

Circuit Breaker Lighting Panel Type P1



Circuit Breaker Lighting or Distribution Panel Types P2/P3



Circuit Breaker Distribution Panel Type P4/P5

Scan to connect online to the most up-to-date version of this Section of SPEEDFAX.

contents

Features, Reference Guide & General Specifications	11-2 – 11-5
Factory Assembled Panelboard Coding System	11-6
Unassembled Panelboards - General info & Kits	11-7 – 11-14
Legacy Original P1-S1-S2-SE Kits available	11-15
15A-125A Branch Breakers for Panelboards	11-16 – 11-19
Spare Parts, GB kits, Fillers for Revised P1 panels	11-20 – 11-23
Type P1	11-24 – 11-43
General Specifications	11-24
Main Lug and Main Breaker Configuration Info	11-25 – 11-28
Modifications and Additions	11-29 – 11-32
Enclosure Dimensions - Type 1, 3R and 3R/12	11-33
General P1-P2-P3 Enclosure and Accessory Info	11-34 – 11-43
Type P2	11-44 – 11-55
Specifications	11-44
Enclosure Selection/ Dimensions	11-45 – 11-47
Main Breaker and Subfeed Breakers	11-48 – 11-49
Branch Breakers	11-50
Main Lug and Main Breaker Panel Examples	11-51
Modifications and Additions	11-52 – 11-54
Enclosure Dimensions, Spare Parts and SEM3	11-55 – 11-59
Type P3	11-60 – 11-74
Specifications	11-60
Main Lug and Main Breaker Configuration Info	11-61 – 11-64
Branch Breakers	11-65 – 11-67
Modifications and Additions	11-68 – 11-69
Enclosure Dimensions and Features	11-70 – 11-72
Spare Parts and Kits	11-73 – 11-74
3VA Breaker Reference Info used in Panelboards P1 thru P5	11-77 – 11-96
Type P4	11-97 – 11-110
Specifications	11-97
Enclosure Selection	11-97 – 11-99
Main Lug and Main Breaker	11-100
Main Switch and Alternate Main Breakers	11-101
Branch Devices – Circuit Breaker and Switch	11-102 – 11-104
Modifications and Additions	11-105 – 11-109
Enclosure Dimensions	11-110
Type P5	11-111 – 11-124
Specifications	11-111
Enclosure Selection	11-112
Main Lug and Main Breaker	11-113
Alternate Main Breaker and Main Switch	11-114
Branch Breakers	11-115 – 11-116
Branch Switches	11-117
Modifications and Additions	11-118 – 11-123
Enclosure Dimensions	11-124
Column Type Panelboards	11-125 – 11-128
Telephone and Equipment Cabinets	11-129
Panelboard Modifications and Additions	11-130 – 11-132
Enclosures—Relay Cabinets, NEMA 4X	11-130
Remote Switches—ASCO, LEN	11-130
Enclosure, Door, & Trim Modifications	11-131
Circuit Breaker Accessories & Panel Skirts	11-132
Coordination Panels	11-133 – 11-140

This generation of panelboards from Siemens offers the high level of engineering and innovation you've come to expect from the leader in power distribution technology. The "P Series" line of panelboards offers a stepped approach to power distribution.

Additional strength has been added to an already rugged and durable panelboard family. Engineered specifically to provide maximum flexibility, the new designs simplify wiring and reduce material requirements making them easier to install and less costly than competitive products. At the heart of the product line is the extensive research and technology found among Siemens circuit protection devices – both fusible switches and molded case circuit breakers.

The line is anchored by the innovative P1. Featuring the industry's most flexible designs, the P1 virtually eliminates common errors, such as feed direction, and main lug versus main breaker. Increasing distribution is simplified by the ability to add feed-thru lugs. The Revised P1 design introduced in January 2015 has added Extended Circuits up to 66 and has available smaller Enclosures with no Subfeed option for added flexibility

Subsequent steps in the P Series offer increased capacity and more design options:

- The highly flexible P2 provides options to fit the most demanding specifications.
- Sized more like a lighting panel, the P3 packs the power of a distribution panel in a space-saving, highly flexible design.
- The P4 is a mid-sized distribution panel that allows both fusible and circuit breaker branch and main devices.
- The powerful P5 anchors the high end of the series. With larger fusible and circuit breaker branch and main devices, the venerable P5 delivers maximum power and flexibility to larger distribution systems.

Siemens also offers a number of specialty panels, like column panels, SEM3 (Embedded Micro Metering Module™), Disaggregation Panels (which are California Title-24 compliant), and others. Don't see a panel to meet your requirements? Ask your Siemens representative about our custom capabilities.

Features Overview

P Series lighting panel features include Fas-Latch trim, which is popular among installers; the jacking screw system, that permits adjustments even after wiring has been installed; our exclusive split neutral, and more. Many panelboards have the capability of mixing and matching breakers of different sizes and ratings – or changing from main lug to main breaker, or adding subfeed breakers without changing the box size. Other models accept a wide range of fuse types, including Siemens exclusive Vacu-Break® technology.

Key Panelboard Features

	P1	P2	P3	P4	P5
Power Panelboard Applications	—	•	•	•	•
Convertible From Top Feed To Bottom Feed Or Vice Versa	•	—	—	—	—
Change From Main Lug To Main Breaker Or Add Subfeed Without Changing Enclosure Size②	•	—	—	—	—
Space-Saving, Horizontally Mounted Main Breaker	Up To 250 Amps	Up To 250 Amps	Up To 400 Amps	•	•
Short-Circuit Rating Label Giving Performance Level	•	•	•	•	•
Standard Aluminum Ground Assembly	•	•	•	•	•
Blank End-Walls Standard①	•	•	•	•	•
Bolted Current-Carrying Parts	•	•	•	•	•
Split Neutral	•	—	•	—	—
Connection Accessible From Front	•	•	•	•	•
Screw-Type Mechanical Lugs	•	•	•	•	•
Time-Reducing Wing Nuts To Secure Interior Without Tools	•	•	•	—	—
Flush Lock, Concealed Door Hinges/Trim Screws	•	•	•	—	—
Symmetrical Interior Mounting Studs To Eliminate Upside-Down Mounting of Box	•	•	•	•	•
Interior Height Adjustment For Flush Applications	•	•	•	—	—
Mix and Match Fusible Switch Circuit Breaker Capability	—	—	—	•	•
Standard Depth and Width of Enclosure	5.75" x 20"	5.75" x 20"	7.75" x 24"	10.00" x 32"	12.75" x 38"
Accepts Vacu-Break Fusible Switch with Wide Range of Fuse Types	—	—	—	•	•
Optional Compression Lugs	•	•	•	•	•

• Standard

① KO's available on P1 and P2 – 5.75" Deep x 20" Wide boxes and P3 7.75" deep X 24" wide boxes.

② For Revised P1, only when Subfeed Space is selected, Interior Part Number ends with "T". When "N" is at end there is no Subfeed Space available

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. The National Electrical Code prior to 2020 allowed a maximum of six service disconnects in the same panelboard. The 2020 NEC now restricts panelboards to one service disconnect in a panelboard enclosure. Adoption of this code vary by a state or local jurisdiction. Consult the local code authorities to determine if this has been adopted in the area where the panel is to be installed and configure the panel accordingly. Also, panels must include a connector for bonding and grounding the neutral conductor.

UL67 requires Service Entrance Barriers for all Panels used for Service Entrance. Siemens includes these barriers in all Factory assembled panels, marked as Service Entrance, and also has available Field Installable kits when needed.

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: 2020 (where accepted)
NEMA: PB1.1
UL: 67, 50 and 50E. Listed by Underwriter's Laboratories, Inc., under "Panelboards" File #E2269, and #E4016. Meets Federal Specification W-P-115c.

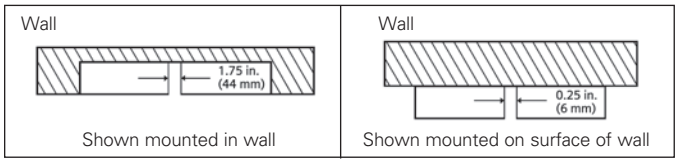
Wire Connectors

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 (6) 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.

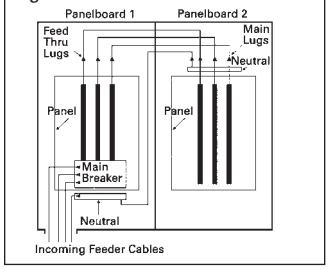
Lug Data
Space Required for Mounting of Double Panels



Use two or more panelboards with feed-thru or subfeed lugs when:
1. More circuit mounting space is required than is provided in the largest box size

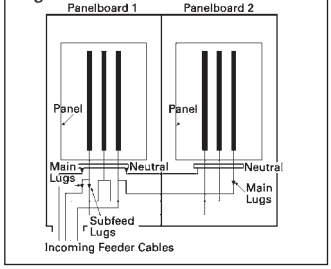
Feed-Thru Lugs

Fig. G-1



Subfeed Lugs or Double Lug

Fig. G-2



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.

Note: For Panelboards, Siemens uses this Document for the Operations and Maintenance manual: ANSI/NEMA PB 1.1-2013 [General Instructions for Proper Installation, Operation, and Maintenance of Panelboards Rated 600 Volts and Less (O&M Manual)]

** The PDF of this document can be downloaded (at no cost) for printing at this location:
https://www.nema.org/standards/view/Panelboards (ref. Material # 11-1056-01)

Bussing Sequence

Interiors are designed to accommodate top or bottom feed. Regardless of which is specified, the uppermost pole is always on "A" phase; the second pole down is always on "B" phase, and the third pole down is always on "C" phase (assuming 3Ø panel).

As standard, branch breakers shall be mounted at the top of the panel with "spaces" at the bottom, regardless of the direction panel is fed.

All breakers have bolted connections except plug-in type. The panel design provides bracing up to 200,000A IR UL short circuit rating. Case-hardened, high performance, thread rolling screws are used on branch bus.



Circuit Breaker Lighting Panel Type P1



Circuit Breaker Lighting or Distribution Panel Types P2/P3



Circuit Breaker Distribution Panel Type P4/P5



Fusible Switch Distribution Panel Type P4/P5

Panelboard Ratings (Updated June 2014 with release of Revised P1 design)

Description	P1 Revised	P2	P3	P4	P5
Max. Voltage	480V AC Max.⑧ 600Y/347V AC⑧	600V AC Max. 250V DC Max.	600V AC Max. 250V DC Max.	600V AC Max. 250V DC Max.	600V AC Max. 250V DC Max.
System	1-Phase, 2-wire 1-Phase, 3-wire 3-Phase, 3-wire 3-Phase, 4-wire	1-Phase, 2-wire 1-Phase, 3-wire 3-Phase, 3-wire 3-Phase, 4-wire	1-Phase, 2-wire 1-Phase, 3-wire 3-Phase, 4-wire 3-Phase, 3-wire	1-Phase, 3-wire 3-Phase, 4-wire 3-Phase, 3-wire	1-Phase, 3-wire 3-Phase, 4-wire 3-Phase, 3-wire
Mains					
Main Lugs Main Breaker Main Switch (Vacu-Break)	125A-400A 100A-400A —	125A-600A 100A-600A —	250A-800A 225A-800A⑩ —	400A-1200A 400A-800A —	800A-1200A 800A-1200A 200A-1200A
Molded Case Switch⑩	150A-400A	150A-600A	150A-800A	400A-800A	400A-800A
Circuits	18, 30, 42, 54, 66 (250A) 30, 42, 54, 66 (400A)	18, 30, 42, 54, 66 78, 90 ①	(unit space 9"- 45")	—	—
Branch Ratings	15-125A	15-400A	15-400A	15-800A MCCB 30-200A Fusible	15-1200A MCCB 30-1200 Fusible
Branch Disconnect Devices (see detailed tables for UL type codes)	BL/BQD series⑨, BT series, xGB series⑦, 3VA41 series, AFCI/GFCI series	BL/BQD series⑨, BT series, xGB series, 3VA41 series, QR series, AFCI/GFCI series, ED series, 3VA52/61/62 series⑤	BL/BQD series⑨, BT series, xGB series, 3VA41 series, QR series, AFCI/GFCI series, ED series, 3VA52/61/62 series⑥	All 15-600A MCCBs, VL MG at 800A and 30-200A VB switches, 3VA52/61/62 series, 3VA53/63 series⑩, 3VA54/64 series⑩	All 15-1200A MCCBs, 30-600A VB switches and 400-1200A HCP switches, 3VA52/61/62 series, 3VA53/63 series⑩, 3VA54/64 series⑩
Subfeed Circuit Breakers②③ (see detailed tables for UL type codes)	BL/BQD series⑨, xGB series⑦, 3VA41 series, QR series, FD series, 3VA52/61/62 series	FD series, JD series, 3VA53/63 series	FD series, JD series, 3VA53/63 series	—	—
Enclosure Heights Inches – (mm)	26, 32, 38, 44, 50, 56 @250A (660, 813, 965, 1118, 1270, 1422) 56, 62, 68, 74 @400A (1422, 1575, 1727, 1880)	26, 32, 38, 44, 50, 56, 62, 68, 74 (660, 813, 965,1118, 1270, 1422, 1524, 1575, 1727, 1880)	56, 68, 80 (24" W) (1422, 1727, 2032) (68"H & 80"H in 30"W Type 1 only)	60, 75, 90 (1524, 1905, 2286)	60, 75, 90 (1524, 1905, 2286)
Standard Trims	Fas-Latch – 1 Piece Surface or Flush	Fas-Latch – 1 Piece Surface or Flush	Fas-Latch – 1 Piece Surface or Flush	Four Piece④ Surface or Flush	Four Piece④ Surface or Flush

① Functional pricing is based on circuits shown. However, the panel can be figured with less circuits.
② P1 can have max. 1 subfeed breaker when Subfeed Space is available. P2 and P3 can have up to (2) FD subfeed breakers.
③ JD and FD breakers are mounted vertical. Limitations apply.
④ Trim ring provided for flush applications.
⑤ A maximum of (4) QR/3VA52/3VA62/61 breakers may be mounted in a P2 Panel and are single mounted.
⑥ A maximum of (6) QR/3VA52/3VA62/61 breakers may be mounted in a P3 panel in 24" wide enclosure. Up to 12 can be installed with 30" wide enclosure.
⑦ P1 panels with xGB/3VA41 are limited to interiors for xGB/3VA41 breakers only.
⑧ Factory assembled P1 has capability of 600Y/347V AC system when the proper breakers are selected.
⑨ BQD6 is not UL Listed. Only for CUL and CSA panels.
⑩ New breakers being introduced in 2021.

Typical Panelboard Modifications

Description	Lighting and Distribution Panelboards			Distribution Panelboards	
	P1	P2	P3	P4	P5
Box					
Type 1	Standard (20"W x 5.75"D)	Standard (20"W x 5.75"D)	Standard (24"W x 7.75"D)	Standard (32" W x 10.0" D)	Standard (38" W x 12.75" D)
Type 1 Enclosure with Hood	●	●	●	●	●
Type 1 w/Gasket between box and front	●	●	●	—	—
Type 2 Enclosure - Drip Tight (this is not available)	—	—	—	—	—
Type 3R/12	●	●	●	●	●
Type 4, 4X (size varies by type/material)	●	●	●	●	●
Wider Box (check w/factory for custom options not shown)	● (24"W)	● (24"W)	● (30"W Type 1)	● (custom)	● (custom)
Deeper Box (check w/factory for custom options not shown)	● (7.75"D)	● (7.75"D)	● (custom)	● (custom)	● (custom)
Front – NEMA Type 1 only					
Front with Door	Standard	Standard	Standard	●	●
4-piece Front	—	—	—	Standard	Standard
4-piece Front w/Hinged Gutter Covers	—	—	—	●	●
Hinged-to-Box Front/Screw-to-Box Front	●	●	(H-to-B only)	(see Door-in-Door)	(see Door-in-Door)
Door-in-Door Front	●	●	●	●	●
Common Front (custom - multi section applications)	● (custom)	● (custom)	● (custom)	—	—
Special Locks	● (custom)	● (custom)	● (custom)	● (custom)	● (custom)
Nameplate (mounting provisions provided as Std - P1/P2/P3) - Nameplate text is configured in COMPAS with limitations.	●	●	●	●	●
Interior					
Aluminum Equipment Ground Bar	Standard	Standard	Standard	Standard	Standard
Copper Equipment Ground Bar	●	●	●	●	●
Insulated Equipment Ground (CU or AL)	●	●	●	●	●
Subfeed Lugs (see page 11-52 or 11-68)	—	●	●	●	●
Feed-Thru Lugs	●	●	●	●	●
Split Bus	—	●	●	●	●
Compression Lugs	●	●	●	●	●
Copper Lugs	●	●	●	●	●
200% Neutral	●	●	●	400 - 600A	400 - 600A
Temperature Rated - Aluminum 1 (tin plated)	Standard	Standard	Standard	Standard	Standard
Temperature Rated - Copper 1	●	●	●	●	●
750 Ampere / in. - Aluminum (tin plated)	—	●	●	●	●
1000 Ampere / in. - Copper	—	●	●	●	●
Copper Plating	Tin	Tin Std./ Silver Opt.	Tin Std./ Silver Opt.	Silver	Silver
Remote Control Switches	External Mounted	●	●	●	●
Time Clocks	External Mounted	●	●	●	●
Circuit Breaker Shunt Trips	●	●	●	●	●
R, J and T Fuse Clips	—	—	—	●	●

All aluminum bus is tin-plated. ● Available as an option. — Not Available

UL Fuse Classes①

Class	Amperes	Volts	Interrupting Ratings (kA)	I^2t, I_i	Circuits
H	1-600	250 and 600V or less AC	10	—	Less than 10,000A Available
K5②	1-600	250 and 600V or less AC	100	I•t – RK5 up to 100A, I_i – RK5 up to 100A	Feeder circuits
J	1-600	600V or less	200	I•t – Low, I_i – Low	Feeder circuits (motor load small %)
RK1	1/10-600	600V or less and 250V or less	200	I•t – Slightly > J, I_i – Slightly > J	Feeder circuits (motor load small %)
RK5	1/10-600	600V or less and 250V or less	200	I•t – > RK-1, I_i – > RK-1	Motor starting currents a factor
T	1-800, 1-1200	300 and 600V or less AC	To 200	I•t – Low, I_i – Low	Non-Motor loads
L	601-1200	600V or less	200	I•t – Low, I_i – Low	Mains, feeder circuits

① Per UL 67.
② Fuses do not prohibit the use of Class H type fuse in switch.

Catalog Numbering System

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

Type of Panel P1, P2, P3, P4, P5

Voltage and System*

C = 208Y/120 3Ø 4 W Wye AC - All (X for UPB)
E = 480Y/277 3Ø 4 W Wye AC - All
8 = 480Y/277 3Ø 4 W Wye - P1 w/ GB/3VA41 Branch Only
D = 240 3Ø 3 W Delta AC - All
F = 480 3Ø 3 W Delta AC - All
G = 600 3Ø 3 W Delta AC - P2, P3, P4, P5
I = 347 3Ø 3 W Delta AC - All
B = 240/120 3Ø 4 W Delta BØ High Leg AC - P2, P3, P4, P5
Q = 240/120 3Ø 4 W Delta CØ High Leg AC - P2, P3, P4, P5
A = 120/240 1Ø 3 W AC - All
H = 120 1Ø 2 W Grounded Neutral AC - P2, P3, P4, P5
J = 240 1Ø 2 W No Neutral AC - All
Y = 125 1Ø 2 W Grounded Neutral AC - P2, P3, P4, P5
Z = No Longer Available
K = 220/127 3Ø 4 W Wye AC - All
M = 380/220 3Ø 4 W Wye AC - All
R = 415/240 3Ø 4 W Wye AC - All
S = 440/250 3Ø 4 W Wye AC - All
L = 600/347 3Ø 4 W Wye AC - All
T = 230 3Ø 3 W Delta AC - All
W = 380 3Ø 3 W Delta AC - P2, P3, P4, P5
1 = 24V DC 1-Pole Branch Only - P2, P3, P4, P5
2 = 24V DC 2-Pole Branch Only - P2, P3, P4, P5
3 = 48V DC 1-Pole Branch Only - P2, P3, P4, P5
4 = 48V DC 2-Pole Branch Only - P2, P3, P4, P5
5 = 125V DC 1-Pole Branch Only - P2, P3, P4, P5
N = 125V DC 2-Pole Branch Only - P2, P3, P4, P5
O = 125/250V DC 2-Pole Branch Only - P2, P3, P4, P5
P = 125/250V DC 2 & 3-Pole Branch - P2, P3, P4, P5
U = 120V AC 3Ø3W - All
V = 240V 3Ø3W Grounded B Phase - P2, P3, P4, P5

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

Circuits
P1 – 18, 30, 42, 54, 66
P2 – 18, 30, 42, 54, 66, 78, 90

or

Enclosure Height①
P3 – 56, 68, 80 (62" & 74" now custom)
P4, P5 – 60, 75, 90

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

Amperage
100–400A = P1② 250–800A = P3
100–600A = P2 400–1200A = P4, P5

Bus Code③	Bus Material	Bus Plating	P1	P2	P3	P4	P5
A	Temp rated Al.	Tin-Plated	•	•	•	•	•
B	750A/sq. in. Al.	Tin-Plated	n/a	•	•	•	•
C	Temp rated Cu.	Tin-Plated	•	n/a	n/a	n/a	n/a
E	Temp rated Cu.	Silver-Plated	n/a	optional	optional	•	•
F	Temp rated Cu.	Tin-Plated	n/a	•	•	n/a	n/a
G	1000A/sq. in. Cu.	Tin-Plated	n/a	•	•	optional	optional
H	1000A/sq. in. Cu.	Silver-Plated	n/a	optional	optional	•	•

• Indicates default for this bus type.

Feed Location T = Top B = Bottom

Mounting
S = Surface F = Flush. Extends 1 1/2" beyond the base box dimensions on P1, P2, P3; and 2" on P4, P5 panels.

Subfeed Space Indicator (for P1 only) T = Subfeed Space Included N④ = No Subfeed Space

Main Breaker Type Coding

Code	Breaker	Code	Breaker	Code	Breaker	Code	Breaker	Code	Breaker	Code	Breaker	3VA ref	Code	Breaker	3VA ref
BL	BL	CJ	CJD6	L6	LD6	HN	HND6	M5	HMG	V1	SEAB	3VA41 125A max	W2	MDAE	3VA61 150A max
BH	BLH	6H	HHJD6	LX	LXD6	HT	HNXD6	M2	HMX	V2	MEAB		W3	HDAE	
BR	BLR	H9	HHJXD6	LH	LXD6H	HX	HNXD6H	M8	HMY	V3	HEAB		W4	CDAE	
HB	HBL	H6	HJD6	S1	SCLD6	ND	ND6	M6	LMG	V4	SEAS	3VA51 150A max	W5	LDAE	
BQ	BQD	H5	HJXD6	S2	SHLD6	NX	NXD6	M3	LMX	V5	MEAS		WA	MFAE	3VA62 250A max
B6	BQD6⑤	H7	HJXD6H	SL	SLD6	NT	NXD6H	M9	LMY	V6	HEAS		WB	HFAE	
CE	CED6	J6	JD6	QJ	QJ2	SR	SCND6	M4	NMG	VA	MFAS	3VA52 250A max	WC	CFAE	
E4	ED4	JD	JXD2	Q2	QJ2H	ST	SCND6H	M1	NMX	VB	HFAS		WD	LFAE	
E6	ED6	JX	JXD6	QH	QJH2	AD	SHND6	M7	NMY	VC	CFAS		WE	MJAE	3VA63 400A max
H4	HED4	JH	JXD6H	C9	CMD6	SD	SHND6H	N8	HNG	VE	MJAS	3VA53 400A max	WF	HJAE	
HA	HHED6	SC	SCJD6	CH	CMD6H	SN	SND6	N2	HNX	VF	HJAS		WG	CJAE	
CF	CFD6	SX	SHJD6	HM	HMD6	AY	SND6H	N5	HNY	VG	CJAS		WH	LJAE	
FD	FD6	SY	SHJD6H	HR	HMXD6	JA	HJG	N9	LNG	VJ	MLAS	3VA54 600A max	WJ	MLAE	3VA64 600A max
FX	FXD6	SJ	SJD6	HS	HMXD6H	J7	HJX	N3	LNX	VK	HLAS		WK	HLAE	
HF	HFD6	SH	SJD6H	MD	MD6	J5	HJY	N6	LNY	VL	CLAS		WL	CLAE	
H2	HFXD6	CL	CLD6	MX	MXD6	J9	LJG	N7	NNG	VN	MMAS	3VA55 800A max	WM	LLAE	
H1	HHFD6	HH	HHLD6	MH	MXD6H	J3	LJX	N1	NNX	VO	HMAS		WN	MMAE	3VA65 800A max
H3	HHFXD6	XH	HHLXD6	SO	SCMD6	J8	LJY	N4	NNY	VP	CMAS		WO	HMAE	
G2	HGB	HL	HLD6	SQ	SCMD6H	L3	LLX	QR	QR2	VV	MNAS	3VA57 1200A max	WP	CMAE	
G3	LGB	HO	HLXD6	S5	SHMD6	J2	NJG	Q4	QRH2	VW	HNAS		WR	MMNAE	3VA66 1000A max
NB	NGB	HP	HLXD6H	S6	SHMD6H	J1	NJX	Q5	HQR2	VX	CNAS		WS	HMNAE	
G4	NGB2			SM	SMD6	J4	NJY	Q6	HQR2H				WT	CMNAE	
G5	HGB2			AX	SMD6H	L2	HLX	Q7	QR2-MCS				WV	MNAE	3VA67 1200A max
G6	LGB2			CN	CND6	L7	NLX						WW	HNAE	
				C6	CND6H								WX	CNAE	

① P3, P4, P5 enclosure height tables found on page 11-61, 11-97 and 11-112. These show the amount of unit space available.
② P1 Bus is either 250A max or 400A max.
③ Standard bussing in P1, P2 and P3 panels is tin-plated for aluminum and copper. Standard bus is temperature rated to the maximum amperage in the panel.
④ Not available for Revised P1 xGB interiors.
⑤ BQD6 is not UL Listed. Only for CUL and CSA panels

Type P1 unassembled panelboards are completely convertible from main lug to main breaker and vice-versa. Additionally, feed-thru lugs up to 400 ampere or subfeed circuit breakers up to 250 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 2 or 3 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 page 11-13 and 11-14 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.

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 (C for Factory Assembled)
A = 120/240V, 1-Phase 3-Wire
E = 480Y/277V, 3-Phase 4-Wire
8 = xGB (or) 3VA41, 480Y/277V, 3-Phase 4-Wire (After 4/1/2020)
7① = xGB interior, 480Y/277V, 3-Phase 4-Wire (prior to 2020 cannot use 3VA41)

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

Mains MC = Convertible mains
Select Main Lug Kit or Breaker Mounting Kit from pages 11-13 or 11-14

Amperage
250A max or 400A max only (typically 250A max Bus (or) 400A max Bus)②

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.

Revised P1 Branch Breaker reference

Revised P1 Branch Breakers in unit Space have a full range of capabilities.③ Only P18… series can accept both xGB and 3VA41 mixed in unit space. See Branch Breaker charts for more info.	Voltage reference	Breaker frame series (kA range)			
		BL	BQD	xGB	3VA41
	120/240V	10-65k	65k	100k	65-150k
	240V	10-65k	65k	100k	65-150k
	480Y/277V	—	14k	25-65k	25-65k
	480V	—	—	—	25-65k
	600Y/347V④	—	—	14k	14-25k
P1, Revised P1 interior type					
P1X = 208Y/120, 3-Phase 4-Wire		x	x	na	na
P1A = 120/240V, 1-Phase 3-Wire		x	x	na	na
P1E = 480Y/277V, 3-Phase 4-Wire (BL/BQD only)⑤		x	x	na	na
P18 = 480Y/277V, 3-Phase 4-Wire (xGB/3VA41 only)⑥		na	na	x	x

① xGB interiors changed to "8" code when 3VA41 capability was added in 2020. Main breaker code "7" will no longer be available.
② P1 panels use either 250A rated bus or 400A rated bus, regardless of the Main Breaker installed (or) MLO Amp rating chosen. Panels with 250A bus can have up to 250A Main Breaker or Main Lugs. Panels with 400A bus can have up to 400A Main Breaker or Main Lugs.
③ Consult sales office for availability of CSA.
④ 600V options are not available in a UPB panel – see factory assembled section.
⑤ See Speedfax for additional information.
⑥ Previous P17… series only accepted xGB series Branch Breakers – you cannot add 3VA41.

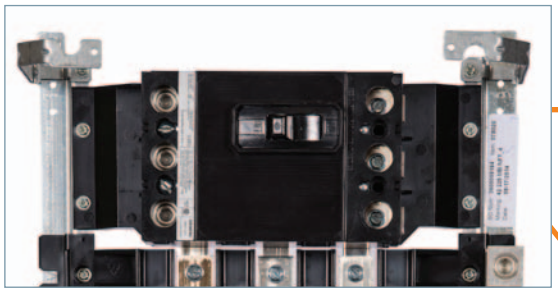
The standard Siemens P1 panelboard has some unique features that make it easier to design for an engineer, easier to reconfigure in the field for a contractor, and easier to upgrade and maintain for the Owner.

