

# Revised P1 Panelboards

(Introduced January 2015)

The Revised P1 Panelboards are now available in both Feed-thru (FT) and Non-Feed-thru (NFT) variations. There is a savings of 6" of box height when a NFT version is selected which eliminates the sub-feed space. The Sub-Feed Space is where the Feed-thru Lugs, sub-feed breaker or a Surge Protection Device (SPD) is installed. The interior part number will end with a "T" for FT panels and will end with an "N" for NFT panels.

The Revised P1 Panelboards also have Extended Circuit variations with 54 circuits and 66 circuits available.

Feed-thru (FT) panels are pre-engineered to accept the most common modifications without increasing box height. The enclosure size is determined by the number of circuits as shown in the Main Lug Table P1-5 or the Main Circuit Breaker Table P1-3.

All Revised P1 FT main lug or main breaker panelboards have space built-in to accept either feed-thru lugs equal to the panel rating (or) one subfeed circuit breaker up to 250 amperes (or) a surge suppressor (SPD) without increasing box height. **(When ordered with sub-feed space the interior part # will end with a "T").**

Non-Feed-thru (NFT) panels do not have a sub-feed space and cannot accept feed-thru lugs (or) sub-feed Breakers (or) SPD/TVSS devices. **(NFT panel interior part # will end in "N").**

**Note the following features, all found in the innovative P1 lighting panelboards:**

- Symmetrical 250A FT Interiors – To change from top to bottom-feed (or vice-versa), simply invert the interior. The deadfront labeling is always legible, even on the NFT panels when inverted. - 400A are not symmetrical, but they are invertable.
- First in the Industry Ratings of 125 through 400A main lug and main breaker. Field convertible from main lug to main breaker and vice versa – with no increase in enclosure height.
- Field adaptability of feed-thru lugs (or) sub-feed circuit breaker without increasing enclosure size. **(FT panels only)**
- Neutral system is field upgradeable to 200% capacity – another industry first. (also 2/0 neutrals are available as a field install kit)
- Extended circuit panels are now available – up to 66 circuits.
  - 18, 30, 42, 54 and 66 circuits for 250A **(FT & NFT)**
  - 26", 32", 38", 44", 50" and 56" standard Enclosures are used.

- 30, 42 and 54 circuits for 400A (FT & NFT), also 66 circuit NFT - 56", 62", 68" and 74" standard Enclosures are used.

- Suitable for use as service entrance given compliance with NEC.
- Bonding provisions are shipped with each panel.
- 240V and 480Y / 277V versions utilize identical boxes & fronts

**Enclosure** – Standard Type 1 enclosure is 20" wide x 5.75" deep. Box Height is determined only by the number of circuits and FT or NFT selection, not by main lug or main circuit breaker. See charts P1-3 and P1-5 for box height.

**Voltage** – 480Y/277 Vac max. (Limited options for 600Y / 347V)

**Amperage** – 400 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 P1 panel is limited to 22 KAIC. Note that the main device may be mounted remote from the panel.

**Bussing** – The P1 panel meets the majority of the markets bussing 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 P1 panel is temperature rated 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 3 lbs. (1.36 kg) per inch (54g per mm) of box height.

**Table P1-1 – Box Material Gauge**

Width	Height (inches)	Gauge Steel
20" (250A)	26, 32, 38, 44, 50, 56	#16 (#17 for endwalls)
(400A)	56, 62, 68, 74	#16 (#17 for endwalls)

**Table P1-2 – Trim Material Gauge**

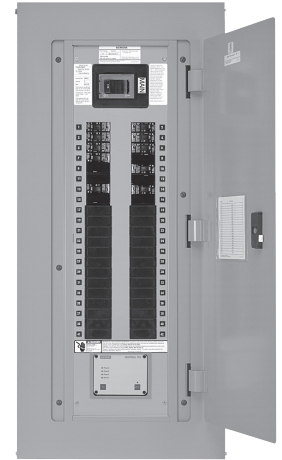
20" (250A)	26, 32, 38, 44, 50, 56	#14
(400A)	56, 62, 68, 74	#14

