100	25	22	HFD
225	200	35	22	FDC

Table 2.41 Branch Circuit Breaker - PRL2a-LX

Ampere Rating	Interrupting Rating (kA Symmetrical) 240 Vac①	480/277 Vac	600Y/347 Vac	125/250 Vac	Breaker Type
15-20	65	14	—	—	GHQ②
15-60	65	14	—	14	GHB②
70-100	65	14	—	14	GHB②
15-30	65	14	—	—	GHBS②③
15-60	65	14	10	—	GBH⑤
70-100	65	14	10	14	GBH⑤
15-60	—	14	—	—	GHBGFEP②④

① Interrupting ratings in this column are applicable to 120Vac for 1-pole breakers.
② At 480V, must be used on 480Y/277V grounded wye systems only.
③ Solenoid operated breaker.
④ GFP for 30 mA equipment protection. Requires two pole spaces.
⑤ At 600V, must be used on 600Y/347V grounded wye systems only.

Table 2.42 Pull box with Trough Extension

Includes pull box with trough extension. For additional trough extensions, refer to **Table 2-43.**

Description	Catalogue Number
Pullbox with 36" Trough	**XCTXB036**
Pullbox with 48" Trough	**XCTXB048**
Pullbox with 60" Trough	**XCTXB060**
Pullbox with 72" Trough	**XCTXB072**
Pullbox with 84" Trough	**XCTXB084**

Table 2.43 Additional Trough Extensions

Width and depth are the same as the panelboard.

Length Inches	mm	Catalogue Number
36	914.4	**CTXB036**
48	1219.2	**CTXB048**
60	1524.0	**CTXB060**
72	1828.8	**CTXB072**
84	2133.6	**CTXB084**

Neutral Bars

When Column Type panels are furnished with trough extensions and pull box, the neutral bar will be placed in the pull box unless otherwise specified.

Box Sizing and Selection

Assembled Circuit Breaker Panelboards

Box size, box and trim catalogue numbers for standard Column Type panelboards listed are available on the next page.

Instructions:

1. Using description of the required panelboard, select the rating and type of main required.

   a. 100 ampere panelboards

   b. 225 ampere panelboards

2. Count the total number of branch circuit poles, including provisions, required in the panelboard. Do not count main breaker poles. Convert 2- or 3-pole branch breaker to single poles, i.e., 3-pole breaker, count as 3 poles. Determine sub-feed breaker or through-feed lug requirements.

3. Select the panelboard main ampere rating on the next page**.**

4. Panelboard Type from first column, main breaker Frame and Designation, if applicable from second column, and sub-feed breaker Frame and Designation, if applicable, from the third column.

5. From Step #2, determine the number of branch circuits in Column 4.

6. Read box size, box and trim catalogue numbers across columns to the right. All panels are surface mounted.

Cabinets

Boxes and trims are code-gauge steel.

Boxes are furnished without knockouts. Standard depth is 6 inches (152.4 mm). Standard width is 8-5/8 inches (219.1 mm).

Top and Bottom Gutters

4-1/2 inches (114.3 mm minimum.

Left Side Gutter

3-5/16 inches (84.2 mm) minimum.

Pull Box

Pull box is furnished without knockouts. Standard dimensions

Table 2.44 Pull Box Dimensions

Height	Width	Depth
12(304.8)	16(406.4)	6(152.4)

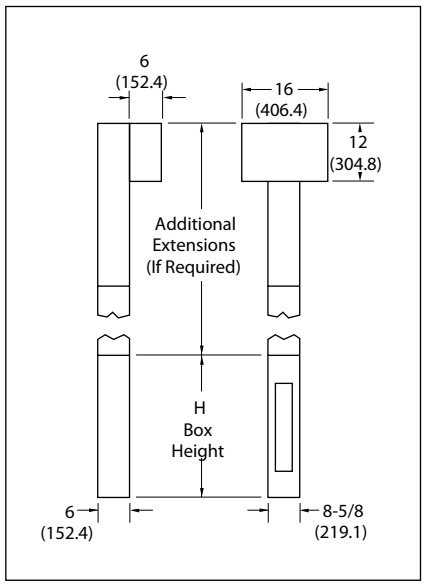


Figure 2.11 PRL2a-LX Trough Extension, Dimensions in Inches(mm)

Box Sizing and Selection (Cont'd)

Table 2.45. 100 Ampere Maximum PRL2a-LX Column Type Panelboard Sizing

Panelboard Types	Main Breaker Types Mounting: (H)=Horizontal (V)=Vertical	Sub-Feed Breaker Types Vertical Mounting	Maximum Number of Branch Circuits Including Provisions	Box Dimensions Inches(mm) H	W	D	Box Catalogue Number	Trim Catalogue Number[1]
Main Breaker	GHB, GBH	—	27	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	**YSC969**	**LTC969S**
	(H)	—	39	81 (2057.4)	8-5/8 (219.2)	6 (152.4)	**YSC981**	**LTC981S**
Main Lugs or Main Breaker	EHD, FD	—	30	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	**YSC969**	**LTC969S**
	HFD, FDC	—	42	81 (2057.4)	8-5/8 (219.2)	6 (152.4)	**YSC981**	**LTC981S**
	(V)							
Main Lugs or Main Breaker with 100A Through-Feed Lugs or Sub-Feed Breaker	EHD, FD	EHD, FD, HFD	30	78 (1981.2)	8-5/8 (219.2)	6 (152.4)	**YSC978**	**LTC978S**
	HFD, FDC	42	90	(2286.0)	8-5/8 (219.2)	6 (152.4)	**YSC990**	**LTC990S**
	(V)							

[1] Add suffix B to trim catalogue number for bottom fed panelboards (i.e., LTC969SB).

Table 2.46. 225 Ampere Maximum PRL2a-LX Column Type Panelboard Sizing

Panelboard Types	Main Breaker Types Vertical Mounting	Sub-Feed Breaker Types Vertical Mounting	Maximum Number of Branch Circuits Including Provisions	Box Dimensions Inches(mm) H	W	D	Box Catalogue Number	Trim Catalogue Number[1]
Main Lugs or Main Breaker	ED, FD	—	30	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	**YSC969**	**LTC969S**
	HFD, FDC	—	42	81 (2057.4)	8-5/8 (219.2)	6 (152.4)	**YSC981**	**LTC981S**
Main Lugs or Main Breaker with 100A Through-Feed Lugs or Sub-Feed Breaker	ED, FD	EHD, FD, HFD	30	78 (1981.2)	8-5/8 (219.2)	6 (152.4)	**YSC978**	**LTC978S**
	HFD, FDC	ED, EDH	42	90 (2286.0)	8-5/8 (219.2)	6 (152.4)	**YSC990**	**LTC990S**

[1] Add suffix B to trim catalogue number for bottom fed panelboards (i.e., LTC969SB).

Boxes and Trims Only - Type 1

Table 2.47. Types PRL1a and PRL2a

Box Dimensions	Height In(mm)	Box Catalogue Number	Trim Catalogue Number
20-inch W x 5-3/4-inch D (508.0 mm W x 146.1 mm D)	30(762.0)	**EZB2030RC**	**EZT2030S or F**
	36 (914.4)	**EZB2036RC**	**EZT2036S or F**
	42 (1066.8)	**EZB2042RC**	**EZT2042S or F**
	48 (1219.2)	**EZB2048RC**	**EZT2048S or F**
	54 (1371.6)	**EZB2054RC**	**EZT2054S or F**
	60 (1524.0)	**EZB2060RC**	**EZT2060S or F**
	72 (1828.8)	**EZB2072RC**	**EZT2072S or F**
	90 (2286.0)	**EZB2090RC**	**EZT2090S or F**

Table 2.48. Type PRL3a 100-400 Amperes

Box Dimensions	Height In(mm)	Box Catalogue Number	Trim Catalogue Number 100-400 Amperes	600 Amperes
20-inch W x 5-3/4-inch D (508.0 mm W x 146.1 mm D)	48 (1219.2)	**EZB2048RC**	**EZT2048S or F**	**EZTV2048S or F**
	60 (1524.0)	**EZB2060RC**	**EZT2060S or F**	**EZTV2060S or F**
	72 (1828.8)	**EZB2072RC**	**EZT2072S or F**	**EZTV2072S or F**
	90 (2286)	**EZB2090RC**	**EZT2090S or F**	**EZT2090S or F**

Table 2.49. Type PRL 4B - PRL 4F

Box Dimensions	Height In(mm)	Box Catalogue Number
24-inch W x 10.4-inch D (609.6 mm W x 264.2 mm D)	57 (1447.8)	**BX2457**
	73.5 (1866.9)	**BX2473**
	90 (2286.0)	**BX2490**
38-inch W x 10.4-inch D (965.2 mm W x 264.2 mm D)	73.5 (1866.9)	**BX3873**
	90 (2286.0)	**BX3890**
44-inch W x 10.4-inch D 1117.6 mm W x 264.2 mm D)	73.5 (1866.9)	**BX4473**
	90 (2286.0)	**BX4490**

Panelboards and Lighting Controls

2

Contents

Types PRL1a, 2a, 3a, 4, Column

Modification Selection Guide

Modifications Index

Modification Type	Item	Available on Panelboard Types PRL1a	PRL2a	PRL3a	PRL4B	PRL4F	PRL 4D	Column
Special Enclosure Construction								
SPRINKLERPROOF (per CEC 26-008), 508mm (20") wide. Single or Multi-Section.	1a..	Yes	Yes	Yes	Yes	Yes	Yes	No
TYPE 2 508mm (20") wide. Single or Multi-Section	1b.	Yes	Yes	Yes	Yes	Yes	Yes	No
TYPE 3R/12 Enclosure	1c.	Yes	Yes	Yes	Yes	Yes	Yes	No
TYPE 4 Combination Enclosure (incorporates features required for 3R and 12 ratings)	1d.	Yes	Yes	Yes	Yes	Yes	Yes	No
Neutral Assemblies								
200% Rated neutrals (use on systems with high harmonic content) - 100A max. bus	2a.	Yes	Yes	Yes	No	No	No	Yes
200% Rated neutrals (use on systems with high harmonic content) - 225A max. bus		Yes	Yes	Yes	No	No	No	Yes
200% Rated neutrals (use on systems with high harmonic content) - 250A max. bus		Yes	Yes	Yes	Yes	Yes	Yes	No
200% Rated neutrals (use on systems with high harmonic content) - 400A max. bus		Yes	Yes	Yes	Yes	Yes	Yes	No
200% Rated neutrals (use on systems with high harmonic content) - 600A max. bus		No	No	Yes	Yes	Yes	Yes	No
ALL 3 Phase, 4 Wire panelboards include a neutral assembly. For 3PH 3W applications the neutral assembly is deleted.	2b.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
24 Point neutral adder for use with "twin frame" DNBA type breakers	2c.	Yes	No	No	No	No	No	No
42 Point neutral adder for use with "twin frame" DNBA type breakers		Yes	No	No	No	No	No	No
Special Ground Bus								
Insulated Ground Bus Assembly	3a.	Yes	Yes	Yes	Yes	Yes	Yes	No
Isolated Ground Bus Assembly	3b.	Yes	Yes	Yes	Yes	Yes	Yes	No
Sub Feed Assemblies (use on MLO panels only)								
Sub-Feed Lugs - 100A Maximum	4a	Yes	Yes	Yes	No	No	No	No
Sub-Feed Lugs - 225A Maximum		Yes	Yes	Yes	No	No	No	No
Sub-Feed Lugs - 250A Maximum		No	No	Yes	Yes	Yes	Yes	No
Sub-Feed Lugs - 400A Maximum (cable size/quantity restrictions on some panels)		Yes	Yes	Yes	Yes	Yes	Yes	No
Sub-Feed Lugs - 600A Maximum		No	No	Yes	Yes	Yes	Yes	No
Sub-Feed Lugs - 800A Maximum		No	No	No	Yes	Yes	Yes	No
Sub-Feed Lugs - 1200A Maximun		No	No	No	No	No	No	No
Sub-Feed Breakers - All Panelboard Ratings	4b`	Yes	Yes	Yes	Yes	Yes	Yes	No
Through-Feed Lug Assemblies (use with MLO or MB panels)								
Through-Feed Lugs - 100A Maximum	5a	Yes	Yes	Yes	No	No	No	No
Through-Feed Lugs - 225A Maximum		Yes	Yes	No	No	No	No	No
Through-Feed Lugs - 250A Maximum		No	No	Yes	Yes	Yes	Yes	No
Through-Feed Lugs - 400A Maximum		Yes	Yes	Yes	Yes	Yes	Yes	No
Through-Feed Lugs - 600A Maximum		No	No	Yes	Yes	Yes	Yes	No
Through-Feed Lugs - 800A Maximum		No	No	No	Yes	Yes	Yes	No
Through-Feed Lugs - 1200A Maximun		No	No	No	Yes	Yes	Yes	No

Types PRL1a, 2a, 3a, 4, Column

Modification Selection Guide

Modifications Index - Cont'd

Modification Type	Item	Available on Panelboard Types PRL1a	PRL2a	PRL3a	PRL4B	PRL4F	PRL 4D	Column
Compression Lugs on Main Lugs								
Max. size: 1x750 kcmil / phase or 2x500 kcmil / phase Refer to Eaton for enclosure dimensions.	6a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Special Entry Plates (Specify location, supplied loose)								
Aluminum (Corflex)	7a	Yes	Yes	Yes	Yes	Yes	Yes	No
Fibre (Corflex)	7b	Yes	Yes	Yes	Yes	Yes	Yes	No
Brass (MIC)	7c	Yes	Yes	Yes	Yes	Yes	Yes	No
Painting and Special Coatings								
Painted Box (Consult Eaton for available colours)	8a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Trim (Other than ASA - 61)	8b	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Trim and Door Modifications								
Door-in-Door	9a	Std.	Std.	Std.	Yes	Yes	Yes	No
Door over Distribution	9b	Std.	Std.	Std.	Yes	Yes	Yes	No
Box / Tub Modifications								
Blank Box End	10a	Std.	Std.	Std.	Std.	Std.	Std.	No
Box End with Knockouts	10b	Yes	Yes	Yes	No	No	No	No
Service Entrance	11a	Yes	Yes	Yes	Yes	Yes	Yes	No
Complete Assembly								
Box, Interior, Breakers & Trim completely assembled prior to shipment.	12a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Multi-Section Panels								
Double Section - Cable connected - 225A Maximum (cross over cables NOT included)	13a	Yes	Yes	No	No	No	No	No
Double Section - Cable connected - 250A Maximum (cross over cables NOT included)		No	No	Yes	Yes	Yes	Yes	No
Double Section - Cable connected - 400A Maximum (cross over cables NOT included)		Yes	Yes	Yes	Yes	Yes	Yes	No
Double Section - Cable connected - 600A Maximum (cross over cables NOT included)		No	No	Yes	Yes	Yes	Yes	No
Double Section - Cable connected - 800A Maximum (cross over cables NOT included)		No	No	Yes	Yes	Yes	Yes	No
Double Section - Cable connected - 1200A Maximum (cross over cables NOT included)		No	No	Yes	Yes	Yes	Yes	No
Key Interlock (Use on main breakers - key protrudes through front cover) - All ratings.	14a	Yes	Yes	Yes	Yes	Yes	Yes	No
Contactor in Mains								
Eaton electrically held, installed in a separate compartment, with a removable cover.	15a	Yes	Yes	Yes	No	No	No	No
Specialty Contactors - mounted as above.	15b	Yes	Yes	Yes	No	No	No	No
Cover Mounted Controls	15c	Yes	Yes	Yes	No	No	No	No
Low Voltage Relay Troughs (Matching Box and Trim mounted adjacent to the panelboard).								
30 inch high (762mm) to 90 inch high (2286mm) box & trim.	16a	Yes	Yes	No	No	No	No	No
Relay Mounting rail for 30 inch high (762mm) to 90 inch high (2286mm) box & trim.	16b	Yes	Yes	No	No	No	No	No
Moisture and Fungus Proofing	17a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Tin Plating of Copper Bus	18a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nameplates and Circuit Directories								
Engraved Lamicoid Nameplates - supplied loose or factory installed.	19a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Circuit Directory Holder (Steel frame & acetate cover)	19b	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Circuit Breaker Handle Lock-off Devices								
Non-Padlockable (supplied loose)	20a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Padlockable (supplied loose)	20b	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Main or Branch Circuit Breaker Accessories								
Auxiliary Switch (1A / 1B)	21a	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Shunt Trip	21b	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Undervoltage Release	21c	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Alarm Switch (1A / 1B)	21d	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Padllocks	21e	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Transient Voltage Surge Suppression

The quality of power feeding sensitive electronic loads is critical to the reliable operation of any facility. In modern offices, hospitals and manufacturing facilities, the most frequent causes of microprocessor-based equipment downtime and damage are voltage transients and electrical noise.

Electrical loads and microprocessor based equipment are highly susceptible to both high and low energy transients.

High energy transients include lightning induced surges and power company switching. These high energy transients can destroy components instantly.

More frequently the electrical system experiences low energy transients and high frequency noise.

The effects of continual low energy transients and high frequency noise can cause erratic equipment performance or sudden failure of electronic circuit board components.

Eaton can provide protective and diagnostic systems integral to panelboards. The SPD (Surge Protective Device) is integrated into the panelboards using a "zero lead length" direct bus bar connection.

The SPD provides Transient Voltage Surge Suppression (TVSS) and active hybrid filtering. It also protects sensitive electronic equipment from the damaging effects of high and low energy transients, as well as high frequency noise

Table 2-50 SPD Series Surge Protective Device
SPD Series replaces CPS Visor Series - effective Aug. 2009

	Surge Current Rating (kA per phase)								
Description	**50kA**	**80kA**	**100kA**	**120kA**	**160kA**	**200kA**	**250kA**	**300kA**	**400kA**
	Availability								
PRL1a - 240Vac Maximum	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
PRL2a - 277/480Vac Maximum	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
PRL2a - 347/600Vac Maximum	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
PRL3a - 600Vac Maximum	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
PRL4B - 600Vac Maximum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PRL4F - 600Vac Maximum	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Column Panels	No	No	No	No	No	No	No	No	No
SPD Feature Package									
Basic									
- Dual coloured LED per phase to indicate protection status - Dual coloured LED to Indicate Protection Status of the NG Mode on Units with a Neutral Wire - Single coloured LED to Indicate the Lack of a Neutral Wire Connection on Systems Requiring a Neutral Wire	OPT	OPT	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Standard									
- All features included in the Basic package plus the following: - Audible Alarm with Silence Button - Form 'C' Relay Contact - EMI / RFI Filtering Providing 50dB of Noise Attenuation @ 100kHz	STD	STD	STD	STD	STD	STD	STD	STD	STD
Standard + Surge Counter									
All Features Included in the Standard Package Plus The Addition of a Surge Counter with Reset Button	OPT	OPT	OPT	OPT	OPT	OPT	OPT	OPT	OPT
Integral Disconnect									
PRL1a - 240Vac Maximum	OPT	OPT	OPT	OPT	OPT	OPT	N/A	N/A	N/A
PRL2a - 277/480Vac Maximum	OPT	OPT	OPT	OPT	OPT	OPT	N/A	N/A	N/A
PRL2a - 347/600Vac Maximum	OPT	OPT	OPT	OPT	OPT	OPT	N/A	N/A	N/A
PRL3a - 600Vac Maximum	STD	STD	STD	STD	STD	STD	STD	STD	STD
PRL4B - 600Vac Maximum	STD	STD	STD	STD	STD	STD	STD	STD	STD
PRL4F - 600Vac Maximum	STD	STD	STD	STD	STD	STD	STD	STD	STD

Retrofit Panelboards

Contents

Retrofit Panelboard

Product Description

- P1R-240V maximum, P2R-347/600/V maximum
- Single-phase 3-wire or single-phase 2-wire
- 3-phase 3-wire or 3-phase 4-wire
- 400 amperes maximum
- 100 amperes maximum branch breakers
- Fits existing box depths from 4.50 to 6.00 inches (114.3 to 152.4 mm) deep
- Integrally mounted neutral assembly
- Ground bar and bonding conductor included
- Neutral and ground convertible from left-right
- Bolt-on branch breakers
- Factory assembled

Application Description

- Lighting and appliance branch panelboards
- Fully rated or series rated
- Interrupting capacities to 100 kA symmetrical

Standards and Certifications

- CSA C22.2 No. 29

3

Table 3.1 Catalogue Numbering System - Pow-R-Line 1R

P1R B 1 A 1 – 42 BAB 100

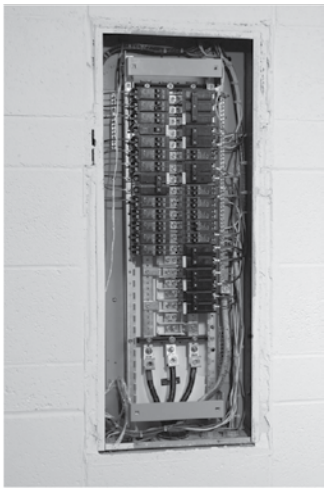
Panel Type	Main Device	System Type	Bus Type	Bus Ampere Rating	Circuits ①	Main Breaker	Main Breaker Amperes
P1R	**L** = MLO **B** = Main Breaker	**1** = Single-Phase (3W or 2W) **3** = 3-Phase (3W or 4W)	**A** = Aluminum **C** = Copper	**1** = 100 A **2** = 225 A **4** = 400 A	**18**= 18 **24**= 24 **30**= 30 **42**= 42	**MLO** = Blank **BAB** **EHD** **QBHW** **ED** **EDH**	**MLO** = Blank **030**= 30 **060**= 60 **100**= 100 **125**= 125 **150**= 150 **175**= 175 **200**= 200 **225**= 225

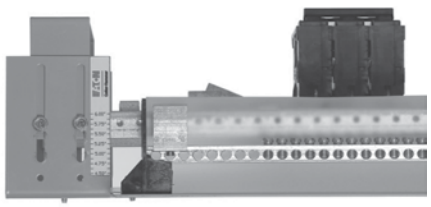
Table 3.2 Catalogue Numbering System - Pow-R-Line 2R

P2R B 1 A 1 – 42 BAB 100

Panel Type	Main Device	System Type	Bus Type	Bus Ampere Rating	Circuits ①	Main Breaker	Main Breaker Amperes
P2R	**L** = MLO **B** = Main Breaker	**1** = Single-Phase (3W or 2W) **3** = 3-Phase, 4-Wire	**A** = Aluminum **C** = Copper	**1** = 100 A **2** = 225 A **4** = 400 A	**18**= 18 **24**= 24 **30**= 30 **42**= 42	**MLO** = Blank **FDB** **FD** **HFD** **FDC**	**MLO** = Blank **030**= 30 **060**= 60 **100**= 100 **125**= 125 **150**= 150 **175**= 175 **200**= 200 **225**= 225

① 18 circuit 225A max. 24 circuit is 400A only.





