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.

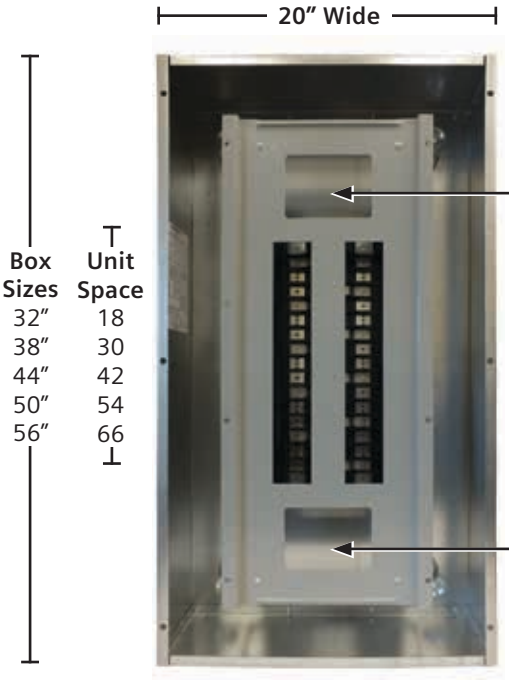
Revised P1 Panelboard 250 & 400A

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

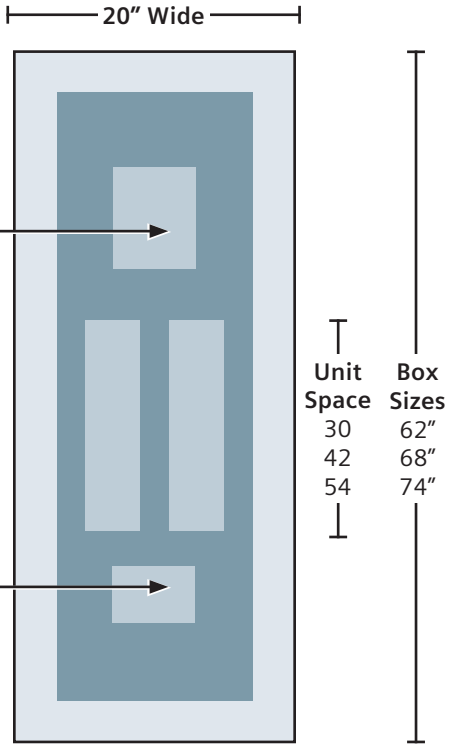
- **Invertability**
- **Flexibility**

FT

250A MLO/MB

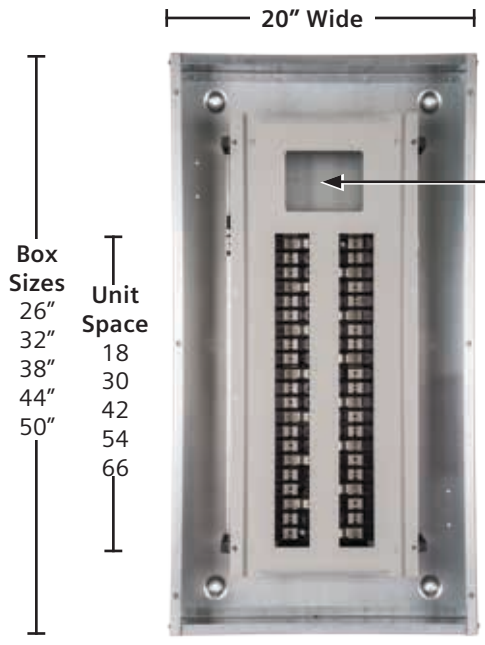


400A MLO / MB

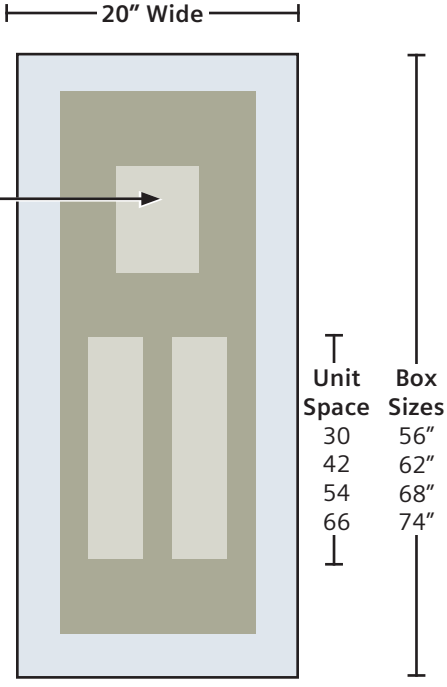


NFT

250A MLO/MB



400A MLO / MB



Revised P1 Panelboard 250A

Why move to NFT?

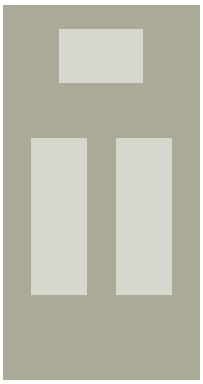
A) Smaller Box Size -
If Customer does not need Sub-feed space or does not want to pay for it.

- 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.

