

The background of the entire page is a photograph of a tall, modern skyscraper under construction. The building has a curved facade with many floors of windows and balconies. Several yellow construction cranes are visible, with one large crane running vertically along the side of the building. The sky is a pale blue with some light clouds.

SIEMENS

Ingenuity for life

Revised P1 Panelboards

Quick reference guide for
selection and application

usa.siemens.com/panelboards

Introducing the Siemens Revised P1 Panelboard



Siemens is proud to introduce new, innovative additions to the P1 series of panelboards. The new "Revised P1" Panelboard increases the flexibility and customization options available in Siemens already robust panelboard line of products.

Siemens New "Revised P1" Panelboard

Siemens new Revised P1 panelboard adds additional strength and flexibility, through the introduction of Non-Feed-Thru options, to the already rugged, best-in-class line of panelboards. By now offering both Feed-Thru (FT) and Non-Feed-Thru (NFT) configuration options, Siemens offers even greater flexibility and potential for customers to configure solutions that are optimized to meet the many unique application and budgetary requirements that today's projects demand.

For applications where additional space for feed-thru lugs, a subfeed breaker, or an SPD device isn't required, the new NFT P1 option is an ideal solution. The NFT Revised P1 features an enclosure that is 6" shorter than a comparably configured P1 with a FT design. Additionally, the NFT design can accommodate 12 circuits more than the FT design panelboard in the same sized cabinet.

Extended Circuitries

In addition to the new NFT options, Siemens P1 line of panelboard products now offer extended circuit options that take advantage of the elimination of the 42 circuit rule in the National Electric Code. New, higher 54 and 66 circuit

options allow for the elimination of a second cabinet in many applications that would have previously required it.

The extended circuit options also facilitate the configuration of P1 panelboard solutions for many applications that have traditionally required the use of a P2 or P3 panelboard, thus significantly reducing costs.

Adaptability

The new NFT design, coupled with the extended circuitries offer additional options for adding circuits to existing Siemens P1 with the Feed-Thru design. Where a 42 circuit FT P1 panelboard needs additional circuits but is not utilizing the provided subfeed space, the interior can be replaced by a new 54 circuit NFT design interior. This saves the customer the cost of a new enclosure and cover while still providing the option for extended circuitries.

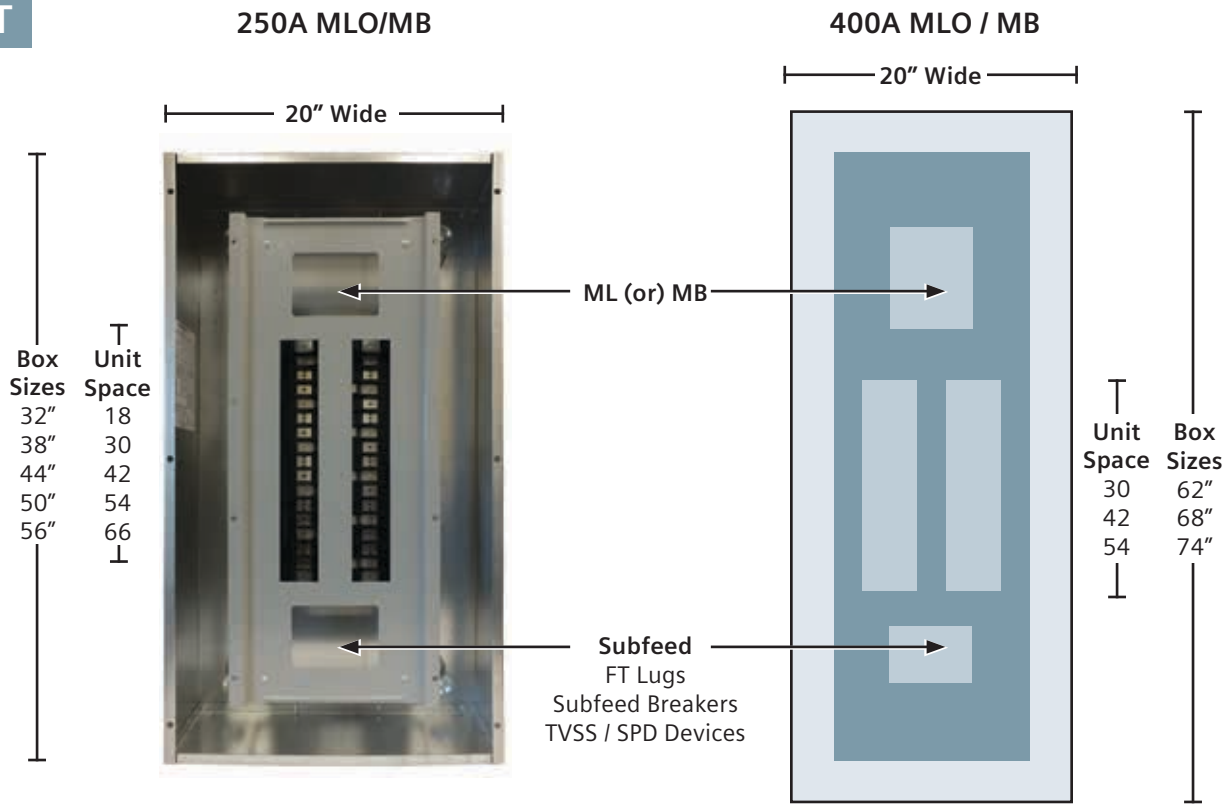
This selection and application guide is designed to provide full insight into these and many other new features, enhancements and options that will allow you to take full advantage of the flexibility and customization options Siemens offers to configure the P1 panelboard that best meets your specific needs.

Revised P1 Panelboard 250 & 400A

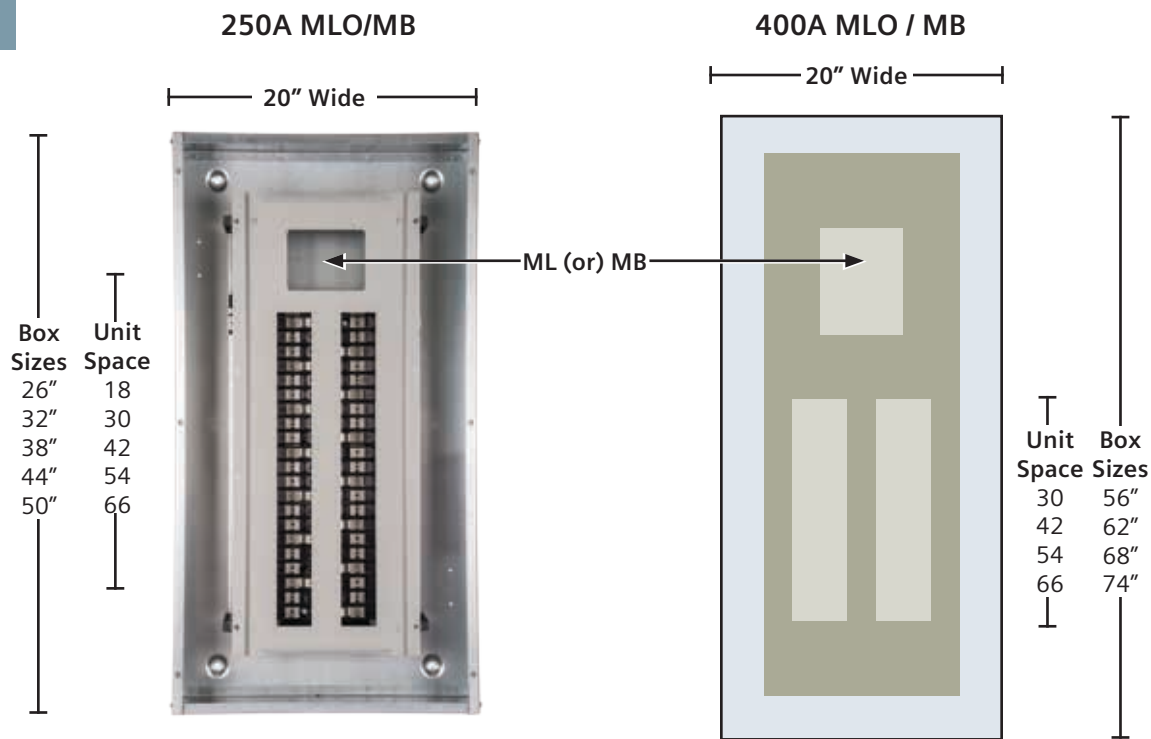
All FT and NFT are invertable in field – Top-feed or Bottom-feed

- Invertability
- Flexibility

FT



NFT



Revised P1 Panelboard 250A

Why move to NFT?

A) Smaller Box Size -

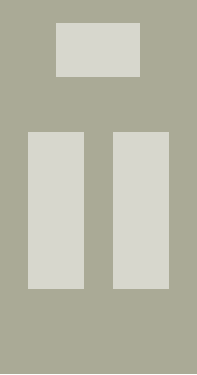


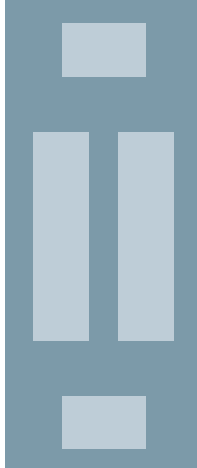
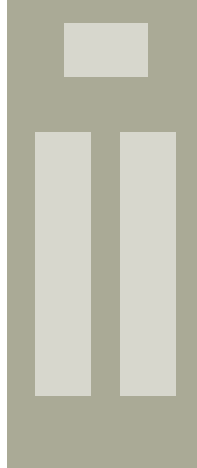
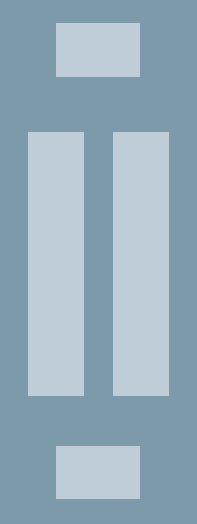
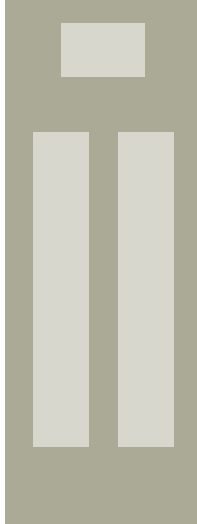
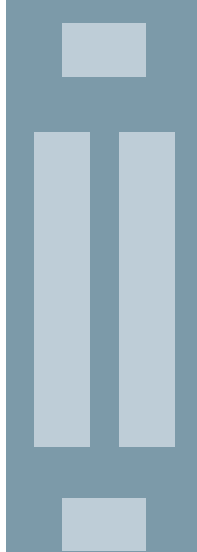
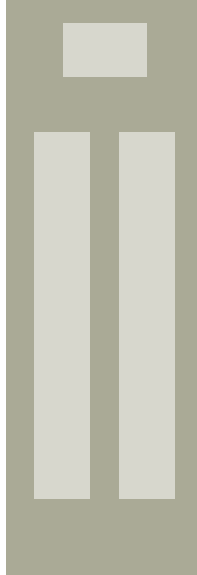
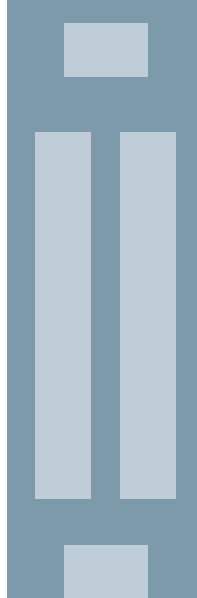
If Customer does not need Sub-feed space or does not want to pay for it.

- 6" shorter Enclosure than FT
- No Sub-Feed Space - pay for what you need only.

B) More Circuits needed -

If Customer does not need Sub-feed space or does not want to pay for it.

- 12 more circuits than FT in same box size
- No Sub-Feed Space- pay for what you need only.

| | | | | |
|---|---|---|---|---|
| <p>New for Revised</p> <p>250A 18 circuit NFT</p>  <p>B26 Enclosure</p> <p>6" shorter than FT</p> | <p>Original & Revised</p> <p>250A 18 circuit FT</p>  <p>B32 Enclosure</p> | <p>New for Revised</p> <p>250A 30 circuit NFT</p>  <p>B32 Enclosure</p> <p>6" shorter than FT</p> | <p>Original & Revised</p> <p>250A 30 circuit FT</p>  <p>B38 Enclosure</p> | <p>New for Revised</p> <p>250A 42 circuit NFT</p>  <p>B38 Enclosure</p> <p>6" shorter than FT</p> |
| <p>Original & Revised</p> <p>250A 42 circuit FT</p>  <p>B44 Enclosure</p> | <p>New for Revised</p> <p>250A 54 circuit NFT</p>  <p>B44 Enclosure</p> <p>6" shorter than FT</p> | <p>New for Revised</p> <p>250A 54 circuit FT</p>  <p>B50 Enclosure</p> | <p>New for Revised</p> <p>250A 66 circuit NFT</p>  <p>B50 Enclosure</p> <p>6" shorter than FT</p> | <p>New for Revised</p> <p>250A 66 circuit FT</p>  <p>B56 Enclosure</p> |

New Options to Consider!

- 1) If a Customer has an existing 42 circuit FT installed and needs additional circuits, the interior can be replaced by a 54 circuit NFT. Re-use the same Enclosure and front.
- 2) If a Customer needs more than 42 circuits, you can use a 54 or 66 circuit device and eliminate the second cabinet.

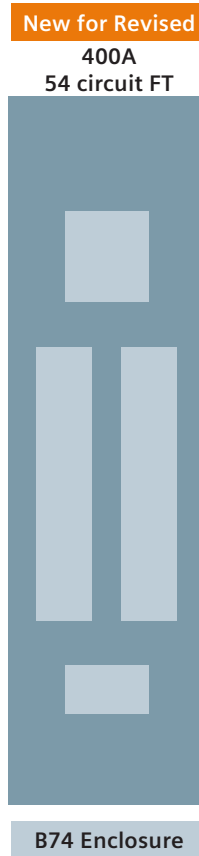
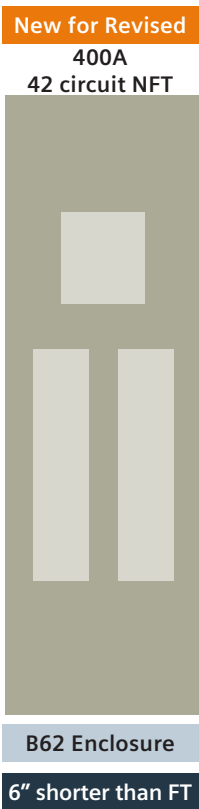
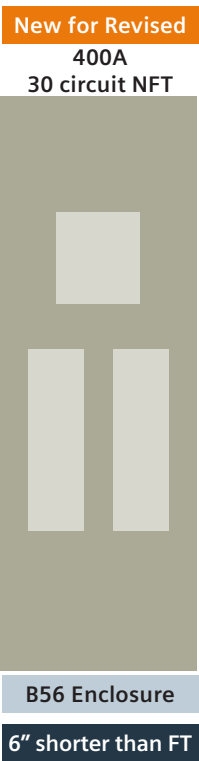
Revised P1 Panelboard 400A

Why move to NFT?

