



Cutler-Hammer

Current Cutler-Hammer Panelboards

Renewal Parts

Supersedes RP.38F.01.T.E
pages 1 – 48 dated February 2000

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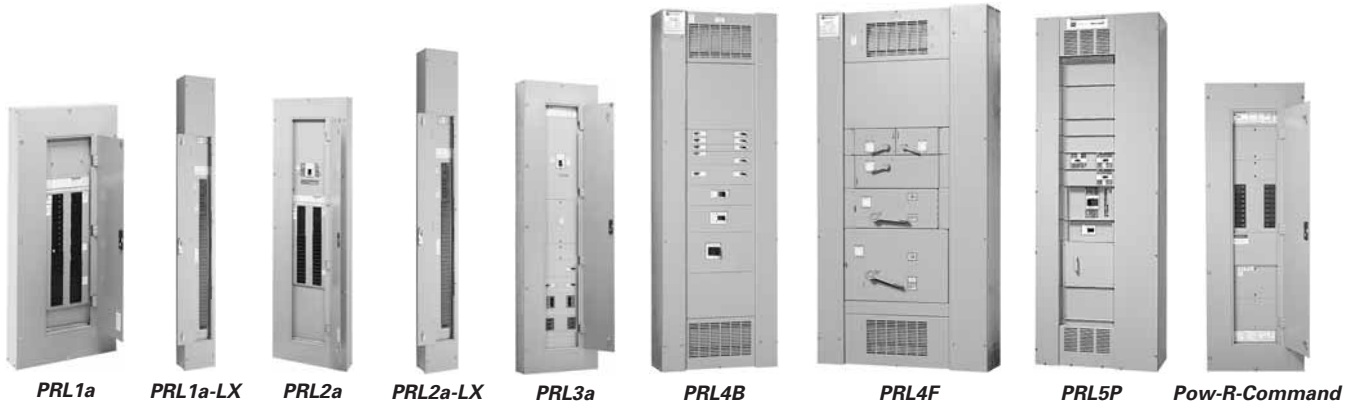


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Table 1. Product History Time Line

Product	1985	1990	1995	Present
Cutler-Hammer PRL1a, 2a			←	Oct. 1996 →
Cutler-Hammer PRL3a			←	Mar. 1994 →
Cutler-Hammer PRL4B/F	←			Oct. 1987 →
Cutler-Hammer PRL5P			←	Aug. 1995 →
Cutler-Hammer PRL1a, 2a-LX			←	Dec. 1997 →
Cutler-Hammer Pow-R-Command			←	Mar. 1996 →

Procedure for Identifying Panelboard Type

The current line of Pow-R-line C panelboards was introduced in 1993.

A panelboard is identified by data found on the nameplate. Pow-R-Line C panelboard nameplates are different in appearance, but all have the same critical information:

- Ampere rating of the main.
- Ampere rating of the neutral.
- Type of service (phase/wire).
- Manufacturing location.
- Type of panel.
- General order number.

In the event the nameplate is missing, it may still be possible to identify the panel type by location of the neutral bar. The illustrations to the right shows the position of the neutral in the panelboard.

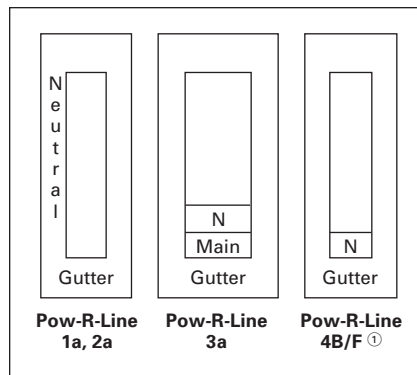


Figure 1. Position of the Neutral in the Panelboard

① PRL4F panels with vertical mounted main switch will have the neutral mounted at the opposite end the main.

Box width may also help identify the panelboard type. Standard width for PRL1a, PRL2a, and PRL3a is 20.00 inches (508.0 mm). PRL4 standard widths are 24.00, 36.00 and 44.00 inches (609.6, 914.4 and 1117.6 mm).

WARNING

HAZARDOUS VOLTAGE WILL CAUSE SEVERE INJURY OR DEATH. TURN OFF POWER SUPPLY TO EQUIPMENT BEFORE WORKING ON IT.

Procedure for Identifying Renewal Parts

1. Identify the type of panelboard, i.e. PRL1a, PRL2a, PRL3a, PRL4, PRL5P by reading the nameplate. Follow the procedure listed to the left.
2. Refer to the listing below and turn to the proper section in this brochure to identify standard parts.

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3. This book identifies those replacement parts most frequently ordered and which are readily available from stock. These parts can be ordered by style or catalog number to speed up processing and delivery.

Distributor Ordering Instructions

1. Specify part by style/part number.
2. Refer to PL01400001E for pricing information. Discount Symbol CE9 applies.
3. Turn to **Page 4** to locate nearest Satellite Plant.
4. Enter the order on the satellite plant via mail, fax or phone.
5. Selling policy 25-000 applies.

Cutler-Hammer Satellite Plants



Figure 2. Satellite Plants

Atlanta

7990-A 2nd Flag Drive
Austell, GA 30001
Phone 770-944-1022
FAX 770-944-2033

Baltimore

6671 Santa Barbara Court, Suite A
Elkridge, MD 21227
Phone 410-796-7777
FAX 410-796-7755

Chicago

959 AEC Drive
Wood Dale, IL 60191
Phone 630-860-3500
FAX 630-860-3569

Cleveland

4711 Hinkley Industrial Parkway
Cleveland, OH 44109
Phone 216-485-1940
FAX 216-485-1943

Dallas

1100 Avenue T
Grand Prairie, TX 75050
Phone 972-988-3339
FAX 972-641-6435

Denver

14101 East 33rd Place, Suite F
Aurora, CO 80011
Phone: 303-371-7844
FAX 303-371-4175

Hartford

625 Day Hill Road
Windsor, CT 06095
Phone 860-688-7330
FAX 860-688-4982

Houston

10810 West Little York, Suite 100
Houston, TX 77041
Phone 713-688-8430
FAX 713-688-3764

Los Angeles

2021 Locust Court
Ontario, CA 91761
Phone 909-923-2040
FAX 909-923-2344

New Jersey

96 Stemmers Lane
Westampton, NJ 08060
Phone 609-835-4230
FAX 609-835-4777

Orlando

3827 St. Valentine Way
Orlando, FL 32811
Phone 407-843-3863
FAX 407-841-9135

Phoenix

7160 South Harl Avenue
Tempe, AZ 85283
Phone 480-777-3957
FAX 480-777-3958

Raleigh

2933 S. Miami Blvd., Suite 111
Durham, NC 27703
Phone 919-544-7074
FAX 919-572-9751

San Francisco

20919 Cabot Boulevard
Hayward, CA 94545
Phone 510-784-8981
FAX 510-784-8980

Seattle

18657 72nd Avenue South
Kent, WA 98032
Phone 425-251-9081
FAX 425-251-0079

St. Louis

12947 Gravois Road
St. Louis, MO 63127
Phone: 314-842-7797
FAX 314-842-2552

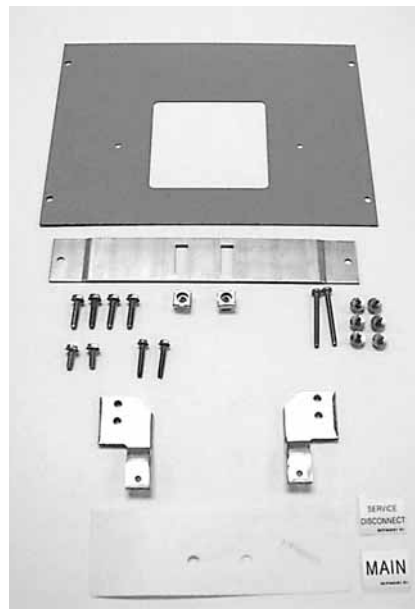
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PRL1a, 2a Connector Kits

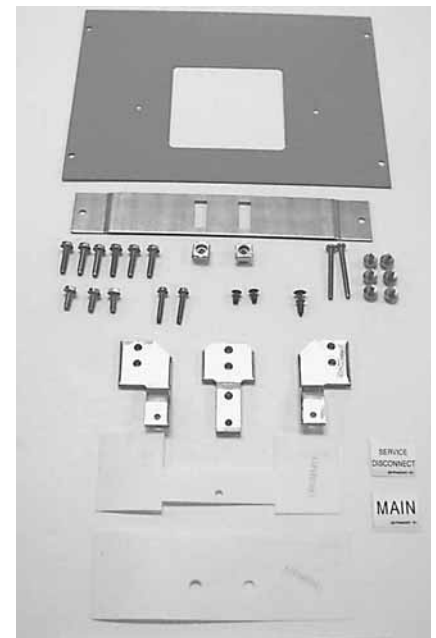
Table 2. Vertical Breaker Assemblies

Device Type ①	Device Mounting	3-Phase		1-Phase	
		Tin-Plated Aluminum Connector	Silver-Plated Copper Connector	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
		Catalog Number			
F-Frame ② (100 Ampere Maximum)	Top Fed Bottom Fed	KB13AFT KB13AFB	KB13SFT KB13SFB	KB11AFT KB11AFB	KB11SFT KB11SFB
F-Frame ③ (225 Ampere Maximum)	Top Fed Bottom Fed	KB23AFT KB23AFB	KB23SFT KB23SFB	KB21AFT KB21AFB	KB21SFT KB21SFB
J-Frame	Top Fed Bottom Fed	KB43AJT KB43AJB	KB43SJT KB43SJB	KB41AJT KB41AJB	KB41SJT KB41SJB
K-Frame	Top Fed Bottom Fed	KB43AKT KB43AKB	KB43SKT KB43SKB	KB41AKT KB41AKB	KB41SKT KB41SKB

- ① Order main or sub-feed breaker separately when ordering above connector kits.
- ② EHD, FD, HFD, FDC.
- ③ FD, HFD, FDC, ED, EDH, EDC.



KB11AFT



KB13AFT

PRL1a, 2a Connector Kits

Table 3. 100 Ampere Lug Assemblies

Lug Type	Panel Lug Options ^①	Wire Size Range	Quantity Per Phase	3-Phase		1-Phase	
				Tin-Plated Aluminum Connector	Silver-Plated Copper Connector	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
				Catalog Number			
Aluminum/Copper Mechanical	STD	#14 – 1/0	1	KL13AMS	KL13SMS	KL11AMS	KL11SMS
	SFL	#14 – 1/0	2	KL13AMF	KL13SMF	KL11AMF	KL11SMF
	OVS	#6 – 300 kcmil	1	KL13AMO	KL13SMO	KL11AMO	KL11SMO
Crimp	STD	#8 – 1/0	1	KL13AVS	KL13SVS	KL11AVS	KL11SVS
	SFL	#8 – 1/0	2	KL13AVF	KL13SVF	KL11AVF	KL11SVF
	OVS	#4 – 300 kcmil	1	KL13AVO	KL13SVO	KL11AVO	KL11SVO
Copper Mechanical	STD	#14 – 1/0	1	—	KL13SCS	—	KL11SCS
	SFL	#14 – 1/0	2	—	KL13SCF	—	KL11SCF
	OVS	#6 – 250 kcmil	1	—	KL13SCO	—	KL11SCO

① STD = Standard lugs. Use for main or through-feed.
 SFL = Sub-feed lugs.
 OVS = Oversize lugs. Use for main or through-feed.



KL13AMS



KL11AVS

PRL1a, 2a Connector Kits

Table 4. 225 Ampere Lug Assemblies

Lug Type	Panel Lug Options ①	Wire Size Range	Quantity Per Phase	3-Phase		1-Phase	
				Tin-Plated Aluminum Connector	Silver-Plated Copper Connector	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
				Catalog Number			
Aluminum/Copper Mechanical	STD	#6 – 300 kcmil	1	KL23AMS	KL23SMS	KL21AMS	KL21SMS
	SFL	#6 – 300 kcmil	2	KL23AMF	KL23SMF	KL21AMF	KL21SMF
	OVS	4/0 – 500 kcmil	1	KL23AMO	KL23SMO	KL21AMO	KL21SMO
Crimp	STD	#4 – 300 kcmil	1	KL23AVS	KL23SVS	KL21AVS	KL21SVS
	SFL	#4 – 300 kcmil	2	KL23AVF	KL23SVF	KL21AVF	KL21SVF
	OVS	2/0 – 500 kcmil	1	KL23AVO	KL23SVO	KL21AVO	KL21SVO
Copper Mechanical	STD	#6 – 250 kcmil	1	—	KL23SCS	—	KL21SCS
	SFL	#6 – 250 kcmil	2	—	KL23SCF	—	KL21SCF
	OVS	1/0 – 600 kcmil	1	—	KL23SCO	—	KL21SCO

① STD = Standard lugs. Use for main or through-feed.
 SFL = Sub-feed lugs.
 OVS = Oversize lugs. Use for main or through-feed.