# Application

## Type P1 Panelboards

Table P1-3 – Main Breaker Panel Size Selector – Revised P1

Max Ampere rating	Main Breaker Types	Connections suitable for Cu or Al	Max # Poles FT ①	Max # Poles NFT	Dimensions in inches (mm)			Weight in Lbs. (kg)			
					Unit Space		Box Height				
					FT A	NFT A	B				
100	BL®, BLH®, HBL®, BQD®	#8-#6 AWG Cu or Al #8-6 AWG Cu or #8-4 AWG Al #8-#1 AWG Cu or #6-#1/0 AWG Al		18	–	9	26 (661)	90 (41)			
			18	30	9	15	32 (813)	105 (48)			
			30	42	15	21	38 (965)	120 (55)			
			42	54	21	27	44 (1118)	135 (61)			
			54	66	27	33	50 (1270)	150 (67)			
125	NGB®, HGB®, LGB®	15-30 amp: #14-#6 Cu or #12-#6 Al 35-125 amp: #6-1/0 Cu #4-2/0 Al		18	–	9	26 (661)	95 (43)			
			18	30	9	15	32 (813)	110 (50)			
	ED4	#14-#10 AWG Cu or #12-10 AWG Al	30	42	15	21	38 (965)	125 (57)			
			42	54	21	27	44 (1118)	140 (64)			
			54	66	27	33	50 (1270)	155 (71)			
ED6, HED4	#3-3/0 Cu or #1-2/0 Al #3-3/0 Cu or #1-2/0 Al	66	–	33	–	56 (1423)	170 (78)				
		225	QJ2, QJH2, QJ2H, QR2, QRH2, HQR2, HQR2H	#6 AWG-300 Kcmil (Cu) or #4 AWG-300 Kcmil (Al)		18	–	9	26 (661)	95 (43)	
18	30				9	15	32 (813)	110 (50)			
30	42				15	21	38 (965)	125 (57)			
42	54				21	27	44 (1118)	140 (64)			
54	66				27	33	50 (1270)	155 (71)			
250	FXD6, FD6, HFD6, HFXD6	#6 AWG-350 Kcmil (Cu) or #4 AWG-350 Kcmil (Al)	66	–	33	–	56 (1423)	170 (78)			
			400	JD6, JXD6, HJD6, HJXD6	3/0-500 Kcmil (Cu) or 4/0-500 Kcmil (Al)		30	–	15	56 (1423)	172 (78)
						30	42	15	21	62 (1575)	190 (86)
42	54	21				27	68 (1728)	208 (95)			
54	66	27				33	74 (1880)	226 (104)			



**Note:** Main breakers use breaker connectors. For sizes, see breaker connector chart. 400A MLO Panels have wire bend space for 600kcmil CU & AL wire when using standard lugs. With optional 750kcmil AL/CU connectors, wire bend space is available for up to 750kcmil AL wire, but is still limited to 600kcmil CU wire.

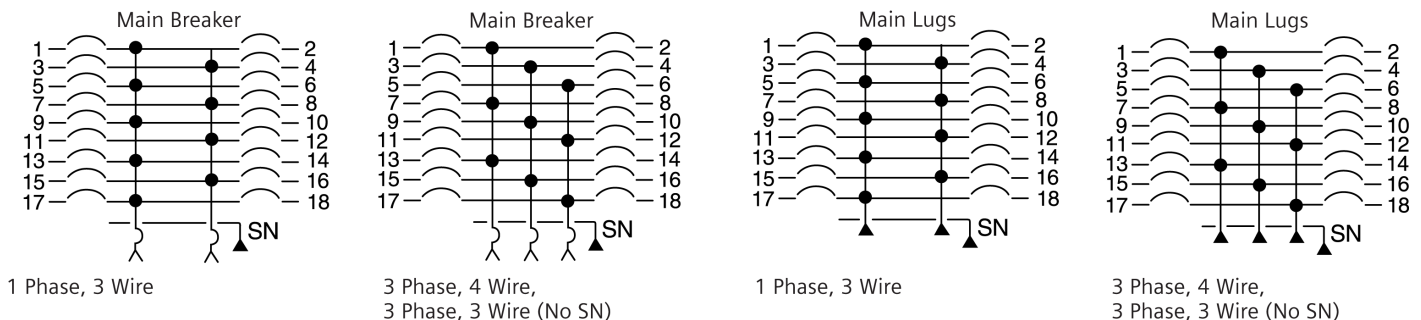
① 400A 66 circuit only available with non-feed thru versions.

② BL, BLH, HBL, BQD, and xGB mount in unit space and count in max. # of poles.

Table P1-5 - Main Lug Panel Size Selector - Revised P1

Maximum Ampere rating	Max # Poles FT	Max # Poles NFT	Dimensions in inches (mm)			Weight in Lbs. (kg)	MLO Connectors Suitable for
			Unit Space		Box Height B"		
			FT A	NFT A			
125 (or) 250		18	–	9	26 (661)	90 (41)	(1) #6 AWG - 350 kcmil (Cu or Al)
	18	30	9	15	32 (813)	105 (48)	
	30	42	15	21	38 (965)	120 (55)	
	42	54	21	27	44 (1118)	135 (61)	
	54	66	27	33	50 (1270)	150 (67)	
	66	–	33	–	56 (1423)	165 (73)	
400		30	–	15	56 (1423)	120 (55)	AL (2) 1/0 - 250 kcmil or (1) #2 AWG - 600 kcmil CU (2) 1/0 - 4/0 or (1) #2 AWG - 600 kcmil
	30	42	15	21	62 (1575)	135 (61)	
	42	54	21	27	68 (1728)	150 (68)	
	54	66	27	33	74 (1880)	165 (75)	