A) Smaller Box Size -

If Customer does not need Sub-feed space or does not want to pay for it.

- 6" shorter Enclosure than FT
- No Sub-Feed Space - pay for what you need only.



New Options to Consider!

- 1) If a Customer has an existing 42 circuit FT installed and needs additional circuits, the interior can be replaced by a 54 circuit NFT. Re-use the same Enclosure and front.
- 2) If a Customer needs more than 42 circuits, you can use a 54 or 66 circuit device and eliminate the second cabinet.

Revised P1 Panelboard FAQ's

New Features and Options for "Revised P1" Offering compared to the "Original P1" panels

1. Non-Feed-thru (NFT) variations of the P1 Panels are now available for Factory assembled only (not UPB):

- Feed-Thru (FT) versions are versions with a Sub-feed space that can be occupied by Feed-thru lugs, Subfeed Breaker or an SPD device. All Original P1 devices were FT versions.
- Non-Feed-thru (NFT) versions do not have the Subfeed space and therefore can fit into an enclosure 6" smaller than the FT version.

The NFT version will have a List price lower than the FT version if configured the same.

- Both FT and NFT variations are fully invertible in the field and can be used for either Top-feed or Bottom-feed applications.

2. Extended Circuits are now available:

Currently only 18, 30 and 42 circuits are available → 54 and 66 "extended circuit" panels are added for Revised P1

- a) P1-250A has FT and NFT variations for all circuits: 18, 30, 42, 54 and 66 (xGB panels only available as FT)
- b) P1-400A has FT and NFT variations for 30, 42, 54 circuits only. (xGB panels only available as FT)
 - The 66 circuit variation of 400A is only available in NFT due to enclosure size limit of 74" high.
 - Also P1-400A will not be available in 18 circuit variations.

→ Benefits: Many P2 and P3 applications can now move down to the P1 platform!

3. New Neutral Configurations are now available:

- The Neutral system has been developed to accommodate the extended circuit variations without increasing costs.
- The configuration is still a split neutral arrangement with connections down either side of the interior, but it is not full length as before. Neutral connections are still near the breakers, but not adjacent to each breaker connection. Many configurations have extra connections and some larger configurations will allow adding more connections if needed.

4 Unassembled Panelboard Program Changes:

- The UPB program only has 54 circuit added to the program for both P1-250A and P1-400A.
- All UPB interiors are the FT variation, the same as Original P1. (400A - 18 circuit is no longer available)
- All old Accessories/Kits will remain available for future needs in Original P1 installations.
- Many Accessories/Kits are available - most are same as old kits with "A" added to end of part number. (see below)

5. Accessories and Kits for Revised P1 are replacing most of the Original P1 Kits:

(most simply add an "A" to end of old kit number)

- a) All Main/Subfeed Breaker Mounting kits are new, with RP1. Ex: Both "Strap Kits" and Kits with Breakers, with RP1.
- b) All Main Lug Kits are new, with RP1.
- c) All Neutral Lug Kits are new, with RP1.

6. BL/BQD and xGB (NGB/HGB/LGB) Main Breaker Usage is now available in main position.

| | | |
|-----------|---------|----------------------------|
| MBKBL1A | 1-Phase | BL Main or Subfeed |
| MBKBL3A | 3-Phase | BL Main or Subfeed |
| MBKBC1NBA | 1-Phase | BQD or xGB Main or Subfeed |
| MBKBC3NBA | 3-Phase | BQD or xGB Main or Subfeed |

7. New B-Phase Bus configuration eliminates "Hump-bus" design

- The flat bus with "B-Phase" connector has many benefits. Increases productivity at the plant and allows for replacement connectors in the field in case of a "stripped" connection.
- Accessory kits for both CU and AL variations of the B-Phase Connectors and A/C Connectors will be available for repair purposes only.

8. xGB Breaker series expansion: NGB remains, but HGB and LGB have been added

- This addition to the Breaker line will now allow many configurations to use the Revised P1 series or the P2 series platforms instead of the P3 platform. Net pricing to customer will be lower. See new ratings below:

NGB – 25,000 A IR Max. @ 480/277V AC / 100,000 A IR @ 240V AC
HGB – 35,000 A IR Max. @ 480/277V AC / 100,000 A IR @ 240V AC
LGB – 65,000 A IR Max. @ 480/277V AC / 100,000 A IR @ 240V AC

9. Misc. additional features:

- a) New 750 kcmil AL/CU MLO are available as an option for 400A. (CU cable limited to 600kcmil)
- b) New 2/0 neutral kits are available. (used with 125A xGB and others) (Only available as a field installable option)
- c) New filler DFFP1 replaces QF3 (fits tighter in deadfront)

10. Misc. additional changes/notes:

- a) All DC voltage offerings are removed from scope of Revised P1 devices.

→ Customers will be moved to a P2 configuration for these DC Voltage applications.

- b) Limits on branch breaker size for 250A 18 circuit only:

- The new Revised P1 (18 circuit 250A only) is limited to 100A per connection (200A per pair)

- Original P1 and the Revised P1 allows for the following: (except as noted above)

- 1) 100A per connection (200A per pair) for BL/BQD construction
- 2) 125A per connection (250A per pair) for xGB construction

→ Some of our competition limits the total to 140A per pair on some panels.

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Type P1 Panelboards

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 invertible.
- 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 |

Selection and Application

3 Easy Steps for Selecting a Siemens Revised P1 Panelboard (Note: Factory assembled panels are configurable in COMPAS)

Step 1

Determine voltage, system, amperage and interrupting rating of branch devices, plus modifications if any.

Example for standard lighting panelboard:

Amperage: 250A
Voltage: 208Y/120V
System: 3Ø4W
Main: Main Lug
Branches: 10K AIR, 42-20/1
Modifications: None
Feed Location: Top
Sub-Feed req'd: Yes (as provision if wanted)
Mounting: Surface

Step 2

Create a catalog number by following the Panelboard Catalog Numbering System on

page 4. The BL branch breakers were selected from the branch breaker selection table 1-6 on page 6.

1-P1C42ML250ATST ("T" indicates FT version)
42-20/1 BL

Note: If Sub-feed space is not needed the NFT device can be used as below:
1-P1C42ML250ATSN ("N" indicates NFT version) 42-20/1 BL

Step 3

Select enclosure size by the number of circuits and FT/NFT as shown in the panelboard dimension chart (Table P1-3) on page 5.

1-P1C42ML250ATST
42-20 BL
Box size – 44" high

A unique feature of P1 FT panels is that they can accommodate either feed-thru lugs or one subfeed circuit breaker (up to 250A) without any addition to box height. For our example changing the branch circuits to 39-20/1 and 1-125/3, we have the following:
1-P1C42ML250ATST
39-20/1 BL
1-125/3 QR2
Box size – 44" high
The QR2 subfeed was selected from Table P1-7 of subfeed breakers on page 7. The box height remains the same.

General Specifications

Service Entrance Equipment

When a panelboard is used as service entrance equipment, it must be located near the point of entrance of building supply conductors. In a main lugs only panel, the number of breakers or switches directly connected to the main bus must be limited to six. In a panel having a main breaker or main switch, the number of circuits are not limited except as may be provided under other panelboard requirements. Also, panels must include a connector for bonding and grounding neutral conductor.

Field installable service entrance barrier (SEB) kits are now available to meet all current UL or NEC requirements. Factory assembled panels will include the SEB when configured properly in COMPAS.

Integrated Equipment Short Circuit Rating

The term "Integrated Equipment Short Circuit Rating" refers to the application of series connected circuit breakers in a combination that allows some breakers to have lower individual interrupting ratings than the available fault current. This is permitted as long as the series combination has been tested and certified by UL.

Standards

NEC: 2014 (where accepted)

NEMA: PB1

UL: 67, 50 and 50E. Listed by Underwriter's Laboratories, Inc., under "Panelboards" File #E2269, and #E4016. Meets Federal Specification W-P-115c.

Wire Connectors

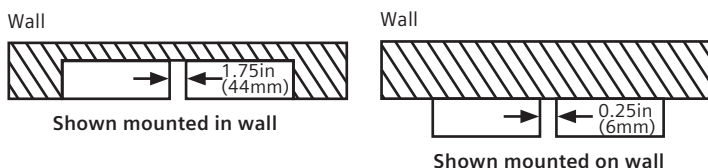
Standard wire connectors in Siemens panels are suitable for copper or aluminum cables rated 60/75 degree. Copper main lugs are a price-added option for most panel types and some Circuit Breakers (check with Siemens sales for availability). It should be noted that most copper lugs will only accept copper cables. Some applications, 100% rated devices in particular, require that the cable and connectors be rated 90 degree but are sized to the 75 degree tables.

Standard ground connectors are also suitable for copper or aluminum wire. Ground connector assemblies (EGK, IGK) have (7) 1/0 max. and (15) #6 max. connections. The 1/0 holes are capable of connecting up (3) #10 max. wires. The #6 holes can accept up to (2) #12 max. wires. Copper ground assemblies (ECGK, ICGK) are rated for copper wire only and have the same wiring capacity as the AL/CU connectors.

Standard neutrals, like standard main lugs, are also rated for copper or aluminum wire. The neutral cross bar material follows the selection bus. Copper neutral lugs are rated for copper cable only and available as a price added option.

Lug Data

Space Required for Mounting of Double Panels

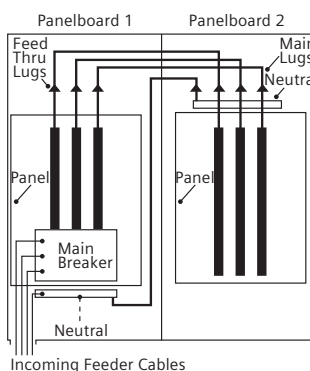


Use two or more panelboards with feed-thru or subfeed lugs when:

1. Lighting and appliance panelboards are required with more than 42 circuits in areas where the zone code has not been accepted. (Note: 54 and 66 circuit panels are also available.)
2. More circuit mounting space is required than is provided in the largest box size.

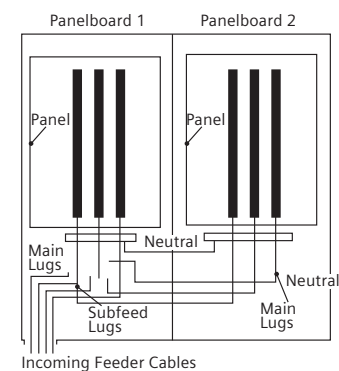
Feed Thru Lugs

Fig G-1



Subfeed lugs or double lugs

Fig G-2 (Not available for P1 panels)



Feed-thru lugs are mounted at the opposite end of the main bus from the main lugs or main breaker and are used to connect two or more panelboards to the incoming feeder. The feeder cables are brought into Panelboard 1 and connected to the main lugs or main breaker. Cables interconnecting the two panelboards are connected to the feed-thru lugs in Panelboard 1 and are carried over the main lugs in Panelboard 2. This arrangement could be reversed with the main lugs located at the top and the feed-thru lugs at the bottom of the panel. Subfeed lugs are mounted directly beside the main incoming lugs and are used to connect two or more panelboards to the incoming feeder. The feeder cables are brought into Panelboard 1 and connected to the main lugs. Another set of cables that are the same size are connected to the subfeed lugs of Panelboard 1 and are carried over the main lugs of Panelboard 2.

Note: P1 panelboards do not have Subfeed lugs available. If this configuration is needed, move to a P2 (or) P3 panelboard.

Catalog Numbering System

Revised P1 panelboards

P
1
C
4
2
F
X
2
5
0
A
T
S
T

Type of Panel _____
P1

Voltage and System* _____

C = 208Y/120 3Ø 4 W Wye AC (X for UPB)

E = 480Y/277 3Ø 4 W Wye AC

D = 240 3Ø 3 W Delta AC

A = 120/240 1Ø 3 W Grounded Neutral AC

J = 240 1Ø 2 W No Neutral AC

M = 380/220 3Ø 4 W Wye AC

R = 415/240 3Ø 4 W Wye AC

S = 440/250 3Ø 4 W Wye AC

L = 600/347 3Ø 4 W Wye AC

T = 230 3Ø 3 W Delta AC

U = 120V AC 3Ø3W

K = 220/127 3Ø 4 W Wye AC

*For any voltage system not listed, check with sales for availability.

Circuits _____

18, 30, 42, 54, 66 (See table P1-3 and P1-5 for options available)
(Back-fed 1-phase will show: 16, 28, 40, 52, 64) (Back-fed 3-phase will show: 15, 27, 39, 51, 63)

Main Lug (ML), Main Breaker _____
(See Main Breaker Table coding below), Main Switch (MS)

Amperage _____
100–400A = P1

| Bus Code | Bus Material | Bus Plating | P1 ^① |
|----------|-------------------|---------------|-----------------|
| A | Temp rated AL. | Tin-Plated | • |
| B | 750A/sq. in. AL. | Tin-Plated | n/a |
| C | Temp rated CU. | Tin-Plated | • |
| E | Temp rated CU. | Silver-Plated | n/a |
| F | Temp rated CU. | Tin-Plated | n/a |
| G | 1000A/sq. in. CU. | Tin-Plated | n/a |
| H | 1000A/sq. in. CU. | Silver-Plated | n/a |

• Indicates default for this bus type.

Feed Location T = Top B = Bottom _____

Mounting _____
S = Surface
F = Flush. Flush trims extend 1 1/2" beyond the base box dimensions on P1 panels.

Subfeed Space Indicator (for Revised P1 only)

T = Subfeed Space Included
 N = No Subfeed Space^②

Main Breaker Coding

| Code | Breaker Type | Code | Breaker Type | Code | Breaker Type | Code | Breaker Type | Code | Breaker Type |
|------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|
| BL | BL | HB | HBL | J6 | JD6 | QJ | QJ2 | SX | SHJD6 |
| BH | BLH | H4 | HED4 | JD | JXD2 | Q2 | QJ2H | SY | SHJD6H |
| BR | BLR | HF | HFD6 | JX | JXD6 | QH | QJH2 | SJ | SJD6 |
| BQ | BQD | H2 | HFXD6 | JH | JXD6H | QR | QR2 | SH | SJD6H |
| B6 | BQD6 | H6 | HJD6 | L6 | LD6 | Q4 | QRH2 | S1 | SCLD6 |
| E4 | ED4 | H5 | HJXD6 | LX | LXD6 | Q5 | HQR2 | S2 | SHLD6 |
| E6 | ED6 | HL | HLD6 | LH | LXD6H | Q6 | HQR2H | SL | SLD6 |
| FD | FD6 | HO | HLXD6 | NB | NGB | Q7 | QR2-MCS | | |
| FX | FXD6 | HP | HLXD6H | | | | | | |
| G2 | HGB | | | | | | | | |
| G3 | LGB | | | | | | | | |

- ① Standard bussing in P1 panels is tin-plated for aluminum and copper. Standard bus is temperature rated to the maximum amperage in the panel.
- ② Not available for Revised P1 xGB interiors.