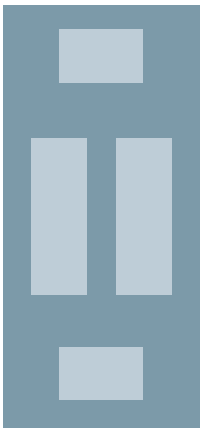
New for Revised
250A
18 circuit NFT



B26 Enclosure

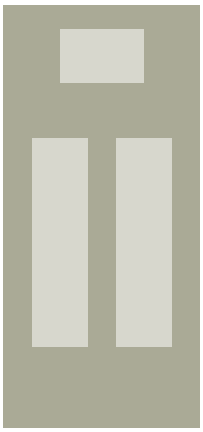
6" shorter than FT

Original & Revised
250A
18 circuit FT



B32 Enclosure

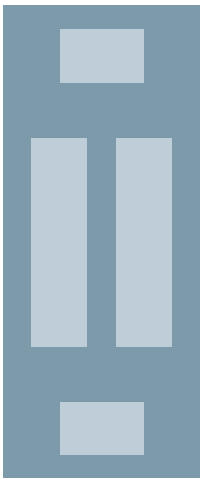
New for Revised
250A
30 circuit NFT



B32 Enclosure

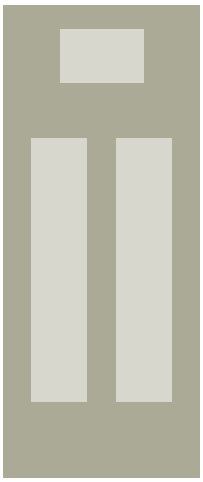
6" shorter than FT

Original & Revised
250A
30 circuit FT



B38 Enclosure

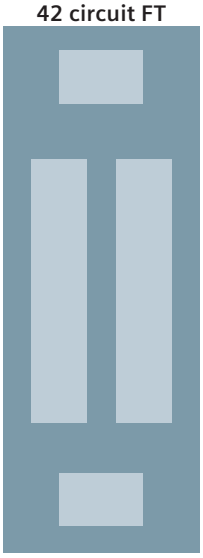
New for Revised
250A
42 circuit NFT



B38 Enclosure

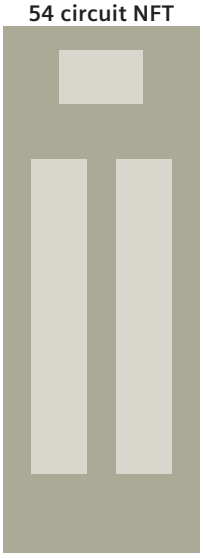
6" shorter than FT

Original & Revised
250A
42 circuit FT



B44 Enclosure

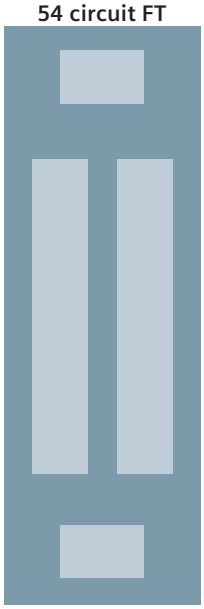
New for Revised
250A
54 circuit NFT



B44 Enclosure

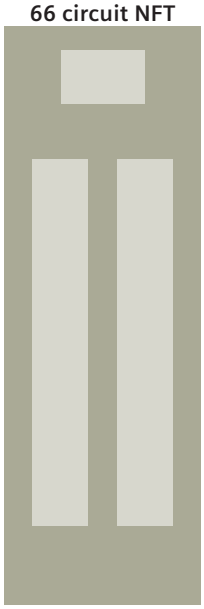
6" shorter than FT

New for Revised
250A
54 circuit FT



B50 Enclosure

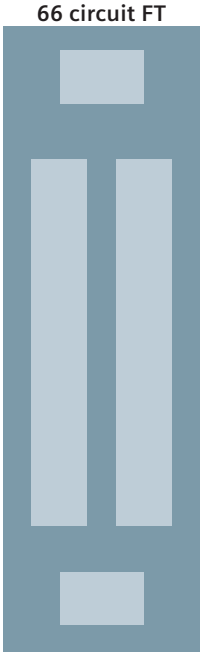
New for Revised
250A
66 circuit NFT



B50 Enclosure

6" shorter than FT

New for Revised
250A
66 circuit FT



B56 Enclosure

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.

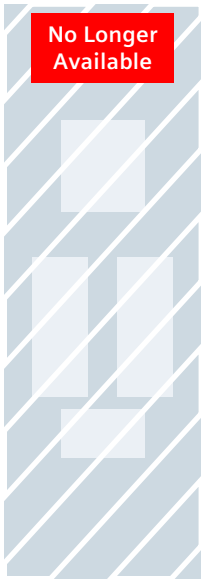
- 6" shorter Enclosure than FT
- No Sub-Feed Space - pay for what you need only.

B) More Circuits needed -
If Customer does not need Sub-feed space or does not want to pay for it.

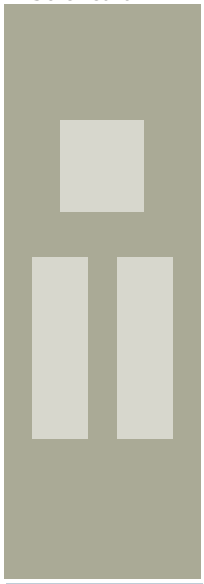
- 12 more circuits than FT in same box size
- No Sub-Feed Space- pay for what you need only.

400A
18 circuit NFT

No Longer Available



New for Revised
400A
30 circuit NFT



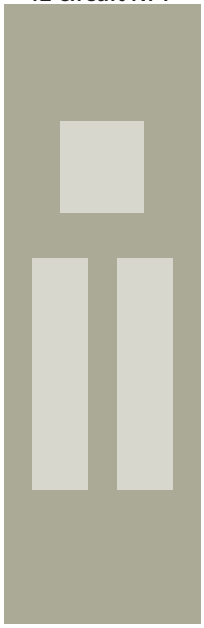
B56 Enclosure

6" shorter than FT

Original & Revised
400A
30 circuit FT

B62 Enclosure

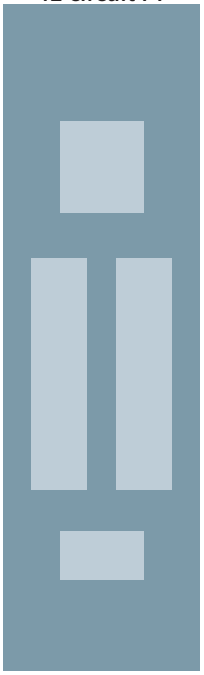
New for Revised
400A
42 circuit NFT



B62 Enclosure

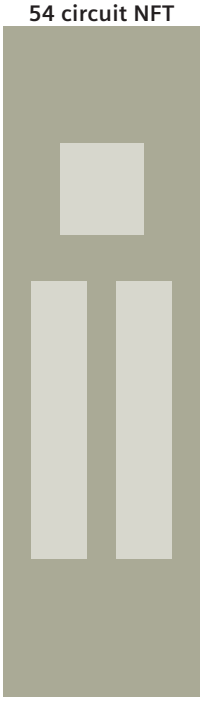
6" shorter than FT

Original & Revised
400A
42 circuit FT



B68 Enclosure

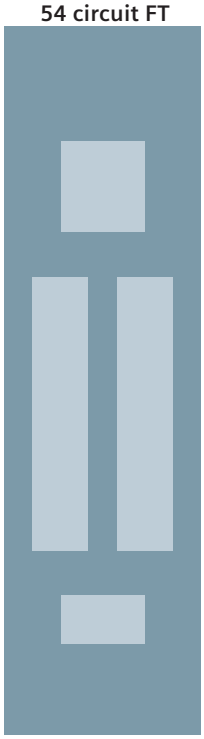
New for Revised
400A
54 circuit NFT



B68 Enclosure

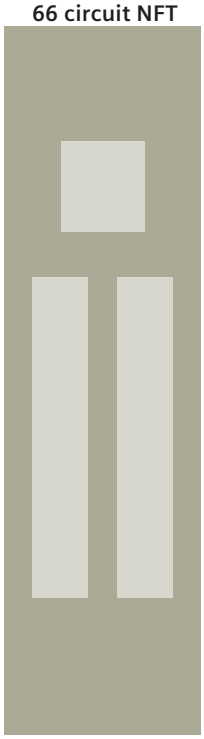
6" shorter than FT

New for Revised
400A
54 circuit FT



B74 Enclosure

New for Revised
400A
66 circuit NFT



B74 Enclosure

400A
66 circuit FT

Not Available

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 will have FT and NFT variations for all circuits: 18, 30, 42, 54 and 66 (xGB panels only available as FT)

   b) P1-400A will have 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 new Neutral system has been developed to accommodate the extended circuit variations without increasing costs.
   - The new 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 will only get 54 circuit added to the program for both P1-250A and P1-400A.
   - All UPB interiors will be 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.
   - New 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. Both "Strap Kits" and Kits with Breakers.

   b) All Main Lug Kits are new.

   c) All Neutral Lug Kits are new.