KL23AMS



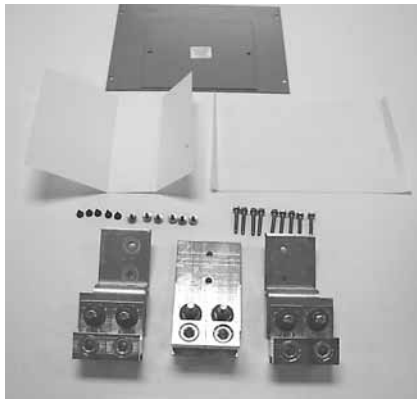
KL21AVS

PRL1a, 2a Connector Kits

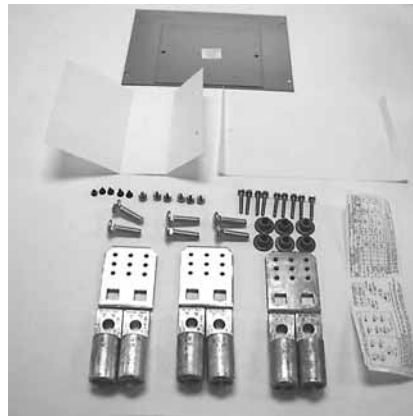
Table 5. 400 Ampere Lug Assemblies

Lug Type	Panel Lug Options ^①	Wire Size Range	Quantity Per Phase	3-Phase		1-Phase	
				Tin-Plated Aluminum Connector	Silver-Plated Copper Connector	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
				Catalog Number			
Aluminum/Copper Mechanical	STD	4/0 – 500 kcmil	2	KL43AMS	KL43SMS	KL41AMS	KL41SMS
	SFL	N/A	N/A	—	—	—	—
	OVS	3/0 – 750 kcmil	2	KL43AMO	KL43SMO	KL41AMO	KL41SMO
Crimp	STD	2/0 – 500 kcmil	2	KL43AVS	KL43SVS	KL41AVS	KL41SVS
	SFL	N/A	N/A	—	—	—	—
	OVS	500 – 750 kcmil	2	KL43AVO	KL43SVO	KL41AVO	KL41SVO
Copper Mechanical	STD	1/0 – 600 kcmil	1	—	—	—	—
	SFL	N/A	N/A	—	—	—	—
	OVS	1/0 – 600 kcmil	1	—	KL43SCO	—	KL41SCO

① STD = Standard lugs. Use for main or through-feed.
 SFL = Sub-feed lugs.
 OVS = Oversize lugs. Use for main or through-feed.



KL43AMS



KL43AVS

PRL1a Horizontally Mounted Connector Kit Assemblies

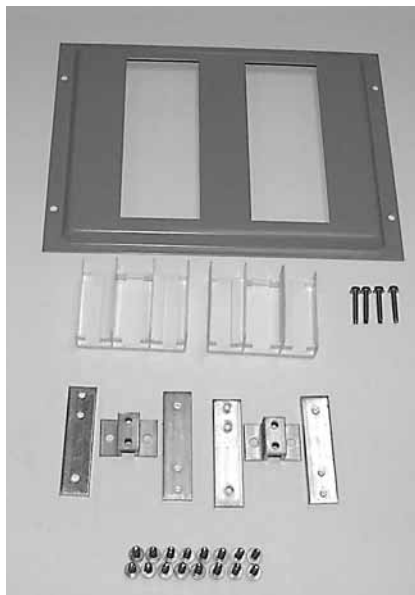
Table 6. Bolt-on QUICKLAG Breaker Assemblies

Breaker Frame	Drawing Number ①	Branch Circuit Quantity	3-Phase		1-Phase	
			Tin-Plated Aluminum Connector	Silver-Plated Copper Connector	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
			Item Number			
BA, BAB, QBH, QBGF, QBHGF, QBGFEP, QBHGFEP	1C96608	12	G01	G03	G05	G07
		18	G09	G11	G13	G15
		30	G17	G19	G21	G23
		42	G25	G27	G29	G31
		48	G33	G35	G37	G39
		54	G41	G43	G45	G47
		72	G49	G51	G53	G55
		96	G57	G59	G61	G63

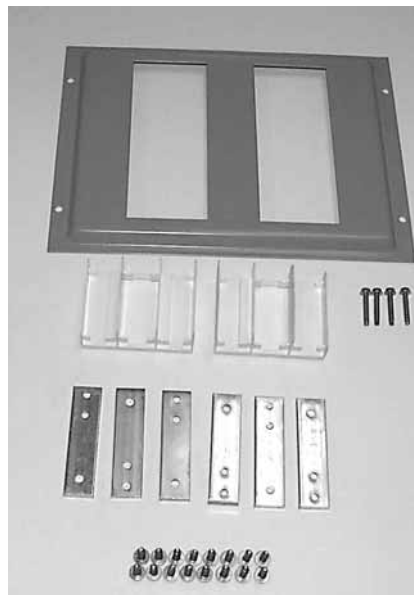
① Order the basic drawing number, along with the equivalent G-number that's needed.

Note: When determining branch circuit quantity, remember:

1. QUICKLAG breakers with shunt trips require one additional circuit.
2. UL® listed lighting and appliance (CTL) panelboards **cannot** exceed 42 electrically connected circuits in a single enclosure.
3. When bare copper is specified, use the silver-plated groups.
4. **Order breakers separately with connector kit.**



1C96608G01



1C96608G05

PRL1a Horizontally Mounted Connector Kit Assemblies

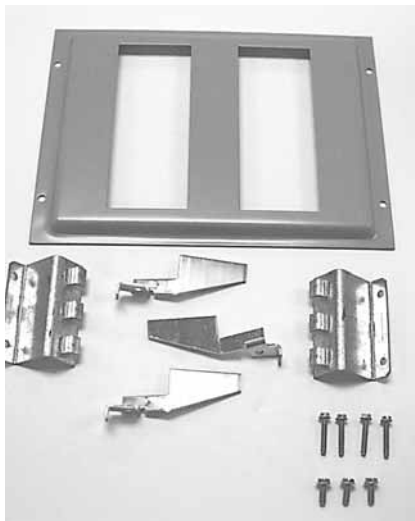
Table 7. Plug-in QUICKLAG Breaker Assemblies

Breaker Frame	Drawing Number ①	Branch Circuit Quantity	3-Phase		1-Phase	
			Tin-Plated Aluminum Connector	Silver-Plated Copper Connector	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
			Item Number			
HQP, QPHW, QHPX, QPGF, QPHGF, QPGFEP, QPHGFEP	2C11642	12	—	G03	—	G07
		18	—	G11	—	G15
		30	—	G19	—	G23
		42	—	G27	—	G31
		48	—	G35	—	G39
		54	—	G43	—	G47
72	—	G51	—	G55		
96	—	G59	—	G63		

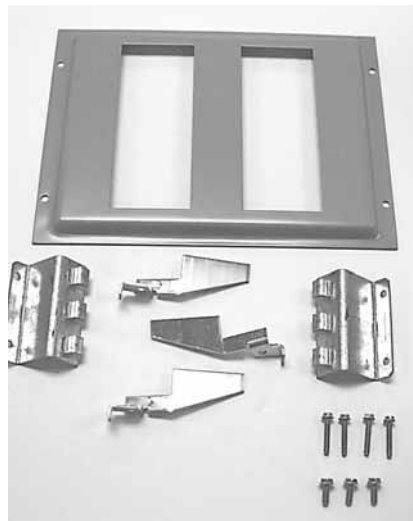
① Order the basic drawing number, along with the equivalent G-number that's needed.

Note: When determining branch circuit quantity, remember:

1. QUICKLAG breakers with shunt trips require one additional circuit.
2. UL listed lighting and appliance (CTL) panelboards **cannot** exceed 42 electrically connected circuits in a single enclosure.
3. When aluminum is specified, use the silver-plated groups.
4. The sum of the horizontally twin mounted breakers **shall not exceed 140 amperes**.
5. **Order breakers separately with connector kit.**



2C11642G03



2C11642G07

PRL2a Horizontally Mounted Connector Kit Assemblies

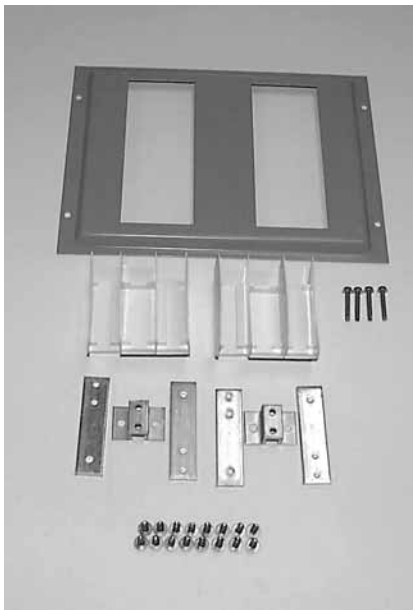
Table 8. GB, GHB, GHQ, GHBS Breaker Assemblies

Breaker Frame	Drawing Number ①	Branch Circuit Quantity	3-Phase		1-Phase	
			Tin-Plated Aluminum Connector	Silver-Plated Copper Connector	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
			Item Number			
GB, GHB, GHQ, GHBS	1C96609	12	G01	G03	G05	G07
		18	G09	G11	G13	G15
		30	G17	G19	G21	G23
		42	G25	G27	G29	G31
		48	G33	G35	G37	G39
		54	G41	G43	G45	G47
		72	G49	G51	G53	G55
		96	G57	G59	G61	G63

① Order the basic drawing number, along with the equivalent G-number that's needed.

Note: When determining branch circuit quantity, remember:

1. QUICKLAG breakers with shunt trips require one additional circuit.
2. UL listed lighting and appliance (CTL) panelboards **cannot** exceed 42 electrically connected circuits in a single enclosure.
3. When bare copper is specified, use the silver-plated groups.
4. **Order breakers separately with connector kit.**



1C96609G01

PRL1a, 2a Neutral Assemblies

Table 9. 100 Ampere Neutral Assemblies ①

Panel Main Bus Ampere Rating	Neutral Rating	Lug Type	Drawing Number ②	Panel Lug Options ③	Wire Size Range	Quantity	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
							Item Number	
100	100%	Mechanical	1C96646	STD SFL/TFL OVS	#14 - 1/0	1	G02	G03
					#14 - 1/0	2	G05	G07
					#6 - 300 kcmil	1	G09	G11
	Crimp	1C96647	STD SFL/TFL OVS	#8 - 1/0	1	G01	G03	
				#8 - 1/0	2	G05	G07	
				#4 - 300 kcmil	1	G09	G11	
	Copper	1C96648	STD SFL/TFL OVS	#14 - 1/0	1	—	G03	
				#14 - 1/0	2	—	G07	
				#6 - 250 kcmil	1	—	G11	
200%	Mechanical	1C96649	STD SFL/TFL OVS	#6 - 300 kcmil	1	G02	G03	
				#6 - 300 kcmil	2	G06	G07	
				4/0 - 500 kcmil	1	G09	G11	
	Crimp	1C96650	STD SFL/TFL OVS	#4 - 300 kcmil	1	G01	G03	
				#4 - 300 kcmil	2	G05	G07	
				2/0 - 500 kcmil	1	G09	G11	
Copper	1C96651	STD SFL/TFL OVS	#6 - 250 kcmil	1	—	G03		
			#6 - 250 kcmil	2	—	G07		
			1/0 - 600 kcmil	1	—	G11		

① The assemblies shown on this page are for panelboards that mount in 30.00 - 90.00-inch (762.0 - 2286.0 mm) high enclosures only. Reference **Page 15** for assemblies for panelboards that mount in 21.00 - 27.00-inch (533.4 - 685.8 mm) high enclosures.

② Order the basic drawing number, along with the equivalent G-number that's needed.