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 ②, BLH ②, HBL ②, BQD ② | #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) |
| | | | 66 | – | 33 | – | 56 (1423) | 165 (73) |
| 125 | NGB ②, HGB ②, LGB② | 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 ED6, HED4 | #14-#10 AWG Cu or #12-10 AWG Al #3-3/0 Cu or #1-2/0 Al #3-3/0 Cu or #1-2/0 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) |
| | | | 66 | – | 33 | – | 56 (1423) | 170 (78) |
| 225 | 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) |
| 250 | FXD6, FD6, HFD6, HFXD6 | #6 AWG-350 Kcmil (Cu) or #4 AWG-350 Kcmil (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) |
| | | | 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.

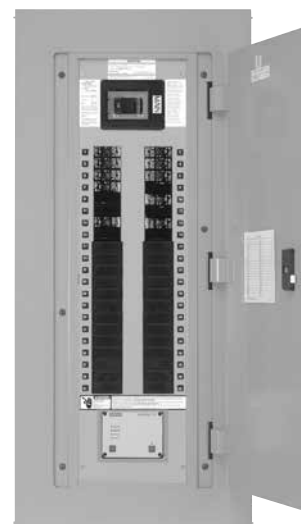
① 400A 66 circuit only available with non-feed thru versions.

② When BL, BLH, HBL, BQD and xGB mount in unit space as back-fed mains, they are included in maximum number of poles.

Table P1-4 – Main Breaker Selection

| Ampere rating | Breaker Types | Max. Ir (kA) at | | Main Breaker Code | Additional Trip Values |
|---------------|---------------|-----------------|-------------|-------------------|---|
| | | 240 AC | 480/277V AC | | |
| 100 | BL (STD) | 10 | | BL | 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100 |
| | BLH | 22 | | BH | 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100 |
| | HBL | 65 | | HB | 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100 |
| | BQD | 65 | 14 | BQ | 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100 |
| 125 | NGB (STD) | 100 | 25 | NB ③ | 50, 60, 70, 80, 90, 100, 110, 125 |
| | HGB | 100 | 35 | G2 ③ | 50, 60, 70, 80, 90, 100, 110, 125 |
| | LGB | 100 | 65 | G3 ③ | 50, 60, 70, 80, 90, 100, 110, 125 |
| | ED4 (STD) | 65 | 25 | E4 | 50, 60, 70, 80, 90, 100, 110, 125 |
| | ED6 | 65 | 25 | E6 | 60, 70, 80, 90, 100, 110, 125 |
| | HED4 | 42 | 42 | H4 | 50, 60, 70, 80, 90, 100, 110, 125 |
| 225 | QR2 | 10 | | QR | 100, 125, 150, 175, 200, 225 |
| | QRH2 | 25 | | Q4 | 100, 125, 150, 175, 200, 225 |
| | HQR2 | 65 | | Q5 | 100, 125, 150, 175, 200, 225 |
| | HQR2H | 100 | | Q6 | 100, 125, 150, 175, 200, 225 |
| 250 | FXD6 (STD) | 65 | 35 | FX | 70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250 |
| | FD6 | 65 | 35 | FD | 70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250 |
| | HFD6 | 100 | 65 | HF | 70, 80, 90, 100, 150, 175, 200, 225, 250 |
| | HFXD6 | 100 | 65 | H2 | 70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250 |
| 400 | JXD2 | 65 | – | JD | 300, 400 |
| | JXD6 (STD) | 65 | 35 | JX | 200, 225, 250, 300, 350, 400 |
| | JD6 | 65 | 35 | J6 | 200, 225, 250, 300, 350, 400 |
| | HJD6 | 100 | 65 | H6 | 200, 225, 250, 300, 350, 400 |
| | HJXD6 | 100 | 65 | H5 | 200, 225, 250, 300, 350, 400 |

③ xGB interiors are not available as non-feed-thru without sub-feed space.



Application

Type P1 Panelboards

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 FT A | NFT A | Box Height B" | | |
| 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) | |

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 | |
| | | 1 | 10 | – | – | – | – | 15, 20, 30 | |
| | BL, HID | 2 | – | 10 | – | – | – | 15, 20, 30 | |
| | | 1 | – | 22 | – | – | – | 15, 20, 30, 40, 50, 55, 60, 70 | |
| | BLH | 2 | – | 22 | – | – | – | 15, 20, 30, 40, 50, 60, 70, 90, 100 | |
| | | 3 | – | – | 22 | – | – | 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | |
| | HBL | 1 | – | 65 | – | – | – | 15, 20, 30, 40, 50 | |
| | | 2 | – | 65 | – | – | – | 15, 20, 30, 40, 50, 60, 70 | |
| | | 3 | – | – | 65 | – | – | 15, 20, 30, 40, 50, 60, 70, 80, 90, 100 | |
| | BLF2 BLFB | 1 | 10 | – | – | – | – | 15, 20, 30 | |
| | | 2 | – | 10 | – | – | – | 15, 20, 30, 40, 50, 60 | |
| | BLHF2 BLHFB | 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 | |
| | | 3 | – | 10 | – | – | – | 15, 20, 30 | |
| | BLE | 1 | 10 | – | – | – | – | 15, 20, 30 | |
| | | 2 | – | 10 | – | – | – | 15, 20, 30, 40, 50, 60 | |
| | BLEH | 1 | 22 | – | – | – | – | 15, 20, 30 | |
| | | 2 | – | 22 | – | – | – | 15, 20, 30, 40, 50, 60 | |
| | BAF | 1 | 10 | – | – | – | – | 15, 20 | |
| | BAFH | 1 | 22 | – | – | – | – | 15, 20 | |
| 125 | NGB ②③ | 1 | 100 | – | – | 25 | – | 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100, 125 ③ | 15-30A #14-#6 Cu #12-#6 Al 35-125 #6-1/0 Cu #4-2/0 Al |
| | | 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 | |
| | BQD | 1 | – | 65 | – | 14 | – | 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100 | |
| | | 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 | |

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 | |
| QR2 | 2, 3 | 10 | – | 100, 125, 150, 175, 200, 225 |
| QRH2 | 2, 3 | 25 | – | 100, 125, 150, 175, 200, 225 |
| HQR2 | 2, 3 | 65 | – | 100, 125, 150, 175, 200, 225 |
| HQR2H | 2, 3 | 100 | – | 100, 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, 45, 50, 55, 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, 55, 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 Catalog Number ^② |
|------------------|------------------------|---------|----------------------------|--|
| 100 | BL, BLH, HBL | 1 Phase | MBKBL1 | MBKBL1A |
| | | 3 Phase | MBKBL3 | MBKBL3A |
| 100 | BQD | 1 Phase | – | MBKBC1NBA |
| 125 | NGB, HGB, LGB | 1 Phase | MBKBNB1 | MBKBC1NBA |
| 100 | BQD | 3 Phase | MBKBC3 | MBKBC3NBA |
| 125 | NGB, HGB, LGB | 3 Phase | MBKBNB3 | MBKBC3NBA |
| 125 | ED4, ED6, HED4, HHED6 | 1 Phase | MBKED1 | MBKED1A |
| | | 3 Phase | MBKED3 | MBKED3A |
| 225 ^③ | 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 ^③ | JXD6, JD6 | 1 Phase | MBKJD1 | MBKJD1A |
| | | 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) | 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 | (1) AL 1/0-750 kcmil (2) AL/CU 250kcmil max. [max.(1) 600 kcmil CU wire] | 1 Phase | – | 4MLKA1B |
| | | | 3 Phase | – | 4MLKA3B |

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.)

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

| No. of Circuits | Description | Original P1 Catalog Number | Revised P1 Catalog Number |
|-----------------|--|----------------------------|---------------------------|
| 18 | 2 or 4 Branch Neutral Strips, 1 Main Neutral Lug, Hardware | CNLK18 | Use 30 ckt kit |
| 30 | | 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 | 2 or 4 Branch Neutral Strips, Hardware | – | Use 30 ckt kit |
| 30 | | – | 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 | 2 or 4 Branch Neutral Strips, 2 Main Neutral Lugs, Hardware | 2NLK18 | Use 30 ckt kit |
| 30 | | 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 | 2 or 4 Branch Neutral Strips, 1 Main 600 kcmil Neutral Lug, Hardware | 42NLK18 | N/A |
| 30 | | 42NLK30 | 42NLK30A |
| 42 | | 42NLK42 | 42NLK42A |
| 54, 66 | | – | 42NLK54A |

Application

Type P1 Panelboards

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

| Main Breaker | Gutter Space | | |
|----------------------------|--------------------------|---------------------------|-----------------------------|
| | 20" wide box | 24" wide box | Neutral Location to Endwall |
| BL, BLH, HBL ^② | 8.680 (220) ^③ | 10.690 (272) ^③ | 10.500 (267) |
| BQD ^② | 7.880 (200) | 9.880 (251) | 10.500 (267) |
| NGB, HGB, LGB ^② | 7.770 (197) ^③ | 9.770 (248) ^③ | 10.500 (267) |
| ED4, ED6, HED4 | 6.125 (156) | 8.125 (206) | 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 ^① | 15.000 (381) | 15.000 (381) | 26.500 (674) |

① JD frame mounted vertically.

^② For revised P1 with back-fed main option, use Side Gutter Wiring Spec Table P1-15

③ 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 to Endwall | |
|------------|--------------|--------------|-----------------------------|--------------|
| | 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.

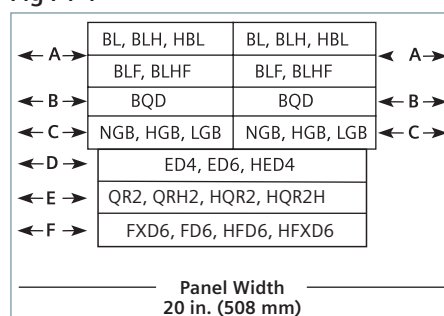
Table P1-15 – Side Gutter Wiring Space Inches (mm) (Fig P1-1)

| Reference Letter | Panel Width 20" | Panel Width 24" Optional |
|------------------|-----------------|--------------------------|
| A ^② | 6.375 (167) | 8.375 (213) |
| B ^② | 5.500 (140) | 7.500 (191) |
| C ^② | 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) |

① Subfeed mounting limit 1 per panel.

^② For all Revised P1 panels using BL/BQD or xGB breakers as mains in back-fed position, use this chart for wiring space.

Fig P1-1



Miscellaneous Parts and Accessories

| Catalog Number | 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 |
| LPDC01 | Directory Card (Pack of 10; ref. 12-1110-01) |
| LPDC02 | Directory Card Holder (Pack of 10; ref. 11-1824-01) |
| MCHK | Metal Card Holder Kit |
| 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 |
| SEBKRP1V1 ^② | FD, QJ, QR Service Entrance Barrier Kit (Revised P1) |
| SEBKRP1V2 ^② | ED Service Entrance Barrier Kit (Revised P1) |
| SEBKRP1V3 ^② | BQD Service Entrance Barrier Kit (Revised P1 - back-fed) |
| SEBKRP1V4 ^② | xGB Service Entrance Barrier Kit (Revised P1 - back-fed) |
| SEBKRP1V5 ^② | BL/BQD/xGB Service Entrance Barrier Kit (RP1 in Main Space) |
| SEBKRP1P2P3V1 ^② | JD, LD Service Entrance Barrier Kit (RP1, P1, P2, P3) |
| 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/HEB 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 position. Suitable for replacing QF3 in P1 thru P5 Panelboards and Switchboards.) |
| P1CONBPHCU ^① | Connector kit – 6 pcs. B-phase Copper |
| P1CONBPHAL ^① | Connector kit – 6 pcs. B-phase Aluminum |
| P1CONACPHCU ^{①④} | Connector kit – 6 pcs. A or C-phase Copper |
| MBKQRFK | P1/Revised P1 Filler for 1PH/3PH QR Horizontal mount only |
| HPLQR | QR Padlock Device |
| HBLQR | QR Handle Block Device |
| ANSI/NEMA PB 1.1-2013 ^③ | General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less (O&M Manual) |

① Replacement parts only.

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.)

③ PDF can be downloaded for free and printed at this location: <http://www.nema.org/standards/pages/Panelboards.aspx>

④ Use for both Cu and Al bus interiors.



Feed-Thru (FT)



Non-Feed-Thru (NFT)



Example of Back-fed xGB Main breaker installed

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.

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® | 74® | – | P1C66ML400ATSN® | – | P1A66ML400ATSN® | – | P1E66ML400ATSN® |

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 ② | 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® | 74® | – | P1C66JX400ATSN® | – | P1A66JX400ATSN® | – | P1E66JX400ATSN® |

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/sub feed 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.

⑤ 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.)

Standard Modifications

Type P1 Panelboards

Panel Options

Enclosures

- Extra gutter to sides or ends of the can
- 24" wide boxes
- Fronts are painted HRPO material (except for stainless version)
- Hinged to box trim
- Door-in-door trims
- Screw to box trims
- Piano hinge trims
- Painted boxes (ANSI 61 light gray is standard color)
- Custom colors
- Increase gauge trims and boxes (See pages 12-13)
- Stainless steel trims and boxes - (304 SS only)
- Type 1 enclosures (Std 16 Gauge / Optional 14 or 12 Gauge)
- Type 1 standard are A60 Galvanealed non-painted (Painted Type 1 use HRPO material)
- NEMA 3R/12 enclosures - (Painted A60 Galvanealed, 16 Gauge can with 14 Gauge front)

- NEMA 4 enclosures (14 Gauge only)
- NEMA 4X enclosures (14 Gauge only - 304 SS Std, 316 SS optional)
- 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 ^① |
| Yale 47 (NYC) National C413A Beck Lock 7-pin tumbler Southco 1 4 Fastener Corbin 1001 FAB7 | Special non-Fast-Latch ^① |

^① See SpeedFax Section 11 for more information.