6. **BL/BQD and xGB (NGB/HGB/LGB) Main Breaker Usage is now only available as a Back-Fed variation.**

   - The Revised P1 interior does not have "strap kits" for the BL/BQD and xGB series of breakers to be used in the "Main" or "Sub-Feed" positions. If needed to be used as a Main - we now have a "Main Label Kit" that allows the placement of the breaker in unit space to be used as the Main when labeled properly. This does reduce unit space by "2 circuits" in a single phase panel and by "3 circuits" in a 3-phase panel. Since 54 and 66 circuit panels are now available - this should not be an issue.

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

   - The new 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 will be 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 is introduced replacing 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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Revised P1 panelboards quick reference guide for selection and application

Revised P1 Factory Assembled Panelboards

Revised P1 Unassembled Panelboards

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.

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.

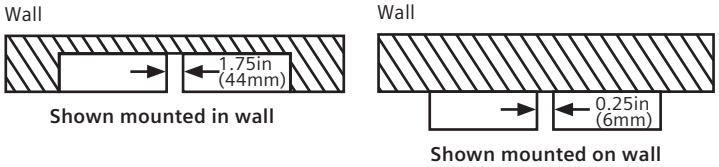
Standards
NEC: 2014 (where accepted)
NEMA: PB1
UL: 67, 50 and 50E. Listed by Underwriter's Laboratories, Inc., under "Panelboards" File #E2269, and #E4016. Meets Federal Specification W-P-115c.

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.

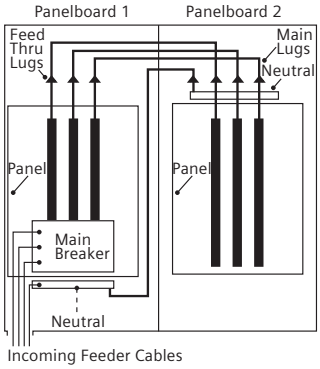
Lug Data
Space Required for Mounting of Double Panels



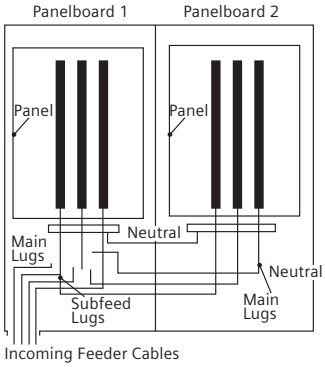
Use two or more panelboards with feed-thru or subfeed lugs when:

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 Panelboard1 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

Type of Panel

P1

Voltage and System*

C = 208Y/120 3Ø 4 W Wye AC
E = 480Y/277 3Ø 4 W Wye AC
D = 240 3Ø 3 W Delta AC
F = 480 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 Space②

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)			
					Unit Space		Box Height	Weight in Lbs. (kg)
					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)
	ED2, ED4	#14-#10 AWG Cu or #12-10 AWG Al	18	30	9	15	32 (813)	110 (50)
			30	42	15	21	38 (965)	125 (57)
	ED6, HED4 HED6	#3-3/0 Cu or #1-2/0 Al #3-3/0 Cu or #1-2/0 Al	42	54	21	27	44 (1118)	140 (64)
			54	66	27	33	50 (1270)	155 (71)
			66	–	33	–	56 (1423)	170 (78)
225	QJ2, QJH2, QJ2H, QR2, QRH2, HQR2, HQR2H	#6 AWG-300 Kcmil (Cu) or #4 AWG-300 Kcmil (Al)		18	–	9	26 (661)	95 (43)
			18	30	9	15	32 (813)	110 (50)
			30	42	15	21	38 (965)	125 (57)
250	FXD6, FD6, HFD6, HFXD6	#6 AWG-350 Kcmil (Cu) or #4 AWG-350 Kcmil (Al)	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 BL, BLH, HBL, BQD, and xGB mount in unit space and count in max. # 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
	HED4	42	42	H4	50, 60, 70, 80, 90, 100, 110, 125
225	QJ2 (STD)	10		QJ	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
	QJH2	22		QH	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
	QJ2H	42		Q2	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
	QR2	10		QR	100, 110, 125, 150, 175, 200, 225
	QRH2	25		Q4	100, 110, 125, 150, 175, 200, 225
	HQR2	65		Q5	100, 110, 125, 150, 175, 200, 225
	HQR2H	100		Q6	100, 110, 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) Unit Space FT A	Unit Space NFT A	Box Height B"	Weight in Lbs. (kg)	MLO Connectors Suitable for
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) 120V	120/240V	240V	277V	480/277V	Available Trip Values	Connections Suitable for Cu or Al
100	BL	1	10	–	–	–	–	15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70	15-20A #14-#10 AWG Cu #12-#10 AWG Al 25-35A #8-#6 AWG Cu #8-#6 AWG Al 40-50A #8-#6 AWG Cu #8-#4 AWG Al 55-70A #8-#4 AWG Cu #8-#2 AWG Al 80-100A #4-#1/0 AWG Cu #2-#1/0 AWG Al
		2	–	10	–	–	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100	
		3	–	–	10	–	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100	
	BLR	2	–	–	10	–	–	15, 20, 30, 40, 50, 60, 70, 90, 100	
	BL, HID	1	10	–	–	–	–	15, 20, 30	
		2	–	10	–	–	–	15, 20, 30	
	BLH	1	–	22	–	–	–	15, 20, 30, 40, 50, 55, 60, 70	
		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	
	BQD	1	–	65	–	14	–	15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 90, 100	15-40A #14-#6 AWG Cu #12-#6 AWG Al 45-100A #8-#1 AWG Cu #6-#1/0 AWG Al
		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	
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	

① Two-pole breaker is one phase and neutral. Three-pole is two phases and neutral.
② P1 panel with NGB/HGB/LGB branch devices will not accept BL or BQD frames in the same panel as branch devices.
③ The New Revised P1 (18 circuit 250A only) is limited to 100A per connection (200A per pair) when installing Branch Breakers across from one another. All other configurations allow 125A per connection max. (250A per pair max.)

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

Application

Type P1 Panelboards

Table P1-7 – Subfeed Breakers

Breaker Type	Number of Poles	Max. Interrupting Rating (kA)		Available Trip Values
		240V	480Y/277V	
QJ2	2, 3	10	–	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
QJH2	2, 3	22	–	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
QJ2H	2, 3	42	–	60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225
QR2	2, 3	10	–	100, 110, 125, 150, 175, 200, 225
QRH2	2, 3	25	–	100, 110, 125, 150, 175, 200, 225
HQR2	2, 3	65	–	100, 110, 125, 150, 175, 200, 225
HQR2H	2, 3	100	–	100, 110, 125, 150, 175, 200, 225
ED4	2, 3	65	18	15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 70, 80, 90, 100, 110, 125
HED4	2, 3	100	42	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
100A	BQD	3 Phase	MBKBC3	Use Back-fed Main Label Kit # MBKBFA ② (includes Neutral Lug, "MAIN" label and instructions)
100A	BL, BLH, HBL	1 Phase	MBKBL1	
		3 Phase	MBKBL3	
125A	NGB, HGB, LGB	1 Phase	MBKNB1	
		3 Phase	MBKNB3	
125	ED4, ED6, HED4, HED6	1 Phase	MBKED1	MBKED1A
		3 Phase	MBKED3	MBKED3A
225	QJ2, QJH2, QJ2H	1 Phase	MBKQJ1	MBKQJ1A
		3 Phase	MBKQJ3	MBKQJ3A
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	1 Phase	MBKJD1	MBKJD1A
	HJD6, HJXD6	3 Phase	MBKJD3	MBKJD3A

① 400 amp kit is for main—only, not allowed for subfeed breaker.
② Back-fed main occupies branch space.
③ Although QR is rated 250A, it is limited to 225A in panelboard.

