

Lighting Panelboards

P3 Panelboards

Features

The innovative P3 panelboard from Siemens is a smaller footprint distribution panel designed for applications that require more large-branch devices than typical lighting panels can support. This panel offers a wide array of factory-assembled options and has the ability to mix breaker frames in unit space up to 225 amps. Bussing options include standard, temperature-rated aluminum and temperature rated (750 ASI1 and 1,000 ASIq") copper. All aluminum bussing in the P3 panel is tin-plated as a standard. Silver-plating is the default for copper bus with tin as an option. Integrated time clocks, bus mounted contactors as mains or sub-mains, split bus and sub-feed lugs (up to 400 amps) are just a few of the options available in this unique panel.

The panel configurations, defined by unit space, allow for given amperage, main device, and box height. The P3 panel starts with a 56" high box. Breakers in unit space can be mixed and matched to meet customer requirements. All 1"pole breakers (BL, BQD, xGB, NEB, HEB and ED frames) are mounted in 3" or 6-pole increments. Breaker frames, rated 225 amps, are dual mounted in 6" increments in unit space. Also available are one or two 250 amp frame breakers or one 400 amp frame breaker, mounted as sub-feed devices outside the unit space.



Like other distribution panels, the P3 panel can include blank space for future expansion or modifications. Any expansions or modifications must be in 3" increments. BL, BQD, xGB, NEB, HEB, and ED frame breakers have 3" or 6-pole kits and can be mixed in unit space by these increments. Breakers of the same frame can cross from one mounting to another if contiguous. QJ frame breakers are mounted in 6" increments for two and three pole single and twin mounted units. Changes in the unit space length for BL, BQD, xGB, NEB, HEB, and ED frame breakers require an additional deadfront center strip kit. Contact your Siemens representative for additional unit space kits.

Voltage – 600 Vac max.

250V Vdc max.

Amperage – 600 amp max.

Short Circuit Rating – 200 KAIC Max. symmetrical or equal to the lowest rated device installed unless a series rating is indicated. Panels with subfeed or feed-thru lugs without a main device, circuit breaker or fusible unit, are limited to a three-cycle rating. The three-cycle rating for the P3 panel is limited to 22 KAIC. Note that the main device may be mounted remote from the panel.

Bussing – The P3 panel has more options to meet market requirements. The standard bussing is temperature rated aluminum. The rating is per the requirements of UL 67 – the standard for panelboards. All aluminum bussing is tin-plated. Optional bussing for the P3 panel is: 750 A/si aluminum, temperature rated copper, and 1000 A/si copper. The copper bus option for this panel is tin-plated.

Weight – Approximate

Total panelboard weight when filled with a normal quantity of breakers and accessories is about 5 lbs. (1 kg) per inch (54g per mm) of box height.

Table P3-1 – Gauge Steel of Boxes Fronts, Surface & Flush

Dimensions in inches (mm)		Gauge Steel	
Width	Height	Box	Front
24"	56 - 80	#16	#14
(610)	(1422, 2032)		

1 A/si = Amperes per square inch

Panel Unit Space To Box Height Requirements

"B" Dimension Box Height	P3 Panels With Standard Line Lugs. Unit Space (starting with 9" and adding 6" increments) "A" Dimension										
	Main Lugs				Main Breakers						
	250A	400A	600A	800A	250A Horiz. FD	250A Vert. FD	250A CFD	400A JD	400A CJD	600A LD	600A CLD
56	27	21	21	21	21	15	9	9	—	9	—
62	33	27	27	27	27	21	15	15	9	15	9
68	39	33	33	33	33	27	21	21	15	21	15
74	45	39	39	39	39	33	27	27	21	27	21
80	51	45	45	45	45	39	33	33	27	33	27