③ STD = Standard lugs.
SFL/TFL = Sub-feed and through-feed lugs.
OVS = Oversize lugs.



1C96646G01

PRL1a, 2a Neutral Assemblies

Table 10. 225 Ampere Neutral Assemblies ①

Panel Main Bus Ampere Rating	Neutral Rating	Lug Type	Drawing Number ②	Panel Lug Options ③	Wire Size Range	Quantity	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
							Item Number	
225	100%	Mechanical	1C96649	STD SFL/TFL OVS	#6 – 300 kcmil	1	G02	G03
					#6 – 300 kcmil	2	G06	G07
					4/0 – 500 kcmil	1	G09	G11
	Crimp	1C96650	STD SFL/TFL OVS	#4 – 300 kcmil	1	G01	G03	
				#4 – 300 kcmil	2	G05	G07	
				2/0 – 500 kcmil	1	G09	G11	
	Copper	1C96651	STD SFL/TFL OVS	#6 – 250 kcmil	1	—	G03	
				#6 – 250 kcmil	2	—	G07	
				1/0 – 600 kcmil	1	—	G11	
200%	Mechanical	1C96652	STD SFL/TFL OVS	4/0 – 500 kcmil	2	G01	G03	
				N/A	N/A	G05	G07	
				3/0 – 750 kcmil	2	G09	G11	
	Crimp	1C96653	STD SFL/TFL OVS	2/0 – 500 kcmil	2	G01	G03	
				N/A	N/A	G05	G07	
				500 – 750 kcmil	2	G09	G11	
Copper	1C96654	STD SFL/TFL OVS	1/0 – 600 kcmil	1	—	G03		
			N/A	N/A	—	G07		
			1/0 – 600 kcmil	1	—	G11		

① The assemblies shown on this page are for panelboards that mount in 30.00 – 90.00-inch (762.0 – 2286.0 mm) high enclosures.

② Order the basic drawing number, along with the equivalent G-number that's needed.

③ STD = Standard lugs.

SFL/TFL = Sub-feed and through-feed lugs.

OVS = Oversize lugs.



1C96649G01

PRL1a, 2a Neutral Assemblies

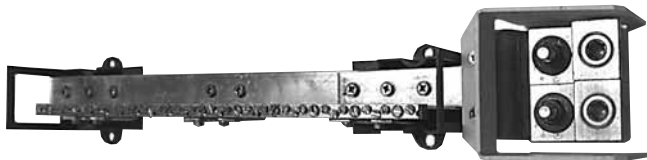
Table 11. 400 Ampere Neutral Assemblies ①

Panel Main Bus Ampere Rating	Neutral Rating	Lug Type	Drawing Number ②	Panel Lug Options ③	Wire Size Range	Quantity	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
							Item Number	
400	100%	Mechanical	1C96652	STD SFL/TFL OVS	4/0 – 500 kcmil N/A 3/0 – 750 kcmil	2 N/A 2	G01 G05 G09	G03 G07 G11
		Crimp	1C96653	STD SFL/TFL OVS	2/0 – 500 kcmil N/A 500 – 750 kcmil	2 N/A 2	G01 G05 G09	G03 G07 G11
		Copper	1C96654	STD SFL/TFL OVS	1/0 – 600 kcmil N/A 1/0 – 600 kcmil	1 N/A 1	— — —	G03 G07 G11

① The assemblies shown on this page are for panelboards that mount in 30.00 – 90.00-inch (762.0 – 2286.0 mm) high enclosures.

② Order the basic drawing number, along with the equivalent G-number that's needed.

③ STD = Standard lugs.
SFL/TFL = Sub-feed and through-feed lugs.
OVS = Oversize lugs.



1C96652G01

PRL1a, 2a Neutral Assemblies

Table 12. 100 Ampere Neutral Assemblies for 21.00 – 27.00-Inch (533.4 – 685.8 mm) High Enclosures Only ①

Panel Main Bus Ampere Rating	Neutral Rating	Lug Type	Drawing Number ②	Panel Lug Options ③	Wire Size Range	Quantity	Tin-Plated Aluminum Connector	Silver-Plated Copper Connector
							Item Number	
100	100%	Mechanical	1C96645	STD	#14 – 1/0 #14 – 1/0 N/A	1	G01 G05 —	G03 G07 —
		SFL/TFL		2				
		OVS		N/A				
	Crimp	N/A	STD	N/A	N/A	—	—	
	SFL/TFL	N/A	—	—				
	OVS	N/A	—	—				
	Copper	N/A	STD	N/A	N/A	—	—	
	SFL/TFL	N/A	—	—				
	OVS	N/A	—	—				
200%	Mechanical	1C97022	STD	#6 – 300 kcmil #6 – 300 kcmil N/A	1	G01 G05 —	G03 G07 —	
	SFL/TFL		2					
	OVS		N/A					
Crimp	N/A	STD	N/A	N/A	—	—		
SFL/TFL	N/A	—	—					
OVS	N/A	—	—					
Copper	N/A	STD	N/A	N/A	—	—		
SFL/TFL	N/A	—	—					
OVS	N/A	—	—					

① The assemblies shown on this page are for panelboards that mount in 21.00 – 27.00-inch (533.4 – 685.8 mm) high enclosures only. Reference **Page 12** for assemblies for panels that mount in 36.00, 48.00, 60.00, 72.00 and 90.00-inch (914.4, 1219.2, 1524.0, 1828.8 and 2286.0 mm) high enclosures.

② Order the basic drawing number, along with the equivalent G-number that's needed.

③ STD = Standard lugs.
SFL/TFL = Sub-feed and through-feed lugs.
OVS = Oversize lugs.



1C96645G01

PRL1a, 2a Ground Assemblies

Table 13. Standard Ground

Drawing Number ①	Enclosure Height in Inches (mm)	Bar Material	Item Number
5158C05	24.00 (609.6)	Aluminum/Copper	G01
		Copper	G03
	36.00 (914.4), 48.00 (1219.2), 60.00 (1524.0), 72.00 (1828.8), 90.00 (2286.0)	Aluminum/Copper	G02
		Copper	G04

① Order the basic drawing number, along with the equivalent G-number that's needed (example 5158C05G01).



5158C05G01



5158C05G02

Table 14. Isolated Ground

Drawing Number ②	Enclosure Height in Inches (mm)	Bar Material	Item Number
2C11296	24.00 (609.6)	Aluminum/Copper	G01
		Copper	G02
	36.00 (914.4), 48.00 (1219.2), 60.00 (1524.0), 72.00 (1828.8), 90.00 (2286.0)	Aluminum/Copper	G03
		Copper	G04

② Order the basic drawing number, along with the equivalent G-number that's needed (example 5158C05G01).

PRL1a, 2a Service Entrance Kits

Table 15. PRL1a, 2a Service Entrance Kits

Drawing Number ③	Panel Ampere Rating	Tin-Plated Aluminum	Bare Copper	Silver-Plated Copper	Tin-Plated Copper
		Item Number			

Mechanical Main Lugs or Main Breakers

4180B62	100 – 225	G01	G02	G03	G04
4180B62	400	G05	G06	G07	G08

Compression (Crimp) Main Lugs

4180B62	100 – 225	G09	G10	G11	G12
4180B62	400	G13	G14	G15	G16

Copper Main Lugs

4180B62	100 – 225	—	G18	G19	G20
4180B62	400	—	G22	G23	G24

③ Order the basic drawing number, along with the equivalent G-number that's needed (example 5158C05G01).



4180B62G01

PRL1a, 2a Deadfront Covers

Note: Does not apply to PRL4 sub-chassis.

Table 16. Assembly

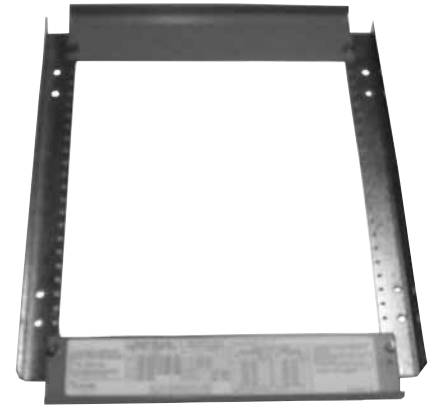
Drawing Number ①	Standard Enclosure Height in Inches (mm)						
	24.00 (609.6)	36.00 (914.4)	42.00 (1066.8)	48.00 (1219.2)	60.00 (1524.0)	72.00 (1828.8)	90.00 (2286.0)
1C96638	G01	G02	G07	G03	G04	G05	G06

① Order the basic drawing number, along with the equivalent G-number that's needed (example 1C96638G01).

Table 17. Vertically Mounted Devices

Mounting Arrangement	Device/Frame	Drawing Number ②	Mounting Position	Item Number
Vertical	100 Ampere MLO, SFL, TFL or F-Frame (100 Ampere Maximum)	4180B03	Top Bottom	H01 H01
	225 Ampere MLO, SFL, TFL or F-Frame (225 Ampere Maximum)	4180B61	Top Bottom	H01 H01
	400 Ampere MLO, SFL, TFL or J-Frame	4180B04	Top Bottom	H01 H02
	400 Ampere MLO, TFL or K-Frame	4180B05	Top Bottom	H01 H02
Blank Covers in Inches (mm)	1.00 (25.4) 2.00 (50.8) 3.00 (76.2)	4180B08	N/A N/A N/A	H01 H02 H03
	4.00 (101.6) 5.00 (127.0) 6.00 (152.4)		N/A N/A N/A	H04 H05 H06
	7.00 (177.8) 8.00 (203.2) 9.00 (228.6)		N/A N/A N/A	H07 H08 H09
	10.00 (254.0) 11.00 (279.4) 12.00 (304.8)		N/A N/A N/A	H10 H11 H12
	13.00 (330.2) 14.00 (355.6) 15.00 (381.0) 16.00 (406.4)		N/A N/A N/A N/A	H13 H14 H15 H16

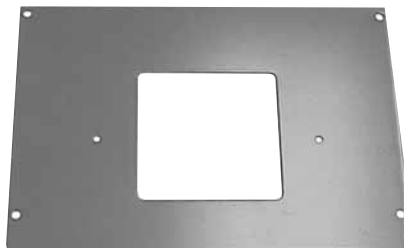
② Order the basic drawing number, along with the equivalent H-number that's needed (example 4180B03H01).



1C96638G01



4180B08H03



4180B03H01

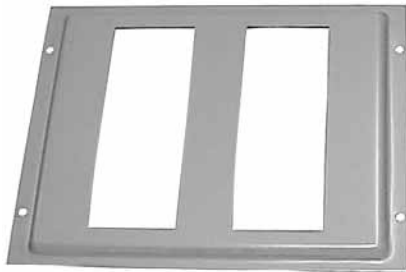
PRL1a, 2a Deadfront Covers

Note: Does not apply to PRL4 sub-chassis.

Table 18. Horizontally Mounted Devices

Mounting Arrangement	Device/ Frame	Drawing Number ①	Branch Circuit Quantity	Item Number	Quantity Required
Horizontal	BA, BAB, QBH, QBGF, QBHGF, QBGFEP, QBHGFEP	1C96619	12	H01	1
			18	H02	1
			30	H04	1
			42	H06	1
			48	H03	2
			54	H03 and H04	1 Each
	GB, GHB, GHQ, GHBS	1C96620	12	H01	1
			18	H02	1
			30	H04	1
			42	H06	1
			48	H03	2
			54	H03 and H04	1 Each
			72	H05	2
			96	H07	2

① Order the basic drawing number, along with the equivalent H-number that's needed (example 1C96619H01).



1C96619H01



1C96620H01



5155C62H01



4180B52H01

Table 19. Filler Covers

Device/Frame	Drawing Number	Item Number
F, J, K ②	4180B52	H01
QUICKLAG, GB, GHB ③	5155C62	H01

② Filler covers are required in addition to deadfront cover whenever MLO, SFL or TFL are specified.

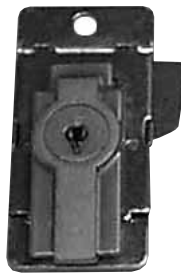
③ Filler covers are required in addition to deadfront cover whenever a branch provision is specified.

Panelboard Trim Locks

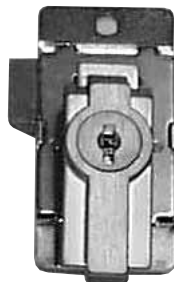
Panelboard trims use different trim locks, see pictures below for styles and part numbers. Contact your nearest Satellite for availability on the styles listed below. See **Page 4** for Satellite listings.