Panel Modifications

- 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^①
- Contactor mains - Mount in 23" enclosure ahead of panel.
 - Asco 920 through 225 amps ^③
 - Asco 911 through 150 amps ^③
 - Siemens LEN through 30 amps ^③
- Branch and main breaker accessories
 - Handle blocks
 - Handle locks
- Feed-thru lugs ^①
Cannot be used in conjunction with SPD/TVSS or subfeed breakers. Do not add height to the panel.

| 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 |

- 200% neutral ^①
- Copper lugs, mechanical line and branch neutral ^①
- Bus mounted SPD/TVSS ^①
- Service entrance labeling
- Factory installed and field installable Service Entrance Barrier kits are now available as required by UL67
- 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 (Optional)
 - AL Insulated Equipment Ground Bar (Optional)
 - CU Insulated Equipment Ground Bar (Optional)
 - Ground Bar Brazed to Box (recommended for painted boxes)
- Shunt Trip on Main or Branch^②
BL, BLH, HBL, BQD, xGB as branch use 1" unit space for shunt trip.

QR2, QRH2, HQR2, HQR2H, ED4, ED6, HED4, FD6, FXD6, HFD6
HF XD6, 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.

Miscellaneous Modifications

Type P1 Panelboards

Compression Lugs

Table P1-19 – Lugs

| Style | Amp Rating | Breaker Type | Compression Connectors | Box Height/Width Addition |
|--------------|------------|------------------------|--|---------------------------|
| MLO | 125 | N/A | (1) #6 AWG - 350 kcmil | None |
| | 250 | | | |
| | 400 | N/A | (1) 400 - 600 kcmil AL (1) 400 - 500 kcmil CU | None |
| Main Breaker | 125 | ED4, ED6, HED4 | (1) #14 AWG - 2/0 | Box must go to 24" wide |
| | 225 | QR2, QRH2, HQR2, HQR2H | (1) #6 AWG - 350 kcmil CU or AL | Box must go to 24" wide |
| | 250 | FXD6, HFD6 | (1) #6 AWG - 350 kcmil CU or AL | Box must go to 24" wide |

Note: Standard compression lugs used for P1 panels are "range taking" lugs and require a particular crimping tool (tool is Hubbell/Anderson Versa Crimp VC6 -for 250A) to accommodate the range. Consult factory for information. 200% neutral not available with compression lugs. xGB breakers cannot accommodate compression lugs. (For 400A tool use Hubbell/Anderson Versa Crimp VC6FT/VC7FT - see instruction sheet for details.)

Enclosure Modifications

NEMA-4–Water Tight, Dust Tight, Steel Enclosure (Actual NEMA-4 enclosure is larger than standard Type 1 enclosure. See chart below for reference to approximate actual size.)

NEMA-4X For Type P1
Water Tight, Dust Tight and Corrosion Resistant
(consult plant to verify actual enclosure size)

Table P1-20

| Standard Box Height (in inches) | Actual NEMA 4 Enclosure Size | | |
|---------------------------------|------------------------------|----|----|
| | H | W | D |
| 32 | 32 | 20 | 8 |
| 38 | 42 | 30 | 8 |
| 44 | 48 | 36 | 8 |
| 56 | 60 | 36 | 10 |

Note: Larger NEMA 4 enclosures are not available.

Table P1-21

| Catalog Number | Enclosure – Stainless Steel Size (inches) (304SS is standard) | | | Catalog Number | Enclosure – Stainless Steel Size (inches) (304SS is standard) | | | Enclosure Fiberglass Size (inches) | | |
|----------------|---|----|------|----------------|---|----|------|------------------------------------|----|----|
| | H | W | D | | H | W | D | | | |
| B4X26 | 26 | 20 | 5.75 | 24B4X26 | 26 | 24 | 5.75 | 36 | 30 | 8 |
| B4X32 | 32 | 20 | 5.75 | 24B4X32 | 32 | 24 | 5.75 | 36 | 30 | 8 |
| B4X38 | 38 | 20 | 5.75 | 24B4X38 | 38 | 24 | 5.75 | 48 | 36 | 12 |
| B4X44 | 44 | 20 | 5.75 | 24B4X44 | 44 | 24 | 5.75 | 48 | 36 | 12 |
| B4X50 | 50 | 20 | 5.75 | 24B4X50 | 50 | 24 | 5.75 | 60 | 36 | 12 |
| B4X56 | 56 | 20 | 5.75 | 24B4X56 | 56 | 24 | 5.75 | 60 | 36 | 12 |
| B4X62 | 62 | 20 | 5.75 | 24B4X62 | 62 | 24 | 5.75 | | | |
| B4X68 | 68 | 20 | 5.75 | 24B4X68 | 68 | 24 | 5.75 | | | |
| B4X74 | 74 | 20 | 5.75 | 24B4X74 | 74 | 24 | 5.75 | | | |

Note: 316SS is available as an option – must be specified.

Remote Switch Modifications

Table P1-22 – Control Power Transformer

| Size | VA Relay |
|------|----------|
| 0, 1 | 50 |
| 2 | 75 |
| 3 | 150 |
| 4 | 250 |

Table P1-24 – Remote Control Switch Modification

| Description |
|---|
| Auxiliary Contacts (mounted, not wired) |
| 2-Wire Control |

Table P1-23 – Applications for a Remote Switch

| Switch Type | Modification |
|-------------|--|
| 920 | Mounts in 23" relay cabinet as a main only |
| LEN | 30A mounts in 23" relay cabinet as a main only |

Gauge Steel of Boxes/Fronts, Surface and Flush

| Dimensions in Inches (mm) | | Gauge Steel | | |
|---------------------------|-----------------|------------------|--------------------|----------------------|
| H | W | Box | Front/Door | Type |
| 26-74 (660-1880) | 20 (508) | 16 ^① | 14 ^② | Type 1 |
| 26-74 (660-1880) | 20 (508) | 16 ^② | 16/14 ^② | Type 3R/12 |
| 32-60 (813-1524) | 20-36 (508-914) | 14 ^③ | 14 ^③ | Type 4 |
| 26-74 (660-1879) | 20 (508) | 14 ^④ | 14 ^④ | Type 4X |
| 36-60 (914-1524) | 30-36 (762-914) | N/A ^⑤ | N/A ^⑤ | Type 4X Non-Metallic |

① 16 Gauge is Standard (14 Gauge & 12 Gauge are optional).

② 15 Gauge Steel Can with 14 Gauge Door or Similar Approved Construction.

③ No Optional Gauge available.

④ 304SS 14 Gauge Std., 316SS 14 Gauge optional.

⑤ Sizes do not match Standard Enclosure Sizes - See Table P1-21 - material is non-metallic - No Gauge Specified.

⑥ FAS-Latch is 14 GA only.

Screw-to-Box, Hinge-to-Box, Door-in-Door (14 GA Std./12 GA Std. or 10 GA Optional).

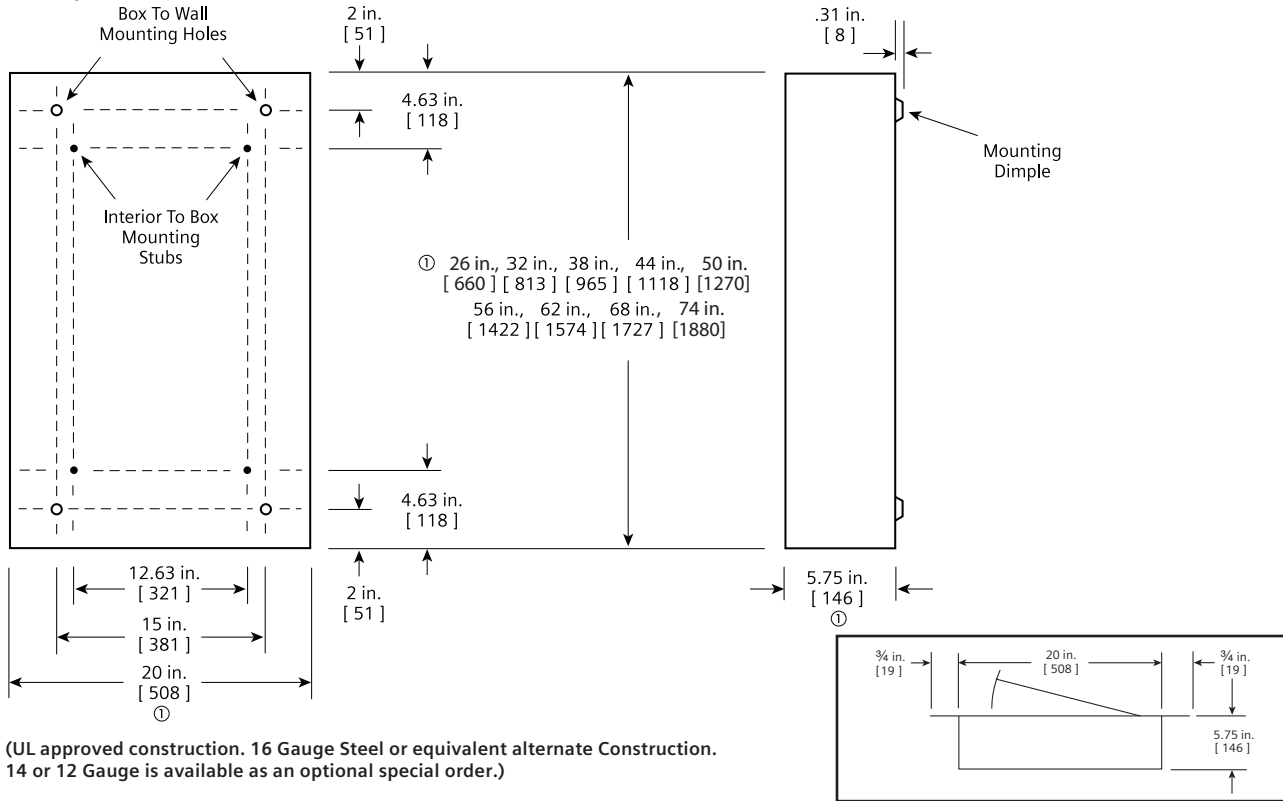
STB/HTB/DND with Piano Hinge (14 GA Std./12 GA Optional).

Dimensions

Type P1 Panelboards

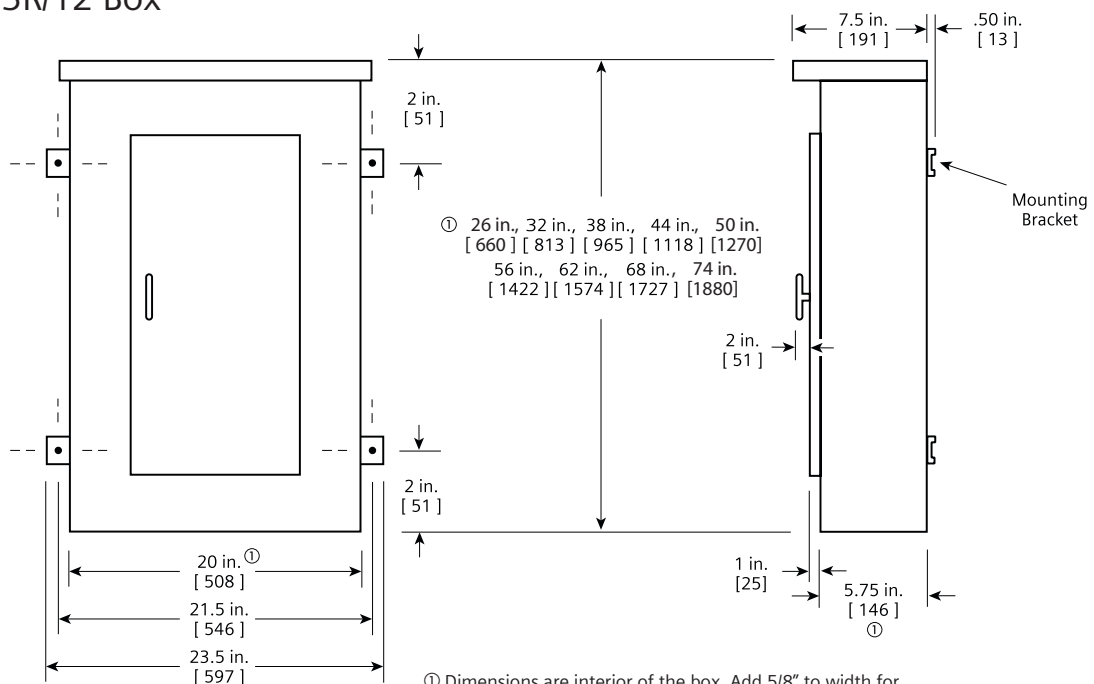
Type 1 Box

Box is symmetrical



Flush Mounting

Type 3R and 3R/12 Box



(UL approved construction. 16 Gauge Steel Can with 14 Gauge front or similar approved construction.)
A60 Galvannealed with ANSI 61 light gray paint is standard.

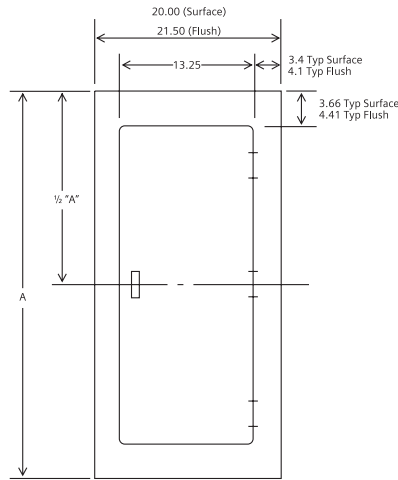
① Dimensions are interior of the box. Add 5/8" to width for absolute dimension. Add 1/8" to height for absolute dimension.

Dimensions shown in inches and millimeters [].

Dimensions

Panelboards - Trim / Front

Standard Trim (FAS-Latch) Typical Dimensions (Hinges available as shown on right side only)
(Typical 14 Gauge Steel construction or UL approved equivalent)

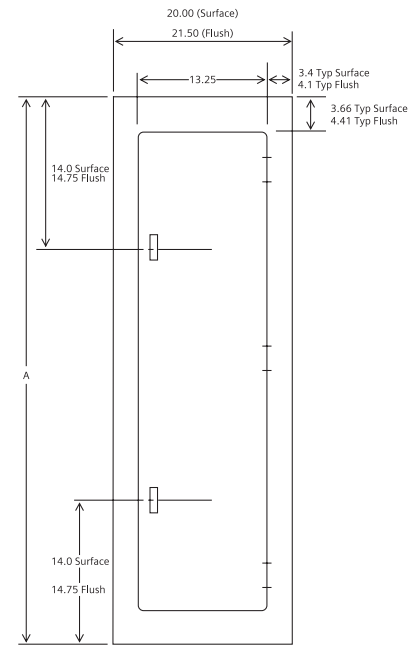


| | Surface | Flush | # of Hinges |
|----------|---------|-------|-------------|
| Box Size | A | A | |
| 26 | 26 | 27.5 | 2 |
| 32 | 32 | 33.5 | 2 |
| 38 | 38 | 39.5 | 2 |
| 44 | 44 | 45.5 | 3 |
| 50 | 50 | 51.5 | 3 |

Standard Trim (FAS-Latch)

(14 Gauge Standard - no options)

(UPB includes surface or flush versions of this style in chart on page 14. Other special fronts below are not part of the UPB program.)



| | Surface | Flush | # of Hinges |
|----------|---------|-------|-------------|
| Box Size | A | A | |
| 56 | 56 | 57.5 | 3 |
| 62 | 62 | 63.5 | 3 |
| 68 | 68 | 69.5 | 3 |
| 74 | 74 | 75.5 | 3 |



Door in Door Front (14 Gauge Standard /12 Gauge optional)



Hinged Front

Material:

- HRPO Steel painted ANSI 61 light gray is standard
- 304 Stainless available with limited piano hinge options

Also available

- Screw to Box Trim
(14 Gauge Std./12 & 10 Gauge Optional)
- Piano Hinge Trim
(14 Gauge standard/12 Gauge optional)
 - a) Screw to box with Piano Hinge Door
 - b) Hinge to Box with Piano Hinge and Piano Hinge Door
 - c) Door-in-Door with Piano Hinge, Both Doors

New Revised P1 Unassembled Panelboards

To better serve the needs of customers, Authorized Siemens Unassembled Panelboard Distributors offer product flexibility, quicker job turn-around, and affordable pricing. All Siemens unassembled panelboards are fully backed for high quality, trouble-free operation and are labeled as Suitable for use as Service Entrance Equipment.

