

PRL1a

Product Description

- 240V AC 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.



Type PRL1a

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 Certifications

- CSA - C22.2 No. 29
- Federal Specification W-P-115c.

Options and Accessories

- Refer to **Page 2-29**.

Layout and Sizing

- Refer to **Page 2-3**.

Product Selection

Table 2-1. Base Configurations — PRL1a

Ampere Rating	Interrupting Rating (kA Sym.) 240V AC	Breaker Type
Main Lug Only		
100	—	—
225	—	—
400	—	—
600	—	—
Main Breaker		
100	10	BAB
100	18	EHD/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. Branch Circuit Breakers — PRL1a

Bolt-on = BAB, QBHW, QBGF, QBHGF, QBGFEP, QBHGFEF, QBAF, QBAG		
Ampere Rating	Interrupting Rating (kA Sym.) 240V AC ①	Breaker Type
15 – 30	10	DNBA (twin)
15 – 60	10	BAB
70	10	BAB
80 – 100	10	BAB
125	10	BAB (2 Pole)
15 – 50 ③	10	QBGF ④
15 – 50 ③	10	QBGFEP ⑤
15 – 20	10	QBCAF ⑥
15 – 60	10	BAB-D ⑦
15 – 30	10	BAB-C ⑧
15 – 30	10	BABRSP ⑨
15 – 60	22	QBHW
70	22	QBHW
80 – 100	22	QBHW
125	22	QBHW (2 Pole)
15 – 30	22	QBHGF ④
15 – 30	22	QBHGFEF ⑤

- ① 1-pole breakers are rated 120V AC 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 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.

Available from 
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PRL1a

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	P1aL1C1-24
	-	24	P1aL4A1-24	P1aL1A1-24	P1aL4C1-24	P1aL1C1-30
	-	30	P1aL4A1-30	P1aL1A1-30	P1aL4C1-30	P1aL1C1-42
	-	42	P1aL4A1-42	P1aL1A1-42	P1aL4C1-42	P1aL1C1-18
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
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	EHD	18	P1aB4A1-18EHD	P1aB1A1-18EHD	P1aB4C1-18EHD	P1aB1C1-18EHD
		24	P1aB4A1-24EHD	P1aB1A1-24EHD	P1aB4C1-24EHD	P1aB1C1-24EHD
		30	P1aB4A1-30EHD	P1aB1A1-30EHD	P1aB4C1-30EHD	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
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 - 1phase, 3 wire 3 - 3phase, 3 wire 4 - 3phase, 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.

PRL1a

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

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

- Select the main ampere rating section from **Table 2-4**.
- Select panelboard type from first column.
- From Step #2, determine the number of branch circuits in Column 2.
- 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

Mains Ampere (Maximum)	Number of Branch Circuit	Box Dimensions (Inches)			Box Catalogue Number	Trim Catalogue Number
		H	W	D		
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
400 ①/600	84	72	20	5.75	EZB2072RC	EZT2072 S or F
	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
400/600	60	60	20	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
	72	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	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
400/600	72	72	20	5.75	EZB2072RC	EZT2072 S or F
	72	72	20	5.75	EZB2072RC	EZT2072 S or F
	72	72	20	5.75	EZB2072RC	EZT2072 S or F
	72	72	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
400/600	84	72	20	5.75	EZB2072RC	EZT2072 S or F
	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
400/600	60	60	20	5.75	EZB2060RC	EZT2060 S or F
	72	72	20	5.75	EZB2072RC	EZT2072 S or F
	72	72	20	5.75	EZB2072RC	EZT2072 S or F
	72	72	20	5.75	EZB2072RC	EZT2072 S or F

① In a Sub-Feed configuration, maximum incoming and outgoing cables are 1 per phase #500kcmil. Through-Feed lugs are recommended for 400A applications.

PRL1a

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

- Using description of the required panelboard, select the rating and type of main required.
- 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.
- Select the main ampere rating section from **Table 2-5**.
- Select panelboard type from first column, main breaker frame from second column.
- From Step #2, determine the number of branch circuits in Column 3.
- 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 Position	Number Branch Cct. Spaces	Box Dimensions (Inches)			Box Catalogue Number	Trim Catalogue Number
			H	W	D		
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	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, ED, EDH, 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	20	5.75	EZB2090RC	EZT2090 S or F

Table 2-6. Metric box dimensions:

Box Catalogue Number	Dimensions in mm		
	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

PRL2a

Product Description

- 600Y/347 V AC.
- 480Y/277V AC .
- 125V AC
- 3-phase 4-wire
- 1-phase 3-wire, 1-phase 2-wire.⑥
- 3-phase 3-wire. ⑥
- 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.



Type PRL2a

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 Certifications

- CSA C22.2 No. 29
- Federal Specification W-P-115c.

Options and Accessories

- Refer to **Page 2-29**.

Layout and Sizing

- Refer to **Page 2-7**.

Product Selection

Table 2-7. Base Configuration — PRL2a

Ampere Rating	Interrupting Rating (kA Symmetrical)				Breaker Type
	240V AC	480Y/277V AC	600Y/347V AC	125/250V DC	
Main Lug Only					
100	—	—	—	—	—
225	—	—	—	—	—
400	—	—	—	—	—
600	—	—	—	—	—
Main Breaker					
100	65	14	—	14	GHB
100	65	14	10	14	GBH
100	18	14	—	10	EHD
100	65	35	18	10	FD
100	18	14	14	10	FDB
100	100	65	25	22	HFD
100	200	100	35	22	FDC
225	65	—	—	—	ED
225	18	14	14	10	FDB
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	35	25	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)				Breaker Type
	240V AC②	480Y/277V AC	600Y/347V AC	125/250V DC	
15 – 60	65	14	—	14	GHB ②
15 – 60	65	14	10	14	GBH ②
70 – 100	65	14	—	14	GHB ②
70 – 100	65	14	10	14	GBH ②
15 – 30	65	14	—	—	GHQRSP ②③
15 – 60	—	14	—	—	GHBGFEP②④
15 – 20	—	14	—	—	GBHID ②⑤
Provision	—	—	—	—	—

① Interrupting ratings in this column are applicable to 120V AC 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. 277V AC only.
 ⑤ HID (High Intensity Discharge) rated breaker.
 ⑥ 240V AC maximum rating for these systems.
 ⑦ At 600V, must be used on 600Y/347V grounded wye systems only.

PRL2a

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 Breaker ^②						
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	-

2

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 - 1phase, 3 wire 3 - 3phase, 3 wire 4 - 3phase, 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 2-7.

② Add breaker trip rating to end of catalogue number.

PRL2a

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 mains 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 breakers 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 column 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 2-12. Metric box dimensions

Box Catalogue Number	Dimensions in mm		
	Height	Width	Depth
EZB2030RC	762	508	146
EZB2036RC	914	508	146
EZB2042RC	1067	508	146
EZB2048RC	1219	508	146
EZB2054RC	1372	508	146
EZB2060RC	1524	508	146
EZB2072RC	1828	508	146

Table 2-10. PRL2a Panelboard Sizing

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

Table 2-11. PRL2a Panelboard Sizing

Main Breaker		Number of Branch Circuit Poles	Box Dimensions Inches			Box Catalogue Number	Trim Catalogue Number
Ampere Rating	Type		H	W	D		
100	GBH, GHB ⊕ (horizontal)	15, 21, 27	30	20	5-3/4	EZB2030RC	EZT2030 S or F
100/225	FDB, FD, HFD, FDC EHD ⊕ (vertical)	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, 84	72	20	5-3/4	EZB2072RC	EZT2072 S or F
400	KD HKD KDC (vertical)	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
Main Breaker with Through-Feed Lugs							
100	GBH, GHB ⊕ (horizontal)	15, 21, 27	30	20	5-3/4	EZB2030RC	EZT2030 S or F
100/225	FDB, FD, HFD, FDC EHD ⊕ (vertical)	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	KD HKD, KDC (vertical)	24	60	20	5-3/4	EZB2060RC	EZT2060 S or F
		30	72	20	5-3/4	EZB2072RC	EZT2072 S or F
		42	72	20	5-3/4	EZB2072RC	EZT2072 S or F

⊕ In Sub-Feed configuration, maximum incoming and outgoing cables are 1 per phase #500kcmil. Through-Feed lugs are recommended for 400A applications.