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

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

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

① Original P1 kits will not work with Revised P1 interiors if the chart shows different part numbers for each.
② Revised P1 kits will not work with original P1 interiors if the chart shows different part numbers for each.
③ Factory installed and field installable Service Entrance Barrier kits are now available as required by UL67. (In COMPAS, you must select Service Entrance Required.)

Application

Type P1 Panelboards

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

Main Breaker	Max. Interrupting Rating (kA)		Neutral Location
	20" wide box	24" wide box	20" wide box
BL, BLH, HBL, BQD ②	8.500 (216) ③	10.500 (267) ③	10.500 (267)
NGB, HGB, LGB ②	8.000 (203) ③	10.000 (254) ③	10.500 (267)
ED2, ED4, ED6, HED4	6.125 (156)	8.125 (206)	10.500 (267)
QJ2, QJH2, QJ2H	6.500 (165)	8.500 (216)	10.500 (267)
QR2, QRH2, HQR2, HQR2H	6.500 (165)	8.500 (216)	10.500 (267)
FD6, FXD6, HFD6, HFXD6	5.250 (133)	7.250 (184)	10.500 (267)
JD6, JXD6 ①	15.000 (381)	15.000 (381)	26.500 (674)

① JD frame mounted vertically.

② For Revised P1, use Side Gutter Wiring Specs Table P1-15. These are back-fed main breakers.

③ These dimensions are for Original P1 as a reference only, not for Revised P1.

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

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

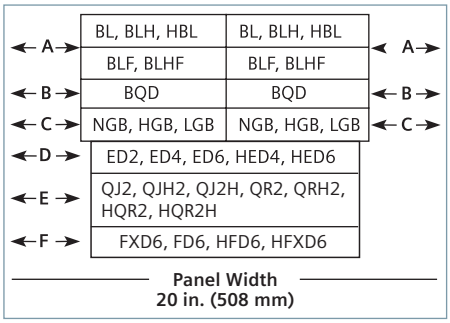
NOTE: Feed-thru lug and neutral wire bending space is 15.000" and 16.250" respectively on 400A panel.

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

Reference Letter	Panel Width 20"	Panel Width 24" Optional
A 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.

Fig P1-1



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

Miscellaneous Parts and Accessories

Catalog #	Description
BK1	Bonding Kit for 400A max. Original P1 Panels
BK1A	Bonding Kit for 400A max. Revised P1 Panels
BK2	Bonding kit for S1/S2 400 & 600
BK3	Bonding kit for S3 Panel
IMK1	Interior Adjusting Kit
11-1824-01	Directory Card Holder
12-1110-01	Directory Card
MCHK	Metal Card Holder Kit
ANSI/NEMA PB 1.1-2013③	General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less (O&M Manual)
NBK03	Number Strips 1–42. Stick-on type; Use w/ P1 series Panels
NBK04	Number Strips 43–84. Stick-on type; Use w/ P1 series Panels
NBK05	Number Strips 85–126. Stick-on type; Use w/ P1 series Panels
NBK06	Number Strips 127–168. Stick-on type; Use w/ P1 series Panels
EGK	AL Ground Bus 44 Connections
ECGK	CU Ground Bus 44 Connections
IGK	Insulated AL Ground Bus
ICGK	Insulated CU Ground Bus
EWK1	End Wall Kit with Knockouts (20" W x 5.75" DP)
EWK2	End Wall Kit with Knockouts (24" W x 7.75" DP)
EBF1	NEB/HEB Filler Plate
P1SCRWS	Package of 42 breaker mounting screws for P1
DFFP1	1" Branch circuit filler plate (suitable for replacing QF3 in P1 thru P5 Panelboards and Switchboards)
SEBKRP1V1②	FD, QJ, QR Service Entrance Barrier Kit (Revised P1)
SEBKRP1V2②	ED Service Entrance Barrier Kit (Revised P1)
SEBKRP1V3②	BQD Service Entrance Barrier Kit (Revised P1 - back-fed)
SEBKRP1V4②	xGB Service Entrance Barrier Kit (Revised P1 - back-fed)
SEBKRP1P2P3V1②	JD, LD Service Entrance Barrier Kit (RP1, P1, P2, P3)
P1CONBPHCU ①	Connector kit – 6 pcs. B-phase Copper
P1CONBPHAL ①	Connector kit – 6 pcs. B-phase Aluminum
P1CONACPHCU ①	Connector kit – 6 pcs. A or C-phase Copper
P1CONACPHAL ①	Connector kit – 6 pcs. A or C-phase Aluminum
MBKQRFK	P1/Revised P1 Filler for 1PH/3PH QR. Horizontal mount only.
HPLQR	QR Padlock Device
HBLQR	QR Handle Block Device

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

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 ①③	Original P1 – Subfeed Space	Revised P1 – Subfeed Space ①③	Original P1 – Subfeed Space	Revised P1 – Subfeed Space ①③④
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	P1C18ML125ATST⑤	P1A18ML125ATS	P1A18ML125ATST⑤	P1E18ML125ATS	P1E18ML125ATST⑤
	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	P1C18ML250ATST⑤	P1A18ML250ATS	P1A18ML250ATST⑤	P1E18ML250ATS	P1E18ML250ATST⑤
	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
	66②	74②	–	P1C66ML400ATSN②	–	P1A66ML400ATSN②	–	P1E66ML400ATSN②

Table P1-17 – Main Circuit Breaker

100	18	32	P1C18BL100ATS	P1C18BL100ATST⑤	P1A18BL100ATS	P1A18BL100ATST⑤	P1E18BD100ATS	P1E18BD100ATST⑤
	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	P1C18NB125ATST⑤	–	–	P1E18NB125ATS	P1E18NB125ATST⑤
	30	38	P1C30NB125ATS	P1C30NB125ATST	–	–	P1E30NB125ATS	P1E30NB125ATST
	42	44	P1C42NB125ATS	P1C42NB125ATST	–	–	P1E42NB125ATS	P1E42NB125ATST
	54	50	–	P1C54NB125ATST	–	–	–	P1E54NB125ATST
	66	56	–	P1C66NB125ATST	–	–	–	P1E66NB125ATST
225	18	32	P1C18QR225ATS	P1C18QR225ATST⑤	P1A18QR225ATS	P1A18QR225ATST⑤	P1E18FX250ATS	P1E18FX225ATST⑤
	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	P1C18FX250ATST⑤	P1A18FX250ATS	P1A18FX250ATST⑤	P1E18FX250ATS	P1E18FX250ATST⑤
	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
	66②	74②	–	P1C66JX400ATSN②	–	P1A66JX400ATSN②	–	P1E66JX400ATSN②

Table P1-18 – Standard Enclosures

Box Height (in.)	Catalog Number				
	Type 1 Standard Trim				
	Box	Surface	Flush	Type 3R	Type 3R/12
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 only available as Back-Fed. No kits are available for use in Main or Sub-feedspace. (GB Type includes NGB, HGB and LGB Breakers). These breakers take up branch circuit space.