Flexibility and ease of assembly:

Customer oriented design creates installation convenience. For all of its one-of-a-kind features, the P1 panelboard is also designed to be extremely user friendly. For instance, field convertible main breaker and main lug kits, (through 400 amps), will allow you to switch from main lug to main breaker, and vice versa with no change in box size or additional cabling. Plus, lay-in construction (for 250 A CU) and/or removable lugs make wiring the main and neutral lugs easier and faster. To further speed

wiring, as well as reduce clutter, the P1 panel also features a split neutral design and branch neutral connections which are closer to the breakers than competitors. Additionally, field addable sub-fed breakers (up to 250 amps) or feed through lug kits can be field installed without utilizing any of your feeder breaker positions or increasing your box height. Furthermore, the unique design allows the panel to be inverted in the field and keep its labeling legible.

1) Completely symmetrical boxes may be mounted with either end up. There are two pre-punched equipment ground connector locations for contractor friendly installation.

2) Box comes pre-punched for optional, field installable door-in-door or hinged style trims. There are also two pre-punched ground connector locations. The panel box will accept both standard ground connector (EGK and ECGK) assemblies and insulated ground connector kits (IGK and ICGK).

3) Interior mounting is completely symmetrical allowing it to be changed from top to bottom feed by simply rotating the interior.

4) Choose either a Main Breaker kit or Main Lug kit with which to terminate your incoming cables. Main lug kits are contractor friendly lugs through 350 kcmil (250 amp panel), (1) 600 kcmil or (2) 250 kcmil connectors for 400 amp panels. No line connectors in the P1 panel require multiple wires under one screw. Main Breaker kits (250 amps and below) are horizontally

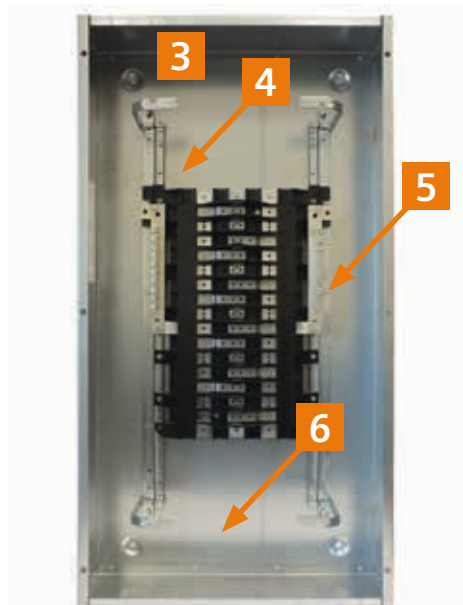
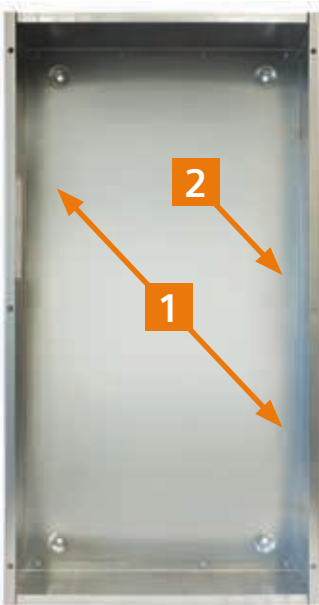
mounted allowing field convertible top or bottom feeds to be performed easily. MLO kits and Main Breaker Kits are interchangeable and can be changed/added in the field without making changes to the enclosure or interior.

5) Branch neutral connections are near the breaker connections to speed wiring and reduce clutter. The standard P1 neutral is rated for 100% of the panel's ampacity and will accept copper or aluminum wire. Optional 200% and 2/0 neutral kits are also available.

6) The panel includes space to add (1) sub-feed breaker (max 250 amps), feed-thru lugs or one TPS3 (SPD) kit.

7) Siemens standard trim has hidden hinges and mounting hardware for added safety. The rounded door corners not only enhance the panel's appearance but also help to eliminate injuries caused from sharp corners.

8) Semi-flush lock comes standard. Easily identified locked position denoted by keyway being horizontal when door has been locked.



Catalog Numbering System

Unassembled Panelboards

Type P1 unassembled panelboards are completely convertible from main lug to main breaker and vice-versa. Additionally feed-thru lugs, or subfeed circuit breakers up to 400 ampere can be added without increasing the box height for Revised P1 with "T" suffix, see the chart.

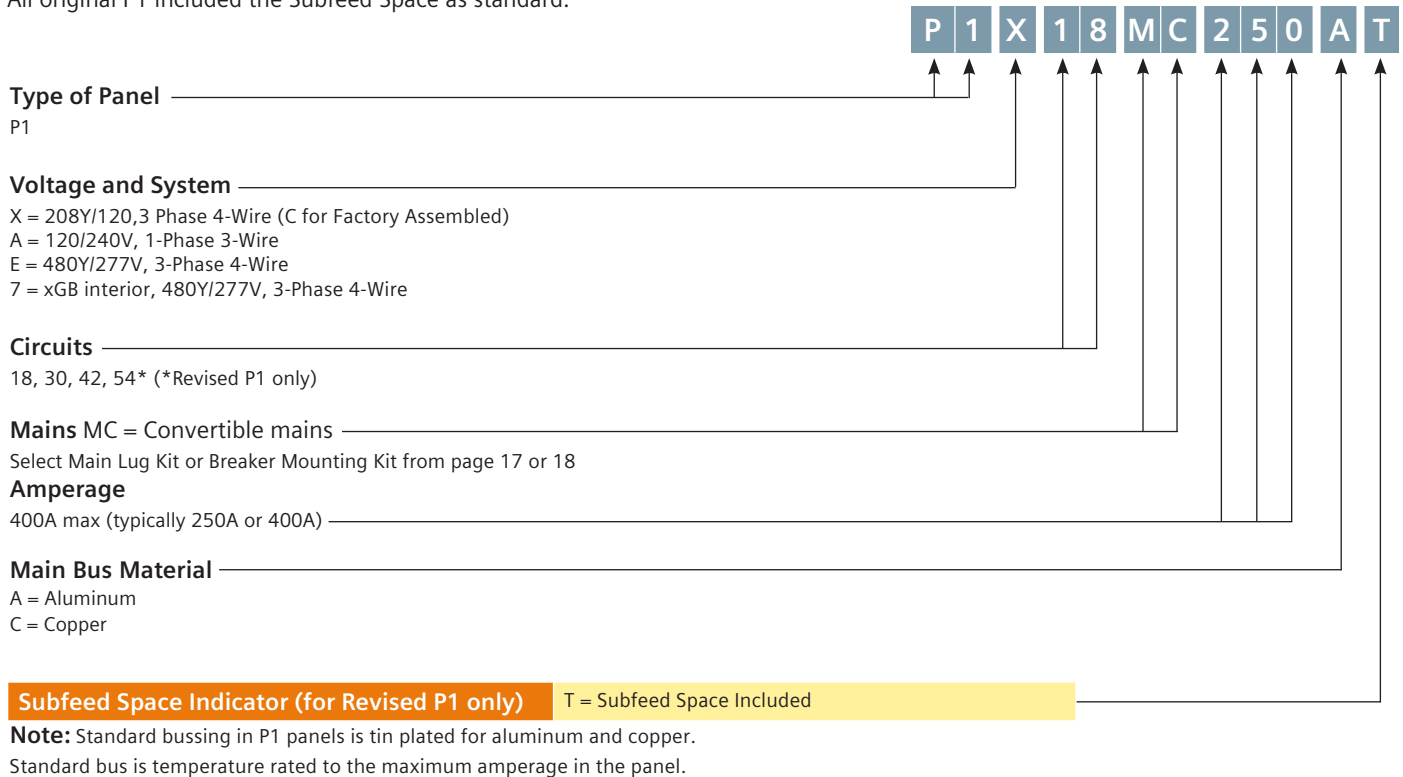
1. When BL/BQD or GB Main Breaker is chosen as back-fed in unit space, the main breaker will use two or three positions of unit space and will reduce usable branch circuit space.
2. List catalog number and price of interior, box and front.
3. Select main lug kit or main breaker kit from appropriate tables.

Note: Main/Subfeed Breaker mounting

kits may be ordered with or without breakers included, see pages 17-18 for selection.

4. List required branch circuit breakers and filler plates to cover any unused positions.
5. Select any modifications or accessories.

Note: Revised P1 was introduced in 2015. All original P1 devices do not include the "Subfeed Space" Indicator. All original P1 included the Subfeed Space as standard.



Branch Breakers

| Panel Type | Voltage (Max.) | Breaker Type | Additional Information |
|-----------------------------|------------------------|-----------------------------------|------------------------|
| P1, Revised P1 ^① | 240 | BL, BLH, HBL, BQD, NGB, HGB, LGB | See Pages 17-19 |
| | 480 / 277 | BQD, NGB, HGB, LGB, | |
| | 600 / 347 ^③ | BQDG ^② , NGB, HGB, LGB | |

① Consult sales office for availability of CSA.

② See Speedfax for additional information.

③ 600/347V options are not available in a UPB panel - see factory assembled section.

Distributor Stock

Type P1 Panelboards

Pricing An Unassembled Panel

400A Max. — 20" Wide x 5.75" Deep

1. Choose the appropriate Interior from the table below.
2. Choose the Main Device: Main Lugs from page 16, Main Breaker Kit from pages 16 - 17 and Main Breakers from Section 7.
3. Choose Branch Breakers. BL, BQD and xGB breakers from Section 7.
4. Choose Feed-Thru Lugs or Subfeed Breaker Kit from pages 16 - 17 and Subfeed Breaker from Section 7.

Type P1 Unassembled Panelboards (Revised P1 introduced 2014)

| Amps | Max. # of Poles | Original Interior Catalog Number | Revised P1 Interior Catalog Number | Box Size | Type 1 Encl. | Type 3R/12 Encl.① | Type 1 Front Surface | Type1 Front Flush |
|---|-----------------|----------------------------------|------------------------------------|----------|--------------|-------------------|----------------------|-------------------|
| Convertible Mains — 1-Phase, 3-Wire 120/240V | | | | | | | | |
| 250 | 18 | P1A18MC250A | P1A18MC250AT② | 32 | B32 | WP32 | S32B | F32B |
| | 30 | P1A30MC250A | P1A30MC250AT | 38 | B38 | WP38 | S38B | F38B |
| | 42 | P1A42MC250A | P1A42MC250AT | 44 | B44 | WP44 | S44B | F44B |
| | 54 | — | P1A54MC250AT | 50 | B50 | WP50 | S50B | F50B |
| 400 | 18 | P1A18MC400A | — | — | — | — | — | — |
| | 30 | P1A30MC400A | P1A30MC400AT | 62 | B62 | WP62 | S62B | F62B |
| | 42 | P1A42MC400A | P1A42MC400AT | 68 | B68 | WP68 | S68B | F68B |
| | 54 | — | P1A54MC400AT | 74 | B74 | WP74 | S74B | F74B |
| 250 | 18 | P1A18MC250C | P1A18MC250CT② | 32 | B32 | WP32 | S32B | F32B |
| | 30 | P1A30MC250C | P1A30MC250CT | 38 | B38 | WP38 | S38B | F38B |
| | 42 | P1A42MC250C | P1A42MC250CT | 44 | B44 | WP44 | S44B | F44B |
| | 54 | — | P1A54MC250CT | 50 | B50 | WP50 | S50B | F50B |
| 400 | 18 | P1A18MC400C | — | — | — | — | — | — |
| | 30 | P1A30MC400C | P1A30MC400CT | 62 | B62 | WP62 | S62B | F62B |
| | 42 | P1A42MC400C | P1A42MC400CT | 68 | B68 | WP68 | S68B | F68B |
| | 54 | — | P1A54MC400CT | 74 | B74 | WP74 | S74B | F74B |

Convertible Mains — 3-Phase, 4-Wire 208Y/120V

| | | | | | | | | |
|-----|----|-------------|---------------|----|-----|------|------|------|
| 250 | 18 | P1X18MC250A | P1X18MC250AT② | 32 | B32 | WP32 | S32B | F32B |
| | 30 | P1X30MC250A | P1X30MC250AT | 38 | B38 | WP38 | S38B | F38B |
| | 42 | P1X42MC250A | P1X42MC250AT | 44 | B44 | WP44 | S44B | F44B |
| | 54 | — | P1X54MC250AT | 50 | B50 | WP50 | S50B | F50B |
| 400 | 18 | P1X18MC400A | — | — | — | — | — | — |
| | 30 | P1X30MC400A | P1X30MC400AT | 62 | B62 | WP62 | S62B | F62B |
| | 42 | P1X42MC400A | P1X42MC400AT | 68 | B68 | WP68 | S68B | F68B |
| | 54 | — | P1X54MC400AT | 74 | B74 | WP74 | S74B | F74B |
| 250 | 18 | P1X18MC250C | P1X18MC250CT② | 32 | B32 | WP32 | S32B | F32B |
| | 30 | P1X30MC250C | P1X30MC250CT | 38 | B38 | WP38 | S38B | F38B |
| | 42 | P1X42MC250C | P1X42MC250CT | 44 | B44 | WP44 | S44B | F44B |
| | 54 | — | P1X54MC250CT | 50 | B50 | WP50 | S50B | F50B |
| 400 | 18 | P1X18MC400C | — | — | — | — | — | — |
| | 30 | P1X30MC400C | P1X30MC400CT | 62 | B62 | WP62 | S62B | F62B |
| | 42 | P1X42MC400C | P1X42MC400CT | 68 | B68 | WP68 | S68B | F68B |
| | 54 | — | P1X54MC400CT | 74 | B74 | WP74 | S74B | F74B |