### Typical Panelboard Wiring Diagrams



# Application

## Type P1 Panelboards

Table P1-6 – Branch Circuit Breakers

Max. Amp Rating	Breaker Type	Number of Poles	Max. Interrupting Rating (kA)					Available Trip Values	Connections Suitable for Cu or Al
			120V	120/240V	240V	277V	480/277V		
100	BL	1	10	–	–	–	–	15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70	15-20A #14-#10 AWG Cu #12-#10 AWG Al 25-35A #8-#6 AWG Cu #8-#6 AWG Al 40-50A #8-#6 AWG Cu #8-#4 AWG Al 55-70A #8-#4 AWG Cu #8-#2 AWG Al 80-100A #4-#1/0 AWG Cu #2-#1/0 AWG Al
		2	–	10	–	–	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100	
		3	–	–	10	–	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100	
	BLR	2	–	–	10	–	–	15, 20, 30, 40, 50, 60, 70, 90, 100	
		BL, HID	1	10	–	–	–	15, 20, 30	
	BLH	2	–	10	–	–	–	15, 20, 30	
		1	–	22	–	–	–	15, 20, 30, 40, 50, 55, 60, 70	
		2	–	22	–	–	–	15, 20, 30, 40, 50, 60, 70, 90, 100	
	HBL	3	–	–	22	–	–	15, 20, 30, 40, 50, 60, 70, 80, 90, 100	
		1	–	65	–	–	–	15, 20, 30, 40, 50	
		2	–	65	–	–	–	15, 20, 30, 40, 50, 60, 70	
	BLF2	3	–	–	65	–	–	15, 20, 30, 40, 50, 60, 70, 80, 90, 100	
		1	10	–	–	–	–	15, 20, 30	
		2	–	10	–	–	–	15, 20, 30, 40, 50, 60	
	BLHF2	1	22	–	–	–	–	15, 20, 30	
		2	–	22	–	–	–	15, 20, 30, 40, 50, 60	
	HBLF2	1	65	–	–	–	–	15, 20, 30	
		BG ①	2	10	–	–	–	15, 20, 30	
	BLE	3	–	10	–	–	–	15, 20, 30	
		1	10	–	–	–	–	15, 20, 30	
BLEH	2	–	10	–	–	–	15, 20, 30, 40, 50, 60		
	1	22	–	–	–	–	15, 20, 30		
BAF	2	–	22	–	–	–	15, 20, 30, 40, 50, 60		
	1	10	–	–	–	–	15, 20		
BAFH	1	22	–	–	–	–	15, 20		
	1	–	65	–	14	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100		
BQD	2	–	65	–	–	14	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100		
	3	–	–	65	–	14	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100		
	15-40A #14-#6 AWG Cu #12-#6 AWG Al 45-100A #8-#1 AWG Cu #6-#1/0 AWG Al								
125	NGB ②③	1	100	–	–	25	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	
		2	–	100	100	–	25	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	
		3	–	100	100	–	25	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	
	HGB ②③	1	100	–	–	35	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	
		2	–	100	100	–	35	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	
		3	–	100	100	–	35	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	
	LGB ②③	1	100	–	–	65	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	
		2	–	100	100	–	65	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	
		3	–	100	100	–	65	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③	

① Two-pole breaker is one phase and neutral. Three-pole is two phases and neutral.

② P1 panel with NGB/HGB/LGB branch devices will not accept BL or BQD frames in the same panel as branch devices.

③ The New Revised P1 (18 circuit 250A only) is limited to 100A per connection (200A per pair) when installing Branch Breakers across from one another. All other configurations allow 125A per connection max. (250A per pair max.)

**Note:** BL, HBL and BQD breakers are mounted in common mountings in 3" or (6) pole increments.

# Application

## Type P1 Panelboards

**Table P1-7 – Subfeed Breakers**

Breaker Type	Number of Poles	Max. Interrupting Rating (kA)		Available Trip Values
		240V	480Y/277V	
QJ2	2, 3	10	–	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
QJH2	2, 3	22	–	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
QJ2H	2, 3	42	–	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
QR2	2, 3	10	–	100, 110, 125, 150, 175, 200, 225
QRH2	2, 3	25	–	100, 110, 125, 150, 175, 200, 225
HQR2	2, 3	65	–	100, 110, 125, 150, 175, 200, 225
HQR2H	2, 3	100	–	100, 110, 125, 150, 175, 200, 225
ED4	2, 3	65	18	15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 80, 90, 100, 110, 125
ED6	2, 3	65	25	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 110, 125
HED4	2, 3	100	42	15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 80, 90, 100, 110, 125
HHED6	2, 3	100	65	15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 110, 125
FXD6	2, 3	65	35	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250
FD6	2, 3	65	35	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250
HFD6	2, 3	100	65	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250
HFXD6	2, 3	100	65	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250

**Table P1-8 – Breaker Mounting Kit Main or Subfeed Strap Kit w/o Breaker**

Amp Rating	Breaker Frames	Service	Original P1 Catalog Number	Revised P1 <sup>®</sup> Catalog Number
100A	BL, BLH, HBL	1 Phase	MBKBL1	MBKBL1A
		3 Phase	MBKBL3	MBKBL3A
100A	BQD	1 Phase	–	MBKBC1NBA
125A	NGB, HGB, LGB	1 Phase	MBKNB1	–
100A	BQD	3 Phase	MBKBC3	MBKBC3NBA
125A		3 Phase	MBKNB3	
125	ED4, ED6, HED4, HHED6	1 Phase	MBKED1	MBKED1A
		3 Phase	MBKED3	MBKED3A
225	QJ2, QJH2, QJ2H	1 Phase	MBKQJ1	MBKQJ1A
		3 Phase	MBKQJ3	MBKQJ3A
225 <sup>③</sup>	QR2, QRH2, HQR2, HQR2H	1 Phase	MBKQR1	MBKQR1A
		3 Phase	MBKQR3	MBKQR3A
250	FXD6, FD6, HFD, HFXD6	1 Phase	MBKFD1	MBKFD1A
		3 Phase	MBKFD3	MBKFD3A
400 <sup>③</sup>	JXD6, JD6	1 Phase	MBKJD1	MBKJD1A
		3 Phase	MBKJD3	MBKJD3A
	HJD6, HJXD6	3 Phase	MBKJD3	MBKJD3A

① 400 amp kit is for main—only, not allowed for subfeed breaker.