PRL3a

Product Description

- 600V AC 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.



Type PRL3a

Product Selection

Table 2-13. Base Configurations — PRL3a

Ampere Rating	Interrupting Rating (kA Symmetrical)				Breaker Type
	240V AC	480V AC	600V AC	250V DC	
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

2

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
- Federal Specification W-P-115c.

Options and Accessories

- Refer to **Page 2-29**.

Layout and Sizing

- Refer to **Page 2-10**.

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 - 1phase, 3 wire 3 - 3phase, 3 wire 4 - 3phase, 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

Table 2-14. Branch Circuit Breakers — PRL3a

Ampere Rating	Interrupting Rating (kA Symmetrical)				Breaker Type
	240V AC	480V AC	600V AC	250V DC	
15 – 30	10 ^①	—	—	—	DNBA (Twin)
15 – 60	10 ^{①②}	—	—	—	BAB
15 – 60	10	—	—	—	BAB-H
70	10 ^{①②}	—	—	—	BAB
70	10	—	—	—	BAB-H
80 – 100	10 ^{①②}	—	—	—	BAB
80 – 100	10	—	—	—	BAB-H
15 – 50 ^③	10 ^{①②}	—	—	—	QBGF
15 – 50 ^③	10 ^{①②}	—	—	—	QBGFEP
15 – 50 ^③	10 ^{①②}	—	—	—	GFCBB
15 – 20	10 ^①	—	—	—	QBCAF ^④
15 – 60	10 ^{①②}	—	—	—	BAB-D ^⑤
15 – 30	10 ^{①②}	—	—	—	BAB-C ^⑥
15 – 30	10 ^①	—	—	—	BABRSP ^⑦
15 – 60	22 ^{①②}	—	—	—	QBHW
15 – 60	22	—	—	—	QBHW-H
70	22 ^{①②}	—	—	—	QBHW
70	22	—	—	—	QBHW-H
80 – 100	22 ^{①②}	—	—	—	QBHW
80 – 100	22	—	—	—	QBHW-H
15 – 30	22	—	—	—	QBHG
15 – 30	22	—	—	—	QBHGFEF
15 – 20	65	14 ^{⑧⑨}	—	—	GHQ
15 – 60	65	14 ^{⑧⑨}	—	14	GHB
15 – 60	65	14 ^{⑧⑨}	10 ^{⑫⑬}	14	GBH
70 – 100	65	14 ^{⑧⑨}	—	14	GHB
70 – 100	65	14 ^{⑧⑨}	10 ^{⑫⑬}	14	GBH
15 – 30	65	14 ^{⑧⑨}	—	14	GHQRSP ^⑧
15 – 60	—	14 ^{⑧⑨}	—	—	GHGFEF
15 – 20	—	14 ^{⑧⑨}	—	—	GHBHD ^⑤
15 – 60	18 ^⑩	14 ^⑧	—	10	EHD
70 – 100	18 ^⑩	14 ^⑧	—	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	65 ^⑩	35 ^⑧	18	10	FD
15 – 150	—	—	18	—	FD
70 – 100	65 ^⑩	35 ^⑧	18	10	FD
110 – 225	65 ^⑩	25	18	10	FD ^⑩
15 – 60	100 ^⑩	65 ^⑧	25	22	HFD
70 – 100	100 ^⑩	65 ^⑧	25	22	HFD
110 – 225	100 ^⑩	65	25	22	HFD ^⑩
15 – 60	200	100	35	22	FDC
70 – 100	200	100	35	22	FDC
110 – 225	200	100	35	22	FDC ^⑩
100 – 225	65	—	—	—	ED ^⑩
100 – 225	100	—	—	—	EDH ^⑩
100 – 225	200	—	—	—	EDC ^⑩
100 – 225	65	35	18	—	FDE322533 LS ^⑭
100 – 225	65	35	18	—	FDE322532 LS ^⑭
60 – 150	65	35	18	—	FDE316033 LS ^⑭
60 – 150	65	35	18	—	FDE316032 LS ^⑭
15 – 80	65	35	18	—	FDE308033 LS ^⑭
15 – 80	65	35	18	—	FDE308032 LS ^⑭
100 – 225	100	65	25	—	HFDE322533 LS ^⑭
100 – 225	100	65	25	—	HFDE322532 LS ^⑭
60 – 150	100	65	25	—	HFDE316033 LS ^⑭
60 – 150	100	65	25	—	HFDE316032 LS ^⑭
15 – 80	100	65	25	—	HFDE308033 LS ^⑭
15 – 80	100	65	25	—	HFDE308032 LS ^⑭

① 1-pole breaker rated 120V AC.
 ② 2-pole breaker rated 120/240V AC.
 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 277V AC.
 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 347V AC.
 ⑬ For use on 600Y/347V systems only.
 ⑭ 3-Pole only

PRL3a

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, 120/208V AC 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. Layout Information from **Figure 1-4**:

- a. 400 ampere Neutral = 5X
- b. 12-poles of QBHW = 5X
- c. Two 3-pole ED break ers . . . = 6X
- d. Two 3-Pole ED break ers . . . = 3X
Main break ers 400 amperes
- e. 3-pole DK = 15X
Total Height. = 34X

3. From **Table 2-15**:

- a. 34X Height (use 40X box)
- b. Box Height 72 inches (1828.8 mm)
- c. Box Catalogue Number **EZB2072RC**

		Poles	BAB, QBHW, BABRSP, GHB, GBH
		6 - 3X 12 - 5X 18 - 8X 24 - 10X 30 - 13X 36 - 15X 42 - 18X	①
		1X	ED, EDH, EDC, EHD, FDB, FD, HFD, FDC
		2X	150A Max. Per Branch Breaker (300A Max. Per Connector)
		3X	
		2X 2-Pole	ED, EDH, EDC, FD, HFD, FDC ②③ (175 - 225A)
		3X 3-Pole	
		Neutral Section	5X: 250A-400A 8X: 600A
Main Lug Section		5X	250A
		8X	400-600A
Main Breaker Section	Horizontal Mounting	2X 2-Pole	EHD, FDB, FD, HFD, FDC
		3X 3-Pole	ED, EDH, EDC ③④
		Vertical Mounting	7X: EHD, FDB, FD, HFD, FDC, ED, EDH, EDC ⑤ 9X: FCL, FB-P ⑥ 14X: JD, HJD, JDC 14X: DK, KD, HKD, KDC 18X: LGE, LGH
	Visor Series TVSS	6X	100-200kA
		8X	250-400kA

Figure 2-1. 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 2-15. Box Tabulation — PRL3a

"X" Units	Box Height		Box Catalogue Number	Trim Catalogue Number ⑤
	Inches	mm		
250 – 400 Amperes				
23X	48	1219.2	EZB2048RC	EZT2048S or F
31X	60	1524.0	EZB2060RC	EZT2060S or F
40X	72	1828.8	EZB2072RC	EZT2072S or F
600 Amperes				
23X	48	1219.2	EZB2048RC	EZTV2048S or F
31X	60	1524.0	EZB2060RC	EZTV2060S or F
40X	72	1828.8	EZB2072RC	EZTV2072S or F

⑤ 600 ampere panels are optionally available with 28-inch (610 mm) wide box. Consult factory for availability.

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.

PRL4

Type PRL4



Type PRL4B Circuit Breaker Panelboard



Type PRL4F Fusible Panelboard

Product Description

- 600V AC maximum (250V DC).
- 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 Certifications

- CSA C22.2 No.29
- Federal Specification W-P-115c.

Options and Accessories

- Refer to **Page 2-29**.

Layout and Sizing

- PRL4B — Refer to **Pages 2-16** through **2-18**.
- PRL4F — Refer to **Pages 2-19** through **2-21**.