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
- Hinged trims
- Door-in-door trims
- Screw to the box trims
- Piano hinge trims
- Painted boxes
- Custom colors
- Increase gauge trims and boxes (See pages 12-13)
- Stainless steel trims and boxes
- Type 1 enclosures (Std 16 Gage / Optional 14 or 12 Gage)
- NEMA 3R/12 enclosures
- NEMA 4 enclosures
- NEMA 4X enclosures
- Special Keyed Locks (Keys are not supplied)
- Panel skirts
- Gaskets between trim and box

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

Panel Modifications

Enclosures

- Main Bus
  Standard main bus is tin-plated aluminum. For copper main bus, add from the table for each panel. Includes copper neutral cross bar. For copper neutral branch lugs, see miscellaneous.
- Compression lug for MLO 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
- Factory installed and field installable Service Entrance Barrier kits are now available as required by UL67
- Bus mounted SPD/TVSS ①
- Service entrance labeling
- Grounding of Panelboards
  Ground Bars except for brazed to box are shipped with the panel interior.
  - Non-Insulated Equipment Ground Bar – Standard
  - Copper Non-Insulated Ground Bar
  - AL Insulated Equipment Ground Bar
  - CU Insulated Equipment Ground Bar
  - Ground Bar Brazed to Box (recommended for painted boxes)
- Shunt Trip on Main or Branch
  BL②, BLH②, HBL②, BQD②, xGB② as branch use 1" unit space for shunt trip.

QJ2, QJ2H, QJH2, QR2, QRH2, HQR2, HQR2H, ED2, ED4, ED6, HED4, HED6, HHED6, FD6, FXD6, HFD6
HFXD6, JXD6, JD6, HJD6, HJXD6

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

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

Note: Specify copper or aluminum cable.

① Do not increase panel or enclosure size.
② Accessories on 1" pole breakers (BL, BQD, xGB, ED) will take 1" unit space.
③ External to the panel, supplied in a separate enclosure.

Miscellaneous Modifications

Type P1 Panelboards

Compression Lugs

Table P1-19 – Lugs

Style	Amp Rating	Breaker Type	Compression Connectors	Box Height 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	QJ2, QJH2, QJ2H, QR2, QRH2, HQR2, HQR2H	(1) #6 AWG - 350 kcmil CU or AL	Box must go to 24" wide for All breakers
	250	FXD6, HFD6	(1) #6 AWG - 350 kcmil CU or AL	Box must go to 24" wide for All breakers

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 enclosre. See chart below for reference to approximate actual 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.

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

Table P1-21

Catalog Number	Enclosure – Stainless Steel Size (inches) (304SS is standard)		
	H	W	D
B4X26	26	20	5.75
B4X32	32	20	5.75
B4X38	38	20	5.75
B4X44	44	20	5.75
B4X50	50	20	5.75
B4X56	56	20	5.75
B4X62	62	20	5.75
B4X68	68	20	5.75
B4X74	74	20	5.75

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

Enclosure Fiberglass Size (inches)		
H	W	D
36	30	8
36	30	8
48	36	12
48	36	12
60	36	12
60	36	12

Remote Switch Modifications

Table P1-22 – Control Power Transformer

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

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

Table P1-24 – Remote Control Switch Modification

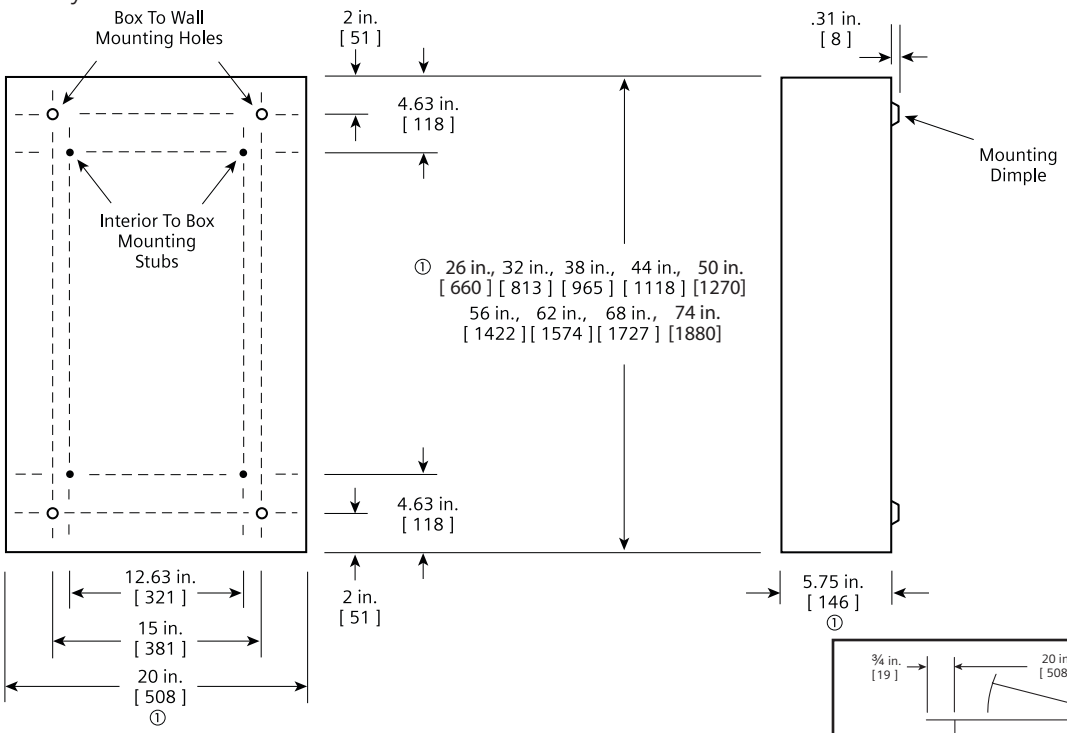
Description
Auxiliary Contacts (mounted, not wired)
2-Wire Control