② MBKBFA kit is available to mount BL/BQD/xGB 2-pole or 3-pole in unit space as a "Back-Fed Main". This occupies branch space and reduces circuit count by 2 or 3 positions. (includes Neutral Lug, "MAIN" label and instructions).

③ Although QR is rated 250A, it is limited to 225A in panelboard.

**Table P1-9 – Lug Kits (Main or Feed-Thru)**

Amp Rating	Matl.	Wire Range (includes Neutral)	Service	Original Catalog Number	Revised P1 Catalog Number
250	AL	(1) #6 AWG-350 kcmil (CU or AL)	1 Phase	MLKA1	MLKA1A
			3 Phase	MLKA3	MLKA3A
	CU	(1) #6 AWG-350 kcmil (CU or AL)	1 Phase	MLKC1	MLKC1A
			3 Phase	MLKC3	MLKC3A
400	AL	(2) 1/0 - 250 kcmil or (1) #2 AWG-600 kcmil	1 Phase	4MLKA1	4MLKA1A
			3 Phase	4MLKA3	4MLKA3A
	CU	(2) 1/0 - 4/0 or (1) 1/0 - 600 kcmil	1 Phase	4MLKC1	4MLKC1A
			3 Phase	4MLKC3	4MLKC3A
400	AL	AL 1/0-750 kcmil (max. 600 kcmil CU wire)	1 Phase	–	4MLKA1B
			3 Phase	–	4MLKA3B

**Notes:**

1) Original P1 kits will not work with Revised P1 interiors if the chart shows different part numbers for each.

2) Revised P1 kits will not work with original P1 interiors if the chart shows different part numbers for each.

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

# Application

## Type P1 Panelboards

**Table P1-10 – Copper Neutral Lug Kits – 250A**

No. of Circuits	Description	Original P1 Catalog Number	Revised P1 Catalog Number
18		CNLK18	Use 30 ckt kit
30	2 or 4 Branch Neutral Strips, 1 Main Neutral Lug, Hardware	CNLK30	CNLK30A
42		CNLK42	CNLK42A
54, 66		–	CNLK54A

**Table P1-10A – 2/0 Neutral Lug Kits – 250A and 400A**

No. of Circuits	Description	Original P1 Catalog Number	Revised P1 Catalog Number
18		–	Use 30 ckt kit
30	2 or 4 Branch Neutral Strips, Hardware	–	LNLK30A
42		–	LNLK42A
54, 66		–	LNLK54A

**Table P1-11 – 200% Neutral Lug Kits – 250A**

No. of Circuits	Description	Original P1 Catalog Number	Revised P1 Catalog Number
18		2NLK18	Use 30 ckt kit
30	2 or 4 Branch Neutral Strips, 2 Main Neutral Lugs, Hardware	2NLK30	2NLK30A
42		2NLK42	2NLK42A
54, 66		–	2NLK54A

**Table P1-12 – 200% Neutral Lug Kits – 400A**

No. of Circuits	Description	Original P1 Catalog Number	Revised P1 Catalog Number
18		42NLK18	N/A
30	2 or 4 Branch Neutral Strips, 1 Main 600 kcmil Neutral Lug, Hardware	42NLK30	42NLK30A
42		42NLK42	42NLK42A
54, 66		–	42NLK54A

**Table P1-13 – Main Breaker Gutter Dimensions Inches (mm)**

Main Breaker	Max. Interrupting Rating (kA)		Neutral Location
	20" wide box	24" wide box	20" wide box
BL, BLH, HBL <sup>ⓐ</sup>	8.680 (220) <sup>ⓐ</sup>	10.690 (272) <sup>ⓐ</sup>	10.500 (267)
BQD <sup>ⓐ</sup>	7.880 (200)	9.880 (251)	10.500 (267)
NGB, HGB, LGB <sup>ⓐ</sup>	7.770 (197) <sup>ⓐ</sup>	9.770 (248) <sup>ⓐ</sup>	10.500 (267)
ED4, ED6, HED4	6.125 (156)	8.125 (206)	10.500 (267)
QJ2, QJH2, QJ2H	6.500 (165)	8.500 (216)	10.500 (267)
QR2, QRH2, HQR2, HQR2H	6.500 (165)	8.500 (216)	10.500 (267)
FD6, FXD6, HFD6, HFXD6	5.250 (133)	7.250 (184)	10.500 (267)
JD6, JXD6 <sup>ⓐ</sup>	15.000 (381)	15.000 (381)	26.500 (674)

<sup>ⓐ</sup> JD frame mounted vertically.