Product Selection

Table 3-1 Base Catalogue Numbers — PRL-1R (240 max) & PRL-2R (600/347V max) - Main Lug Only

Ampere Rating	Number of Circuits	Interrupting Rating (kA Sym.) 240 Vac	Main Type	Pow-R-Line 1R 208/120V 3ph, 4w Catalogue Number	Pow-R-Line 2R 600/347V 3ph, 4w Catalogue Number
Main Lug Only					
100	18	—	MLO	**P1RL3A1-18**	**P2RL3A1-18**
	30	—		**P1RL3A1-30**	**P2RL3A1-30**
	42	—		**P1RL3A1-42**	**P2RL3A1-42**
225	18	—	MLO	**P1RL3A2-18**	**P2RL3A2-18**
	24	—		**P1RL3A2-24**	**P2RL3A2-24**
	30	—		**P1RL3A2-30**	**P2RL3A2-30**
	42	—		**P1RL3A2-42**	**P2RL3A2-42**
	60	—		**P1RL3A2-60**	**P2RL3A2-60**
400	24	—	MLO	**P1RL3A4-24**	**P2RL3A4-24**
	30	—		**P1RL3A4-30**	**P2RL3A4-30**
	42	—		**P1RL3A4-42**	**P2RL3A4-42**

Table 3-2 Base Catalogue Numbers — PRL-1R (240 max) Main Breaker

Ampere Rating	Number of Circuits	Interrupting Rating (kA Sym.) 240 Vac	Main Breaker Type	Pow-R-Line 1R 240/120V 1ph, 3w Catalogue Number②	Pow-R-Line 1R 208/120V 3ph, 4w Catalogue Number②
Main Lug Only					
100	18	10	BAB①	**P1RB1A1-18BAB-****	**P1RB3A1-18BAB-****
	30			**P1RB1A1-30BAB-****	**P1RB3A1-30BAB-****
	42			**P1RB1A1-42BAB-****	**P1RB3A1-42BAB-****
100	18	18	EHD	**P1RB1A1-18EHD-****	**P1RB3A1-18EHD-****
	30			**P1RB1A1-30EHD-****	**P1RB3A1-30EHD-****
	42			**P1RB1A1-42EHD-****	**P1RB3A1-42EHD-****
100	18	22	QBHW①	**P1RB1A1-18QBHW-****	**P1RB3A1-18QBHW-****
	30			**P1RB1A1-30QBHW-****	**P1RB3A1-30QBHW-****
	42			**P1RB1A1-42QBHW-****	**P1RB3A1-42QBHW-****
100	18	65	ED	**P1RB1A1-18ED-****	**P1RB3A1-18ED-****
	30			**P1RB1A1-30ED-****	**P1RB3A1-30ED-****
	42			**P1RB1A1-42ED-****	**P1RB3A1-42ED-****
100	18	100	EDH	**P1RB1A1-18EDH-****	**P1RB3A1-18EDH-****
	30			**P1RB1A1-30EDH-****	**P1RB3A1-30EDH-****
	42			**P1RB1A1-42EDH-****	**P1RB3A1-42EDH-****
225	18	65	ED	**P1RB1A2-18ED-****	**P1RL3A2-18ED-****
	30			**P1RB1A2-30ED-****	**P1RL3A2-30ED-****
	42			**P1RB1A2-42ED-****	**P1RL3A2-42ED-****
225	18	100	EDH	**P1RB1A2-18EDH-****	**P1RL3A2-24EDH-****
	30			**P1RB1A2-30EDH-****	**P1RL3A2-30EDH-****
	42			**P1RB1A2-42EDH-****	**P1RL3A2-42EDH-****

① BAB, QBHW and GBH main devices consume available circuit space positions. (2 circuits for Single-Phase; 3 circuits for 3-Phase.)
② Add main breaker ampere rating suffix. May NOT exceed main bus rating.

Table 3-3 Base Catalogue Numbers — PRL-2R (600/347V max) Main Breaker

Ampere Rating	Number of Circuits	Interrupting Rating (kA Sym.) 600/347 Vac	Main Type	Pow-R-Line 2R 600/347V 3ph, 4w Catalogue Number[2]
Main Breaker				
100	18 30 42	10	GBH[1]	**P2RB3A1-18GBH-**** **P2RB3A1-30GBH-**** **P2RB3A1-42GBH-****
100	18 30 42	14	FDB	**P2RB3A1-18FDB-**** **P2RB3A1-30FDB-**** **P2RB3A1-42FDB-****
100	18 30 42	18	FD	**P2RB3A1-18FD-**** **P2RB3A1-30FD-**** **P2RB3A1-42FD-****
100	18 30 42	25	HFD	**P2RB3A1-18HFD-**** **P2RB3A1-30HFD-**** **P2RB3A1-42HFD-****
100	18 30 42	35	FDC	**P2RB3A1-18FDC-**** **P2RB3A1-30FDC-**** **P2RB3A1-42FDC-****
225	18 30 42	14	FDB	**P2RB3A2-18FDB-**** **P2RB3A2-30FDB-**** **P2RB3A2-42FDB-****
225	18 30 42	18	FD	**P2RB3A2-18FD-**** **P2RB3A2-30FD-**** **P2RB3A2-42FD-****
225	18 30 42	25	HFD	**P2RB3A2-18HFD-**** **P2RB3A2-30HFD-**** **P2RB3A2-42HFD-****
225	18 30 42	35	FDC	**P2RB3A2-18FDC-**** **P2RB3A2-30FDC-**** **P2RB3A2-42FDC-****

[1] BAB, QBHW and GBH main devices consume available circuit space positions. (2 circuits for Single-Phase; 3 circuits for 3-Phase.)
[2] Add main breaker ampere rating suffix. May NOT exceed main bus rating.

Options and Accessories

Table 3-4. Branch Circuit Breakers — PRL-1R

Ampere Rating	Interrupting Rating (kA Sym.) 240 Vac①	Breaker Type	Number of Poles
15-70	10	BAB	1,2,3 Pole
90-100	10	BAB	2,3 Pole
125	10	BAB	2 Pole
15-30	10	BABRSP④	1,2 Pole
15/15-20/20-30/30	10	DNBA⑨	1 Pole
15-50③	10	QBGF⑤	1,2 Pole
15-50③	10	QBGFEP⑥	1,2 Pole
15-20	10	QBCAF⑦	1 Pole
15-20	10	BAB-D⑧	1 Pole
15-70	10	QBHW	1,2,3 Pole
90-100	10	QBHW	2,3 Pole
125	10	QBHW	2 Pole
15-30	10	QBHGF⑤	1,2 Pole
15-30	10	QBHGFEP⑥	1,2 Pole

Table 3-5. Branch Circuit Breakers - PRL-2R

Ampere Rating	Interrupting Rating (kA Sym.) 600/347 Vac	Breaker Type	Number of Poles
15-100	10	GBH	1,2,3 Pole

① Single-pole breakers are rated 120 Vac maximum.
② 240 volt breakers must be used on 3-phase, 3-wire 240 volt delta systems or on the high leg of a mid-point delta grounded system.
③ 50 ampere devices available as 2-pole only.
④ Remote controllable circuit breaker.
⑤ GFCI for 5 mA personnel protection.
⑥ GFP for 30 mA equipment protection.
⑦ Arc fault circuit breaker. – Combination arc fault circuit breaker
⑧ HID (High Intensity Discharge) rated arc fault circuit breaker.
⑨ Twin Breaker.

Table 3-6. Copper Main Bus

Main Bus Ampere Rating	Catalogue Number
100	⑩
225	⑩
400	⑩

Table 3-7. Copper Terminal Ground Bar for Copper Cable Only

Copper Ground Bar
Catalogue Number **P1RGBC**

⑩ To convert base chassis catalogue number from aluminum main bus to copper main bus, change the 6th digit of the aluminum base chassis catalogue number to "C." (i.e., P1RL1A1-42 becomes P1RL1C1-42).

Table 3-8. Insulated/Isolated Ground Bus (Separately Mounted)

Catalogue Number AL	Catalogue Number CU
P1RGKA	**P1RNKC**

Table 3-9. Neutral Kit (Separately Mounted)⑩

Number of Termination Points	Catalogue Number AL	Catalogue Number CU
18	**P1RNKA18**	**P1RNKC18**
30	**P1RNKA30**	**P1RNKC30**
42	**P1RNKA42**	**P1RNKC42**

⑩ Each base chassis includes a neutral bar that contains one connection point for every circuit space available. Use this kit when additional connection points are required or the neutral must be separately mounted to meet existing cable locations.

Table 3-10. Field Survey of Existing Equipment

Number of Panels[1]	Catalogue Number
10 to 24	-
25 to 50	-
50 Plus	-

[1] Contact Eaton for details.

Table 3-11. Match Existing Mounting Studs

Match chassis mounting holes to existing stud locations.[2]	Catalogue Number	
Per Panel	-	-

[2] This option includes any mounting plate extensions (from **Table 1-66**) required to match existing mounting studs. Detailed stud location drawings must accompany the order or a Field Survey (**Table 1-64**) must be purchased.

Table 3-12. Depth Adder Support (2 per chassis)

Support Depth In. (mm)	Existing Box Depth Range Minimum In. (mm)	Maximum In.(mm)	Pow-R-Line 1R	Pow-R-Line 2R
1.5 (38.1)	6 (152.4)	7.5 (190.5)	**P1RDA15**	**P2RDA15**
3 (76.2)	7.5 (190.5)	9 (228.6)	**P1RDA30**	**P2RDA30**
4.5 (114.3)	9 (228.6)	10.5 (266.7)	**P1RDA45**	**P2RDA45**
6 (152.4)	10.5 (266.7)	12 (304.8)	**P1RDA60**	**P2RDA60**

Table 3-13. Box Collar Kit Table

Collar Depth In. (mm)	Existing Box Depth Range Minimum In. (mm)	Maximum In.(mm)	Catalogue Number
1 (26)	3.5 (89)	5 (127)	**P1RBC10**

Table 3-14. Through Feed Lugs

Amps	Mechanical Lug Size
100	#12-1/0
225	#6-300 MCM

Table 3-15. Mounting Plate Extensions (2 per Chassis)

Extension Height In. (mm)	Pow-R-Line 1R	Pow-R-Line 2R
2 (50.8)	**P1RMP2**	**P2RMP2**
4 (101.6)	**P1RMP4**	**P2RMP4**
6 (152.4)	**P1RMP6**	**P2RMP6**

Application Guidelines

Instructions

- In order to meet minimum wire bending space requirements and to ensure ease of installation, minimum enclosure space dimensions have been defined for each chassis. In order to ensure a proper fit, every panelboard to be renovated must be carefully surveyed prior to installation.
- Determine the electrical requirements of the panelboard to be renovated (i.e., main breaker or main lugs, amperes, interrupting rating, circuit space, branch breakers, accessories).
- Using the electrical requirement data, select a base chassis and any required breakers, options and accessories.
- **Table 3-17** provides the minimum dimensions of the enclosure, in which each base chassis may be installed. These dimensions assume that the chassis is mounted in the centre of the existing box, both vertically and horizontally. Where site conditions require the chassis to be offset from this centre mounted position, it is the installer's responsibility to ensure wire bending space and electrical clearance requirements are met.
- **Table 3-17** provides a "Trim Door Size Code." Using this code, select a standard trim from **Table 3-18** and **3-19** that will fit the outside dimensions of the existing box. Refer to **Table 3-20** to define non-standard trim requirements.

Table 3-16 Minimum Enclosure Sizing / Trim Door Size Selection

Main Device	Circuits	Current	Minimum Height (inches)	Minimum Width (inches)	Minimum Depth (inches)
Lug	18	100	19.5	14.25	4.5
Lug	30	100	26.5	14.25	4.5
Lug	42	100	33.5	14.25	4.5
Lug	18	225	22	14.25	4.5
Lug	30	225	28	14.25	4.5
Lug	42	225	34	14.25	4.5
Breaker (BAB)	18	60-100	19.5	14.25	4.5
Breaker (BAB)	30	60-100	26.5	14.25	4.5
Breaker (BAB)	42	60-100	33.5	14.25	4.5
Breaker (E or F Frame)	18	60-225	30	14.25	4.5
Breaker (E or F Frame)	30	60-225	36	14.25	4.5
Breaker (E or F Frame)	42	60-225	42	14.25	4.5
Lug	24	400	48	20.0	5.75
Lug	30	400	48	20.0	5.75
Lug	42	400	48	20.0	5.75

Main Device	Circuits	Current	Minimum Height (inches)	Minimum Width (inches)	Minimum Depth (inches)
Lug	18	100	19.5	14.25	4.75
Lug	30	100	26.5	14.25	4.75
Lug	42	100	33.5	14.25	4.75
Lug	18	225	22	14.25	4.75
Lug	30	225	28	14.25	4.75
Lug	42	225	34	14.25	4.75
Breaker (GBH, GHB)	18	60-100	19.5	14.25	4.75
Breaker (GBH, GHB)	30	60-100	26.5	14.25	4.75
Breaker (GBH, GHB)	42	60-100	33.5	14.25	4.75
Breaker (E or F Frame)	18	60-225	30	14.25	4.75
Breaker (E or F Frame)	30	60-225	36	14.25	4.75
Breaker (E or F Frame)	42	60-225	42	14.25	4.75
Lug	24	400	48	20.0	5.75
Lug	30	400	48	20.0	5.75
Lug	42	400	48	20.0	5.75

Ampere Rating	Number of Circuits	Main Device Type	Trim Door Size Code	Minimum Enclosure Height In. (mm)
Main Lug Only				
100	18	MLO	A	21 (533.4)
	30		B	27 (685.8)
	42		C	34 (863.6)
225	18	MLO	B	21 (533.4)
	24		A	23.5 (596.9)
	30		B	27 (685.8)
	42		C	34 (863.6)
	60		E	42 (1066.8)
400	24	MLO	B	48 (1219)
	30		D	48 (1219)
	42		E	48 (1219)
Main Breaker				
100	18	BAB	A	21 (533.4)
	30		B	27 (685.8)
	42		C	34 (863.6)
100	18	EHD	B	30 (762)
	30		D	36 (914.4)
	42		E	42 (1066.8)
100	18	QBHW	A	21 (533.4)
	30		B	27 (685.8)
	42		C	34 (863.6)
100	18	ED	B	30 (762)
	30		D	36 (914.4)
	42		E	42 (1066.8)
100	18	EDH	B	30 (762)
	30		D	36 (914.4)
	42		E	42 (1066.8)
225	18	ED	B	30 (762)
	30		D	36 (914.4)
	42		E	42 (1066.8)
225	18	EDH	B	30 (762)
	30		D	36 (914.4)
	42		E	42 (1066.8)

Table 3-17. Standard Trim Selection — 20-Inch (508.0 mm) Wide Enclosure

		Surface Type			Flush Type		
			Trim Dimensions			Trim Dimensions	
Trim Door Size Code	Enclosure Height In (mm)	Catalogue Number	Height In (mm)	Width In (mm)	Catalogue Number	Height In (mm)	Width In (mm)
A	24 (609.6)	**RTA2024**	24 (609.6)	20 (508)	**RTA2226**	26 (660.4)	22 (558.8)
A	30 (762)	**RTA2030**	30 (762)	20 (508)	**RTA2232**	32 (812.8)	22 (558.8)
A	36 (914.4)	**RTA2036**	36 (914.4)	20 (508)	**RTA2238**	38 (965.2)	22 (558.8)
B	30 (762)	**RTB2030**	30 (762)	20 (508)	**RTB2232**	32 (812.8)	22 (558.8)
B	36 (914.4)	**RTB2036**	36 (914.4)	20 (508)	**RTB2238**	38 (965.2)	22 (558.8)
B	42 (1066.8)	**RTB2042**	42 (1066.8)	20 (508)	**RTB2244**	44 (1117.6)	22 (558.8)
B	48 (1219.2)	**RTB2048**	48 (1219.2)	20 (508)	**RTB2250**	50 (1270)	22 (558.8)
C	36 (914.4)	**RTC2036**	36 (914.4)	20 (508)	**RTC2238**	38 (965.2)	22)558.8)
C	42 (1066.8)	**RTC2042**	42 (1066.8)	20 (508)	**RTC2244**	44 (1117.6)	22 (558.8)
C	48 (1219.2)	**RTC2048**	48 (1219.2)	20 (508)	**RTC2250**	50 (1270)	22 (558.8)
D	30 (762)	**RTD2030**	30 (762)	20 (508)	**RTD2232**	32 (812.8)	22 (558.8)
D	36 (914.4)	**RTD2036**	36 (914.4)	20 (508)	**RTD2238**	38 (965.2)	22 (558.8)
D	42 (1066.8)	**RTD2042**	42 (1066.8)	20 (508)	**RTD2244**	44 (1117.6)	22 (558.8)
D	48 (1219.2)	**RTD2048**	48 (1219.9)	20 (508)	**RTD2250**	50 (1270)	22 (558.8)
E	36 (914.4)	**RTE2036**	36 (914.4)	20 (508)	**RTE2238**	38 (965.2)	22 (558.8)
E	42 (1066.8)	**RTE2042**	42 (1066.8)	20 (508)	**RTE2244**	44 (1117.6)	22 (558.8)
E	54 (1371.6)	**RTE2054**	54 (1371.6)	20 (508)	**RTE2256**	56 (1422.4)	22 (558.8)
E	60 (1524)	**RTE2060**	60 (1524)	20 (508)	**RTE2262**	62 (1574.8)	22 (558.8)

Table 3-18. Standard Trim Selection

		Surface Type			Flush Type		
			Trim Dimensions			Trim Dimensions	
Trim Door Size Code	Enclosure Height In (mm)	Catalogue Number[1]	Height In (mm)	Width In (mm)	Catalogue Number	Height In (mm)	Width In (mm)
A	24 (609.6)	**RTA1424**	24 (609.6)	14 (355.6)	**RTA1626**	26 (660.4)	16 (406.4)
A	30 (762)	**RTA1430**	30 (762)	14 (355.6)	**RTA1632**	32 (812.8)	16 (406.4)
A	36 (914.4)	**RTA1436**	36 (914.4)	14 (355.6)	**RTA1638**	38 (965.2)	16 (406.4)
B	30 (762)	**RTB1430**	30 (762)	14 (355.6)	**RTB1632**	32 (812.8)	16 (406.4)
B	36 (914.4)	**RTB1436**	36 (914.4)	14 (355.6)	**RTB1638**	38 (965.2)	16 (406.4
B	42 (1066.8)	**RTB1442**	42 (1066.8)	14 (355.6)	**RTB1644**	44 (1117.6)	16 (406.4)
C	36 (914.4)	**RTC1436**	36 (914.4)	14 (355.6)	**RTC1638**	38 (965.2)	16 (406.4)
C	42 (1066.8)	**RTC1442**	42 (1066.8)	14 (355.6)	**RTC1644**	44 (1117.6)	16 (406.4)
C	48 (1219.2)	**RTC1448**	48 (1219.2)	14 (355.6)	**RTC1650**	50 (1270)	16 (406.4)
D	30 (762)	**RTD1430**	30 (762)	14 (355.6)	**RTD1632**	32 (812.8)	16 (406.4)
D	36 (914.4)	**RTD1436**	36 (914.4)	14 (355.6)	**RTD1638**	38 (965.2)	16 (406.4)
D	42 (1066.8)	**RTD1442**	42 (1066.8)	14 (355.6)	**RTD1644**	44 (1117.6)	16 (406.4)
E	36 (914.4)	**RTE1436**	36 (914.4)	14 (355.6)	**RTE1638**	38 (965.2)	16 (406.4)
E	42 (1066.8)	**RTE1442**	42 (1066.8)	14 (355.6)	**RTE1644**	44 (1117.6)	16 (406.4)
E	48 (1219.2)	**RTE1448**	48 (1219.2)	14 (355.6)	**RTE1650**	50 (1270)	16 (406.4)

[1] 14-Inch (355.6 mm) Wide Enclosure (PRL1R only)

Custom Trim Selection

Instructions

In order to accommodate instances where the standard trims (**Tables 3-18** and **3-19**) do not suit an installation, custom-sized trims may be ordered. Since the trim mounts to the retrofit chassis, and not the existing enclosure, custom trims can solve many problems encountered with differing enclosure sizes and configurations. Use the dimension and sizing parameters listed below to define a custom trim catalogue number. Contact Eaton to ensure manufacturability and determine lead time required.

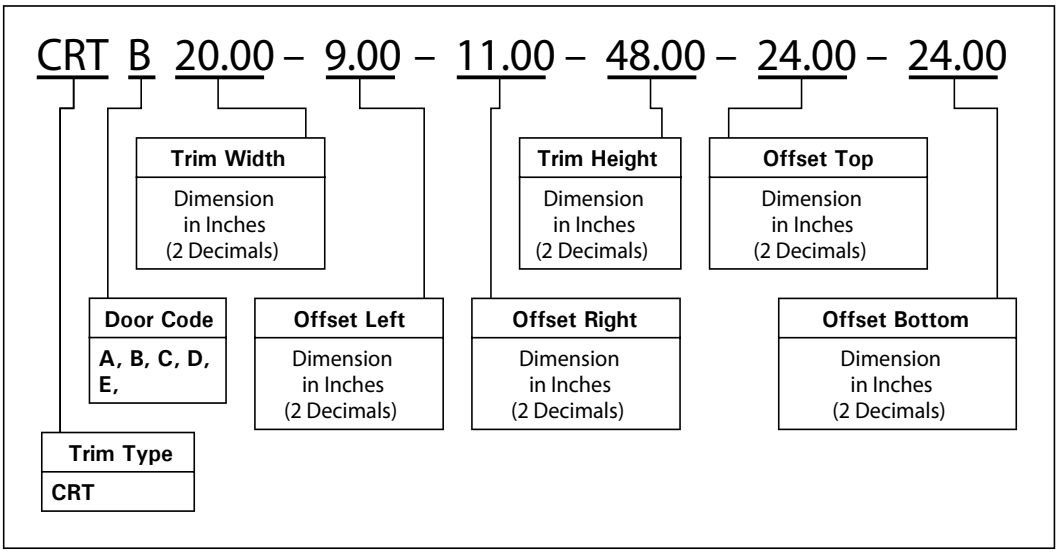
Outer Dimensions

The outer dimensions are the overall OUTSIDE dimensions of the trim. In surface-mounted applications, this is usually the same as the outside dimensions of the enclosure to be renovated. For flush-mounted applications, an additional amount of trim material extends beyond the outer edge of the box, in order to cover any gap between the wall material and the box. Extending the outer dimensions can cover larger than normal wall gaps or imperfections that may be encountered.