- The P1 is the smallest panel in the Siemens lineup, with bus sizes up to 400A.
- What makes it different is the split neutral design and the open ended bus. In the Siemens panel, instead of the common single neutral bus on one end, we have a neutral bus on both sides that is cross-bussed.
- This makes branch wiring simpler and cleaner – the lead lengths for line and neutral can now be made nearly the same, creating more room and a neater installation.
- It also allows access to both ends of the bus as a standard feature – this provides the flexibility to make changes in the field, even if it wasn't part of the original configuration.

New Revised P1 introduced in 2015 has extended circuits up to 66 available and also non-feed thru versions are available, without the Subfeed Space, in a 6'' smaller enclosure.

- In 2020 we introduced 3VA Main and Branch breakers as well as BT twin and BSPD Surge Products.

MAIN BREAKER or SUB-FEED BREAKER

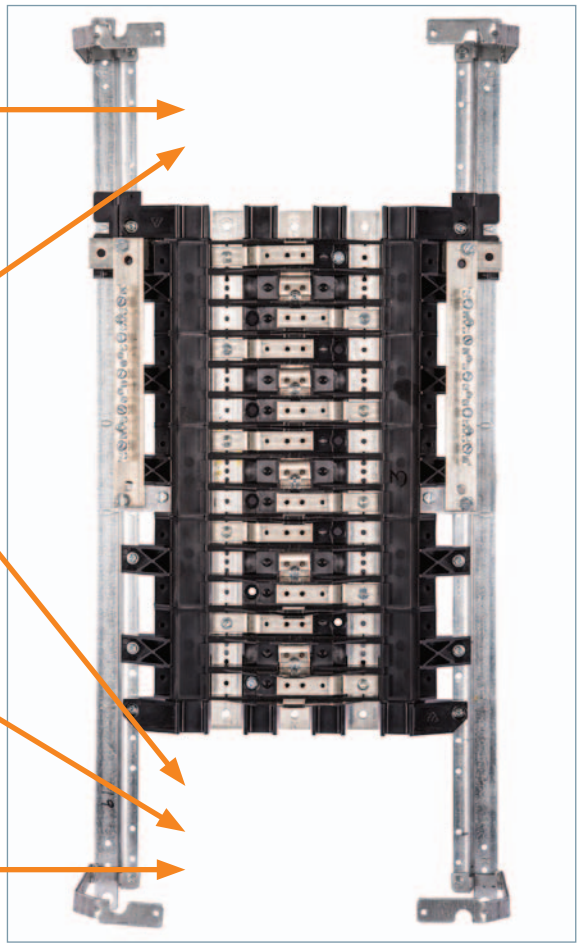


MAIN LUGS or FEED-THROUGH LUGS



INTEGRAL BUS MOUNTED SPD





The following can be done to a standard P1 panelboard **in the field** with no modifications:

- Change from top fed to bottom fed
- Add feed-through lugs①
- Add an Integral bus-mounted SPD① (or new Branch Mounted BSPD)
- Add a sub feed breaker up to 250 amps①
- Change from Main Lugs to Main Breaker
- Change from Main Breaker to Main Lugs
- Panel may have up to two ground assemblies. Options are: (a) standard aluminum, (b) optional copper, or (c) optional insulated/isolated aluminum or copper. Mounting provisions in opposing corners of the box are standard. Any of these options may be added after installation.

① Only when Subfeed Space is selected/available.

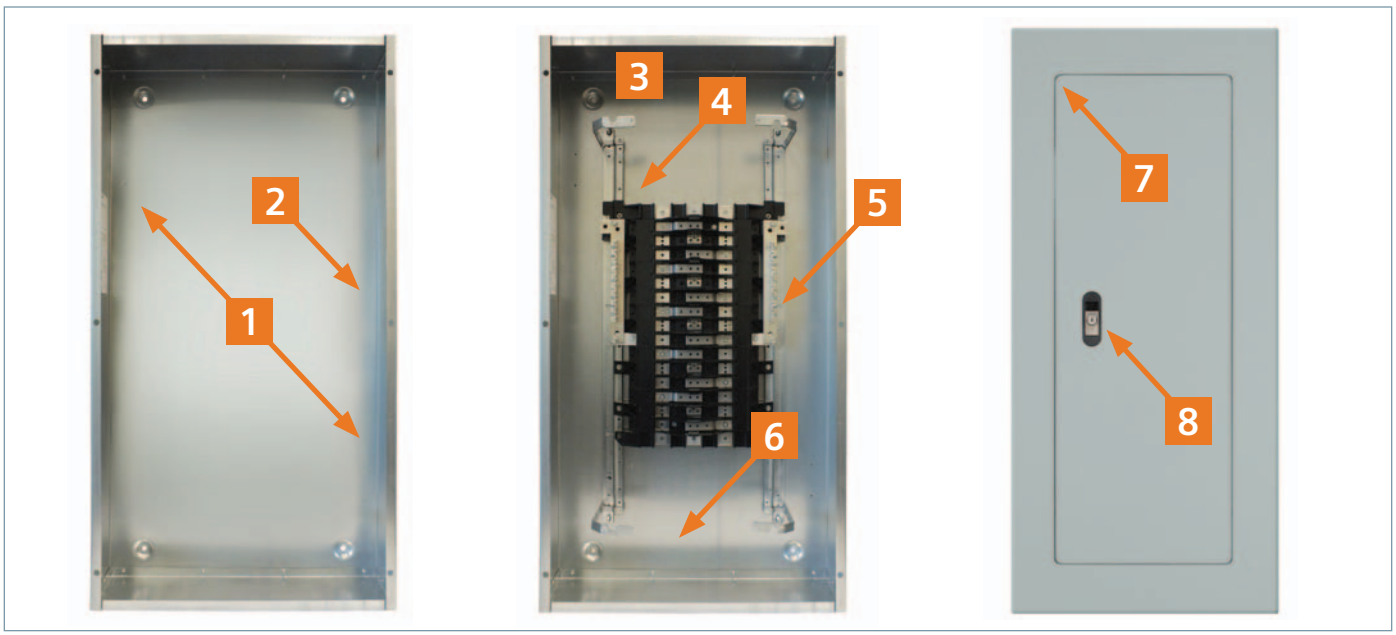
To better serve the needs of customers, Authorized Siemens Unassembled Panelboard Distributors offer product flexibility, quicker job turn-around, and affordable pricing. All Siemens unassembled panelboards are fully backed for high quality, trouble-free operation and are labeled as Suitable for use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

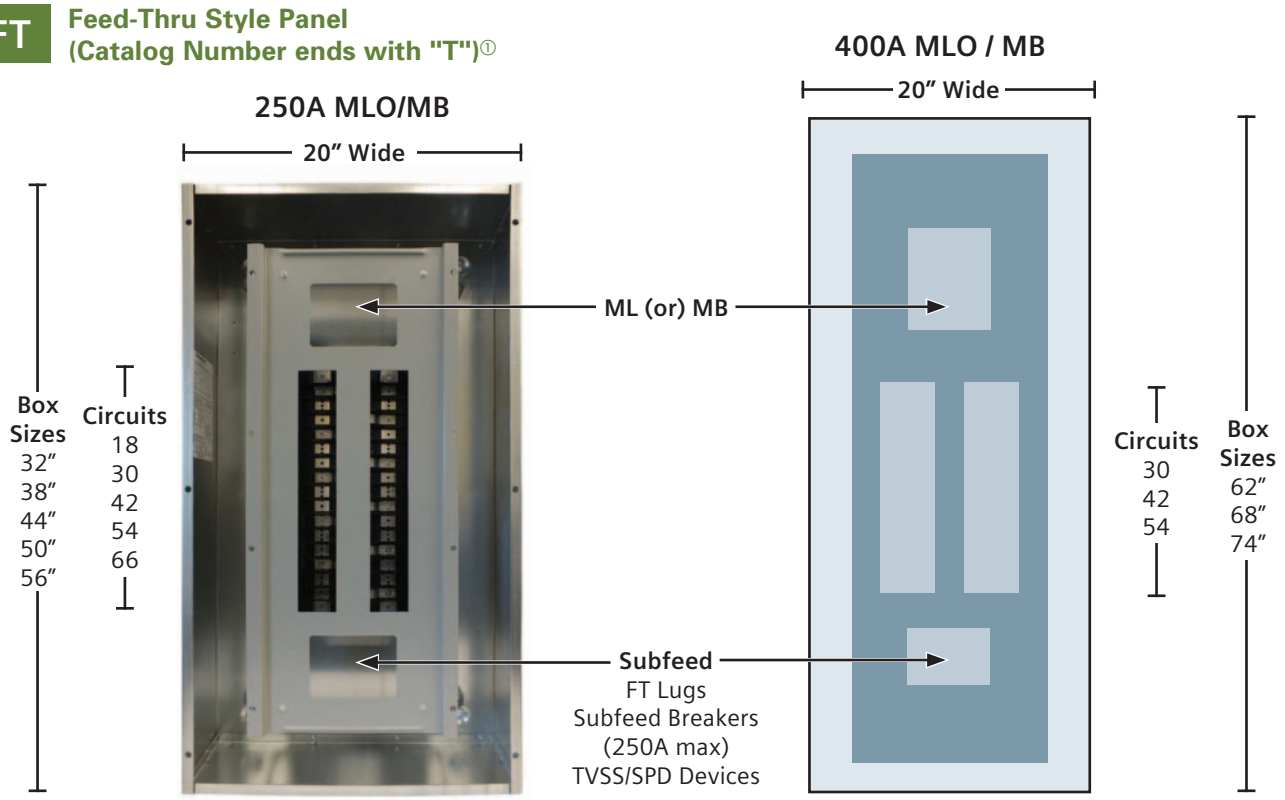
1) Completely symmetrical Type 1 boxes may be mounted with either end up. There are two pre-punched equipment ground connector locations for contractor friendly installation.
2) Box comes pre-punched for optional, field installable door-in-door or hinged style trims. There are also two or more pre-punched 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. (2/0 max. Neutral strips are now standard on all xGB/3VA41 Interiors.)
6) The panel includes space to add (1) sub-feed breaker (max 250 amps), feed-thru lugs or one TPS3 or TPS4 (SPD) kit. (Branch mounted BSPDs are also available for Surge Protection Flexibility.)
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.



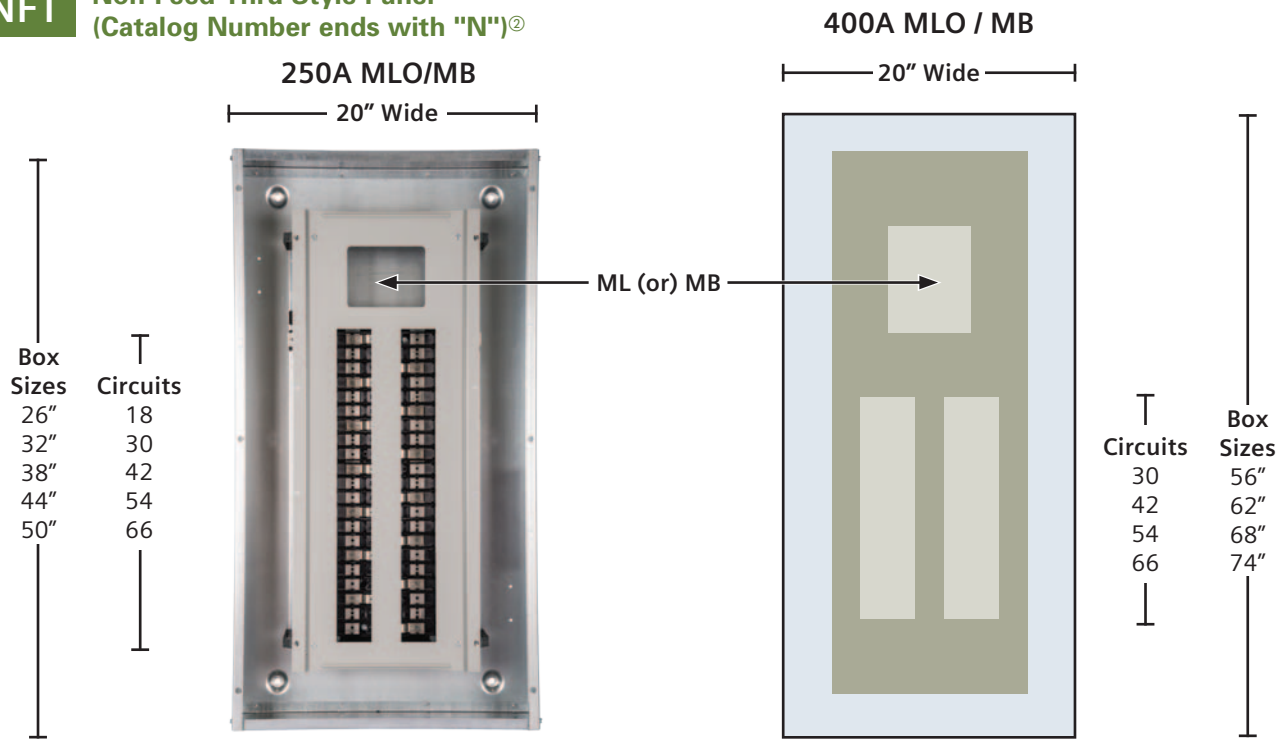
Invertablity and Flexability!

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

FT Feed-Thru Style Panel (Catalog Number ends with "T")①



NFT Non-Feed-Thru Style Panel (Catalog Number ends with "N")②

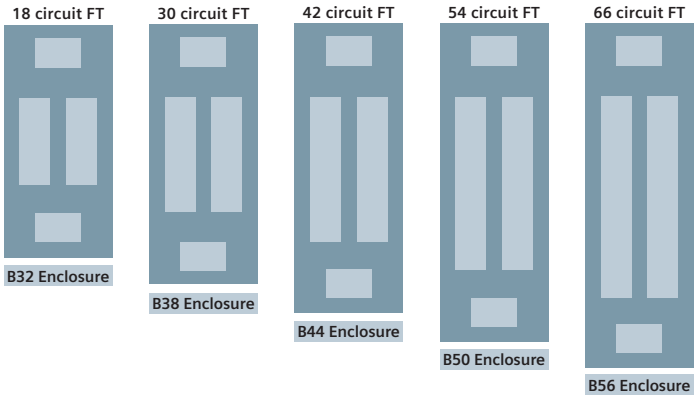


① 66 circuits only for Factory Assembly.

② Not available for UPB.

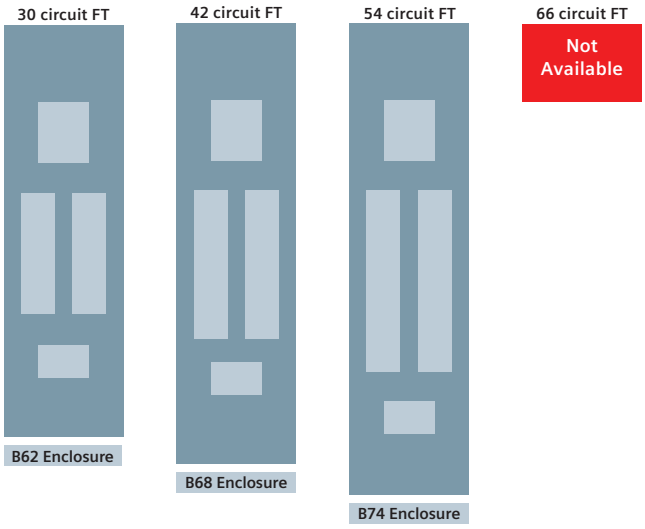
Revised P1 Panelboard 250A and 400A

FT 250A Configurations Feed-Thru Style Panel

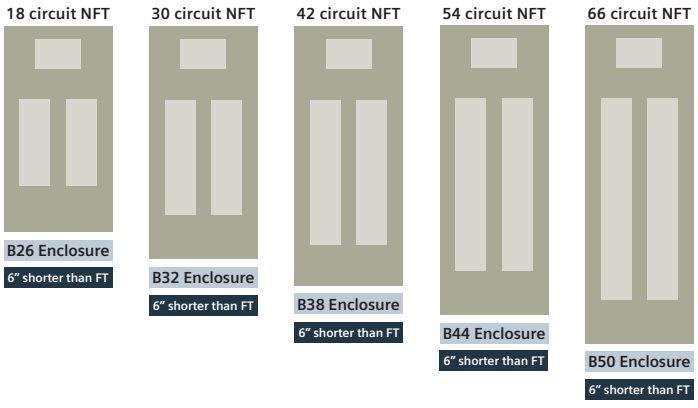


NFT configurations below are 6" shorter than FT with same circuit count

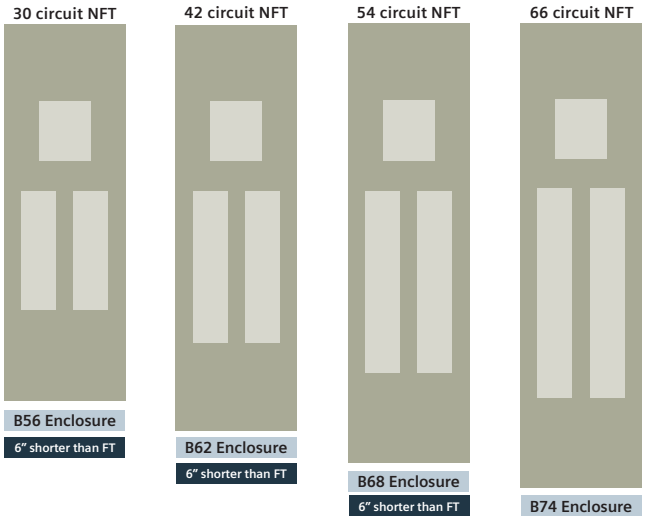
FT 400A Configurations Feed-Thru Style Panel



NFT 250A Configurations Feed-Thru Style Panel



NFT 400A Configurations Feed-Thru Style Panel



Configuring 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 11-13, Main Breaker Kit from pages 11-13 to 11-14 and Main Breakers needed for strap kits separately from Section 7.
3. Choose Branch Breakers: BL, BQD, xGB, 3VA41 (or) AFCI/GFCI from tables on pages 11-16 thru 11-19 or Section 7.
4. Choose Feed-Thru Lugs or Subfeed Breaker Kit from pages 11-13 to 11-14 and Subfeed Breaker for Strap kits from Section 7 (250A max.).

Type P1 Unassembled Panelboards (Revised P1 introduced 2014)

Amps	Max. # of Poles	Revised P1 Interior Catalog Number③	Box Size	Type 1 Enclosure	Type 3R/12 Enclosure①	Type 1 Front Surface	Type1 Front Flush
Convertible Mains — 1-Phase, 3-Wire 120/240V (BL/BQD Branch Breakers only)							
250	18	P1A18MC250AT②	32	B32	WP32	S32B	F32B
	30	P1A30MC250AT	38	B38	WP38	S38B	F38B
	42	P1A42MC250AT	44	B44	WP44	S44B	F44B
	54	P1A54MC250AT	50	B50	WP50	S50B	F50B
400	18	—	—	—	—	—	—
	30	P1A30MC400AT	62	B62	WP62	S62B	F62B
	42	P1A42MC400AT	68	B68	WP68	S68B	F68B
	54	P1A54MC400AT	74	B74	WP74	S74B	F74B
250	18	P1A18MC250CT②	32	B32	WP32	S32B	F32B
	30	P1A30MC250CT	38	B38	WP38	S38B	F38B
	42	P1A42MC250CT	44	B44	WP44	S44B	F44B
	54	P1A54MC250CT	50	B50	WP50	S50B	F50B
400	18	—	—	—	—	—	—
	30	P1A30MC400CT	62	B62	WP62	S62B	F62B
	42	P1A42MC400CT	68	B68	WP68	S68B	F68B
	54	P1A54MC400CT	74	B74	WP74	S74B	F74B
Convertible Mains — 3-Phase, 4-Wire 208Y/120V (BL/BQD Branch Breakers only)							
250	18	P1X18MC250AT②	32	B32	WP32	S32B	F32B
	30	P1X30MC250AT	38	B38	WP38	S38B	F38B
	42	P1X42MC250AT	44	B44	WP44	S44B	F44B
	54	P1X54MC250AT	50	B50	WP50	S50B	F50B
400	18	—	—	—	—	—	—
	30	P1X30MC400AT	62	B62	WP62	S62B	F62B
	42	P1X42MC400AT	68	B68	WP68	S68B	F68B
	54	P1X54MC400AT	74	B74	WP74	S74B	F74B
250	18	P1X18MC250CT②	32	B32	WP32	S32B	F32B
	30	P1X30MC250CT	38	B38	WP38	S38B	F38B
	42	P1X42MC250CT	44	B44	WP44	S44B	F44B
	54	P1X54MC250CT	50	B50	WP50	S50B	F50B
400	18	—	—	—	—	—	—
	30	P1X30MC400CT	62	B62	WP62	S62B	F62B
	42	P1X42MC400CT	68	B68	WP68	S68B	F68B
	54	P1X54MC400CT	74	B74	WP74	S74B	F74B
Convertible Mains — 3-Phase, 4-Wire 480Y/277V (BL/BQD Branch Breakers only)							
250	18	P1E18MC250AT②	32	B32	WP32	S32B	F32B
	30	P1E30MC250AT	38	B38	WP38	S38B	F38B
	42	P1E42MC250AT	44	B44	WP44	S44B	F44B
	54	P1E54MC250AT	50	B50	WP50	S50B	F50B
400	18	—	—	—	—	—	—
	30	P1E30MC400AT	62	B62	WP62	S62B	F62B
	42	P1E42MC400AT	68	B68	WP68	S68B	F68B
	54	P1E54MC400AT	74	B74	WP74	S74B	F74B
250	18	P1E18MC250CT②	32	B32	WP32	S32B	F32B
	30	P1E30MC250CT	38	B38	WP38	S38B	F38B
	42	P1E42MC250CT	44	B44	WP44	S44B	F44B
	54	P1E54MC250CT	50	B50	WP50	S50B	F50B
400	18	—	—	—	—	—	—
	30	P1E30MC400CT	62	B62	WP62	S62B	F62B
	42	P1E42MC400CT	68	B68	WP68	S68B	F68B
	54	P1E54MC400CT	74	B74	WP74	S74B	F74B
Interiors for xGB/3VA41 Breakers — 3-Phase, 4-Wire 480Y/277V							
250	18	P1818MC250AT②	32	B32	WP32	S32B	F32B
	30	P1830MC250AT	38	B38	WP38	S38B	F38B
	42	P1842MC250AT	44	B44	WP44	S44B	F44B
	54	P1854MC250AT	50	B50	WP50	S50B	F50B
400	18	—	—	—	—	—	—
	30	P1830MC400AT	62	B62	WP62	S62B	F62B
	42	P1842MC400AT	68	B68	WP68	S68B	F68B
	54	P1854MC400AT	74	B74	WP74	S74B	F74B
250	18	P1818MC250CT②	32	B32	WP32	S32B	F32B
	30	P1830MC250CT	38	B38	WP38	S38B	F38B
	42	P1842MC250CT	44	B44	WP44	S44B	F44B
	54	P1854MC250CT	50	B50	WP50	S50B	F50B
400	18	—	—	—	—	—	—
	30	P1830MC400CT	62	B62	WP62	S62B	F62B
	42	P1842MC400CT	68	B68	WP68	S68B	F68B
	54	P1854MC400CT	74	B74	WP74	S74B	F74B

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

② The Revised P1 (18 circuit 250A only) is limited to 100A per connection (200A per pair) when installing BL/BQD or xGB Branch Breakers across from one another. 3VA41 does not have this restriction. All other configurations allow 125A per connection max. (250A per pair max.)

③ Original P1 is similar Part Number - Remove "T" up to 42 circuits only.







42 circuit with Back-fed Main



54 circuit 400A

Lug Kits — Main or Feed Thru

Amp Rating	Mat.	Wire Range (includes Neutral)	Service	Revised P1 Catalog No.②
250	AL	(1) #6 AWG-350 kcmil (CU or AL)	1 Phase	MLKA1A
			3 Phase	MLKA3A
	CU	(1) #6 AWG-350 kcmil (CU)	1 Phase	MLKC1A
			3 Phase	MLKC3A
400	AL	(2) 1/0 - 250 kcmil or (1) #2 AWG-600 kcmil	1 Phase	4MLKA1A
			3 Phase	4MLKA3A
	CU	(1) 1/0 - 600 kcmil CU cable only	1 Phase	4MLKC1A
			3 Phase	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

Main and Subfeed Strap Kits for Revised P1② (after neutral updates – April 2020)

Group	Amps	Kit Catalog #	Description	Replaces	Comments
250A RP1 Main Strap Kits	125A max	**MBKVA41A**	RP1 1PH Main/SF kit BL/BQD/GB/3VA4 - Includes filler #DFFPVA41A	**MBKBL1A**① **MBKBC1NBA**①	New kits allow use of all 4 breaker types with included adapter.
		MBKVA41B	RP1 3PH Main/SF kit BL/BQD/GB/3VA4 - Includes filler #DFFPVA41A	**MBKBL3A**① **MBKBC3NBA**①	
		MBKED1A **MBKED3A**	RP1 1PH Main/SF kit ED - 125A max RP1 3PH Main/SF kit ED - 125A max	none	Includes DF Filler #DFFPVA41A replacing #DFFPED01
	225A max	**MBKQR1A** **MBKQR3A**	RP1 1PH Main/SF kit QR - 225A max RP1 3PH Main/SF kit QR - 225A max	none	Includes DF Filler # MBKQRFK
	250A max	**MBKFD1A** **MBKFD3A**	RP1 1PH Main/SF kit FD - 250A max RP1 3PH Main/SF kit FD - 250A max	none	Includes DF Filler # DFFPFD01
		MBKVA5262A **MBKVA5262B**	RP1 1PH Main/SF kit 3VA52/61/62 - 250A max RP1 3PH Main/SF kit 3VA52/61/62 - 250A max	none	Includes DF Filler # DFFPVA5262A
400A RP1 Main Strap Kits	400A max	**MBKVA5363A**	RP1 400A 3VA Main Strap kit, 1ph or 3ph, includes: DFFPVA5363A (Large) Filler	none	These new 400A kits include both small and large filler plates as needed.
		MBKJD3B	RP1 400A JD Strap kit 1ph/3ph 2-fillers, includes: DFFPJD02 (Large) and DFFPJD01 (Small) Filler	**MBKJD1A**① **MBKJD3A**①	
		MBKVA5363JD	RP1 400A JD to 3VA53/63 Retrofit kit 1ph/3ph – This kit will allow 3VA53/63 in old 400A RP1 only with small Deadfront opening – no access to breaker adjustments without removing Deadfront.	none	(to be available 2021)

Neutral Kits for Revised P1② (after neutral updates – April 2020)

Group	Amps	Kit Catalog #	Description	Replaces①	Circuits / details
1/0 Neutral Kits	250A & 400A	**LNLK5X12A**	RP1 1/0 NEUTRAL LUG KIT [(5x)1/0 + (12x) #6] - short 1/0 replacement neutral strip (17POS) (5.80" long)	na	2 strips per pack - replacement parts
		LNLK7X18A	RP1 1/0 NEUTRAL LUG KIT [(7x)1/0 + (18x) #6] - long 1/0 replacement neutral strip (25POS) (8.14" Long)	na	
2/0 Neutral Kits	250A & 400A	**LNLK4X11B**	RP1 & P3 2/0 NEUTRAL LUG KIT (15POS) - [(4x)2/0 + (11x) #6] - 2/0 max neutral strips (6.17" Long)	**LNLK30A** **LNLK42A** **LNLK54A** Revised P1 only	2 strips per pack - replacement parts
		LNLK6X17B	RP1 & P3 2/0 NEUTRAL LUG KIT (23POS) - [(5x)2/0 + (17x) #6] - 2/0 max neutral strips (8.67" Long)		
		LNLK7X20B	RP1 & P3 2/0 NEUTRAL LUG KIT (27POS) - [(7x)2/0 + (20x) #6] - 2/0 max neutral strips (9.92" Long)		
Copper Neutral Kits	250A	**CNLK42B**	RP1 CU NEUTRAL LUG KIT, 42B - 2 short & 2 long strips (17 & 25 pos) contains: CU neutral strips and CU riser extension, plus all hardware to replace standard neutrals. CU strips are 1/0 max. and require CU cable.	**CNLK30A** **CNLK42A** **CNLK54A** Revised P1 only	250A - 18, 30, 42
	250A & 400A	**CNLK54B**	RP1 CU NEUTRAL LUG KIT, 54B - 4 long strips (25 pos) contains: CU neutral strips and CU riser extension, plus all hardware to replace standard neutrals. CU strips are 1/0 max. and require CU cable.		all 400A - 30, 54, 66 250A - 54, 66
200% Neutral Kits	250A	**2NLK42B**	RP1 250A 200% NEUTRAL LUG KITS. Contains: CU neutral strips (2 short & 2 long strips (17 & 25 pos)), CU neutral extensions and an additional AL Line Lug (350kcmil), plus all hardware to replace standard neutrals. CU strips are 1/0 max. and require CU cable. (200% neutral kits require CU neutrals)	**2NLK30A** **2NLK42A** **2NLK54A** Revised P1 only	250A - 18, 30, 42
		2NLK54B	RP1 250A 200% NEUTRAL LUG KITS. Contains: CU neutral strips (4 long strips (25 pos)), CU neutral extensions and an additional AL Line Lug (350kcmil), plus all hardware to replace standard neutrals. CU strips are 1/0 max. and require CU cable. (200% neutral kits require CU neutrals)		250A - 54, 66
	400A	**42NLK54B**	RP1 400A 200% NEUTRAL LUG KIT contains: CU neutral strips (4 long strips (25 pos)), CU neutral extensions and an additional AL Line Lugs (600kcmil and 300kcmil), plus all hardware to replace standard neutrals. CU strips are 1/0 max. and require CU cable. (200% neutral kits require CU neutrals)	**42NLK30A** **42NLK42A** **42NLK54A** Revised P1 only	all 400A - 30, 54, 66

① Parts will no longer be available after inventory is depleted. OK to use up inventory.
② Revised P1 kits cannot be used with original P1. See page 11-15.