<sup>ⓑ</sup> For Revised P1 with back-fed main option, use Side Gutter Wiring Spec Table P1-15

<sup>ⓒ</sup> These dimensions are for Revised P1 only. See Original P1 cut sheets for valid dimensions if needed (P1 production prior to January 2015)

**Table P1-14 – Main Lug End Gutter Dimensions Inches (mm)**

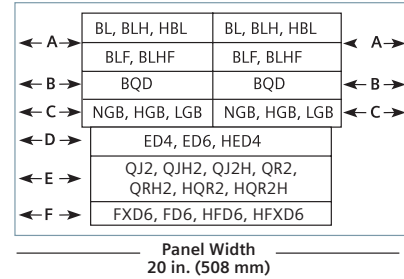
Amp Rating	End Gutter		Neutral Location	
	20" wide box	24" wide box	20" wide box	24" wide box
125	9.500 (242)	9.500 (242)	10.500 (267)	10.500 (267)
250	9.500 (242)	9.500 (242)	10.500 (267)	10.500 (267)
400	25.500 (648)	25.500 (648)	26.750 (680)	26.750 (680)

**Note:** Feed-thru lug and neutral wire bending space is 15.000" and 16.250" respectively on 400A panel.

**Table P1-15 – Side Gutter Wiring Space Inches (mm) (Fig P1-1)**

Reference Letter	Panel Width 20"	Panel Width 24" Optional
A <sup>ⓐ</sup>	6.375 (167)	8.375 (213)
B <sup>ⓐ</sup>	5.500 (140)	7.500 (191)
C <sup>ⓐ</sup>	5.000 (127)	7.000 (178)
D	6.125 (156)	8.125 (206)
E	6.500 (165)	8.500 (216)
F	5.250 (133)	7.250 (184)

**Fig P1-1**



<sup>ⓐ</sup> Subfeed mounting limit 1 per panel.

<sup>ⓑ</sup> For all Revised P1 panels using BL/BQD or xGB breakers as mains in back-fed position, use this chart for wiring space.

### Miscellaneous Parts and Accessories

Catalog #	Description
BK1	Bonding Kit for 400A max. Original P1 Panels
BK1A	Bonding Kit for 400A max. Revised P1 Panels
BK2	Bonding kit for S1/S2 400 & 600
BK3	Bonding kit for S3 Panel
IMK1	Interior Adjusting Kit
11-1824-01	Directory Card Holder
12-1110-01	Directory Card
MCHK	Metal Card Holder Kit
ANSI/NEMA PB 1.1-2013 <sup>ⓐ</sup>	NEMA Instruction Book (ref part 11-1056-01) General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less (O&M Manual)
NBK03	Number Strips 1–42. Stick-on type; Use w/ P1 series Panels
NBK04	Number Strips 43–84. Stick-on type; Use w/ P1 series Panels
NBK05	Number Strips 85–126. Stick-on type; Use w/ P1 series Panels
NBK06	Number Strips 127–168. Stick-on type; Use w/ P1 series Panels
EGK	AL Ground Bus 44 Connections
ECGK	CU Ground Bus 44 Connections
IGK	Insulated AL Ground Bus
ICGK	Insulated CU Ground Bus
EWK1	End Wall Kit with Knockouts (20" W x 5.75" DP)
EWK2	End Wall Kit with Knockouts (24" W x 7.75" DP)
EBF1	NEB/HGB Filler Plate
P1SCRWS	Package of 42 breaker mounting screws for P1
DFFP1	1" Branch circuit filler plate (used for BL/BQD/xGB/xGB2/ED blank positions suitable for replacing QF3 in P1 thru P5 Panelboards and Switchboards)
SEBKR1V1 <sup>ⓐ</sup>	FD, QJ, QR Service Entrance Barrier Kit (Revised P1)
SEBKR1V2 <sup>ⓐ</sup>	ED Service Entrance Barrier Kit (Revised P1)
SEBKR1V3 <sup>ⓐ</sup>	BQD Service Entrance Barrier Kit (Revised P1 - back-fed)
SEBKR1V4 <sup>ⓐ</sup>	xGB Service Entrance Barrier Kit (Revised P1) - back-fed
SEBKR1V5 <sup>ⓐ</sup>	BL/BQD/xGB Service Entrance Barrier Kit (RP1 in Main Space)
SEBKP1P2P3V1 <sup>ⓐ</sup>	JD, LD Service Entrance Barrier Kit (RP1, P1, P2, P3)
P1CONBPHCU <sup>ⓐ</sup>	Connector kit – 6 pcs. B-phase Copper
P1CONBPHAL <sup>ⓐ</sup>	Connector kit – 6 pcs. B-phase Aluminum
P1CONACPHCU <sup>ⓐ</sup>	Connector kit – 6 pcs. A or C-phase Copper
P1CONACPHAL <sup>ⓐ</sup>	Connector kit – 6 pcs. A or C-phase Aluminum
MBKQRFK	P1/Revised P1 Filler for 1PH/3PH QR. Horizontal mount only.

<sup>ⓐ</sup> Replacement parts only.

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

<sup>ⓒ</sup> PDF can be downloaded at no cost and printed at this location: <http://www.nema.org/standards/pages/Panelboards.aspx>

# Typical Catalog Numbers

## Type P1 Panelboards

Shown with Standard Mains, Top Fed and Surface Trim  
Catalog number is for aluminum main bus. For optional copper main bus change "A" in position 11 to "C".

Panels are top feed, surface mounted. For bottom feed, change "T" in position 12 to "B". For flush mounting, change "S" in position 13 to "F".

Replace fifth and sixth position in panelboard catalog number, with alternate main breaker code.

**Note:** Original P1 was produced until 2015 and in January the revised P1 was introduced. All interior numbers that end with "T" or "N" are the new Revised interiors. "T" at end of catalog number indicates there is a Subfeed area available. "N" at end of catalog number indicates there is no Subfeed area available. Replace fifth and sixth position in panelboard catalog number, with alternate main breaker code.