Main Breaker Selection^①

"B" Box Height	P3 Panels Wit	Maximum interrupting rating (kA)			Lug wire range
		240V	480V	600V	
250	FD6, FXD6 (STD)	65	35	18	#6 AWG - 350 Kcmil Cu or #4 AWG - 30 Kcmil Al
	HFD6, HFxD6	100	65	25	
	CFD6	200	150	100	
400	JXD6 (STD), JD6	65	35	25	3/0 - 500 Kcmil Cu or 4/0 - 500 Kcmil Al
	HJD6, HJxD6	100	65	35	
	SJD6	65	35	25	
	CJD6, SCJD6	200	200	100	
600	LXD6 (STD)	65	35	25	3/0 - 500 Kcmil Cu or 4/0 - 500 Kcmil Al
	LD6	65	35	25	
	HLD6, HLXD6	100	65	35	
	SLD6	65	35	25	
	SHLD6	100	65	35	
	CLD6, SCLD6	200	150	100	

Fig. P3-1

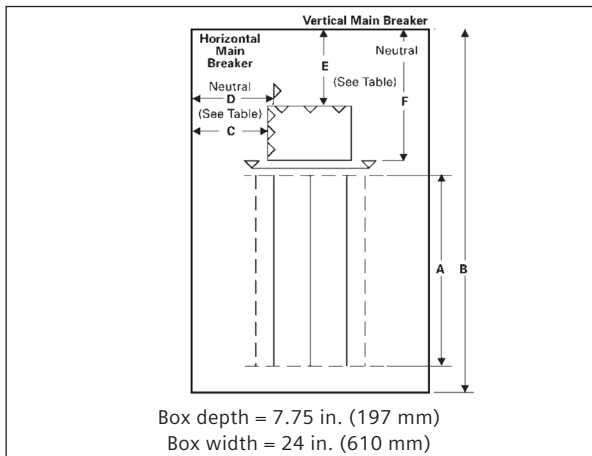
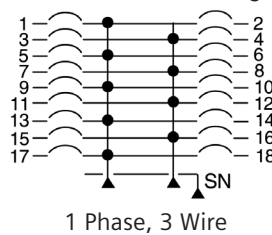


Table P3-1 – Gauge Steel of Boxes Fronts, Surface & Flush

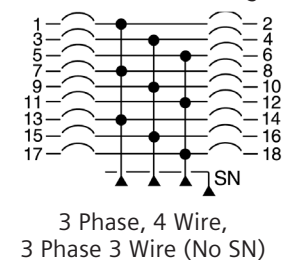
Dimensions in inches (mm)		Gauge Steel	
Width	Height	Box	Front
24"	56 - 80	#16	#14
-610	(1422, 2032)		

Typical Panelboard Wiring Diagrams

Main Breaker Main Lugs



Main Breaker Main Lugs



Branch Breaker Side Gutters Inches (mm) (Fig. P3-2)

Reference Letter	Panel Width 24" (609)
A	7.750 (197)
B	7.125 (181)
C	6.620 (168)
D	6.440 (164)
E	6.000 (152)
F	7.000 (178)

Fig. P3-2

← A →	BL, BLH, HBL	BL, BLH, HBL	← A →
← B →	BLF, BLFH	BLF, BLFH	← B →
← C →	BQD, BQD6	BQD, BQD6	← C →
← D →	NGB, HGB, LGB	NGB, HGB, LGB	← D →
← E →	NEB, HEB	NEB, HEB	← E →
← F →	ED4, ED6	ED4, ED6	← F →
← F →	HED4, HHED6	HED4, HHED6	← F →
← F →	QJ2, QJH2, QJ2H, QR2, QRH2, HQR2, HQR2H	QJ2, QJH2, QJ2H, QR2, QRH2, HQR2, HQR2H	← F →

Panel Width 24 in. (610 mm)

Branch Breaker Side Gutters Inches (mm) (Fig. P3-2)

Box Height (In.)	Catalog Number			Type 3R	Type 3R/12
	Type 1 Standard Trim				
	Box	Surface	Flush		
56	24WD56	P3S56	P3F56	24NRD56	24WPD56
62	24WD62	P3S62	P3F62	24NRD62	24WPD62
68	24WD68	P3S68	P3F68	24NRD68	24WPD68
74	24WD74	P3S74	P3F74	24NRD74	24WPD74
80	24WD80	P3S80	P3F80	24NRD80	24WPD80

Options For Type 1 Trims

Items must be ordered as manual line item on factory.