Table 20. Panelboard Trim Locks

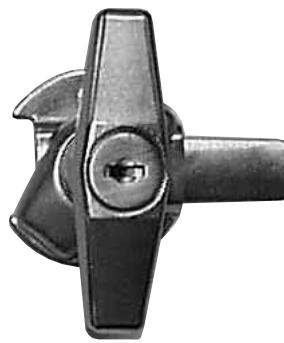
Description	Catalog Number
For use on left-handed door. (Hinged on left side.)	K80522
For use on right-handed door. (Hinged on right side.)	K80133
T-Handle lock, at one time used on all trims over 48.00 inches (1219.2 mm) in height. Also used on outdoor NEMA 12/3R trims.	K80429
Used on PRL4 lighting and power panels as standard.	1A32258H03
Used on PRL1, 2, 3 and PRL1a, 2a, 3a lighting panels as standard. WEM 2 key.	5155C81G01



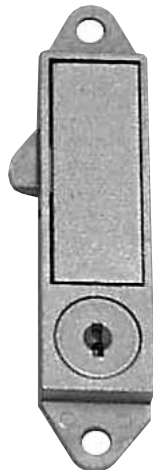
K80522



K80133



K80429



1A32258H03



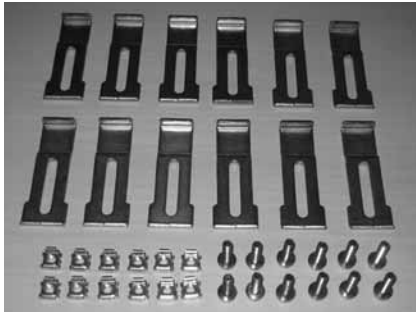
5155C81G01

Panelboard Fastrim Clamps and Screw-on Hardware Kits

For panelboard trim clamps, contact your nearest Satellite for availability on the styles listed below. See **Page 4** for Satellite listings.

Table 21. Panelboard Fastrim Clamps and Screw-on Hardware Kits

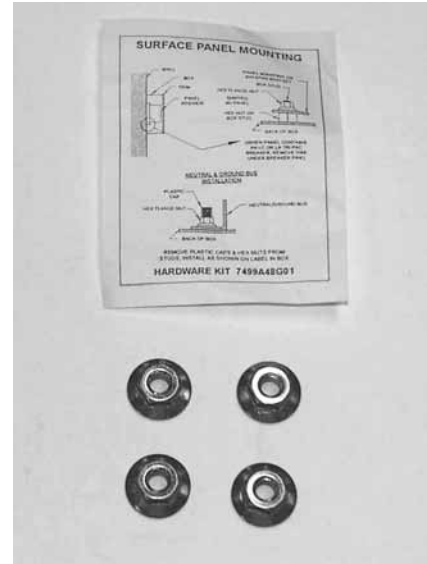
Description	Style Number
Trim clamps — used on PRL1a, 2a, 3a fastrims. (6 per bag.)	2C11641G02
Trim screws — used on PRL1a, 2a, 3a, 4B standard trim. (10 per bag.)	5157C83G06
Chassis mounting hardware bag — PRL1a, 2a, 3a panels.	7499A48G04



2C11641G02



5157C83G06



7499A48G04

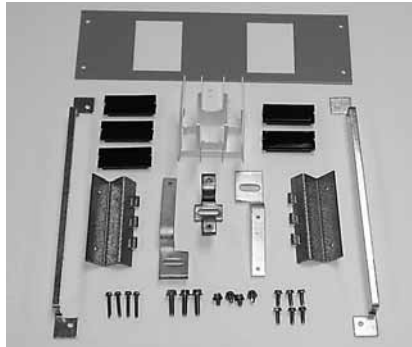
PRL3a Parts Section	Page
Connector Kits, Branch Breakers	21
Quicklag	21
GB, GHB, GHBS.	21
Twin Mounted F-Frame 150 Ampere Maximum	22
Single Mounted F-Frame 175 – 225 Ampere Maximum .	22
Ground Assemblies	23
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PRL3a Horizontally Mounted Connector Kit Assemblies

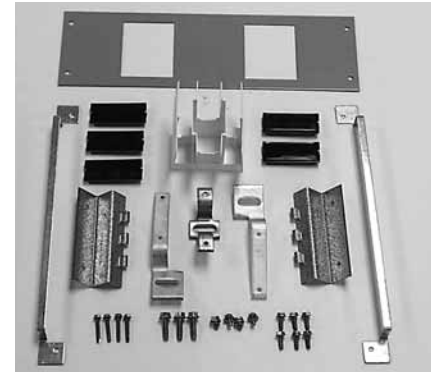
Table 22. Connector Kit Assemblies

Devices	Circuits or Pole	3-Phase		1-Phase		Notes
		Catalog Number	Phase	Catalog Number	Phase	
BA, BAB, QBGF, QBH, QBHGF, QBGFEP, QBHGFEF	6	KPRL3ABA06	A/B/C	KPRL3ABA06-1	A/C	(2) 100 Ampere Devices Maximum
	12	KPRL3ABA12	A/B/C	KPRL3ABA12-1	A/C	
	18	KPRL3ABA18	A/B/C	KPRL3ABA18-1	A/C	
	24	KPRL3ABA24	A/B/C	KPRL3ABA24-1	A/C	
GB, GHB, GHQ, GHBS	6	KPRL3AGB06	A/B/C	KPRL3AGB06-1	A/C	
	12	KPRL3AGB12	A/B/C	KPRL3AGB12-1	A/C	
	18	KPRL3AGB18	A/B/C	KPRL3AGB18-1	A/C	
	24	KPRL3AGB24	A/B/C	KPRL3AGB24-1	A/C	

Three-phase kits contain A, B and C phase connectors. Single-phase kits contain A and C phase connectors, deadfront cover, hardware and instructions to twin mount breakers across from each other. **Maximum amperes connected to any one connector cannot exceed 200 amperes.**



KPRL3ABA06



KPRL3AGB06

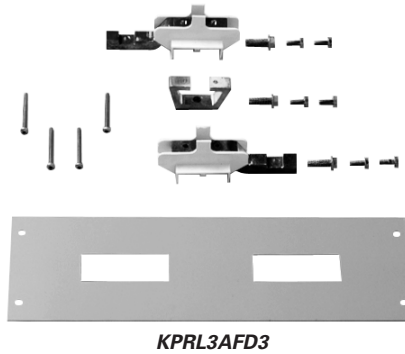
PRL3a F-Frame Horizontally Mounted Connector Kit Assemblies

Table 23. Connector Kit Assemblies

Devices	Circuits or Pole	3-Phase		1-Phase		Notes
		Catalog Number	Phase	Catalog Number	Phase	
EHD, FD, FDB, HFD, FDC (150 Ampere Maximum Twin Mount)	3-Pole Breaker	KPRL3AFD3	A/B/C	—	—	(2) 150 Ampere Devices Maximum
	2-Pole Breaker	KPRL3AFD2	A/C	KPRL3AFD2	A/C	
	1-Pole Breaker	KPRL3AFD1	A/C	KPRL3AFD1	A/C	
FD, HFD, FDC, ED, EDH, EDC (175 – 225 Ampere Single Mount) ①	3-Pole Breaker	KPRL3AED3	A/B/C	—	—	(1) 225 Ampere Maximum Single Mounted
	2-Pole Breaker	KPRL3AED2	A/C	KPRL3AED2	A/C	

① F-Frame devices rated above 150 amperes must be single mounted. No twin mounting acceptable.

Connector kits contain phase connectors, deadfront cover, hardware and instructions to mount breakers. Order breakers separately when ordering connector kit.



PRL3a Ground Assemblies

Table 24. PRL3a Ground Assemblies

Material	Standard	Isolated
	Catalog Number	
Aluminum/Copper	5158C05G02	2C11296G02
Copper Only	5158C05G04	2C11296G04



5158C05G02

PRL3a Service Entrance Kits

Table 25. PRL3a Service Entrance Kits

Style Number ①	Panel Ampere Rating	Tin-Plated Aluminum	Bare Copper	Silver-Plated Copper	Tin-Plated Copper
		Item Number			

Mechanical Main Lugs or Main Breakers

5078A98	100	G01	G02	G03	G04
	250 – 600	G13	G14	G15	G16

Crimp Main Lugs

5078A98	100	G05	G06	G07	G08
	250 – 600	G17	G18	G19	G20

Copper Main Lugs

5078A98	100	G09	G10	G11	G12
	250 – 600	G21	G22	G23	G24

① When ordering, use complete style number (example 100 Ampere Tin-Plated Aluminum 5078A98G01).



5078A98G01

PRL3a Deadfront Covers

Table 26. Assembly ②

Style Number ③	Chassis Height/Item Number				
	14X	23X	31X	40X	53X
6559C59	G01	G02	G03	G04	G05

② Assembly groups include the frame only (two rails and two end covers). Reference **Pages 24 and 25** for specific device covers. All connector kits ship with a deadfront cover for that device.

③ When ordering, use complete style number (example 14X High Assembly 6559C59G01).



6559C59G01

PRL3a Vertical Devices Deadfront Covers

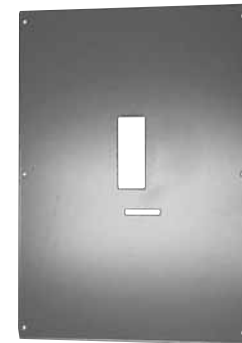
Table 27. Vertical Mounting Position

Device/Frame	Trip Unit Type	Style Number ①	"X" Space Required	Item Number	
				Without Lock-offs ①	With Lock-offs ①
EHD, FD, FDB, HFD, FDC, ED, EDH, EDC (Top) ②	N/A	4176B68	7X	H01	H03
EHD, FD, FDB, HFD, FDC, ED, EDH, EDC (Bottom) ②	N/A		7X	H04	H05
FD, HFD, FDC, ED, EDH (Top) ③	N/A	4180B93	10X	H01	H03
FD, HFD, FDC, ED, EDH (Bottom) ③	N/A		10X	H04	H05
J-Frame (Bottom)	N/A	4176B60	14X	H01	H02
J-Frame (Top)	N/A		14X	H03	H04
K-Frame (Bottom)	Thermal-Mag.	4176B61	15X	H01	H02
K-Frame (Bottom)	Electronic		15X	H03	H04
K-Frame (Top)	Thermal-Mag.		15X	H05	H06
K-Frame (Top)	Electronic		15X	H07	H08
L-Frame (Bottom)	Thermal-Mag.	4176B51	17X	H01	H02
L-Frame (Bottom)	Electronic		17X	H03	H04
L-Frame (Top)	Thermal-Mag.		17X	H05	H06
L-Frame (Top)	Electronic		17X	H07	H08
FB-P (Top Only)	N/A	4176B70	9X	H02	H02
LA-P (Top Only)	N/A	4176B57	21X	H01	H01
FCL	N/A	4176B70	9X	H01	H01
LCL (Top)	N/A	4176B56	21X	H01	H02
LCL (Bottom)	N/A		21X	H03	H04
Neutral/Blank Cover	N/A	4176B72	1X	H01	—
			2X	H02	
			3X	H03	
			4X	H04	
			5X	H05	
			6X	H06	
			7X	H07	
			8X	H08	
			9X	H09	
			10X	H10	
			11X	H11	
			12X	H12	
J-Frame Sub-Feed Twin Bottom	N/A	4176B79	20X	H01	H02 (2 L/O) H03 (1 L/O RT) H04 (1 L/O LT)
J-Frame Sub-Feed Twin Top	N/A	4176B79	20X	H05	H05 (2 L/O) H07 (1 L/O RT) H08 (1 L/O LT)
PT363 (Top)	N/A	4180B79	7X	H01	—
PT363 (Bottom)	N/A		7X	H02	
PT364 (Top)	N/A		9X	H03	
PT364 (Bottom)	N/A		9X	H04	

① When ordering covers, order complete style and item numbers (example 4176B68H01).

② 4/0 Maximum acceptable terminal size.

③ 300 kcmil maximum acceptable terminal size.