**Table P1-16 – Main Lugs Only**

Main Lug Only			Original P1 – Subfeed Space	Revised P1 – Subfeed Space ③	Original P1 – Subfeed Space	Revised P1 – Subfeed Space ③	Original P1 – Subfeed Space	Revised P1 – Subfeed Space ③④
Max Panel Amp Rating	Max 1-Pole Circuits	Box Height (in.)	208Y/120V 3-Phase 4-Wire Catalog #	208Y/120V 3-Phase 4-Wire Catalog #	120/240V 1-Phase 3-Wire Catalog #	120/240V 1-Phase 3-Wire Catalog #	480Y/277V 3-Phase 4-Wire Catalog #	480Y/277V 3-Phase 4-Wire Catalog #
125	18	32	P1C18ML125ATS	P1C18ML125ATST	P1A18ML125ATS	P1A18ML125ATST	P1E18ML125ATS	P1E18ML125ATST
	30	38	P1C30ML125ATS	P1C30ML125ATST	P1A30ML125ATS	P1A30ML125ATST	P1E30ML125ATS	P1E30ML125ATST
	42	44	P1C42ML125ATS	P1C42ML125ATST	P1A42ML125ATS	P1A42ML125ATST	P1E42ML125ATS	P1E42ML125ATST
	54	50	N/A	P1C54ML125ATST	N/A	P1A54ML125ATST	N/A	P1E54ML125ATST
	66	56	N/A	P1C66ML125ATST	N/A	P1A66ML125ATST	N/A	P1E66ML125ATST
250	18	32	P1C18ML250ATS	P1C18ML250ATST	P1A18ML250ATS	P1A18ML250ATST	P1E18ML250ATS	P1E18ML250ATST
	30	38	P1C30ML250ATS	P1C30ML250ATST	P1A30ML250ATS	P1A30ML250ATST	P1E30ML250ATS	P1E30ML250ATST
	42	44	P1C42ML250ATS	P1C42ML250ATST	P1A42ML250ATS	P1A42ML250ATST	P1E42ML250ATS	P1E42ML250ATST
	54	50	N/A	P1C54ML250ATST	N/A	P1A54ML250ATST	N/A	P1E54ML250ATST
	66	56	N/A	P1C66ML250ATST	N/A	P1A66ML250ATST	N/A	P1E66ML250ATST
400	18	56	P1C18ML400ATS	–	P1A18ML400ATS	–	P1E18ML400ATS	–
	30	62	P1C30ML400ATS	P1C30ML400ATST	P1A30ML400ATS	P1A30ML400ATST	P1E30ML400ATS	P1E30ML400ATST
	42	68	P1C42ML400ATS	P1C42ML400ATST	P1A42ML400ATS	P1A42ML400ATST	P1E42ML400ATS	P1E42ML400ATST
	54	74	–	P1C54ML400ATST	–	P1A54ML400ATST	–	P1E54ML400ATST
	66 <sup>②</sup>	74 <sup>②</sup>	–	P1C66ML400ATSN <sup>②</sup>	–	P1A66ML400ATSN <sup>②</sup>	–	P1E66ML400ATSN <sup>②</sup>

**Table P1-17 – Main Circuit Breaker**

100	18	32	P1C18BL100ATS	P1C18BL100ATST	P1A18BL100ATS	P1A18BL100ATST	P1E18BD100ATS	P1E18BD100ATST
	30	38	P1C30BL100ATS	P1C30BL100ATST	P1A30BL100ATS	P1A30BL100ATST	P1E30BD100ATS	P1E30BD100ATST
	42	44	P1C42BL100ATS	P1C42BL100ATST	P1A42BL100ATS	P1A42BL100ATST	P1E42BD100ATS	P1E42BD100ATST
	54	50	–	P1C54BL100ATST	–	P1A54BL100ATST	–	P1E54BD100ATST
	66	56	–	P1C66BL100ATST	–	P1A66BL100ATST	–	P1E66BD100ATST
125 <sup>2</sup>	18	32	P1C18NB125ATS	P1C18NB125ATST	–	–	P1E18NB125ATS	P1E18NB125ATST
	30	38	P1C30NB125ATS	P1C30NB125ATST	–	–	P1E30NB125ATS	P1E30NB125ATST
	42	44	P1C42NB125ATS	P1C42NB125ATST	–	–	P1E42NB125ATS	P1E42NB125ATST
	54	50	–	P1C54NB125ATST	–	–	–	P1E54NB125ATST
	66	56	–	P1C66NB125ATST	–	–	–	P1E66NB125ATST
225	18	32	P1C18QR225ATS	P1C18QR225ATST	P1A18QR225ATS	P1A18QR225ATST	P1E18FX250ATS	P1E18FX225ATST
	30	38	P1C30QR225ATS	P1C30QR225ATST	P1A30QR225ATS	P1A30QR225ATST	P1E30FX250ATS	P1E30FX225ATST
	42	44	P1C42QR225ATS	P1C42QR225ATST	P1A42QR225ATS	P1A42QR225ATST	P1E42FX250ATS	P1E42FX225ATST
	54	50	–	P1C54QR225ATST	–	P1A54QR225ATST	–	P1E54FX225ATST
	66	56	–	P1C66QR225ATST	–	P1A66QR225ATST	–	P1E66FX225ATST
250	18	32	P1C18FX250ATS	P1C18FX250ATST	P1A18FX250ATS	P1A18FX250ATST	P1E18FX250ATS	P1E18FX250ATST
	30	38	P1C30FX250ATS	P1C30FX250ATST	P1A30FX250ATS	P1A30FX250ATST	P1E30FX250ATS	P1E30FX250ATST
	42	44	P1C42FX250ATS	P1C42FX250ATST	P1A42FX250ATS	P1A42FX250ATST	P1E42FX250ATS	P1E42FX250ATST
	54	50	–	P1C54FX250ATST	–	P1A54FX250ATST	–	P1E54FX250ATST
	66	56	–	P1C66FX250ATST	–	P1A66FX250ATST	–	P1E66FX250ATST
400	18	56	P1C18JX400ATS	–	P1A18JX400ATS	–	P1E18JX400ATS	–
	30	62	P1C30JX400ATS	P1C30JX400ATST	P1A30JX400ATS	P1A30JX400ATST	P1E30JX400ATS	P1E30JX400ATST
	42	68	P1C42JX400ATS	P1C42JX400ATST	P1A42JX400ATS	P1A42JX400ATST	P1E42JX400ATS	P1E42JX400ATST
	54	74	–	P1C54JX400ATST	–	P1A54JX400ATST	–	P1E54JX400ATST
	66 <sup>②</sup>	74 <sup>②</sup>	–	P1C66JX400ATSN <sup>②</sup>	–	P1A66JX400ATSN <sup>②</sup>	–	P1E66JX400ATSN <sup>②</sup>