Main Breaker Mounting Kits with Breakers for P1 Panels

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

Frame size Reference	Revised P1 Catalog No.	Description	Max IR (kA) at 240V	480V	600V
ED① 3-ph 125A Max.	**MBKED3100A**	Kit w/3-pole ED4 100A breaker	65	18	—
	MBKED3125A	Kit w/3-pole ED4 125A breaker	65	18	—
QR 1-ph 225A Max.	**MBKQR1125A**	Kit w/2-pole QR2 125A breaker	10	—	—
	MBKQR1150A	Kit w/2-pole QR2 150A breaker	10	—	—
	MBKQR1175A	Kit w/2-pole QR2 175A breaker	10	—	—
	MBKQR1200A	Kit w/2-pole QR2 200A breaker	10	—	—
	MBKQR1225A	Kit w/2-pole QR2 225A breaker	10	—	—
HQR 1-ph 225A Max.	**MBKQR1125H**	A Kit w/2-pole HQR2 125A breaker	65	—	—
	MBKQR1150H	A Kit w/2-pole HQR2 150A breaker	65	—	—
	MBKQR1175H	A Kit w/2-pole HQR2 175A breaker	65	—	—
	MBKQR1200H	A Kit w/2-pole HQR2 200A breaker	65	—	—
	MBKQR1225H	A Kit w/2-pole HQR2 225A breaker	65	—	—
QR2 3-ph 225A Max.	**MBKQR3125A**	Kit w/3-pole QR2 125A breaker	10	—	—
	MBKQR3150A	Kit w/3-pole QR2 150A breaker	10	—	—
	MBKQR3175A	Kit w/3-pole QR2 175A breaker	10	—	—
	MBKQR3200A	Kit w/3-pole QR2 200A breaker	10	—	—
	MBKQR3225A	Kit w/3-pole QR2 225A breaker	10	—	—
HQR2 3-ph 225A Max.	**MBKQR3125H**	A Kit w/3-pole HQR2 125A breaker	65	—	—
	MBKQR3150H	A Kit w/3-pole HQR2 150A breaker	65	—	—
	MBKQR3175H	A Kit w/3-pole HQR2 175A breaker	65	—	—
	MBKQR3200H	A Kit w/3-pole HQR2 200A breaker	65	—	—
	MBKQR3225H	A Kit w/3-pole HQR2 225A breaker	65	—	—
3VA52 3-ph 250A Max.	**MBKVAM3150A**	RP1 150A MB kit, 35kA 3ph 3VA52, MFAS	85	35	18
	MBKVAM3200A	RP1 200A MB kit, 35kA 3ph 3VA52, MFAS	85	35	18
	MBKVAM3225A	RP1 225A MB kit, 35kA 3ph 3VA52, MFAS	85	35	18
	MBKVAM3250A	RP1 250A MB kit, 35kA 3ph 3VA52, MFAS	85	35	18
	MBKVAH3200A	RP1 200A MB kit, 65kA 3ph 3VA52, HFAS	100	65	25
	MBKVAH3250A	RP1 250A MB kit, 65kA 3ph 3VA52, HFAS	100	65	25
FD① 3-ph 250A Max.	**MBKFD3150A**	Kit w/3-pole FXD6 150A breaker	65	35	22
	MBKFD3175A	Kit w/3-pole FXD6 175A breaker	65	35	22
	MBKFD3200A	Kit w/3-pole FXD6 200A breaker	65	35	22
	MBKFD3225A	Kit w/3-pole FXD6 225A breaker	65	35	22
	MBKFD3250A	Kit w/3-pole FXD6 250A breaker	65	35	22
3VA53 3-ph 400A Max.	**MBKVAM1300A**	RP1 300A MB kit, 35kA 1ph 3VA53, MJAS	85	35	18
	MBKVAM1400A	RP1 400A MB kit, 35kA 1ph 3VA53, MJAS	85	35	18
	MBKVAM3300A	RP1 300A MB kit, 35kA 3ph 3VA53, MJAS	85	35	18
	MBKVAM3400A	RP1 400A MB kit, 35kA 3ph 3VA53, MJAS	85	35	18
	MBKVAH3300A	RP1 300A MB kit, 65kA 3ph 3VA53, HJAS	100	65	25
	MBKVAH3400A	RP1 400A MB kit, 65kA 3ph 3VA53, HJAS	100	65	25
JD① 1-ph 400A Max.	**MBKJD1300A**	Kit w/2-pole JXD6 300A breaker	65	35	—
	MBKJD1400A	Kit w/2-pole JXD6 400A breaker	65	35	—
	MBKJD12300A	Kit w/2-pole JXD2 300A breaker	65	—	—
	MBKJD12400A	Kit w/2-pole JXD2 400A breaker	65	—	—
JD① 3-ph 400A Max.	**MBKJD3300A**	Kit w/3-pole JXD6 300A breaker	65	35	—
	MBKJD3400A	Kit w/3-pole JXD6 400A breaker	65	35	—
	MBKJD32300A	Kit w/3-pole JXD2 300A breaker	65	—	—
	MBKJD32400A	Kit w/3-pole JXD2 400A breaker	65	—	—

① These Main Breaker Kits are Make to Order only – expect extended lead-times.

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 11-13.)



300A Main installed. These Revised P1 kits can now be used as top or bottom feed.

S1/S2 Panels—All the original P1 panel kits for 250 amp and below panels will work for 250 amp maximum S1/S2 panels (will not work for S1/S2 400A and above).

Note: Revised P1 kits will not work with S1/S2 or SE Panels.

Original P1 Kits

Original P1 Main or Subfeed Strap Kits without Breakers and MLO kits

S1/S2 Panels—All the original P1 panel kits for 250 amp and below panels will work for 250 amp maximum S1/S2 panels (will not work for S1/S2 400A and above).
Note: Revised P1 kits will not work with S1/S2 or SE Panels.

Strap kits for Original P1 product only - Breaker kits not available				
Original P1 Catalog No.	**Description of breaker type to order**	**Phase**	**Amps Max.**	**Available for Subfeed**
MBKBL1	2-pole BL/BLH/HBL 15A-100A	1	100A	yes
MBKBL3	3-pole BL/BLH/HBL 15A-100A	3	100A	yes
MBKBC3	3-pole BQD 15A-100A	3	100A	yes
MBKNB1	2-pole NGB/LGB/HGB 15A-125A	1	125A	yes
MBKNB3	3-pole NGB/LGB/HGB 15A-125A	3	125A	yes
MBKED1	2-pole ED4/HED4 50A-125A	1	125A	yes
MBKED3	3-pole ED4/HED4 50A-125A	3	125A	yes
MBKQR1	2-pole QR(H)2/HQR2(H) 125A-225A	1	225A	yes
MBKQR3	3-pole QR(H)2/HQR2(H) 125A-225A	3	225A	yes
MBKFD1	2-pole F(X)D6/HF(X)D6 70A-250A	1	250A	yes
MBKFD3	3-pole F(X)D6/HF(X)D6 70A-250A	3	250A	yes
MBKJD1	2-pole JXD2/J(X)D6/HJ(X)D6 200A-400A	1	400A	NO
MBKJD3	3-pole JXD2/J(X)D6/HJ(X)D6 200A-400A	3	400A	NO

Strap kits for 400/600A S1/S2 and all SE panels - breakers not included				
Catalog No.	**Description of breaker type to order**	**Phase**	**Amps Max.**	**Available for Subfeed**
SMBKED1	2-pole ED2, ED4, ED6, HED4, HHED6	1	125A	yes
SMBKED3	3-pole ED2, ED4, ED6, HED4, HHED6	3	125A	yes
SMBKFD1	2-pole FXD6, FD6, HFXD6, HFD6	1	250A	yes
SMBKFD3	3-pole FXD6, FD6, HFXD6, HFD6	3	250A	yes
SMBKJD1	2-pole JD6, JXD6, HJD6, HJXD6	1	400A	yes
SMBKJD3	3-pole JD6, JXD6, HJD6, HJXD6	3	400A	yes

MLO kits for Original P1 product only

* MLO Kits available for SE Panels - AL 250A only
Note: 400/600A S1/S2 MLO kits no longer available

Original P1 Cat No.	**Description**	**Phase**	**Amps Max.**	**Available for P1 Feed-thru**
MLKA1*	(1) #6 AWG- 350 kcmil (CU or AL)	1	250A	yes
MLKA3*		3		yes
MLKC1	(1) #6 AWG- 350 kcmil (CU)	1	250A	yes
MLKC3		3		yes
4MLKA1	(2) 1/0 - 250 kcmil or (1) #2 AWG-600 kcmil	1	400A	yes
4MLKA3		3		yes
4MLKC1	(2) 1/0 - 4/0 or (1) 1/0 - 600 kcmil	1	400A	yes
4MLKC3		3		yes

Other applications:
For P4/S4 and 10" deep SPP panels see page 11-104 for branch breaker mounting kits.
For P5/S5 and 12.75" deep SPP panels see page 11-118 for branch breaker mounting kits.
For P4/F1 and 10" deep FPP panels see page 11-104 for branch fusible switch mounting kits.
For P5/F2 and 12.75" deep FPP panels see page 11-118 for branch fusible switch mounting kits.
For Series 5, Series 6, CDP6 and VB 6 panels as well as FC20, FCI, FCII, SB1, SB2 and SB3 distribution switchboards, see page 12-32 for branch device mounting kits.

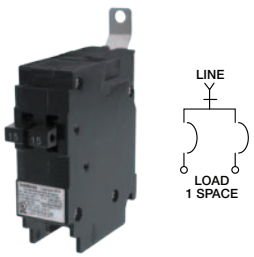
Branch Breakers Selection for P1

BL Family Circuit Breakers

Amp Ratings	1-Pole	2-Pole		3-Pole
	120V	240/120V	240V	240V
Type BL - 10,000A IR①				
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
60	B160	B260	—	B360
70	B170	B270	—	B370
80	—	B280	—	B380
90	—	B290	—	B390
100	—	B2100	—	B3100
Type BLH — 22,000 IR①				
15	B115H	B215H	—	B315H
20	B120H	B220H	—	B320H
25	B125H	B225H	—	B325H
30	B130H	B230H	—	B330H
35	B135H	B235H	—	B335H
40	B140H	B240H	—	B340H
45	B145H	B245H	—	B345H
50	B150H	B250H	—	B350H
60	B160H	B260H	—	B360H
70	B170H	B270H	—	B370H
80	—	B280H	—	B380H
90	—	B290H	—	B390H
100	—	B2100H	—	B3100H
Type HBL — 65,000A IR①				
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

BT Twin Family Circuit Breakers

The Space saver duplex breakers combine two independent 1/2" breaker poles in a common unit. This unit bolts into any location that would typically fit a 1-pole BL breaker and requires only 1" of panel space.



Replacement for 1-pole BL series (15A & 20A only)

Amp Ratings	Width	Circuits	BT (10k AIC)	BTH (22k AIC)	Details
Type BT and BTH					
15-15	1" pole	2	B1515	B1515H	Two 15A circuits
20-20	1" pole	2	B2020	B2020H	Two 20A circuits

BQD & GB Family Circuit Breakers

Amp Ratings	1-Pole	2-Pole	3-Pole
	277V	480Y/277V	480Y/277V
Type BQD② – 14,000A IR @ 480/277V I 65,000A IR @ 240V			
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 Family② Type NGB - 25,000A IR @ 480/277V I 100,000A IR @ 240V Type HGB - 35,000A IR @ 480/277V I 100,000A IR @ 240V Type LGB - 65,000A IR @ 480/277V I 100,000A IR @ 240V Type NGB/HGB/LGB - 14,000A IR @ 347V and 600Y/347V			
Amp Ratings	277V	480Y/277V	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

Typical Cable Ranges by Breaker Type

UL Breaker Type	Amps	Connector Range for AL cable	Connector Range for CU cable
BL	15-20A	#12-#10 AWG	#14-#10 AWG
	25-35A	#8-#6 AWG	#8-#6 AWG
	10-50A	#8-#4 AWG	#8-#6 AWG
	55-70A	#8-#2 AWG	#8-#4 AWG
	80-100A	#2-#1/0 AWG	#4-#1/0 AWG
BQD	15-40A	#12-#6 AWG	#14-#6 AWG
	45-100A	#6-1/0 AWG	#8 - #1 AWG
xGB	15-30A	#12-#6 AWG	#14-#6 AWG
	35-125A	#4-2/0 AWG	#6-1/0 AWG
3VA41	15-40A	#14-#10 AWG	#14-#10 AWG
	45-125A	#14AWG - 3/0	#14AWG - 2/0

① To add Shunt trip to BL breakers (factory assempled only), See SpeedFax Breaker accessories section 7. One inch additional unit space required typically.
② To add Shunt trip or other accessories to BQD and GB family breakers, See SpeedFax Breaker accessories section 7. One inch additional unit space required typically for each.

AFCI/GFCI

Electronic Circuit Breakers		1-Pole		2-Pole		
Trip Type	**Breaker Type**	**Max IR (kA) at 120V**	**Amp Ratings Available**	**Max IR (kA) at 120/240**	**Amp Ratings Available**	**Catalog Number**
Combination AFCI	BAF2	10	15	—	—	**BA115AFC**
		10	20	—	—	**BA120AFC**
	BAFH2	22	15	—	—	**BA115AFCH**
		22	20	—	—	**BA120AFCH**
	HBAF2	65	15	—	—	**BA115AFCHH**
		65	20	—	—	**BA120AFCHH**
	BAF	—	—	10	15	**B215AFC**
		—	—	10	20	**B220AFC**
	BAFH	—	—	22	15	**B215AFCH**
		—	—	22	20	**B220AFCH**
Dual Function AFCI/GFCI	BFGA2	10	15	—	—	**B115DF**
		10	20	—	—	**B120DF**
	BFGAH2	22	15	—	—	**B115DFH**
		22	20	—	—	**B120DFH**
	HBFGA2	65	15	—	—	**B115DFHH**
		65	20	—	—	**B120DFHH**
Switching Neutrals[1]	BLG 2-Wire/3-Wire Common Trip	10	15	—	—	**BG215**
		10	20	—	—	**BG220**
		—	—	10	30	**BG330**
GFCI Personnel Protection (5mA)	BLF2	10	15	—	—	**BF115A**
		10	20	—	—	**BF120A**
		10	30	—	—	**BF130A**
	BLF	—	—	10	15	**BF215A**
		—	—	10	20	**BF220A**
		—	—	10	30	**BF230A**
		—	—	10	40	**BF240A**
		—	—	10	50	**BF250A**
		—	—	10	60	**BF260A**
	BLHF2	22	15	—	—	**BF115AH**
		22	20	—	—	**BF120AH**
		22	30	—	—	**BF130AH**
	BLHF	—	—	22	15	**BF215AH**
		—	—	22	20	**BF220AH**
		—	—	22	30	**BF230AH**
		—	—	22	40	**BF240AH**
		—	—	22	50	**BF250AH**
		—	—	22	60	**BF260AH**
	HBLF2	65	15	—	—	**BF115AHH**
		65	20	—	—	**BF120AHH**
		65	30	—	—	**BF130AHH**
GFCI Ground Fault Equipment Protection (30mA)	BLE	10	15	—	—	**BE1153**
		10	20	—	—	**BE1203**
		10	30	—	—	**BE130**
		—	—	10	15	**BE215**
		—	—	10	20	**BE220**
		—	—	10	30	**BE230**
		—	—	10	40	**BE240**
		—	—	10	50	**BE250**
		—	—	10	60	**BE260**
	BLEH	22	15	—	—	**BE115H**[2]
		22	20	—	—	**BE120H**[2]
		22	30	—	—	**BE130H**[2]
		—	—	22	15	**BE215H**[2]
		—	—	22	20	**BE220H**[2]
		—	—	22	30	**BE230H**[2]
		—	—	22	40	**BE240H**[2]
		—	—	22	50	**BE250H**[2]
		—	—	22	60	**BE260H**[2]

① Built to order. Additional "circuit" is included for neutral (via pigtail) and is NOT connected to bus. 2-pole is one phase and one neutral pigtail. 3-pole is two phase connections and one neutral pigtail.

② Allow 8-10 weeks for delivery

③ UL Listed as SWD (Switching Duty) Rated, suitable for 120V AC fluorescent lighting

3VA41 TMTU 125A max. - breakers w/AL lugs included

3VA41 1-Pole (1" wide)

		UL Type Code ==>	SEAB	MEAB	HEAB
		Panelboard MB codes ==>	V1 1-pole	V2 1-pole	V3 1-pole
		120 VAC kAIC rating ==>	65	85	150①
		277 VAC kAIC rating ==>	25	35	65
		347 VAC kAIC rating ==>	14	18	25
		125 VDC kAIC rating ==>	14②	25②	30②
		IC family @ 277VAC ==>	25kA	35kA	65kA
amps	**code**	**FTFM Trip included ==>**	**TM210**	**TM210**	**TM210**
15	95	**3VA41 1P breaker w/TM210**	**3VA4195-4ED14-0AA0**	...-5ED...	...-6ED...
20	20		**3VA4120-4ED14-0AA0**	...-5ED...	...-6ED...
25	25	**1 Pole 3VA41 with**	**3VA4125-4ED14-0AA0**	...-5ED...	...-6ED...
30	30	**AL connectors included.**	**3VA4130-4ED14-0AA0**	...-5ED...	...-6ED...
35	35	**For copper, use the following kits:**	**3VA4135-4ED14-0AA0**	...-5ED...	...-6ED...
40	40	**15A-40A use # 3VA9133-0JD10**	**3VA4140-4ED14-0AA0**	...-5ED...	...-6ED...
45	45	**45A-125A use # 3VA9133-0JD11**	**3VA4145-4ED14-0AA0**	...-5ED...	...-6ED...
50	50		**3VA4150-4ED14-0AA0**	...-5ED...	...-6ED...
60	60	Note: No accessory pockets available	**3VA4160-4ED14-0AA0**	...-5ED...	...-6ED...
70	70		**3VA4170-4ED14-0AA0**	...-5ED...	...-6ED...
80	80		**3VA4180-4ED14-0AA0**	...-5ED...	...-6ED...
90	90		**3VA4190-4ED14-0AA0**	...-5ED...	...-6ED...
100	10		**3VA4110-4ED14-0AA0**	...-5ED...	...-6ED...
110	11		**3VA4111-4ED14-0AA0**	...-5ED...	...-6ED...
125	12		**3VA4112-4ED14-0AA0**	...-5ED...	...-6ED...

3VA41 1-Pole in 2-Pole Frame (2" wide)

		IC family @ 277VAC ==>	25kA	35kA	65kA
amps	**code**	**FTFM Trip included ==>**	**TM210**	**TM210**	**TM210**
15	95	**3VA41 1P in 2-P**	**3VA4195-4ED54-0AA0**	...-5ED...	...-6ED...
20	20	**Frame breaker w/TM210**	**3VA4120-4ED54-0AA0**	...-5ED...	...-6ED...
25	25		**3VA4125-4ED54-0AA0**	...-5ED...	...-6ED...
30	30	**1 Pole in 2-pole Frame 3VA41**	**3VA4130-4ED54-0AA0**	...-5ED...	...-6ED...
35	35	**with AL connectors included.**	**3VA4135-4ED54-0AA0**	...-5ED...	...-6ED...
40	40	**For copper, use the following kits:**	**3VA4140-4ED54-0AA0**	...-5ED...	...-6ED...
45	45	**15A-40A use # 3VA9133-0JD10**	**3VA4145-4ED54-0AA0**	...-5ED...	...-6ED...
50	50	**45A-125A use # 3VA9133-0JD11**	**3VA4150-4ED54-0AA0**	...-5ED...	...-6ED...
60	60		**3VA4160-4ED54-0AA0**	...-5ED...	...-6ED...
70	70	Note: Only 3 Left side Accessory pockets available	**3VA4170-4ED54-0AA0**	...-5ED...	...-6ED...
80	80		**3VA4180-4ED54-0AA0**	...-5ED...	...-6ED...
90	90		**3VA4190-4ED54-0AA0**	...-5ED...	...-6ED...
100	10		**3VA4110-4ED54-0AA0**	...-5ED...	...-6ED...
110	11		**3VA4111-4ED54-0AA0**	...-5ED...	...-6ED...
125	12		**3VA4112-4ED54-0AA0**	...-5ED...	...-6ED...

① Although some breakers have a kAIC rating above 100 kAIC – many panels are limited to 100 kAIC or less.

② DC Voltage panels are limited by various factors. These DC ratings apply to the Breaker only.

3VA41 TMTU 125A max. - breakers w/AL lugs included

3VA41 2-Pole & 3-Pole (2" & 3" wide)

		UL Type Code ==>	SEAB	MEAB	HEAB
		Panelboard MB codes ==>	V1 3-pole I 2-pole	V2 3-p I 2-p	V3 3-p I 2-p
		240 VAC kAIC rating ==>	65 I 65	85 I 85	150①I150①
		480Y/277VAC kAIC rating ==>	25 I 25	35 I 35	65 I 65
		480 VAC kAIC rating ==>	25 I 25	35 I 35	65 I 65
		600Y/347VAC kAIC rating ==>	14 I 14	18 I 18	25 I 25
		600 VAC kAIC rating ==>	na I na	na I na	na I na
		250 VDC kAIC rating ==>	na I 50②	na I 85②	na I 100②
		IC family @ 480VAC ==>	25kA	35kA	65kA
amps	**code**	**FTAM Trip included ==>**	**TM210**	**TM210**	**TM210**
15	95	**3VA41 2P breaker w/TM210**	**3VA4195-4ED24-0AA0**	...-5ED...	...-6ED...
20	20		**3VA4120-4ED24-0AA0**	...-5ED...	...-6ED...
25	25	**2 Pole 3VA41 with**	**3VA4125-4ED24-0AA0**	...-5ED...	...-6ED...
30	30	**AL connectors included.**	**3VA4130-4ED24-0AA0**	...-5ED...	...-6ED...
35	35	**For copper, use the following kits:**	**3VA4135-4ED24-0AA0**	...-5ED...	...-6ED...
40	40	**15A-40A use # 3VA9133-0JD10**	**3VA4140-4ED24-0AA0**	...-5ED...	...-6ED...
45	45	**45A-125A use # 3VA9133-0JD11**	**3VA4145-4ED24-0AA0**	...-5ED...	...-6ED...
50	50		**3VA4150-4ED24-0AA0**	...-5ED...	...-6ED...
60	60	Note: Only 3 Left side Accessory pockets available	**3VA4160-4ED24-0AA0**	...-5ED...	...-6ED...
70	70		**3VA4170-4ED24-0AA0**	...-5ED...	...-6ED...
80	80		**3VA4180-4ED24-0AA0**	...-5ED...	...-6ED...
90	90		**3VA4190-4ED24-0AA0**	...-5ED...	...-6ED...
100	10		**3VA4110-4ED24-0AA0**	...-5ED...	...-6ED...
110	11		**3VA4111-4ED24-0AA0**	...-5ED...	...-6ED...
125	12		**3VA4112-4ED24-0AA0**	...-5ED...	...-6ED...
amps	**code**	**FTAM Trip included ==>**	**TM210**	**TM210**	**TM210**
15	95	**3VA41 3P breaker w/TM210**	**3VA4195-4ED34-0AA0**	...-5ED...	...-6ED...
20	20		**3VA4120-4ED34-0AA0**	...-5ED...	...-6ED...
25	25	**3 Pole 3VA41 with**	**3VA4125-4ED34-0AA0**	...-5ED...	...-6ED...
30	30	**AL connectors included.**	**3VA4130-4ED34-0AA0**	...-5ED...	...-6ED...
35	35	**For copper, use the following kits:**	**3VA4135-4ED34-0AA0**	...-5ED...	...-6ED...
40	40	**15A-40A use # 3VA9133-0JD10**	**3VA4140-4ED34-0AA0**	...-5ED...	...-6ED...
45	45	**45A-125A use # 3VA9133-0JD11**	**3VA4145-4ED34-0AA0**	...-5ED...	...-6ED...
50	50		**3VA4150-4ED34-0AA0**	...-5ED...	...-6ED...
60	60	Note: 3 Left side and 3 right side Accessory pockets available	**3VA4160-4ED34-0AA0**	...-5ED...	...-6ED...
70	70		**3VA4170-4ED34-0AA0**	...-5ED...	...-6ED...
80	80		**3VA4180-4ED34-0AA0**	...-5ED...	...-6ED...
90	90		**3VA4190-4ED34-0AA0**	...-5ED...	...-6ED...
100	10		**3VA4110-4ED34-0AA0**	...-5ED...	...-6ED...
110	11		**3VA4111-4ED34-0AA0**	...-5ED...	...-6ED...
125	12		**3VA4112-4ED34-0AA0**	...-5ED...	...-6ED...
amps	**code**	**Molded Case Switch**			
100	10	3VA41 2P MCS 65 kA	HEAB only 65ka ==> 3VA4110-1BB24-0AA0		
100	10	3VA41 3P MCS 65 kA	HEAB only 65ka ==> 3VA4110-1BB34-0AA0		

① Although some breakers have a kAIC rating above 100 kAIC – many panels are limited to 100 kAIC or less.

② DC Voltage panels are limited by various factors. These DC ratings apply to the Breaker only.

