

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

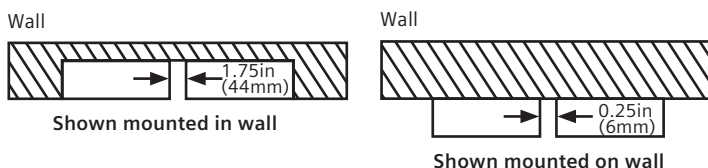
Standard wire connectors in Siemens panels are suitable for copper or aluminum cables rated 60/75 degree. Copper main lugs are a price-added option for most panel types and some Circuit Breakers (check with Siemens sales for availability). It should be noted that most copper lugs will only accept copper 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

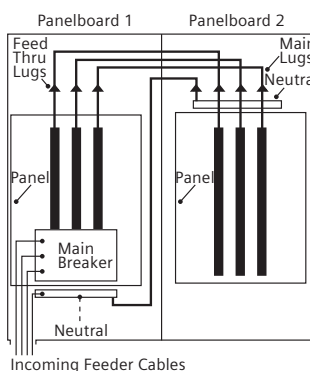


Use two or more panelboards with feed-thru or subfeed lugs when:

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.

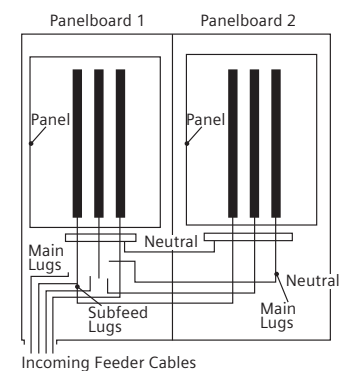
Feed Thru Lugs

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) R = 415/240 3Ø 4 W Wye AC
 E = 480Y/277 3Ø 4 W Wye AC S = 440/250 3Ø 4 W Wye AC
 D = 240 3Ø 3 W Delta AC L = 600/347 3Ø 4 W Wye AC
 A = 120/240 1Ø 3 W Grounded Neutral AC T = 230 3Ø 3 W Delta AC
 J = 240 1Ø 2 W No Neutral AC U = 120V AC 3Ø3W
 M = 380/220 3Ø 4 W Wye AC 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

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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.

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

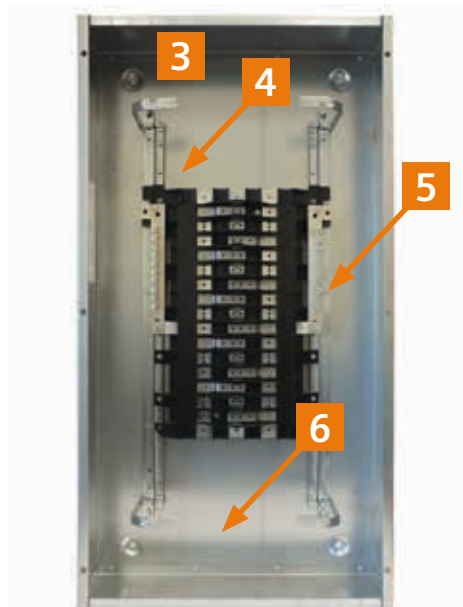
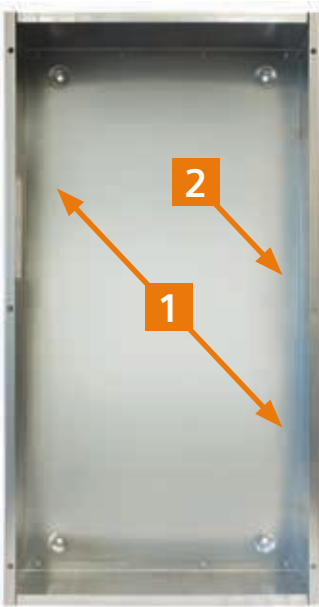
mounted allowing field convertible top or bottom feeds to be performed easily. MLO kits and Main Breaker Kits are interchangeable and can be changed/added in the field without making changes to the enclosure or interior.