Pow-R-Line 4 Catalogue Code

P4	B	4	A	4	-	27	KD	400
Panelboard Type	L - Main Lugs Only B - Bottom Main Breaker T - Top Main Breaker S - Main Switch	1 - 1phase, 3 wire 3 - 3phase, 3 wire 4 - 3phase, 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

PRL4

Product Selection

Table 2-16. Base Configuration — PRL4 Main Lugs and Main Breakers

Ampere Rating	Interrupting Rating (kA Symmetrical)				Breaker Type
	240V AC	480V AC	600V AC	250V DC	
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	—	CKD ①②
400	100	65	35	22	HKD
400	100	65	35	—	CHKD ①②
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
600	65	35	25	22	LD
600	65	35	25	—	CLD ①
600	100	65	35	25	HLD
600	100	65	35	—	CHLD ①
600	200	100	50	25	LDC
600	200	100	50	—	CLDC ①
800	65	50	25	22	MDL
800	100	65	35	25	HMDL
800	65	50	25	—	CMDL ①
800	100	65	35	—	CHMDL ①
800	200	200	200	—	NB-P
800	65	50	25	—	ND
800	100	65	35	—	HND
800	200	100	50	—	NDC
800	65	50	25	—	CND ①③
800	100	65	35	—	CHND ①③
800	200	100	50	—	CNDC ①③
1200	65	50	25	—	ND
1200	100	65	35	—	HND
1200	200	100	65	—	NDC
1200	65	50	25	—	CND ①③
1200	100	65	35	—	CHND ①③
1200	200	100	65	—	CNDC ①③

① 100% rated breaker. Requires copper bus.

② Breaker only available in 3-pole frame.

③ Requires 44-inch (1117.6 mm) wide box.

Table 2-17. Base Configuration — PRL4 Main Fusible Switches

Ampere Rating	Interrupting Rating (kA Symmetrical)		Device Type
	240V AC	480V AC / 600V AC	
Main Fusible Switch 240V AC, 250V DC ④⑤⑥			
200	See Table 2-20		FDPB
400			FDPW
600 ⑥			FDPW
800 ⑥			FDPW
1200 ⑥			FDPW
Main Fusible Switch 600V AC ④⑤			
200	See Table 2-20		FDPB
400			FDPW
600 ⑥			FDPW
800 ⑥			FDPW
1200 ⑥			FDPW

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.

PRL4

Table 2-18 Branch Devices — PRL4

Ampere Rating	Interrupting Rating (kA Symmetrical)				Breaker Type
	240V AC	480V AC	600V AC	250V DC	
15 – 30	10 ^③	—	—	—	DNBA (Twin)
15 – 60	10 ^{③④}	—	—	—	BAB
15 – 60	10	—	—	—	BAB-H
70 – 100	10 ^{③④}	—	—	—	BAB
70 – 100	10	—	—	—	BAB-H
15 – 50 ^②	10 ^{③④}	—	—	—	QBGF
15 – 60	22 ^{③④}	—	—	—	QBHW
15 – 60	22	—	—	—	QBHW-H
70 – 100	22 ^{③④}	—	—	—	QBHW
70 – 100	22	—	—	—	QBHW-H
15 – 30	22 ^{③④}	—	—	—	QBHGF
15 – 60	65 ^⑤	14 ^⑤	—	14	GHB ^⑥
70 – 100	65 ^⑤	14 ^⑤	—	14	GHB ^⑥
15 – 60	65 ^⑤	14 ^⑤	10 ^⑩	14	GBH ^⑦
70 – 100	65 ^⑤	14 ^⑤	10 ^⑩	14	GBH ^⑦
15 – 60	18 ^⑦	14 ^⑤	—	10	EHD
70 – 100	18 ^⑦	14 ^⑤	—	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	65 ^⑦	35 ^⑤	18	10	FD
70 – 100	65 ^⑦	35 ^⑤	18	10	FD
110 – 225	65 ^⑦	35	18	10	FD
15 – 60	100 ^⑦	65 ^⑤	25	22	HFD
70 – 100	100 ^⑦	65 ^⑤	25	22	HFD
110 – 225	100 ^⑦	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
100-225	65	35	18	—	FDE322533 LS ^①
100-225	65	35	18	—	FDE322532 LSI ^①
100-225	65	35	18	—	FDE322535 LSG ^①
100-225	65	35	18	—	FDE322536 LSIG ^①
60-150	65	35	18	—	FDE316033 LS ^①
60-150	65	35	18	—	FDE316032 LSI ^①
60-150	65	35	18	—	FDE316035 LSG ^①
60-150	65	35	18	—	FDE316036 LSIG ^①
15-80	65	35	18	—	FDE308033 LS ^①
15-80	65	35	18	—	FDE308032 LSI ^①
15-80	65	35	18	—	FDE308035 LSG ^①
15-80	65	35	18	—	FDE308036 LSIG ^①
100-225	100	65	25	—	HFDE322533 LS ^①
100-225	100	65	25	—	HFDE322532 LSI ^①
100-225	100	65	25	—	HFDE322535 LSG ^①
100-225	100	65	25	—	HFDE322536 LSIG ^①
60-150	100	65	25	—	HFDE316033 ^①
60-150	100	65	25	—	HFDE316032 ^①
60-150	100	65	25	—	HFDE316035 ^①
60-150	100	65	25	—	HFDE316036 ^①
15-80	100	65	25	—	HFDE308033 ^①
15-80	100	65	25	—	HFDE308032 ^①
15-80	100	65	25	—	HFDE308035 ^①
15-80	100	65	25	—	HFDE308036 ^①
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 120V AC.
 ④ 2-pole breakers rated 120/240V AC.
 ⑤ 1-pole breakers rated 277V AC.
 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 347V AC.
 ⑫ At 600V, must be used on 600Y/347V grounded wye systems only.

PRL4

Table 2-18 Branch Devices — PRL4 (Continued)

Ampere Rating	Interrupting Rating (kA Symmetrical)				Device Type
	240V AC	480V AC	600V AC	250V DC	
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	—	CKD ⑧⑨⑩
100 – 400	100	65	35	22	HKD
100 – 400	100	65	35	—	CHKD ⑧⑨⑩
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	—	CLD ⑧
300 – 600	100	65	35	25	HLD
300 – 600	100	65	35	—	CHLD ⑧
300 – 600	200	100	50	25	LDC
300 – 600	200	100	50	25	CLDC ⑧
400 – 800	65	50	25	22	MDL
400 – 800	100	65	35	25	HMDL
400 – 800	65	50	25	—	CMDL ⑧
400 – 800	100	65	35	—	CHMDL ⑧
400 – 800	65	50	25	—	ND
400 – 800	100	65	35	—	HND
400 – 800	200	100	65	—	NDC
400 – 800	65	50	25	—	CND ①②
400 – 800	100	65	35	—	CHND ①②
400 – 800	200	100	65	—	CNDC ①②
600 – 1200	65	50	25	—	ND
600 – 1200	100	65	35	—	HND
600 – 1200	200	100	65	—	NDC
600 – 1200	65	50	25	—	CND ①②
600 – 1200	100	65	35	—	CHND ①②
600 – 1200	200	100	65	—	CNDC ①②

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 120V AC.

④ 2-pole breakers rated 120/240V AC.

⑤ 1-pole breakers rated 277V AC.

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 347V AC.

⑫ At 600V, must be used on 600Y/347V grounded wye systems only.

Table 2-19.

Fusible Switches 240V AC, 250V DC ④

30/30 ⑤ 60/60 ⑤ 100/100 ⑤ 200/200 200	See Table 2-20	FDPW-Twin FDPW-Twin FDPW-Twin FDPB-Twin FDPB-Single
400 600 ⑥ 800 ⑥ 1200 ⑥	See Table 2-20	FDPW-Single FDPW-Single FDPW-Single FDPW-Single

Fusible Switches 600V AC ④

30/30 ⑤ 60/60 ⑤ 100/100 ⑤ 200/200 ⑦ 200	See Table 2-20	FDPW-Twin FDPW-Twin FDPW-Twin FDPB-Twin FDPB-Single
400 600 ⑥ 800 ⑥ 1200 ⑥	See Table 2-20	FDPW-Single FDPW-Single FDPW-Single FDPW-Single

Table 2-20. FDPW and FDPB Switch Ratings, 240 or 600V AC

Ampere Rating	Fuse Class Used	Short Circuit Ratings (Sym. Amperes)
30 – 100	R, J ⑧	200,000
200 Single	R, J ⑧	200,000
200 Twin	R ⑩, J ⑧, T	200,000
400, 600 ⑥	R ⑩, J ⑧, T	200,000
800, 1200 ⑥	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.