Convertible Mains — 3-Phase, 4-Wire 480Y/277V

| | | | | | | | | |
|-----|----|-------------|---------------|----|-----|------|------|------|
| 250 | 18 | P1E18MC250A | P1E18MC250AT② | 32 | B32 | WP32 | S32B | F32B |
| | 30 | P1E30MC250A | P1E30MC250AT | 38 | B38 | WP38 | S38B | F38B |
| | 42 | P1E42MC250A | P1E42MC250AT | 44 | B44 | WP44 | S44B | F44B |
| | 54 | — | P1E54MC250AT | 50 | B50 | WP50 | S50B | F50B |
| 400 | 18 | P1E18MC400A | — | — | — | — | — | — |
| | 30 | P1E30MC400A | P1E30MC400AT | 62 | B62 | WP62 | S62B | F62B |
| | 42 | P1E42MC400A | P1E42MC400AT | 68 | B68 | WP68 | S68B | F68B |
| | 54 | — | P1E54MC400AT | 74 | B74 | WP74 | S74B | F74B |
| 250 | 18 | P1E18MC250C | P1E18MC250CT② | 32 | B32 | WP32 | S32B | F32B |
| | 30 | P1E30MC250C | P1E30MC250CT | 38 | B38 | WP38 | S38B | F38B |
| | 42 | P1E42MC250C | P1E42MC250CT | 44 | B44 | WP44 | S44B | F44B |
| | 54 | — | P1E54MC250CT | 50 | B50 | WP50 | S50B | F50B |
| 400 | 18 | P1E18MC400C | — | — | — | — | — | — |
| | 30 | P1E30MC400C | P1E30MC400CT | 62 | B62 | WP62 | S62B | F62B |
| | 42 | P1E42MC400C | P1E42MC400CT | 68 | B68 | WP68 | S68B | F68B |
| | 54 | — | P1E54MC400CT | 74 | B74 | WP74 | S74B | F74B |

Interiors for xGB Breakers — 3-Phase, 4-Wire 480Y/277V

| | | | | | | | | |
|-----|----|-------------|---------------|----|-----|------|------|------|
| 250 | 18 | P1718MC250A | P1718MC250AT② | 32 | B32 | WP32 | S32B | F32B |
| | 30 | P1730MC250A | P1730MC250AT | 38 | B38 | WP38 | S38B | F38B |
| | 42 | P1742MC250A | P1742MC250AT | 44 | B44 | WP44 | S44B | F44B |
| | 54 | — | P1754MC250AT | 50 | B50 | WP50 | S50B | F50B |
| 400 | 18 | P1718MC400A | — | — | — | — | — | — |
| | 30 | P1730MC400A | P1730MC400AT | 62 | B62 | WP62 | S62B | F62B |
| | 42 | P1742MC400A | P1742MC400AT | 68 | B68 | WP68 | S68B | F68B |
| | 54 | — | P1754MC400AT | 74 | B74 | WP74 | S74B | F74B |
| 250 | 18 | P1718MC250C | P1718MC250CT② | 32 | B32 | WP32 | S32B | F32B |
| | 30 | P1730MC250C | P1730MC250CT | 38 | B38 | WP38 | S38B | F38B |
| | 42 | P1742MC250C | P1742MC250CT | 44 | B44 | WP44 | S44B | F44B |
| | 54 | — | P1754MC250CT | 50 | B50 | WP50 | S50B | F50B |
| 400 | 18 | P1718MC400C | — | — | — | — | — | — |
| | 30 | P1730MC400C | P1730MC400CT | 62 | B62 | WP62 | S62B | F62B |
| | 42 | P1742MC400C | P1742MC400CT | 68 | B68 | WP68 | S68B | F68B |
| | 54 | — | P1754MC400CT | 74 | B74 | WP74 | S74B | F74B |

① Front included in NEMA 3R and 3R/12 Box.

② 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.)



42 circuit with Back-fed Main



54 circuit 400A

Distributor Stock

Type P1 Panelboards

Lug Kits — Main or Feed Thru

| Max 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) | 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 | (1) AL 1/0-750 kcmil (2) AL/CU 250kcmil max. [max.(1) 600 kcmil CU wire] | 1 Phase | — | 4MLKA1B |
| | | | 3 Phase | — | 4MLKA3B |

Breaker Mounting Kits—Main or Subfeed Strap Kit w/o Breaker

| Amp Rating | Breaker Frames | Service | Original P1 Catalog Number | Revised P1 Catalog Number ² |
|------------------|------------------------|---------|----------------------------|--|
| 100 | BL, BLH, HBL | 1 Phase | MBKBL1 | MBKBL1A |
| | | 3 Phase | MBKBL3 | MBKBL3A |
| 100 | BQD | 1 Phase | — | MBKBC1NBA |
| 125 | NGB, HGB, LGB | 1 Phase | MBKNB1 | — |
| 100 | BQD | 3 Phase | MBKBC3 | MBKBC3NBA |
| 125 | NGB, HGB, LGB | 3 Phase | MBKNB3 | — |
| 125 | ED4, ED6, HED4, HHED6 | 1 Phase | MBKED1 | MBKED1A |
| | | 3 Phase | MBKED3 | MBKED3A |
| 225 ³ | 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 ¹ | JXD6, JD6, HJD6, HJXD6 | 1 Phase | MBKJD1 | MBKJD1A |
| | | 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 panelboards.

Copper Neutral Lug Kits — 250A

| Number of Circuits | Description | Original P1 Catalog Number | Revised P1 Catalog Number |
|--------------------|--|----------------------------|---------------------------|
| 18 | 2 or 4 Branch Neutral Strips, 1 Main Neutral Lug, Hardware | CNKL18 | Use 30 ckt kit |
| 30 | | CNKL30 | CNLK30A |
| 42 | | CNKL42 | CNLK42A |
| 54, 66 | | — | CNLK54A |

2/0 Neutral Lug Kits — 250A and 400A

| | | | |
|--------|--|---|----------------|
| 18 | 2 or 4 Branch Neutral Strips, Hardware | — | Use 30 ckt kit |
| 30 | | — | LNLK30A |
| 42 | | — | LNLK42A |
| 54, 66 | | — | LNLK54A |

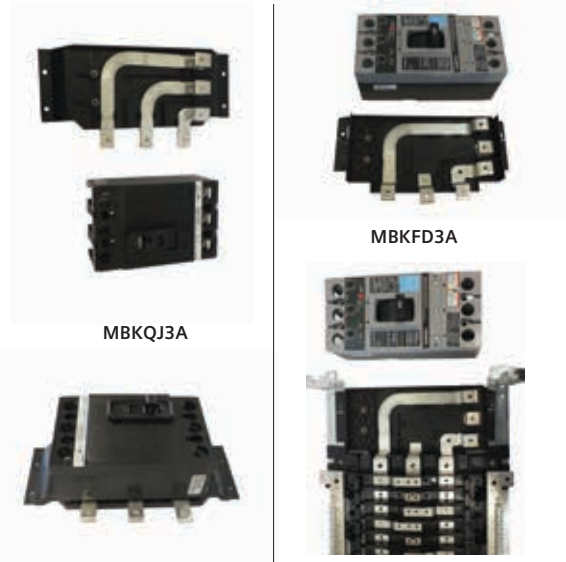
200% Neutral Lug Kits/250A

| | | | |
|--------|---|--------|----------------|
| 18 | 2 or 4 Branch Neutral Strips, 2 Main Neutral Lugs, Hardware | 2NLK18 | Use 30 ckt kit |
| 30 | | 2NLK30 | 2NLK30A |
| 42 | | 2NLK42 | 2NLK42A |
| 54, 66 | | — | 2NLK54A |

200% Neutral Lug Kits/400A

| | | | |
|--------|---|---------|----------------|
| 18 | 2 or 4 Branch Neutral Strips, 1 Main 600MCM Neutral Lug, Hardware | 42NLK18 | Use 30 ckt kit |
| 30 | | 42NLK30 | 42NLK30A |
| 42 | | 42NLK42 | 42NLK42A |
| 54, 66 | | — | 42NLK54A |

Product Category UPB



Miscellaneous Parts and Accessories

| Catalog Number | 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 |
| LPDC01 | Directory Card (Pack of 10; ref. 12-1110-01) |
| LPDC02 | Directory Card Holder (Pack of 10; ref. 11-1824-01) |
| MCHK | Metal Card Holder Kit |
| 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 |
| SEBKR1P1V1 ² | FD, QJ, QR Service Entrance Barrier Kit (Revised P1) |
| SEBKR1P1V2 ² | ED Service Entrance Barrier Kit (Revised P1) |
| SEBKR1P1V3 ² | BQD Service Entrance Barrier Kit (Revised P1 - back-fed) |
| SEBKR1P1V4 ² | xGB Service Entrance Barrier Kit (Revised P1 - back-fed) |
| SEBKR1P1V5 ² | BL/BQD/xGB Service Entrance Barrier Kit (RP1 in Main Space) |
| SEBKP1P2P3V1 ² | JD, LD Service Entrance Barrier Kit (RP1, P1, P2, P3) |
| 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/HEB Filler Plate |
| P1SCRW5 | Package of 42 breaker mounting screws for P1 |
| DFFP1 | 1" Branch circuit filler plate (Used for BL/BQD/xGB/xGB2/ED blank position. Suitable for replacing QF3 in P1 thru P5 Panelboards and Switchboards.) |
| P1CONBPHCU ¹ | Connector kit – 6 pcs. B-phase Copper |
| P1CONBPHAL ¹ | Connector kit – 6 pcs. B-phase Aluminum |
| P1CONACPHCU ^{1,4} | Connector kit – 6 pcs. A or C-phase Copper |
| MBKQRFK | P1/Revised P1 Filler for 1PH/3PH QR. Horizontal mount only. |
| HPLQR | QR Padlock Device |
| HBLQR | QR Handle Block Device |
| ANSI/NEMA PB 1.1-2013 ³ | General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less (O&M Manual) |

¹ Replacement parts only.

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.)

³ PDF can be downloaded for free and printed at this location: <http://www.nema.org/standards/pages/Panelboards.aspx>

⁴ Use for both Cu and Al bus interiors.

Warehouse Stock/Unassembled

Main Breaker Mounting Kits with Breakers for P1 Panels

(250A and lower can be used as subfeed kits also)

| Original P1 Catalog Number | Revised P1 Catalog Number (Q/QR type listed where applicable) | Description | Ratings | |
|----------------------------|---|--------------------------------|---------|------|
| | | | 240V | 480V |
| MBKED3100 | MBKED3100A | Kit w/3-pole ED4 100A breaker | 65KA | 18KA |
| MBKED3125 | MBKED3125A | Kit w/3-pole ED4 125A breaker | 65KA | 18KA |
| MBKQR1 plus breaker | MBKQR1125A | Kit w/2-pole QR2 125A breaker | 10KA | — |
| MBKQR1 plus breaker | MBKQR1150A | Kit w/2-pole QR2 150A breaker | 10KA | — |
| MBKQR1 plus breaker | MBKQR1175A | Kit w/2-pole QR2 175A breaker | 10KA | — |
| MBKQR1 plus breaker | MBKQR1200A | Kit w/2-pole QR2 200A breaker | 10KA | — |
| MBKQR1 plus breaker | MBKQR1225A | Kit w/2-pole QR2 225A breaker | 10KA | — |
| MBKQR3 plus breaker | MBKQR3125A | Kit w/3-pole QR2 125A breaker | 10KA | — |
| MBKQR3 plus breaker | MBKQR3150A | Kit w/3-pole QR2 150A breaker | 10KA | — |
| MBKQR3 plus breaker | MBKQR3175A | Kit w/3-pole QR2 175A breaker | 10KA | — |
| MBKQR3 plus breaker | MBKQR3200A | Kit w/3-pole QR2 200A breaker | 10KA | — |
| MBKQR3 plus breaker | MBKQR3225A | Kit w/3-pole QR2 225A breaker | 10KA | — |
| MBKQR1 plus breaker | MBKQR1125HA | Kit w/2-pole HQR2 125A breaker | 65KA | — |
| MBKQR1 plus breaker | MBKQR1150HA | Kit w/2-pole HQR2 150A breaker | 65KA | — |
| MBKQR1 plus breaker | MBKQR1175HA | Kit w/2-pole HQR2 175A breaker | 65KA | — |
| MBKQR1 plus breaker | MBKQR1200HA | Kit w/2-pole HQR2 200A breaker | 65KA | — |
| MBKQR1 plus breaker | MBKQR1225HA | Kit w/2-pole HQR2 225A breaker | 65KA | — |
| MBKQR3 plus breaker | MBKQR3125HA | Kit w/3-pole HQR2 125A breaker | 65KA | — |
| MBKQR3 plus breaker | MBKQR3150HA | Kit w/3-pole HQR2 150A breaker | 65KA | — |
| MBKQR3 plus breaker | MBKQR3175HA | Kit w/3-pole HQR2 175A breaker | 65KA | — |
| MBKQR3 plus breaker | MBKQR3200HA | Kit w/3-pole HQR2 200A breaker | 65KA | — |
| MBKQR3 plus breaker | MBKQR3225HA | Kit w/3-pole HQR2 225A breaker | 65KA | — |
| MBKFD3150 | MBKFD3150A | Kit w/3-pole FXD6 150A breaker | 65KA | 35KA |
| MBKFD3175 | MBKFD3175A | Kit w/3-pole FXD6 175A breaker | 65KA | 35KA |
| MBKFD3200 | MBKFD3200A | Kit w/3-pole FXD6 200A breaker | 65KA | 35KA |
| MBKFD3225 | MBKFD3225A | Kit w/3-pole FXD6 225A breaker | 65KA | 35KA |
| MBKFD3250 | MBKFD3250A | Kit w/3-pole FXD6 250A breaker | 65KA | 35KA |
| MBKJD1300 ^① | MBKJD1300A ^① | Kit w/2-pole JXD6 300A breaker | 65KA | 35KA |
| MBKJD3300 ^① | MBKJD3300A ^① | Kit w/3-pole JXD6 300A breaker | 65KA | 35KA |
| MBKJD1400 ^① | MBKJD1400A ^① | Kit w/2-pole JXD6 400A breaker | 65KA | 35KA |
| MBKJD3400 ^① | MBKJD3400A ^① | Kit w/3-pole JXD6 400A breaker | 65KA | 35KA |
| MBKJD12300 ^① | MBKJD12300A ^① | Kit w/2-pole JXD2 300A breaker | 65KA | — |
| MBKJD32300 ^① | MBKJD32300A ^① | Kit w/3-pole JXD2 300A breaker | 65KA | — |
| MBKJD12400 ^① | MBKJD12400A ^① | Kit w/2-pole JXD2 400A breaker | 65KA | — |
| MBKJD32400 ^① | MBKJD32400A ^① | Kit w/3-pole JXD2 400A breaker | 65KA | — |

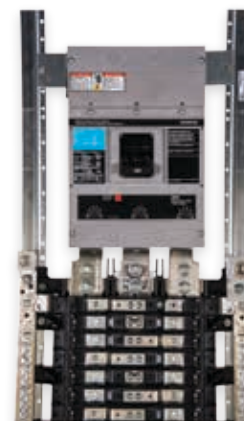
① Kits are for Main only. New "Revised P1" kits can be used for either top feed or bottom feed.