Hinged trim – Add "H" suffix

Door-in-door – Add "D" suffix

Metal card holder – Add "M" suffix

^① Interchangeable trip main breakers are mounted at top of panel only.

Breaker Kits and Accessories

Kit Number	Description	Contents
BBKB32 (P2/P3)	BL/BQD 6-pole 3" branch breaker kit	Kit contains top barrier, (3) A/C connectors, (1) B connector, hardware
BBKNB32 (P2/P3)	NGB, HGB, LGB 6-pole 3" branch breaker kit	Kit contains top barrier, (3) A/C connectors, (1) B connector, hardware
BBKGB32 (P2/P3)	xGB2 P2/P3 3" Branch Breaker Kit	Kit contains top barrier, (3) A/C connectors, (1) B connector, hardware
BBKEB32 (P3)	NEB/HEB 6-pole 3" branch breaker kit	Kit contains top barrier, (3) A/C connectors, (1) B connector, hardware
BBKED32 (P2/P3)	ED 6-pole 3" branch breaker kit	Kit contains breaker support, inter-phase barriers, (3) A/C connectors, (1) B connector, hardware
BBKQ2 (P3)	Branch breaker kit for 2 and 3-pole QJ twin mount	Kit contains all connectors and cover plates necessary to mount both 2 and 3-pole breakers
BBKQR1 ①	P2 branch BKR strap kit for single QR 1-phase/3-phase.	Kit contains all connectors and cover plates necessary to mount both 2 and 3-pole breakers
BBKQR2 ①	P3 twin BKR mounting kit for QR 1-phase/3-phase.	Kit contains all connectors and cover plates necessary to mount both 2 and 3-pole breakers
SEBKP3V1 ②	Service entrance barrier kit CFD, FD (P3 only)	Kit contains barrier, mounting brackets, and hardware
SEBKP2V3	FD, QJ, QR Horizontal Main Service Entrance Barrier (P2, P2 with SEM3, P3)	Kit contains barrier, mounting brackets, and hardware
SEBKP1P2P3V1 ②	JD, LD Service Entrance Barrier Kit (RP1, P1, P2, P3)	Kit contains barrier, mounting brackets, and hardware
P3BK1	P3 bonding kit	Bonding strap and hardware
DFK1	BL, BQD, ED deadfront kit for 1" pole breakers	Center strips 3", 6", 9", 15", 21" plus mounting hardware
DFFP3	Deadfront filler 3"	3" empty space filler and hardware
DFFP6	Deadfront filler 6"	6" empty space filler and hardware
EBF1	HEB/NEB Filler Plate	Filler plate
BBKQR1FK	P2 Filler for QR. Horizontal or vertical mount. 1-phase/3-phase.	Kit contains all cover plates necessary to change from QJ to QR both 2 and 3-pole breakers.
BBKQR2FK	P3 Filler for QR. Dual mount horizontal 1-phase/3-phase.	Kit contains all cover plates necessary to change from QJ to QR both 2 and 3-pole breakers. For 1-phase panel, both breakers must change from QJ to QR, cannot have one of each installed.

① Although QR is rated 250A, it is limited to 225A in panelboard.

② Factory installed and field installable Service Entrance Barrier kits are now available as required by UL67 (In COMPAS, you must select Service Entrance Required.)