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.

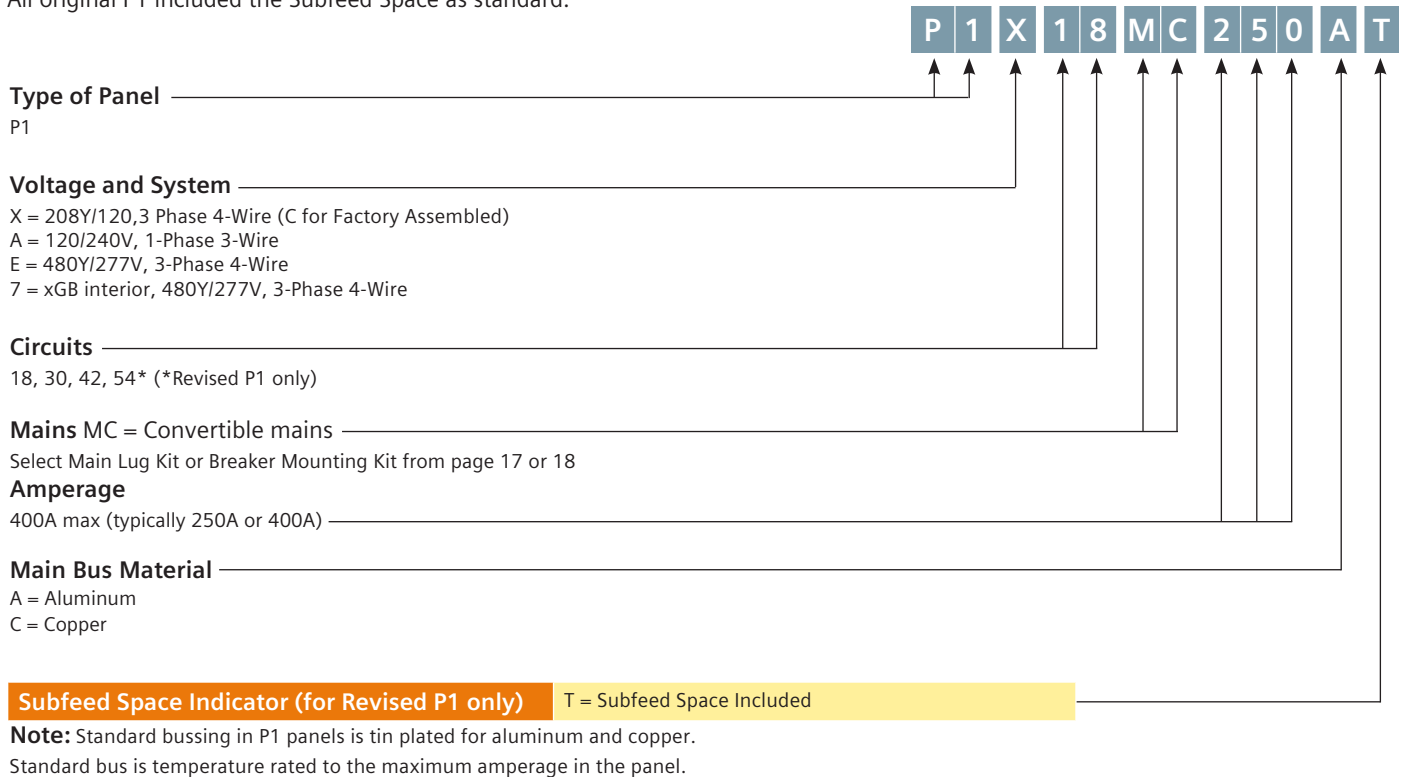
1. When BL/BQD or GB Main Breaker is chosen as back-fed in unit space, the main breaker will use two or three positions of unit space and will reduce usable branch circuit space.
2. List catalog number and price of interior, box and front.
3. Select main lug kit or main breaker kit from appropriate tables.

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