PRL4

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.

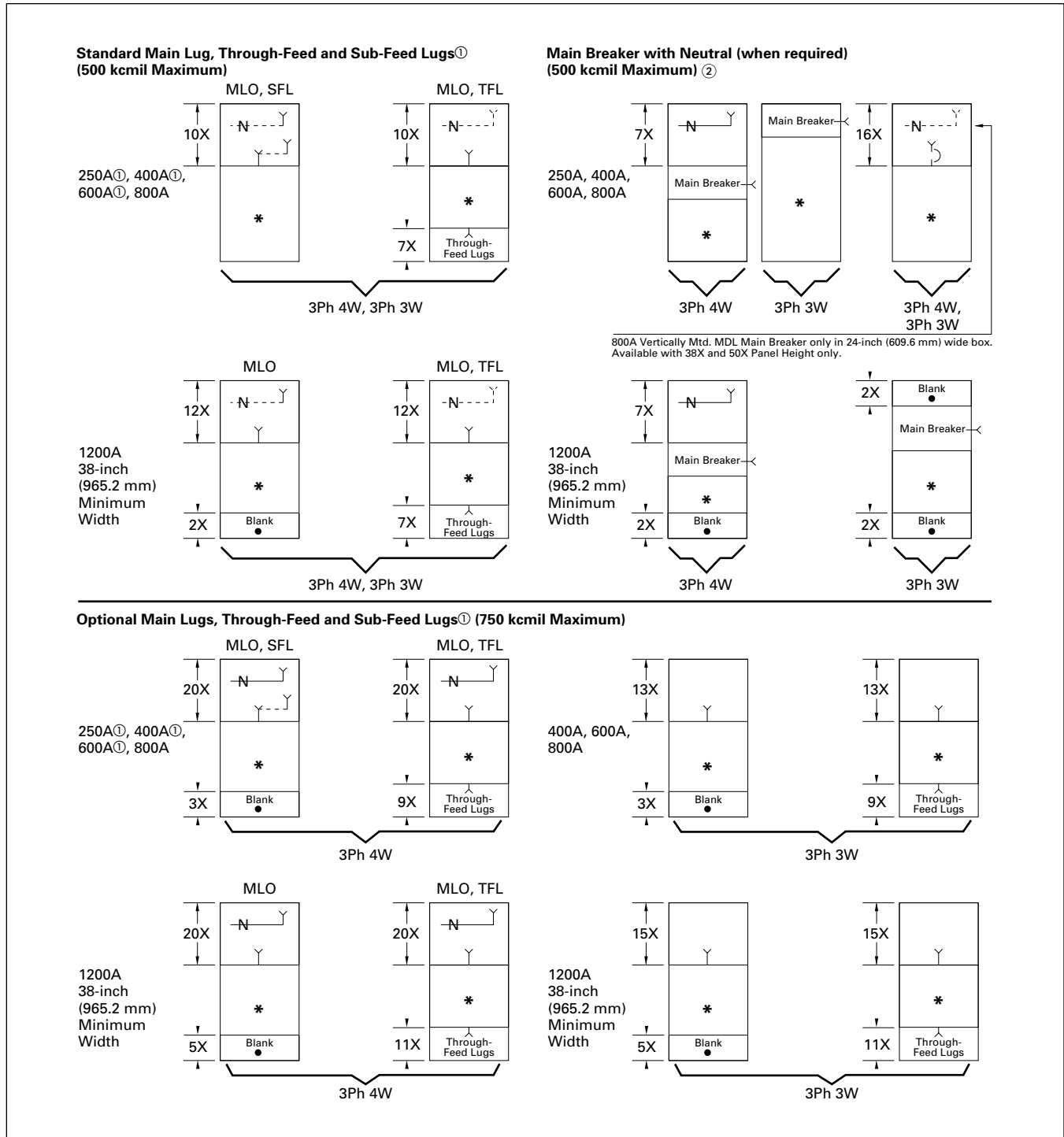


Figure 2-2. PRL4B Layout

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

PRL4

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 1-6

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.

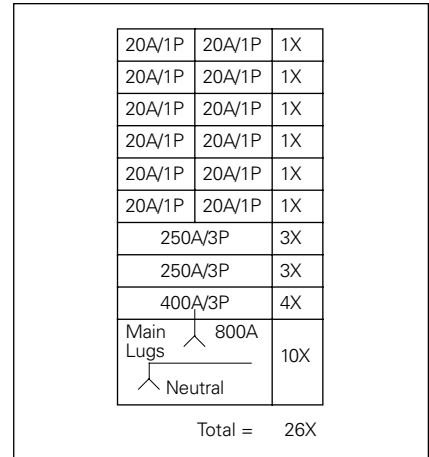


Figure 2-3. PRL4B Layout Example

Table 2-21. Box Dimensions — PRL4B

"X" Units	Catalogue Number	Inches			mm		
		Height	Width	Depth ①	Height	Width	Depth ①
26X	BX2457	57	24	11-5/16	1447.8	609.6	287.0
38X	BX2473	73-1/2	24	11-5/16	1866.9	609.6	287.0
50X	BX2490	90	24	11-5/16	2286.0	609.6	287.0
38X	BX3873	73-1/2	38	11-5/16	1866.9	965.2	287.0
50X	BX3890	90	38	11-5/16	2286.0	965.2	287.0
38X	BX4473	73-1/2	44	11-5/16	1866.9	1117.6	287.0
50X	BX4490	90	44	11-5/16	2286.0	1117.6	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.

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).