Branch Circuit Breakers

Max. Amp Rating	Bolt-On Breaker Type	No. of Poles	Amp Rating	Maximum Interrupting Rating (kA)							DC	Load Connectors
				Volts – AC								
				120	120/240	240	277	480	600	250		
100	BL ①	1	15 - 70	10	–	–	–	–	–	–	–	
		2	15 - 100	–	10	–	–	–	–	–	–	
		3	15 - 100	–	–	10	–	–	–	–	–	
	BL HID	1	15 - 30	10	–	–	–	–	–	–	–	
		2	15 - 30	–	10	–	–	–	–	–	–	
	BLR	2	15 - 100	–	–	10	–	–	–	–		
	BLE	1	15 - 30	10	–	–	–	–	–	–	–	
		2	15 - 60	–	10	–	–	–	–	–	–	
	BLEH	1	15 - 30	22	–	–	–	–	–	–	–	
		2	15 - 60	–	22	–	–	–	–	–	–	
	BLF	1	15 - 30	10	–	–	–	–	–	–	–	
		2	15 - 60	–	10	–	–	–	–	–	–	
	BLHF	1	15 - 30	22	–	–	–	–	–	–	–	
		3	15 - 60	–	22	–	–	–	–	–	–	
		2	15 - 30	10	–	–	–	–	–	–	–	
	BGL	2	15 - 30	–	10	–	–	–	–	–	–	
		3	15 - 30	–	10	–	–	–	–	–	–	
	BAF	1	15, 20	10	–	–	–	–	–	–	–	
	BAFH	1	15, 20	22	–	–	–	–	–	–	–	
	BLH ①	1	15 - 70	–	22	–	–	–	–	–	–	
2		15 - 100	–	22	–	–	–	–	–	–		
3		15 - 100	–	–	22	–	–	–	–	–		
HBL ①	1	15 - 70	–	65	–	–	–	–	–	–		
	2	15 - 100	–	65	–	–	–	–	–	–		
	3	15 - 100	–	–	65	–	–	–	–	–		
BQD ③	1	–	–	65	–	14	–	–	–	14		
	2	15 - 100	–	65	–	–	14	–	–	14		
	3	–	–	–	65	–	14	–	–	14		
125	NGB ②	1	15 - 125	100	–	–	25	–	–	14		
		2 & 3	15 - 125	–	100	100	–	25	–	–		
	HGB ②	1	15 - 125	100	–	–	35	–	–	14		
		2 & 3	15 - 125	–	100	100	–	35	–	–		
	LGB ②	1	15 - 125	100	–	–	65	–	–	14		
		2 & 3	15 - 125	–	100	100	–	65	–	–		
	NEB ④	1	15 - 125	85	–	–	35	–	–	–		
		2 & 3	15 - 125	–	85	85	–	35	–	–		
	HEB ④	1	15 - 125	100	–	–	65	–	–	–		
		2 & 3	15 - 125	–	100	100	–	65	–	–		
	ED4 ⑤	1	15 - 125	65	–	–	22	–	–	–		
		2	–	–	–	65	–	18	–	30		
		3	–	–	–	65	–	18	–	–		
	ED6 ⑤	2	15 - 125	–	–	65	–	25	18	30		
		3	–	–	–	65	–	25	18	–		
	HED4 ⑤ HHED6 ⑤	1	–	100	–	–	–	–	–	–		
		2	15 - 125	–	–	–	65	–	–	–		
		3	–	–	–	100	42	42	–	30		
	NGB2	1	15 - 125	100	–	–	25	–	–	14		
		2 & 3	15 - 125	–	100	100	–	25	–	–		
HGB2	1	15 - 125	100	–	–	35	–	–	22			
	2 & 3	15 - 125	–	100	100	–	35	–	–			
LGB2	1	15 - 125	100	–	–	65	–	–	25			
	2 & 3	15 - 125	–	100	100	–	65	–	–			
225	QJ2 ⑥	2 & 3	60 - 225	–	–	10	–	–	–			
	QJH2 ⑥	2 & 3	60 - 225	–	–	22	–	–	–			
	QJ2H ⑥	2 & 3	60 - 225	–	–	42	–	–	–			
	QR2 ⑥	2 & 3	100 - 225	–	–	10	–	–	–			
	QRH2 ⑥	2 & 3	100 - 225	–	–	25	–	–	–			
	HQR2 ⑥	2 & 3	100 - 225	–	–	65	–	–	–			
	HQR2H ⑥	2 & 3	100 - 225	–	–	100	–	–	–			

① BL, HBL, BLH and BQD breakers are mounted in common mountings in 3" or 6 pole increments.