J Main 4176B60H04



Neutral Blank Cover 4176B72H04

PRL3a Horizontal Devices Deadfront Covers

Table 28. Horizontal Mounting Position

Device/Frame	Device Poles	Style Number ①	Total Circuit Quantity	"X" Space Required	Item Number
EHD, FD, FDB, HFD, FDC (Twin Mounted)	1, 2 or 3	4178B08	6	3X	H01
			12	6X	H02
			18	9X	H03
			24	12X	H04
			30	15X	H05
			36	18X	H06
			42	21X	H07
			48	24X	H08
EHD, FD, FDB, HFD, FDC (Twin Mounted)	1 or 2	4179B39	4	2X	H01
			8	4X	H02
			12	6X	H03
			16	8X	H04
			20	10X	H05
			24	12X	H06
			28	14X	H07
			32	16X	H08
EHD, FD, FDB, HFD, FDC (Twin Mounted)	1	4179B40	2	1X	H01
FD, HFD, FDC, ED, EDH, EDC (Single Mounted)	3	4179B41	3	3X	H01
FD, HFD, FDC, ED, EDH, EDC (Single Mounted)	2	4179B42	2	2X	H01
CA, CAH, HCA	3	4176B66	3	3X	H01
CA, CAH, HCA	2	4176B80	2	2X	H01
BA, BAB, BABRP, BABRSP QBH, QBGF, QBGFEP, QBHGFEP	1, 2 or 3	4176B67	6	3X	H01
			12	5X	H02
			18	8X	H03
			24	10X	H04
GB, GHB, GHBS, GHBGFEP, HGHB, GHQ	1, 2 or 3	4176B69	6	3X	H01
			12	5X	H02
			18	8X	H03
			24	10X	H04
Pow-R-Command Controller	N/A	4180B91	N/A	5X	H01
Pow-R-Command Expansion	N/A	4180B91	N/A	7X	H02
				16X	H03

① When ordering covers, order complete style and item number (example 4178B08H01).

PRL3a Deadfront Cover Blank Fillers

Table 29. PRL3a Deadfront Cover Blank Fillers

Device/Frame	Poles	Style Number
F-Frame	1, 2 or 3	4178B06H01
C-Frame	2	6555C40H01
C-Frame	3	6555C41H01
QUICKLAG, GB, GHB, GHBS	1, 2 or 3	5155C62H01



BAB Cover 4176B67H01

PRL4B/F Parts Section	Page
Vented Cover Assemblies and Side Gutter Covers	26
PRL4 Blank Covers	27
PRL4 Breaker Connector Kits . .	28
PRL4 Fusible FDPW Switch Connector Kit	29
PRL4 Breaker Retrofit Kits	30
PRL4 Fusible Retrofit Kits	30
PRL4 Energy Sentinel	31
PRL1a, 2a, 3a and PRL4 Special Trims and Enclosures	32

PRL4 Vented Cover Assemblies

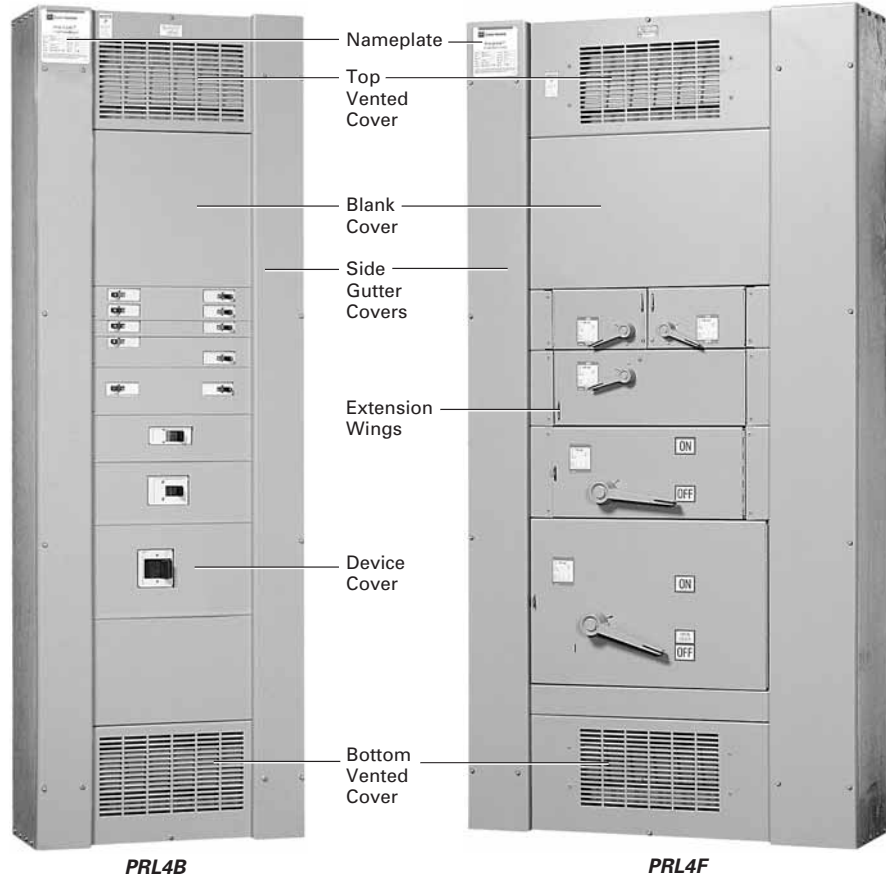


Table 30. Vented Cover Assemblies and Side Gutter Covers — Dimensions in Inches (mm)

NEMA 1 Box			Catalog Number	Vented Cover Assembly ^② Style Number	Side Gutter Covers			
Dimensions					Left		Right	
Height	Width	Depth ^①			Size	Style Number	Size	Style Number
57.00 (1447.8)	24.00 (609.6)	10.40 (264.2)	BX2457	6574C74G02	5.00 (127.0) x 57.00 (1447.8)	6555C20H01	5.00 (127.0) x 57.00 (1447.8)	6555C20H01
73.00 (1854.2)	24.00 (609.6)		BX2473	6574C74G03	5.00 (127.0) x 73.00 (1854.2)	6555C21H01	5.00 (127.0) x 73.00 (1854.2)	6555C21H01
90.00 (2286.0)	24.00 (609.6)		BX2490	6574C74G04	5.00 (127.0) x 90.00 (2286.0)	6555C25H01	5.00 (127.0) x 90.00 (2286.0)	6555C25H01
73.00 (1854.2)	36.00 (914.4)	36.00 (914.4)	BX3673	6574C74G05	6.00 (152.4) x 73.00 (1854.2)	6555C22H01	8.00 (203.2) x 73.00 (1854.2)	6555C23H01
90.00 (2286.0)	36.00 (914.4)		BX3690	6574C74G06	6.00 (152.4) x 90.00 (2286.0)	6555C26H01	8.00 (203.2) x 90.00 (2286.0)	6555C27H01
73.00 (1854.2)	44.00 (1117.6)	44.00 (1117.6)	BX4473	6574C74G05	8.00 (203.2) x 73.00 (1854.2)	6555C23H01	14.00 (355.6) x 73.00 (1854.2)	6555C24H01
90.00 (2286.0)	44.00 (1117.6)		BX4490	6574C74G06	8.00 (203.2) x 90.00 (2286.0)	6555C27H01	14.00 (355.6) x 90.00 (2286.0)	6555C28H01

① Covers add .90 inches (22.9 mm) to box depth for overall enclosure depth of 11.30 inches (287.0 mm).

② Cover assembly consists of 2 side rails, top and bottom vented covers.

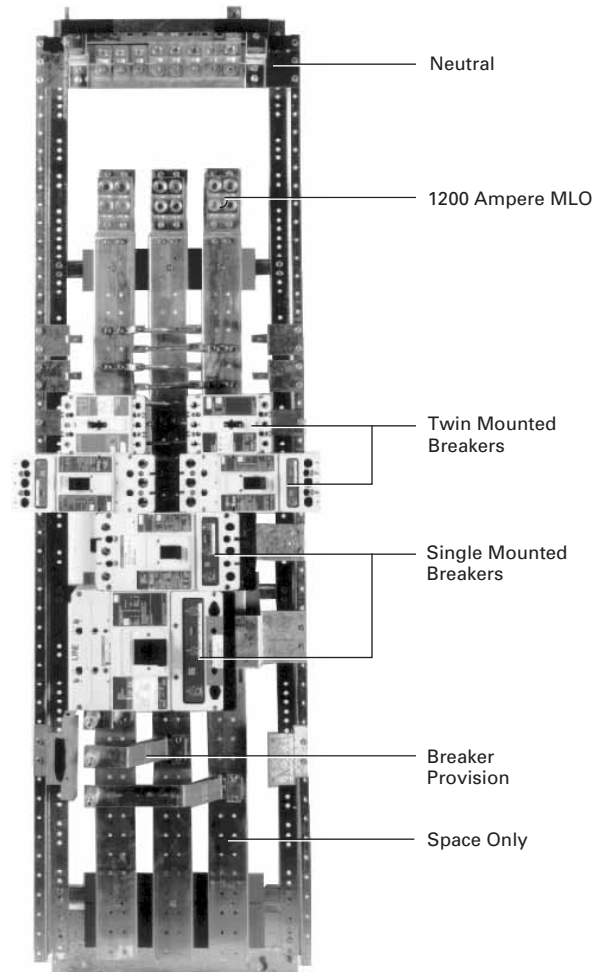
Important: Order individual device covers and blanks separately.

PRL4 Blank Covers

Used to cover blank space on chassis. All PRL4 cover heights are measured in "X" units. 1X equals 1.38 inches (35.1 mm).

Table 31. PRL4 Blank Covers

Cover Size	Style Number	
	24.00-Inch (609.6 mm) Width Box	36.00, 44.00-Inch (914.4, 1117.6 mm) Width Box
1X	6554C01H01	6554C02H01
2X	6554C01H02	6554C02H02
3X	6554C01H03	6554C02H03
4X	6554C01H13	6554C02H13
5X	6554C01H14	6554C02H14
6X	6554C01H04	6554C02H04
7X	6554C01H05	6554C02H05
9X	6554C01H06	6554C02H06
10X	6554C01H07	6554C02H07
11X	6554C01H08	6554C02H08
12X	6554C01H09	6554C02H09
13X	6554C01H10	6554C02H10
15X	6554C01H11	6554C02H11
20X	6554C01H12	6554C02H12



PRL4B Interior

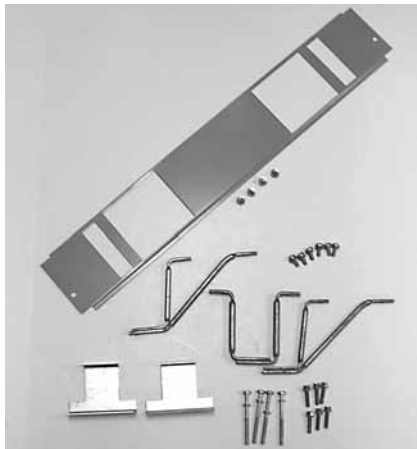
PRL4 Breaker Connector Kits

Breaker Connector Kits

Each kit includes copper connectors, mounting brackets, covers, hardware and instructions for mounting breaker(s) in a PRL4. **Breakers are not included.** Contact your local Satellite plant for availability and application information (see **Page 4**).

Connector Kit

Each kit includes copper connectors mounting brackets, cover, hardware and instructions.



Connector Kit

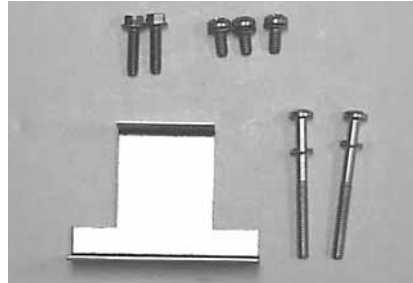
Table 32. Breaker Connector Kits

Breaker Frame	Space Required		Poles	Mounting Type	Connector Kit Catalog Number
	Inches (mm)	"X"			
EHD, FD, HFD EHD, FD, FDB, HFD, FDC ED, EDH, EDC	2.75 (69.9)	2X	1 ① 2 2	Twin Twin Twin	KPRL4FD1 KPRL4FD2 KPRL4ED2
EHD, FD, FDB, HFD, FDC FCL, FB-P, FD/LFD ED, EDH, EDC JD, JDB, HJD, JDC JD, JDB, HJD, JDC	4.13 (104.9)	3X	3 3 3 2, 3 2,3	Twin Twin Twin Single Twin	KPRL4FD KPRL4FBP KPRL4ED KPRL4JDS KPRL4JDT ②
DK, KD, KDB, HKD, KDC DK, KD, KDB, HKD, KDC CKD, CHKD	5.50 (139.7)	4X	2, 3 2,3 2,3	Single Twin Single	KPRL4KDS KPRL4KDT ③ KPRL4CKD ④
LCL LA-P LD, LDB, HLD, LDC, CLD, LC MDL, HMDL NB-P CND, CHND ND, HND	8.25 (209.5)	6X	2, 3 2, 3 2, 3 2, 3 2, 3 3 2, 3	Single Single Single Single Single Single Single	KPRL4LCL ② KPRL4LAP ② KPRL4LD ② KPRL4MC ② KPRL4NBP ③ KPRL4CND ③④ KPRL4ND ②

- ① Two sets of twin mounted 1-pole breakers.
- ② 36.00-inch (914.4 mm) minimum box width required.
- ③ 44.00-inch (1117.6 mm) box width required.
- ④ Requires density rated bus in existing panel chassis.