Spare Parts Kits for Revised P1 Panels

Kit Number	Current Product: P1 Revised	P2	P3	C1	C2	Old Product is no longer Manufactured, some kits are available: P1 Original	S1, S2, SE	qty/ kit	Product Description Note: Some kits apply to only specific enclosures used or configurations of the product listed	Drawing # ref for part or kit
Deadfront Parts										
NBK01A	X					X		1	Number Strips 1–60. Stick-on type; Use w/ P1 series Panels – includes 1/2" spacing numbers for BT twins	replaces NBK03
NBK02A	X					X		1	Number Strips 61-120. Stick-on type; Use w/ P1 series Panels – includes 1/2" spacing numbers for BT twins	replaces NBK04-05
NBK03A	X					X		1	Number Strips 121-240. Stick-on type; Use w/ P1 series Panels – includes 1/2" spacing numbers for BT twins	replaces NBK06-08
P1DFS250AFT	X							1	P1 250A Deadfront Support - for Feed-thru interiors only (4 per interior) Part # 11-D-3323-01 (replaces # 11-D-3212-01)	11-D-3323
P1DFS250ANFT	X							1	P1 250A Deadfront Support - for Non Feed-thru interiors only (4 per interior) Part # 11-D-3323-02 (replaces # 11-D-3212-02)	11-D-3323
P1DFS400A	X							1	P1 400A Deadfront Support (new for 3VA) - for both FT and NFT interiors. (#11-D-3315-01 replaces # 11-D-3004-01) (4 per interior)	11-D-3315
Filler Plates										
DFFP1A	X	X	X	X	X	X	X	1	DFFP1A Blank filler , 1 inch snap-in, replaced old QF3 and DFFP1 in Systems Products. Ref. old #12-1800-01 and 11-D-4554-01	11-D-4613-01
DFFP01B	X			X		X		1	P1 Main or Subfeed 250A Blank Filler Plate (use for Original or Revised P1 - also replaces DFFP01A/11-D-4560-01/12-A-1801-01) (Installs Vertical for 400A Main w/small DF opening)	11-D-4612-01
DFFP01C	X							1	P1 Main 400A Blank Filler Plate (use for Revised P1 400A with Large MB opening only)	11-D-4600-01
DFFPVA41A	X							1	RP1 Main/Sub-feed, 3VA4/BL/BQD/ED/xGB filler (replaces DFFPED01 / 12-A-1802-01)	11-D-4604-01
DFFPVA5262A	X							1	RP1 Main or Subfeed Filler 3VA52/61/62 – new filler for P1 150A-250A 3VA frame breakers	11-D-4617-01
DFFPVA5363A	X	X	X					1	RP1 400A Main Filler 3VA53/63 (also used in P2/P3 applications) – for RP1 Deadfronts with Large MB opening only	11-D-4599-01
MBKVA5363JD	X							1	RP1 400A Main only Filler 3VA53/63 – for Deadfronts with Small MB opening only (replacing a JD Main)	tbd - being developed
DFFPED01 (replaced by DFFPVA41A)	X					X		1	P1 Main Filler 100-125A frames ED, BL/BQD or xGB (old filler used for Original or Revised P1 and other applications)	12-A-1802-61
DFFPFD01	X	X	X			X	X	1	FD Main Filler Plate for 1-Ph and 3-Ph P1 Panels (use for Original or Revised P1 and other applications)(P2/P3 and S1/S2/SE)	12-A-1803-61
DFFPJD01	X	X	X			X	X	1	JD Main Filler Plate for 1-Ph and 3-Ph P1 Panels – Small MB opening (use for Original or Revised P1 & other applications)(P2/P3 & S1/S2)	11-D-4522-61
DFFPJD02	X					X		1	JD Main Filler Plate for 1-Ph and 3-Ph – for P1 Panels with Large MB Opening only.	11-D-4598-01
DFFPQJ01	X					X		1	QJ Main Filler Plate for 3-Phase (3-pole) P1 Panels (use for Original or Revised P1 and other applications)	12-A-1804-61
DFFPQJ02	X					X		1	QJ Main Filler Plate for 1-Phase (2-pole) P1 Panels (use for Original or Revised P1 and other applications)	12-A-1804-62
MBKQRFK	X					X		1	P1/Revised P1 Filler for 1PH/3PH QR. Horizontal Mount only.	11-D-2643-01
Service Entrance Barriers Kits (SEB)										
SEBKRP1V1	X							1	SEB Kit for RP1 with FD, QJ or QR Horizontal Main	11-A-1148-01
SEBKRP1V2	X							1	SEB Kit for RP1 with ED Horizontal Main	11-A-1148-01
SEBKRP1V3	X							1	SEB Kit for RP1 with back-fed BL/BQD Main in Unit Space	11-A-1149-01
SEBKRP1V4	X							1	SEB Kit for RP1 with back-fed xGB Main in Unit Space	11-A-1149-01
SEBKRP1V5	X							1	SEB Kit for RP1 with BL/BQD/xGB Main - with steel breaker brackets	11-A-1165-01
SEBKRP1V6	X							1	SEB Kit for RP1 with BL/BQD/GB/3VA41 Main - with all plastic strap kit	11-A-1194-01
SEBKRP1V7	X							1	SEB Kit for RP1 with 3VA52/61/62 Horizontal Main	11-B-1060-01
SEBKP1P2P3V1	X	X	X					1	SEB Kit for RP1 with RP1/P2/P3 with JD/LD or 3VA53/63 Vertical Main	11-A-1157-01
Ground Bar & Bond Kits										
BK1A	X							1	Revised P1 Bonding Kit including Service Disconnect Label	11-A-2024-01
ECGK	X	X	X			X		1	ECGK Copper Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	11-A-2024-01
EGK	X	X	X			X		1	ECGK Al/Cu Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	11-A-2024-01
ICGK	X	X	X			X		1	ICGK Insulated Copper Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	11-A-2024-01
IGK	X	X	X			X		1	IGK Insulated Al/Cu Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	11-A-2024-01

Spare Parts Kits for Revised P1 Panels (cont.)

Kit Number	Current Product					Old Product is no longer Manufactured, some kits are available			Product Description Note: Some kits apply to only specific enclosures used or configurations of the product listed	Drawing # ref for part or kit
	P1 Revised	P2	P3	C1	C2	P1 Original	S1, S2, SE	qty/ kit		
General Hardware										
IMK1	X	X	X			X		1	Interior Mounting Kit with Adjustment Provisions for P1/P2/P3	11-A-2024-01
LPDC01	X	X	X	X	X	X	X	10	Panelboard Directory Card. 5.5"X5", for 1-90 circuits. Mates with pouch # 11-1824-01	12-1110
LPDC02	X	X	X	X	X	X	X	10	Panelboard Directory Vinyl Pouch, 6.3"x6.1". Mates with Directory Card #12-1110-01	11-1824
MCHK	X	X	X	X	X	X	X	1	MCHK - Metal Card Holder Kit - Field Installable	12-A-2098-00
LPJSPDNUT01	X	X	X	X	X	X	X	25	Replacement J-nuts for use with lighting panel fronts and deadfronts. Also used in miscellaneous other applications.	11-A-1820-61
LPTS01	X	X	X	X	X	X	X	25	Trim Screw, Lighting Panel Front, 0.547" Length, ¼-20 Machine Screw Thread (kit pending - not yet available) ref #11-A-1819-01	11-A-1819
P1CONACPHCU	X							6	RP1 A/C-Phase Replacement Copper Connectors, Kit of 6 pcs plus mounting hardware. Also can be used to replaced AL A/C-Phase Connectors.	11-D-2572-02
P1CONBPHAL	X							6	RP1 B-Phase Replacement Aluminum Connectors, Kit of 6 pcs plus mounting hardware	11-D-2573-01
P1CONBPHCU	X							6	RP1 B-Phase Replacement Copper Connectors, Kit of 6 pcs plus mounting hardware	11-D-2573-02
P1SCRWS	X					X		42	P1 Branch breaker mounting screws - pack of 42 screws, part #11-A-1505-03, 10-32 x 0.312" Hex Washer Head Screw - Do Not Substitute	11-A-2010-01
LP3RHP01	X	X	X			X		12	3R/12 Hinge Pin, 0.188" dia. Steel w/Zinc plate (kit pending, not yet available) ref # 11-1902-01	11-1902
ref 31-1905-01	X	X	X	X	X	X		1	NEMA 3R T-Handle with harware, uses B363A key - does not include key (kit needed with all mounting hardware and keys - in process)	31-1905
LPKEY01A	X	X	X	X	X	X		4	Key for standard Panelboard Lock series 1-1895-0x. Siemens FAS-Latch and other various fronts use this standard key #B363A	B363A
LPKEY01B	X	X	X	X	X	X		25	Key for standard Panelboard Lock series 1-1895-0x. Siemens FAS-Latch and other various fronts use this standard key #B363A	B363A
LPLOCK01A	X	X	X	X	X	X		1	Siemens FAS-Latch Replacement Lock Kit with two B363A Keys, for 14 Gauge Steel, Lighting Panel Type 1 Fronts, various styles.	11-1895-61
LPLOCK02A	O	O	O	O	O	O		1	Siemens FAS-Latch Replacement Lock Kit with two B363A Keys, for 12 Gauge Steel, Lighting Panel Type 1 Fronts, various styles.	11-1895-62
LPLOCK03A	O	O	O	O	O	O		1	Siemens FAS-Latch Replacement Lock Kit with two B363A Keys, for 10 Gauge Steel, Lighting Panel Type 1 Fronts, various styles.	11-1895-63
XTP060	X	X	X	X	X	X	X	1	TUP61 Grey Touch-up Paint, 12 oz Spray Can	na
Misc. Parts for reference										
ref 11-A-1505-02	X					X		1	Screw: 10-32 x0.375" Slotted Hex Washer Head SEMS - Used in P1 for BL/BQD/xGB/ED Main breaker to bus strap mounting (not in unit space)	11-A-1502
ref 11-A-1508-04	X					X		1	Screw: 1/4-20 x0.50" Slotted Hex Washer Head SEMS - Used in P1 for QJ/QR/FD breaker to bus strap mounting - Also used for P1 Bus strap to Bus connections - BL/BQD/xGB/ED/FD	11-A-1508
ref 11-A-1508-08	X					X		1	Screw: 10-32 x0.875" Slotted Hex Washer Head SEMS - Used in P1 for FD breaker to bus strap mounting	11-A-1508
ref 11-A-1520-07	X					X		1	Screw: 5/16-18 X 0.750" IHWHSW, Indented Hex Washer-Head Screw, Thread Forming SEMS with captive Belleville washer. - Used for P1 Bus strap to Bus connections - JD - two per connection	11-A-1520
ref 11-1576-04	X					X		1	Screw: 10-24 X 0.437" ISHWHSW Indented Slotted Hex Washer Head. - Used for P1 250A and 400A Deadfront support to base-rail and deadfront to DF support (plus many other items) (kit pending, not yet available)	11-1576
ref 11-1615-07 **ref 11-1618-05** **ref 11-1586-05**	X					X		1	One of each used for each phase: JD Breaker to Bus strap connection. Washer: Type A Plain 3/8" Narrow, .406"x.812"x.065" Washer: 3/8" Helical Spring Lock washer, .382"x.683"x.094" Screw: 3/8-16x1.00" HHMS, Hex Head Machine Screw	11-1615 11-1618 11-1586

Lighting panel ground bus information: P1-P2-P3

Catalog Number	Description	Comments
EGK	Al Ground Bus 44 Connections	Type 1, 3R, 3R/12
ECGK	Cu Ground Bus 44 Connections	Type 1, 3R, 3R/12
IGK	Insulated Al Ground Bus	Type 1, 3R, 3R/12
ICGK	Insulated Cu Ground Bus	Type 1, 3R, 3R/12

EGK / ECGK / IGK / ICGK Installation Instructions:

Ground bus to be mounted in either left or right gutter with hardware provided. Applied torque ratings shall be 45-lbs-inch for three No. 10 AWG solid copper conductors in the large holes. For all other combinations of conductors, refer to the torque rating label on the panelboard.

Note: For IGK / ICGK, insure ground bar is attached to Glastic insulator with two screws before mounting insulator to enclosure. Ground Bar mounts thru side holes oriented as shown on picture below.

Construction notes:
a) AL Ground bus kits can be used with either AL or CU Cable.
b) CU Ground bus kits only accept CU Cable.

Wire size range of the EGK/ECGK/IGK/ICGK lug connections/holes:

(Note: The multiple combinations typically only apply when used as an equipment ground. If similar bar is used as a neutral bar, only one wire can be used in each hole.)

1. Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). (note: one Connection may be needed for incoming Ground Connection)
2. The Maximum wire size the standard ground accepts is: 1/0 in the Large Holes and #6 in the Smaller Holes.
3. Small Hole can accept:
   (1-2 wires) #14-12; (1 wire) #10; (1 wire) #8-#6.
4. The Large Hole can accept:
   (1-3 wires) #14-#10; (1 wire) #8; (1 wire) #6 - #4; (1 wire) #3-1/0.
5. Max. connections if largest wire size is used:
   (6 x 1) + (15 x 1) = 21
6. Max. connections if smallest wire size is used:
   (6 x 3) + (15 x 2) = 48
7. Request for Ground Lug greater than 1/0 in Size requires a Special Modification in COMPAS when Line Item is entered (specify number of connections needed greater than 1/0) or Manual Line for Custom Ground (specify number of connections needed greater than 1/0).

This chart is on labels for P1, P2 and P3 enclosures.

Note: Ground bus mounting locations may be available in alternate corners from shown below, or all 4 corners in some enclosures.

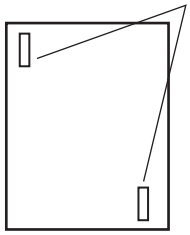
USE SIEMENS EQUIPMENT GROUND BUS
TYPES EGK, IGK, ECGK, ICGK

Torque required to secure wire sizes listed below:

Small Terminal	
(1-2 Wires)-#14-#12	20 lb-in
(1 Wire)-#10	20 lb-in
(1 Wire)-#8-#6	30 lb-in

Large Terminal	
(1-3 Wires)-#14-#10	35 lb-in
(1 Wire)-#8	40 lb-in
(1 Wire)-#6-#16	45 lb-in
(1 Wire)-#3-1/0	50 lb-in

Grd. bus location



Type 1, 3R and 3R/12 Enclosure



EGK / ECGK kit parts



IGK / ICGK kit parts

Deadfront Filler Chart – P1, P2, P3, C1, C2

Ref.	Panel Type	Breaker Position	Breaker Type	Orient-ation	Catalog No.	Catalog Description / comments	Filler Plate Eng ref #	Filler Description
A1	P1 & RP1, P2, P3, C1, C2	1" Branch & Main①	BL/BQD/ xGB/xGB2/ ED①/3VA41	Horiz. or Vert.	**DFFP1A②**	1" Branch circuit filler plate (used for BL/BQD/xGB/xGB2/ ED/3VA41 blank positions)①	11-D-4613-01 replaces 11-D-4554-01	Blank Filler 1"
A2	P1 & RP1, C1	Main / Subfeed	blank MLO - no breaker	Horiz. or Vert.	**DFFP01B**	P1 Main Blank Filler Plate - 1 Piece (use for Original or Revised P1 - also replaces DFFP01A and 12-A-1801-01) (Vertical for 400A Main)	11-D-4612-01 (replaces 11-D-4560-01 & 12-A-1801-01)	P1 Main - Blank Filler Plate With standard small opening
B1	P1 & RP1	250A Main / 250A & 400A Subfeed (small opening)	3VA4/xGB BL/BQD/ED	Horiz.	**DFFPVA41A**	RP1 Main/Sub-feed 125A max. 3VA4/BL/BQD/ED/xGB filler (replaces DFFPED01 ref. 12-A-1802-01)	11-D-4604-01 replaces 12-A-1802-01	P1 125A Main Breaker Filler
B2	P1 & RP1		QJ 2-pole	Horiz.	**DFFPQJ02**	P1 QJ Main Filler Plate 2 pole - 1 pc.	12-A-1804-02	P1 QJ Main 2P Filler Plate
B3	P1 & RP1		QJ 3-pole	Horiz.	**DFFPQJ01**	P1 QJ Main Filler Plate 3 pole - 1 pc.	12-A-1804-01	P1 QJ Main 3P Filler Plate
B4	P1 & RP1		QR	Horiz.	**MBKQRFK**	P1/Revised P1 Filler for 1PH/3PH QR. Horizontal Mount only.	11-D-4563-01*	P1 QR Filler Plate
B5	P1 & RP1		FD	Horiz.	**DFFPFD01**	P1 FD Main Filler Plate - 1 Piece	12-A-1803-01	FD Filler Plate
B6	RP1		3VA52/61/62	Horiz.	**DFFPVA5262A**	RP1 SINGLE MNT 3VA52/61/62 FILLER 1 piece	11-D-4617-01	RP1 SINGLE MNT 3VA52/61/62 FILLER 1 piece
C1	P1 & RP1 400A only	400A Main (small opening)	JD	Vert.	**DFFPJD01**	P1 JD Main Filler Plate - 1 Piece	11-D-4522-01	Deadfront Filler 400 - 800A Breaker
C2	RP1 400A only		JD	Vert.	**MBKVA5363JD**	RP1 Deadfront Filler 400A Max. allows old 400A JD to be replaced with 3VA53/63 with small DF open-ing	tbd	RP1 400A JD to 3VA retrofit kit 1ph/3ph (filler only - launching Q4 FY20)
D1	RP1 400A only	400A Main (large opening)	blank MLO - no breaker	Vert.	**DFFP01C**	RP1 400A Main Blank Filler Plate - 1 Piece for large opening (use for Revised P1 400A with large MB opening only)	11-D-4600-01	RP1 400A Main w/ large opening - Blank Filler Plate for MLO
D2	RP1 400A only		JD	Vert.	**DFFPJD02**	RP1 400A w/JD Main - 1 Piece for large opening	11-D-4598-01	JD Filler - RP1 400A Main w/ large opening
D3	RP1 400A only		3VA53/63	Vert.	**DFFPVA5363A**	RP1 400A w/3VA53/63 Main - 1 Piece for large opening	11-D-4599-01	3VA53/63 Filler - RP1 400A Main w/ large opening
E1	P2 & P3	Branch	BL/BQD/ED/ xGB/xGB2	n/a①	**DFK1**	BL, BQD, ED, xGB, xGB2, 3VA41 deadfront center strip kit for 1" pole breakers with mounting hardware	multiple parts 11-D-3018-01 thru ...-07	Center strips included (7 sizes) 3", 6", 9", 12", 15", 18", 21" (of branch height)
E2	P2 & P3	Branch	blank - no breaker	Horiz.	**DFFP3**	Deadfront filler, 3" steel blank filler plate (one each P2&P3)	11-D-3014-02 11-D-3035-02	P2 Blank Deadfront Plate 3" P3 Blank Cover Plate 2.97"
E3	P2 & P3	Branch	blank - no breaker	Horiz.	**DFFP6**	Deadfront filler, 6" steel blank filler plate (one each P2&P3)	11-D-3014-01 11-D-3035-01	P2 Blank Deadfront Plate 6" P3 Blank Cover Plate 5.97"
F1	P2 & P3	Main / Branch	3VA52/61/62	Horiz.	**DFFPVA5262P2A**	3VA52/61/62 FILLER for single mount P2/P3 applications. 1 piece	11-D-4610-01	P2/P3 SINGLE MNT 3VA52/61/62 FILLER 1PCE
F2	P2 & P3	Main / Branch	3VA52/61/62	Horiz.	**DFFPVA5262P2B**	3VA52/61/62 (single mount) blank plate with provision barrier (one set of parts for P2 or P3)	11-D-3340-01 11-D-4614-01	P2/P3 3VA52/62 BLANK PLATE/BARRIER 1PCE
F3	P2	Branch	QR	Horiz. or Vert.	**BBKQRP1FK**	P2 Filler for QR. Horiz. or vert. mount. Contains all cover plates necessary to change from QJ to QR both 2 and 3-pole breakers.	11-D-3282-01 11-D-4563-01* 11-D-4564-01	QR Deadfront Plate P1 QR Filler Plate P2 QR Deadfront Filler
F4	P3	Branch	QR	Horiz.	**BBKQRP2FK**	P3 Filler for QR. Dual mount horiz. Kit contains all cover plates neces-sary to change from QJ to QR both 2 and 3-pole breakers. For 1-phase panel, both breakers must change from QJ to QR, cannot have one of each installed.	11-D-4565-01 11-D-3283-01 11-D-3284-01 11-D-3288-01 12-6812-34	P3 QR Deadfront Filler P3 DUAL QJ Deadfront Plate P3 DUAL QJ Deadfront Plate P3 QR-QJ Combo Deadfront Plate Breaker Blank Filler
F5	P2	Main	QR	Vert.	**P2QRFP01**	P2 QR Dead front filler, Vertical main only, 1 per kit	11-D-4564-01	P2 QR Vert. filler
G1	P3	Branch	NEB/HEB	Horiz.	**EBF1**	EB Filler Plate	11-D-4529-01	EB Deadfront Filler
G2	P3	Branch	BL, BQD, ED, xGB or 3VA41	Horiz.	**DFP3AP01**	Used for filling space in a P3 dead-front when a BL, BQD, ED, xGB or 3VA41 branch breaker is installed. Can be replaced in field if lost or damaged.	11-D-3033-01	P3 BL/BQD/ED/xGB/3VA41 adaptor plate 3" - 1 Piece per pack

① 1" Branch circuit filler plate (used for BL/BQD/xGB/xGB2/ED/3VA41 blank positions. Suiteable for replacing QF3 and DFFP1 in P1-P5 Panelboards and Switchboards). Also used to fill void where a 2-pole breaker is installed in a 3-pole position in various applications.
② QF3/DFFP1 compatability
a) DFFP1 fits tighter in the opening than the QF3 (small spring tabs are stronger on the sides, but otherwise almost identical). thus DFFP1 will not slide out of place without some force being applied).
b) In a P1-P2-P3 deadfront, a QF3 will slide out of position when the deadfront is removed from the panel. This makes it difficult to put the deadfront back on the panel.
c) Both the QF3 and DFFP1 are approved for use in all panelboards and switchboards. However, only QF3 is approved for use in residential products (load centers, meter combos, etc.

Revised Type P1 - General Specifications

480V AC Maximum
600Y/347V AC Maximum (limited applications)
400 Ampere Max. Mains
250 Ampere Maximum Branch
UL Short Circuit Rating — 200,000 A. @ 240 Vac / 100,000 A. @ 480/277 Vac. IR Maximum

Branch Breaker Symmetrical Interrupting Capacity

Based on Underwriters' Test Procedure

Feed thru and subfeed lugs may result in lower interrupting ratings if not protected by a main device. Consult sales office.

Standards

NEC: 2020 (where accepted)
NEMA: PB1.1
UL: 67, 50 and 50E. Listed by Underwriter's Laboratories, Inc., under "Panelboards"
File #E2269, and #E4016.
Meets Federal Specification W-P-115c.

Service

1-phase 2-wire - 120 Vac, 240 Vac

1-phase 3-wire - 120/240 Vac

3-phase 3-wire - 480Y/277 (when derived from 3-phase 4-wire system), 480 Vac, 347 Vac, 240 Vac, 120 Vac

3-phase 4-wire - 208Y/120 Vac, 480Y/277 Vac, 600Y/347 Vac, 380/220 Vac (see complete list in table on page 11-6)

Panelboard Fronts and Doors

Standard panelboards are furnished with trim featuring concealed fasteners and hinges with a flush door lock. All are factory-assembled for ease of installation. Fronts are fabricated from code gauge steel and finished ANSI-61. See page 11-37 for optional fronts.

Main Breakers

BL, BLH, HBL, NGB, HGB, LGB, BQD, ED4, ED6, HED4, QR2, QRH2,HQR2, HQR2H, FXD6, FD6, HFD6, HFXD6, JXD6, JD6, HJXD6, HJD6, 3VA41/52/61/62/53/63. (All main breakers except 400 amp frame are mounted horizontal.)

Note: Revised P1 interiors with BL, BQD, GB or 3VA41 Type Mains can be Back-fed in unit space. See special Notes for unit space reduction.

Main Breaker Panel Connectors

Ampere Rating	Connectors Suitable for Cu or Al
100	(1)—#14 1/0 AWG
125	(1)—#4 1/0 AWG
225	(1)—#4 AWG–300 kcmil
250	(1)—#4/0 AWG–350 kcmil Al (1)—#6/0 AWG–350 kcmil Cu
400①	(2)—#3/0 AWG–250 kcmil Al or (1)—#3/0 AWG–500 kcmil Al

Connector ranges indicated do not apply to all main breaker types. Refer to molded case circuit breaker standard pressure wire connector chart (Section 7) for the connector range of a specific frame.

Main Lug Connectors⑥

125	(1)—#6 AWG–350 kcmil
250	(1)—#6 AWG–350 kcmil
400 std.	AL (2) 1/0-250 kcmil or (1) #2 AWG–600 kcmil
400 opt.	CU (2) 1/0–4/0 or (1) 110–600 kcmil
400 opt.	AL (1) AL 1/0–750 kcmil (2) AL/CU 250 kcmil max. [max. (1) 600 kcmil (1) wire]

Boxes

20" wide, 5.75" deep

- End walls are blank as standard.
- End walls with knockouts are available for 5.75" deep enclosures, if requested at time of order, and are available as a field installable kit.

Weight — Approximate

Total panelboard weight when filled with a normal quantity of breakers and accessories is:

- About 3 lbs. per inch of box height

Gauge Steel Boxes (Type 1)

Width	Height	Gauge Steel
20"	All	#16

Fronts — Surface, Flush (Type 1)

20"	All	#14

Series Connected Short Circuit Ratings

The term "Series Connected 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.

See Circuit Breaker Section of this book. Series ratings must be specified on order at time of entry.

① P1 400 amp main breaker panels have wire bending space available for 600 kcmil.
② 400A main breaker is vertical mounted.
③ Feed-thru lug wire bending space is 15.000" and neutral wire bending space is 15.880" on 400A panel.
④ P1 panel limited to (1) subfeed 250 amperes max.
⑤ See Branch Breaker Side Gutter Chart for Revised P1 Backfed Options.
⑥ See complete list of MLO connectors on page 11-27.

For inches / millimeters conversion, see Application Data section.

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 (These are examples of configured panels - for reference only)

Main Lug Only			Revised P1 – Subfeed Space①③	Revised P1 – Subfeed Space①③	Revised P1 – Subfeed Space①③④
Max Panel Amp Rating	Max 1-Pole Circuits	Box Height (in.)	208Y/120V 3-Phase 4-Wire Catalog #	120/240V 1-Phase 3-Wire Catalog #	480Y/277V 3-Phase 4-Wire Catalog #
125	18	32	P1C18ML125ATST⑧	P1A18ML125ATST⑧	P1E18ML125ATST⑧
	30	38	P1C30ML125ATST	P1A30ML125ATST	P1E30ML125ATST
	42	44	P1C42ML125ATST	P1A42ML125ATST	P1E42ML125ATST
	54	50	P1C54ML125ATST	P1A54ML125ATST	P1E54ML125ATST
	66	56	P1C66ML125ATST	P1A66ML125ATST	P1E66ML125ATST
250	18	32	P1C18ML250ATST⑧	P1A18ML250ATST⑧	P1E18ML250ATST⑧
	30	38	P1C30ML250ATST	P1A30ML250ATST	P1E30ML250ATST
	42	44	P1C42ML250ATST	P1A42ML250ATST	P1E42ML250ATST
	54	50	P1C54ML250ATST	P1A54ML250ATST	P1E54ML250ATST
	66	56	P1C66ML250ATST	P1A66ML250ATST	P1E66ML250ATST
400	18	56	–	–	–
	30	62	P1C30ML400ATST	P1A30ML400ATST	P1E30ML400ATST
	42	68	P1C42ML400ATST	P1A42ML400ATST	P1E42ML400ATST
	54	74	P1C54ML400ATST	P1A54ML400ATST	P1E54ML400ATST
	66②	74②	P1C66ML400ATSN②	P1A66ML400ATSN②	P1E66ML400ATSN②

Table P1-17 – Main Circuit Breaker (These are examples of configured panels - for reference only)

100	18	32	P1C18BL100ATST⑧	P1A18BL100ATST⑧	P1E18V1100ATST⑧
	30	38	P1C30BL100ATST	P1A30BL100ATST	P1E30V1100ATST
	42	44	P1C42BL100ATST	P1A42BL100ATST	P1E42V1100ATST
	54	50	P1C54BL100ATST	P1A54BL100ATST	P1E54V1100ATST
	66	56	P1C66BL100ATST	P1A66BL100ATST	P1E66V1100ATST
125	18	32	P1C18V1125ATST⑧	—	P1E18V1125ATST⑧
	30	38	P1C30V1125ATST	—	P1E30V1125ATST
	42	44	P1C42V1125ATST	—	P1E42V1125ATST
	54	50	P1C54V1125ATST	—	P1E54V1125ATST
	66	56	P1C66V1125ATST	—	P1E66V1125ATST
225	18	32	P1C18QR225ATST⑧	P1A18QR225ATST⑧	P1E18VA225ATST⑧
	30	38	P1C30QR225ATST	P1A30QR225ATST	P1E30VA225ATST
	42	44	P1C42QR225ATST	P1A42QR225ATST	P1E42VA225ATST
	54	50	P1C54QR225ATST	P1A54QR225ATST	P1E54VA225ATST
	66	56	P1C66QR225ATST	P1A66QR225ATST	P1E66VA225ATST
250	18	32	P1C18VA250ATST⑧	P1A18VA250ATST⑧	P1E18VA250ATST⑧
	30	38	P1C30VA250ATST	P1A30VA250ATST	P1E30VA250ATST
	42	44	P1C42VA250ATST	P1A42VA250ATST	P1E42VA250ATST
	54	50	P1C54VA250ATST	P1A54VA250ATST	P1E54VA250ATST
	66	56	P1C66VA250ATST	P1A66VA250ATST	P1E66VA250ATST
400	18	56	—	—	—
	30	62	P1C30VE400ATST	P1A30VE400ATST	P1E30VE400ATST
	42	68	P1C42VE400ATST	P1A42VE400ATST	P1E42VE400ATST
	54	74	P1C54VE400ATST	P1A54VE400ATST	P1E54VE400ATST
	66②	74②	P1C66VE400ATSN②	P1A66VE400ATSN②	P1E66VE400ATSN②

Table P1-18 – Standard Enclosures

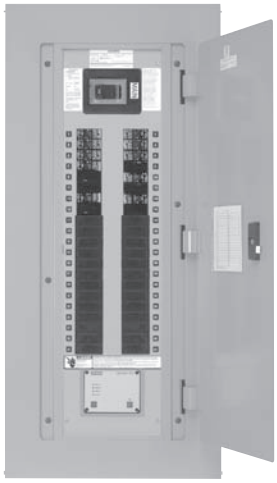
Box Height (in.)	Catalog Number				
	Type 1 Standard Trim				
	Box⑤	Surface⑥	Flush⑥	Type 3R⑦	Type 3R/12⑦
26	B26	S26B	F26B	NR26	WP26
32	B32	S32B	F32B	NR32	WP32
38	B38	S38B	F38B	NR38	WP38
44	B44	S44B	F44B	NR44	WP44
50	B50	S50B	F50B	NR50	WP50
56	B56	S56B	F56B	NR56	WP56
62	B62	S62B	F62B	NR62	WP62
68	B68	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 16 GA std., Optional 14 GA & 12 GA Enclosures only.
⑥ 14 Gauge Steel only.
⑦ 16 Gauge Can w/ 14 Gauge Front.
⑧ The Revised P1 (18 circuit 250A only) is limited to 100A per connection (200A per pair) when installing BL/BQD or xGB Branch Breakers across from one another. 3VA41 does not have this restriction. All other configurations allow 125A per connection max. (250A per pair max.)