② xGB breakers are counted in common mountings of 3" or 6 pole increments.

③ For use on 480Y/277V systems. Not suitable for 480 Delta 3 phase 3 wire systems.

④ NEB/HE breakers are counted in common mountings of 3" or 6 pole increments.

⑤ ED4, ED6, HED4 and HHED6 breakers are mounted in common mountings in 3" or (6) pole increments.

⑥ QJ/QR Breakers are single mounted in unit space and take 6" of unit space. Limited to (3) per panel max.

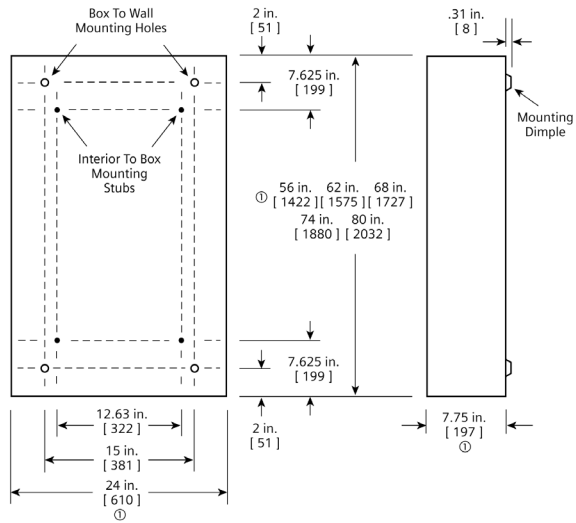
Modifications and Dimensions

Panel Options, Enclosures

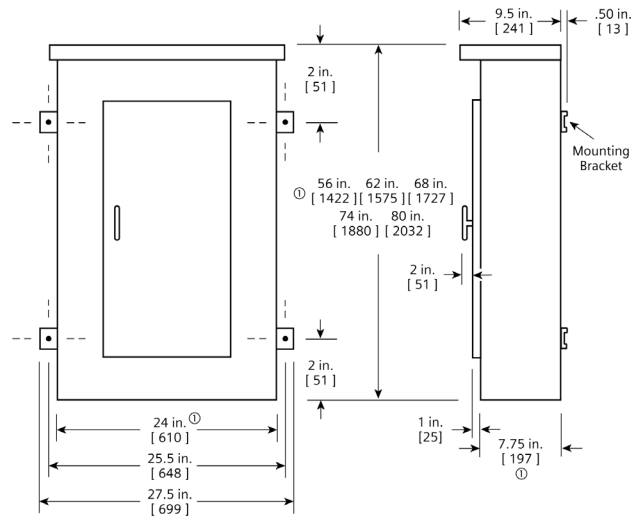
- Extra gutter to sides or ends of the can
- 24" wide boxes
- Hinged trims
- Door-in-door trims
- Screw to the box trims
- Trim mounted devices (Devices mounted and wired to the trim should also have hinged trim specified.)
 - Pilot lights
 - Toggle switches
 - Push buttons
- Painted boxes
- Custom colors
- Increase gauge trims and boxes
- Stainless steel trims and boxes, Type 1
- Aluminum trims and boxes, Type 1
- NEMA 3R enclosures
- NEMA 3R/12 enclosures
- NEMA 4 enclosures
- NEMA 4X enclosures
- Special keyed locks
 - TEY
 - TEU1
 - Cat 60
 - LL803
 - LL806
 - Yale
- Meters (Contact application engineering for space requirements.)
- Panel skirts
- Gaskets between trim and box
- Factory installed and Field installable Service Entrance Barrier kits are now available as required by UL67 (In COMPAS, you must select Service Entrance Required.)