Dimensions

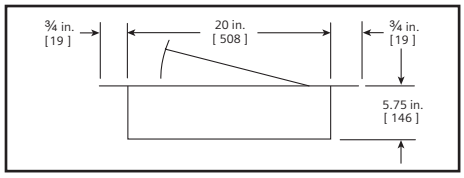
Type P1 Panelboards

Type 1 Box

Box is symmetrical

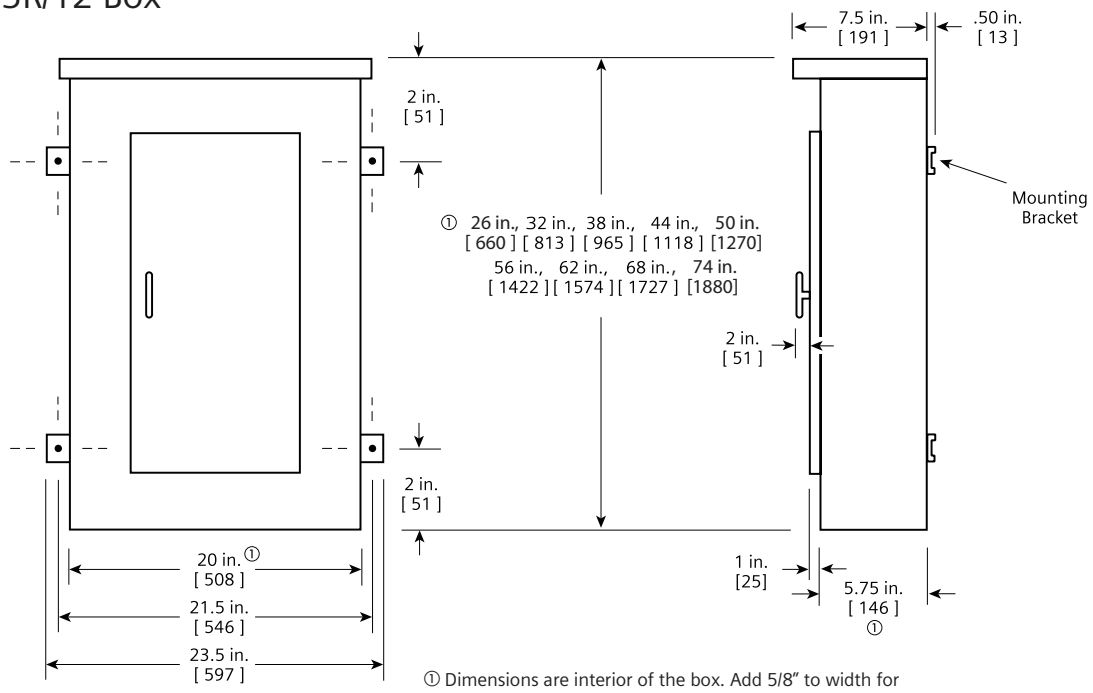


(UL approved construction. 16 Gage Steel or equivalent alternate Construction. 14 or 12 Gage is available as an optional special order.)



Flush Mounting

Type 3R and 3R/12 Box



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

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

Dimensions shown in inches and millimeters [ ].

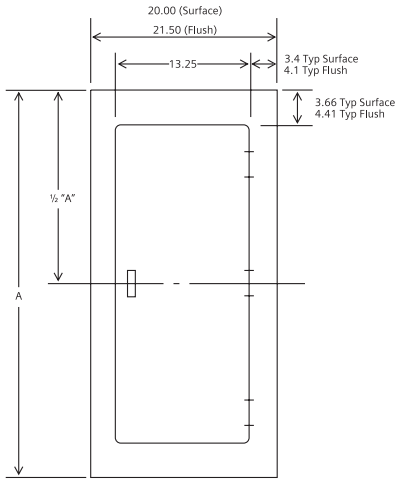
Dimensions

Panelboards - Trim / Front

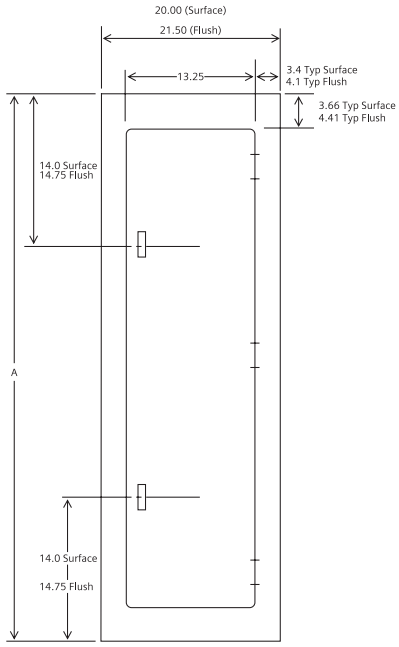
Standard Trim (FAS-Latch)
(14 Gage Standard - no options)
(UPB includes surface or flush versions of this style in chart on page 14. Other special fronts below are not part of the UPB program.)

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

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



Box Size	Surface A	Flush A	# of Hinges
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



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

Hinged Front

Also available

- Screw to Box Trim
  (14 Gage Std./12 Gage Optional)
- Piano Hinge Trim
  (not available for 10 Gage)
  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 userfriendly. 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 is completely symmetrical allowing it to be changed from top to bottom feed by simply rotating the interior.

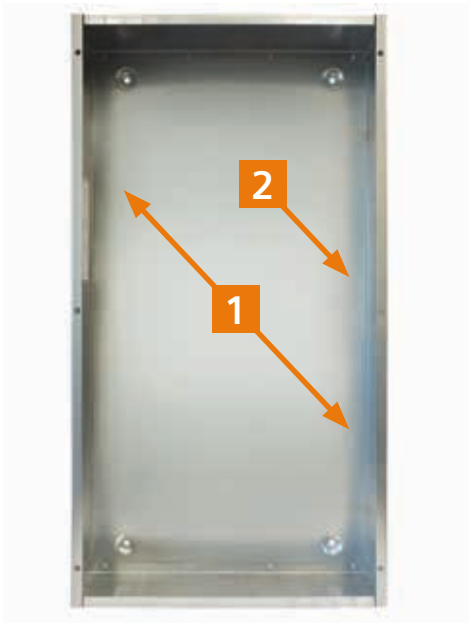
4) Choose either a Main Breaker kit or Main Lug kit with which to terminate your incoming cables. Main lug kits are contractor friendly lugs through 350 kcmil (250 amp panel) or (1) 600 kcmil or (2) 250 kcmil connectors for 400 amp panels. No line connectors in the P1 panel require multiple wires under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

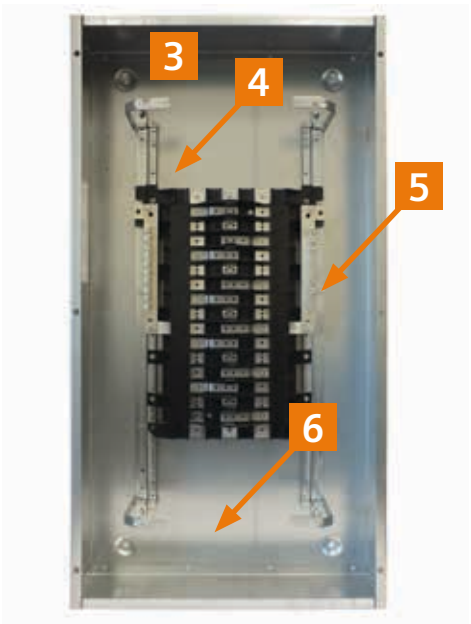
5) Branch neutral connections are near the breaker connections to speed wiring and reduce clutter. The standard P1 neutral is rated for 100% of the panel's ampacity and will accept copper or aluminum wire. Optional 200% and 2/0 neutrals are also available.

6) The panel includes space to add (1) sub-feed breaker (max 250 amps), feed-thru lugs or 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. Compute total number of poles to determine interior catalog number. (Note: BL / BQD (or) xGB Main Breaker will use unit space. The total number of poles should include 2 (or) 3 poles for 1-phase (or) 3-phase mains.)
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 page 5 and 6 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 June 2014. All original P1 devices do not include the "Subfeed Space" Indicator. All original P1 included the Subfeed Space as standard.