W = Trim Width — Total outside width of the TRIM, including that required to overlap the box in a flush application.

H = Trim Height — Total outside length of the TRIM, including that required to overlap the box in a flush application.

Table 3-19 Catalogue Numbering System



Note: This example is for a custom trim that has overall dimensions of 20 inches (508.0 mm) in width and 48 inches (1219.2 mm) in height. The trim door is offset 1.00 inch (25.4 mm) to the RIGHT, in order to accommodate a flush-mounted, double-tub arrangement in which the boxes are bolted together without any spacers.

Offset

Offset allows a retrofit chassis to be relocated from the central mounting position required for standard trims. This can accommodate many challenging site conditions such as short cables, physical obstructions, close coupled boxes…etc.

OR = Offset Right — This is the distance from the centreline of the CHASSIS to the right-hand edge of the TRIM.

OL = Offset Left — This is the distance from the centreline of the CHASSIS to the left-hand edge of the TRIM.

OT = Offset Top — This is the distance from the centreline of the CHASSIS to the top edge of the TRIM.

OB = Offset Bottom — This is the distance from the centreline of the CHASSIS to the bottom edge of the TRIM.

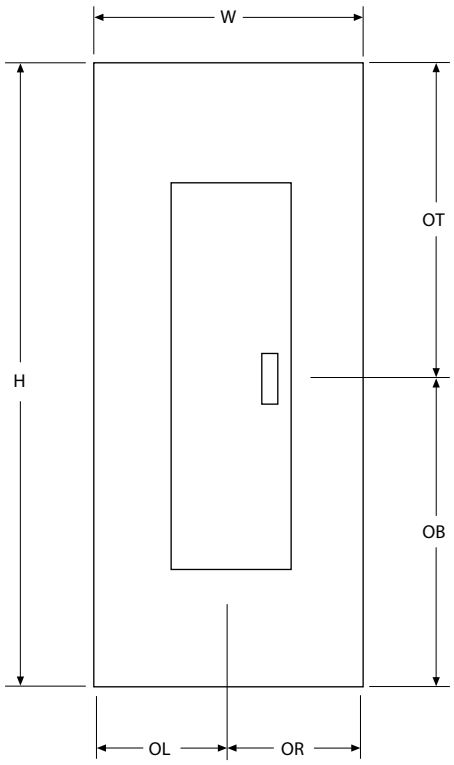


Figure 3-3. Custom Trim Dimensions

Application Guide

Surface-Mount Panelboards — Data Sheet

Electrical Data
Panel Designation or Location

_____

_____

Service:_____Vac _____Phase _____Wire

Circuits:_____

Bus Amps:_____(A)

❑ Main Lugs Only
❑ Main Breaker
❑Top Entry
❑ Bottom Entry

Amps:_____(A)

Existing Enclosure Dimensions
S elect only one dimension F or FF

H:_____

W:_____

D:_____

F:_____ or FF:_____

❑ Enclosure has no Flange

Table 3-30. Branch Breakers

Breaker Type	Amps	Poles	CCT		Poles	Amps	Breaker Type
			1	2			
			3	4			
			5	6			
			7	8			
			9	10			
			11	12			
			13	14			
			15	16			
			17	18			
			19	20			
			21	22			
			23	24			
			25	26			
			27	28			
			29	30			
			31	32			
			33	34			
			35	36			
			37	38			
			39	40			
			41	42			

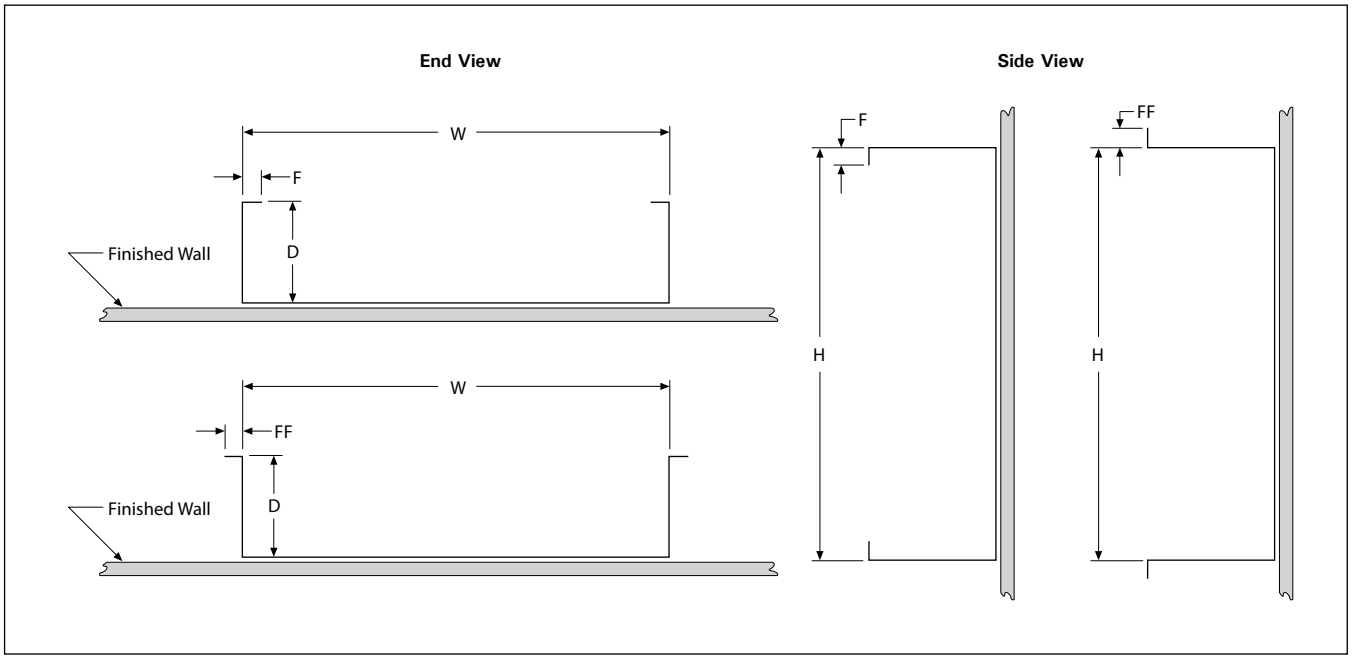


Figure 3-3. Surface Mount Panelboards — Dimensions

3

Flush-Mount Panelboards — Data Sheet

Electrical Data
Panel Designation or Location

_____

_____

Service:_____Vac _____Phase _____Wire

Circuits:_____

Bus Amps:_____(A)

❑ Main Lugs Only
❑ Main Breaker
❑ Top Entry
❑ Bottom Entry

Amps:_____(A)

Existing Enclosure Dimensions
S elect only one dimension F or FF

H:_____ HH:_____

W:_____ WW:_____

D:_____ DD:_____

F:_____ or FF:_____

❑ Enclosure has no Flange

Table 3-31. Branch Breakers

Breaker Type	Amps	Poles	CCT		Poles	Amps	Breaker Type
			1	2			
			3	4			
			5	6			
			7	8			
			9	10			
			11	12			
			13	14			
			15	16			
			17	18			
			19	20			
			21	22			
			23	24			
			25	26			
			27	28			
			29	30			
			31	32			
			33	34			
			35	36			
			37	38			
			39	40			
			41	42			

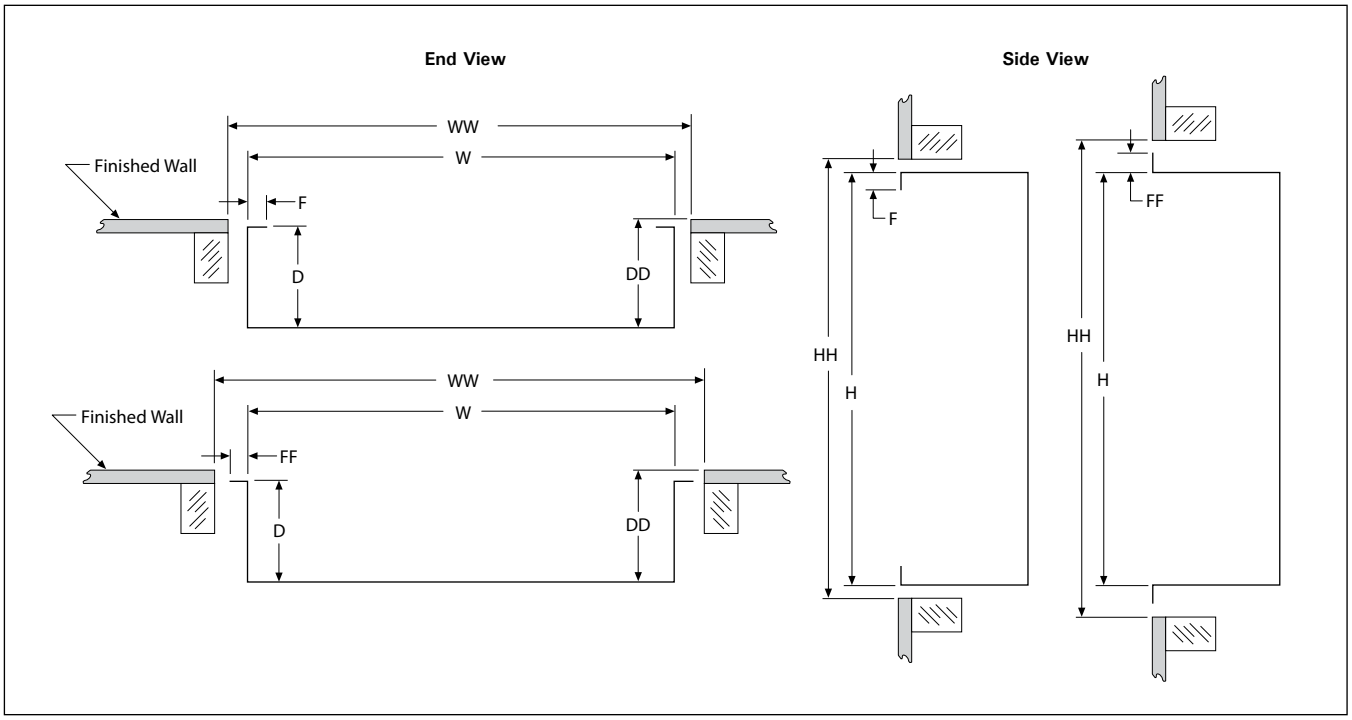


Figure 3-4. Surface Mount Panelboards — Dimensions

Chassis Mounting

In some applications it is required to drill mounting holes that match the location of hardware points (studs or bolts) in the existing panel. All dimensions to these hardware points are measured from the CENTRELINE of the enclosure. Follow the guidelines below to ensure that these holes are located properly, ensuring a quick and easy installation.

1. Measure and mark the vertical centreline point. This measurement should be taken from the INSIDE surface of the enclosure's END.
2. Measure and mark the horizontal centreline point. This measurement should be taken from the INSIDE surface of the enclosure's SIDE.
3. Measure the distance from the centreline marks to the centre of the hardware point to be matched and record below.
4. Measure and record the diameter of the stud or bolt to be matched.

In some cases the mounting hardware may NOT be placed symmetrically about the centre of the enclosure. Ensure that all desired hardware locations are measured to the CENTRELINE.

H:_____

W: _____

ST:_____

SB: _____

SL: _____

SR: _____

D: _____ (Bolt or Stud Diameter)

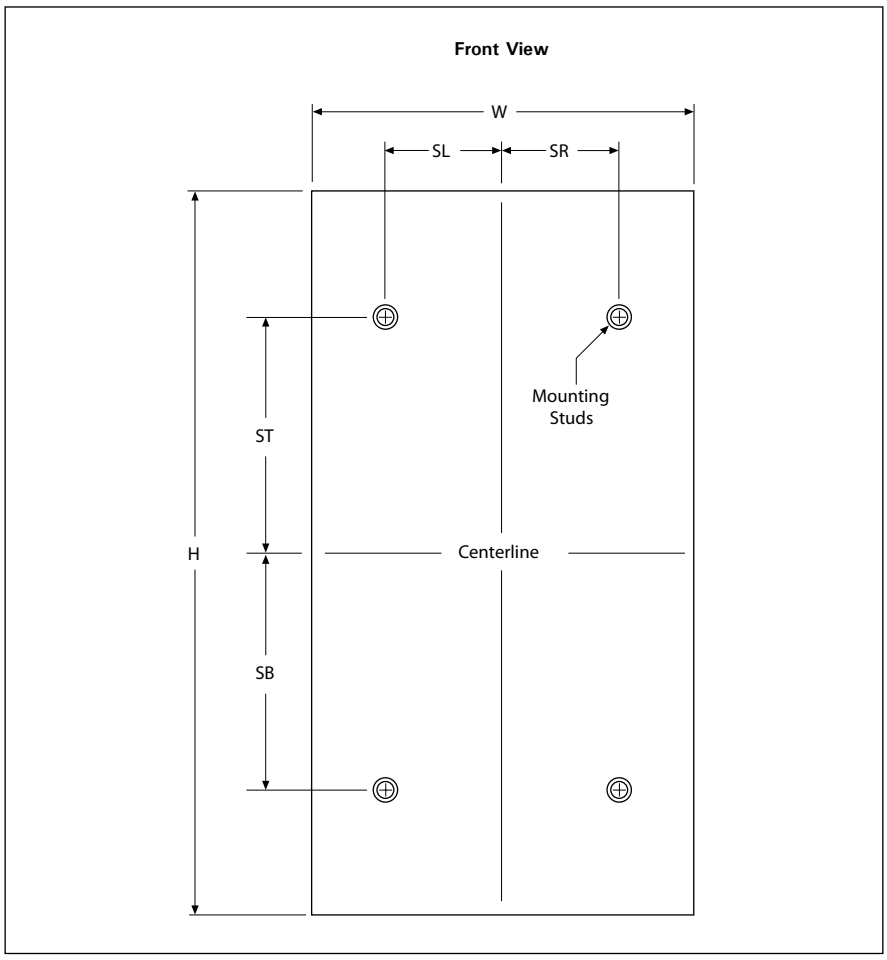


Figure 3-4. Chassis Mounting Dimensions

PRL 4R

Contents

Retrofit Panelboard

Product Description

- 600Vac maximum
- 3-phase 4-wire, 3-phase 3-wire, 1-phase 3-wire, 1-phase 2-wire
- PRL4B circuit breaker panelboard
- 1200 ampere maximum
- 1200 ampere maximum branch devices
- Bolt-on branch devices

Application Description

- Eaton Installed Solution
- Retrofit applications with larger panels
- Commercial applications where a new panelboard would cost considerably more than a retrofit application
- PRL 4R retrofit panel includes all the options or PRL4 breaker panels

Standards and Certifications

- CSA C22.2 No. 29

Options and Accessories

- Refer to **Page 2-29**

Layout and Sizing

- Please consult Eaton for more information.

Field Measurment Guide

PRL 4 retrofit panels require several measurements in the field to ensure that the factory can build the retrofit panel as per the customer requirements. Please follow the below instructions for every PRL 4R panel. If exceptions needed, please consult Eaton.

Panel Designation: _____

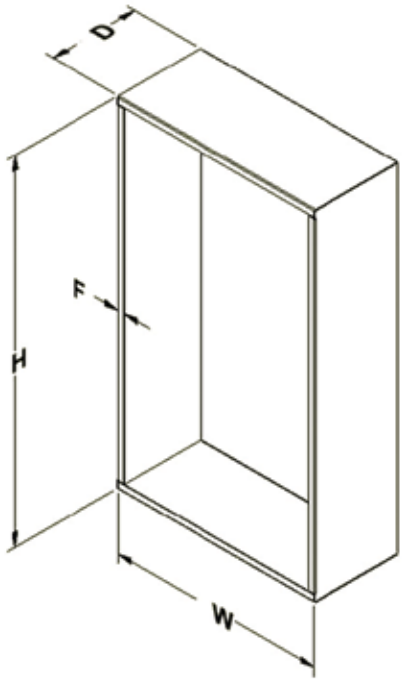
Box Details:

Width: _____ Height: _____ Depth: _____

Flange Dimensions: _____

Steel Thickness: _____

Door over distribution: _____



Chassis Bus and Breaker Details:

Main Breaker: _____ Main Lug: _____

Bus Amperage: _____

Main Breaker Amperage: _____

	Amperage	Frame	Cable Size
Branch Circuit 1			
Branch Circuit 2			
Branch Circuit 3			
Branch Circuit 4			
Branch Circuit 5			
Branch Circuit 6			
Branch Circuit 7			
Branch Circuit 8			
Branch Circuit 9			
Branch Circuit 10			
Branch Circuit 11			
Branch Circuit 12			
Branch Circuit 13			
Branch Circuit 14			

Pow-R-Command™ Family

Eaton's Pow-R-Command family of lighting control panelboards are designed to meet the lighting control needs for buildings of all sizes and complexity. The system incorporates microprocessor-based distributed intelligence within a traditional panelboard, simplifying wiring in the field. The system can be networked over customers or directly interfaced to the Internet allowing for password protected web access. The panelboard design allows the Pow-R-Command lighting control system to meet short circuit ratings, as required by the CSA.

Lighting Control Overview

Traditional lighting control employs lighting contactors or relay panels to turn groups of lighting on or off. Input devices are typically time clocks, photo cells, wall switches, or, in more sophisticated applications, contact inputs from a building automation system (BAS). Pow-R-Command is a lighting control panelboard with remote controllable circuit breakers. These controllable circuit breakers perform a dual function:

1. They provide the overcurrent and overload protection for the circuit.
2. They perform the same function as relays and contactors in traditional lighting control systems, opening and closing the circuit in response to a remote signal.

Design Considerations

Short Circuit Protection: In the past, contactors or relay panels were mounted close to the lighting load and short circuit ratings were not a major concern. Today, most of the lighting control devices are located in electrical rooms, often adjacent to the panelboards that feed them. These devices are subjected to short circuit conditions almost as high as those of the electrical distribution equipment.

The current version of the National Electrical Code now requires that these lighting control devices carry a short circuit rating (Article 110-10). Although some traditional lighting control components are available with short circuit ratings, these ratings are limited and may require upstream fusing.

A lighting control panelboard makes meeting the requirements of NEC 110-10 as simple as specifying the short circuit rating of the panelboard.

Flexibility: Lighting control panelboards allow simple and inexpensive changes during start-up. Contactor and relay panels often require rewiring to make changes in the field.

Choices: Eaton lighting control panelboards offers varying levels of flexibility, from six zones per panel with the Pow-R-Command 25 up to 250 zones per panel with the Pow-R-Command 2000. We have added wireless capabilities using our Pow-R-Command Small building Controller with wireless I/O modules.

Space: Lighting control panelboards eliminate contactor panels and/or relay panels, freeing up valuable wall space. Pow-R-Command panels are the same width as standard panelboards.

Retrofit Applications: Retrofitting traditional lighting control methods into an existing electrical distribution system often requires extensive rewiring and unwanted downtime. In most cases, a Pow-R-Command panel interior can be installed into an existing panelboard back box, and the cables can be re-terminated on the new circuit breakers, with minimal downtime. The wireless I/O modules also allow for discrete ON/OFF load control through and on-board relay capable of switching 120V or 277V ballasts.

Installation Considerations

Simplicity: Lighting control panelboards are as easy to install as standard panelboards. There are no additional components to install.

Labour: Because contactors and relays are eliminated, the labour associated with installing them and the additional cables and conduit associated with them is eliminated.

Start-up : Start-up for the Pow-R-Command panelboards is straightforward. The PRC25 requires no startup. It is prewired at the factory. The PRC750 is provided with an LCD display and keypad for on-site programming. The PRC2000B is programmed over the network. They have an optional display available for local interface.

Operational Considerations

Failure Modes: If a lighting contactor or relay fails to operate due to a mechanical or control system failure, it is very difficult to control the lights manually. Often, it is necessary to hard-wire around the device on a temporary basis. With a lighting control panelboard system, the circuit breaker can be manually switched on or off as necessary until the system is back in operation.

Flexibility: In many cases, the lighting control scheme may change over the life of the facility. With traditional lighting control methods, changes require major rewiring and facility downtime. Breaker control schemes can be changed within the lighting control panelboard, often with a simple modification through software.

Table 3-20. Pow-R-Command Product Features

Controller	PRC-25	PRC-750	PRC-2000B
Mandatory EATON Start-up and Integration Required	no	no	no①
Inputs			
Switch	6	8	8
Universal (Switch or Analogue)	0	8	8
Optional Switch Input Expander	0	0	48
Total Inputs	6	16	64
Outputs			
Outputs Digital (Maximum Controllable Zones)	6	16	75
Analogue	0	0	4
Universal I/O Module	no	no	yes
Telephone Override	no	no	yes
Data Logging	no	no	yes
Remote Access	no	no	yes
Power Supply for External Devices	n/a	yes	yes
Maximum Number of Loads (Breaker/Relay)	42	168	168
Number of Satellite Panels	0	7②	7②
Manual Override	yes	yes	yes
Dimming	no	no	yes
Maximum Number of Dimming Ballasts	0	0	160
Daylight Harvesting (Using Dimming Ballasts)	no	no	yes
Daylight Switching (On/Off Circuit Switching)	yes	yes	yes
Time Clock	no	yes	yes
Time Schedules	no	yes	yes
Scheduling Zones	n/a	75	75/250③
On/Off Periods per Schedule	n/a	50	50
Holidays	n/a	30	30/16④
Blink Notice	no	yes	yes
Maximum Override Time (hrs)	n/a	24	24
RS -232 Port	no	no	no
RS -485 Port	no	no	yes
Ethernet Port	no	no	yes
Ethernet via External Gateway	no	no	yes
Input/Output Matrix Across Controllers	no	no	yes
Input/Output Matrix Within Controllers	no	yes	yes
Local LCD/LED Display	no	yes	option
Local LED Status Indicators	yes	yes	yes
Non-Volatile Program Memory	no	yes	yes
Battery Back-up for Program Memory	n/a	10 yrs	10 yrs
Clock Memory Back-up	n/a	10 yrs	10 yrs
Flash Firmware Memory	n/a	yes	yes
Protocols			
Modbus® AS CII/RTU	n/a	no	n/a
Modbus TCP	n/a	no	n/a
Johnson Controls® N2	n/a	no	n/a
BACnet	n/a	no	yes
LonWorks®	n/a	no	n/a
SOAP/XML	n/a	no	n/a
OPC	n/a	no	yes

① Start-up and Integration by Eaton is not mandatory when utilizing the PRC2000B with BACNET® protocol.
② Each rail drives 21 breakers. Rails can be distributed individually over a total of eight panels (max. SLAN wire-length of 150ft.).
③ 250 additional schedules with optional Network Interface Box NIB.
④ 16 additional holidays with optional Network Interface Box NIB.