NOTE: "Revised P1" Kits above only work for interior numbers ending in "T" or "N". Use "Original P1" kits for all others.

Branch Breakers Selection for P1

Selection Guide

1. Select breaker type.
2. Select required amperage.
3. Select number of poles.
4. Select branch breaker catalog numbers.
5. Select ground bar and filler plates. (See replacement parts & accessories on Page 15.)



300A Main installed.

These Revised P1 kits can now be used as top or bottom feed.

AFCI – Combination Type Arc Fault Circuit Interrupter

| Breaker Type | Ampere Rating | Catalog Number | Interrupting Ratings (kA) RMS Symmetrical Amperes | | |
|-----------------|---------------|----------------|---|---------|-----|
| | | | Volts AC | | |
| | | | 120 | 120/240 | 240 |
| BAF2 1-pole | 15 | BA115AFC | 10 | — | — |
| | 20 | BA120AFC | 10 | — | — |
| BAFH2 1-pole | 15 | BA115AFCH | 22 | — | — |
| | 20 | BA120AFCH | 22 | — | — |
| HBAF2 1-pole | 15 | BA115AFCHH | 65 | — | — |
| | 20 | BA120AFCHH | 65 | — | — |
| BAF 2-pole | 15 | B215AFC | — | 10 | — |
| | 20 | B220AFC | — | 10 | — |
| BAFH 2-pole | 15 | B215AFCH | — | 22 | — |
| | 20 | B220AFCH | — | 22 | — |

Dual Function AFCI/GFCI Circuit Breaker

| Breaker Type | Ampere Rating | Catalog Number | Interrupting Ratings (kA) RMS Symmetrical Amperes | | |
|------------------|---------------|----------------|---|---------|-----|
| | | | Volts AC | | |
| | | | 120 | 120/240 | 240 |
| BFGA2 1-pole | 15 | B115DF | 10 | — | — |
| | 20 | B120DF | 10 | — | — |
| BFGAH2 1-pole | 15 | B115DFH | 22 | — | — |
| | 20 | B120DFH | 22 | — | — |
| HBFGA2 1-pole | 15 | B115DFHH | 65 | — | — |
| | 20 | B120DFHH | 65 | — | — |

Switching Neutrals

| Breaker Type | Ampere Rating | Catalog Number | Maximum Interrupting Rating (kA) | | |
|------------------------------|---------------|----------------|----------------------------------|-------------|---------|
| | | | 120V AC | 120/240V AC | 240V AC |
| BLG 2-Wire Common Trip | 15 | BG215* | 10 | — | — |
| | 20 | BG220* | 10 | — | — |
| | 30 | BG230* | 10 | — | — |
| BLG 3-Wire Common Trip | 15 | BG315* | — | 10 | — |
| | 20 | BG320* | — | 10 | — |
| | 30 | BG330* | — | 10 | — |

* Built to order.

Product Category UPB

Warehouse Stock / Unassembled

Type P1 Panelboards

Branch Breakers Selection for P1

Selection Guide

1. Select breaker type.
2. Select required amperage.
3. Select number of poles.
4. Select branch breaker catalog numbers.
5. Select ground bar and filler plates.
(See replacement parts & accessories on Pages 17 and 18.)

BL Branch Breakers – 10,000A IR^①

| Amp Rating | 1-Pole 120/240V | 2-Pole 120/240V | 2-Pole 240V | 3-Pole 240V |
|------------|-----------------|-----------------|-------------|-------------|
| 15 | B115 | B215 | B215R | B315 |
| 20 | B120 | B220 | B220R | B320 |
| 25 | B125 | B225 | B225R | B325 |
| 30 | B130 | B230 | B230R | B330 |
| 35 | B135 | B235 | B235R | B335 |
| 40 | B140 | B240 | B240R | B340 |
| 45 | B145 | B245 | B245R | B345 |
| 50 | B150 | B250 | B250R | B350 |
| 55 | B155 | — | — | — |
| 60 | B160 | B260 | — | B360 |
| 70 | B170 | B270 | — | B370 |
| 80 | — | B280 | — | B380 |
| 90 | — | B290 | — | B390 |
| 100 | — | B2100 | — | B3100 |

BLH Branch Breakers – 22,000A IR^①

| Amp Rating | 1-Pole 120/240V | 2-Pole 120/240V | 3-Pole 240V |
|------------|-----------------|-----------------|-------------|
| 15 | B115H | B215H | B315H |
| 20 | B120H | B220H | B320H |
| 25 | B125H | B225H | B325H |
| 30 | B130H | B230H | B330H |
| 40 | B140H | B240H | B340H |
| 50 | B150H | B250H | B350H |
| 55 | B155H | — | — |
| 60 | B160H | B260H | B360H |
| 70 | B170H | B270H | B370H |
| 80 | — | B280H | B380H |
| 90 | — | B290H | B390H |
| 100 | — | B2100H | B3100H |

BQD Branch Breakers – 14,000A IR Max. @ 480/277 Vac / 65,000A IR max. @ 240 Vac^②

| Amp Rating | 1-Pole 277V | 2-Pole 480Y/277V | 3-Pole 480Y/277V |
|------------|-------------|------------------|------------------|
| 15 | BQD115 | BQD215 | BQD315 |
| 20 | BQD120 | BQD220 | BQD320 |
| 25 | BQD125 | BQD225 | BQD325 |
| 30 | BQD130 | BQD230 | BQD330 |
| 35 | BQD135 | BQD235 | BQD335 |
| 40 | BQD140 | BQD240 | BQD340 |
| 45 | BQD145 | BQD245 | BQD345 |
| 50 | BQD150 | BQD250 | BQD350 |
| 60 | BQD160 | BQD260 | BQD360 |
| 70 | BQD170 | BQD270 | BQD370 |
| 80 | BQD180 | BQD280 | BQD380 |
| 90 | BQD190 | BQD290 | BQD390 |
| 100 | BQD1100 | BQD2100 | BQD3100 |

HBL Branch Breakers – 65,000A IR^①

| Amp Rating | 1-Pole 120/240V | 2-Pole 120/240V | 3-Pole 240V |
|------------|-----------------|-----------------|-------------|
| 15 | B115HH | B215HH | B315HH |
| 20 | B120HH | B220HH | B320HH |
| 30 | B130HH | B230HH | B330HH |
| 40 | B140HH | B240HH | B340HH |
| 50 | B150HH | B250HH | B350HH |
| 60 | — | B260HH | B360HH |
| 70 | — | B270HH | B370HH |
| 80 | — | B280HH | B380HH |
| 90 | — | B290HH | B390HH |
| 100 | — | B2100HH | B3100HH |

GFCI Personnel Protection (5MA)

| Breaker Type | Ampere Rating | Catalog Number | Interrupting Ratings (kA) RMS Symmetrical Amperes | | |
|-----------------|---------------|----------------|---|---------|-----|
| | | | Volts AC | | |
| | | | 120 | 120/240 | 240 |
| BLF2 1-Pole | 15 | BF115A | 10 | — | — |
| | 20 | BF120A | 10 | — | — |
| | 30 | BF130A | 10 | — | — |
| BLFB 2-Pole | 15 | BF215A | — | 10 | — |
| | 20 | BF220A | — | 10 | — |
| | 30 | BF230A | — | 10 | — |
| | 40 | BF240A | — | 10 | — |
| | 50 | BF250A | — | 10 | — |
| | 60 | BF260A | — | 10 | — |
| BLHF2 1-Pole | 15 | BF115AH | 22 | — | — |
| | 20 | BF120AH | 22 | — | — |
| | 30 | BF130AH | 22 | — | — |
| BLHFB 2-Pole | 15 | BF215AH | — | 22 | — |
| | 20 | BF220AH | — | 22 | — |
| | 30 | BF230AH | — | 22 | — |
| | 40 | BF240AH | — | 22 | — |
| | 50 | BF250AH | — | 22 | — |
| | 60 | BF260AH | — | 22 | — |
| HBLF2 1-pole | 15 | BF115AHH | 65 | — | — |
| | 20 | BF120AHH | 65 | — | — |
| | 30 | BF130AHH | 65 | — | — |

GB Family Branch Breakers

NGB – 25,000 A IR Max. @ 480/277V AC / 100,000 A IR @ 240V AC

HGB – 35,000 A IR Max. @ 480/277V AC / 100,000 A IR @ 240V AC

LGB – 65,000 A IR Max. @ 480/277V AC / 100,000 A IR @ 240V AC

| Amp Rating | 1-pole 277V | 2-pole 480Y/277V | 3-pole 480Y/277V |
|------------|-------------|------------------|------------------|
| 15 | xGB1B015B | xGB2B015B | xGB3B015B |
| 20 | xGB1B020B | xGB2B020B | xGB3B020B |
| 25 | xGB1B025B | xGB2B025B | xGB3B025B |
| 30 | xGB1B030B | xGB2B030B | xGB3B030B |
| 35 | xGB1B035B | xGB2B035B | xGB3B035B |
| 40 | xGB1B040B | xGB2B040B | xGB3B040B |
| 45 | xGB1B045B | xGB2B045B | xGB3B045B |
| 50 | xGB1B050B | xGB2B050B | xGB3B050B |
| 60 | xGB1B060B | xGB2B060B | xGB3B060B |
| 70 | xGB1B070B | xGB2B070B | xGB3B070B |
| 80 | xGB1B080B | xGB2B080B | xGB3B080B |
| 90 | xGB1B090B | xGB2B090B | xGB3B090B |
| 100 | xGB1B100B | xGB2B100B | xGB3B100B |
| 110 | xGB1B110B | xGB2B110B | xGB3B110B |
| 125 | xGB1B125B | xGB2B125B | xGB3B125B |

Replace x with N, H or L depending on desired type of breaker
NOTE: 2-pole and 3-pole xGB Frame Breakers are also rated at 14,000 A IR max. for 600Y/347V AC systems. UPB interiors are only rated to 480V max. - see factory assembled section for proper interiors.

Built to order. Allow 2–3 weeks for delivery.

① To add shunt trip to BL breakers, see Speedfax for Breaker Accessories.

② To add shunt trip to BQD breakers, see Speedfax for Breaker Accessories.

TPS3 02

Surge Protection Device (SPD) for Revised P1 Lighting Panelboards (for Original P1 – refer to TPS3 01 Series)

These newly developed kits are for use in the new revised P1 Series only.
Interior part numbers must end with "N" or "T".

Features:

- Mounts internal to:
 - Revised P1 Lighting Panelboards
- Consult factory for field retrofit in Revised P1 Lighting Panelboards
- UL 1449 4th Edition recognized as of 2016
- UL 1283
- Type 4 SPD intended for use in Type 1 applications (Type 2, cUL)
- UL Type 1 tested with all internal OCP and safety coordination features included
- Large block, individually fused, thermally protected, 50 kA MOVs
- 20 kA I_n (most models)
- 200 kA SCCR (most models)
- UL96A Lightning Protection Master Label appropriate (@ 20 kA I_n)
- Applications
 - Provides main service or downstream protection for sensitive computer and electronic loads
 - Standard redundancy use: 100 kA per phase
 - Increased redundancy use: 200 kA per phase
 - Maximum redundancy use: 300 kA per phase
- SPD Specification
 - Surge Current Rating Per Phase

| Per Phase | L-N | L-G | N-G |
|-----------|-------|-------|-------|
| 100kA | 50kA | 50kA | 50kA |
| 150kA | 100kA | 50kA | 50kA |
| 200kA | 100kA | 100kA | 100kA |
| 250kA | 150kA | 100kA | 100kA |
| 300kA | 150kA | 150kA | 150kA |

 - 100% monitoring (Every MOV is monitored, incl. N-G)
 - EMI/RFI filtering: Active tracking up to -50 db from 10 kHz to 100 MHz
 - Repetitive impulse: 5,000 hits
 - Less than ½ nanosecond response time
 - Relative humidity range: 1-95% non-condensing
 - Operating frequency: 47-63 Hz
 - Operating temperature: -25°C (-15°F) to +60°C (140°F)



TPS3 02

UL 1449 3rd Edition SPD

- SPD Features
 - UL 1449 4th Edition recognized as of 2016
 - Designed, manufactured & tested consistent with:
 - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
 - 1992/2000 NEMA LS-1
 - NEC Article 285
 - IEC 61643, CE
 - Large block, individually fused, thermally protected, 50 kA MOVs
- SPD Features
 - Direct bus connected
 - Can be wired to a circuit breaker (consult factory at time of order or see installation manual for retrofit)
 - 10 year warranty
- Standard Monitoring
 - LED indicators
 - Audible alarm with silence switch and test button
 - Dry contacts
- Available Options
 - Surge counter
- Key Bid Specifications
 - UL 1449 3rd Edition Recognized
 - UL 1283
 - Audible alarm with silence switch and test button
 - Dry contacts
 - EMI/RFI filtering
 - Protection modes on L-N, L-G, L-L, N-G
 - I_n Rating - 20 kA
 - Short Circuit Current Rating - 200 kA
 - Surge Current Rating

| | | | | |
|-----------|---|------|---|-------|
| Per Phase | = | L-N | + | L-G |
| 100kA | | 50kA | | 50 kA |

Ordering Information

Catalog

TPS3 02

Voltage Code

A = 120/240V, 1Ø, 3W (Fig 1)
 B = 120/240V, 3Ø, 4W (Fig 3)
 C = 120/208V, 3Ø, 4W (Fig 2)
 D = 240V, 3Ø, 3W (Fig 4)
 E = 277/480V, 3Ø, 4W (Fig 2)
 F = 480V, 3Ø, 3W (Fig 4)
 G = 600V, 3Ø, 3W (Fig 4)
 K = 380/220V, 3Ø, 4W (Fig 2)
 L = 600/347V, 3Ø, 4W (Fig 2)
 S = 400/230V, 3Ø, 4W (Fig 2)

Surge Current (kA)

10 = 100 kA per phase
 15 = 150 kA per phase
 20 = 200 kA per phase
 25 = 250 kA per phase
 30 = 300 kA per phase

– Example: TPS3C0220X = SPD for a 208/120V panelboard with a surge current capacity of 200 kA per phase and a surge counter option