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

RP1 Est. size/weights for AL MLO panels. - Add Main Breaker weights as needed. - Add 20% for CU Bus.		Max # of 1" Poles		Max # of Poles w/BT②		Dimensions in inches (mm)			MLO① Estimated Weight in Lbs. (kg) with Breakers
Type of RP1 interior ==>		BL/BQD or xGB/3VA41③		BL/BQD only		Unit Space		Box Height B"(mm)	
Main Breaker Amp Rating / Type	Main Lug Amp Rating	FT #	NFT #	FT w/BT	NFT w/BT	FT A"	NFT A"		
250A max. Main Bus rating 100A max BL or BQD series 125A max xGB or 3VA41 Series or 225A max QR Series 250A max FD or 3VA52/62 Series	125A or 250A (all bus is 250A max.)	–	18	–	18 + 10	–	9	26 (661)	95 (43)
		18	30	18 + 10	30 + 20	9	15	32 (813)	110 (50)
		30	42	30 + 20	42 + 30	15	21	38 (965)	125 (57)
		42	54	42 + 30	54 + 30	21	27	44 (1118)	140 (64)
		54	66	54 + 30	66 + 30	27	33	50 (1270)	155 (71)
		66	—	66 + 30	—	33	—	56 (1423)	170 (78)
400A max. Main Bus rating 400A max JD Series or 400A max 3VA53/63 Series	400A (all bus is 400A max.)	—	30	—	30 + 20	—	15	56 (1423)	172 (78)
		30	42	30 + 20	42 + 30	15	21	62 (1575)	190 (86)
		42	54	42 + 30	54 + 30	21	27	68 (1728)	208 (95)
		54	66	54 + 30	66 + 30	27	33	74 (1880)	226 (104)



① Estimated weights are for Aluminum bus MLO panels and vary by MB and installed Branches
② BT - twin style breakers are available in 15A and 20A only and provide two 1-pole circuits in 1" of unit space. The maximum Qty. of BT twins allowed in a panel is restricted to the max. number of neutral positions and/or physical space available, whichever is lower. Values shown are recommended maximums.
③ BT twins can only be used in BL/BQD RP1 panels. The xGB series of interiors do not accept BL/BQD or BT style of breakers.

Table P1-4 – Main Breaker Selection

P1 Main Circuit Breakers & Subfeed					2-Pole and 3-Pole Max IR (kA) at ④						
Amp Rating	Trip Type	Breaker Family	Main Breaker Code	Breaker Type	240V	480Y /277V	480V	600Y /347V	600V	Amp Ratings Available	Available for Sub-feed Horizontal mount only
100	Thermal Magnetic	BL	BL	BL	10	—	—	—	—	15-100	Single
			BH	BLH	22	—	—	—	—	15-100	Single
			HB	HBL	65	—	—	—	—	15-100	Single
		BQD	BQ	BQD⑤	65	14	—	10	—	15-100	Single
125	Thermal Magnetic	Sentron GB	NB	NGB	100	25	—	14	—	15-125	Single
			G2	HGB	100	35	—	14	—	15-125	Single
			G3	LGB	100	65	—	14	—	15-125	Single
		Sentron ED	E4	ED4	65	—	18	—	—	15-125	Single
			E6	ED6⑥	65	—	25	—	18	20-125	Single
			H4	HED4	100	—	42	—	—	15-125	Single
		3VA41	V1	SEAB	65	—	—	—	14	15-125	Single
			V2	MEAB	85	—	35	—	18	15-125	Single
			V3	HEAB	100	—	65	—	25	15-125	Single
225	Thermal Magnetic	Sentron QR	QR	QR2	10	—	—	—	—	100-225	Single
			Q4	QRH2	25	—	—	—	—	100-225	Single
			Q5	HQR2	65	—	—	—	—	100-225	Single
			Q6	HQR2H	100	—	—	—	—	100-225	Single
250	Thermal Magnetic	Sentron FD	FX, FD	FXD6-A, FD6-A	65	—	35	—	22	70-250	Single
			HF	HFD6	100	—	65	—	25	70-250	Single
			H2	HFXD6	100	—	65	—	—	70-250	Single
250 [150]	Thermal Magnetic	3VA52 (W/TM230 trip)	VA	MFAS	85	—	35	—	18	100-250	Single
			VB	HFAS	100	—	65	—	25	100-250	Single
			VC	CFAS	200	—	100	—	35	100-250	Single
	Electronic (Solid state)	3VA62 [3VA61] (ETU350 LSI standard)	WA [W2]	MFAE [MDAE]	100	—	35	—	18	100-250 [40-150]	Single
			WB [W3]	HFAE [HDAE]	100	—	65	—	22	100-250 [40-150]	Single
			WC [W4]	CFAE [CDAE]	200	—	100	—	35	100-250 [40-150]	Single
			WD [W5]	LFAE [LDAE]	200	—	150	—	50	100-250 [40-150]	Single
400	Thermal Magnetic	Sentron JD	JX, J6	JXD6-A, JD6-A	65	—	35	—	25	200-400	n/a
			H5, H6	HJXD6-A, HJD6-A	100	—	65	—	35	200-400	n/a
			JD	JXD2	65	—	—	—	—	300-400	n/a
400	Thermal Magnetic	3VA53 (W/TM230 trip)	VE	MJAS	85	—	35	—	18	200-400	n/a
			VF	HJAS	100	—	65	—	25	200-400	n/a
			VG	CJAS	200	—	100	—	35	300-400	n/a
	Electronic (Solid state)	3VA63 (ETU350 LSI standard)	WE	MJAE	100	—	35	—	18	100-400	n/a
			WF	HJAE	100	—	65	—	22	100-400	n/a
			WG	CJAE	200	—	100	—	35	100-400	n/a
			WH	LJAE	200	—	150	—	50	100-400	n/a

④ DC System Voltages are not available for RP1 series.
⑤ Approved for CSA and UL Listed.
⑥ ED6 2-pole only available in 20A, 25A and 30A. See SpeedFAX section 7 for more details.

Table P1-5 - Line/Load Cable Connector Size Chart

Max Amp Rating	Main Lug	Amp Series	Connections suitable for Copper Cable	Connections suitable for Aluminum Cable
125	Aluminum body	125A max	(1) #6 AWG - 350 kcmil	(1) #6 AWG - 350 kcmil
	Copper body	125A max	(1) #6 AWG - 350 kcmil	not suitable
250	Aluminum body	250A max	(1) #6 AWG - 350 kcmil	(1) #6 AWG - 350 kcmil
	Copper body	250A max	(1) #6 AWG - 350 kcmil	not suitable
400 std.	Aluminum body	400A max	(2) 1/0 - 4/0 or (1) #2 AWG - 600kcmil	(2) 1/0 - 250 kcmil or (1) #2 AWG-600kcmil
	Copper body	400A max	(2) 1/0 - 4/0 or (1) 1/0 - 600kcmil	not suitable for AL
400 alt.	Aluminum body	400A max	(2) 1/0 - 250 kcmil or (1) 1/0 - 600kcmil	(2) 1/0 - 250 kcmil or (1) 1/0 - 750kcmil
Max Amp	**Main Breaker Types**	**Series**	**Connections for Copper**	**Connections for Aluminum**
100	BL, BLH, HBL	15-35A 40-50A 55-100A	#14-#6 AWG #8-#6 AWG #8 AWG - 2/0	#14-#6 AWG #8-#4 AWG #8 AWG - 2/0
	BQD	15-40A 45-100A	#14-#6 AWG #8-#1 AWG	#12-#6 AWG #6 AWG -1/0
125	NGB, HGB, LGB	15-30A 35-125A	#14-#6 AWG #8 AWG-1/0	#12-#6 AWG #8-2/0 AWG
	ED4 ED6, HED4	15-25A 30-100A 110-125A (1-P) 30-60A (1-P) 70-100A	#14-#10 AWG #10 AWG -1/0 #3 AWG-3/0 #10-#4 AWG #6 AWG- 1/0	#12-10 AWG #10 AWG -1/0 #1 AWG-2/0 #10-#4 AWG #6 AWG- 1/0
	3VA41	15-40A	#14-#10 AWG	#14-#10 AWG
		45-125A	#14AWG - 3/0	#14AWG - 2/0
225	QR2, QRH2, HQR2, HQR2H	100-225A	#3 AWG-300 Kcmil	#3 AWG-300 Kcmil
250 [150]	FXD6, FD6, HFD6, HFXD6	70-250A	#6 AWG-350 Kcmil	#4 AWG-350 Kcmil
	3VA52 3VA62 [3VA61]	100-250A 40-250A [16-150A]	#6 AWG-350 Kcmil	#6 AWG-350 Kcmil
400	JD6, JXD6, HJD6, HJXD6	200-400A	(1)or(2) 3/0-500 Kcmil [dual port lug]	(1)or(2) 4/0-500 Kcmil [dual port lug]
	3VA53 3VA63	200-400A 100-400A	(1)or(2) 2/0-600 kcmil [dual port lug]	(1)or(2) 2/0-600 kcmil [dual port lug]

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.

Table P1-6 – Branch Circuit Breakers

Revised P1 Branch Circuit Breakers①				1-Pole					2-Pole and 3-Pole								
				Max IR (kA) at					Max IR (kA) at								
Amp Rating	Trip Type	Breaker Family	Breaker Type	120V	277V	347V	125V DC③	Amp Ratings Available	120/ 240V	240V	480Y/ 277V	480V	600Y/ 347V	600V	125/ 250V DC③	250V DC③	Amp Ratings Available
100	Thermal Magnetic	BL	BL, BT⑦	10	—	—	—	15-70⑦	10	10	—	—	—	—	—	—	15-100④
			BLH, BTH⑦	22	—	—	—	15-70⑦	22	22	—	—	—	—	—	—	15-100④
			HBL	65	—	—	—	15-50	65	65	—	—	—	—	—	—	15-100
	Special② Application	BLG BL	BLG②	10	—	—	—	15-20	10	-	—	—	—	—	—	—	30
			BL(HID)	10	—	—	—	15-30	10	-	—	—	—	—	—	—	15-30
	Thermal Magnetic	BQD BQD (CSA)	BQD⑤	65	14	—	14	15-100	—	65	14	—	—	—	14	—	15-100
			BQD6⑥	65	—	—	14	15-70	—	65		—	10	—	14	—	15-70
XX	Electronic and misc.	BL	AFCI/GFCI & Dual Function	X	—	—	—	see special table page 11-16	x	—	—	—	—	—	—	—	see special table page 11-16
125	Thermal Magnetic	GB	NGB	100	25	14	14	15-125	—	100	25	—	14	—	14	—	15-125
			HGB	100	35	14	14	15-125	—	100	35	—	14	—	14	—	15-125
			LGB	100	65	14	14	15-125	—	100	65	—	14	—	14	—	15-125
		3VA41③	SEAB	65	25	14	14		65	65	25	25	14	—	50	50	15-125
			MEAB	85	35	18	25		85	85	35	35	18	—	85	85	15-125
			HEAB	150	65	25	30		150	150	65	65	25	—	100	100	15-125

① Unit space is 1 inch per pole, except for Special Application with accessory included.
- No branch kits available, unit space for all branch positions is twin mount.
- Branch space is either for BL/BQD only (or) for xGB/3VA41 only. (after 3VA41 is made availabe).

② BLG: Two-pole breaker is one phase and neutral. Three pole is two phases and neutral
- See SpeedFax Page 7-31 for additional info. Some are Built to order. Allow 2-3 weeks delivery.

③ DC Voltage Systems are not approved for use in P1 panels. Refer to P2/P3 panels if DC Voltage Systems are needed.

④ 110A-125A BL/BLH (2-pole only) available as Main or Subfeed only in Revised P1 panels.

⑤ Approved for CSA and UL Listed.

⑥ Approved for CSA but not UL Listed.

⑦ BT and BTH are only available in 15A and 20A with two 1-pole circuits in one inch of unit space.

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

Main Breaker	Gutter Space inches (mm)		Neutral Location to Endwall
	20" wide box	24" wide box	20" wide box
BL, BLH, HBL②	8.500 (215)③	10.500 (267)③	10.000 (254)
BQD②	7.750 (196)③	9.750 (248)③	10.000 (254)
NGB, HGB, LGB②	7.500 (190)③	9.500 (241)③	10.000 (254)
ED4, ED6, HED4	6.125 (156)	8.125 (206)	10.000 (254)
QR2, QRH2, HQR2, HQR2H	6.500 (165)	8.500 (216)	10.000 (254)
3VA41	7.250 (184)	9.250 (235)	10.000 (254)
3VA52	6.750 (171)	8.750 (222)	10.000 (254)
3VA61/62	6.250 (159)	8.250 (210)	10.000 (254)
3VA53/63① Double / Single Port	7.500 (190) / 12.250 (305)	14.750 (375) / 12.250 (305)	24.500 (622)
FD6, FXD6, HFD6, HFXD6	5.250 (133)	7.250 (184)	10.500 (267)
JD6, JXD6①	15.000 (381)	15.000 (381)	26.500 (674)

① 3VA53/63 or JD frame mounted vertically.

② For Revised P1 with Back-fed Main option, use Side Gutter Wiring Spec Table P1-15.

③ These dimensions are for Revised P1 only. See Original P1 cut sheets for valid dimensions if needed (P1 production prior to January 2015).



Feed-Thru (FT)

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

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

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



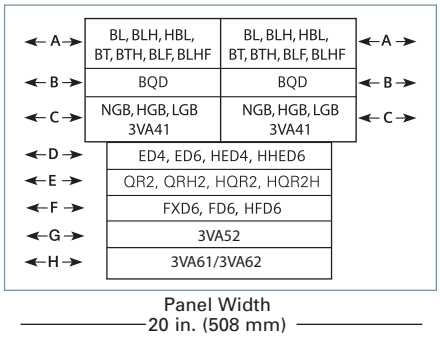
Non-Feed-Thru (NFT)

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

Reference Letter	Panel Width 20"	Panel Width 24" Optional
A②	6.375 (167)	8.375 (213)
B②	5.500 (140)	7.500 (191)
C②	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)
G	6.750 (171)	8.750 (222)
H	6.250 (159)	8.250 (210)

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.

NOTE: See page 11-32 for Main Breaker trip handle height reference chart.



Example of Back-fed xGB Main breaker installed

Panel Options

Enclosures

- Extra gutter to sides or ends of the can
- 24" wide boxes
- Hinged to box trim
- Door-in-door trims
- Screw to box trims
- Piano hinge trims
- Painted boxes (ANSI 61 Light Gray is standard color)
- Custom colors
- Increase gauge trims and boxes (See pages 12-13)
- Stainless steel trims (304 SS only) for Type 1 enclosures
- Type 1 enclosures (Std 16 Gage / Optional 14 or 12 Gage)
- Type 1 Standard are A60 Galvanealed non painted (Painted Type 1 use HRPO material)
- NEMA 3R/12 enclosures 16 Gauge Can w/ 14 Gauge front)
- NEMA 4 enclosures (14 Gauge only)
- NEMA 4X enclosures (14 Gauge only - 304SS Std, 316SS Optional)
- Special Keyed Locks (Keys are not supplied)
- Panel skirts
- Gaskets between trim and box

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

*See page 11-40 for more information.

Panel Modifications

- Main Bus
  Standard main bus is tin-plated aluminum. For copper main bus, add from the table for each panel. Includes copper neutral cross bar. For copper neutral branch lugs, see miscellaneous.
- Compression lug for MLO①
- Contactor mains - Mount in 23" enclosure ahead of panel.
  – Asco 920 through 225 amps③
  – Asco 911 through 150 amps③
  – Siemens LEN through 30 amps③
- Branch and main breaker accessories
  – Handle blocks
  – Handle locks
- Feed-thru lugs①
  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% neutral①

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.

- Copper lugs, mechanical line and branch neutral①
- Bus mounted SPD/TVSS and unit space mounted BSPD①
- Service entrance labeling
- Factory installed and Field installable Service Entrance Barrier kits are now available as required by UL67
- Grounding of Panelboards
  Ground Bars except for brazed to box are shipped with the panel interior.
  – Non-Insulated Equipment Ground Bar – standard
  – Copper Non-Insulated Ground Bar – optional
  – AL Insulated Equipment Ground Bar – optional
  – CU Insulated Equipment Ground Bar – optional
  – Ground Bar Brazed to Box (recommended for painted boxes)
- Shunt Trip on Main or Branch②
  BL, BLH, HBL, BQD, xGB as branch use 1" unit space for shunt trip.

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

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	QR2, QRH2, HQR2, HQR2H	(1) #6 AWG - 350 kcmil CU or AL	Box must go to 24" wide
	250	FXD6, HFD6	(1) #6 AWG - 350 kcmil CU or AL	Box must go to 24" wide

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

Enclosure Modifications

NEMA-4–Water Tight, Dust Tight, Steel Enclosure

(Actual NEMA-4 enclosure is larger than standard Type 1 enclosure. See chart below for reference to approximate actual size.)

Table P1-20

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

Note: Larger NEMA 4 enclosures are not available.

Table P1-21 – NEMA Type 4X (Water Tight, Dust Tight and Corrosion Resistant)

Enclosure – Stainless Steel (304SS is standard)

Note: 316SS is optional - must be specified

Catalog Number	Size (inches)			Catalog Number	Size (inches)		
	H	W	D		H	W	D
B4X26	26	20	5.75	**24B4X26**	26	24	5.75
B4X32	32	20	5.75	**24B4X32**	32	24	5.75
B4X38	38	20	5.75	**24B4X38**	38	24	5.75
B4X44	44	20	5.75	**24B4X44**	44	24	5.75
B4X50	50	20	5.75	**24B4X50**	50	24	5.75
B4X56	56	20	5.75	**24B4X56**	56	24	5.75
B4X62	62	20	5.75	**24B4X62**	62	24	5.75
B4X68	68	20	5.75	**24B4X68**	68	24	5.75
B4X74	74	20	5.75	**24B4X74**	74	24	5.75

Enclosure – Non-metalic / Fiberglass

Catalog Number	Ref. Interior Height	Size (inches)			Custom order in COMPAS Reference Number
		H	W	D	
tbd	26	30	24	8	A30H2408GQRLP
tbd	32	36	30	8	A36H3008GQRLP
tbd	38	48	36	12	A48H3612GQRLP
tbd	44				
tbd	50	60	36	12	A60H3612GQRLP
tbd	56				
tbd	62	na	na	na	na
tbd	68	na	na	na	na
tbd	74	na	na	na	na

Remote Switch Modifications

Table P1-22 – Control Power Transformer

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

Table P1-24 – Remote Control Switch Modification

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

Table P1-23 – Applications for a Remote Switch

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

Gauge Steel of Boxes/Fronts, Surface and Flush (see pgs. 11-6 & 11-7)

Dimensions in Inches (mm)		Gauge Steel		
H	W	Box	Front/Door	Type
26-74 (660-1880)	20 (508)	16①	14⑥	Type 1
26-74 (660-1880)	20 (508)	16②	16/14②	Type 3R/12
32-60 (813-1524)	20-36 (508-914)	14③	14③	Type 4
26-74 (660-1879)	20 (508)	14④	14④	Type 4X
36-60 (914-1524)	30-36 (762-914)	N/A⑤	N/A⑤	Type 4X Non-Metallic

① 16 Gauge is Standard (14 Gauge & 12 Gauge are optional)
② 15 Gauge Steel Can with 14 Gauge Door or Similar Approved Construction
③ No Optional Gauge available
④ 304SS 14 Gauge Std., 316SS 14 Gauge optional
⑤ Sizes do not match Standard Enclosure Sizes - See Table P1-21 - material is non-metallic - No Gauge Specified.
⑥ FAS-Latch is 14 GA only. Screw-to-Box, Hinge-to-Box, Door-in-Door (14 GA Std./12 GA Std. or 10 GA Optional) STB/HTB/DND with Piano Hinge (14 GA Std./12 GA Optional) (14 GA Stainless 304 Optional)

Siemens TPS Surge Protection

The new TPS4 01/L1 series has been added to our internal mount SPD family for Lighting panels. This series provides many additional benefits and features not available with TPS3 01/L1 series or the TPS3 02/L2 series (for RP1 only). TPS4 series uses different MOV technology than the Mersen TPMOV used in TPS3 series. The TPS4 product leverages a MOV 'pill stack' design that also includes thermal protection, that is proven in the telecomm and other industries for many years. Look for comparisons for these products online for more information.

Wired versions of the TPS4 01/L1 series allow for connection to bus by cabling to a branch breaker in the panel when specs require a disconnect for the installation.

This TPS4 01/L1 series is designed for form/fit/function to replace both the TPS3 01/02 or TPS3 02/L2 series in most applications, but some differences must be considered - see important notes below:

1) TPS4 01/L1 series is designed to directly bolt to the bus of Revised P1 product (RP1). There are no adapters needed which makes installation easier. For field replacement of TPS3 02/L2, the entire TPS3 kit must be removed and the new TPS4 kit can be installed.
2) The TPS4 01/L1 series is NOT compatible with Original P1 series so TPS3 01/L1 must be used for Original P1 as either initial installation or as replacement.
3) TPS4 01/L1 can be used to replace TPS3 01/L1 in most RP1/P2/P3 applications where specs will allow. P2/P3 will need an additional kit ordered to adapt to the interior properly. Order Kit # TPS4P2P3K - SPD KIT P2 P3 TPS4.
4) For Busway and MCC kits - Please consult the factory regarding field replacement of TPS3 series.

Customer Support should be contacted if there are any questions regarding field replacement of SPD profucts. COMPAS will allow either TPS4 or TPS3 to be selected in applications that allow either.

TPS4 01 and TPS4 L1 Key Features
(see SpeedFax section 10 for a complete list)

- UL 1449-5 Type 2 SPD and UL 1283 Listed
  – Optional UL 1449 5th Edition Listed Type 1
- Type 1 / Type 2 SPD
- 100 - 500 kA Per Phase Surge Current
- UL 96A Lightning Protection Master Labeling compliant (@ 20 kA)
- Modes of Protection: L-N, L-G, N-G, and L-L
- Dimensions: 9.25" x 4.5" x 4.29"
  (235 mm x 114.3 mm x 109 mm)
- Weight: 4.55 lb. (2.06 kg)



TPS4 01

Ordering Information

Catalog # TPS4 □ 01 □□ □□□□

Voltage Code
- **A** = 240/120 V, 1Ø, 3W①
- **B** = 240/120 V, 3Ø, 4W
- **C** = 208/120 V, 3Ø, 4W
- **W**= 220/127 V, 3Ø, 4W
- **D** = 240 V, 3Ø, 3W
- **E** = 480/277 V, 3Ø, 4W
- **F** = 480 V, 3Ø, 3W
- **G** = 600 V, 3Ø, 3W②
- **K** = 380/220 V, 3Ø, 4W
- **L** = 600/347 V, 3Ø, 4W
- **S** = 400/230 V, 3Ø, 4W
- **T** = 415/240 V, 3Ø, 4W

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
- **40** = 400 kA per phase
- **50** = 500 kA per phase

Options

X = Surge counter (Standard)

0 = Std config (default)
W= Terminal lug

0 = Std config (default)
B = Busway application
M = MCC application

2 = Type 2 SPD (Default) Includes UL 1283 EMI/ RFI Filters
0 = Type 1 SPD (Consult Factory Prior to Ordering)

Example: **TPS4C0120X000** = SPD for a 208/120V panelboard with a surge current capacity of 200 kA per phase and a surge counter option.

When an option is not selected, include a **zero** (**0**) in the field.

① Can also be used on 208Y/120V, 1Ø, 3W System
② Not available in 300, 400 or 500 kA versions

Please note: The TPS4 01 series is not suitable for use in the Original P1 Lighting Panels - Only Revised P1 Lighting Panels.



TPS4 L1

Common TPS4 01 SPD Catalog Reference
(see SPD section 8 for complete list including L1)

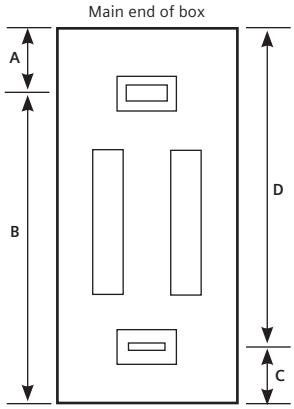
Catalog #	Description reference
TPS4A0110X002	SPD2 100kA 240/120V 1P3W SC
TPS4A0115X002	SPD2 150kA 240/120V 1P3W SC
TPS4B0110X002	SPD2 100kA 240/120V 3P4W SC
TPS4B0115X002	SPD2 150kA 240/120V 3P4W SC
TPS4C0110X002	SPD2 100kA 208/120V 3P4W SC
TPS4C0115X002	SPD2 150kA 208/120V 3P4W SC
TPS4C0120X002	SPD2 200kA 208/120V 3P4W SC
TPS4C0125X002	SPD2 250kA 208/120V 3P4W SC
TPS4E0110X002	SPD2 100kA 480/277V 3P4W SC
TPS4E0115X002	SPD2 150kA 480/277V 3P4W SC
TPS4E0120X002	SPD2 200kA 480/277V 3P4W SC
TPS4F0110X002	SPD2 100kA 480V 3P3W SC
TPS4F0115X002	SPD2 150kA 480V 3P3W SC
Kit below is needed for P2/P3 installation only	
TPS4P2P3K	SPD KIT P2 P3 TPS4 ADDER

Note: P2/P3 SPD's are factory installed only. For field replacement in P2/P2 panels, these same part numbers can be used to replace TPS3 01/L1 but an additional kit is needed only if replacing TPS3 with TPS4. Order kit # TPS4P2P3K - SPD KIT P2 P3 TPS4 ADDER

P1 Endwall to Main or Subfeed Trip Handle Distance

Interior ==>	P1 250A			P1 400A							
Mains ==>	includes BL/BQD and 3VA Mains			includes 3VA53/63 mains. JD dimensions +/- 1" from these values							
Feed ==>	Top & Bottom Feed			Top Feed				Bottom Feed①			
Box size	A	B/D②	C②	A	B	C②	D②	A	B	C②	D②
26	8.03	17.97	NFT②	na	na	na	na	na	na	na	na
32	8.03	23.97	8.03	na	na	na	na	na	na	na	na
38	8.03	29.97	8.03	na	na	na	na	na	na	na	na
44	8.03	35.97	8.03	na	na	na	na	na	na	na	na
50	8.03	41.97	8.03	na	na	na	na	na	na	na	na
56	8.03	47.97	8.03	19.5	36.5	NFT only②		21.38	34.62	NFT only②	
62	na	na	na	19.5	42.5	13.78	48.22	21.38	40.62	13.78	48.22
68	na	na	na	19.5	48.5	13.78	54.22	21.38	46.62	13.78	54.22
74	na	na	na	19.5	54.5	13.78	60.22	21.38	52.62	13.78	60.22

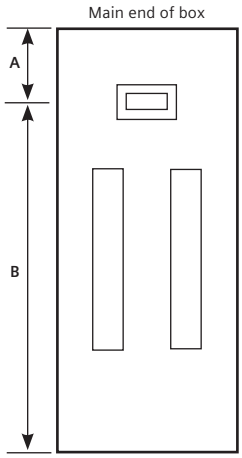
① Bottom Feed 400A distance is different due to breaker orientation.
② For NFT panels (Non-Feed-thru) - these values are not appropriate.