Table 3-21. Pow-R-Command Product Features (Continued)

Controller	PRC-25	PRC-750	PRC-2000B
Browser Access			
TCP/IP External Device	n/a	no	yes
Built-in Web Server			
TCP/IP	n/a	n/a	yes
BACnet IP server	n/a	n/a	yes
Standards			
UL® 916 Energy Management Equipment	yes	yes	yes
California Title 24	-	n/a	n/a
NEC® 110-10	-	yes	yes
UL 67 Panelboards	yes	yes	yes
CSA® C22.2 #29 Panelboards	yes	yes	yes
Baud Rate	n/a	9.6k	9.6k
Maximum Controllers/Network	n/a	1	1800
Password Protected	no	yes	yes
Mounting			
3-Pole Breaker Housing	no	no	no
External Bracket Mount Available	yes	yes	yes

Pow-R-Command 25 (PRC25)

Eaton's PRC25 Panelboard replaces contactors and relay panels in lighting control and other load switching systems. It is the most basic and cost-effective way to remotely control loads. The PRC25 is ideal for any building that requires a fixed lighting control scheme with a low installed cost. Examples may include small commercial buildings, tenant spaces, and other light commercial facilities.

Pow-R-Command 750

Eaton's PRC750 is designed for stand-alone applications, the PRC750 is a premier microprocessor-based lighting control system that can be used to control all of the lighting in your industrial facilities, high-rise office buildings and airports. A single PRC750 panel can be connected to a maximum of three expansion panels for the ability to control up to a total of 168 Smart Breakers. The PRC750 also boasts load override, holiday scheduling, memory loss protection, astronomical time clocks and scheduling, 16 switch inputs, and alarm and message log features.

Pow-R-Command 2000B (PRC2000B)

Eaton's PRC2000B is a microprocessor-based programmable lighting control system that can be used to control all of the lighting in your industrial facilities,high-rise office buildings and airports. Being on the cutting edge of technology, the Pow-R-Command 2000B is an IP-based device with an embedded web server and allows communication over Building Automation and Control Network (BACnet).

Capable of being utilized in both standalone and networkable applications, the PRC2000B can incorporate both standard branch mounted breakers and controllable thermal-magnetic breakers for tailored control. The System Controller also includes load override, holiday scheduling, oneshot or event schedules, or warning to tenants, memory loss protection, hardware diagnostics and real-time clock for optimal energy management functions.

Sustainability – Green Buildings
Solutions for a Greener Planet

Environmental stewardship, innovation and leadership are becoming increasingly important as we take steps to create a sustainable environment for future generations by going green. This is particularly important when it comes to construction of new buildings or major renovations of older ones. To this end, Eaton Corporation offers a broad range of energy efficient and environmentally-friendly electrical solutions that can help a building go green and qualify for Leadership in Energy and Environmental Design (LEED) credits through the Canadian Green Buildings Council (CaGBC®).

For customers like you, Eaton offers an exceptional array of equipment, tools and services to reduce energy consumption and leave a smaller footprint on the world's environment. As you work to achieve your own goals for environmental sustainability, when you partner with Eaton, you can be sure your power equipment is doing its part too.

The world is more energy conscious these days. But unlike you, most of the world doesn't pay a utility bill that rivals the cost of a four bedroom home. You understand the need to know where energy is being expended in your facility and how you can make it more of an asset and less of a chronic liability.

It starts with the right products in the right places. Whether you are looking for a special piece of gear to help identify energy loss, or a full blown solution for full blown asset optimization, you are bound to find what you need from Eaton.

Through automated building management systems you reduce your energy consumption by 10 to 30 percent. Simple protocols can control your facilities lighting, heating and air conditioning, and electrical loads. End the manual exercise of checking where energy is being wasted. Eaton's industry-leading Pow-R-Command™ lighting control systems turn off the lights when a space is empty.

A lighting control system can contribute significantly to achieving LEED credit points. The following represent potential points available when applying Eaton's Pow-R-Command as part of a lighting control system.

- SS Credit 8: Lighting Pollution Reduction (1 point)
- EA Prerequisite 1: Fundamental Commissioning of the Building Energy Systems (Required)
- EA Prerequisite 2: Minimum Energy Performance (Required)
- EA Credit 1: Optimize Energy Performance (1–10 points)
- EA Credit 3: Enhanced Commissioning (1 point)
- EA Credit 5: Measurement & Verification (1 point)
- EQ Credit 8.1: Daylight & Views: Daylight 75% of Spaces (1 point)
- ID Credit 1–1.4: Innovation in Design (1–4 points)

For more information see Eaton's LEED Credits Guide – SA08300002E Latest Revision.

Pow-R-Command 2000

General Description

Eaton's Pow-R-Command 2000 microprocessor-based programmable lighting control system with an embedded webserver for robust control. The PRC2000 can be used as a standalone panelboard or networked as a system. An upgrade can be purchased to integrate the unit within BACnet native control networks.

Features

PRC 2000/750 common features list see **Page 3-19**.

- LCD display and keypad.
- Memory loss protection.
- Power failure/brownout recovery.
- Astronomical real-time clock.
- Time scheduling.
- Holiday scheduling.
- Input to output switch matrix.
- Message/alarms.
- Daylight optimization.
- Switch Override Controller (SOC).
- Telephone Override Controller (TOC).

Components

- Embedded webserver.
- Intelligent power switching equipment.
- LCD programming display and keypad.
- Application Specific Controllers (ASCs).
- Software and support.
- Integration components.

Intelligent Power Switching Equipment

Pow-R-Command 2000 Panelboards

Pow-R-Command 2000 Panelboards are offered from 100 through 225 amperes in main lug and main breaker configurations. Available voltages are 120/240, 208Y/120 and 480Y/277, single-phase and 3-phase. The panelboard utilizes both branch mounted standard breakers through 100 amperes, and controllable thermal-magnetic breakers which are controlled by the Pow-R-Command 2000 System Controller. The Pow-R-Command 2000 controllers provide the ability to directly operate up to eight breaker control buses. Such a capability allows a single controller to directly operate up to 168 GHQRSP and BABRSP controllable circuit breakers, with individual control and status feedback of each controllable breaker.

The System Controller also includes load override, holiday scheduling, one-shot or event schedules, off warning to tenants by blinking lights, memory loss protection, power failure/brownout protection, hardware diagnostics, a real-time clock and 16 dry contact switch inputs.

Equipment within the Pow-R-Command 2000 System may be networked. Up to 120 panelboards may be networked over a shielded twisted pair network cable without the need for a personal computer in the system.

The Pow-R-Command 2000 Panelboard is CSA approved to C22.2 No 29.

BACnet Protocol

The PRC2000 unit can be upgraded to the "B" series for integration within BACnet native control networks. BACnet is a communications protocol widely used in building automation and controls and adds even more flexibility to the control system.

Pow-R-Command 750

General Description

Eaton's Pow-R-Command 750 is a microprocessor-based programmable lighting control system. The Pow-R-Command 750 can be used as a stand-alone panel, or the user has the option to connect up to three expansion panels to the 750 creating its own stand-alone subnetwork.

Features

PRC 2000B/750 common features list see **Page 3-19**.

- LCD display and keypad.
- Memory loss protection.
- Power failure/brownout recovery.
- Astronomical real-time clock.
- Time scheduling.
- Holiday scheduling.
- Input to output switch matrix.
- Message/alarms.
- Daylight optimization.
- Switch Override Controller (SOC).
- Telephone Override Controller (TOC).

Components

- Intelligent power switching equipment.
- LCD programming display and keypad.
- Integration components.

Intelligent Power Switching Equipment

Pow-R-Command 750 Panelboards

Pow-R-Command 750 Panelboards are offered from 100 through 225 amperes in main lug and main breaker configurations. Available voltages are 120/240, 208Y/120 and 480Y/277, single-phase and 3-phase. The panelboard utilizes both branch mounted standard breakers through 100 amperes, and controllable thermal-magnetic breakers which are controlled by the Pow-R-Command 750 System Controller. The Pow-R-Command 750 controllers provide the ability to directly operate up to eight breaker control buses. Such a capability allows a single controller to directly operate up to 168 GHQRSP and BABRSP controllable circuit breakers, with individual control and status feedback of each controllable breaker.

The System Controller also includes load override, holiday scheduling, one-shot or event schedules, off warning to tenants by blinking lights, memory loss protection, power failure/brownout protection, hardware diagnostics, a real-time clock and 16 dry contact switch inputs.

The Pow-R-Command 750 Panelboard is CSA approved to C22.2 No 29.

Pow-R-Command 25

General Description

Eaton's Pow-R-Command 25 is designed to replace lighting control systems involving multi-pole lighting contactors and relay panels. The Pow-R-Command 25 utilizes controllable circuit breakers in a panelboard which are grouped into zones and switched by a dry or control signal contact from an external source. **The controllable breakers are pre-wired at the factory in up to six customer-designated zones with up to 16 breakers per zone.**

Note: Refer to Eaton for zoning restrictions.

Components

- Intelligent power switching equipment.
- Maintained-to-momentary board (MTM).

Intelligent Power Switching Equipment

Pow-R-Command 25 Panelboards are offered from 100 through 400 amperes in main lug and main breaker configurations. Available voltages are 120/240, 480Y/277 Vac and 208Y/120, single-phase and 3-phase. The panelboard utilizes both branch mounted standard breakers through 100 amperes and controllable thermal- magnetic breakers which are controlled by the MTM.

System Configurations

The Pow-R-Command 25 Panelboard provides the ability to group up to 42 remotely operated controllable breakers into six individual zones. Each zone is designed to be switched by a dry or control signal contact from an external device. Each Pow-R-Command 25 panelboard has an integral zoning board where the zone designations are pre-wired at the factory and linked to specific contact inputs. Limited changes may be made to zone designations in the field through wiring changes.

The Pow-R-Command 25 Panelboard is CSA approved to C22.2 NO 29.

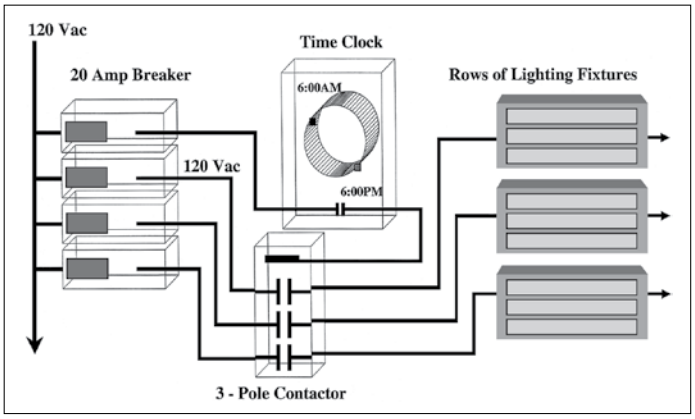


Figure 3-5. Typical Electrically Held Contactor Control System

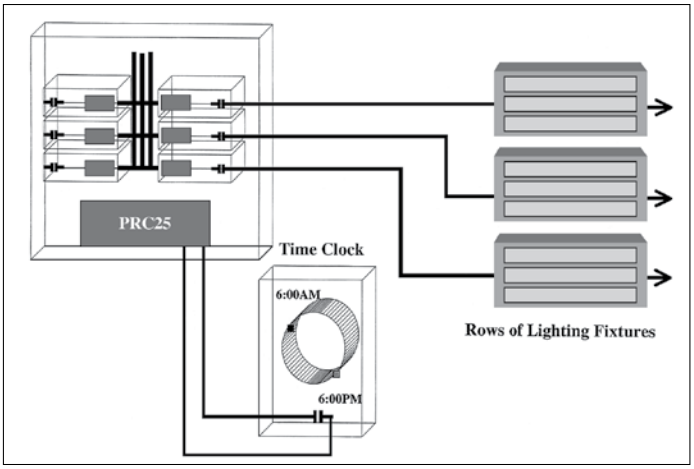


Figure 3-6. Typical Pow-R-Command 25 Panelboard System

BAS

Integration

The Pow-R-Command Lighting Control system can be integrated with Building Automation Systems via the following optional components:

- PRC2000 web-enabled BACnet Controller. The PRC2000 BACnet Controller provides direct interface via the web to a BACnet BAS system.

Refer to Eaton for further information on applying these interfaces.

The System Interface Equipment

- Provides Windows-based programming and monitoring screens. The personal computer functions as the central point for data manipulation and programming of the system. It communicates with the system through a network interface device that is connected to the system through a twisted pair network.

The Lighting Management Software

- Provides programming for the following equipment:
  - Power switching equipment
  - Application specific controllers
- The Lighting Management Software provides fully interactive easy-to-use software screens for the following functions:
  - System Setup
  - System Management
  - Controller Access and Modification
  - Data Logging and Back-up
  - Remote Monitoring
- The programming screens provide access to all the capabilities that exist in the power switching and application specific controllers.

System Configurations

PRC2000 Network Architecture

Containing an embedded webserver, each Pow-R-Command 2000 system is programmed with a unique IP address for communication via any standard Internet browser. Web access is standard with the PRC2000. Eight 21-circuit control buses configured as needed throughout PRL1 and 2 panels. The PRC2000B directly interfaces to a BACnet Client Workstation.

Breaker Control Busses (BCB)

Every Pow-R-Command Expansion Panelboard can be configured with the left and/or right breaker control busses installed. When using PRC EP Panel with one BCB, the remote controlled breakers are placed on the side with the control bus. Standard and controlled breakers can be distributed anywhere in the panel as needed.

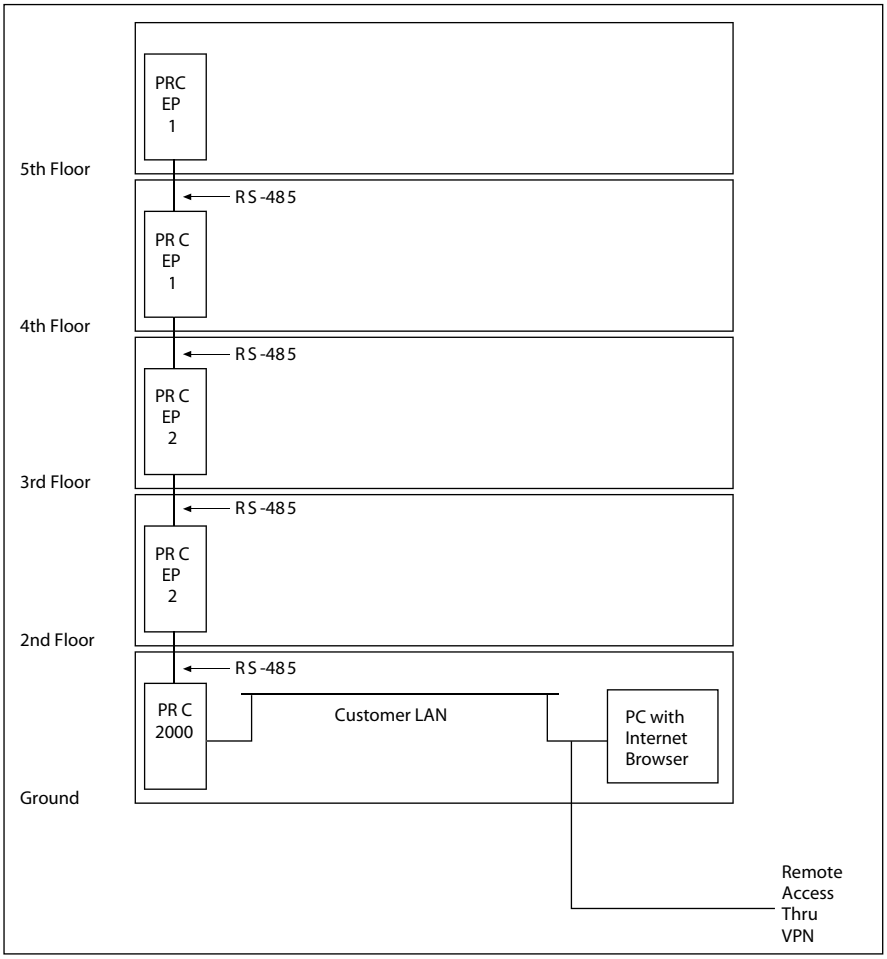


Figure 3-7. PRC2000 Breaker Control Busses

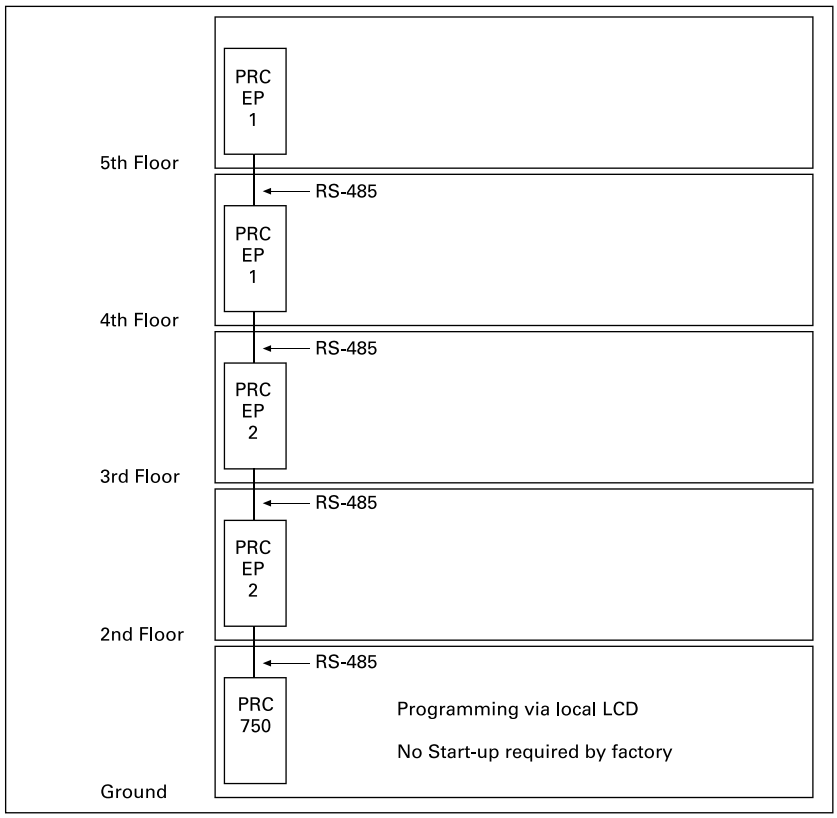


Figure 3.8. PRC750 Stand-alone System Architecture

Type BABRSP Solenoid-Operated, Remote-Controlled

BABRSP Breaker

General Description

BABRSP circuit breaker is a bolt-on branch circuit breaker designed for use in panelboards and are ideally suited for lighting control or energy management applications. In addition to providing conventional branch circuit protection, they include a unique solenoid-operated mechanism that provides for efficient breaker pulse-on and pulse-off operation when used with a suitable controller like Eaton's Pow-R-Command lighting control system. BABRSP-breaker can also be operated by a pushbutton, relay or PLC. A breaker status feature is included.

Note: BABRSP has monitoring only of the status of the breaker contacts.

Product Features

- Bolt-on line-side terminal.
- Cable connected load-side terminal.
- 3- or 4-wire (BABRP) control terminal.
- Status switch.
- Bi-metal assembly for thermal overload protection.
- Fast acting short circuit protection.
- Arc-runner and arc-chute assembly for fast acting arc extinction.
- Three-position handle: OFF, TRIP (Centre), ON.
- Handle permits manual switching when control power is lost.
- Mechanical trip indicator.
- 15 and 20 ampere breakers SWD (switching duty) rated.
- HID ratings for HID (high intensity discharge) lighting.

Note: For use in lighting control applications.

Table 3-22. BABRP and BABRSP UL 489 and CSA 22.2 Interrupting Ratings and Catalogue Numbers

Circuit Breaker Type	Number of Poles	Interrupting Capacity (Symmetrical Amperes) Ampere Rating①	Volts ac (50/60 Hz) 120	120/240
BABRSP1015	1	15	10,000	—
BABRSP1020	1	20	10,000	—
BABRSP1025	1	25	10,000	—
BABRSP1030	1	30	10,000	—
BABRSP2015	2	15	—	10,000
BABRSP2020	2	20	—	10,000
BABRSP2025	2	25	—	10,000
BABRSP2030	2	30	—	10,000

① Continuous current rating at 40°C.

Table 3-23. BABRP Wire Harness

Description	Catalogue Number
This 60-inch (1219.2 mm) wire pigtail provides a connection from a single BABRSP control plug to a customer's pushbutton, relay or PLC. Each box contains 12 pigtails. Wires are 22 AWG, 600 V. Order in multiples of 12.	**SLBKRPTL1**
Same as SLBKRPTL1 except 72 inches (1828.8 mm) long and connects up to four BABRSP breakers on the same pigtail. Each box contains 4 pigtails. Order in multiples of 4.	**SLBKRPTL4**
Same as SLBKRPTL4 except it connects up to six BABRSP breakers on the same pigtail. Each box contains 4 pigtails. Order in multiples of 4.	**SLBKRPTL6**

Type BABRSP and GHQRSP, Remote-Controlled

Remote Control Operation

The remote-control capability of the breaker is "armed" when the breaker handle is manually switched to the "ON" position. Once armed, the breaker can be pulsed "ON" and "OFF" by a controller device which provides an ac pulse of specified magnitude and duration to the solenoid operated mechanism. Control connections to the breaker are provided through a conductor plug (supplied by others). A normally open (a) auxiliary contact provides for "ON"/"OFF" status indication to the remote controller and/or indicating lamp.

In the event the breaker automatically trips, the breaker must be reset manually.

Breaker Control and Operating Data

- Ambient temperature: 0ºC – 40ºC.
- Nominal pulse magnitude: 28 Vac rms, 24 Vac (BABRP).
- Tolerance: +10% to -15% of nominal voltage.
- Pulse duration: 1/2 cycle (8 – 10 ms).
- Minimum recommended pulse current at nominal voltage:
  - BABRP, BABRSP, GHQRSP
    - 1-Pole: 1.0 amperes peak
    - 2-Pole: 2.0 amperes peak
- Breaker operating time: 20 – 40 ms.
- Maximum breaker cycling: six operations per minute.
- Humidity: 0 – 95% non-condensing.
- The BABRSP and GHQRSP are rated for 250,000 operations.