P	1	X	1	8	M	C	2	5	0	A	T

Type of Panel
P1

Voltage and System
X = 208Y/120, 3-Phase 4-Wire
A = 120/240V, 1-Phase 3-Wire
E = 480Y/277V, 3-Phase 4-Wire
7 = xGB interior, 480Y/277V, 3-Phase 4-Wire

Circuits
18, 30, 42, 54* (*Revised P1 only)

Mains MC = Convertible mains
Select Main Lug Kit or Breaker Mounting Kit from page 17

Amperage
400A max (typically 250A or 400A)

Main Bus Material
A = Aluminum
C = Copper

Subfeed Space Indicator (for Revised P1 only) T = Subfeed Space Included

Note: Standard bussing in P1 panels is tin plated for aluminum and copper.
Standard bus is temperature rated to the maximum amperage in the panel.

Branch Breakers

Panel Type	Voltage (Max.)	Breaker Type	Additional Information
P1, Revised P1①	240	BL, BLH, HBL, BQD, NGB, HGB, LGB	See Page 17
	480 / 277	BQD, NGB, HGB, LGB,	
	600 / 347 ③	BQDG ②, NGB, HGB, LGB	

①Consult sales office for availability of CSA.
②See Speedfax for additional information.
③600/347V 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

Product Category UPB

Distributor Stock

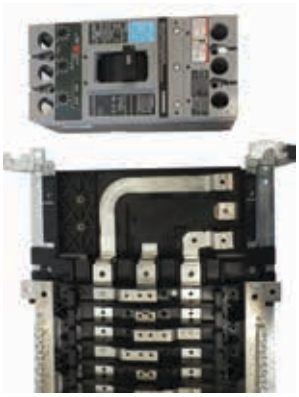
Type P1 Panelboards

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 or AL)	1 Phase	MLKC1	MLKC1A
			3 Phase	MLKC3	MLKC3A
400	AL	(2) 1/0 - 250 kcmil or (1) #2 AWG-600 kcmil	1 Phase	4MLKA1	4MLKA1A
			3 Phase	4MLKA3	4MLKA3A
	CU	(2) 1/0 - 4/0 or (1) 1/0 - 600 kcmil	1 Phase	4MLKC1	4MLKC1A
			3 Phase	4MLKC3	4MLKC3A
400	AL	(1) AL 1/0-750 kcmil (2) AL/CU 250kcmil max. [max.(1) 600 kcmil CU wire]	1 Phase	–	4MLKA1B
			3 Phase	–	4MLKA3B

MBKQJ3A

MBKFD3A



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

Max Amp Rating	Breaker Types	Service	Original P1 Catalog Number	Revised P1 Catalog Number
100A	BQD	3-Phase	MBKBC3	Use Back-fed Main Label Kit # MBKBFA② (includes Neutral Lug, "MAIN" label and instructions)
100A	BL, BLH, HBL	1-Phase	MBKBL1	
		3-Phase	MBKBL3	
125A	NGB, HGB, LGB	1-Phase	MBKNB1	
		3-Phase	MBKNB3	
125A	ED4, ED6, HED4, HED6	1-Phase	MBKED1	MBKED1A
		3-Phase	MBKED3	MBKED3A
225A	QJ2, QJH2, QJ2H	1-Phase	MBKQJ1	MBKQJ1A
		3-Phase	MBKQJ3	MBKQJ3A
225A	QR2, QRH2, HQR2, HQR2H	1-Phase	MBKQR1	MBKQR1A
		3-Phase	MBKQR3	MBKQR3A
250A	FXD6, FD6, HFD6, HFXD6	1-Phase	MBKFD1	MBKFD1A
		3-Phase	MBKFD3	MBKFD3A
400A①	JXD2, JD6, JXD6, HJD6, HJXD6	1-Phase	MBKJD1	MBKJD1A
		3-Phase	MBKJD3	MBKJD3A

① 400 amp kit is for main position only - not allowed for subfeed breaker position
②Back-fed main occupies branch space.

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

Miscellaneous Parts and Accessories

Catalog #	Description
BK1	Bonding Kit for 400A max. Original P1 Panels
BK1A	Bonding Kit for 400A max. Revised P1 Panels
BK2	Bonding Kit for S1/S2 400 & 600
BK3	Bonding Kit for S3 Panel
IMK1	Interior Adjusting Kit
11-1824-01	Directory Card Holder
12-1110-01	Directory Card
MCHK	Metal Card Holder Kit
ANSI/NEMA PB 1.1-2013 ②	General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts or Less (O&M Manual)
NBK03	Number Strips 1–42. Stick-on type; Use w/ P1 series Panels
NBK04	Number Strips 43–84. Stick-on type; Use w/ P1 series Panels
NBK05	Number Strips 85–126. Stick-on type; Use w/ P1 series Panels
NBK06	Number Strips 127–168. Stick-on type; Use w/ P1 series Panels
EGK	AL Ground Bus 44 Connections
ECGK	CU Ground Bus 44 Connections
IGK	Insulated AL Ground Bus
ICGK	Insulated CU Ground Bus
EWK1	End Wall Kit with Knockouts (20" W x 5.75" DP)
EWK2	End Wall Kit with Knockouts (24" W x 7.75" DP)
EBF1	NEB/HEB Filler Plate
P1SCRWS	Package of 42 breaker mounting screws for P1
DFFP1	1" Branch circuit filler plate (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	Connector kit – 6 pcs. A or C-phase Copper
P1CONACPHAL ①	Connector kit – 6 pcs. A or C-phase Aluminum
MBKQRFK	P1/Revised P1 Filler for 1PH/3PH QR. Horizontal mount only.

① Replacement parts only.

② PDF can be downloaded for free and printed at this location: http://www.nema.org/standards/pages/Panelboards.aspx