P2 Endwall to Main Trip Handle Distance①④

250A and smaller panels only

Main ==>	P2 125A max. BL/BQD/3VA41				P2 225A QR						P2 250A 3VA52/61/62			
Mount =>	Horiz. Mnt.				Horiz. Mnt.		Vert. Mnt.				Horiz. Mnt. (Vert. below)			
Std or Ext	Standard Circuit		Extended Circuit③		Std. & Ext. Circuit③		Std. & Ext. Circuit③		Std. & Ext. Circuit③		Standard Circuit		Extended Circuit③	
Feed =>	Top & Bot. Feed		Top & Bot. Feed		Top & Bot. Feed		Top Feed		Bottom Feed		Top & Bot. Feed		Top & Bot. Feed	
Box size	A	B	A	B	A	B	A	B	A	B	A	B	A	B
26	8.75	17.25	na	na	na	na	na	na	na	na	na	na	na	na
32	8.75	23.25	na	na	13.25	18.75	na	na	na	na	8.03	23.97	na	na
38	8.75	29.25	na	na	13.25	24.75	14.1	23.9	13.25	24.75	8.03	29.97	na	na
44	8.75	35.25	na	na	13.25	30.75	14.1	29.9	13.25	30.75	8.03	35.97	na	na
50	8.75	41.25	na	na	13.25	36.75	14.1	35.9	13.25	36.75	8.03	41.97	na	na
56	8.75	47.25	14.75	41.25	13.25	42.75	14.1	41.9	13.25	42.75	8.03	47.97	14.03	41.97
62	8.75	53.25	14.75	47.25	13.25	48.75	14.1	47.9	13.25	48.75	8.03	53.97	14.03	47.97
68	na	na	14.75	53.25	13.25	54.75	14.1	53.9	13.25	54.75	8.03	59.97	14.03	53.97
74	na	na	na	na	na	na	14.1	59.9	13.25	60.75	na	na	14.03	59.97



P2 Endwall to Main Trip Handle Distance①④ for Vertical Mount panels

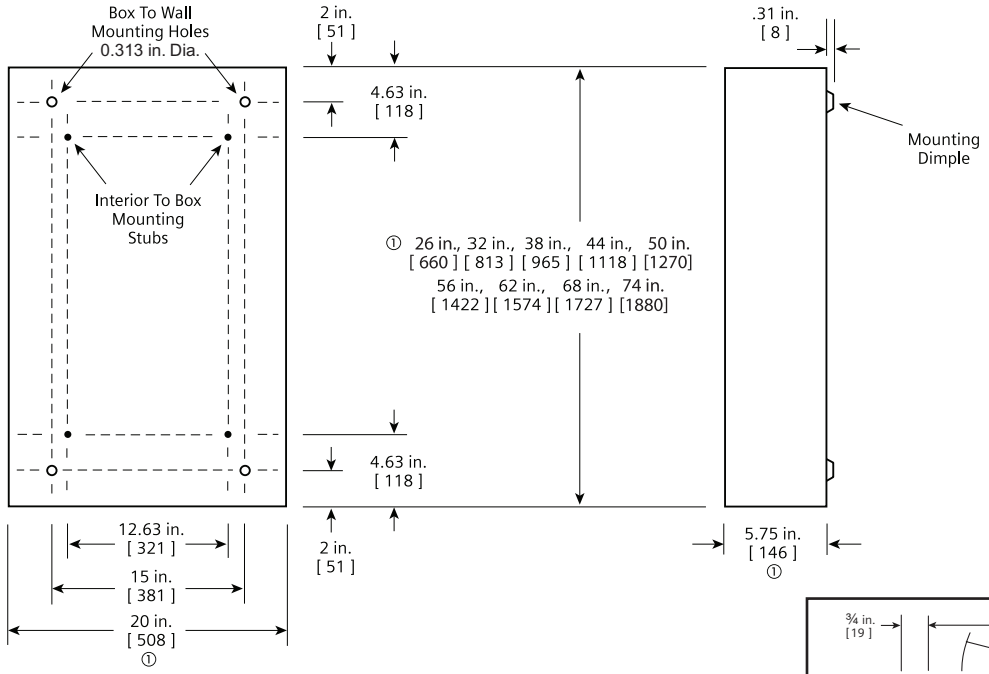
250A and larger panels

Main ==>	P2 250A 3VA52/61/62								P2 400A 3VA				P2 600A 3VA			
Mount =>	3VA52 Vert. Mnt.				3VA61/62 Vert. Mnt.				Vert. Mnt.		Vert. Mnt.		Vert. Mnt.		Vert. Mnt.	
Std or Ext	Std. & Ext. Circuit③		Std. & Ext. Circuit③		Std. & Ext. Circuit③		Std. & Ext. Circuit③		Std. & Ext. Circuit③		Std. & Ext. Circuit③		Std. & Ext. Circuit③		Std. & Ext. Circuit③	
Feed =>	Top Feed		Bottom Feed		Top Feed		Bottom Feed		Top Feed		Bottom Feed		Top Feed		Bottom Feed	
Box size	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
44	19.75	24.25	20.75	23.25	19.25	24.75	20.75	23.25	na	na	na	na	na	na	na	na
50	19.75	30.25	20.75	29.25	19.25	30.75	20.75	29.25	20.31	29.69	22.19	27.81	na	na	na	na
56	19.75	36.25	20.75	35.25	19.25	36.75	20.75	35.25	20.31	35.69	22.19	33.81	18.31	37.69	20.19	35.81
62	19.75	42.25	20.75	41.25	19.25	42.75	20.75	41.25	20.31	41.69	22.19	39.81	18.31	43.69	20.19	41.81
68	19.75	48.25	20.75	47.25	19.25	48.75	20.75	47.25	20.31	47.69	22.19	45.81	18.31	49.69	20.19	47.81
74	19.75	54.25	20.75	53.25	19.25	54.75	20.75	53.25	20.31	53.69	22.19	51.81	18.31	55.69	20.19	53.81

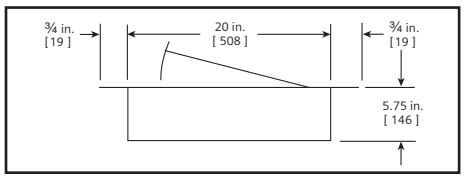
① These values are for typical configuration, they may not apply for special conditions and features..
② Subfeed Space in P2 panels is no longer available for any breakers. Only Feed-thru Lugs and SPD can be configured.
③ Extended Circuit P2 panel configurations are only available in 56" thru 74" High Enclosures.
④ Dimensions for all 250A and larger are for 3VA series of breakers only.

Type 1 Box

Box is symmetrical



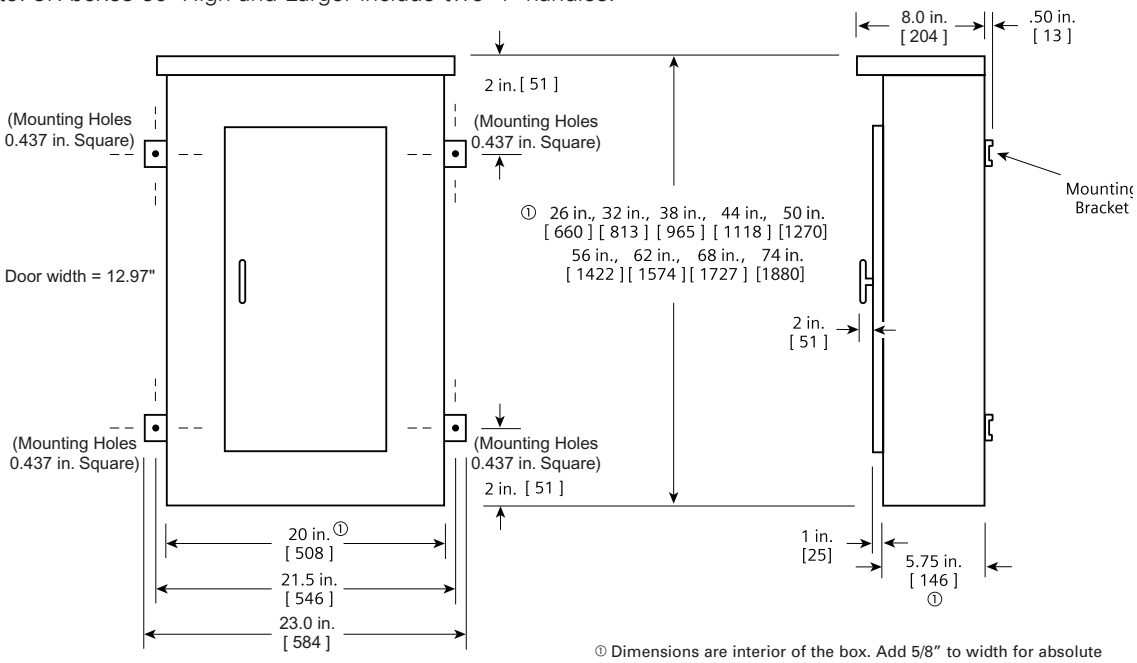
(UL approved construction. 16 Gage Steel or equivalent alternate Construction.
14 or 12 Gage is available as an optional special order.)
G60 Galvanized is standard without paint.



Flush Mounting

Type 3R and 3R/12 Box

Note: 3R boxes 50" High and Larger include two "T" handles.



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 [ ].

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

Enclosures

NEMA Type 1

Primarily indoor use: Box and front needed for complete enclosure.



NEMA Type 3R

Outdoor use primarily to provide a degree of protection against rain, sleet, and damage from external ice formation.



NEMA Type 12 (Siemens 3R/12)

These enclosures for Lighting Panels are useable as Type 12 or Type 3R by adding the gasket shown around the door.



(Siemens 3R/12 panelboard products meet this requirement)

NEMA Type 4 or 4X

Indoor or outdoor use primarily to provide a degree of protection against splashing water, corrosion, windblown dust and rain, hose-directed water, and damage from external ice formation.



Note: NEMA Type 4 is painted steel. NEMA Type 4X is typically stainless or non-metallic.

P1, P2, P3 panelboard standard Type 1 enclosure

Features:	Typical Standard P1 and P2 Type 1 enclosures are 20"W and 5.75"D - 16 GA A60 Galvanized steel or equivalent UL approved construction - Endwalls are blank as standard - Endwalls with Knockouts are available	Options - Painted enclosures [ANSI 61 gray] - 24" wide enclosures - 7.75" deep enclosure - 24" wide and 7.75" deep
	Typical Standard P3 Type 1 enclosures are 24"W and 7.75"D	Options - Painted enclosures [ANSI 61 gray]

Note: Contact customer support for special colors (RAL # required.)

Box Height Inches	P1, P2 and P3 Catalog Number Type 1 Standard Enclosure Standard P1/ P2 Galvanized 20" W 5.75" Depth	Option P1/P2, Painted 20" W 5.75" Depth	Option P1/P2, Galvanized w/ KOs 20" W 5.75" Depth	Option P1/P2, Galvanized 20" W 7.75" Depth	Option P1/P2, Painted 20" W 7.75" Depth	Option P1/P2, Galvanized 24" W 5.75" Depth	Option P1/ P2, Painted 24" W 5.75" Depth	Standard P3, Option P1/P2, Galvanized 24" W 7.75" Depth	Standard P3, Option P1/P2, Painted 24" W 7.75" Depth
26	B26	B26P	B26K	Ref BD26①	Ref BD26P①	24B26	24B26P	N/A	N/A
32	B32	B32P	B32K	BD32	BD32P	24B32	24B32P	24BD32②	24BD32P②
38	B38	B38P	B38K	BD38	BD38P	24B38	24B38P	24BD38②	24BD38P②
44	B44	B44P	B44K	BD44	BD44P	24B44	24B44P	24BD44②	24BD44P②
50	B50	B50P	B50K	BD50	BD50P	24B50	24B50P	24BD50②	24BD50P②
56	B56	B56P	B56K	BD56	BD56P	24B56	24B56P	24BD56②③	24BD56P②③)
68	B68	B68P	B68K	BD68	BD68P	24B68	24B68P	24BD68②③	24BD68P②③)
74	B74	B74P	B74K	BD74	BD74P	24B74	24B74P	24BD74②③	24BD74P②③
80	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24BD80③	Ref 24BD80P①③

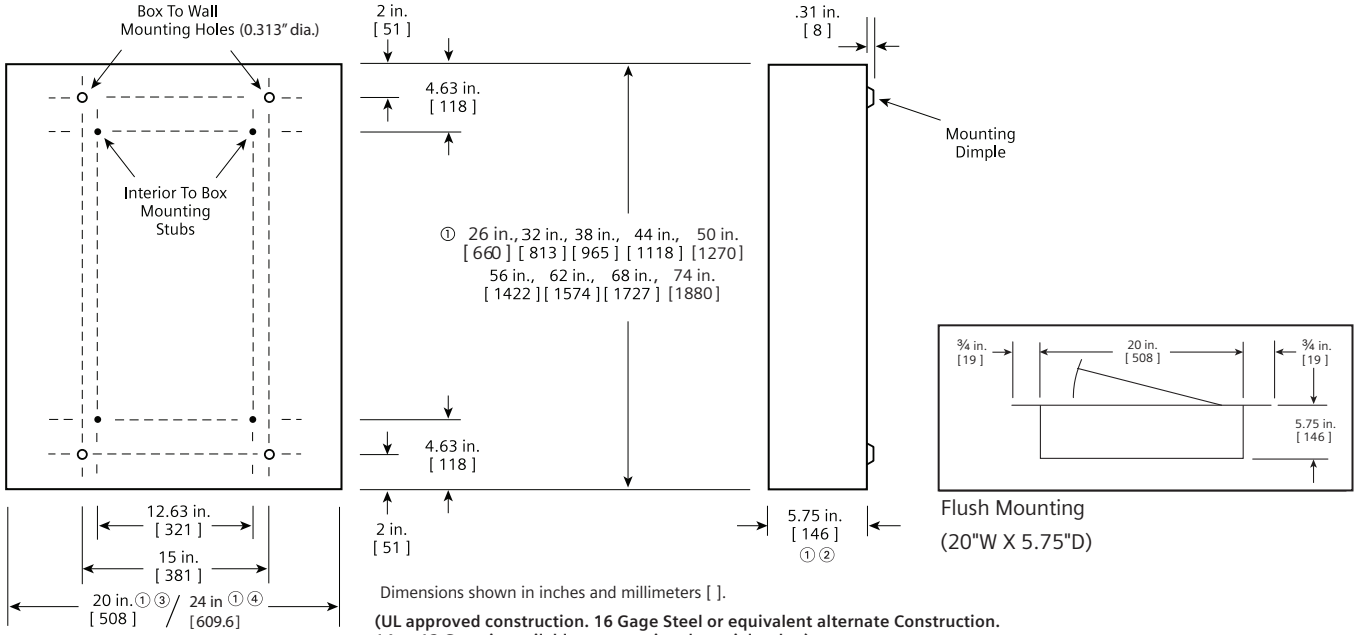
① Custom order in COMPAS ② P1/P2 only with adaptor (Contact Customer Service) ③ P3

* 24BD Series replace 24WD series
* For parts without catalog numbers yet, please contact Customer Service for ordering information.

For further information on P1, P2, and P3 lighting panels, please refer to: http://w3.usa.siemens.com/powerdistribution/us/en/resources/Pages/DownloadCenter.aspx

Type 1 Box

Box is symmetrical (P1/P2 std type 1 box shown for ref)



Dimensions shown in inches and millimeters [ ].

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

A60 Galvanized is standard without paint.

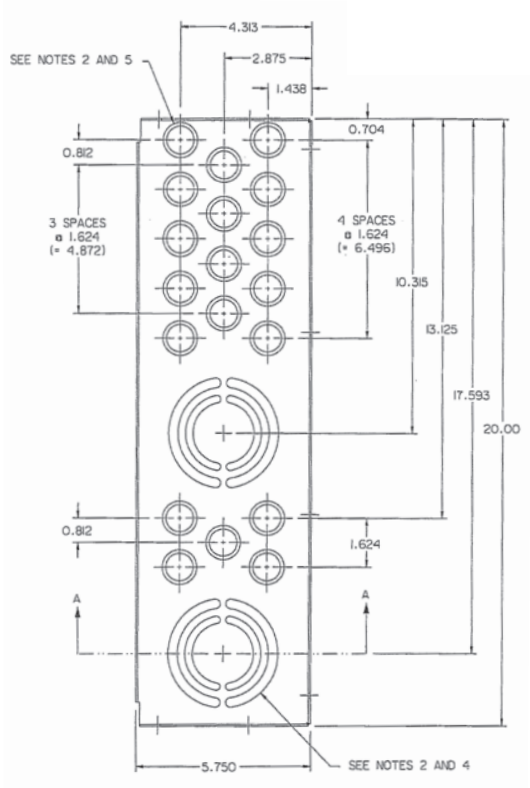
① Dimensions are interior of the box. Add 5/8" to overall depth for absolute dimension. Add 1/8" to height and width for absolute dimension.
② Optional 7.75 in. [197].
③ Dimension is for P1 and P2.
④ Dimension is for P3.

Miscellaneous parts and accessories-enclosures

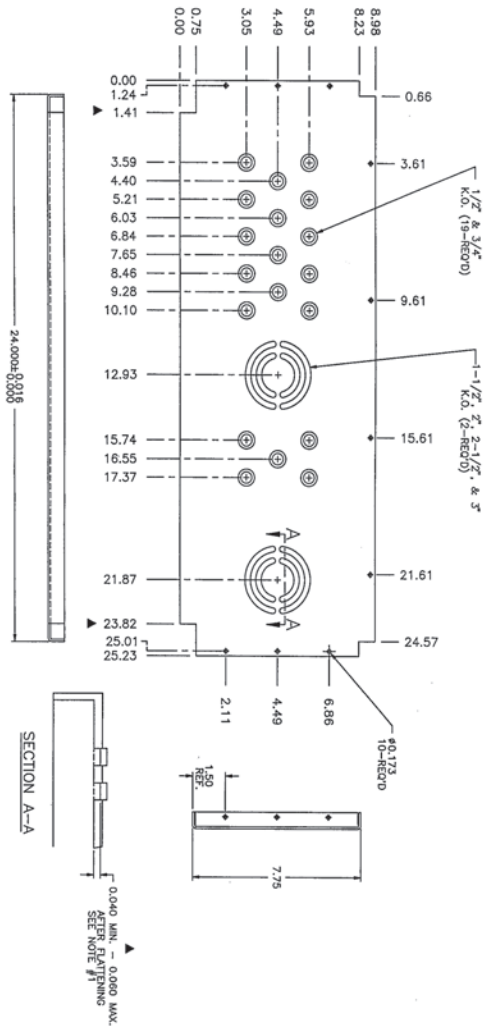
Catalog Number	Description	Comments
EWK1	End Wall Kit with Knockouts (20"W x 5.75" DP)	Type 1 Only
EWK2	End Wall Kit with Knockouts (24"W x 7.75" DP)	Type 1 Only
EWK3	End Wall Kit - open center space - ref B74FLR (20" W x 5.75" DP)	Type 1 Only
EWK1B	End Wall Kit without Knockouts (20" W x 5.75" DP)	Type 1 Only
EWK2B	End Wall Kit without Knockouts (24" W x 7.75" DP)	Type 1 Only

For further information regarding these parts, please follow the below to the literature section tab under lighting panels. **usa.siemens.com/panelboards**

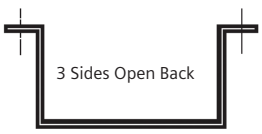
EWK1 End Wall w/KOs (20"W X 5.75"D)



EWK2 End Wall w/KOs (20"W X 5.75"D)



Panel Skirts Standard Length





8, 9, 10, 11, 12, 14, 17, 18, 23, 24, 25, 25, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44

Notes:
A) 4-sided skirts have standard Part Numbers (not catalog numbers).
B) 3-sided skirts are ordered as Custom in COMPAS
C) Order in COMPAS with interior when possible.
D) If ordered separate from interior, use a manual line in COMPAS.
E) Must note if Top Entry or Bottom Entry required.

P1, P2 FAS-Latch standard fronts: Type 1

Standard Trim (FAS-Latch) Typical Dimensions. Hinges available as shown on right side only.
Typical 14 Gage Steel construction or UL approved equivalent. Stainless steel is not available.

Optional Fronts for FAS-Latch Series – see examples below for Suffix adders:

Suffix	Description	Example
M	Metal Card Holder	F44BM
WM	Welded-on Metal Card Holder	F44BWM

Options for FAS-Latch Series:

Metal Card Holder – Add "M" suffix on all fronts

Welded Metal Card Holder – Contact Customer Support for availability



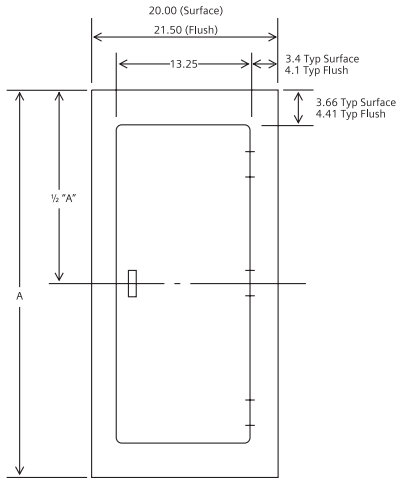
Standard Trim (FAS-Latch)

(14 Gage Standard – no options)
(UPB includes surface or flush versions of this style. Other special fronts below are note part of the UPB program).

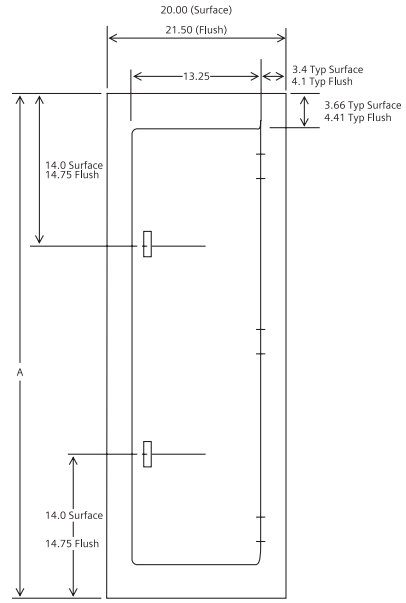
Circuit Numbering			
P1 only Stick-on		P2 / P3 Push-in	
NBK01A	1-60	NBK3	1-42
NBK02A	61-120	NBK4	43-84
NBK03A	121-240	NBK5	85-126
		NBK6	127-168
		NBK7	169-210
		NBK8	211-252

Front Height Inches	Flush FAS-Latch Fronts	
	20" Wide Flush Front	24" Wide Flush Front
	Catalog No.	Catalog No.
26	F26B	24F26B
32	F32B	24F32B
38	F38B	24F38B
44	F44B	24F44B
50	F50B	24F50B
56	F56B	24F56B
62	F62B	24F62B
68	F68B	23F68B
74	F74B	24F74B

Front Height Inches	Surface FAS-Latch Fronts	
	20" Wide Surface Front	24" Wide Surface Front
	Catalog No.	Catalog No.
26	S26B	24S26B
32	S32B	24S32B
38	S38B	24S38B
44	S44B	23S44B
50	S50B	24S50B
56	S56B	24S56B
62	S62B	24S62B
68	S68B	24S68B
74	S74B	24S74B



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

Replacement Parts

Catalog No.	Market Facing Description	Pack Quantity
LPLOCK01A	Panel Trim Lock (14GA) W Key, B363A (FAS-Latch)	1
LPLOCK02A	Panel Trim Lock (12GA) W/O Key (Non FAS-Latch)	3
LPLOCK03A	Panel Trim Lock (10GA) W/O Key (Non FAS-Latch)	1
LPKEY01A	Key for Panel Trim Lock (FAS-Latch)	4
LPKEY01B	Key for Panel Trim Lock (FAS-Latch)	25
LPJSPDNUT01	J-Type Speed Nut For Panel Fronts	25
LPTS01	Trim Screw, Lighting Panel Front, 0.547" Length, ¼-20 Machine Screw Thread (kit pending - not yet available) ref #11-A-1819-01	25
LPDC01	Panelboard Directory Card 5.5 x 5 in	10
LPDC02	Directory Card Pouch, Vinyl w/adhesive back	10
MCHK	Metal Card Holder Kit, stick-on with double sided tape	1

P1, P2 non FAS-Latch optional fronts

Options: For 24" wide fronts – Add "24" to start of part number: "F44H" becomes "24F44H" Note: 24" wide may require special order in COMPAS for some options.

For Metal Card Holder (stick-on) – Add "M" suffix to end of part number: "F44H" becomes "F44HM"

For Welded Metal Card Holder (special order in COMPAS) – Add "WM" suffix to end of part number: "F44H" becomes "F44HWM"

Front Height Inches	Screw to Box	
	20" W Flush	20" W Surface
	Catalog Number	
26	F26C	S26C
32	F32C	S32C
38	F38C	S38C
44	F44C	S44C
50	F50C	S50C
56	F56C	S56C
62	F62C	S62C
68	F68C	S68C
74	F74C	S74C

Front Height Inches	Hinge to Box	
	20" W Flush	20" W Surface
	Catalog Number	
26	F26H	S26H
32	F32H	S32H
38	F38H	S38H
44	F44H	S44H
50	F50H	S50H
56	F56H	S56H
62	F62H	S62H
68	F68H	S68H
74	F74H	S74H

Front Height Inches	Door-to-Door	
	20" W Flush	20" W Surface
	Catalog Number	
26	F26D	S26D
32	F32D	S32D
38	F38D	S38D
44	F44D	S44D
50	F50D	S50D
56	F56D	S56D
62	F62D	S62D
68	F68D	S68D
74	F74D	S74D

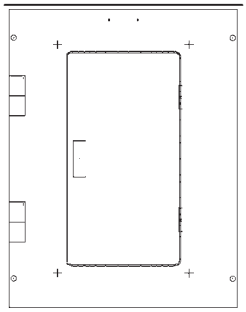


Figure 1: Standard Screw to Box Trim

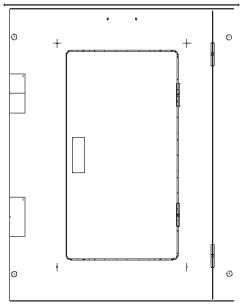


Figure 2: Standard Hinge to Box

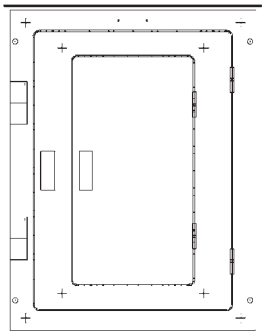


Figure 3: Standard Door in Door

Piano Hinge Options (Stainless 304 is available as option; all have piano hinges)

Front Height Inches	Screw to Box	
	20" W Flush	20" W Surface
	Catalog Number	
26	Ref F26CPH26①	Ref S26CPH26①
32	Ref F32CPH32①	Ref S32CPH32①
38	Ref F38CPH38①	Ref S38CPH38①
44	Ref F44CPH44①	Ref S44CPH44①
50	Ref F50CPH50①	Ref S50CPH50①
56	Ref F56CPH56①	Ref S56CPH56①
62	Ref F62CPH62①	Ref S62CPH62①
68	Ref F68CPH68①	Ref S68CPH68①
74	Ref F74CPH74①	Ref S74CPH74①

Front Height Inches	Hinge to Box	
	20" W Flush	20" W Surface
	Catalog Number	
26	Ref F26HPH26①	Ref S26HPH26①
32	Ref F32HPH32①	Ref S32HPH32①
38	Ref F38HPH38①	Ref S38HPH38①
44	Ref F44HPH44①	Ref S44HPH44①
50	Ref F50HPH50①	Ref S50HPH50①
56	Ref F56HPH56①	Ref S56HPH56①
62	Ref F62HPH62①	Ref S62HPH62①
68	Ref F68HPH68①	Ref S68HPH68①
74	Ref F74HPH74①	Ref S74HPH74①

Front Height Inches	Door-to-Door	
	20" W Flush	20" W Surface
	Catalog Number	
26	Ref F26DPH26①	Ref S26DPH26①
32	Ref F32DPH32①	Ref S32DPH32①
38	Ref F38DPH38①	Ref S38DPH38①
44	Ref F44DPH44①	Ref S44DPH44①
50	Ref F50DPH50①	Ref S50DPH50①
56	Ref F56DPH56①	Ref S56DPH56①
62	Ref F62DPH62①	Ref S62DPH62①
68	Ref F68DPH68①	Ref S68DPH68①
74	Ref F74DPH74①	Ref S74DPH74①

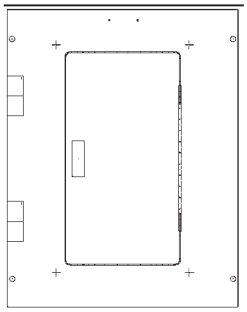


Figure 4: Screw to Box w/ Piano Hinge Door 1)

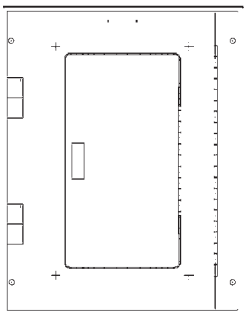


Figure 5: Hinge in Box w/ Piano Hinge and Piano Hinge Door

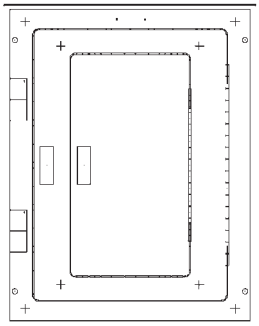


Figure 6: Door in Door w/ Piano Hinge both Doors

① Custom order in COMPAS.

② Stainless 304 is available as a special order for 20" W and 24" W only. Stainless 316 is not available. Flush stainless fronts are typically 1/2" wider and taller than standard flush fronts.

P3 series fronts (will not work with P1/P2 interiors)

Note: The P3 Dead Front size is larger than P1/P2, so any fronts or Dead Front interfaces for P3 interiors have to be larger than those for P1/P2. If a P3 Front is used with a P1/P2 interior there is a gap that allows access to live parts, so this is not allowed or UL approved.

Front Height Inches	Standard FAS-Latch Front	
	24" W Flush Standard	24" W Surface Standard
	Catalog Number	Catalog Number
56	P3F56	P3S56
62	P3F62	P3S62
68	P3F68	P3S68
74	P3F74	P3S74
80	P3F80	P3S80

Note: Add "M" suffix for Metal Card Holder or "WM" suffix for Welded Metal Card Holder

Front Height Inches	Door-in-Door Front①	
	24" W Flush	24" W Surface
	Catalog Number	Catalog Number
56	P3F56D	P3S56D
62	P3F62D	P3S62D
68	P3F68D	P3S68D
74	P3F74D	P3S74D
80	P3F80D	P3S80D

Note: Add "M" suffix for Metal Card Holder. For Welded Metal Card Holder, contact Customer Support for availability.