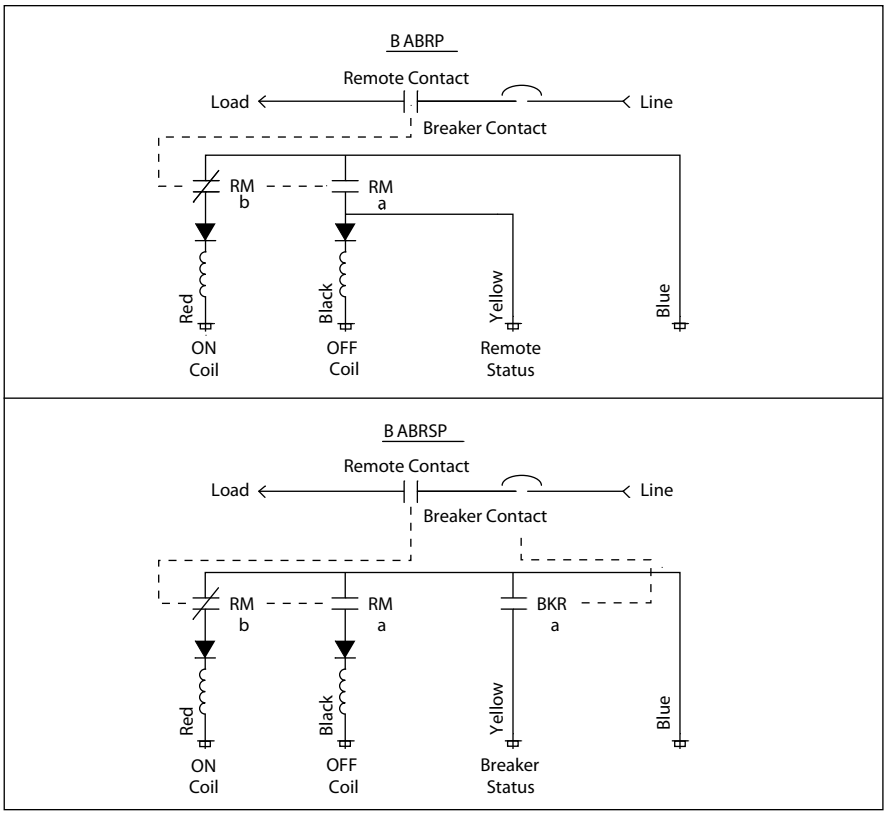


Figure 3-9. Circuit Breaker Schematic Diagram for the BABRP and BABRSP Breakers
Note: 2-pole breakers have two solenoids.

Technical Data

Panelboard Ratings

- Voltage:
  - 240 Vac
  - 480Y/277 Vac
- Main lugs:
  - 100 through 400 amperes
- Main breakers:
  - 100 through 400 amperes
- Branches:
  - 15 through 100 amperes
  - Controllable from 15 through 30 amperes

Interrupting Capacity (Symmetrical)

- 240 Vac: 65 kA maximum fully rated.
- 480Y/277 Vac maximum series rated 65 kA.

Service

- 3-phase, 4-wire 208Y/120 V, 480Y/277 Vac and 240/120 V Delta.
- Single-phase, 3-wire, 120/240 V.

Mains

For available mains, refer to **Table 3-24.**

Branch Circuits

For available branch circuit devices, refer to **Table 3-25.**

Main Lugs Only

The short circuit rating of the MLO assembled panelboard will be fully rated based upon the lowest rated branch device or may be series rated with an approved upstream device.

- Main lugs only ampere ratings:100 and 225 and 400.

Main Circuit Breakers

The short circuit rating shown is that of the main breaker only. The short circuit rating of the assembled panelboard is the rating of the lowest fully rated main or branch device or the rating of an approved series rating combination

Table 3-24. Main Circuit Breakers

Breaker Type	Frame Ampere Rating	Interrupting Rating (kA Symmetrical) 240V	480Y/277Y V
EHD	100	18	14
FDB	225	18	14
FD	225	65	35
HFD	225	100①	65
FDC	225	200①	100①
ED	225	65	—
EDH	225	100①	—
EDC	225	200①	—
JD	250	65	35
HJD	250	100①	65
JDC	250	200①	100①
KD	400	35	35
HKD	400	100①	100①

① Controllable breaker ratings limited to 65ka.

Branch Circuit Breakers

The type GHQRSP and BABRSP are the controllable circuit breakers. Controllable breakers are available in 1- and 2-pole styles, from 15 through 30 amperes. Non-controlled circuit breakers can be located within the panelboard chassis.

Table 3-25. Branch Circuit Breakers

Breaker Type	Ampere Rating	Number of Poles	Interrupting Rating (kA Symmetrical) 120 V	120/240 V	240 V	277 V	480 V
BAB	15-70	1	10	—	—	—	—
BAB	15-100	2	—	10	—	—	—
BAB	15-100	2, 3	—	—	10	—	—
BAB-D②	15-60	1, 2	10	10	—	—	—
BAB-C③	15-30	1, 2	10	10	—	—	—
BABRSP④	15-30	1, 2	10	10	—	—	—
GHQRSP④	15-20	1, 2	—	—	65	14	14
QBGF⑤, QBGFEP⑥	15-50⑦	1, 2	10	10	—	—	—

② HID (High Intensity Discharge) rated breaker.
③ Switching neutral breaker. 1-pole device requires 2-pole space; 2-pole device requires 3-pole space.
④ Controllable breaker.
⑤ GFCI for 5 mA personnel protection.
⑥ GFP for 30 mA equipment protection.
⑦ 50 ampere devices are available as 2-pole only.

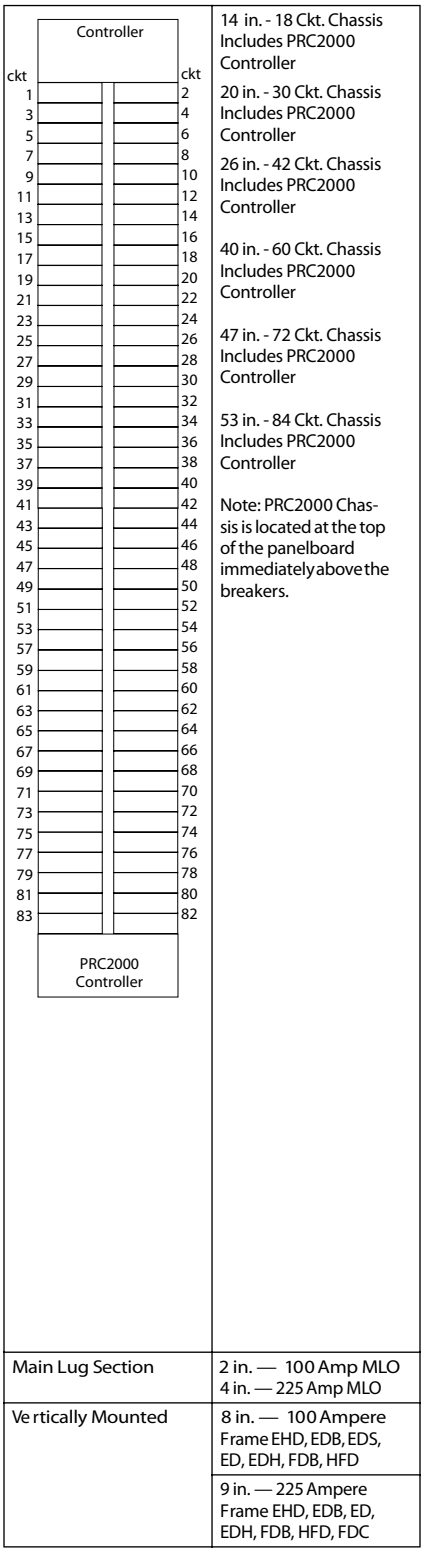


Figure 3-10. Pow-R-Command PRC2000 Layout

PRC2000 Panel Layout Instructions

1. Select PRC2000 Panelboard Chassis from **Figure 3-13**.
   a. Determine required mains (lugs or breaker)
   b. Select appropriate Main Lug
   c. Select appropriate Main Device
   d. Select appropriate branch breakers
2. Layout panel as shown in **Figure 3-13.** Total "in." determine box height shown in **Table 3-42** (When total "in." units exceeds the number shown, use next size box size.

Layout Example

1. Panel Description:
   a. PRC2000, 3-phase 4-wire, 208Y/ 120 Vac, interrupting rating of 10,000 AIC symmetrical: 225 ampere main lugs only at bottom, surface mounted and the following branch breakers
   b. 36 – 20 ampere, 1-pole BABRSP
   c. 6 – 20 ampere, 1-pole BABRSP spaces
2. Layout information from **Figure 3-13**.
   a. PRC2000 with 42-circuit Interior 26 in.
   b. 225 ampere Main Lugs Section 4 in.
   c. Total Panelboard Height 30 in.
3. From **Table 3-42**:
   a. Panel Height: 30 in. 20 in. wide x 5.75 in. deep
   b. Box Height: 48 in.
   c. Box Catalogue Number: EZB2048RC
   d. Trim Catalogue Number: EZT2048S

Table 3-26. Box Selection — Dimensions in Inches (mm)

Maximum Panel Height	Box Height Inches	Catalogue Number EZ Box	EZ Trim
20-Inch Wide x 5.75-Inch Deep Boxes			
0-22	36	**EZB2036R**	**EZT2036S or F**
23-28	42	**EZB2042R**	**EZT2042S or F**
29-34	48	**EZB2048R**	**EZT2048S or F**
35-46	60	**EZB2060R**	**EZT2060S or F**
47-58	72	**EZB2072R**	**EZT2072S or F**

Cabinets

Trims are code gauge steel, ASA 61 light gray painted finish. Boxes are code gauge galvanized steel without knockout. Standard size is 20 in. wide x 5.75 in. deep.

Top and Bottom Gutters

6.38 in.

Minimum Side Gutters

4 in. (minimum) on 20 in. wide box size.

Left Side	Right Side	"X" Space — Poles	
1-Pole ①	1-Pole ①	1X	EHD
2-Pole ①	2-Pole ①	2X	FDB, FD
1-Pole ①	3-Pole ①	3X	HFD, FDC
2-Pole ①			
2-Pole ①②		2X	ED, EDH, EDC
3-Pole ①②		3X	ED, EDH, EDC
		Add-On Chassis "X" – Poles 5X – 12 10X – 24	Breaker Frame GHB ③④⑤ or BAB ③⑤⑥⑦
ckt	ckt	20X – Pow-R-Command 100 EC Smart Expansion Chassis includes spaces for: 18 Poles:	GHQRSP, GHB ③④⑦ or BABRSP, BAB ③⑤⑥⑦
1	2		
3	4		
5	6		
7	8		
9	10		
11	12		
13	14		
15	16		
17	18		
Pow-R-Command 100 System Controller and 18 Pole Spaces for Controllable Breakers		**Note:** Smart chassis is always located at the bottom of the chassis immediately below all controllable breakers. All other breakers, excluding mains, are located above all controllable breakers.	
Expansion Chassis Accepts Up to 1 Application Specific Controllers			
Neutral Section		5X – 100, 250 Ampere 8X – 400 Ampere	
Main Lug Section		2X – 100 Ampere 5X – 250 Ampere 8X – 400 Ampere	
Main Devices Horizontally Mounted		See branch mounted – EHD, FD, FDB, HFD, FDC, ED, EDH, EDC Above	
		7X – EHD, FDB, FD, HFD, FDC, ED, EDH, EDC	
Vertically Mounted		7X – 100 Ampere Class "T" Fused Main	
		9X – 200 Ampere Class "T" Fused Main	
		9X – FB–P ⑧	
		14X – JD, HJD, JDC	
		15X – DK, KD, HKD, KDC ⑧	

① All "F" frame branch mounted breakers must be mounted above (top) of all controllable breakers on the chassis.
② ED, EDH and EDC branch mounted breakers may be mounted with load lugs on either left or right. Specify on order.
③ All add-on GHB/GHQRSP and BABRSP/BAB branch spaces must be adjacent to smart chassis poles.
④ GHQRSP and GHB breakers may be mixed on the same connector. GHB breakers are NOT controllable breakers.
⑤ Panelboards may have GHB/GHQRSP type breakers or BABRSP/BAB type breakers, but the two types may not be mixed in one panel.
⑥ BABRSP and BAB breakers may be mixed on the same connector. BAB breakers are not controllable breakers.
⑦ 20/240 V or 120/208 V only.
⑧ Top mounted main only.
⑨ LCL main breaker requires 6-1/2-inch (165.1 mm) deep box.

Pow-R-Command Digital Switch — system overview

General Overview

The Pow-R-Command™ (PRC) Digital Switch is a state-of-the-art microprocessor-based low voltage switch. Each switch has the ability to communicate directly to a Pow-R-Command 1000 line of the controllers over a dedicated switch network. This gives distributed control throughout the entire facility at a much lower cost of installation. In addition to advanced network features, each PRC Digital Switch is completely customizable and can be programmed to precisely meet customers' requirements for lighting control. All the programming features are stored directly in each switch's integrated memory, which adds to the robustness of the digital switch network. In addition, each switch is equipped with onboard inputs and outputs, which expands the switch's capability by allowing the connection of photo sensors, occupancy sensors, and/or dimmable ballasts directly to the switch.

Product layout and onboard I/O

The PRC Digital Switch is offered in multiple pushbutton configurations with colour options of white, black, or almond. Depending on the pushbutton configuration, each switch has a number of inputs and outputs available.

Analogue input: 0 to 10Vdc. Typically used to monitor a photo sensor or occupancy sensor.

Analogue output: 0 to 10Vdc. Used primarily for dimmable ballast control. Each analogue output can have up to 30 dimmable ballasts connected to it.

Digital input: Typically used for dry contact input from an occupancy sensor.

DC output: The 12 V/10 mA Vdc output is primarily used to power auxiliary devices such as the occupancy sensor and photo sensor.

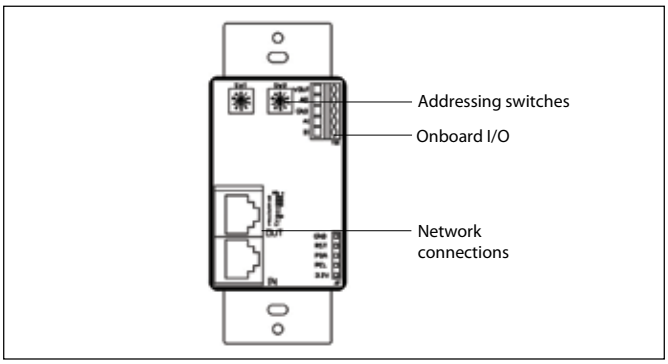


Figure 3-12. Digital switch

Table 3-27

Button Configuration	Analogue Input	Analogue Output	Digital Input	12 Vdc Output
2-button	√	√	√	√
4-button	√	√	√	√
6-button	√	√	x	√

Onboard memory

The PRC Digital Switch comes standard with onboard memory to store all programming and configuration. This allows for the switch network to have distributed intelligence. Rather than having all programming information for each switch stored at one centralized location, each switch stores its own configuration on its onboard memory. This keeps the switch network from having a centralized break point. If one switch were to fail, the integrity of the network would not be compromised, and the remaining switches would still function properly.

Easy installation

The PRC Digital Switch was designed to mount into a standard switch box. Switches on the basic network are powered by the Pow-R-Command controller; no additional power supply is required. The network uses standard 23-gauge CAT6 cable, and connections to each switch are made using standard RJ-45 connectors. Each switch can be easily addressed through the onboard rotary switches. For more information on installation, please reference the PRC Digital Switch Installation Guide—IL01412025E.

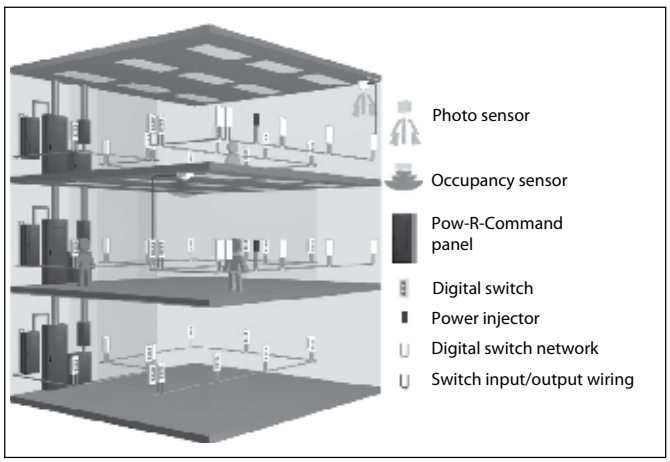


Figure 3-13. Lighting control in a commercial building

Programmable

With its ability to be custom programmed, each PRC Digital Switch offers complete flexibility to the end user. The PRC Digital Switch comes in two-pushbutton, four-pushbutton, and six-pushbutton configurations. Each pushbutton can be separately programmed to meet the customer requirements. The actions of the pushbutton can be programmed to: Momentary Toggle, Momentary ON, or Momentary OFF operation. The action executed when the pushbutton is pressed can be programmed to command any breaker or number of breakers in the facility. In addition to breaker and zone control, each pushbutton can be set to control multiple dimmable ballasts.

Pow-R-Command software: The Pow-R-Command Lighting Optimization Software will be used to configure and program each digital switch. Each configuration parameter is easily set through this user-friendly "point and click" interface. From the software, the user will have the ability to change a number of switch parameters. Switch pushbutton type: Each pushbutton on the switch can be adjusted to be a Momentary Toggle, Momentary ON, or Momentary OFF button type.

Switch pushbutton action: Each switch pushbutton on the device can be set up to execute a different action or command. Once the pushbutton is pressed, the switch will send a network command to execute the desired action. This action can be set to turn on any number of breakers throughout the facility, dim multiple ballasts, activate a digital output, and so on.

Analogue input: The analogue input is typically used to monitor a photo sensor or occupancy sensor. The action, like the switch pushbutton action, can be completely customized and typically is set to dim multiple ballasts throughout the facility by setting the analogue output.

Digital input: The digital input is typically used to monitor an occupancy sensor. The action, like the switch pushbutton and analogue input actions, can be completely customized and typically is set to control the Smart Breaker(s) associated with that room or space.

The screenshot in **Figure 3** shows a typical dimming program for a six-button switch with an occupancy sensor. This programming has set up five incremental dimming levels and an OFF function button on the switch. The value entry is the percentage setting of the analogue output to the dimmable ballasts. This gives the ability to set the maximum light output level at the switch. Also, the occupancy sensor input is programmed to activate and deactivate the lights automatically.

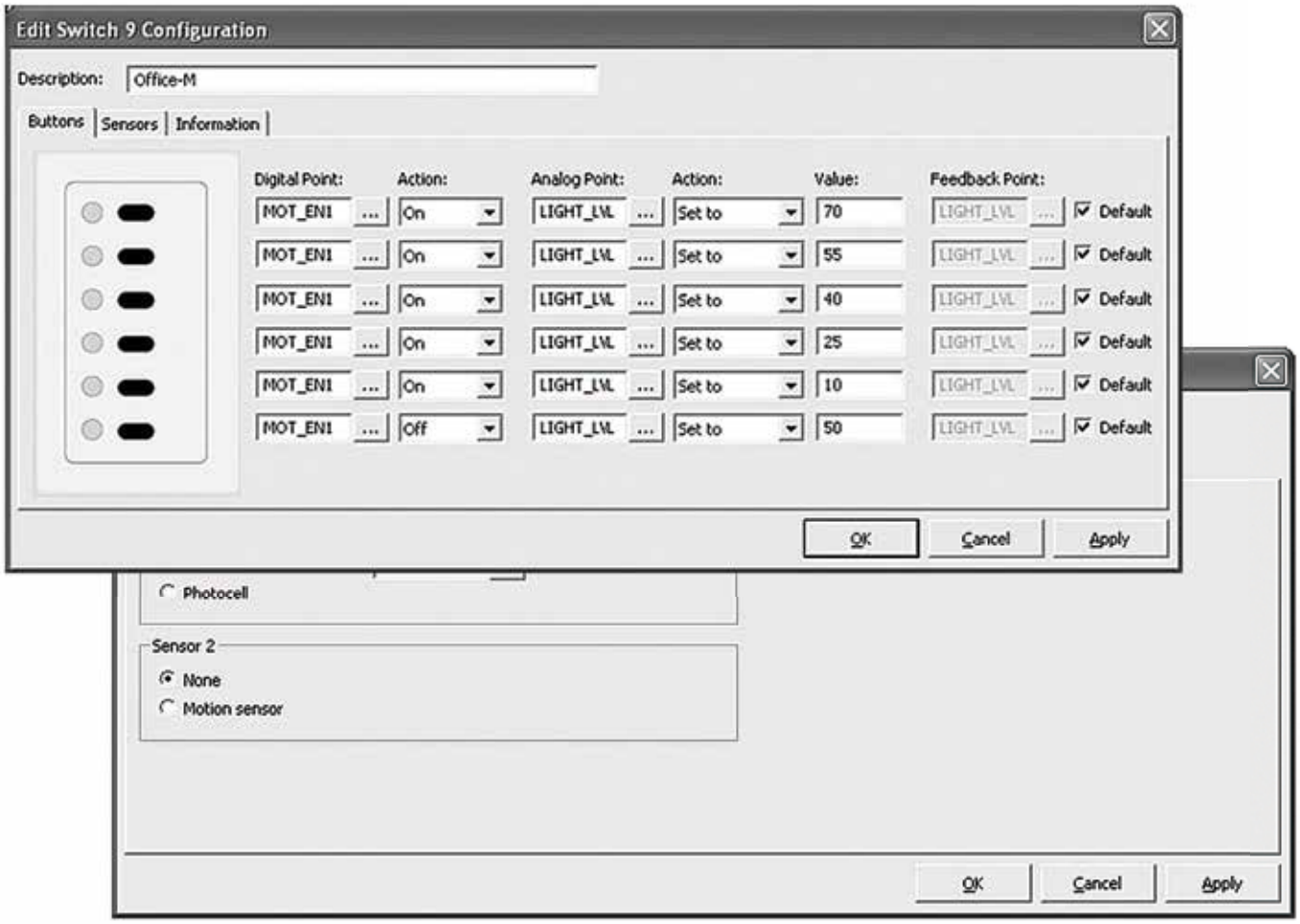


Figure 3-14. Digital Switch programming screen

Network philosophy

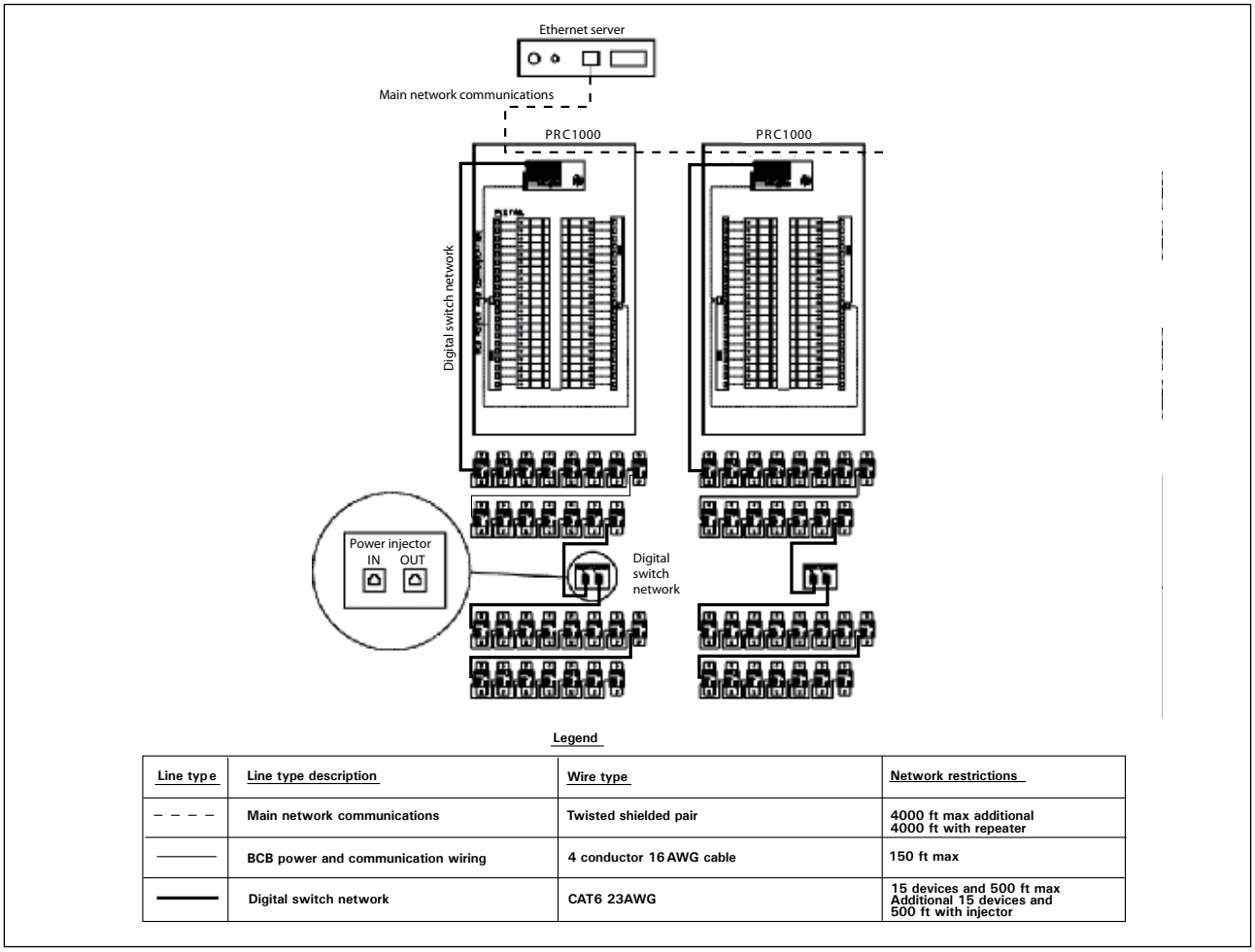
Each PRC Digital Switch communicates over a daisy-chained RS-485 peer-to-peer network. The beginning of the network will be a Pow-R-Command 1000 or 2000 Lighting Control panelboard. Each Pow-R-Command controller in the facility can have up to 99 digital switches on its switch network and each facility can have up to 120 Pow-R-Command panelboards on its lighting network. That's the ability to have up to 11,880 digital switches on the facility's lighting network.