PRL4

2

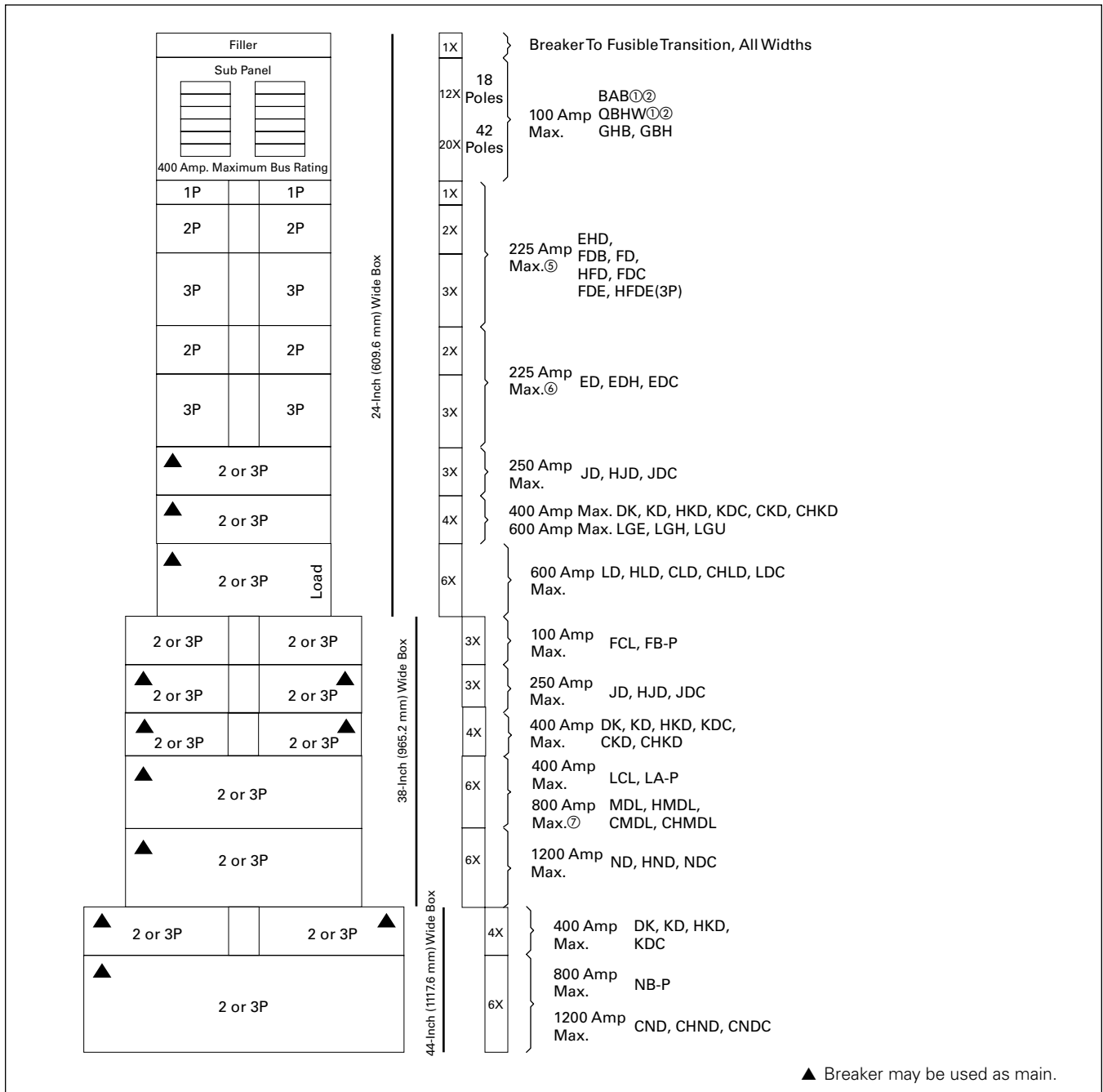


Figure 2-4. Layout for Branch and Horizontally Mounted Main Devices — PRL4B

- 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.

PRL4

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.

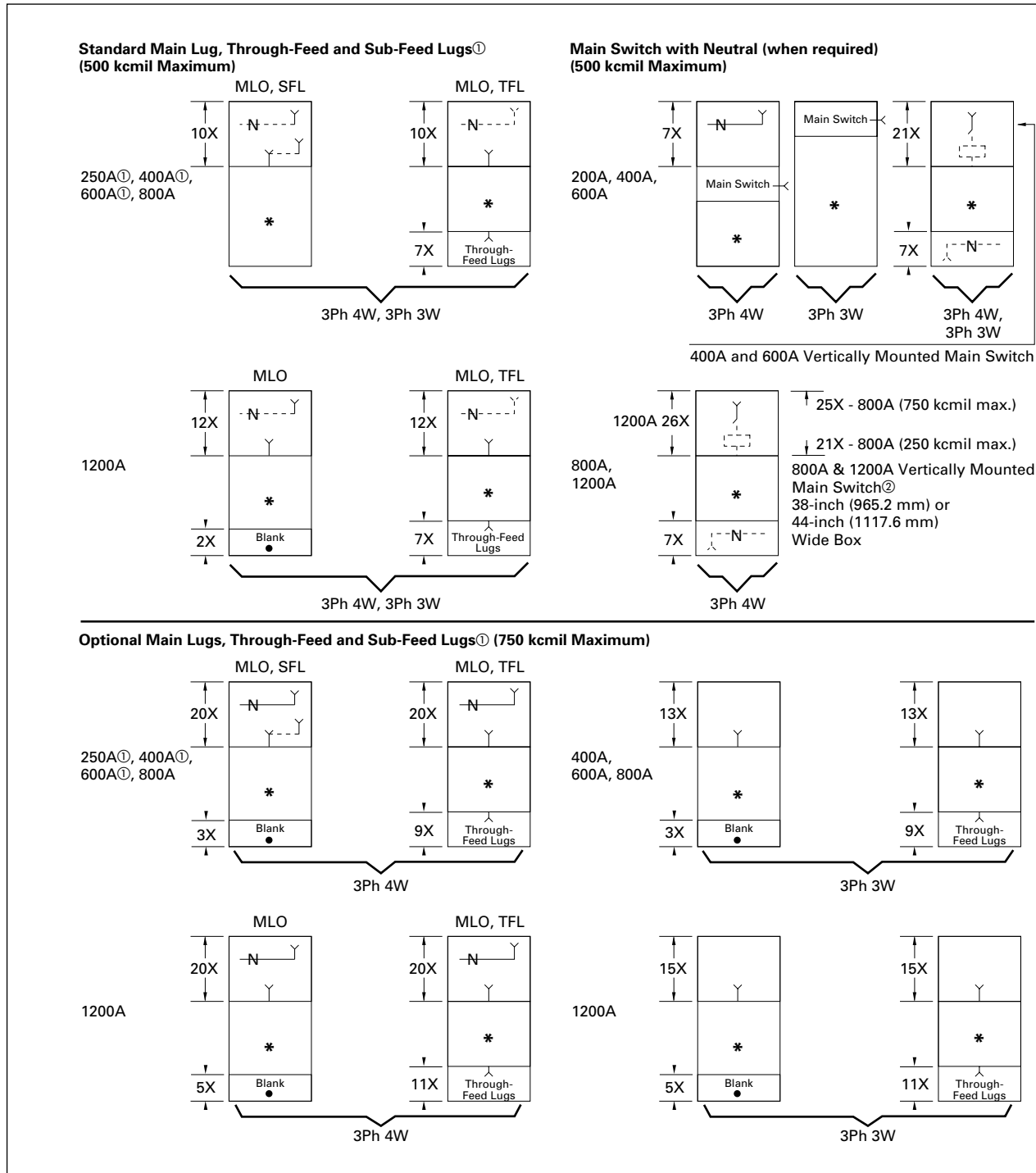


Figure 2-5. PRL4F Layout

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.

PRL4

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 2-22**. 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

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

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

Panel to have short circuit rating of 100,000 amperes symmetrical.

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).

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. Type 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 2-22. Box Dimensions — PRL4F

"X" Units	Catalogue Number	Inches			mm		
		Height	Width	Depth ①	Height	Width	Depth ①
38X	BX3873	73-1/2	38	11-5/16	1866.9	965.2	287.0
50X	BX3890	90	38	11-5/16	2286.0	965.2	287.0
38X	BX4473	73-1/2	44	11-5/16	1866.9	1117.6	287.0
50X	BX4490	90	44	11-5/16	2286.0	1117.6	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.