Product Category UPB

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 (QJ/QR type listed where applicable)	Description	Ratings		
			QJ 240V	QR 240V	480V
MBKED3100	MBKED3100A	Kit w/3-pole ED4 100A breaker	65KA	—	18KA
MBKED3125	MBKED3125A	Kit w/3-pole ED4 125A breaker	65KA	—	18KA
MBKQJ1125 / MBKQR1125	MBKQJ1125A / MBKQR1125A	Kit w/2-pole QJ2/QR2 125A breaker	10KA	10KA	—
MBKQJ1150 / MBKQR1150	MBKQJ1150A / MBKQR1150A	Kit w/2-pole QJ2/QR2 150A breaker	10KA	10KA	—
MBKQJ1175 / MBKQR1175	MBKQJ1175A / MBKQR1175A	Kit w/2-pole QJ2/QR2 175A breaker	10KA	10KA	—
MBKQJ1200 / MBKQR1200	MBKQJ1200A / MBKQR1200A	Kit w/2-pole QJ2/QR2 200A breaker	10KA	10KA	—
MBKQJ1225 / MBKQR1225	MBKQJ1225A / MBKQR1225A	Kit w/2-pole QJ2/QR2 225A breaker	10KA	10KA	—
MBKQJ3125 / MBKQR3125	MBKQJ3125A / MBKQR3125A	Kit w/3-pole QJ2/QR2 125A breaker	10KA	10KA	—
MBKQJ3150 / MBKQR3150	MBKQJ3150A / MBKQR3150A	Kit w/3-pole QJ2/QR2 150A breaker	10KA	10KA	—
MBKQJ3175 / MBKQR3175	MBKQJ3175A / MBKQR3175A	Kit w/3-pole QJ2/QR2 175A breaker	10KA	10KA	—
MBKQJ3200 / MBKQR3200	MBKQJ3200A / MBKQR3200A	Kit w/3-pole QJ2/QR2 200A breaker	10KA	10KA	—
MBKQJ3225 / MBKQR3225	MBKQJ3225A / MBKQJ3225A	Kit w/3-pole QJ2/QR2 225A breaker	10KA	10KA	—
MBKQJ1125H / MBKQR1125H	MBKQJ1125HA / MBKQR1125HA	Kit w/2-pole QJ2H/HQR2 125A breaker	42KA	65KA	—
MBKQJ1150H / MBKQR1150H	MBKQJ1150HA / MBKQR1150HA	Kit w/2-pole QJ2H/HQR2 150A breaker	42KA	65KA	—
MBKQJ1175H / MBKQR1175H	MBKQJ1175HA / MBKQR1175HA	Kit w/2-pole QJ2H/HQR2 175A breaker	42KA	65KA	—
MBKQJ1200H / MBKQR1200H	MBKQJ1200HA / MBKQR1200HA	Kit w/2-pole QJ2H/HQR2 200A breaker	42KA	65KA	—
MBKQJ1225H / MBKQR1225H	MBKQJ1225HA / MBKQR1225HA	Kit w/2-pole QJ2H/HQR2 225A breaker	42KA	65KA	—
MBKQJ3125H / MBKQR3125H	MBKQJ3125HA / MBKQR3125HA	Kit w/3-pole QJ2H/HQR2 125A breaker	42KA	65KA	—
MBKQJ3150H / MBKQR3150H	MBKQJ3150HA / MBKQR3150HA	Kit w/3-pole QJ2H/HQR2 150A breaker	42KA	65KA	—
MBKQJ3175H / MBKQR3175H	MBKQJ3175HA / MBKQR3175HA	Kit w/3-pole QJ2H/HQR2 175A breaker	42KA	65KA	—
MBKQJ3200H / MBKQR3200H	MBKQJ3200HA / MBKQR3200HA	Kit w/3-pole QJ2H/HQR2 200A breaker	42KA	65KA	—
MBKQJ3225H / MBKQR3225H	MBKQJ3225HA / MBKQR3225HA	Kit w/3-pole QJ2H/HQR2 225A breaker	42KA	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
MBKJD1300①	MBKJD1300A①	Kit w/2-pole JXD6 300A breaker	65KA	—	35KA
MBKJD3300①	MBKJD3300A①	Kit w/3-pole JXD6 300A breaker	65KA	—	35KA
MBKJD1400①	MBKJD1400A①	Kit w/2-pole JXD6 400A breaker	65KA	—	35KA
MBKJD3400①	MBKJD3400A①	Kit w/3-pole JXD6 400A breaker	65KA	—	35KA
MBKJD12300①	MBKJD12300A①	Kit w/2-pole JXD2 300A breaker	65KA	—	–
MBKJD32300①	MBKJD32300A①	Kit w/3-pole JXD2 300A breaker	65KA	—	–
MBKJD12400①	MBKJD12400A①	Kit w/2-pole JXD2 400A breaker	65KA	—	–
MBKJD32400①	MBKJD32400A①	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	—

Switching Neutrals

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

* Built to order.

AFCI – Branch Feeder 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	BA115AF	10	—	—
	20	BA120AF	10	—	—
BAF2H 1-pole	15	BA115AFH	22	—	—
	20	BA120AFH	22	—	—
HBAF2 1-pole	15	BA115AFHH	65	—	—
	20	BA120AFHH	65	—	—

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	—	—

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 IR①

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

HBL Branch Breakers – 65,000A IR①

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	—	—

BLH Branch Breakers – 22,000A IR①

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 Vac②

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

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)

UL 1449 3rd Edition SPD

TPS3 02

- SPD Features
  - UL 1449 3rd Edition effective September 2009
  - 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)❶
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

Options
X = Surge counter
Standard with new UL 1449 compliant version

Options
2 = Complies with UL 1449 (4th Edition)

- 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

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

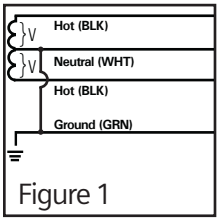


Figure 1

Split
2 Hots, 1 Neu, 1 Grnd

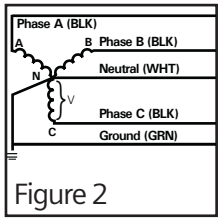


Figure 2

Wye
3 Hots, 1 Neu, 1 Grnd

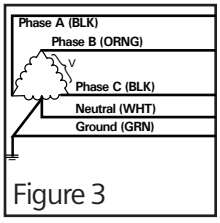


Figure 3

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

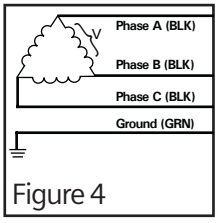


Figure 4

Delta & HRG Wye
3 Hots, 1 Grnd

Notes:

❶ 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 In (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)

UL 1449 3rd Edition SPD

TPS3 L2

- SPD Features
  - UL 1449 3rd Edition effective September 2009
  - 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 # TPS3 □ L2 □□ □□

Voltage Code
A = 120/240V, 1Ø, 3W (Fig 1)
B = 120/240V, 3Ø, 4W (Fig 3)
C = 120/208V, 3Ø, 4W (Fig 2)
E = 277/480V, 3Ø, 4W (Fig 2)
K = 380/220V, 3Ø, 4W (Fig 2)
S = 400/230V, 3Ø, 4W (Fig 2)

Surge Current (kA)
15 = 150 kA per phase
30 = 300 kA per phase

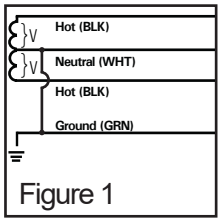
Options
X = Surge counter
Standard with new UL 1449 compliant version

Options
2 = Complies with UL 1449 (4th Edition)

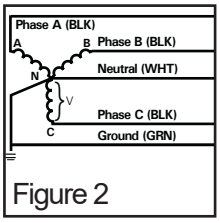
- Example: TPS3CL230X = 10 Mode SPD for a 208/120V panelboard with a surge current capacity of 300 kA per phase and a surge counter option
- When surge counter is not selected, include a zero (0) in the field

Available Accessories: Ordered Separately
- RMSIE - Remote monitor

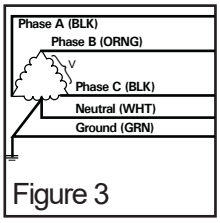
UL 1449 3rd Edition - 2009 Test Data Summary Voltage Protection Rating (VPR - 6kV, 3 kA)									
Voltage Code	Service Voltage	L-N	L-G	N-G	L-L	Type	I_n	SCCR	MCOV
A	120/240V, 1Ø, 3W (Fig 1)	700	700	700	1000	Type 4	20 kA	100 kA	150
B	120/240V, 3Ø, 4W (Fig 3)	800 / 1500	700 / 1200	700	1800 / 1800	Type 4	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



Split
2 Hots, 1 Neu, 1 Grnd



Wye
3 Hots, 1 Neu, 1 Grnd



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

Notes:

Notes:

Siemens Industry, Inc.
5400 Triangle Parkway
Norcross, GA 30092

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