Each digital switch on a basic network is powered by the Pow-R-Command controller; no additional power supply is required. Due to the power being supplied to the switches on the same CAT6 cable as the communication network, there are a few requirements that need to be followed when laying out the switch network:

- 23-gauge CAT6 wiring should be used
- Standard RJ-45 connectors should be used to make connections to each switch
- Due to the current (50 mA) requirements of each switch to operate correctly, a power injector should be installed on the communication network cable before every 16th switch or before the total length of the network reaches 500 ft (whichever comes first)

Pow-R-Command Digital Switch – system overview

As shown in **Figure 3-24**, the PRC Digital Switch Network is seamlessly integrated into the facility's Pow-R-Command Lighting Control Network. Each switch has the ability to send commands to the host Pow-R-Command controller and/or any other Pow-R-Command panelboard on the network, giving it the ability to extend the control to any Smart Breaker in the facility.



Legend

Line type	Line type description	Wire type	Network restrictions
– – – –	Main network communications	Twisted shielded pair	4000 ft max additional 4000 ft with repeater
———	BCB power and communication wiring	4 conductor 16 AWG cable	150 ft max
▬▬▬	Digital switch network	CAT6 23AWG	15 devices and 500 ft max Additional 15 devices and 500 ft with injector

Figure 3-15. Digital Switch Network

Introduction

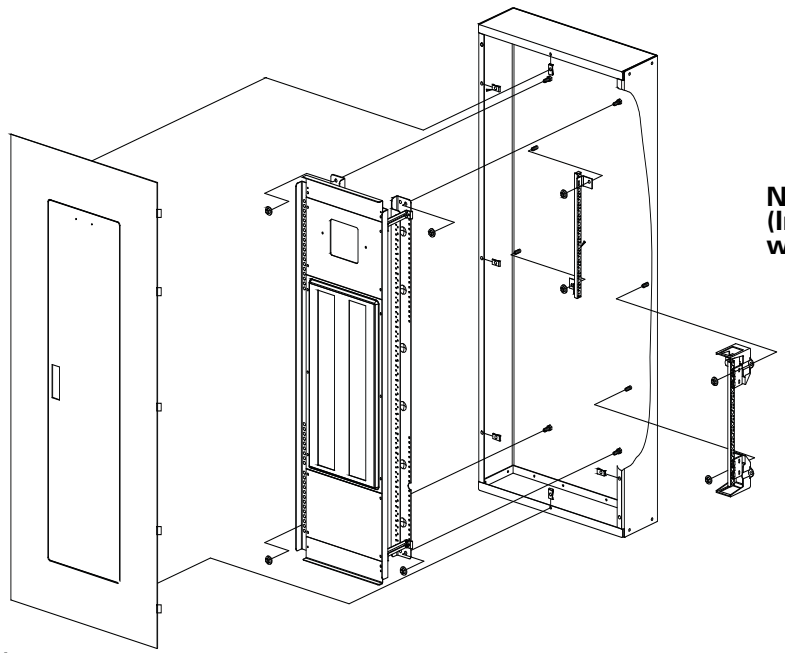
This section is designed to assist a distributor in selling these goods over the counter or from the branch warehouse.

PRL1a, 2a, 3E panelboards ordered from this product guide are shipped unassembled as box / interior / trim / breaker.

CBM/CBL panelboards are shipped with box interior and trim assembled.

Breakers are supplied loose.

INDEX



PRL1a/PRL2a

CBM / CBL Light Commercial Panelboard 100 & 200 Ampere

Product Description

- CBM – main breaker design
- CBL – main lug design
- 100A & 200A
- Single phase 120/240V
- Three phase 240V
- Tin plated aluminum bus or silver plated copper bus
- Accommodates Bolt –On branch breakers
- 84 circuit max.
- Box, Interior & Trim supplied assembled

Accessories

Refer to page 13

Standards and Certifications

- Panels CSA – C22.2 No.29 (not UL approved)
- Breakers CSA – C22.2 No.5

Branch Circuit Breakers for CBM, CBL design

- Bolt-On
- Refer to pages 8 & 9 for breaker selection

Cabinets

- Indoor rated type 1 enclosure.
- 4" shallow depth enclosure.
- Narrow width 14.25" enclosure.
- Code gauge galvanized steel, with knockouts. Sides, top, bottom.
- Baked on polyester powder coat ASA-61 light gray painted finish. Trim
- Box dimensions - Refer to page 4-13

Branch Circuit Breakers - PRL1a

Bolt-on

Ampere Rating	Interrupting Rating (kA Sym.) 240Vac①	Breaker Type
15-30	10	**DNBA (twin)**
10-125	10	**BAB** ⑩
15-50③	10	**QBGF**④
15-50③	10	**QBGFEP**⑤
15-20	10	**QBCAF**⑥⑦
15-20	22	**QBHCAF**⑥⑦
15-20	10	**QBAF**⑥⑦
15-60	10	**BAB-D**⑦
15-30	10	**BABRSP**⑧
15-20	10	**BABF**②
15-30	42	**HBAW**⑦⑩
15-125	10	**BAB-S**⑨
15-100	22	**QBHW** ⑩
125	22	**QBHW (2 Pole)**
15-30	22	**QBHGF**④
15-30	22	**QBHGFEP**⑤

① 1-Pole breakers are rated 120Vac maximum
② Fire alarm breaker per NFPA72 CSA/UL
③ 50 ampere devices are available as 2-pole only
④ GFCI for 5mA personnel protection
⑤ GFP for 30mA equipment protection
⑥ Arc fault circuit breaker
⑦ HID (High Intensity Discharge) rated breaker
⑧ Solenoid operated breaker
⑨ BAB with shunt trip
⑩ 1 pole 15A and 20A switch duty rated

Single Phase 120/240Vac Type 1 (Indoor) Main Breaker

Single Phase 3 Wire 120/240Vac Aluminum Bus

Maximum Main Ampere Breaker Rating	Catalogue Rating	Max. No. 1" Number	Max. No. 1/2" Spaces	Spaces	Cover Style	H	W	D	Wire Size Range for Main CU/AL
125	100	**CBM118**①	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
125	100	**CBM130**①	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
125	100	**CBM142**①	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
225	200	**CBM218**②	18	36	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#4-4/0
225	200	**CBM230**②	30	60	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#4-4/0
225	200	**CBM242**②	42	84	Flush/Surface	45/1143	14-1/4/361.9	3-3/4/95.3	#4-4/0

Three Phase 120/240Vac Type 1 (Indoor) Main Breaker

Three Phase 4 Wire 120/240Vac Maximum Aluminum Bus

Maximum Main Ampere Breaker Rating	Catalogue Rating	Max. No. 1" Number	Max. No. 1/2" Spaces	Spaces	Cover Style	H	W	D	Wire Size Range for Main CU/AL
125	100	**3CBM118**③	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
125	100	**3CBM130**③	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
125	100	**3CBM142**③	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
225	200	**3CBM218**④	18	36	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#4-4/0
225	200	**3CBM230**④	30	60	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#4-4/0
225	200	**3CBM242**④	42	84	Flush/Surface	45/1143	14-1/4/361.9	3-3/4/95.3	#4-4/0

Single Phase 120/240Vac Type 1 (Indoor) Main Breaker

Single Phase 3 Wire 120/240Vac Copper Bus

Maximum Main Ampere Breaker Rating	Catalogue Rating	Max. No. 1" Number	Max. No. 1/2" Spaces	Spaces	Cover Style	H	W	D	Wire Size Range for Main CU/AL
125	100	**CBM118CU**①	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
125	100	**CBM130CU**①	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
125	100	**CBM142CU**①	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
225	200	**CBM218CU**②	18	36	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#4-4/0
225	200	**CBM230CU**②	30	60	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#4-4/0

Three Phase 120/240Vac Type 1 (Indoor) Main Breaker

Three Phase 4 Wire 120/240Vac Maximum Copper Bus

Maximum Main Ampere Breaker Rating	Catalogue Rating	Max. No. 1" Number	Max. No. 1/2" Spaces	Spaces	Cover Style	H	W	D	Wire Size Range for Main CU/AL
125	100	**3CBM118CU**③	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
125	100	**3CBM130CU**③	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
125	100	**3CBM142CU**③	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#8-#1 Cu / #8-1/0 Al
225	200	**3CBM230CU**④	30	60	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#4-4/0

① BAB2100 Main circuit breaker factory installed.
② ED2200 Main circuit breaker factory installed.
③ BAB3100H Main circuit breaker factory installed.
④ ED3200 Main circuit breaker factory installed.

Type CBL Bolt-On Light Commercial Panelboards

Non-Combination (Main Lug Only) Single & Three Phase
Aluminum and Copper Bus

Single Phase 120/240Vac Type 1 (Indoor) Main Lug

Single Phase 3 Wire 120/240Vac Aluminum Bus

Maximum Main Ampere	Breaker Rating	Catalogue Rating	Max. No. 1" Number	Max. No. 1/2" Spaces	Spaces	Cover Style	H	W	D	Wire Size Range for Main CU/AL
125	100	**CBL118**	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
125	100	**CBL130**	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
125	100	**CBL142**	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**CBL218**	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**CBL230**	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**CBL242**	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#6-300MCM	

Three Phase 120/240Vac Type 1 (Indoor) Main Lug

Three Phase 4 Wire 120/240Vac Maximum Aluminum Bus

Maximum Main Ampere	Breaker Rating	Catalogue Rating	Max. No. 1" Number	Max. No. 1/2" Spaces	Spaces	Cover Style	H	W	D	Wire Size Range for Main CU/AL
125	100	**3CBL118**	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
125	100	**3CBL130**	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
125	100	**3CBL142**	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**3CBL218**	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**3CBL230**	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**3CBL242**	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#6-300MCM	

Single Phase 120/240Vac Type 1 (Indoor) Main Lug

Single Phase 3 Wire 120/240Vac Copper Bus

MAximum Main Ampere	Breaker Rating	Catalogue Rating	Max. No. 1" Number	Max. No. 1/2" Spaces	Spaces	Cover Style	H	W	D	Wire Size Range for Main CU/AL
125	100	**CBL118CU**	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
125	100	**CBL130CU**	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
125	100	**CBL142CU**	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**CBL218CU**	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**CBL230CU**	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**CBL242CU**	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#6-300MCM	

Three Phase 120/240Vac Type 1 (Indoor) Main Lug

Three Phase 4 Wire 120/240Vac Copper Bus

Maximum Main Ampere	Breaker Rating	Catalogue Rating	Max. No. 1" Number	Max. No. 1/2" Spaces	Spaces	Cover Style	H	W	D	Wire Size Range for Main CU/AL
1125	100	**3CBL118CU**	18	36	Flush/Surface	27/685.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
125	100	**3CBL130CU**	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
125	100	**3CBL142CU**	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**3CBL230CU**	30	60	Flush/Surface	34-1/8/866.8	14-1/4/361.9	3-3/4/95.3	#6-300MCM	
225	200	**3CBL242CU**	42	84	Flush/Surface	39/990.6	14-1/4/361.9	3-3/4/95.3	#6-300MCM	

Product Description

- Main lug only - 400 ampere maximum
- 240Vac maximum
- 3-phase 4 wire or 1-phase 3 wire
- 100 ampere maximum branch breakers (2 pole 125A)
- Tin plated aluminum bus or silver plated copper bus
- Accommodates Bolt-on branch breakers
- Utilizes Eaton exclusive design "EZ" Box and "EZ" Trim
- Box-Interior-Trim-Breakers, supplied unassembled

Note
Factory order the following as an assembly
- 3-phase 3 wire or single-phase 2 wire
- 600 ampere main lug
- Main breaker design

Accessories

Refer to page 13.

Standards and Certifications

- CSA - C22.2 No.29
- CSA - C22.2 No. 5 and UL489

Branch Circuit Breakers for PRL1a

- Bolt-on, Refer to pages 8 & 9 for breaker selection.

Cabinets

- "EZ" Enclosure design - code gauge galvanized steel, without knockouts (blank endwalls)
- "EZ" Trim design - baked on polyester powder coat ASA-61 light gray painted finish.
- Box dimensions - refer to page 4-13.

Branch Circuit Breakers - PRL1a
Bolt-on

Ampere Rating	Interrupting Rating (kA Sym.) 240Vac①	Breaker Type
15-30	10	**DNBA (twin)**
10-125	10	**BAB⑩**
15-50③	10	**QBGF④**
15-50③	10	**QBGFEP⑤**
15-20	10	**QBCAF⑥⑦**
15-20	22	**QBHCAF⑥⑦**
15-20	10	**QBAF⑥⑦**
15-60	10	**BAB-D⑦**
15-30	10	**BABRSP⑧**
15-20	10	**BABF②**
15-30	42	**HBAW⑦⑩**
15-125	10	**BAB-S⑨**
15-100	22	**QBHW ⑩**
125	22	**QBHW (2 Pole)**
15-30	22	**QBHGF④**
15-30	22	**QBHGFEP⑤**

① 1-Pole breakers are rated 120Vac maximum
② Fire alarm breaker per NFPA72 CSA/UL
③ 50 ampere devices are available as 2-pole only
④ GFCI for 5mA personnel protection
⑤ GFP for 30mA equipment protection
⑥ Arc fault circuit breaker
⑦ HID (High Intensity Discharge) rated breaker
⑧ Solenoid operated breaker
⑨ BAB with shunt trip
⑩ 1 pole 15A and 20A switch duty rated

Pow-R-Line 1a, 120/208 Vac, 100-400 Amperes: MAIN LUG ONLY Box - Interior - Trim

3 Ph, 4 W Aluminum

Ampere Rating	I.C. Rating	Main Lug Size	Branch Circuits	Stock Order			Factory Order Complete Panelboard
				Box	Interior/AL	Trim S=Surface / F = Flush	
100	10kA	Main Lugs Only #12-1/0	16	**EZB2030RC**	**P1AL4A118I**	**EZT2030S \ 30F**	P1AL4A1 - 18
			24	**EZB2030RC**	**P1AL4A124I**	**EZT2030S \ 30F**	P1AL4A1 - 24
			32	**EZB2030RC**	**P1AL4A130I**	**EZT2030S \ 30F**	P1AL4A1 - 30
			42	**EZB2042RC**	**P1AL4A142I**	**EZT2042S \ 42F**	P1AL4A1 - 42
225	10kA	Main Lugs Only #6-300 MCM	18	**EZB2030RC**	**P1AL4A218I**	**EZT2030S \ 30F**	P1AL4A2 - 18
			24	**EZB2036RC**	**P1AL4A224I**	**EZT2036S \ 36F**	P1AL4A2 - 24
			30	**EZB2036RC**	**P1AL4A230I**	**EZT2036S \ 36F**	P1AL4A2 - 30
			42	**EZB2042RC**	**P1AL4A242I**	**EZT2042S \ 42F**	P1AL4A2 - 42
			60	**EZB2054RC**	**P1AL4A260I**	**EZT2054S \ 54F**	P1AL4A2 - 60
			72	**EZB2060RC**	**P1AL4A272I**	**EZT2060S \ 60F**	P1AL4A2 - 72
			84	**EZB2072RC**	**P1AL4A284I**	**EZT2072S \ 72F**	P1AL4A2-84
400	10kA	Main Lugs Only 2-#2-250 MCM or 1-#2-500MCM	24	**EZB2042RC**	**P1AL4A424I**	**EZT2042S \ 42F**	P1AL4A4 - 24
			30	**EZB2048RC**	**P1AL4A430I**	**EZT2048S \ 48F**	P1AL4A4 - 30
			42	**EZB2054RC**	**P1AL4A442I**	**EZT2054S \ 54F**	P1AL4A4 - 42
			60	**EZB2060RC**	**P1AL4A460I**	**EZT2060S \ 60F**	P1AL4A4 - 60
			72	**EZB2072RC**	**P1AL4A472I**	**EZT2072S \ 72F**	P1AL4A4 - 72
			84	**EZB2072RC**	**P1AL4A484I**	**EZT2072S \ 72F**	P1AL4A4 - 84

3 Ph, 4 W Copper

Ampere Rating	I.C. Rating	Main Lug Size	Branch Circuits	Stock Order			Factory Order Complete Panelboard
				Box	Interior/CU	Trim S=Surface / F = Flush	
100	10kA	Main Lugs Only #12-1/0	18	**EZB2030RC**	**P1AL4C118I**	**EZT2030S \ 30F**	P1AL4C1 - 18
			24	**EZB2030RC**	**P1AL4C124I**	**EZT2030S \ 30F**	P1AL4C1 - 24
			30	**EZB2030RC**	**P1AL4C130I**	**EZT2030S \ 30F**	P1AL4C1 - 30
225	10kA	Main Lugs Only #6-300 MCM	18	**EZB2030RC**	**P1AL4C218I**	**EZT2030S \ 30F**	P1AL4C2 - 18
			24	**EZB2036RC**	**P1AL4C224I**	**EZT2036S \ 36F**	P1AL4C2 - 24
			30	**EZB2036RC**	**P1AL4C230I**	**EZT2036S \ 36F**	P1AL4C2 - 30
			42	**EZB2042RC**	**P1AL4C242I**	**EZT2042S \ 42F**	P1AL4C2 - 42
			60	**EZB2054RC**	**P1AL4C260I**	**EZT2054S \ 54F**	P1AL4C2 - 60
			72	**EZB2060RC**	**P1AL4C272I**	**EZT2060S \ 60F**	P1AL4C2 - 72
			84	**EZB2072RC**	**P1AL4C284I**	**EZT2072S \ 72F**	P1AL4C2 - 84
400	10kA	Main Lugs Only 2-#2-250 MCM or 1-#2-500MCM	24	**EZB2042RC**	**P1AL4C424I**	**EZT2042S \ 42F**	P1AL4C4 - 24
			30	**EZB2048RC**	**P1AL4C430I**	**EZT2048S \ 48F**	P1AL4C4 - 30
			42	**EZB2054RC**	**P1AL4C442I**	**EZT2054S \ 54F**	P1AL4C4 - 42
			60	**EZB2060RC**	**P1AL4C460I**	**EZT2060S \ 60F**	P1AL4C4 - 60
			72	**EZB2072RC**	**P1AL4C472I**	**EZT2072S \ 72F**	P1AL4C4 - 72
			84	**EZB2072RC**	**P1AL4C484I**	**EZT2072S \ 72F**	P1AL4C4 - 84

1 Ph, 3 W Aluminum

Ampere Rating	I.C. Rating	Main Lug Size	Branch Circuits	Stock Order			Factory Order Complete Panelboard
				Box	Interior/AL	Trim S=Surface / F = Flush	
100	10kA	Main Lugs Only #12-1/0	16	**EZB2030RC**	**P1AL1A118I**	**EZT2030S \ 30F**	P1AL1A1 - 18
			24	**EZB2030RC**	**P1AL1A124I**	**EZT2030S \ 30F**	P1AL1A1 - 24
			30	**EZB2030RC**	**P1AL1A130I**	**EZT2030S \ 30F**	P1AL1A1 - 30
225	10kA	Main Lugs Only #6-300 MCM	18	**EZB2030RC**	**P1AL1A218I**	**EZT2030S \ 30F**	P1AL1A2 - 18
			24	**EZB2036RC**	**P1AL1A224I**	**EZT2036S \ 36F**	P1AL1A2 - 24
			30	**EZB2036RC**	**P1AL1A230I**	**EZT2036S \ 36F**	P1AL1A2 - 30
			42	**EZB2042RC**	**P1AL1A242I**	**EZT2042S \ 42F**	P1AL1A2 - 42
			60	**EZB2054RC**	**P1AL1A260I**	**EZT2054S \ 54F**	P1AL1A2 - 60
			72	**EZB2072RC**	**P1AL1A272I**	**EZT2060S \ 60F**	P1AL1A2 - 72
400	10kA	Main Lugs Only 2-#2-250 MCM or 1-#2-500MCM	24	**EZB2042RC**	**P1AL1A424I**	**EZT2042S \ 42F**	P1AL1A4 - 24
			30	**EZB2048RC**	**P1AL1A430I**	**EZT2048S \ 48F**	P1AL1A4 - 30
			42	**EZB2054RC**	**P1AL1A442I**	**EZT2054S \ 54F**	P1AL1A4 - 42
			60	**EZB2060RC**	**P1AL1A460I**	**EZT2060S \ 60F**	P1AL1A4 - 60
			72	**EZB2072RC**	**P1AL1A472I**	**EZT2072S \ 72F**	P1AL1A4 - 72