Type P3 Dimensions

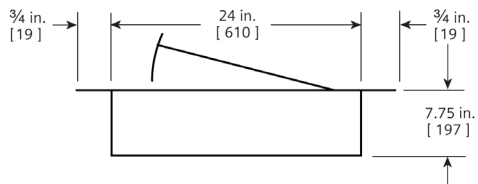
Type 1 Box (Box is Symmetrical)



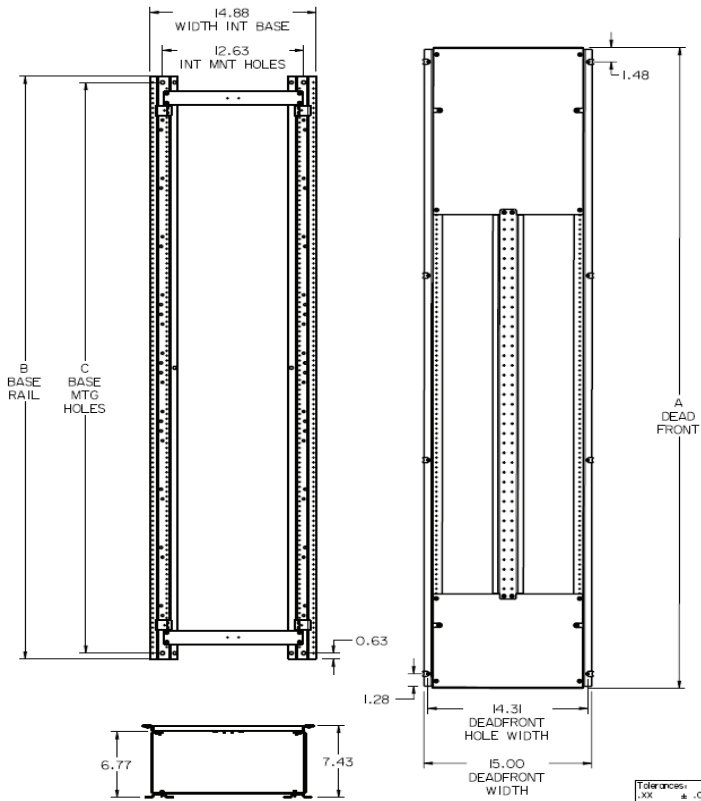
Type 3R and 3R/12 Box



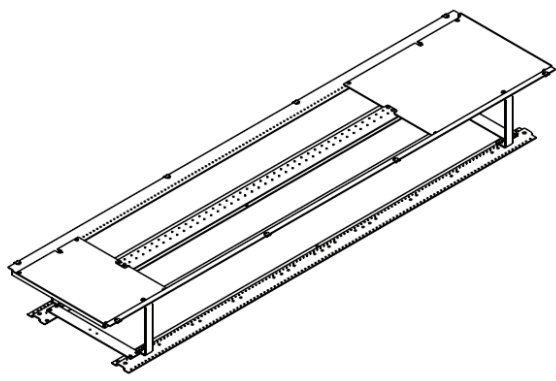
Flush Mounting



- ① Dimensions are interior of the box. Add 5/8" to width for absolute dimension.
Add 1/8" to height for absolute dimension. Dimensions shown in inches and millimeters [].



PANEL REF: II-D-2200 AO THRU A3
 PANEL BASE RAILS: II-D-3015
 DEADFRONT RAILS: II-D-3037



SCALE 0.120

Tolerances:
 .xx ± .030
 .xxx ± .015
 Angular ± 2°

A	B	C	STANDARD BOX SIZE
47.97	42.00	40.75	58H 24W 7.75D
53.97	48.00	46.75	64H 24W 7.75D
59.97	54.00	52.75	68H 24W 7.75D
65.97	60.00	58.75	74H 24W 7.75D
71.97	66.00	64.75	80H 24W 7.75D

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