– When surge counter is not selected, include a zero (0) in the field

Available Accessories: Ordered Separately

– RMSIE - Remote monitor

Options

X = Surge counter 2 = Complies with
 Standard with new UL 1449 (4th Edition)
 UL 1449 compliant version

UL 1449 3rd Edition - 2009 Test Data Summary

Voltage Protection Rating (VPR - 6kV, 3kA)

| Voltage Code | Service Voltage | L-N | L-G | N-G | L-L | Type | I_n | SCCR | MCOV |
|--------------|--------------------------|------------|------------|------|-------------|--------|-------|--------|-----------|
| A | 120/240V, 1Ø, 3W (Fig 1) | 700 | 700 | 700 | 1200 | Type 4 | 20 kA | 100 kA | 150 |
| B | 120/240V, 3Ø, 4W (Fig 3) | 700 / 1200 | 700 / 1200 | 700 | 1800 / 1800 | Type 4 | 20 kA | 200 kA | 150 / 320 |
| C | 120/208V, 3Ø, 4W (Fig 2) | 700 | 700 | 700 | 1200 | Type 4 | 20 kA | 200 kA | 150 |
| D | 240V, 3Ø, 3W (Fig 4) | | 1200 | | 1200 | Type 4 | 10 kA | 200 kA | 320 |
| E | 277/480V, 3Ø, 4W (Fig 2) | 1200 | 1200 | 1200 | 2000 | Type 4 | 20 kA | 200 kA | 320 |
| F | 480V, 3Ø, 3W (Fig 4) | | 1800 | | 1800 | Type 4 | 10 kA | 200 kA | 550 |
| G | 600V, 3Ø, 3W (Fig 4) | | 2500 | | 2500 | Type 4 | 10 kA | 200 kA | 690 |
| K | 380/220V, 3Ø, 4W (Fig 2) | 1200 | 1200 | 1200 | 2000 | Type 4 | 20 kA | 200 kA | 320 |
| L | 600/347V, 3Ø, 4W (Fig 2) | 1500 | 1500 | 1500 | 2500 | Type 4 | 10 kA | 200 kA | 420 |
| S | 400/230V, 3Ø, 4W (Fig 2) | 1200 | 1200 | 1200 | 2000 | Type 4 | 20 kA | 200 kA | 320 |

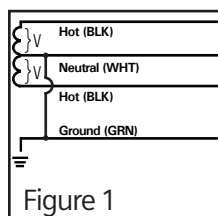


Figure 1

Split
2 Hots, 1 Neu, 1 Grnd

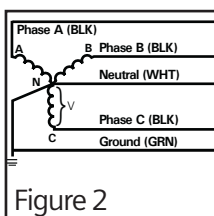


Figure 2

Wye
3 Hots, 1 Neu, 1 Grnd

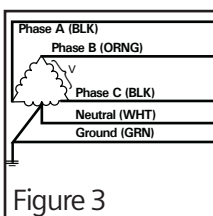


Figure 3

Hi-Leg Delta (B High)
3 Hots, (B High),
1 Neu, 1 Grnd

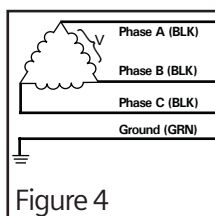


Figure 4

Delta & HRG Wye
3 Hots, 1 Grnd

Notes:

- ① Available 100 kA & 150 kA only



TPS3 L2 - True 10 Mode Protection

Surge Protection Device (SPD) for Revised P1 Lighting Distribution Panelboards (for Original P1 – refer to TPS3 L1 Series)

These newly developed kits are for use in the new revised P1 Series only.
Interior part numbers must end with "N" or "T".

Features:

- Mounts internal to:
 - Revised P1 Lighting Panelboards
- Consult factory for field retrofit in Revised P1 Lighting Panelboards
- UL 1449 4th Edition recognized as of 2016
- UL 1283
- Type 4 SPD intended for use in Type 1 applications (Type 2, cUL)
- UL Type 1 tested with all internal OCP and safety coordination features included
- Large block, individually fused, thermally protected, 50 kA MOVs
- 20 kA I_n (most models)
- 200 kA SCCR (most models)
- UL96A Lightning Protection Master Label appropriate (@ 20 kA I_n)
- Applications
 - Provides main service or downstream protection for sensitive computer and electronic loads
 - Standard redundancy use: 150 kA per phase
 - Maximum redundancy use: 300 kA per phase
- SPD Specifications
 - Directly connected discrete protection elements between all possible modes providing true 10 mode protection
 - Surge Current Rating Per Phase

| Per Phase | L-N | L-G | L-L | N-G |
|-----------|-------|-------|-------|-------|
| 150kA | 50kA | 50kA | 50kA | 50kA |
| 300kA | 100kA | 100kA | 100kA | 100kA |
 - 100% monitoring (Every MOV is monitored, incl. N-G)
 - EMI/RFI filtering: Active tracking up to -50 db from 10 kHz to 100 MHz
 - Repetitive impulse: 5,000 hits
 - Less than ½ nanosecond response time
 - Relative humidity range: 1-95% non-condensing
 - Operating frequency: 47-63 Hz
 - Operating temperature: -25°C (-15°F) to +60°C (140°F)



TPS3 L2

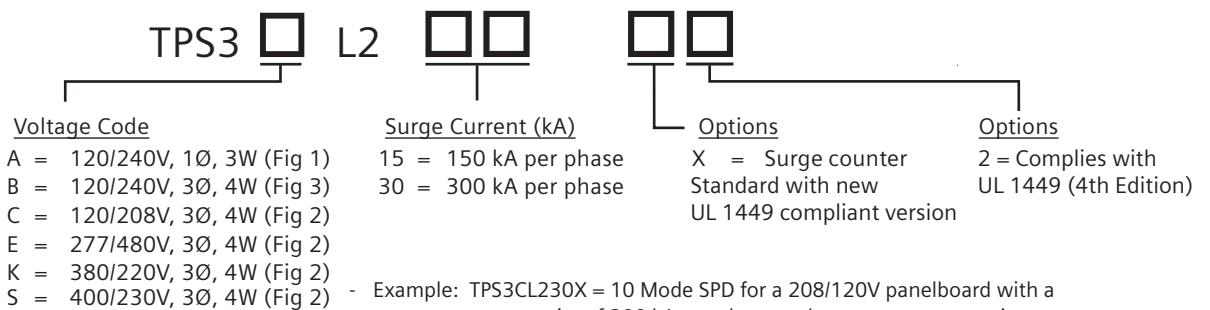
UL 1449 3rd Edition SPD

- SPD Features
 - UL 1449 4th Edition recognized as of 2016
 - Designed, manufactured & tested consistent with:
 - ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
 - 1992/2000 NEMA LS-1
 - NEC Article 285
 - IEC 61643, CE
 - Large block, individually fused, thermally protected, 50 kA MOVs
- SPD Features
 - Direct bus connected
 - Can be wired to a circuit breaker (consult factory at time of order or see installation manual for retrofit)
 - 10 year warranty
- Standard Monitoring
 - LED indicators
 - Audible alarm with silence switch and test button
 - Dry contacts
- Available Options
 - Surge counter
- Key Bid Specifications
 - UL 1449 3rd Edition Recognized - 2009
 - UL 1283
 - Audible alarm with silence switch and test button
 - Dry contacts
 - EMI/RFI filtering
 - Protection modes on L-N, L-G, L-L, N-G
 - I_n Rating - 20 kA
 - Short Circuit Current Rating - 200 kA
 - Surge Current Rating

| | | | | | | |
|-----------|---|------|---|------|---|------|
| Per Phase | = | L-N | + | L-G | + | L-L |
| 150kA | | 50kA | | 50kA | | 50kA |

Ordering Information

Catalog #



- Example: TPS3CL230X = 10 Mode SPD for a 208/120V panelboard with a surge current capacity of 300 kA per phase and a surge counter option
- When surge counter is not selected, include a zero (0) in the field

Available Accessories: Ordered Separately

- RMSIE - Remote monitor

UL 1449 3rd Edition - 2009 Test Data Summary

Voltage Protection Rating (VPR - 6kV, 3 kA)

| Voltage Code | Service Voltage | L-N | L-G | N-G | L-L | Type | I_n | SCCR | MCOV |
|--------------|--------------------------|------------|------------|------|-------------|--------|-------|--------|-----------|
| A | 120/240V, 1Ø, 3W (Fig 1) | 700 | 700 | 700 | 1000 | Type 4 | 20 kA | 100 kA | 150 |
| B | 120/240V, 3Ø, 4W (Fig 3) | 800 / 1500 | 700 / 1200 | 700 | 1800 / 1800 | Type 4 | 20 kA | 200 kA | 150 / 320 |
| C | 120/208V, 3Ø, 4W (Fig 2) | 700 | 700 | 700 | 1000 | Type 4 | 20 kA | 200 kA | 150 |
| E | 277/480V, 3Ø, 4W (Fig 2) | 1200 | 1200 | 1200 | 1800 | Type 4 | 20 kA | 200 kA | 320 |
| K | 380/220V, 3Ø, 4W (Fig 2) | 1200 | 1200 | 1200 | 1800 | Type 4 | 20 kA | 200 kA | 320 |
| S | 400/230V, 3Ø, 4W (Fig 2) | 1200 | 1200 | 1200 | 1800 | Type 4 | 20 kA | 200 kA | 320 |

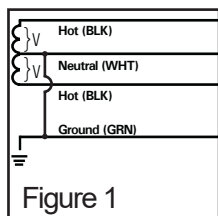


Figure 1

Split
2 Hots, 1 Neu, 1 Gmd

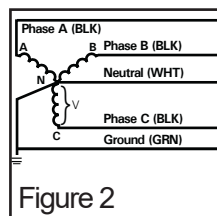


Figure 2

Wye
3 Hots, 1 Neu, 1 Gmd

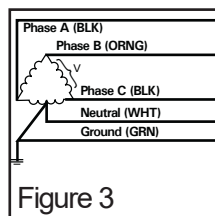


Figure 3

Hi-Leg Delta (B High)
3 Hots, (B High),
1 Neu, 1 Gmd



Replacement Filler Plate Reference Chart

| Ref. | Panel Type | Breaker Position | Breaker Type | Orientation | Catalog No. | Catalog Description / comments | Filler Plate Eng ref # | Filler Description |
|------|--------------------------|----------------------------|---------------------------------|------------------------------------|--------------------|---|--|--|
| A | P1 & RP1, P2, P3, C1, C2 | Branch & Main ¹ | BL/BQD/xGB/xGB2/ED ¹ | Horizontal or Vertical (as needed) | DFFP1 ² | 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) - also used to fill void where a 2-pole breaker is installed in a 3-pole position in various applications. | 11-D-4554-01 * | Blank Filler 1" |
| B | P1 & RP1, C1 | Main / Subfeed | blank - no breaker | Horizontal or Vertical | DFFP01A | P1 Main Blank Filler Plate - 1 Piece (use for Original or Revised P1 - also replaces 12-A-1801-01) (Vertical for 400A Main) | 11-D-4560-01* (replaces 12-A-1801-01) | P1 Blank Filler Plate |
| C | P1 & RP1 | Main / Subfeed | ED | Horizontal | DFFPED01 | P1 ED Main Filler Plate - 1 Piece | 12-A-1802-01 | P1 125A Filler Plate |
| D | P1 & RP1 | Main / Subfeed | QJ 2-pole | Horizontal | DFFPQJ02 | P1 QJ Main Filler Plate 2 pole - 1 Piece | 12-A-1804-02 | P1 QJ Filler Plate |
| E | P1 & RP1 | Main / Subfeed | QJ 3-pole | Horizontal | DFFPQJ01 | P1 QJ Main Filler Plate 3 pole - 1 Piece | 12-A-1804-01 | P1 QJ Filler Plate |
| F | P1 & RP1 | Main / Subfeed | QR | Horizontal | MBKQRFK | P1/Revised P1 Filler for 1PH/3PH QR. Horizontal Mount only. | 11-D-4563-01 * | P1 QR Filler Plate |
| G | P1 & RP1 | Main / Subfeed | FD | Horizontal | DFFPFD01 | P1 FD Main Filler Plate - 1 Piece | 12-A-1803-01 | FD Filler Plate |
| H | P1 & RP1 | Main | JD | Vertical | DFFPJD01 | P1 JD Main Filler Plate - 1 Piece | 11-D-4522-01 | Deadfront Filler 400 - 800A Breaker |
| I | P2 & P3 | Branch | BL/BQD/xGB/xGB2/ED | n/a ¹ | DFK1 | BL, BQD, ED deadfront kit for 1" pole breakers - Center strips 3", 6", 9", 12", 15", 18", 21" plus mounting hardware | multiple parts 11-D-3018-01 thru07 | Center strips included (7 sizes) 3", 6", 9", 12", 15", 18", 21" (of branch height) |
| J | P2 & P3 | Branch | blank - no breaker | Horizontal | DFFP3 | Deadfront filler, 3" steel blank filler plate (one each P2&P3) | 11-D-3014-02 11-D-3035-02 | P2 Blank Deadfront Plate 3" P3 Blank Cover Plate 2.97" |
| K | P2 & P3 | Branch | blank - no breaker | Horizontal | DFFP6 | Deadfront filler, 6" steel blank filler plate (one each P2&P3) | 11-D-3014-01 11-D-3035-01 | P2 Blank Deadfront Plate 6" P3 Blank Cover Plate 5.97" |
| L | P2 | Branch | QR | Horizontal and Vertical | BBKQRP1FK | P2 Filler for QR. Horizontal or vertical mount. It contains all cover plates necessary to change from QJ to QR both 2 and 3-pole breakers. | 11-D-3282-01 11-D-4563-01* 11-D-4564-01 | QR Deadfront Plate P1 QR Filler Plate P2 QR Deadfront Filler |
| M | P3 | Branch | QR | Horizontal | BBKQRP2FK | P3 Filler for QR. Dual mount horizontal. - 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. | 11-D-4565-01 11-D-3283-01 11-D-3284-01 11-D-3288-01 12-6812-34 | P3 QR Deadfront Filler P3 DUAL QJ Deadfront Plate P3 DUAL QJ Deadfront Plate P3 QR-QJ Combo Deadfront Plate Breaker Blank Filler |
| N | P3 | Branch | NEB/HEB | Horizontal | EBF1 | EB Filler Plate | 11-D-4529-01 | EB Deadfront Filler |
| O | P3 | Branch | BL, BQD, ED or GB | Horizontal | DFP3AP01 | Used for filling space in a P3 deadfront when a BL, BQD, ED or GB branch breaker is installed. Can be replaced in field if lost or damaged. | 11-D-3033-01 | P3 BL/BQD/ED/xGB adaptor plate 3" - 1 Piece per pack |

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