1 Ph, 3 W Copper

Ampere Rating	I.C. Rating	Main Lug Size	Branch Circuits	Stock Order			Factory Order Complete Panelboard
				Box	Interior/CU	Trim S=Surface / F = Flush	
100	10kA	Main Lugs Only #12-1/0	16	**EZB2030RC**	**P1AL1C118I**	**EZT2030S \ 30F**	P1AL1C1 - 18
			24	**EZB2030RC**	**P1AL1C124I**	**EZT2030S \ 30F**	P1AL1C1 - 24
			30	**EZB2030RC**	**P1AL1C130I**	**EZT2030S \ 30F**	P1AL1C1 - 30
225	10kA	Main Lugs Only #6-300 MCM	18	**EZB2030RC**	**P1AL1C218I**	**EZT2030S \ 30F**	P1AL1C2 - 18
			24	**EZB2036RC**	**P1AL1C224I**	**EZT2036S \ 36F**	P1AL1C2 - 24
			30	**EZB2036RC**	**P1AL1C230I**	**EZT2036S \ 36F**	P1AL1C2 - 30
			42	**EZB2042RC**	**P1AL1C242I**	**EZT2042S \ 42F**	P1AL1C2 - 42
			60	**EZB2054RC**	**P1AL1C260I**	**EZT2054S \ 54F**	P1AL1C2 - 60
			72	**EZB2060RC**	**P1AL1C272I**	**EZT2060S \ 60F**	P1AL1C2 - 72
400	10kA	Main Lugs Only 2-#2-250 MCM or 1-#2-500MCM	24	**EZB2042RC**	**P1AL1C424I**	**EZT2042S \ 42F**	P1AL1C4 - 24
			30	**EZB2048RC**	**P1AL1C430I**	**EZT2048S \ 48F**	P1AL1C4 - 30
			42	**EZB2054RC**	**P1AL1C442I**	**EZT2054S \ 54F**	P1AL1C4 - 42
			60	**EZB2060RC**	**P1AL1C460I**	**EZT2060S \ 60F**	P1AL1C4 - 60
			72	**EZB2072RC**	**P1AL1C472I**	**EZT2072S \ 72F**	P1AL1C4 - 72

Branch Circuit Breakers
Pow-R-Line 1a, CBL, CBM 240 Vac Maximum:

For use on 1 and 3 phase (2, 3 and 4 wire) systems - 240 Vac maximum

Standard (1" per pole) breakers - 10kA

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Cat / Style
10kA	10	**BAB1010**	N / A	N / A
10kA	15	**BAB1015**①	**BAB2015**	**BAB3015H**
10kA	20	**BAB1020**①	**BAB2020**	**BAB3020H**
10kA	25	**BAB1025**	**BAB2025**	**BAB3025H**
10kA	30	**BAB1030**	**BAB2030**	**BAB3030H**
10kA	40	**BAB1040**	**BAB2040**	**BAB3040H**
10kA	50	**BAB1050**	**BAB2050**	**BAB3050H**
10kA	60	**BAB1060**	**BAB2060**	**BAB3060H**
10kA	70	**BAB1070**	**BAB2070**	**BAB3070H**
10kA	90	N / A	**BAB2090**	**BAB3090H**
10kA	100	**BAB1100**	**BAB2100**	**BAB3100H**
10kA	125	N / A	**BAB2125**	N / A

Duplex (twin singles in 1") breakers - 10kA

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Cat / Style
10kA	15/15	**DNBA1515**	N / A	N / A
10kA	20/20	**DNBA2020**	N / A	N / A
10kA	30/30	**DNBA3030**	N / A	N / A

Ground Fault breakers (5mA. people protectors) -10kA

NOTE: GFCBB replaced with QBGF Dec. 1st, 2003

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Cat / Style
10kA	15	**QBGF1015**	**QBGF2015**	N / A
10kA	20	**QBGF1020**	**QBGF2020**	N / A
10kA	30	**QBGF1030**	**QBGF2030**	N / A
10kA	40	**QBGF1040**	**QBGF2040**	N / A
10kA	50	N/A	**QBGF2050**	N/A

High I.C. Ground Fault breakers (5mA. people protectors) - 22kA

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Cat / Style
22kA	15	**QBHGF1015**	**QBHGF2015**	N / A
22kA	20	**QBHGF1020**	**QBHGF2020**	N / A
22kA	30	**QBHGF1030**	**QBHGF2030**	N / A

① Switching duty rated for 120Vac fluorescent light applications.

High I.C. (1" per pole) breakers - 22kA

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Cat / Style
22kA	15	**QBHW1015**①	**QBHW2015**	**QBHW3015H**
22kA	20	**QBHW1020**①	**QBHW2020**	**QBHW3020H**
22kA	30	**QBHW1030**	**QBHW2030**	**QBHW3030H**
22kA	40	**QBHW1040**	**QBHW2040**	**QBHW3040H**
22kA	50	**QBHW1050**	**QBHW2050**	**QBHW3050H**
22kA	60	**QBHW1060**	**QBHW2060**	**QBHW3060H**
22kA	70	**QBHW1070**	**QBHW2070**	**QBHW3070H**
22kA	90	N / A	**QBHW2090**	**QBHW3090H**
22kA	100	N / A	**QBHW2100**	**QBHW3100H**
22kA	125	N/A	**QBHW2125**	N/A

Very High I.C. (1" per pole) breakers - 65kA (Replaces old HBA breaker)

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Cat / Style
42kA	15	**HBAW1015**	**HBAW2015**	**HBAW3015H**
42kA	20	**HBAW1020**	**HBAW2020**	**HBAW3020H**
42kA	30	**HBAW1030**	**HBAW2030**	N / A

High Intensity Discharge (HID) rated breakers - 10kA

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Cat / Style
10kA	15	**BAB1015D**	N / A	N / A
10kA	20	**BAB1020D**	N / A	N / A

Accessories

Catalogue No.	Description
BRKSCREW	Mounting Screw for PRL1a/2a Branch Breakers (PKG 100)
BRDL1-10	Padlock Device -QBGF 1/2 pole (pkg of 10)
QL23NPL	Heavy Duty Lockdog - 2 / 3 pole BAB / QBHW / HBA
QL1NPL	Heavy Duty Lockdog - 1 pole BAB / QBHW / HBA
QL123PL	Padlock Device - 1, 2, 3, pole BAB / QBHW / HBA
QL1PL	Padlock Device - 1 pole BAB / QBHW / HBA (pkg of 10)
PL12NAK42	42 cct neutral adder kit - use with all DNBA breakers (M43)**

**Use the neutral adder kit to ensure enough neutral connection points when using more than 50% fill of DNBA breakers.

30mA Ground Fault Equipment Protectors 120/240Vac max

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
10kA	15	**QBGFEP1015**	**QBGFEP2015**	N / A
10kA	20	**QBGFEP1020**	**QBGFEP2020**	N / A
10kA	25	**QBGFEP1025**	**QBGFEP2025**	N / A
10kA	30	**QBGFEP1030**	**QBGFEP2030**	N / A
10kA	40	**QBGFEP1040**	**QBGFEP2040**	N / A
10kA	50	N / A	**QBGFEP2050**	N / A

30mA Ground Fault Equipment Protectors 120/240Vac max - 22KA

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
22kA	15	**QBHGFEP1015**	**QBHGFEP2015**	N / A
22kA	20	**QBHGFEP1020**	**QBHGFEP2020**	N / A
22kA	30	**QBHGFEP1030**	**QBHGFEP2030**	N / A

30mA Ground Fault Equipment Protectors 120/240Vac max. - with Alarm Switch

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
10kA	15	**QBGFEP1015W1**	**QBGFEP2015W1**	N / A
10kA	20	**QBGFEP1020W1**	**QBGFEP2020W1**	N / A
10kA	25	**QBGFEP1025W1**	**QBGFEP2025W1**	N / A
10kA	30	**QBGFEP1030W1**	**QBGFEP2030W1**	N / A
10kA	40	N / A	**QBGFEP2040W1**	N / A
10kA	50	N / A	**QBGFEP2050W1**	N / A

BAB with Shunt Trip 120/240Vac Max. (Shunt Trip Rating 120, 208, 240 V)

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
10kA	15	**BAB1015S**	**BAB2015S**	N / A
10kA	20	**BAB1020S**	**BAB2020S**	N / A
10kA	30	**BAB1030S**	**BAB2030S**	N / A
10kA	40	**BAB1040S**	**BAB2040S**	N / A
10kA	50	**BAB1050S**	**BAB2050S**	N / A
10kA	60	**BAB1060S**	**BAB2060S**	N / A
10kA	70	**BAB1070S**	**BAB2070S**	N / A
10kA	80	N / A	**BAB2080S**	N / A
10kA	90	N / A	**BAB2090S**	N / A
10kA	100	N / A	**BAB2100S**	N / A
10kA	125	N / A	**BAB2125S**	N / A

Arc Fault Breaker 240Vac Max.

Bolt-On Parallel Sensing

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
10kA	15	**QBAF1015**	N/A	N / A
10kA	20	**QBAF1020**	N/A	N / A

Bolt-On Parallel Sensing High IC

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
22kA	15	**QBHAF1015**	N / A	N / A
22kA	20	**QBHAF1020**	N / A	N / A

Parallel Sensing Only

Bolt-On Series and Parallel Sensing

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
10kA	15	**QBCAF1015**	N / A	N / A
10kA	20	**QBCAF1020**	N / A	N / A

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
22kA	15	**QBHCAF1015**	N / A	N / A
22kA	20	**QBHCAF1020**	N / A	N / A

Series sensing and parallel (Not AFGF)

Bolt-On Independent Trip

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
10kA	15	N / A	**QBAF2015IT**	N / A
10kA	20	N / A	**QBAF2020IT**	N / A

QBAF-IT - 2 single pole 120V breakers coupled together. Trips independently on thermal or mag but both poles will trip on arc fault.

Remote Operated Breakers

Bolt-On "BABRSP" REMOTELY OPERATED BREAKER WITH STATUS CONTACT

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
10kA	15	**BABRSP1015**	**BABRSP2015**	N / A
10kA	20	**BABRSP1020**	**BABRSP2020**	N / A
10kA	30	**BABRSP1030**	**BABRSP2030**	N / A

Fire Alarm Circuit Breakers

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
10kA	15	**BABF1015**	N/A	N / A
10kA	20	**BABF1020**	N/A	N / A

Pow-R-Line 2a 347/600Vac, 100-400 Ampere

Product Description

- Main lug only - 400 ampere maximum
- 347/600A AC
- 3 phase 4 wire
- 100 ampere maximum branch breakers
- Tin plated aluminum bus or silver plated copper bus
- Accomodates bolt-on branch breakers
- Utilizes Eaton exclusive design "EZ" Box and "EZ" Trim
- Box-Interior-Trim-Breakers, supplied unassembled

Note
Factory order the following as an assembly
- 3-phase 3 wire or single-phase 2 or 3 wire
- 600 ampere main lug
- Main breaker design

Accessories

Refer to page 4-13.

Standards and Certifications
- CSA - C22.2 No.29
- CSA - C22.2 No. 5

Branch Circuit Breakers for PRL2a
- Bolt-on, Refer to page 12 for breaker selection.

Cabinets
- "EZ" Enclosure design - code gauge galvanized steel, without knockouts (blank endwalls)
- "EZ" Trim design - baked on polyester powder coat ASA-61 light gray painted finish.
- Box dimensions - refer to page 4-13.

Branch Circuit Breakers - PRL2a

Ampere Rating	Interrupting Rating (kA Symmetrical) 240Vac	480/277Vac	600Y/347Vac	125/250Vac	Breaker Type
15-60	65	14	—	14	**GHB**①
15-60	—	—	10	14	**GBH**③
70-100	65	14	—	14	**GHB**①
70-100	—	—	10	14	**GBH**③
15-60	—	14	—	—	**GHBGFEP**①②

① At 480V, must be used on 480Y/277V grounded wye system only
② GFP for 30 mA equipment protection. Requires 2-pole spaces 277Vac only.
③ At 600V, must be used on 600Y/347V grounded wye systems only

3 Ph, 4 W Aluminum

Ampere Rating	I.C. Rating	Main Lug Size	Branch Circuits	Stock Order			Factory Order Complete Panelboard
				Box	Interior/AL	Trim S=Surface / F = Flush	
100	10kA	Main Lugs Only #12-1/0	18	**EZB2030RC**	**P2AL4A118I**	**EZT2030S \ 30F**	P2AL4A1 - 18
			24	**EZB2030RC**	**P2AL4A124I**	**EZT2030S \ 30F**	P2AL4A1 - 24
			30	**EZB2030RC**	**P2AL4A130I**	**EZT2030S \ 30F**	P2AL4A1 - 30
225	10kA	Main Lugs Only #6-300MCM	24	**EZB2036RC**	**P2AL4A224I**	**EZT2036S \ 36F**	P2AL4A2 - 24
			30	**EZB2036RC**	**P2AL4A230I**	**EZT2036S \ 36F**	P2AL4A2 - 30
			42	**EZB2042RC**	**P2AL4A242I**	**EZT2042S \ 42F**	P2AL4A2 - 42
			60	**EZB2054RC**	**P2AL4A260I**	**EZT2054S \ 54F**	P2AL4A2 - 60
			72	**EZB2060RC**	**P2AL4A272I**	**EZT2060S \ 60F**	P2AL4A2 - 72
400	10kA	Main Lugs Only 2-#2-250 MCM or 1-#2-500MCM	24	**EZB2042RC**	**P2AL4A424I**	**EZT2042S \ 42F**	P2AL4A4 - 24
			30	**EZB2048RC**	**P2AL4A430I**	**EZT2048S \ 48F**	P2AL4A4 - 30
			42	**EZB2054RC**	**P2AL4A442I**	**EZT2054S \ 54F**	P2AL4A4 - 42
			60	**EZB2060RC**	**P2AL4A460I**	**EZT2060S \ 60F**	P2AL4A4 - 60
			72	**EZB2072RC**	**P2AL4A472I**	**EZT2072S \ 72F**	P2AL4A4 - 72

3 Ph, 4 W Copper

Ampere Rating	I.C. Rating	Main Lug Size	Branch Circuits	Stock Order			Factory Order Complete Panelboard
				Box	Interior/CU	Trim S=Surface / F = Flush	
100	10kA	Main Lugs Only #12-1/0	18	**EZB2030RC**	**P2AL4C118I**	**EZT2030S \ 30F**	P2AL4C1 - 18
			24	**EZB2030RC**	**P2AL4C124I**	**EZT2030S \ 30F**	P2AL4C1 - 24
			30	**EZB2030RC**	**P2AL4C130I**	**EZT2030S \ 30F**	P2AL4C1 - 30
225	10kA	Main Lugs Only #6-300MCM	24	**EZB2036RC**	**P2AL4C224I**	**EZT2036S \ 36F**	P2AL4C2 - 24
			30	**EZB2036RC**	**P2AL4C230I**	**EZT2036S \ 36F**	P2AL4C2 - 30
			42	**EZB2042RC**	**P2AL4C242I**	**EZT2042S \ 42F**	P2AL4C2 - 42
			60	**EZB2054RC**	**P2AL4C260I**	**EZT2054S \ 54F**	P2AL4C2 - 60
			72	**EZB2060RC**	**P2AL4C272I**	**EZT2060S \ 60F**	P2AL4C2 - 72
400	10kA	Main Lugs Only 2-#2-250 MCM or 1-#2-500MCM	24	**EZB2042RC**	**P2AL4C424I**	**EZT2042S \ 42F**	P2AL4C4 - 24
			30	**EZB2048RC**	**P2AL4C430I**	**EZT2048S \ 48F**	P2AL4C4 - 30
			42	**EZB2054RC**	**P2AL4C442I**	**EZT2054S \ 54F**	P2AL4C4 - 42
			60	**EZB2060RC**	**P2AL4C460I**	**EZT2060S \ 60F**	P2AL4C4 - 60
			72	**EZB2072RC**	**P2AL4C472I**	**EZT2072S \ 72F**	P2AL4C4 - 72

10kA @ 347/600Vac

For use only on 3-phase 4 wire circuits - 347/600VAC maximum, wye grounded system only

Ampere Rating	1 Pole Catalogue #	2 Pole Catalogue #	3 Pole Catalogue #
15A	**GBH1015**	**GBH2015**	**GBH3015**
20A	**GBH1020**	**GBH2020**	**GBH3020**
30A	**GBH1030**	**GBH2030**	**GBH3030**
40A	**GBH1040**	**GBH2040**	**GBH3040**
50A	**GBH1050**	**GBH2050**	**GBH3050**
60A	**GBH1060**	**GBH2060**	**GBH3060**
70A	**GBH1070**	**GBH2070**	**GBH3070**
90A	**GBH1090**	**GBH2090**	**GBH3090**
100A	**GBH1100**	**GBH2100**	**GBH3100**

14kA @ 277/480Vac

For use on 480Y/277Vac wye grounded system only

Ampere Rating	1 Pole Catalogue #	2 Pole Catalogue #	3 Pole Catalogue #
15A	**GHB1015**	**GHB2015**	**GHB3015**
20A	**GHB1020**	**GHB2020**	**GHB3020**
30A	**GHB1030**	**GHB2030**	**GHB3030**
40A	**GHB1040**	**GHB2040**	**GHB3040**
50A	**GHB1050**	**GHB2050**	**GHB3050**
60A	**GHB1060**	**GHB2060**	**GHB3060**
70A	**GHB1070**	**GHB2070**	**GHB3070**
90A	**GHB1090**	**GHB2090**	**GHB3090**
100A	**GHB1100**	**GHB2100**	**GHB3100**

Ground Fault Breaker 480Y/277Vac Max.

Bolt-On GHB

I.C Value	Amperes. Rating	1 Pole Catalogue No.	2 Pole Catalogue No.	3 Pole Catalogue No.
14kA	15	**GHBGFEP1015**	N / A	N / A
14kA	20	**GHBGFEP1020**	N / A	N / A

Accessories for GBH Circuit Breakers

Catalogue No,	Description
GBNP123P	Lockdog/Handle Block
GPLK	Padlock device (pkg of 10)
BRKSCREW	Mounting Screw for PRL1a/2a Branch Breakers (PKG 100)

Dimensions - Inches (mm)

Box Catalogue Number	Height	Width	Depth
EZB2030RC	30 (762)	20 (508)	5-3/4 (146)
EZB2036RC	36 (914)	20 (508)	5-3/4 (146)
EZB2042RC	42 (1067)	20 (508)	5-3/4 (146)
EZB2048RC	48 (1219)	20 (508)	5-3/4 (146)
EZB2054RC	54 (1372)	20 (508)	5-3/4 (146)
EZB2060RC	60 (1524)	20 (508)	5-3/4 (146)
EZB2072RC	72 (1828)	20 (508)	5-3/4 (146)

Dimensions are inside, for outside dimensions add 1/4" (6.4mm)

Breaker Accessories
For PRL1a, 2a, CBL, CBM Panels

Catalogue No,	Description
BRDL1-10	Handle Lockoff 1-pole of type DNBA duplex circuit breakers (Package of 10)
QL123PL	Handle Lockoff type BAB and QBHW circuit breakers
QL1NPL	Handle Lockdog 1-pole type BAB and QBHW circuit breakers
QL23NPL	Handle Lockdog 2- and 3-pole type BAB and QBHW circuit breakers

Definitions
Handle Lockoffs - Devices that use a padlock to lock a circuit breaker's handle in either the ON or OFF position.
Handle Lockdogs - Devices that used to secure a circuit breaker's handle in the ON or OFF position. They are not padlockable devices.

Panelboard Enclosure Accessories

Catalogue No,	Description
PL123DRLK	PL1a/2a door lock Pre EZ Trim (5155C81G01) c/w key
EZLOCK	EZ Trim Lock on Door **Frame** c/w Key
EZLOCKR3060	EZ Trim Lock on **Door** 30-60 CCT c/w Key
EZLOCKR7290	EZ Trim Lock on **Door** 72-90 CCT c/w Key
WEM2	Key for Door/Trim Locks
CHROMELOCK	Lock c/w WEM3 key for old style panels
TDL	Door lock for CBL/CBM panels
EZBSPKIT	EZ Box Sprinklerproof Kit
BRFP	BAB/GBH Filler
PL3AFILL	(12) x 4178B06H01 - PL3a Filler F-Frame
PL3EFILL	(10) PL3E Filler plates EG Frame
PL12GK	PRL1a/2a Ground Assy Kit (new 42cct bar for EZ)
PL12IGK24	Insulated ground kit - 24 circuit
PL12IGK42	Insulated ground kit - 42 circuit
ISGRD	Isolated ground kit for CBL/CBM panels
PL12N2X-42	200% rated neutral - max 400A
PL12NAK24	24cct neutral bar-only adder kit (use with DNBA bkrs)
PL12NAK42	42cct neutral bar-only adder kit (use with DNBA bkrs)
PLA12SF100	PL1a/2a 100A subfeed lug kit
PLA12SF225	PL1a/2a 225A subfeed lug kit
CBSF100	Sub Feed Lug 100A (For main lug panel style CBL)
CBSF225	Sub Feed Lug 225A (For main lug panel style CBL)
3CBSF100	Sub Feed Lug Kit 100A 3 phase (For main lug panel style CBL)
3CBSF225	Sub Feed Lug Kit 225A 3 phase (For main lug panel style CBL)
BXJNRFLUSH	Double tub box joiner (for flush mounted panels)
DIRCARD42	(50) cct 1-42 cct directory card
DIRCARD84	(50) cct 43-84 cct directory card
DIRSLEEVE	(25) x Plastic card holder
PRL12ANUM42	PRL1a/2a Number Strip 1-42 (5)
PRL12ANUM84	PRL1a/2a Number Strip 43-84 (5)
PRL12ANUM126	PRL1a/2a Number Strip 85-126 (5)
PRL3ANUM42	PRL3a Number Strip 1-42 (5)
PRL3ANUM84	PRL3a Number Strip 43-84 (5)
PRL3ANUM126	PRL3a Number Strip 85-126 (5)
PL12NEUT24	Neutral assembly 42CCT 225A PWRL 1A 2A
PL12NEUT24F	Neutral PL1a/2a 225A CU/AL 84CCT Tin Plated
PL12NEUT28	Neutral PL1a 2a 225A 84CCT Feedthrough
PL12NEUT44	Neutral assembly for PL1a, MECH. STD, 4/600A,SNCU
PL12NEUT44F	Neutral PL1a/2a 400A/600A CU/AL Through Feed 42CCT SN/CU
PL12NEUT48	Neutral assembly for PL1a, 84 CCT MECH STD 4/600A SNCU
PL12NEUT48F	Neutral PL1a/2a 400A/600A CU/AL 84CCT Through Feed

Pow-R-Line 3E 347/600Vac, 250 & 400 Ampere

Product Description

- Main lug only - 250A and 400A
- Main lug feed through 250A and 400A
- Main lug sub feed breaker (breaker not included) provision only 250A and 400A
- 347/600Vac maximum
- 3-phase 4 wire
- 30, 42, 60, 72 cct
- Tin plated aluminum bus
- Accommodates bolt-on branch breakers
- Utilizes "EZ" Box and "EZ" Trim
- Box – Interior – Trim – Breakers, supplied unassembled

Note:
- Factory order the following as PRL3a factory assembly
- 3-phase 3 wire or single-phase 2 or 3 wire
- 600 ampere main lug
- Main breaker design

Accessories

Refer to page 4-13.