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

PRL4

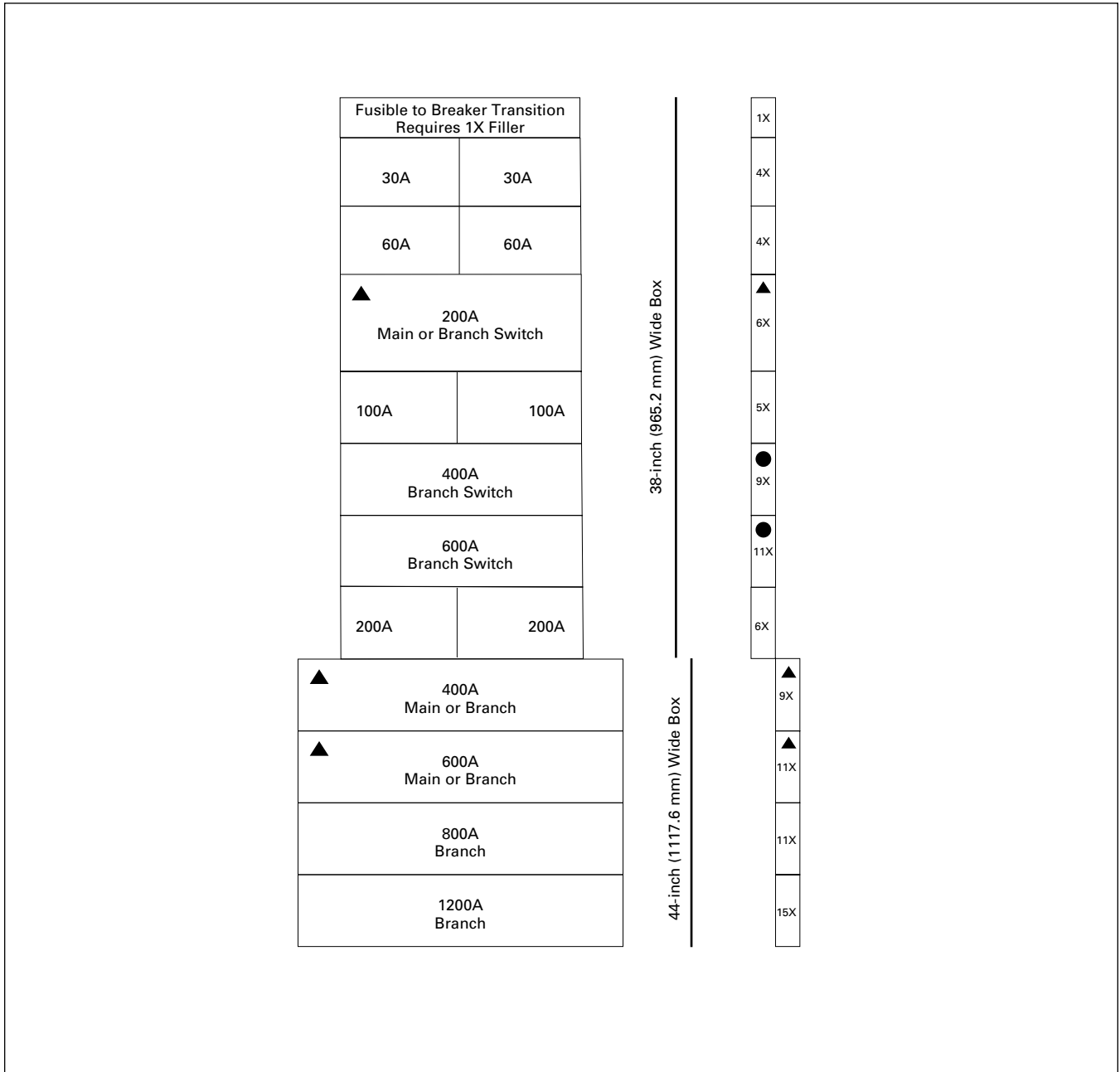


Figure 2-7. Branch and Horizontally Mounted Main Device Layout — PRL4F

- ▲ 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 PRL1a-LX

Product Description

- 240V AC maximum.
- 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.



Type PRL1a-LX, Column Type

2

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
- Federal Specification W-P-115c.

Options and Accessories

- Pullbox and trough extensions.
- See also **Page 2-29**.

Layout and Sizing

- Refer to **Page 2-23**.

Product Selection

Table 2-23 PRL1a-LX

Ampere Rating	Interrupting Rating (kA Sym.) 240V AC	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 2-24 Branch Circuit Breakers — PRL1a-LX

Ampere Rating	Interrupting Rating (kA Sym.) 240V AC ^①	Breaker Type
---------------	--	--------------

15 – 60	10	BAB
70	10	BAB
80 – 100	10	BAB
15 – 50 ^③	10	QBGF ^④
15 – 50 ^③	10	QBGFEP ^⑤
15 – 20	10	QBAF ^⑥
15 – 20	10	QBAG ^⑦
15 – 30	10	BABR ^⑧
15 – 30	10	BABRS ^⑧
15 – 60	22	QBHW
70	22	QBHW
80 – 100	22	QBHW
15 – 30	22	QBHGF ^④
15 – 30	22	QBHGFEP ^⑤

^① 1-pole breakers are rated 120V AC 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 2-25. Pull Box With Extension Trough

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 2-26. Additional Trough Extensions

Width and depth are the same as the panelboard.

Length		Catalogue Number
Inches	mm	
36	914.4	CCTXB036
48	1219.2	CCTXB048
60	1524.0	CCTXB060
72	1828.8	CCTXB072
84	2133.6	CCTXB084

Neutral Bars

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

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

Type PRL1a-LX

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 knock outs. Standard depth is 6 inc hes (152.4 mm). Standard width is 8-5/8 inc hes (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 knock-outs. Standard dimensions

Table 2-27. Pull Box Dimensions

Height		Width		Depth	
Inches	mm	Inches	mm	Inches	mm
12	304.8	16	406.4	6	152.4

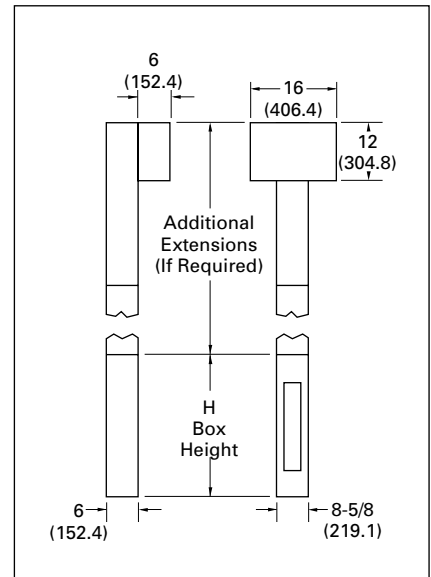


Figure 2-8. PRL1a-LX Trough Extension, Dimensions in Inches (mm)

Type PRL1a-LX

Box Sizing and Selection (Continued)

Table 2-28. 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)			Box Catalogue Number	Trim Catalogue Number ^①
				Height	Width	Depth		
Main Breaker	BAB, QBHW (H)	—	27	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	YSC969	LTC969S
			39	81 (2057.4)	8-5/8 (219.2)	6 (152.4)	YSC981	LTC981S
Main Lugs or Main Breaker	EHD, ED FD, HFD (V)	—	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	EHD, ED FD HFD (V)	EHD, FD, HFD	30	78 (1981.2)	8-5/8 (219.2)	6 (152.4)	YSC978	LTC978S
			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).

Table 2-29. 225 Ampere Maximum PRL1a-LX Column Type Panelboard Sizing

Panelboard Types	Main Breaker Types	Sub-Feed Breaker Types	Maximum Number of Branch Circuits Including Provisions	Box Dimensions Inches			Box Catalogue Number	Trim Catalogue Number ^②
				Height	Width	Depth		
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 225A Through-Feed Lugs or Sub-Feed Breaker	ED, EDH	EHD, FD, HFD, ED, EDH	30	78 (1981.2)	8-5/8 (219.2)	6 (152.4)	YSC978	LTC978S
			42	90 (2286.0)	8-5/8 (219.2)	6 (152.4)	YSC990	LTC990S

^② Add suffix B to trim catalogue number for bottom fed panelboards (i.e., LTC969SB).

Type PRL2a-LX

Product Description

- 600Y/347V AC maximum (125V DC).
- 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.



Type PRL2a-LX, Column Type

Application Description

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

Standards and Certifications

- CSA C22.2 No.29
- Federal Specification W-P-115c.

Options and Accessories

- Pullbox and trough extensions.
- See also **Page 2-29**.

Layout and Sizing

- Refer to **Page 2-26**.

Product Selection

Table 2-30. Base Prices — PRL2a-LX

Ampere Rating	Interrupting Rating (kA Symmetrical)			Breaker Type
	240V AC	600Y/347V AC	125/250V DC	
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

① These system voltages apply to 240 volts.

Table 2-31. Branch Circuit Breakers — PRL2a-LX

Ampere Rating	Interrupting Rating (kA Symmetrical)				Breaker Type
	240V AC ②	480Y/277V AC	600Y/347V AC	125/250V DC	
15 – 20	65	14	—	—	GHQ ③
15 – 60	65	14	—	14	GHB ③
70 – 100	65	14	—	14	GHB ③
15 – 30	65	14	—	—	GHBS ③④
15 – 60	65	14	10	—	GBH ⑤
70 – 100	65	14	10	14	GBH ⑤
15 – 60	—	14	—	—	GHBFEP ③⑤

② Interrupting ratings in this column are applicable to 120V AC for 1-pole breakers.

③ At 480V, must be used on 480Y/277V grounded wye systems only.

④ Solenoid operated breaker.