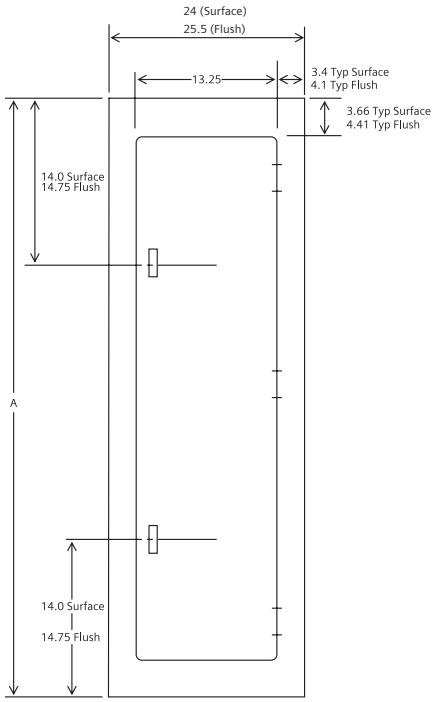
Front Height Inches	Hinge-to-Box Front①	
	24" W Flush	24" W Surface
	Catalog Number	Catalog Number
56	P3F56H	P3S56H
62	P3F62H	P3S62H
68	P3F68H	P3S68H
74	P3F74H	P3S74H
80	P3F80H	P3S80H

Note: Add "M" suffix for Metal Card Holder.
Non-standard P3 series fronts options must be ordered as manual item on factory. For welded metal card holder, contact Customer Support for availability.

① Stainless 304 is available as a special order for 20" W and 24" W only. Stainless 316 is not available. Flush stainless fronts are typically 1/2" wider and taller than standard flush fronts.



P3 Series Surface Front



P3 Series Surface Front

24"W P3 Box Size	Surface	Flush	# of Hinges
	A	A	
56	56	57.5	3
62	62	63.5	3
68	68	69.5	3
74	74	75.5	3
80	80	81.5	3

P1-P3 panel locks for Type 1 fronts⑥⑦

Push-In Panel Locks - Availability for Front/Door by Gauge①			Type 1 Front Styles available with material, lock and hinge options.⑤										
Front/Door Thickness	Replacement kit (where available) and Reference Material #	This lock is keyed for	FAS-Latch (16 Gauge)	STB (Screw-to-Bolt)	HTB (Hinged Front)	DND (Door-in-Door)	STB w/Piano Hinge Door	HTB w/Piano Hinge 2 places	DND w/Piano Hinge 2 places	STB 304 Stainless④ w/Piano Hinge Door 20" & 24" wide only	HTB 304 Stainless④ w/Piano Hinge Door 20" & 24" wide only	DND 304 Stainless④ w/Piano Hinge Door 20" & 24" wide only	Comments
0.178 max (16-14 GA)	Cat # **LPLOCK01A**① ref 11-1895-01	standard lock - keyed for B363A	std	std	std	std	std	std	std	std	std	std	
0.208 max (12 GA)	Cat # **LPLOCK02A**① ref 11-1895-02	standard lock - keyed for B363A	n/a	opt	opt	opt	opt	opt	opt	opt	n/a	n/a	
0.238 max (10 GA)	Cat # **LPLOCK03A**① ref 11-1895-03	standard lock - keyed for B363A	n/a	opt	opt	opt	n/a	n/a	n/a	n/a	n/a	n/a	see note 2
Special keyed locks below: (Contact Customer Support if needed)													
Front/ Door thickness	**Ref. Material number②**	**This lock is keyed for⑥**											
0.178 max (16-14 GA)	11-1896-01	Yale LL803 / GE 75 (Corbin TEY)	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	see note 2 and 6
0.178 max (16-14 GA)	11-1896-02	Yale LL806	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	see note 2 and 6
0.178 max (16-14 GA)	11-1896-03	Corbin TEU1	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	see note 2 and 6
0.178 max (16-14 GA)	11-1896-04	Corbin CAT 60	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	see note 2 and 6
0.178 max (16-14 GA)	11-1896-05	National C413A	opt	opt	opt	opt	opt	opt	opt	opt	opt	opt	see note 2 and 6
0.208 max (12 GA)	11-1896-06	Yale LL803 / GE 75 (Corbin TEY)	n/a	opt	opt	opt	opt	opt	opt	n/a	n/a	n/a	see note 2 and 6
0.208 max (12 GA)	11-1896-07	Yale LL806	n/a	opt	opt	opt	opt	opt	opt	n/a	n/a	n/a	see note 2 and 6
0.208 max (12 GA)	11-1896-08	Corbin TEU1	n/a	opt	opt	opt	opt	opt	opt	n/a	n/a	n/a	see note 2 and 6
0.208 max (12 GA)	11-1896-09	Corbin CAT 60	n/a	opt	opt	opt	opt	opt	opt	n/a	n/a	n/a	see note 2 and 6
0.208 max (12 GA)	11-1896-10	National C413A	n/a	opt	opt	opt	opt	opt	opt	n/a	n/a	n/a	see note 2 and 6
0.238 max (10 GA)	11-1896-11	Yale LL803 / GE 75 (Corbin TEY)	n/a	opt	opt	opt	n/a	n/a	n/a	n/a	n/a	n/a	see note 2 and 6
0.238 max (10 GA)	11-1896-12	Yale LL806	n/a	opt	opt	opt	n/a	n/a	n/a	n/a	n/a	n/a	see note 2 and 6
0.238 max (10 GA)	11-1896-13	Corbin TEU1	n/a	opt	opt	opt	n/a	n/a	n/a	n/a	n/a	n/a	see note 2 and 6
0.238 max (10 GA)	11-1896-14	Corbin CAT 60	n/a	opt	opt	opt	n/a	n/a	n/a	n/a	n/a	n/a	see note 2 and 6
0.238 max (10 GA)	11-1896-15	National C413A	n/a	opt	opt	opt	n/a	n/a	n/a	n/a	n/a	n/a	see note 2 and 6

Replacement Parts

Catalog No.	Market Facing Description	Pack Quantity
LPKEY01A	Key #B363A for Panel Trim Lock (FAS-Latch)	4
LPKEY01B	Key #B363A for Panel Trim Lock (FAS-Latch)	25

Contacts for Special Keys

National C413A	Go to this website: http://compx.com/dist-csp.html ==> then lookup a distributor in your area to get keys. Or call 864-297-6655
Corbin TEU1 or CAT 60	Contact your local distributor for special keys
Yale LL803 / GE 75 (Corbin TEY)	Contact your local distributor for special keys

Locks not listed may require special door cutouts and are not field replaceable in standard fronts included in this table.

① Lock kits include one replacement lock with 2 keys #B363A
② Contact Customer Support for re-ordering special keyed locks as needed.
③ The lock options for Yale 511, BEST, Corbin 15751 and Corbin 15757 CANNOT be used in 12GA and 10GA fronts, or with any 304 stainless steel fronts.
④ Factory has final determination on whether combinations of non-standard features are available. Contact customer support for complex front configurations.
⑤ The factory does not stock keys for these locks. It's the customer's responsibility to obtain it from outside sources.
⑥ NEMA 3R/12, NEMA 4, NEMA 4X SS, NEMA 4X non-metallic enclosures cannot be used with the fas-latch lock assembly.
⑦ Consult Factory or Customer Support for any special lock requirements.

P1, P2, P3 panelboard standard Type 3R and 3R/12 enclosures

Type 3R/12 enclosures meet both NEMA 3R and NEMA 12 requirements

Features:	Typical Standard NEMA Type 3R and 3R/12 Enclosure – P1 and P2 are 20"W x 5.75"D (min interior dimensions) – P3 is 24"W x 7.75"D (min. interior dimensions) – 16 GA Steel can with 14 GA steel door or similar UL approved construction – Standard is A60 galvannealed ANSI 61 gray paint	Options – Custom paint available Note 3R and 3R/12 are same steel enclosure. 3R/12 has gasketing added at factory. Note Siemens 3R/12 meets NEMA Type 12 specifications

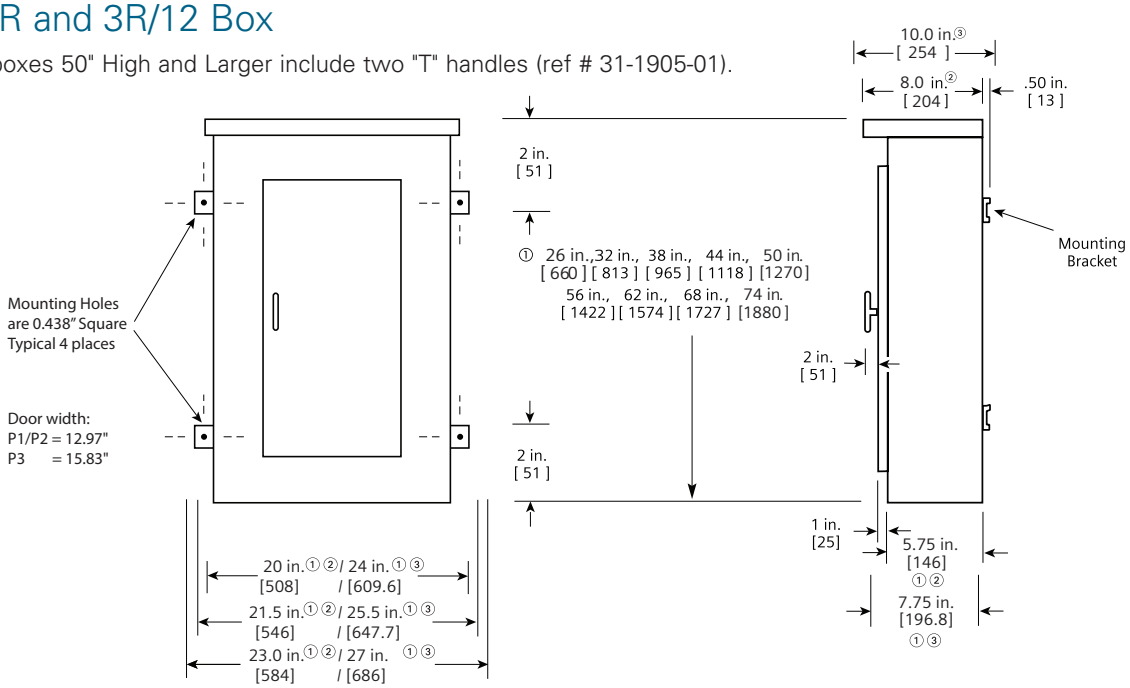
Note: Contact customer support for special colors (RAL # required.)

Box Height Inches	P1/P2 Catalog Number Type 3R Standard Enclosure Galvannealed 20" W 5.75" Depth	P1/P2 Catalog Number Type 3R Standard Enclosure Galvannealed 20" W 7.75" Depth	P1/P2 Catalog Number Type 3R Standard Enclosure Galvannealed 24" W 5.75" Depth	P1/P2 Catalog Number Type 3R/12 Standard Enclosure Galvannealed 20" W 5.75" Depth	P1/P2 Catalog Number Type 3R/12 Standard Enclosure Galvannealed 20" W 7.75" Depth	P1/P2 Catalog Number Type 3R/12 Standard Enclosure Galvannealed 24" W 5.75" Depth	P3 Catalog Number Type 3R Standard Enclosure Galvannealed 24" W 7.75" Depth	P3 Catalog Number Type 3R/12 Standard Enclosure Galvannealed 24" W 7.75" Depth
26	NR26	Ref NRD26①	24NR26	WP26	Ref WPD26①	24WP26	N/A	N/A
32	NR32	NRD32	24NR32	WP32	WPD32	24WP32	N/A	N/A
38	NR38	NRD38	24NR38	WP38	WPD38	24WP38	N/A	N/A
44	NR44	NRD44	24NR44	WP44	WPD44	24WP44	N/A	N/A
50	NR50	NRD50	24NR50	WP50	WPD50	24WP50	N/A	N/A
56	NR56	NRD56	24NR56	WP56	WPD56	24WP56	24NRD56	24WPD56
62	NR62	NRD62	24NR62	WP62	WPD62	24WP62	24NRD62	24WPD62
68	NR68	NRD68	24NR68	WP68	WPD68	24WP68	24NRD68	24WPD68
74	NR74	NRD74	24NR74	WP74	WPD74	24WP74	24NRD74	24WPD74
80	N/A	N/A	N/A	N/A	N/A	N/A	24NRD80	24WPD80

① Custom order in COMPAS

Type 3R and 3R/12 Box

Note: 3R boxes 50" High and Larger include two "T" handles (ref # 31-1905-01).



(UL approved construction. 16 Gage Steel Can with 14 Gage front or similar approved construction.)
A60 Galvannealed is standard without paint.

Dimensions shown in inches and millimeters [ ].

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

② Dimensions are for P1 and P2. (P1/P2 24" W x 7.75" D is special - contact factory)

③ Dimensions are for P3.

P1/P2 NEMA 4 and NEMA 4X non-metallic enclosures

NEMA Type 4 enclosures below are special order and are larger than typical enclosure size needed. NEMA 4X enclosures are more appropriately sized.

NEMA 4

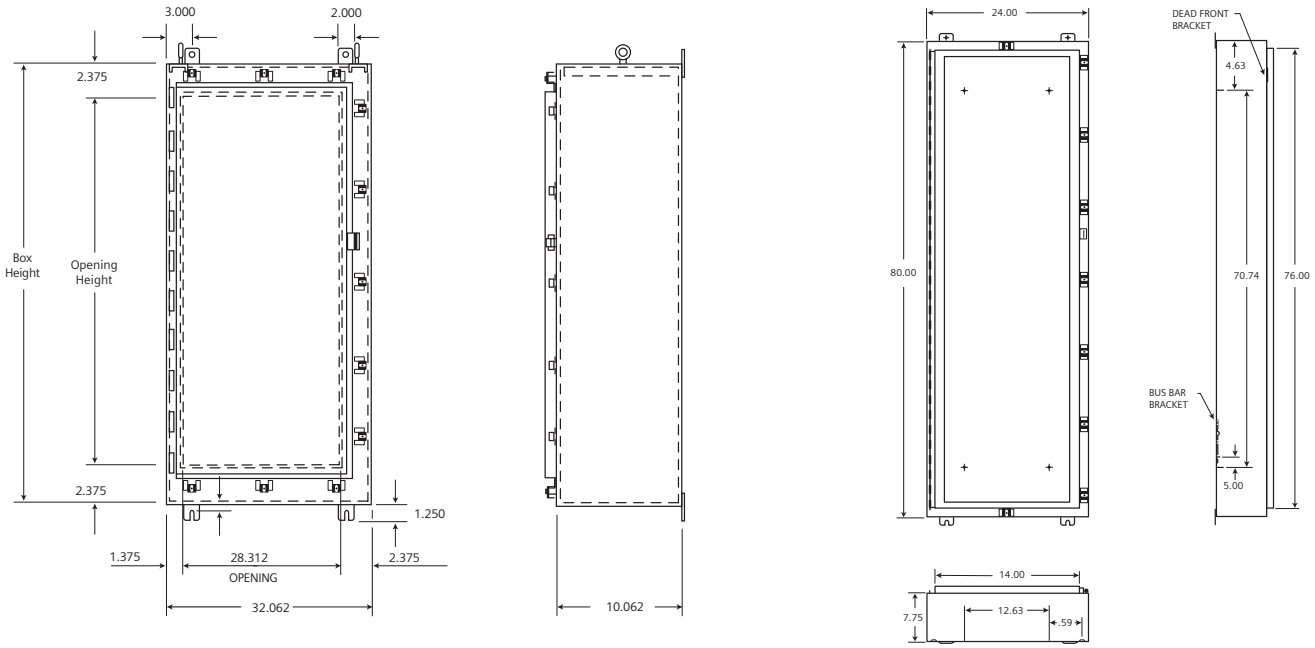
Ref. Type 1 Enclosure Height Inches	Actual Box Height Inches	P1 / P2 Catalog Number			
		24″ W	30″ W	36″ W	36″ W
		8″ Depth	8″ Depth	8″ Depth	10″ Depth
26*	30	Custom A36H24BLP*①	—	—	—
32	36	Custom A36H24BLP①	—	—	—
38	42	—	Custom A42H30BLP①	—	—
44	48	—	—	Custom A48H36BLP①	—
50, 56	60	—	—	—	Custom A60H36CLP①

Note that the parts listed in this table are buyout items; long lead times are associated with them. Must be entered as manual line in COMPAS.
*Type 4 26″ height enclosures will be adjusted at the plant to use the 32″ enclosure

NEMA 4X

Box Height Inches	P1 / P2 / P3 Catalog Number			
	304 SS Enclosure		316 SS Enclosure	
	20″ W – P1 / P2	24″ W – P3	20″ W – P1 / P2	24″ W – P3
	5.75″ Depth	7.75″ Depth	5.75″ Depth	7.75″ Depth
26	B4X26	N/A	Ref A6X30103883①	N/A
32	B4X32	N/A	Ref A6X30065588①	N/A
38	B4X38	N/A	Ref A6X30065589①	N/A
44	B4X44	N/A	Ref A6X30069448①	N/A
50	B4X50	N/A	Ref A6X30100668①	N/A
56	B4X56	24BD4X56②	Ref A6X30100669①	N/A
62	B4X62	24BD4X62②	N/A	Ref A6X30075982①②
68	B4X68	24BD4X68②	Ref A6X30100670①	Ref A6X30075983①②
74	B4X74	24BD4X74②	Ref A6X30100701①	Ref A6X30075984①②
80	N/A	24BD4X80②	N/A	Ref A6X30069449①②

NEMA 4X Stainless Enclosures (Hasp for padlock included)



① Custom order in COMPAS

② Interface with the Deadfront is for P3 only, will not work with P1/P2

NEMA 4X enclosures (continued)

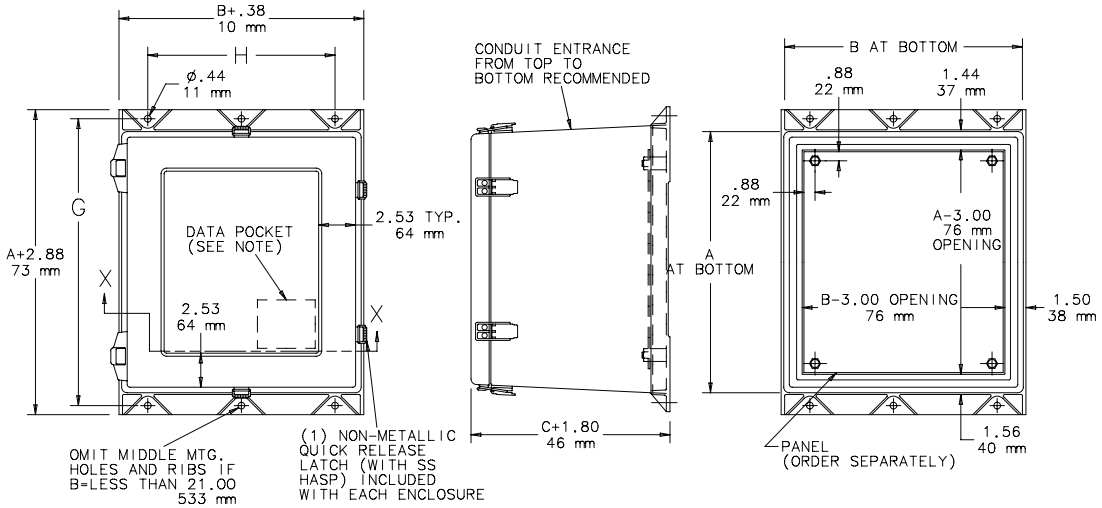
NEMA 4X Non-Metallic Enclosures (Limited sizes are available)

Ref. Type 1 Enclosure Height Inches	Actual Box Height Inches	AxBxC Reference Inches	Catalog Number		
			24" W - P1 / P2	30" W - P1 / P2	36" W - P1 / P2 / P3
			8" Depth	8" Depth	12" Depth
26	30	30.25 x 30.25 x 8.00	Custom A30H2408GQRLP①	—	—
32	36	36.25 x 30.25 x 8.00	—	Custom A36H3008GQRLP①	—
38, 44	48	48.25 x 36.25 x 12.00	—	—	Custom A48H3612GQRLP①
50, 56	60	60.25 x 36.25 x 12.00	—	—	Custom A60H3612GQRLP①②

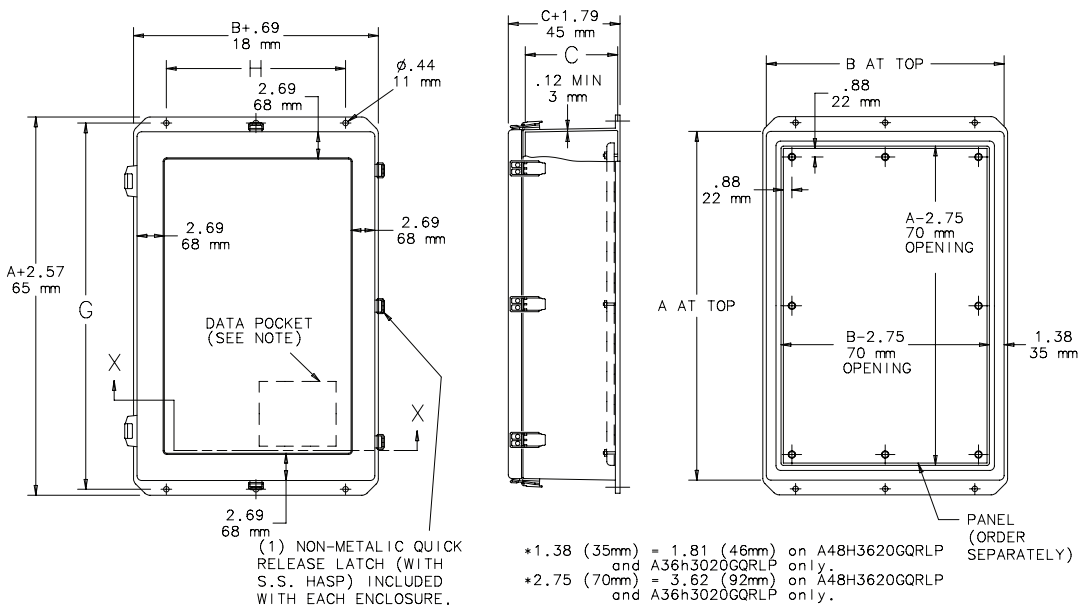
Hinged with Quick-Release Latches, Type 4X
NEMA 4X Non-Metallic Enclosures

Dimensions below for reference only - actual sizes vary by enclosure

Hinged with Quick-Release Latch Enclosures 36 X 30 or Smaller Drawing③



Hinged with Quick-Release Latch Enclosures 36 X 36 or Larger Drawing④



① Custom order in COMPAS

② 60" enclosure can fit 56" P3 interior due to custom fit at plant.

③ ??There is a footnote# by the drawing but no actual footnote on the page 12 in the guide.

Features

Flexibility is the hallmark of the P2 panel and with the addition of the 3VA family of breakers in 2021 it is more capable than ever.

This panel offers a wide array of factory assembled options to meet almost all panel board applications up to 600A Maximum Bus ratings. With this design, the ability to mix breaker frames in unit space up to 250 amps will also meet many distribution panel requirements in a much smaller package.

Integrated time clocks, bus mounted contactors (as mains or sub mains), split bus, and subfeed lugs (up to 400 amp) are just a few of the options of this flexible panel.

Similar to Siemens P1 Panel board, P2 is set up around 18, 30, 42, 54, 66, 78, and 90 circuit configurations in 6" increments of Box size. It will also allow the user to configure the panel to the smallest possible size. Enclosures are shared with the P1 series as well and are from 26" to 74" high (in 6" increments to match interiors).

The P2 panel starts with 9" of unit space (18 circuits of 1" pole breakers). Breaker strap kits mounted in unit space can be mixed and matched to meet customer requirements for many types of breakers. All 1" pole breakers (BL, BQD, xGB, xGB2, ED & 3VA41 frames) are mounted in 3" or 6-pole increments. Breaker frames, above 125 amps, are mounted in 6" single breaker mounting kits (Sentron QR, FD and new 3VA series 3VA52/61/62 cover all requirements up to 250A).

- 3VA52/61/62 can single mount in 6" of unit space so FD is no longer needed in Subfeed Space.
- JD 400 amp will no longer be needed as main or Subfeed. 3VA53/63 Mains are now available.

Main Breakers from 100A frame to 600A frame can be configured as needed. 3VA mains are generally the preferred Main choice for most applications.

As an example of a minimum panel, (6) 20 amp 1-pole BL breakers (3" of unit space) and a 3-pole 225 amp QR breaker (6" of unit space) equaling 9" of unit space can be configured in a P2 panel without any extra provisions or space required.

Another unique feature of the P2 panel is that blank unit space can be added to allow for future expansions or modifications. - Any expansions or modifications must be in 3"or 6" increments for these kits and they can be mixed in unit space as needed.

Small frame breakers of the same frame can cross from one mounting kit to another if needed.

- BL/BQD 100A max. has 3" kits - 6-poles max.
- xGB/3VA41 125A max. has 3" kits - 6-poles max.
- xGB2 and ED 125A max. each have 3" kits also, but are no longer needed with the introduction of 3VA.

Larger frame breaker kits are single mount in 6" of unit space:

- QR 225A max. 2-pole or 3-pole have 6" kits.
- 3VA61 150A ETU only and 3VA52/62 250A max. 2-pole or 3-pole share the same 6" kit.
- Changes in the field for unit space length for any 3" kit may require an addition deadfront center strip kit. Check with sales or the factory for field installable unit space strap kits.

Enclosures for P1 and P2

- Standard Type 1 enclosures are 20" wide x 5.75" deep. Box Height is determined by main device and unit space. See charts for box height.
- Height: 26", 32", 38", 44", 50", 56", 62", 68" and 74" are standard sizes used for both P1 and P2
- NEMA 3R, 3R/12, 4X are typical examples of product available in 20" wide x 5.75" deep enclosures.
- For most applications, 24" wide and 7.75" deep variations are also available. (see end of P1 section for more details)

Main Lug / Main Breaker for P2

Voltage – 600V AC max./250V DC max.

Amperage

- Main Lug: 125 to 600 amp max.
- Main Breaker: 100 to 600 amp max.
- Molded Case Switch: 100 to 600 amp max. (MCS)

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 P2 panel is limited to 22 KAIC.

*Note: The main device may be mounted remote from the panel.

Bussing – The P2 panel has more options than P1 to meet market requirements. The standard bussing is temperature rated aluminum. The rating is per the requirements of UL 67 – the standard for panelboards.

- All aluminum bussing is tin-plated.
- Optional bussing for the P2 panel is: 750 A/Si aluminum, temperature rated copper, and 1000 A/Si copper.
- Copper bus is tin-plated as standard, but silver plating is an additional option.

Weight – Approximate

Total panelboard weight when filled with a normal quantity of breakers and accessories is about 3 lbs. (1.4 kg) per inch (55g per mm) of box height.

Gauge Steel of Boxes/Fronts, Surface and Flush (see pgs. 11-6 & 11-7)

Dimensions in Inches (mm)		Gauge Steel		
H	W	Box	Front/Door	Type
26-74 (660-1880)	20 (508)	16①	14⑥	Type 1
26-74 (660-1880)	20 (508)	16②	16/14②	Type 3R/12
32-60 (813-1524)	20-36 (508-914)	14③	14③	Type 4
26-74 (660-1879)	20 (508)	14④	14④	Type 4X
36-60 (914-1524)	30-36 (762-914)	N/A⑤	N/A⑤	Type 4X Non-Metallic

① 16 Gauge is Standard (14 Gauge & 12 Gauge are optional)
② 15 Gauge Steel Can with 14 Gauge Door or Similar Approved Construction
③ No Optional Gauge available
④ 304SS 14 Gauge Std., 316SS 14 Gauge optional
⑤ Sizes do not match Standard Enclosure Sizes - See Table P1-21 - material is non-metallic - No Gauge Specified.
⑥ FAS-Latch is 14 GA only.
Screw-to-Box, Hinge-to-Box, Door-in-Door (14 GA Std./12 GA Std. or 10 GA Optional)
STB/HTB/DND with Piano Hinge (14 GA Std./12 GA Optional)

Standard Circuit P2 Panels (Neutral Configurations for up to 54 circuits max.)

Table below shows minimum Box Size required for the Unit Space indicated with the Main Option at the top of each Column.