Standards and Certifications

- CSA - C22.2 No.29
- CSA - C22.2 No. 5

Branch Circuit Breakers for PRL3E

- EGE Type 18kA @ 347/600Vac
- EGH Type 25kA @ 347/600Vac
- Bolt-on, line and load terminals standard
- Fully rated
- 1" per pole
- 125 Ampere maximum

Cabinets

- "EZ" Enclosure – code gauge galvanized steel, without knockouts (blank endwalls)
- "EZ" Trim – baked on polyester powder coat ASA-61 light gray painted finish
- Box dimensions – refer to page 4-13

Branch Circuit Breakers - PRL3E

Bolt-on EG

Ampere Rating	Interrupting Rating (kA Symmetrical) 600Y/347V	480V	240V	Breaker Type
15-125A	18	25	35	**EGE**
15-125A	25	65	100	**EGH**

Pow-R-Line 3E, 347/600Vac, 225-400 Amperes: MAIN LUG - 3 Ph, 4W ALUMINUM

Ampere Rating	I.C Rating	Main Lug Size	Branch Circuits	Box	Interior/AL	Trim S=Surface F=Flush
225	25KA	Main Lugs Only #6 - 350MCM	30	EZB2042RC	P3EL4A230I	EZT2042S / F
			42	EZB2048RC	P3EL4A242I	EZT2048S / F
			60	EZB2060RC	P3EL4A260I	EZT2060S / F
			72	EZB2072RC	P3EL4A272I	EZT2072S / F
400	25KA	Main Lugs Only 4/0 - 500MCM	30	EZB2060RC	P3EL4A430I	EZT2060S / F
			42	EZB2060RC	P3EL4A442I	EZT2060S / F
			60	EZB2072RC	P3EL4A460I	EZT2072S / F
			72	EZB2090RC	P3EL4A472I	EZT2090S / F

Pow-R-Line 3E, 347/600Vac, 225-400 Amperes: MAIN LUG - Feed Through - 3 Ph, 4W ALUMINUM

Ampere Rating	I.C Rating	Main Lug Size	Branch Circuits	Box	Interior/AL	Trim S=Surface F=Flush
225	25KA	Main Lugs Only #6 - 350MCM	30	EZB2060RC	P3EL4A230ITF	EZT2060S / F
			42	EZB2060RC	P3EL4A242ITF	EZT2060S / F
			60	EZB2072RC	P3EL4A260ITF	EZT2072S / F
			72	EZB2072RC	P3EL4A272ITF	EZT2072S / F
400	25KA	Main Lugs Only 4/0 - 500MCM	30	EZB2072RC	P3EL4A430ITF	EZT2072S / F
			42	EZB2072RC	P3EL4A442ITF	EZT2072S / F
			60	EZB2090RC	P3EL4A460ITF	EZT2090S / F
			72	EZB2090RC	P3EL4A472ITF	EZT2090S / F

Pow-R-Line 3E, 347/600Vac, 225-400 Amperes: MAIN LUG - Sub Feed Breaker - 3 Ph, 4W ALUMINUM

Note: Sub feed breaker NOT included, provision only for F frame breaker 15A to 225A

Ampere Rating	I.C Rating	Main Lug Size	Branch Circuits	Box	Interior/AL	Trim S=Surface F=Flush
225	25KA	Main Lugs Only #6 - 350MCM	30	EZB2060RC	P3EL4A230ISB	EZT2060S / F
			42	EZB2060RC	P3EL4A242ISB	EZT2060S / F
			60	EZB2072RC	P3EL4A260ISB	EZT2072S / F
			72	EZB2072RC	P3EL4A272ISB	EZT2072S / F
400	25KA	Main Lugs Only 4/0 - 500MCM	30	EZB2072RC	P3EL4A430ISB	EZT2072S / F
			42	EZB2072RC	P3EL4A442ISB	EZT2072S / F
			60	EZB2090RC	P3EL4A460ISB	EZT2090S / F
			72	EZB2090RC	P3EL4A472ISB	EZT2090S / F

EGE Breakers for Pow-R-Line 3E 18kA @ 347/600Vac

Ampere	1 Pole	2 Pole	3 Pole
15	EGE1015FFB	EGE2015FFB	EGE3015FFB
20	EGE1020FFB	EGE2020FFB	EGE3020FFB
25	EGE1025FFB	EGH2025FFB	EGE3025FFB
30	EGE1030FFB	EGE2030FFB	EGE3030FFB
35	EGE1035FFB	EGH2035FFB	EGE3035FFB
40	EGE1040FFB	EGE2040FFB	EGE3040FFB
45	EGE1045FFB	EGE2045FFB	EGE3045FFB
50	EGE1050FFB	EGE2050FFB	EGE3050FFB
60	EGE1060FFB	EGE2060FFB	EGE3060FFB
70	EGE1070FFB	EGE2070FFB	EGE3070FFB
80	EGE1080FFB	EGE2080FFB	EGE3080FFB
90	EGE1090FFB	EGE2090FFB	EGE3090FFB
100	EGE1100FFB	EGE2100FFB	EGE3100FFB
125	EGE1125FFB	EGE2125FFB	EGE3125FFB

- 1, 2, 3 Pole short-circuit interrupting rating 35kAIC @ 240V
- 2, 3 Pole short-circuit interrupting rating 18kAIC @ 347/600V
- For additional technical data and specifications refer to Series G moulded case circuit breakers publication CA08101001K

EGH Breakers for Pow-R-Line 3E 25kA @ 347/600Vac

Ampere	1 Pole	2 Pole	3 Pole
15	EGH1015FFB	EGH2015FFB	EGH3015FFB
20	EGH1020FFB	EGH2020FFB	EGH3020FFB
25	EGH1025FFB	EGH2025FFB	EGH3025FFB
30	EGH1030FFB	EGH2030FFB	EGH3030FFB
35	EGH1035FFB	EGH2035FFB	EGH3035FFB
40	EGH1040FFB	EGH2040FFB	EGH3040FFB
45	EGH1045FFB	EGE2045FFB	EGH3045FFB
50	EGH1050FFB	EGH2050FFB	EGH3050FFB
60	EGH1060FFB	EGH2060FFB	EGH3060FFB
70	EGH1070FFB	EGH2070FFB	EGH3070FFB
80	EGH1080FFB	EGH2080FFB	EGH3080FFB
90	EGH1090FFB	EGH2090FFB	EGH3090FFB
100	EGH1100FFB	EGH2100FFB	EGH3100FFB
125	EGH1125FFB	EGH2125FFB	EGH3125FFB

- 1, 2, 3 Pole short-circuit interrupting rating 100kAIC @ 240V
- 2, 3 Pole short-circuit interrupting rating 25kAIC @ 347/600V
- For additional technical data and specifications refer to Series G moulded case circuit breakers publication CA08101001K

Panelboard Connector Kits (1960 to 1990)

Application Note
CAUTION:
Old panelboards may not be able to handle the interrupting means of Series C Breakers. Only use a breaker for which a connector exists for that panelboard. Any applications that cannot be satisfied by the listed connector kits should be referred to Eaton.
USE OF A BREAKER IN A PANELBOARD FOR WHICH THEY ARE NOT INTENDED FOR, COULD RESULT IN SERIOUS DAMAGE AND/OR PERSONAL INJURY.

CDP Panaflex Aluminum (Up to Late 1990)

Catalogue No,	Description
1A00759G05	1,2,3 POLE HFB BREAKER (old EB / EHB / FB)
572B718G07	2, 3 POLE CA/CAH - OBSOLETE
572B718G11	2,3 POLE KA/HKA/DA/LB/HLB - OBSOLETE
572B718G09	2,3 POLE HLA - 600 A MAX. (old LA)
8985A09G03	2,3 POLE DK BREAKER (240V only)
1A00759G05*	1,2,3 POLE SERIES C F-FRAME BREAKER 150 A MAX. *
8985A09G06*	2,3 POLE SERIES C K-FRAME*

*** CAUTION:** Use the following kits ONLY on retrofitted panels identified by a light blue label next to the panel rating label
IF NO BLUE LABEL, DO NOT USE!

Application Notes:
1) CDP Panaflex Aluminum panelboards that have not been retrofitted are not built to handle the means of interrupting of Series C breakers. Failure to follow the above application table could result in serious damage and personal injury.
2) Connector kits for Series C 600A LD and higher do not exist for CDP Panaflex.

CDP Copper Panel (1976 to Late 1990)

Catalogue No,	Description
1916B93G04	FOR 2 EB / FB / HFB BREAKERS - 150A max breaker.
1916B93G08	FOR 2 CA/CAH BREAKERS - OBSOLETE
1916B93G07	FOR 2 LB/HLB BREAKERS - OBSOLETE
1916B93G06	FOR 2 HLA BREAKERS - 600A max. (old LA)
1916B93G09	FOR 1 HMA BREAKER (old MA)
1916B93G04	FOR 2 SERIES C F-FRAME BREAKERS - 150 A MAX.
5106A10G98	Line insulation kit REQUIRED for 2 pole HFD / FDC at 600V
5106A10G99	Line insulation kit REQUIRED for 3 pole HFD / FDC at 600V
8985A09G02	FOR 2 SERIES C K-FRAME BREAKERS

CDP Copper Panel (Approx. 1960 to 1975)

Catalogue No,	Description
572B482G06	FOR 2 HFB BREAKERS (old EB / FB) (480V max-- 600V HFB Not available)
572B482G01	FOR 2 KA/HKA BREAKERS - OBSOLETE
572B482G15	FOR 2 LB/HLB BREAKERS - OBSOLETE
572B482G02	FOR 2 HLA BREAKERS 600A MAX (old LA)
572B482G09	FOR 1 HMA BREAKER (old MA)

Application Note
CAUTION:
Old panelboards may not be able to handle the interrupting means of Series C Breakers. Only use a breaker for which a connector exists for that panelboard. Any applications that cannot be satisfied by the listed connector kits should be referred to Eaton.
USE OF A BREAKER IN A PANELBOARD FOR WHICH THEY ARE NOT INTENDED FOR, COULD RESULT IN SERIOUS DAMAGE AND/OR PERSONAL INJURY.

POW-R-LINE 3 / Commander CHB2 (1991 to July 1994) / NFB / NFD

Catalogue No,	Description
CK3A	ALUMINUM - Superceded-Use CK3C for Al or Cu
CK3C	COPPER F-FRAME 3 POLE 150 A MAX.

POW-R-LINE 3a (July 1994 to Present)

Catalogue No,	Description
KPRL3ABA06	For 6 circuits of BAB / QBHW / GFCBB BREAKERS (3X)
KPRL3ABA12	For 12 circuits of BAB / QBHW / GFCBB BREAKERS (5X)
KPRL3ABA18	For 18 circuits of BAB / QBHW / GFCBB BREAKERS (8X)
KPRL3ABA24	For 24 circuits of BAB / QBHW / GFCBB BREAKERS (10X).
KPRL3AGB06	For 6 circuits of GB / GBH BREAKERS (3X)
KPRL3AGB12	For 12 circuits of GB/ GBH BREAKERS (5X)
KPRL3AGB18	For 18 circuits of GB/ GBH BREAKERS (8X)
KPRL3AGB24	For 24 circuits of GB / GBH BREAKERS (10X)
KPRL3AFD3	FOR 2 SERIES C F-FRAME 1, 2, 3 POLE (3X) MAX SUM BREAKER 400A
KPRL3AFD3S	F FRAME 3 POLE SINGLE MOUNT - OVER 150 A

POW-R-LINE 4 Blank Filler Plates

Catalogue No,	Description
P41X17	PRL4- 1X BLANK COVER FOR 24"W BOX (1-3/8"X17")
P42X17	PRL4- 2X BLANK COVER FOR 24"W BOX (2-3/4"X17")
P43X17	PRL4- 3X BLANK COVER FOR 24"W BOX (4-1/8"X17")
P44X17	PRL4- 4X BLANK COVER FOR 24"W BOX (5-1/2"X17")
P41X25	PRL4- 1X BLANK COVER FOR 38" OR 44"W BOX (1-3/8"X25")
P42X25	PRL4- 2X BLANK COVER FOR 38" OR 44"W BOX (2-3/4"X25")
P43X25	PRL4- 3X BLANK COVER FOR 38" OR 44"W BOX (4-1/8"X25")
P44X25	PRL4- 4X BLANK COVER FOR 38" OR 44"W BOX (5-1/2"X25")

POW-R-LINE 4 / Commander CDP2- Copper or Aluminum (Late 1990 to Present)

Catalogue No,	Description
KPRL4CA	FOR 2 CA/CAH Breakers - OBSOLETE
KPRL4FD2	SERIES C F-FR. 4 x 1 POLE OR 2 x 2 POLE-450A max. total (2X)
KPRL4FD3	FOR 2 SERIES C F-FRAME 3 POLE - 450A max. total (3X)
KPRL4LFD3	FD+LFD BREAKER 3 POLE 150A max.
KPRL4FD3W	FOR SERIES C-F-FRAME 3 POLE, WIDER CUTOUT (3X)
KPRL4FBP	FB TRIPAC BREAKER 3 POLE 100A max.
KPRL4JDS	JD SINGLE - 250A max. - (3X)
KPRL4JDT	JD TWIN - 250A max. - (3X)
KPRL4KDS	KD / HKD / KDC SINGLE - 400A max. - (4X)
KPRL4KDCT	HKD/KDC TWIN - 400A max. - (4X) (Use with NEW KDC 65kA @ 600V - Replaced **KPRL4KDT**
KPRL4CKDS	CKD SINGLE - 400A max. - (4X)
KPRL4LCL	LCL BREAKER 3 POLE 400A max.
KPRL4LAP	LA TRIPAC BREAKER 3 POLE 400A max.
KPRL4LD	LA/HLA/LC/HLC/LD/HLD/LDC/CLD BREAKER 3 POLE 600A max.
KPRL4LG	FOR SERIES G-L-FRAME 3 POLE
KPRL4MA	MA/HMA/MC/HMC BREAKER 3 POLE 800A max.
KPRL4MDL	MDL/HMDL BREAKER 3 POLE 800A max.
KPRL4NBP	NB TRIPAC BREAKER 3 POLE 800A max.
KPRL4ND	NB/HNB/ND/HND/NDC/NG BREAKER 3 POLE 1200A max.
KPRL4CND	CND/NG BREAKER 3 POLE 1200A max.

Application Notes:
1) JD and KD single connector kits fit in 24" and 30" wide panels.
2) JD and KD twin connector kits fit in 38" , 44" and 48" wide panels.

Note: Twin mounted KDC's for use at 65kA @ 600V must use KPRL4KDCT twin connector kits. Do not use KPRL4KDT.

Replacement Fusible Switches

Fusible Switch	Catalogue No.	Style No.
Twin 30A / 30A Switch c/w 600V "J" Fuse Clips (4X)	**FDPWT3611J**	1240C05G84
Twin 30A / 60A Switch c/w 600V "J" Fuse Clips (4X)	**FDPWT3612J**	1240C05G85
Twin 60A / 60A Switch c/w 600V "J" Fuse Clips (4X)	**FDPWT3622J**	1240C05G86
Twin 100A / 100A Switch c/w 600V "J" Fuse Clips (5X)	**FDPWT3633J**	1240C06G83
Single 200A Switch c/w 600V "J" Fuse Clips (6X) OBSOLETE	**FDPWS364J**	2611D08G12
Single 200A Switch c/w 600V "J" Fuse Clips (6X)	**FDPBS364J**	7828C97G13
Twin 200A / 200A Switch c/w 600V "J" Fuse Clips (6X) OBSOLETE	**FDPWT3644J**	7830C68G02
Twin 200A / 200A Switch c/w 600V "J" Fuse Clips (6X)	**FDPBT3644J**	7828C98G12
Single 400A Switch c/w 600V "J" Fuse Clips (9X)	**FDPW365J**	7830C03G43
Single 600A Switch c/w 600V "J" Fuse Clips (11X)	**FDPW366J**	7830C09G43
Single 800A Switch c/w 600V "L" Fuse Clips (11X)	**FDPW367**	7830C10G41
Single 1200A Switch c/w 600V "L" Fuse Clips (15X)	**FDPW368**	7830C08G41

- **Note:** Twin 200A / 200A switch for use on current Pow-R-Line 4 panels only. For other fuse clip provisons, refer to Eaton.

For complete kit order fusible switch and connectors for the associated panelboard

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Replacement Fusible Metered Switches

Metered Switch FSMC	Catalogue No.	Style No.
Twin 30A / 30A Metered Switch c/w 600V "J" Fuse Clips (7X)	**FSMC3030**	1C01078G01
Twin 60A / 60A Metered Switch c/w 600V "J" Fuse Clips (7X)	**FSMC6060**	1C01079G01
Twin 100A / 100A Metered Switch c/w 600V "J" Fuse Clips (7X)	**FSMC100100**	1C01080G01
200A Metered Switch c/w 600V "J" Fuse Clips (7X) OBSOLETE	**FSMC200**	1C01081G01
200A FSMCB Metered Sw c/w 600V "J" Fuse Clips (7X)	**FSMCB200**	1C01081G02

For complete kit order fusible switch and connectors for the associated panelboard

Replacement Connector Kits

Fusible Switch Connectors for Pow-R-Line 4 Panels (Sept. 1995 to present) (Switch type FDP, CFDP or FSMC) No.	Catalogue
Connector Kit for Twin 30A / 30A switch - Al or Cu Panel bus	**KPRL4W4XT**
Connector Kit for Twin 60A / 60A switch - Al or Cu Panel bus	**KPRL4W4XT**
Connector Kit for Twin 100A / 100A switch - Al or Cu Panel bus	**KPRL4W5XT**
Connector Kit for Single 200A switch - Al or Cu Panel bus OBSOLETE	**KPRL4W6XS**
Connector Kit for Single 200A switch - Al or Cu Panel bus Use with new FDPB only	**KPRL4B6XS**
Connector Kit for Twin 200A/200A switch - Al or Cu Panel bus OBSOLETE	**KPRL4W6XT**
Connector Kit for Twin 200A/200A switch - Al or Cu Panel bus Use with new FDPB only	**KPRL4B6XT**
Connector Kit for Single 400A switch - Al or Cu Panel bus	**KPRL4W9X**
Connector Kit for Single 600/800A switch - Al or Cu Panel bus	**KPRL4W11X**
Connector Kit for Single 1200A switch - Al or Cu Panel bus	**KPRL4W15X**

Fusible Switch Connectors for WSF / WMBF / QSF / QMBF Panels (up to 1995)	Catalogue No.
Connector Kit for Twin 30A & 60A switches - Al or Cu panel bus (also use for P-switch)	**KWSF4XT**
Connector Kit for Twin 100A / 100A switch - Al or Cu panel bus	**KWSF5XT**
Connector Kit for Single 200A switch - Al or Cu panel bus (also use for P-switch) OBSOLETE	**KWSF6XS**
Connector Kit for Single FDPB 200A sw only - Al or Cu panel bus (does not work for P-switch)	**KWSFB6XS**
Connector Kit for Single 400A switch - Al or Cu panel bus	**KWSF9X**
Connector Kit for Single 600A & 800A switches - Al or Cu panel bus	**KWSF11X**
1200A Connector Kit Not for use with new switch	

Replacement Connector Kits
Cont'd

Fusible Switch Connectors for QMBP Panels (up to 1986) (Commander P-switches)	Catalogue No.
Connector Kit for QMBF P-Switch 100A / 100A	**KQMBP5XT**
Connector Kit for QMBF P-Switch 400A	**KQMBP9X**
Connector Kit for QMBF P-Switch 600A & 800A	**KQMBP11X**

Application Notes:
- For Twin 100A, Single 400A and Single 800A
  For 36" wide cell, modifications to the left and right side trims may be required to accommodate the new switch
  For 38" wide cell, modifications to the 2" filler on the right side may be required to accommodate the new switch
- For replacement of old Commander "P" Switches refer to Eaton

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Fusible Switch Connectors for FDP Panels (used until 1990)	Catalogue No.
Connector Kit for Twin 30A, 60A, 100A switches - Alum panel bus	**KFDP5XT**
Connector Kit for Single 200A switch - Alum panel bus OBSOLETE	**KFDP6XS**
Connector Kit for Single 400A switch - Alum panel bus	**KFDP9X**
Connector Kit for Single 600A switch - Alum panel bus	**KFDP11X**
800 and 1200A Connector Kit Not for use with new switch	
Connector Kit for Twin 30A, 60A, 100A switches - Cu panel bus	**KFDP5XTC**
Connector Kit for Single 200A switch - Cu panel bus OBSOLETE	**KFDP6XSC**
Connector Kit for Single 400A switch - Cu panel bus	**KFDP9XC**
Connector Kit for Single 600A switch - Cu panel bus	**KFDP11XC**
800 and 1200A Connector Kit Not for use with new switch	
A 200A Alum. Connector kit is no longer available for use with old FDP panelboards. Contact Eaton for retrofit panelboard options.	

Application Notes:
- Identify if panel bus is copper or aluminum before you select connector kit. They are not interchangable.

Notes

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Eaton is a power management company with 2014 sales of $22.6 billion. Eaton provides energy-efficient solutions that help our customers effectively manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. Eaton has approximately 99,000 employees and sells products to customers in more than 175 countries. For more information, visit www.eaton.com.

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