Hardware Kit

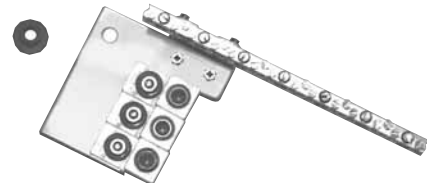
Each kit includes mounting bracket(s) and mounting hardware only. Use the appropriate Connector Kit catalog number and add an "H" to designate hardware only (example: KPRL4FD-H).



Hardware Kit

Standard Ground Bus

Copper bus with (3) 6 – 300 kcmil lugs plus a 24-circuit terminal bar with #14 – 1/0 wire range.



6572C746G01

PRL4 Fusible Connector Kits

Fusible Switch Connector Kits

Each kit includes copper connectors, extension wings (when required), hardware and instructions to mount a fusible switch. **Switches are not included.** Contact your local Satellite plant for availability and application information (see **Page 4**).

Table 33. Fusible Switch Connector Kits

Switch Height		Switch Ampere Rating	3-Pole Switch		Connector Kit
Inches (mm)	"X" Space Required		240 Volts	600 Volts	
			Catalog Number		
5.50 (139.7)	4X	30 – 30 60 – 60 100 – 100	FDPWT3211R FDPWT3222R FDPWT3233R	FDPWT3611R FDPWT3622R —	— KPR44X ① —
6.88 (174.8)	5X	100 – 100	—	FDPWT3633R	KPRL45X ①
8.25 (209.6)	6X	200 200 – 200	FDPBS324R FDPBT3244R	FDPBS364R FDPBT3644R	KPRL4B6XS KPRL4B6XT ②
12.38 (314.5)	9X	400	FDPW325R	FDPW365R	KPRL4W9X
15.13 (384.3)	11X	600 800	FDPW326R FDPW327	FDPW366R FDPW367	KPRL4W11X KPRL4W11X ②
20.63 (524.0)	15X	1200	FDPW328	FDPW368	KPRL4W15X ②

① These connector kits will fit the FDP and FDPW switches.

② 44.00-inch (1117.6 mm) box width required for both R and J fuse applications.

PRL4 Breaker and Fusible Switch Retrofit Kits

Breaker Retrofit Kits

Each kit includes **one** breaker, copper connectors, covers, hardware and instructions to mount in a PRL4.

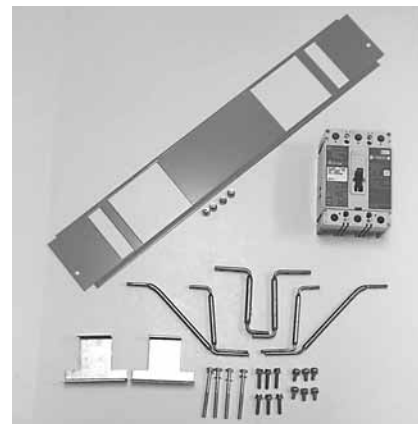
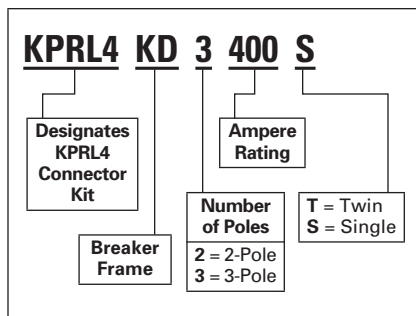
Table 34. Breaker Retrofit Kits

Breaker Frame	Frame Ampere Rating	Trip Range	Mounting Type
EHD FDB FD HFD FDC FCL FB-P	100	15 – 100 15 – 100 15 – 100 15 – 100 15 – 100 15 – 100 15 – 100	Twin Twin Twin Twin Twin Twin Twin
FDB	150	110 – 150	Twin
FD HFD FDC ED EDH EDC	225	110 – 225 110 – 225 110 – 225 100 – 225 100 – 225 100 – 225	Twin Twin Twin Twin Twin Twin
JD HJD JDC	250	70 – 250 70 – 250 70 – 250	Twin/Single Twin/Single Twin/Single
DK KD HKD KDC CKD LCL LA-P	400	100 – 400 100 – 400 100 – 400 100 – 400 125 – 400 70 – 400	Twin/Single Twin/Single Twin/Single Twin/Single Single Single Single
LD CLD HLD CHLD LDC CLDC	600	300 – 600 300 – 600 300 – 600 300 – 600 300 – 600 300 – 600	Single Single Single Single Single Single
MDL CMDL HMDL CHMDL	800	300 – 800 300 – 800 300 – 800 300 – 800	Single Single Single Single
ND CND HND CHND NDC CNDC	1200	600 – 1200 600 – 1200 600 – 1200 600 – 1200 600 – 1200 600 – 1200	Single Single Single Single Single Single

How to Order a Breaker Retrofit Kit by Catalog Number

Use “KPRL4” prefix and add catalog number of breaker as shown below. Use suffix “T” or “S” to denote twin or single mounting. Twin mounting indicates that one set of connectors is required to mount two breakers (of similar frames) opposite one another. **RETROFIT KIT INCLUDES ONE BREAKER ONLY, FOR EITHER SINGLE OR TWIN MOUNTED APPLICATIONS.**

Table 35. Catalog Numbering System — Breaker Retrofit Kit



Breaker Retrofit Kit

Fusible Retrofit Kits

Each kit includes a 3-pole switch, copper connectors, extension wings (if required), hardware and instructions to horizontally mount in a PRL4.

How to Order a Fusible Retrofit Kit by Catalog Number

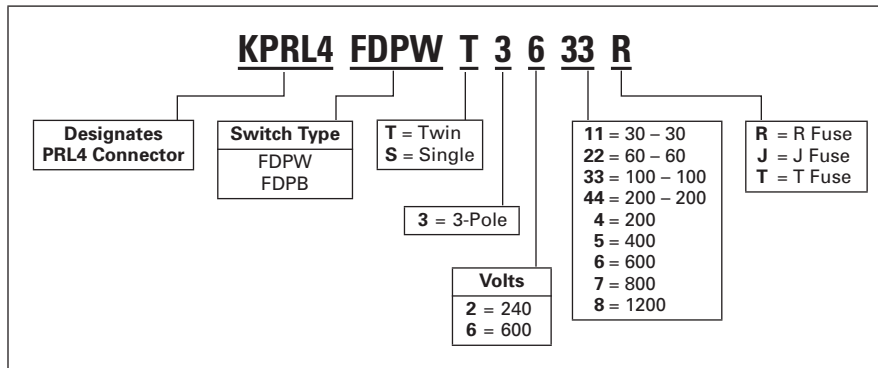
Use “KPRL4” prefix and add catalog number of appropriate switch (refer to **Page 29** for 3-pole switch catalog number).

Example: The Retrofit Kit catalog number for a 600 volt, 100 ampere twin FDPW switch is:

Table 36. Fusible Retrofit Kits

Switch Ampere Rating	Switch Type	Mounting Type
30 – 30 60 – 60 100 – 100	FDPW FDPW FDPW	Twin Twin Twin
100 200 200 – 200	FDPW FDPB FDPB	Single Single Twin
400 600 800 1200	FDPW FDPW FDPW FDPW	Single Single Single Single

Table 37. Catalog Numbering System — Fusible Retrofit Kit



PRL4 Energy Sentinel



Energy Sentinel

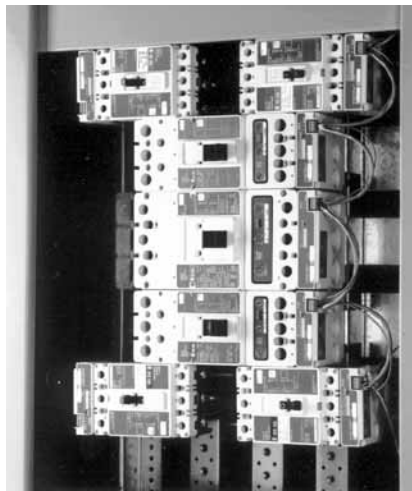
The IQ Energy Sentinel is a submetering device that mounts directly on a circuit breaker and monitors both power and energy with an overall accuracy of 99%.

This high system accuracy is achieved by use of the Cutler-Hammer SURE Plus Chip, which is a sophisticated microprocessor.

All that is necessary to complete an IQ Energy Sentinel installation is to insert it into the load side of a breaker, feed the load conductors through it, and run the shielded twisted pair wire for communications. The IQ Energy Sentinel has a nonvolatile memory, is powered by the circuit breaker, and can be applied on 3-phase, 4-wire or single-phase, 3-wire systems.

The space-saving design characteristics of the IQ Energy Sentinel mean they can be quickly and easily retrofitted onto Series C® circuit breakers in existing equipment...with no additional space required. Additionally, IQ Energy Sentinel can be installed when upgrading to Series C from older breakers that are physically interchangeable...with no additional space required.

Power and energy information from IQ Energy Sentinels can be communicated to a PC, a panel mounted Central Energy Display (CED), or even existing building management or distribution control systems.



Energy Sentinels Installed

IQ Central Energy Display



IQ Central Energy Display

The IQ Central Energy Display may be panel mounted or located remotely (up to 7500 feet [2286 m] away). It displays power, peak demand, and energy readings of up to 50 IQ Energy Sentinels and eight IQ Data Plus meters.

Additional capabilities include: peak demand alarming, demand and energy totals for groups of IQ Energy Sentinels and IQ Data Plus 11 digital meters.

Refer to your local Satellite for retrofit and upgrade options available for existing equipment.

Table 38. Energy Sentinel

Series C Breaker Frame	Voltage ac	Maximum Amperes	Catalog Number
F	120/208, 120/240	150	IQESF208
F	277/480	150	IQESF480
J	120/208, 120/240	250	IQESJ208
J	277/480	250	IQESJ480
K	120/208, 120/240	350	IQESK208
K	277/480	350	IQESK480

PRL1a, 2a, 3a Special Trims and Enclosures

Ventilated Trim

Required on PRL1a, 2a, 3a, 600 ampere and above panels only. Order by adding the letter "V" to the standard trim catalog number. **Add 10% to standard trim list price.**

Example: LT2072S becomes LTV2072S.



Ventilated Trim

Fastrim

Used when concealed trim mounting hardware is required for PRL1a, 2a and PRL3a. Trim clamps are included and shipped with the trim. Order by adding the letter "F" to the standard trim catalog number. **Add 20% to standard trim list price.**

Example: LT2072S becomes LTF2072S.

For trim clamps only, refer to **Page 20.**



Fastrim

Door-In-Door

Piano hinge on the right side of the trim provides access to the wiring gutters without requiring removal of the trim. Order by adding the letters "DD" to the standard trim catalog number. **Add 20% to standard trim list price.**

Example: LT2072S becomes LTDD2072S.



Door-in-Door

Type 12/3R Enclosures

The complete enclosure consists of a box and trim. The enclosure meets code requirements for both Type 12 (dust-tight) and Type 3R (rainproof) standards. Features include a laser cut trim with rounded corners, concealed

hinges and a T-handle lock. Gasketing is provided around the trim door. The box is gasketed and made from code gauge steel with dripshield and is painted ANSI-61.