⑤ GFP for 30 mA equipment protection. Requires two pole spaces.

⑥ At 600V, must be used on 600Y/347V grounded wye systems only.

Table 2-32. Pull Box With Extension Trough

Includes pull box with trough extension. For additional trough extensions, refer to Table 2-33.

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 2-33. Additional Trough Extensions

Width and depth are the same as the panelboard.

Length	Catalogue Number	
	Inches	mm
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.

Type PRL2a-LX

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 2-35** and **2-36**.

Instructions

- Using description of the required panelboard, select the rating and type of main required.
 - 100 ampere panelboards — **Table 2-35**.
 - 225 ampere panelboards — **Table 2-36**.
- 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.

- Select the panelboard main ampere rating from **Tables 2-35** or **2-36**.
- 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.
- From Step #2, determine the number of branch circuits in Column 4.
- 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 galvanized 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 2-34. Pull Box Dimensions

Height		Width		Depth	
Inches	mm	Inches	mm	Inches	mm
12	304.8	16	406.4	6	152.4

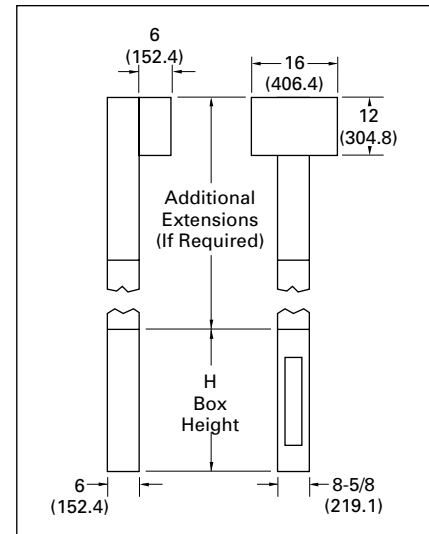


Figure 2-9. PRL2a-LX Trough Extension, Dimensions in Inches (mm)

Type PRL2a-LX

Box Sizing and Selection (Continued)

Table 2-35. 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			Box Catalogue Number	Trim Catalogue Number ①
				Height	Width	Depth		
Main Breaker	GHB, GBH (H)	—	27	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	YSC969	LTC969S
			39	81 (2057.7)	8-5/8 (219.2)	6 (152.4)	YSC981	LTC981S
Main Lugs or Main Breaker	EHD, FD HFD, FDC (V)	—	30	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	YSC969	LTC969S
			42	81 (2057.7)	8-5/8 (219.2)	6 (152.4)	YSC981	LTC981S
Main Lugs or Main Breaker with 100A Through-Feed Lugs or Sub-Feed Breaker	EHD, FD HFD, FDC (V)	EHD, FD, HFD	30	78 (1981.2)	8-5/8 (219.2)	6 (152.4)	YSC978	LTC978S
			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).

Table 2-36. 225 Ampere Maximum PRL2a-LX Column Type Panelboard Sizing

Panelboard Types	Main Breaker Types Vertical Mounting	Sub-Feed Breaker Types	Maximum Number of Branch Circuits Including Provisions	Box Dimensions Inches			Box Catalogue Number	Trim Catalogue Number ②
				Height	Width	Depth		
Main Lugs or Main Breaker	ED, FD HFD, FDC	—	30	69 (1752.6)	8-5/8 (219.2)	6 (152.4)	YSC969	LTC969S
			42	81 (2057.7)	8-5/8 (219.2)	6 (152.4)	YSC981	LTC981S
Main Lugs or Main Breaker with 225A Through-Feed Lugs or Sub-Feed Breaker	ED, FD HFD, FDC	EHD, FD, HFD, ED, EDH	30	78 (1981.2)	8-5/8 (219.2)	6 (152.4)	YSC978	LTC978S
			42	90 (2286.0)	8-5/8 (219.2)	6 (152.4)	YSC990	LTC990S

② Add suffix B to trim catalogue number for bottom fed panelboards (i.e., LTC969SB).

Boxes and Trims

Boxes and Trims Only — Type 1

Table 2-37. Types PRL1a and PRL2a

Box Dimensions	Height		Box		Trim
	Inches	mm	Catalogue Number		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 2-38. Type PRL3a 100 – 400 Amperes

Box Dimensions	Height		Box		Trim	
	Inches	mm	Catalogue Number		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

Table 2-39. Type PRL4

Box Dimensions	Height		Box
	Inches	mm	Catalogue Number
24-inch W x 10.4-inch D (609.6 mm W x 264.2 mm D)	57	1447.8	BX2457
	73-1/2	1866.9	BX2473
	90	2286.0	BX2490
38-inch W x 10.4-inch D (965.2 mm W x 264.2 mm D)	73-1/2	1866.9	BX3873
	90	2286.0	BX3890
44-inch W x 10.4-inch D (1117.6 mm W x 264.2 mm D)	73-1/2	1866.9	BX4473
	90	2286.0	BX4490

Type PRL 1a, 2a, 3a, 4, Column

Table 2-40. Panelboard Accessories and Modifications

Modification	Item	Available on Panelboard Types					
		PRL1a	PRL2a	PRL3a	PRL4B	PRL4F	Column Type
Special Enclosure Construction							
SPRINKLERPROOF (per CEC 26-008), 508mm (20") wide. Single or Multi-Section.	1a.	Yes	Yes	Yes	Yes	Yes	No
TYPE 2 508mm (20") wide. Single or Multi Section	1b.	Yes	Yes	Yes	Yes	Yes	No
TYPE 3R/12 Enclosure	1c.	Yes	Yes	Yes	Yes	Yes	No
TYPE 4 combination Enclosure (incorporates features required for 3R and 12 ratings)	1d.	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	Yes
200% rated neutrals (use on systems with high harmonic content) - 225A max. bus		Yes	Yes	Yes	No	No	Yes
200% rated neutrals (use on systems with high harmonic content) - 250A max. bus		No	No	Yes	Yes	Yes	No
200% rated neutrals (use on systems with high harmonic content) - 400A max. bus		No	No	Yes	Yes	Yes	No
200% rated neutrals (use on systems with high harmonic content) - 600A max. bus		No	No	Yes	Yes	Yes	No
200% rated neutrals (use on systems with high harmonic content) - 800A max. bus		No	No	No	No	No	No
200% rated neutrals (use on systems with high harmonic content) - 1200A max. bus		No	No	No	No	No	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
24 point neutral adder for use with "twin frame" DNBA type breakers	2c.	Yes	No	No	No	No	No
42 point neutral adder for use with "twin frame" DNBA type breakers		Yes	No	No	No	No	No
Special Ground Bus							
Insulated Ground Bus Assembly	3a.	Yes	Yes	Yes	Yes	Yes	No
Isolated Ground Bus Assembly	3b.	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
Sub-Feed Lugs - 225A Maximum		Yes	Yes	Yes	No	No	No
Sub-Feed Lugs - 250A Maximum		No	No	Yes	Yes	Yes	No
Sub-Feed Lugs - 400A Maximum (cable size/quantity restrictions on some panels)		Yes	Yes	Yes	Yes	Yes	No
Sub-Feed Lugs - 600A Maximum		No	No	Yes	Yes	Yes	No
Sub-Feed Lugs - 800A Maximum		No	No	No	Yes	Yes	No
Sub-Feed Lugs - 1200A Maximum		No	No	No	No	No	No
Sub-Feed Breakers - All Panelboard Ratings	4b.	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
Through-Feed Lugs - 225A Maximum		Yes	Yes	No	No	No	No
Through-Feed Lugs - 250A Maximum		No	No	Yes	Yes	Yes	No
Through-Feed Lugs - 400A Maximum		Yes	Yes	Yes	Yes	Yes	No
Through-Feed Lugs - 600A Maximum		No	No	Yes	Yes	Yes	No
Through-Feed Lugs - 800A Maximum		No	No	No	Yes	Yes	No
Through-Feed Lugs - 1200A Maximum		No	No	No	Yes	Yes	No
Compression Lugs on Mains							
Max. size: 1x750 kcmil / phase or 2x500 kcmil / phase Refer to Eaton for enclosure dimensions.	6a.	Yes	Yes	Yes	Yes	Yes	Yes
Special Entry Plates (Specify location, supplied loose)							
Aluminum (Corflex)	7a.	Yes	Yes	Yes	Yes	Yes	No
Fibre (Corflex)	7b.	Yes	Yes	Yes	Yes	Yes	No
Brass (MIC)	7c.	Yes	Yes	Yes	Yes	Yes	No
Painting and Special Coatings							
Painted Box (Any colour)	8a.	Yes	Yes	Yes	Yes	Yes	Yes
Trim (Other than ASA - 61)	8b.	Yes	Yes	Yes	Yes	Yes	Yes
Trim and Door Modifications							
Door-in-Door	9a.	Std.	Std.	Std.	Yes	Yes	No
Door over Distribution	9b.	Std.	Std.	Std.	Yes	Yes	No
Box / Tub Modifications							
Blank Box End	10a.	Std.	Std.	Std.	Std.	Std.	No
Box End with Knockouts	10b.	Yes	Yes	Yes	No	No	No
Service Entrance							
Includes barriered main breaker compartment to CSA requirements. All ratings.	11a.	Yes	Yes	Yes	Yes	Yes	No