**Table P1-18 – Standard Enclosures**

Box Height (in.)	Catalog Number					
	Type 1 Standard Trim			Type 3R	Type 3R/12	
	Box	Surface	Flush			
26	B26	S26B	F26B	NR26		WP26
32	B32	S32B	F32B	NR32		WP32
38	B38	S38B	F38B	NR38		WP38
44	B44	S44B	F44B	NR44		WP44
50	B50	S50B	F50B	NR50		WP50
56	B56	S56B	F56B	NR56		WP56
62	B62	S62B	F62B	NR62		WP62
68	B68	S68B	F68B	NR68		WP68
74	B74	S74B	F74B	NR74		WP74

① For all products without subfeed space - change "T" at end to "N" and reduce box size by 6".

- ② No sub-feed space only for 400A 66 circuit.
- ③ BL/BQD/GB type mains are available in main/subfeed space and also can be used as back-fed in unit space. Either two or three positions of unit space are used when back-fed and circuit count is reduced.
- ④ xGB interiors are not available as Non-Feed-Thru, without Subfeed Space.

# Standard Modifications

## Type P1 Panelboards

### 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
- Piano hinge trims
- Painted boxes
- Custom colors
- Increase gauge trims and boxes (See pages 12-13)
- Stainless steel trims and boxes
- Type 1 enclosures (Std 16 Gage / Optional 14 or 12 Gage)
- NEMA 3R/12 enclosures

- NEMA 4 enclosures
- NEMA 4X enclosures
- Special Keyed Locks (Keys are not supplied)
- Panel skirts
- Gaskets between trim and box

TEY TEU1 Cat 60 LL803 LL806	All fit Fast-Latch Front
Yale 47 (NYC) National C413A Beck Lock 7-pin tumbler Southco 1 4 Fastener Corbin 1001 FAB7	Special non-Fast-Latch

\*see Page 11-7

### Panel Modifications

#### Enclosures

- Main Bus  
Standard main bus is tin-plated aluminum. For copper main bus, add from the table for each panel. Includes copper neutral cross bar. For copper neutral branch lugs, see miscellaneous.
- Compression lug for MLO<sup>①</sup>
- Contactor mains - Mount in 23" enclosure ahead of panel.
  - Asco 920 through 225 amps<sup>③</sup>
  - Asco 911 through 150 amps<sup>③</sup>
  - Siemens LEN through 30 amps<sup>③</sup>
- Branch and main breaker accessories
  - Handle blocks
  - Handle locks
- Feed-thru lugs<sup>①</sup>  
Cannot be used in conjunction with SPD/TVSS or subfeed breakers. Do not add height to the panel.

- 200% neutral<sup>①</sup>
- Copper lugs, mechanical line and branch neutral<sup>①</sup>
- Bus mounted SPD/TVSS<sup>①</sup>
- Service entrance labeling
- Factory installed and field installable Service Entrance Barrier kits are now available as required by UL67. (In COMPAS, you must select Service Entrance Required.)
- Grounding of Panelboards  
Ground Bars except for brazed to box are shipped with the panel interior.
  - Non-Insulated Equipment Ground Bar – Standard
  - Copper Non-Insulated Ground Bar
  - AL Insulated Equipment Ground Bar
  - CU Insulated Equipment Ground Bar
  - Ground Bar Brazed to Box (recommended for painted boxes)
- Shunt Trip on Main or Branch  
BL<sup>②</sup>, BLH<sup>②</sup>, HBL<sup>②</sup>, BQD<sup>②</sup>, xGB<sup>②</sup> as branch use 1" unit space for shunt trip.

QJ2, QJ2H, QR2, QRH2, HQR2, HQR2H, QJH2, ED4, ED6, HED4, FD6, FXD6, HFD6
HFXD6, JXD6, JD6, HJD6, HJXD6

- Remote control switches – 480V AC max. mounted in a 23" enclosure to be cable connected to the panel.
- Time Clocks – mounted in a 23" enclosure to be cable connected to the panel. Tork time clock can be supplied and mounted in panelboard cabinet.