Type 12/3R Enclosures

Table 39. Type 12/3R Enclosures for PRL1a, 2a, 3a

Box Dimensions in Inches (mm)			Catalog Number	
Height	Width	Depth	Box	Trim
24.00 (609.6)	20.00 (508.0)	6.00 (152.4)	VWPB2024	LWPT2024
36.00 (914.4)			VWPB2036	LWPT2036
48.00 (1219.2)			VWPB2048	LWPT2048
60.00 (1524.0)	20.00 (508.0)	6.00 (152.4)	VWPB2060	LWPT2060
72.00 (1828.8)			VWPB2072	LWPT2072
90.00 (2286.0)			VWPB2090	LWPT2090

PRL4 Special Trims and Enclosures

Door-In-Door Trim



Door-In-Door Trim

A piano hinge on the right side of the trim provides access to the wiring gutter without requiring the removal of the trim. When used with a standard PRL4 box, a special mounting channel must be used to add extra depth to the enclosure.

An extra depth box, not requiring a mounting channel, is another available option. Contact your local Satellite for ordering information.

Table 40. Special Trims and Enclosures

Standard Box Catalog Number	Mounting Channel Style Number	Door-In-Door Trim Catalog Number	
		Surface	Flush
BX2457 BX2473 BX2490	8708C82G02 8708C82G03 8708C82G04	LDD2457STW LDD2473STW LDD2490STW	LDD2457FTW LDD2473FTW LDD2490FTW
BX3673 BX3690 BX4473 BX4490	8708C82G05 8708C82G06 8708C82G07 8708C82G08	LDD3673STW LDD3690STW LDD4473STW LDD4490STW	LDD3673FTW LDD3690FTW LDD4473FTW LDD4490FTW

Type 12/3R Enclosures



Type 12, 24.00 Inches (609.6 mm) Wide



Type 3R, 36.00 Inches (914.4 mm) Wide

PRL4 enclosures are available in both Type 12 (dust-tight) and Type 3R (rainproof) designs. The 24.00-inch (609.6 mm) wide enclosure includes a single hinged door while the 36.00-inch (914.4 mm) wide is provided with double hinged doors. The side gutter covers are an integral part of the box in all styles. Sizes and catalog numbers are shown in the table below.

Table 41. Type 12/3R Enclosures

Enclosure Dimensions in Inches (mm)			Catalog Number	
Height	Width	Depth	Type 3R	Type 12
57.00 (1447.8) 73.00 (1854.2) 90.00 (2286.0)	24.00 (609.6) 24.00 (609.6) 24.00 (609.6)	13.90 (353.1)	RPC2457 RPC2473 RPC2490	DPC2457 DPC2473 DPC2490
73.00 (1854.2) 90.00 (2286.0)	36.00 (914.4) 36.00 (914.4)		RPC3673 RPC3690	DPC3673 DPC3690

<i>PRL5P Parts Section</i>	<i>Page</i>
PRL5P Chassis Layout	35
PRL5P Breaker Adapter Unit Catalog Numbers	36
PRL5P Branch Breaker Information	37
PRL5P Main or Through-Feed Lugs	38
PRL5P Neutrals and Grounds . .	39
PRL5P Boxes, Trims and Filler Plates	40

Ordering Procedure

- Step 1** Select the correct part or Branch Device. When selecting, you need to know the following:
- Panelboard type.
 - Amperage.
 - System voltage.
 - Available short circuit rating.
 - Number of poles available.
 - Size and number of wires per phase.
 - "X" space required.

- Step 2** Refer to the 5P panelboard layout on **Page 35** to verify the amount of "X" space available.
- Step 3** Create a 5P breaker unit catalog number, by following the instructions on **Page 36**, or order the catalog number for parts on **Pages 38 through 40**.
- Step 4** Determine if extra filler covers are required. Additional filler covers may be necessary to fill the unused space. Refer to **Page 40** for filler plate information.

PRL5P Chassis Layout

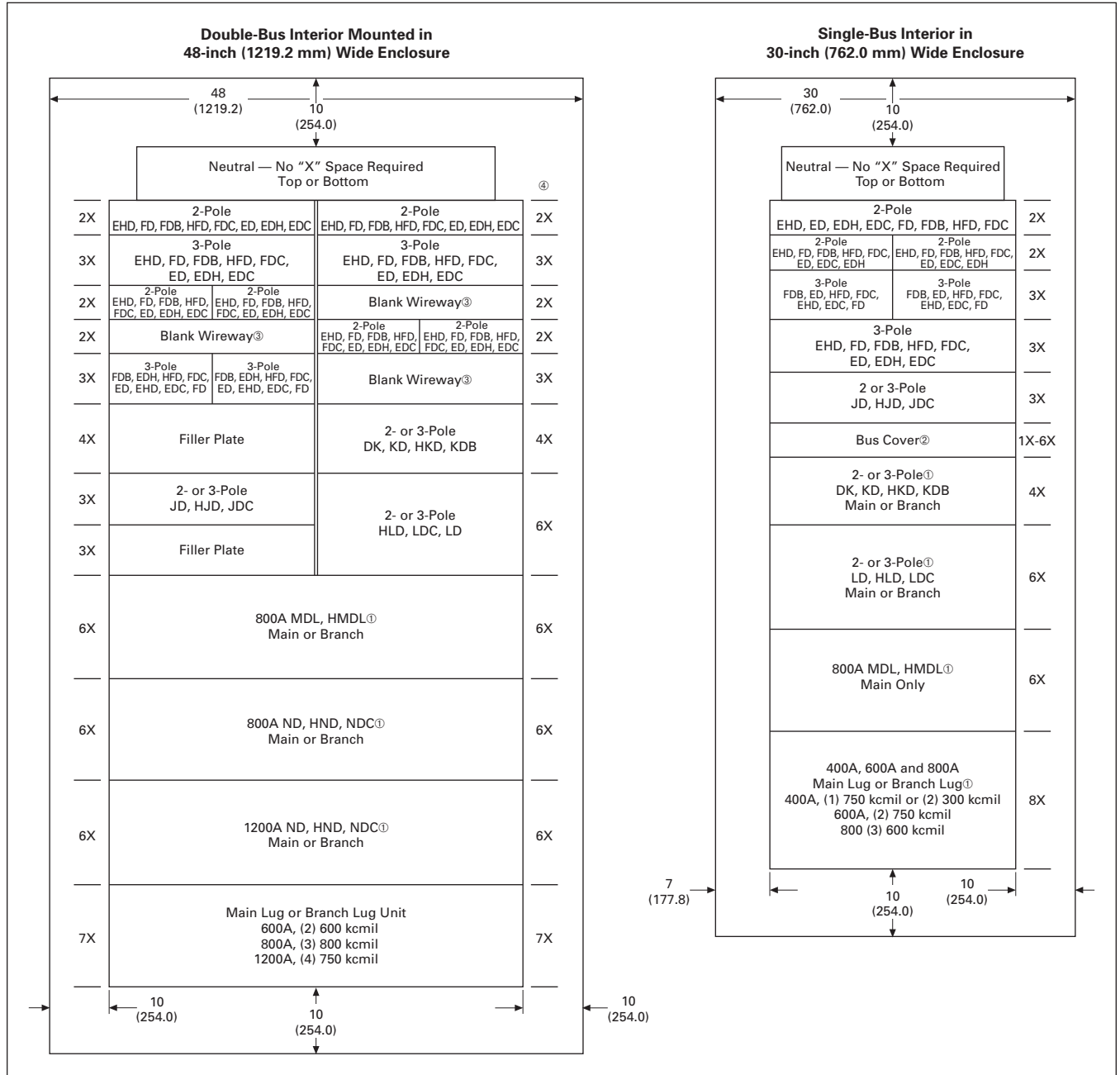
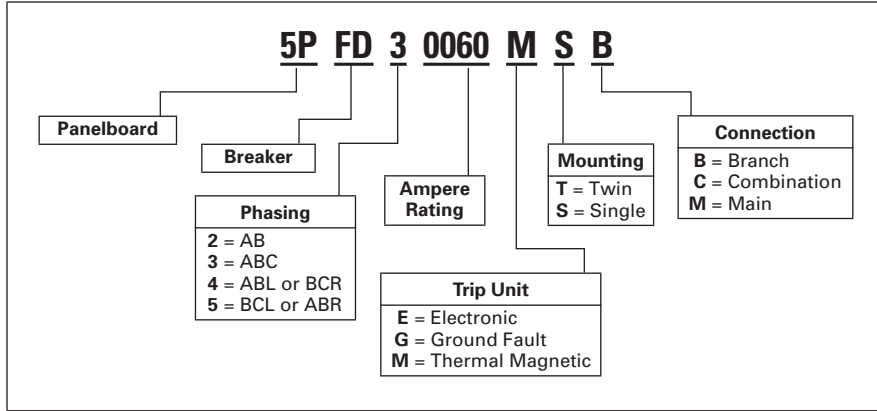


Figure 3. PRL5P Chassis Layout — Dimensions in Inches (mm)

- ① If used as a main device, must be mounted at the neutral end of panel.
- ② Fixed bus covers are required for unused spaces if NEC® six circuit disconnect rule is to be met.
- ③ Blank wireway fillers are required opposite any dual breaker unit.
- ④ One "X" = 1.38 inches (35.1 mm).

PRL5P Breaker Assemblies Catalog Numbers

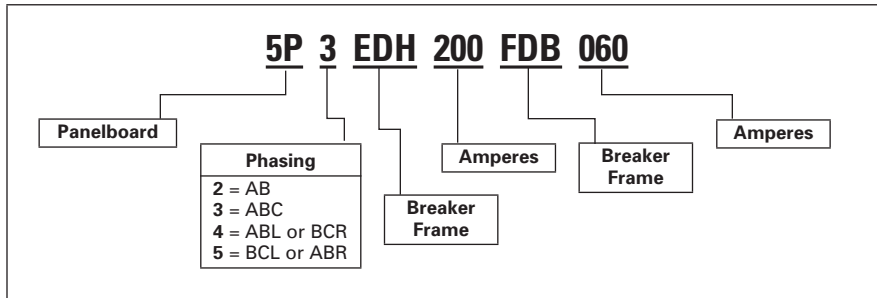
Table 42. Catalog Numbering System — 5P Single or Twin Breakers with Adapters



A plug-on unit is a complete assembly with a circuit breaker and mounting adapter to mount on a 5P panelboard.

Single indicates units that may be mounted in a single or double bus panel, and twin indicates double bus panels only. See **Tables 44 and 45** on **Page 37**.

Table 43. Catalog Numbering System — 5P Dual Breakers with Adapters



Any two F-Frame breakers listed may be mounted on the same 2X or 3X dual breaker adapter.

Dual breaker adapters may be used in single or double bus panels. Dual breaker adapters can **NOT** be mounted across from another adapter in a double bus panel. See **Table 46** on **Page 37**.