Type PRL 1a, 2a, 3a, 4, Column

Table 2-40a. Panelboard Accessories and Modifications - Continued

Modification	Item	Available on Panelboard Types					
		PRL1a	PRL2a	PRL3a	PRL4B	PRL4F	Column Type
Complete Assembly							
Box, Interior, Breakers & Trim completely assembled prior to shipment.	12a.	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
Double Section - Cable connected - 250A Maximum (cross over cables NOT included)		No	No	Yes	Yes	Yes	No
Double Section - Cable connected - 400A Maximum (cross over cables NOT included)		Yes	Yes	Yes	Yes	Yes	No
Double Section - Cable connected - 600A Maximum (cross over cables NOT included)		No	No	Yes	Yes	Yes	No
Double Section - Cable connected - 800A Maximum (cross over cables NOT included)		No	No	Yes	Yes	Yes	No
Double Section - Cable connected - 1200A Maximum (cross over cables NOT included)		No	No	Yes	Yes	Yes	No
Double Section - Bus connected - 225A Maximum	13b.	Yes	Yes	No	No	No	No
Double Section - Bus connected - 250A Maximum		No	No	Yes	Yes	Yes	No
Double Section - Bus connected - 400A Maximum		Yes	Yes	Yes	Yes	Yes	No
Double Section - Bus connected - 600A Maximum		No	No	Yes	Yes	Yes	No
Double Section - Bus connected - 800A Maximum		No	No	Yes	Yes	Yes	No
Double Section - Bus connected - 1200A Maximum		No	No	Yes	Yes	Yes	No
Key Interlock (Use on main breakers - key protrudes through front cover) - All ratings.	14a.	Yes	Yes	Yes	Yes	Yes	No
Contactors in Mains							
C-H - electrically held, installed in a separate compartment, with a removable cover.	15a.	Yes	Yes	Yes	No	No	No
Specialty Contactors - mounted as above.	15b.	Yes	Yes	Yes	No	No	No
Cover Mounted Controls (Factory Wired)	15c.	Yes	Yes	Yes	No	No	No
Low Voltage Relay Troughs (Matching Box and Trim mounted adjacent to the panelboard).							
30 inch high (762mm) to 72 inch high (1828mm) box & trim.	16a.	Yes	Yes	No	No	No	No
Relay Mounting rail for 30 inch high (762mm) to 72 inch high (1828mm) box & trim.	16b.	Yes	Yes	No	No	No	No
Moisture and Fungus Proofing	17a.	Yes	Yes	Yes	Yes	Yes	Yes
Tin Plating of Copper Bus	18a.	Yes	Yes	Yes	Yes	Yes	Yes
Nameplates and Circuit Directories							
Engraved Lamicoïd Nameplates - supplied loose or factory installed.	19a.	Yes	Yes	Yes	Yes	Yes	Yes
Circuit Directory Holder (Steel frame & acetate cover)	19b.	Yes	Yes	Yes	Yes	Yes	Yes
Circuit Breaker Handle Lock-off Devices							
Non-Padlockable (supplied loose)	20a.	Yes	Yes	Yes	Yes	Yes	Yes
Padlockable (supplied loose)	20b.	Yes	Yes	Yes	Yes	Yes	Yes
Main or Branch Circuit Breaker Accessories							
Auxiliary Switch (1A / 1B)	20a.	Yes	Yes	Yes	Yes	Yes	Yes
Shunt Trip	20b.	Yes	Yes	Yes	Yes	Yes	Yes
Undervoltage Release	20c.	Yes	Yes	Yes	Yes	Yes	Yes
Alarm Switch (1A / 1B)	20d.	Yes	Yes	Yes	Yes	Yes	Yes

Type PRL 1a, 2a, 3a, 4, Column

Table 2-41. PRL-3a Connector Kits

Breaker Type and Space Requirement	Connector Kit Catalogue Number
For 6 circuits of BAB / QBHW / GFCBB BREAKERS (3X)	KPRL3ABA06
For 12 circuits of BAB / QBHW / GFCBB BREAKERS (5X)	KPRL3ABA12
For 18 circuits of BAB / QBHW / GFCBB BREAKERS (8X)	KPRL3ABA18
For 24 circuits of BAB / QBHW / GFCBB BREAKERS (10X)	KPRL3ABA24
For 6 circuits of GB / GBH BREAKERS (3X)	KPRL3AGB06
For 12 circuits of GB / GBH BREAKERS (5X)	KPRL3AGB12
For 18 circuits of GB / GBH BREAKERS (8X)	KPRL3AGB18
For 24 circuits of GB / GBH BREAKERS (10X)	KPRL3AGB24
FOR 2 SERIES C F-FRAME 1, 2, 3 POLE (3X) MAX SUM BREAKER 400A	KPRL3AFD3

Table 2-42. PRL-4B Connector Kits

Breaker Type and Space Requirement	Connector Kit Catalogue Number
F-FRAME 4 x 1 POLE OR 2 x 2 POLE-450A max. total (2X)	KPRL4FD2
FOR 2 SERIES C F-FRAME 3 POLE - 450A max. total (3X)	KPRL4FD3
FOR 2 FD+LFD BREAKER 3P 150A MAX.	KDRL4LFD3
FB TRIPAC BREAKER 3 POLE 100A max.	KPRL4FBP
JD SINGLE - 250A max. - (3X)	KPRL4JDS
JD TWIN - 250A max. - (3X)	KPRL4JDT
KDL / KD SINGLE - 400A max. - (4X)	KPRL4KDS
KDL / KD TWIN - 400A max. - (4X)	KPRL4KDCT
CKD SINGLE - 400A max. - (4X) 100% RATED	KPRL4CKDS
LCL BREAKER 3 POLE 400A max.	KPRL4LCL
LA TRIPAC BREAKER 3 POLE 400A max.	KPRL4LAP
LA/HLA/LC/HLC/LD/HLD/LDC/CLD BREAKER 3 POLE 600A max.	KPRL4LD
MA/HMA/MC/HMC BREAKER 3 POLE 800A max.	KPRL4MA
MDL/HMDL BREAKER 3 POLE 800A max.	KPRL4MDL
NB TRIPAC BREAKER 3 POLE 800A max.	KPRL4NBP
NB/HNB/ND/HND/NDC BREAKER 3 POLE 1200A max.	KPRL4ND
CND BREAKER 3 POLE 1200A max.	KPRL4CND

Table 2-43. PRL-4F Connector Kits

Breaker Type and Space Requirement	Connector Kit Catalogue Number
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 (FDBP ONLY)	KPRL4B6XS
Connector Kit for Twin 200A/200A switch - Al or Cu Panel bus (FDBP 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

Note - Connectors for all branch devices are included with PRI-1a, 2a and Column Type panelboards

Type PRL 1a, 2a, 3a, 4, Column

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 micro-processor-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 2-44 SPD Series Surge Protective Device

SPD Series replaces CPS Visor Series - effective Aug. 2009

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