Time Clock Information and Options
Time Clock (1- or 2-Pole, Single or Double Throw Contacts, 3-Pole Single Throw) 277V Maximum with Plain Dial
Options:
Astronomical Dial
An Omitting Device
Reserve Power or Carryover
Space and Mounting Provisions Only

**Note:** Specify copper or aluminum cable.

① Do not increase panel or enclosure size.

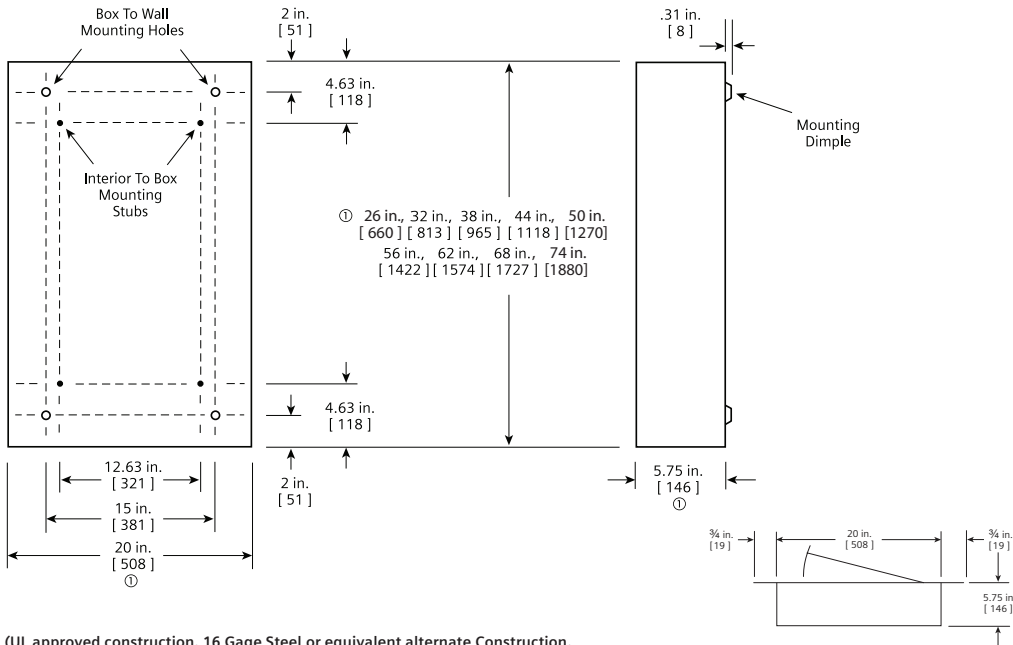
② Accessories on 1" pole breakers (BL, BQD, xGB, ED) will take 1" unit space.

③ External to the panel, supplied in a separate enclosure.

Feed-thru Lugs Amp Rating	Type	Connector CU/AL Range
250	AL/CU Mechanical	(1)-#6 AWG-350 kcmil
	CU Mechanical	(1)-#6 AWG-350 kcmil
	AL/CU Compression	(1)-#6 AWG-350 kcmil
400	AL/CU AWG Mechanical	(2)-#1/0 - 250 kcmil or (1)-#2 AWG-600 kcmil
	CU	(1)-1/0-600 kcmil (2)-1/0-4/0
	AL/CU Compression	(1) 400-600 kcmil AL (1) 400-500 kcmil CU

# Dimensions

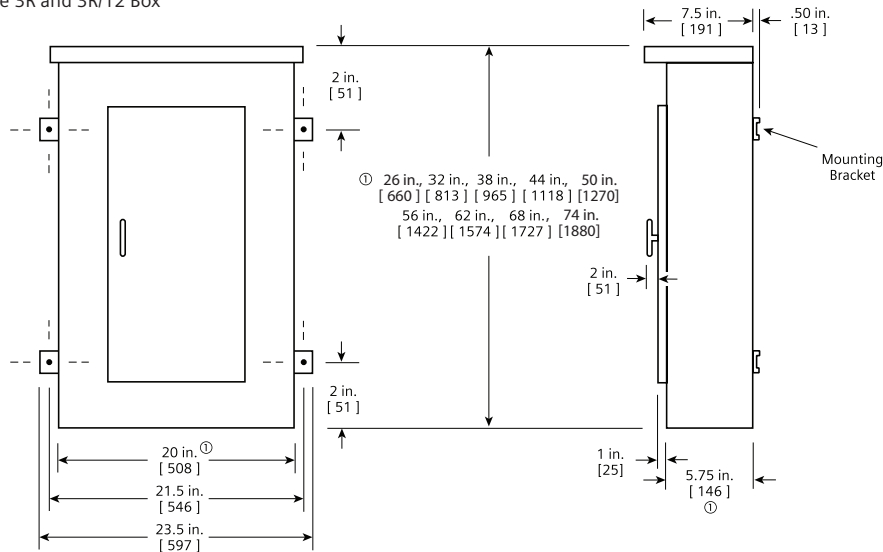
## Type 1 Box Box is symmetrical



(UL approved construction. 16 Gage Steel or equivalent alternate Construction. 14 or 12 Gage is available as an optional special order.)

## Flush Mounting

## Type 3R and 3R/12 Box



(UL approved construction. 16 Gage Steel Can with 14 Gage front or similar approved construction.)

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 [ ].

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