Branch Devices

Single-pole breakers in single adapter units. Include two or three single-pole 15 – 60 ampere assembled on one unit. (One X = 1.38 inches [35.1 mm])

Table 44. Single-Pole Breakers in Single Adapter Units

Breaker Type	Ampere Rating	Interrupting Rating (kA Sym.)				"X" Space Required
		120 Vac	240 Vac	277 Vac	125 Vdc	
EHD	15 – 60	—	—	14	10	2X
FD	15 – 60	—	—	25	10	2X
HFD	15 – 60	—	—	65	10	2X
EHD	15 – 60	—	—	14	10	3X
FD	15 – 60	—	—	25	10	3X
HFD	15 – 60	—	—	65	10	3X

Table 45. 2- and 3-Pole Breakers in Single Adapter Units

Breaker Type	Ampere Rating	Interrupting Rating (kA Sym.)				"X" Space Required
		240 Vac	480 Vac	600 Vac	250 Vdc	
ED	100 – 225	65	—	—	—	3X
EDH	100 – 225	100	—	—	—	3X
EDC	100 – 225	200	—	—	—	3X
EHD	15 – 60	18	14	—	10	3X
EHD	70 – 100	18	14	—	10	3X
FD	15 – 60	65	25	18	10	3X
FD	70 – 100	65	25	18	10	3X
FD	110 – 225	65	25	18	10	3X
HFD	15 – 60	100	65	25	22	3X
HFD	70 – 100	100	65	25	22	3X
HFD	110 – 225	100	65	25	22	3X
FDC	15 – 60	200	100	35	22	3X
FDC	70 – 100	200	100	35	22	3X
FDC	110 – 225	200	100	35	22	3X
JD, JDB	70 – 225	65	35	18	10	3X
JD, JDB	250	65	35	18	10	3X
HJD	70 – 225	100	65	25	22	3X
HJD	250	100	65	25	22	3X
JDC	70 – 225	200	100	35	22	3X
JDC	250	200	100	35	22	3X
DK	100 – 400	65	—	—	—	4X
KD, KDB	250 – 400	65	35	25	10	4X
HKD	250 – 400	100	65	35	22	4X
KDC	250 – 400	200	100	50	22	4X
LD, LDB	300 – 600	65	35	25	22	6X
HLD ①②	300 – 600	100	65	35	25	6X
LDC	300 – 600	200	100	50	25	6X
MDL ①②	400 – 800	65	50	25	22	6X
HMDL ①②	400 – 800	100	65	35	25	6X
ND	400 – 1200	65	50	25	—	6X
HND ①②	400 – 1200	100	65	35	—	6X
NDC	400 – 1200	200	100	50	—	6X

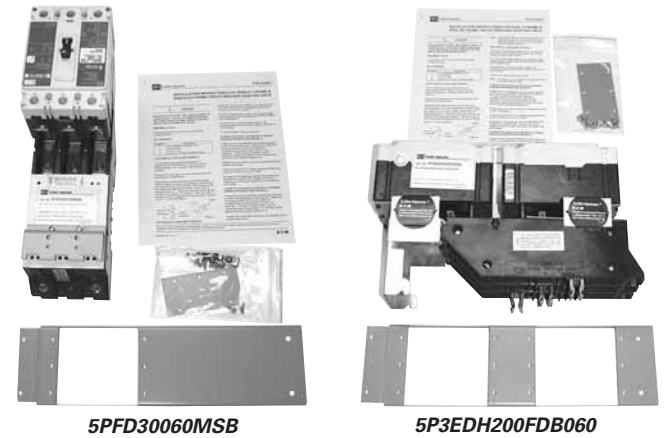
① For use only in double bus chassis panelboards.
 ② 100% rated breakers are **NOT** available in 5P panelboards.

Dual breaker adapters — Any two breakers listed in **Table 46** may be mounted on the same 2X or 3X dual breaker adapter.

Dual breaker adapters may be used in single or double bus chassis. Dual breaker adapters can **NOT** be mounted across from another in a double bus chassis. (One X = 1.38 inches [35.1 mm])

Table 46. Dual Breaker Adapters

Breaker Type	Ampere Rating	Interrupting Rating (kA Sym.)				"X" Space Required
		240 Vac	480 Vac	600 Vac	250 Vdc	
ED	100 – 225	65	—	—	—	3X
EDH	100 – 225	100	—	—	—	3X
EDC	100 – 225	200	—	—	—	3X
EHD	15 – 60	18	14	—	10	3X
EHD	70 – 100	18	14	—	10	3X
FD	15 – 60	65	25	18	10	3X
FD	70 – 100	65	25	18	10	3X
FD	110 – 225	65	25	18	10	3X
HFD	15 – 60	100	65	25	22	3X
HFD	70 – 100	100	65	25	22	3X
HFD	110 – 225	100	65	25	22	3X
FDC	15 – 60	200	100	35	22	3X
FDC	70 – 100	200	100	35	22	3X
FDC	110 – 225	200	100	35	22	3X



PRL5P Main or Through-Feed Lugs

Table 47. PRL5P Main or Through-Feed Lugs

Description	Ampere Rating	Wire Size Range	"X" Space Required	Catalog Number
Single Bus Chassis Mounting				
Ampere Lug Unit	400	(1) 1/0 – 500 or (2) 1/0 – 250 kcmil	8X	5PLUG3400SC
Ampere Lug Unit	600	(2) 1/0 – 500 kcmil	8X	5PLUG3600SC
Ampere Lug Unit	800	(2) #2 – 500 or (3) #2 – 400 kcmil	8X	5PLUG3800SC
Double Bus Chassis Mounting				
1200 Ampere Lug Unit	600 – 1200	(4) #4 – 750 kcmil	7X	5PLUG31200TC



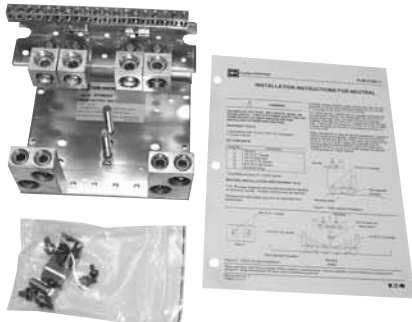
5PLUG3800SC



5PLUG31200TC

PRL5P Neutrals and Grounds

Neutral Assembly



5PN800A

Table 48. Neutral Assemblies with Lugs

Incoming Number of Cables and Wire Size	Catalog Number
(4) 250 – 500 kcmil 800 Amperes Aluminum/Copper	5PN800A
(4) 250 – 500 kcmil 800 Amperes Copper	5PN800C
(4) 250 – 500 kcmil 1200 Amperes Aluminum/Copper	5PN1200A
(4) 250 – 500 kcmil 1200 Amperes Copper	5PN1200C

Table 49. Additional Lugs for Neutral Assemblies

Description	Catalog Number
(1) 1/0 – 750 kcmil or (2) 1/0 – 300 kcmil Aluminum/Copper	5PNL400
(2) 250 – 500 kcmil Aluminum/Copper	5PNL600
(3) 3/0 – 750 kcmil Aluminum/Copper	5PNL800
(4) 3/0 – 750 kcmil Aluminum/Copper	5PNL1200

Ground Bar Type

1200 Amperes Aluminum/Copper	5PG1200A
1200 Amperes Copper	5PG1200C

Ground Bar Assemblies



5PG1200A

Table 50. Grounded "B" Phase Adapter Kits

Ampere Rating	Main Device	Catalog Number
Single Bus Chassis		
400	Main Lugs	5PCGBLUG400S
600	Main Lugs	5PCGBLUG600S
600	LD Breaker	5PCGBLD600S
800	Main Lugs	5PCGBLUG800S
Double Bus Chassis		
800	MD Breaker	5PCGBMD800T
1200	Main Lugs	5PCGBLUG1200T
1200	ND Breaker	5PCGBND1200T

PRL5P Box, Trim and Deadfront Filler Plates

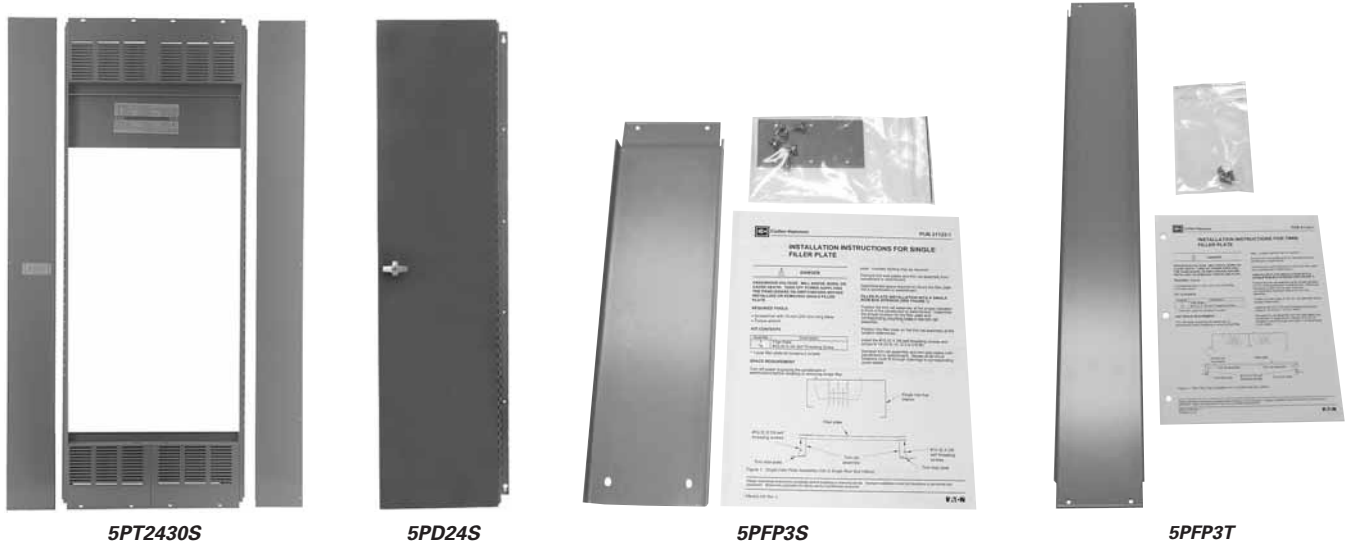
Table 51. PRL5P Box, Trim and Deadfront Filler Plates

Chassis "X" Factor	Catalog Number		
	Back Box	Trim	Trim Door Kit
Single Bus Chassis — 30.00-Inch (762.0 mm) Wide Box			
24X	5PB2430G	5PT2430S	5PD24S
32X	5PB3230G	5PT3230S	5PD32S
40X	5PB4030G	5PT4030S	5PD40S
Double Bus Chassis — 48.00-Inch (1219.2 mm) Wide Box			
24X	5PB2448G	5PT2448S	5PD24T
32X	5PB3248G	5PT3248S	5PD32T
40X	5PB4048G	5PT4048S	5PD40T

Table 52. Deadfront Filler Plates

Vertical "X" Increment	Catalog Number	
	Single Bus Chassis ①	Double Bus Chassis
1X	5PFP1S	5PFP1T
2X	5PFP2S	5PFP2T
3X	5PFP3S	5PFP3T
4X	5PFP4S	5PFP4T
5X	5PFP5S	5PFP5T
6X	5PFP6S	5PFP6T

① These fillers are also used across from a breaker unit in a double bus chassis.



PRL1a, 2a-LX

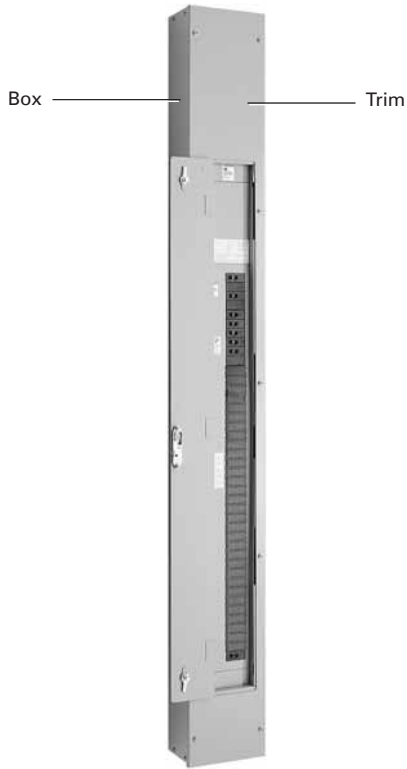


Table 53. Type 1 Box and Trims

Box Height in Inches (mm)	Catalog Number		
	Box	Surface Trim Standard	Surface Trim Door-In-Door
Incoming Location Top Fed			
69.00 (1752.6)	YSC969	LTC969S	LTCD969S
78.00 (1981.2)	YSC978	LTC978S	LTCD978S
81.00 (2057.4)	YSC981	LTC981S	LTCD981S
90.00 (2286.0)	YSC990	LTC990S	LTCD990S
Incoming Location Bottom Fed			
69.00 (1752.6)	YSC969	LTC969SB	LTCD969SB
78.00 (1981.2)	YSC978	LTC978SB	LTCD978SB
81.00 (2057.4)	YSC981	LTC981SB	LTCD981SB
90.00 (2286.0)	YSC990	LTC990SB	LTCD990SB

Pow-R-Command

For replacement parts, see PRL3a Section, **Page 21**. Parts available are the following:

- Connector kits.
- Ground assemblies.
- Service entrance kits.
- Deadfront covers.
- Trim locks.



Pow-R-Command

Additional Services

Since virtually all panelboards are supplied to meet specific customer requirements, other parts not listed in this publication might occasionally be needed. Price and availability for parts not shown here may be obtained by contacting your local Satellite plant and providing a complete description of the part along with the data on the panelboard nameplate.

Should you experience difficulty in determining what replacement parts are needed, contact your local Satellite Plant Manager who can provide help to:

- Identify and recommend replacement parts.
- Remove damaged parts and instruct you in how to install replacement parts.
- Verify the correct connector kits which should be ordered for each circuit breaker or fusible switch.
- Retrofit existing panelboard boxes with new Pow-R-Line interiors.
- Provide a recommended spare parts list.

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