- Adding other options generally will add to the box Height when configured in COMPAS. Also, there may be cost adders with each option.
- The maximum number of 1" circuits supported is shown at the bottom of each column in brackets. [54p] = max 54 poles of 1" circuits supported (BL, BT, BQD, ED, xGB, xGB2).
- Unit space is available in 9", 15", 21", 27", 33", 39", and 45" sizes.
- Within unit space listed, the neutral will support up to 54 circuits.
- When more then 54 circuits are required, COMPAS will configure with larger Extended Circuit Neutral - see Extended Circuit chart below for minimum box sizes.
- Box sizes available: 26", 32", 38", 44", 50", 62", 68", 74"

Circuit P2 Panels with Standard Line Side Lugs

Unit Space (starting with 9" and adding 6" increments) "A" Dimension

Panel Type →		Main Lugs			Main Breakers																	
Bus amps max.		250A		600A	250A											600A					
ML/MB amps		125	250	400-600	100	125 max.				225 max.		250 max.				400 max.			600 max.		
"B" Dim. Box Height	Type / Family	→			BL BQD	xGB 3VA41	ED		CED	QR		3VA52/ 61/62		FD		CFD	3VA53 3VA63	JD	CJD	3VA54 3VA64	LD	CLD
	Horiz.	→			H	H	H		H	H		H		H								
	Vertical	→						V①			V①		V①		V①	V	V	V	V	V	V	V
26	values to right are in inches of unit space	—	—	—	9	9	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32		9	9	—	15	15	15	9	9	9	—	9	—	9	—	—	—	—	—	—	—	—
38		15	15	9	21	21	21	15	15	15	9	15	—	15	—	—	—	—	—	—	—	—
44		21	21	15	27	27	27	21	21	21	15	21	9	21	9	—	—	—	—	—	—	—
50		27	27	21	33	33	33	27	27	27	21	27	15	27	15	9	9	9	—	—	—	—
56		33	33	27	39	39	39	33	33	33	27	33	21	33	21	15	15	15	—	9	9	—
62		39	39	33	45	45	45	39	39	39	33	39	27	39	27	21	21	21	9	15	15	9
68		45	45	39	—	—	—	45	45	45	39	45	33	45	33	27	27	27	15	21	21	15
74		—	—	45	—	—	—	—	—	—	45	n/a	39	n/a	39	33	33	33	21	27	27	21
Max. 1-pole brk②		[54p]			[54p]					[54p]		[54p]					[54p]		[42p]	[54p]		[42p]

Extended Circuit P2 Panels (Neutral Configurations for more than 54 circuits)

When COMPAS configuration has more than 54 circuits, the large neutral configuration is needed. Box size shown is the minimum available without any options.

- Unit space of 33", 39", and 45" are available.
- Unit space will be reduced by selecting some options such as Feed-thru lugs, Surge Protection Devices, and the other Subfeed options.
- In general, vertically mounted mains require 6" more box space than equivalent horizontally mounted mains.
- Neutral Configurations typically support a max of 90 1-pole breakers, or as noted in tables on page 11-47.

Extended Circuit P2 Panels with Standard Line Side Lugs

Unit Space (starting with 33" and adding 6" increments) "A" Dimension

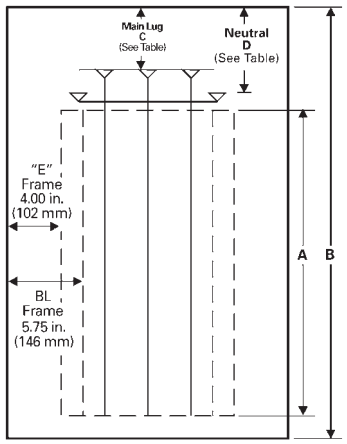
Panel Type →		Main Lugs			Main Breakers																	
Bus amps max.		250A		600A	250A											600A					
ML/MB amps		125	250	400-600	100	125 max.				225 max.		250 max.				400 max.			600 max.		
"B" Dim. Box Height	Type / Family	→			BL BQD	xGB 3VA41	ED		CED	QR		3VA52/ 61/62		FD		CFD	3VA53 3VA63	JD	CJD	3VA54 3VA64	LD	CLD
	Horiz.	→			H	H	H		H	H		H		H								
	Vertical	→						V①			V①		V①		V①	V	V	V	V	V	V	V
56	values are in inches of unit space	33	—	—	33	33	33	—	—	33	—	—	—	—	—	n/a	—	—	n/a	n/a	n/a	n/a
62		39	33	33	39	39	39	33	33	39	33	33	—	—	—	n/a	—	—	n/a	n/a	n/a	n/a
68		45	39	39	45	45	45	39	39	45	39	39	33	33	—	n/a	—	—	n/a	n/a	n/a	n/a
74		45	45	45	45	45	45	45	45	45	45	45	39	39	33	n/a	33	33	n/a	n/a	n/a	n/a
Max. 1-pole brk②		[90p]			[90p]					[90p]		[90p]	[78p]	[78p]	[66p]	n/a	[66p]		n/a	n/a	n/a	n/a

① The vertical main breaker application for ED, QJ, QR, FD and 3VA52/61/62 adds 6" of box height.

② Generally the count varies depending on neutral connections available and configuration of the panel. Use this value as general rule. Also, see tables on page 11-47.

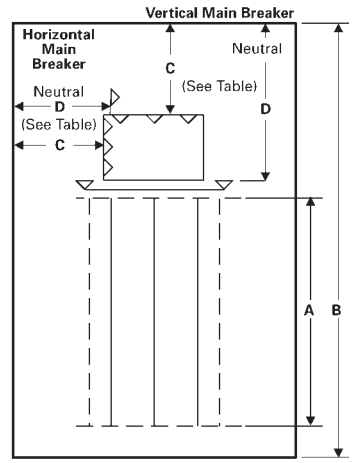
Main lug wire bending space diagram

Box depth = 5.75 in. (146 mm)
Box width = 20 in. (508 mm) for 100-600A



Main breaker wire bending space diagram

Box depth = 5.75 in. (146 mm)
Box width = 20 in. (508 mm) for 100-600A



NOTE: See page 11-32 for Main Breaker trip handle height reference chart.

Standard Circuit P2 Panels

Main Breaker Wire Bending

Panel Amps	Standard Circuits (up to 54 1" module branch poles)			
	Breaker Frames	Mounting	C① (Main)	D① (Neutral)
100	BL	Horiz.	5.75	8.00
	BQD	Horiz.	5.13	8.00
125	3VA41	Horiz.	4.63	8.00
	xGB, GB2	Horiz.	4.63	8.00
	ED	Horiz.	4.00	8.00
	ED	Vert.	6.56	11.13
225	QR	Horiz.	5.00	7.00
	QR	Vert.	10.06	16.69
250	3VA52	Horiz.	6.83	7.29
	3VA61/62	Horiz.	6.29	7.29
	3VA52	Vert.	17.07	22.75
	3VA61/62	Vert.	16.56	22.75
	FD	Horiz.	5.00	7.00
	FD	Vert.	13.25	22.72
400	3VA53/63 (1)600 Lug	Vert.	14.73	25.00
	3VA53/63 (2)600 Lug	Vert.	12.30②	25.00
	JD	Vert.	15.38	25.00
600	3VA54/64 (2)600 Lug	Vert.	12.30	29.00③
	LD	Vert.	15.38	23.00③

Main Lug Connectors

Standard Circuits (up to 54 1" module branch poles)			
Panel Amps	Standard Connectors	C①	D①
125	(1) #14-2/0	12.62	14.19
250	(1) #6 AWG - 350 MCM	11.75	10.72
400	(1) #4 AWG - 600 MCM or (2) #6 - 250 MCM	14.00	13.09
600	(2) #4 AWG - 500 MCM	14.00	11.00

Extended Circuit P2 Panels

Main Breaker Wire Bending

Panel Amps	Standard Circuits (up to 54 1" module branch poles)			
	Breaker Frames	Mounting	C① (Main)	D① (Neutral)
100	BL	Horiz.	5.75	6.56
	BQD	Horiz.	5.13	6.56
125	3VA41	Horiz.	4.63	6.56
	xGB, GB2	Horiz.	4.63	6.56
	ED	Horiz.	4.00	6.56
	ED	Vert.	12.56	14.88
225	QR	Horiz.	5.00	6.44
	QR	Vert.	10.06	15.53
250	3VA52	Horiz.	6.83	5.65
	3VA61/62	Horiz.	6.29	5.65
	3VA52	Vert.	17.07	19.74
	3VA61/62	Vert.	16.56	19.74
	FD	Horiz.	5.00	5.63
	FD	Vert.	19.25	25.71
400	3VA53/63 (1)600 Lug	Vert.	14.73	23.18④
	3VA53/63 (2)600 Lug	Vert.	12.30②	23.18④
	JD	Vert.	15.38	23.75④
600	3VA54/64	Vert.	N/A	N/A
	LD	Vert.	N/A	N/A

Main Lug Connectors

Extended Circuits (more than 54 1" module branch poles)			
Panel Amps	Standard Connectors	C①	D①
125	(1) #14-2/0	12.62	8.91
250	(1) #6 AWG - 350 MCM	17.75	13.69
400	(1) #4 AWG - 600 MCM or (2) #6 - 250 MCM	14.00	14.19
600	(2) #4 AWG - 500 MCM	14.00	14.23

① Refer to diagrams at the top of this page.
② Lug is removable per UL reducing requirement from 13" to 10" when running (1) max size 600kcmil cu cable.
③ Wire bending with std neut with AL/CU lugs. Same for JD
④ Wire bending with std neut with AL/CU lugs. Measured to steplug limiting access to main Neut lug. Same for JD

Branch Breaker Side Gutters Inches (mm)

← 24" (610mm) box width reference →						
← 20" (508mm) box width reference →					20" W box	24" W box
Ref code	Breaker type or Family		Ref code		Gutter Space inches (mm)	Gutter Space inches (mm)
← A →	BL, BLH,HBL	BL, BLH,HBL	← A →	=	5.750 (146)	7.750 (197)
← B →	BLF2, BLHF2, HBLF2, BLFB, BLHFB	BLF2, BLHF2, HBLF2, BLFB, BLHFB	← B →	=	5.125 (130)	7.125 (181)
	BQD, BQD6	BQD, BQD6				
← C →	NGB, HGB, LGB	NGB, HGB, LGB	← C →	=	4.625 (117)	6.625 (168)
	NGB2, HGB2, LGB2	NGB2, HGB2, LGB2				
← D →	3VA41	3VA41	← D →	=	4.625 (117)	6.625 (168)
← E →	ED4, ED6	ED4, ED6	← E →	=	4.000 (102)	6.000 (152)
	HED4, HHED6	HED4, HHED6				
← F →	QR2, QRH2, HQR2, HQR2H (Single Mounted)		← F →	=	5.000 (127)	7.000 (178)
← G →	3VA52 (w/1-port lug) (Single Mount)		← G →	=	6.83(174)	8.83(225)
← H →	3VA61/62 (w/1-port lug) (Single Mount)		← H →	=	6.29(160)	8.29(211)

P2 Branch Neutral Connections — updated for BT in 2021 — includes new 2/0 options

With all 1/0 Step lugs	Maximum Connections with all 1/0 step lugs										
	Std. Panels	Extended Circuit Panels — neutral examples						Max. Amp reference			
Note: Large Branch is >125A frame size. Connector Wire Range below:	Neutral with 1/0 step lugs (varies with config.)	125-250A MLO or MB	400A MB/MLO (2) lg branch	400A① MB/MLO (3) lg branch	600A MLO (0) lg branch	600A① MLO (2) lg branch	600A① MLO (3) lg branch	AL Cable 60C	CU Cable 60C	AL Cable 75C②	CU Cable 75C
#14-#6	28	56	56	42	56	42	28	40	55	50	65
#14-#3	xx	xx	xx	xx	xx	xx	xx	65	85	75	100
#14-1/0 (before update)	28	56	56	42	56	42	28	n/a	n/a	120	150
#14-2/0 (after update)	xx	xx	xx	xx	xx	xx	xx	n/a	n/a	135	175
#6-350kcml	0-3	3	2	3	0	2	3	n/a	n/a	250	310
(1) #4-600kcmil or (2) #6-250kcmil (for subfeed breaker or as needed)	0-1	1	1	1	1	1	1	n/a	n/a	340 410	420 510
Total connections max. =	56-60	116	115	88	113	87	60				

With all 2/0 Step lugs	Maximum Connections with all 2/0 step lugs										
	Std. Panels	Extended Circuit Panels — neutral examples						Max. Amp reference			
Note: Large Branch is >125A frame size. Connector Wire Range below:	Neutral with 2/0 step lugs (varies with config.)	125-250A MLO or MB	400A MB/MLO (2) lg branch	400A① MB/MLO (3) lg branch	600A MLO (0) lg branch	600A① MLO (2) lg branch	600A① MLO (3) lg branch	AL Cable 60C	CU Cable 60C	AL Cable 75C②	CU Cable 75C
#14-#6	28	56	56	42	56	42	28	40	55	50	65
#14-#3	4	8	8	6	8	6	4	65	85	75	100
#14-1/0 (before update)	xx	xx	xx	xx	xx	xx	xx	n/a	n/a	120	150
#14-2/0 (after update)	24	48	48	36	48	36	24	n/a	n/a	135	175
#6-350kcml	0-3	3	2	3	0	2	3	n/a	n/a	250	310
(1) #4-600kcmil or (2) #6-250kcmil (for subfeed breaker or as needed)	0-1	1	1	1	1	1	1	n/a	n/a	340 410	420 510
Total connections max. =	56-60	116	115	88	113	87	60				

① For 400A and 600A designs, branch neutral step lugs need to be removed in some cases for the large branch 350 kcmil lugs mounted on the neutral cross bus to have wiring access to the side gutters of the enclosure. The default 400A assembly has gutter access to one side for 2 lg branch loads min. The 600A neutral provides no gutter access for large branch lugs when the maximum (2) step lugs per side are installed.

② The branch neutral can already use 75C, but when running a circuit to a load, the same type of wire should be used on the phase (breaker) and neutral connections in the panel. All of our breakers are rated for 75C (smaller dia per amp rating than 60C wire). – UL assumes 75C or higher rating for wires at or above 1/0 size.

P2 Main Circuit Breakers and Subfeed

P2 Main Circuit Breakers④ and Subfeed					2-P	2-Pole and 3-Pole														
					Max IR (kA) at															
Amp Rating	Trip Type	Breaker Family	Main Breaker Code	Breaker Type	120/240V	240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC ①	Amp Ratings Available	For Horizontal or Vertical Mounted Main Option – add X" to Box Height	Horiz. mount box size Min. w/ 9" of unit space	Vertical mount box size Min. w/ 9" of unit space	Extended Circuits Available	Horiz. mount box size Ext. Ckts w/ 33" unit space	Vertical mount box size Ext. Ckts w/ 33" unit space	Sub-feed outside of unit space – add X" to Box Height
100	Thermal Magnetic	BL	BL	BL	10	10	—	—	—	—	—	—	15-100	Horiz. Only	26	n/a	n	n/a	n/a	n/a
			BH	BLH	22	22	—	—	—	—	—	—	15-100	Horiz. Only	26	n/a	n	n/a	n/a	n/a
			HB	HBL	65	65	—	—	—	—	—	—	15-100	Horiz. Only	26	n/a	n	n/a	n/a	n/a
		BQD	BQ	BQD②	—	65	14	—	10	—	14	—	15-100	Horiz. Only	26	n/a	y	56	n/a	n/a
125	Thermal Magnetic	Sentron GB	NB	NGB	—	100	25	—	14	—	14	—	15-125	Horiz. Only	26	n/a	y	56	n/a	n/a
			G2	HGB	—	100	35	—	14	—	14	—	15-125	Horiz. Only	26	n/a	y	56	n/a	n/a
			G3	LGB	—	100	65	—	14	—	14	—	15-125	Horiz. Only	26	n/a	y	56	n/a	n/a
		Sentron GB2	G4	NGB2	—	100	—	25	14	—	14	—	15-125	Horiz. Only	26	n/a	y	56	n/a	n/a
			G5	HGB2	—	100	—	35	22	—	14	—	15-125	Horiz. Only	26	n/a	y	56	n/a	n/a
			G6	LGB2	—	100	—	65	65	—	14	—	15-125	Horiz. Only	26	n/a	y	56	n/a	n/a
		Sentron ED	E4	ED4	—	65	—	18	—	—	—	30	15-125	Vert.= Std. +6"	26	32	y	56	62	n/a
			E6	ED6③	—	65	—	25	—	18	—	30	20-125	Vert.= Std. +6"	26	32	y	56	62	n/a
			H4	HED4	—	100	—	42	—	—	—	30	15-125	Vert.= Std. +6"	26	32	y	56	62	n/a
			HA	HHED6	—	100	—	65	—	18	—	—	15-50	Vert.= Std. +6"	26	32	y	56	62	n/a
			CE	CED6	—	200	—	200	—	100	—	—	50-125	Vert. Only Std. +6"	n/a	32	y	62	n/a	n/a
		3VA41	V1	SEAB	—	65	—	25	14	—	—	—	15-125	Horiz Only	26	n/a	y	56	n/a	n/a
			V2	MEAB	—	85	—	35	18	—	—	—	15-125	Horiz Only	26	n/a	y	56	n/a	n/a
			V3	HEAB	—	150	—	65	25	—	—	—	15-125	Horiz Only	26	n/a	y	56	n/a	n/a
150	Electronic (Solid state)	3VA61 (ETU350 LSI std)	W2	MDAE	—	100	—	35	—	18	—	—	16-150	Vert.= Std. +6"	38	44	y	68	74	n/a
			W3	HDAE	—	100	—	65	—	22	—	—	16-150	Vert.= Std. +6"	38	44	y	68	74	n/a
			W4	CDAE	—	200	—	100	—	35	—	—	16-150	Vert.= Std. +6"	38	44	y	68	74	n/a
			W5	LDAE	—	200	—	150	—	50	—	—	16-150	Vert.= Std. +6"	38	44	y	68	74	n/a
225	Thermal Magnetic	Sentron QR	QR	QR2	—	10	—	—	—	—	—	—	100-225	Vert.= Std. +6"	32	38	y	56	62	n/a
			Q4	QRH2	—	25	—	—	—	—	—	—	100-225	Vert.= Std. +6"	32	38	y	56	62	n/a
			Q5	HQR2	—	65	—	—	—	—	—	—	100-225	Vert.= Std. +6"	32	38	y	56	62	n/a
			Q6	HQR2H	—	100	—	—	—	—	—	—	100-225	Vert.= Std. +6"	32	38	y	56	62	n/a
250	Thermal Magnetic	Sentron FD	FX, FD	FXD6-A, FD6-A	—	65	—	35	—	22	—	30	70-250	Vert.= Std. +6"	38	44	y	68	74	⑤
			H2, HF	HFXD6, HFD6	—	100	—	65	—	25	—	30	70-250	Vert.= Std. +6"	38	44	y	68	74	⑤
			CF	CFD6-A	—	200	—	200	—	100	—	50	70-250	Vert. Std. +12"	38	50	n	n/a	n/a	n/a
250	Thermal Magnetic	3VA52 (with TM230 trip)	VA	MFAS	—	85	—	35	—	18	—	60	100-250	Vert.= Std. +6"	38	44	y	68	74	n/a
			VB	HFAS	—	100	—	65	—	25	—	85	100-250	Vert.= Std. +6"	38	44	y	68	74	n/a
			VC	CFAS	—	200	—	100	—	35	—	100	100-250	Vert.= Std. +6"	38	44	y	68	74	n/a
	Electronic (Solid state)	3VA62 (ETU350 LSI std)	WA	MFAE	—	100	—	35	—	18	—	—	100-250	Vert.= Std. +6"	38	44	y	68	74	n/a
			WB	HFAE	—	100	—	65	—	22	—	—	100-250	Vert.= Std. +6"	38	44	y	68	74	n/a
			WC	CFAE	—	200	—	100	—	35	—	—	100-250	Vert.= Std. +6"	38	44	y	68	74	n/a
			WD	LFAE	—	200	—	150	—	50	—	—	100-250	Vert.= Std. +6"	38	44	y	68	74	n/a

① 250VDC ratings are for 2-pole only (or for 2-poles of a 3-pole breaker)
② Approved for CSA and UL Listed.
③ ED6 2-pole only available in 20A, 25A and 30A. See SpeedFAX section 7 for more details.
④ Interchangeable Trip Main Breakers are mounted at top of panel only.
⑤ Horiz: Single +12". Vertical: Twin +24".
⑥ Vert: Single only with MLO Panel +24".

P2 Main Circuit Breakers and Subfeed (cont.)

P2 Main Circuit Breakers④ and Subfeed					2-P	2-Pole and 3-Pole														
					Max IR (kA) at															
Amp Rating	Trip Type	Breaker Family	Main Breaker Code	Breaker Type	120/240V	240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC ①	Amp Ratings Available	For Horizontal or Vertical Mounted Main Option – add X" to Box Height	Horiz. mount box size Min. w/ 9" of unit space	Vertical mount box size Min. w/ 9" of unit space	Extended Circuits Available	Horiz. mount box size Ext. Ckts w/ 33" unit space	Vertical mount box size Ext. Ckts w/ 33" unit space	Sub-feed outside of unit space – add X" to Box Height
400	Thermal Magnetic	Sentron JD	JX, J6	JXD6-A, JD6-A	—	65	—	35	—	25	—	30	200-400	Vert. Std.	n/a	50	y	n/a	74	⑥
			H5, H6	HJXD6-A, HJD6-A	—	100	—	65	—	35	—	30	200-400	Vert. Std.	n/a	50	y	n/a	74	⑥
			CJ	CJD6-A	—	200	—	150	—	100	—	—	200-400	Vert.= Std.+12"	n/a	62	n	n/a	n/a	n/a
	Electronic (Solid state)	Sentron JD	SJ	SJD6-B	—	65	—	35	—	25	—	—	200-400	Vert. Std.	n/a	50	y	n/a	74	n/a
			SX	SHJD6-B	—	100	—	65	—	35	—	—	200-400	Vert. Std.	n/a	50	y	n/a	74	n/a
			SC	SCJD6-B	—	200	—	150	—	100	—	—	200-400	Vert.= Std.+12"	n/a	62	y	n/a	74	n/a
400	Thermal Magnetic	3VA53 (TM230 trip)	VE	MJAS	—	85	—	35	—	18	—	50	200-400	Vert. Std.	n/a	50	y	n/a	74	n/a
			VF	HJAS	—	100	—	65	—	25	—	85	200-400	Vert. Std.	n/a	50	y	n/a	74	n/a
			VG	CJAS	—	200	—	100	—	35	—	100	300-400	Vert. Std.	n/a	50	y	n/a	74	n/a
	Electronic (Solid state)	3VA63 (ETU350 LSI std)	WE	MJAE	—	100	—	35	—	18	—	—	100-400	Vert. Std.	n/a	50	y	n/a	74	n/a
			WF	HJAE	—	100	—	65	—	22	—	—	100-400	Vert. Std.	n/a	50	y	n/a	74	n/a
			WG	CJAE	—	200	—	100	—	35	—	—	100-400	Vert. Std.	n/a	50	y	n/a	74	n/a
			WH	LJAE	—	200	—	150	—	50	—	—	100-400	Vert. Std.	n/a	50	y	n/a	74	n/a
600	Thermal Magnetic	Sentron LD	LX	LXD6-A	—	65	—	35	—	25	—	30	450-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			L6	LD6-A	—	65	—	35	—	25	—	30	250-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			HL, HO	HLXD6-A, HLD6-A	—	100	—	65	—	35	—	30	250-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			CL	CLD6-A	—	200	—	150	—	100	—	—	250-600	Vert.= Std. +6"	n/a	62	n	n/a	n/a	n/a
	Electronic (Solid state)	Sentron LD	SL	SLD6-B	—	65	—	35	—	25	—	—	300-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			S2	SHLD6-B	—	100	—	65	—	35	—	—	300-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			SI	SCLD6-B	—	200	—	150	—	100	—	—	300-600	Vert.= Std. +6"	n/a	62	n	n/a	n/a	n/a
600	Thermal Magnetic	3VA54 (TM230 std)	VJ	MLAS	—	85	—	35	—	18	—	50	450-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			VK	HLAS	—	100	—	65	—	25	—	85	450-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			VL	CLAS	—	200	—	100	—	35	—	100	450-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
	Electronic (Solid state)	3VA64 (ETU350 LSI std)	WJ	MLAE	—	100	—	35	—	18	—	—	240-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			WK	HLAE	—	100	—	65	—	22	—	—	240-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			WL	CLAE	—	200	—	100	—	35	—	—	240-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a
			WM	LLAE	—	200	—	150	—	50	—	—	240-600	Vert. Std.	n/a	56	n	n/a	n/a	n/a

Alternate Lugs (Aluminum body excepts Al or CU cable, CU only lugs accept CU only cable)

Style	Amp Rating	Breaker Type	Standard AL connectors	Vert or Horiz	Box Height adder	Additional comments
MLO	400	n/a	(1) 250 - 750 kcmil or (2)#3/0 AWG - 250 kcmil Cu or Al	V	6"	
Main Breaker	400	JD6, JXD6, HJD6, CJD6, SJD6, SHJD6, SCJD6	(1)#4/0 AWG - 750 kcmil Cu or Al	V	6	
	150	3VA61	tbd - configurable in COMPAS	H	varies	see SpeedFax Breaker section for other available configurations
			tbd - configurable in COMPAS	V	varies	
	250	3VA52, 3VA62	tbd - configurable in COMPAS	H	varies	see SpeedFax Breaker section for other available configurations
			tbd - configurable in COMPAS	V	varies	
	400	3VA53. 3VA63	tbd - configurable in COMPAS	V	varies	see SpeedFax Breaker section for other available configurations
	600	3VA54, 3VA64	tbd - configurable in COMPAS	V	varies	

① 250VDC ratings are for 2-pole only (or for 2-poles of a 3-pole breaker)
② Approved for CSA and UL Listed.
③ ED6 2-pole only available in 20A, 25A and 30A. See SpeedFAX section 7 for more details.
④ Interchangeable Trip Main Breakers are mounted at top of panel only.
⑤ Horiz: Single +12". Vertical: Twin +24".
⑥ Vert: Single only with MLO Panel +24".

P2 Branch Circuit Breakers

Amp Rating	Trip Type	Breaker Family	Breaker Type	1-Pole Max IR (kA) at 120V	277V	347V	125V DC	1-Pole Amp Ratings Avail.	2-Pole and 3-Pole Max IR (kA) at 120/240V	240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC	2-Pole and 3-Pole Amp Ratings Avail.	S = Single Mount	T = Twin mount	Unit Space per Kit (in.)	Max 1-pole Circuits per Kit
100	Thermal Magnetic	BL	BL, BT⑦	10	—	—	—	15-70⑦	10	10	—	—	—	—	—	—	15-100⑦	—	T	3.00	6
			BLH, BTH⑦	22	—	—	—	15-70⑦	22	22	—	—	—	—	—	—	15-100⑦	—	T	3.00	6
			HBL	65	—	—	—	15-50	65	65	—	—	—	—	—	—	15-100	—	T	3.00	6
	Special Application	BLG BL	BLG①	10	—	—	—	15-20	10	—	—	—	—	—	—	—	30	—	T	3.00	6
			BL (HID)	10	—	—	—	15-30	10	—	—	—	—	—	—	—	15-30	—	T	3.00	6
	Thermal Magnetic	BQD	BQD④	65	14	—	14	15-100	—	65	14	—	—	—	14	—	15-100	—	T	3.00	6
			BQD6⑤	65	—	—	14	15-70	—	65		—	10	—	14	—	15-70	—	T	3.00	6
xx	Electronic and misc.	BL	AFCI/ GFCI & Dual Function	x	—	—	—	see special table page 11-13	x	—	—	—	—	—	—	—	see special table page 11-13	—	T	3.00	6
125	Thermal Magnetic	GB	NGB	100	25	14	14	15-125	—	100	25	—	14	—	14	—	15-125	—	T	3.00	6
			HGB	100	35	14	14	15-125	—	100	35	—	14	—	14	—	15-125	—	T	3.00	6
			LGB	100	65	14	14	15-125	—	100	65	—	14	—	14	—	15-125	—	T	3.00	6
		Sentron	ED4	65	22	—	30	15-100	—	65	—	18	—	—	—	30	15-125	—	T	3.00	6
			ED6⑥	—	—		—	15-100	—	65	—	25	—	18	—	30	20-125	—	T	3.00	6
			HED4②	100	25②	—	30	15-100	—	65	—	18②	—	—	—	30	15-125	—	T	3.00	6
			HHED6	—	—	—	—	—	—	100	—	65	—	18	—	—	15-50	—	T	3.00	6
		GB2	NGB2	100	25	14	14③	15-125	—	100	—	25	14	—	14③	—	15-125	—	T	3.00	6
			HGB2	100	35	22	14③	15-125	—	100	—	35	22	—	14③	—	15-125	—	T	3.00	6
			LGB2	100	65	25	14③	15-125	—	100	—	65	25	—	14③	—	15-125	—	T	3.00	6
		3VA41	SEAB	65	25	14	14	15-125	65	65	25	25	14	—	50	50	15-125	—	T	3.00	6
			MEAB	85	35	18	25	15-125	85	85	35	35	18	—	85	85	15-125	—	T	3.00	6
			HEAB	150	65	25	30	15-125	150	150	65	65	25	—	100	100	15-125	—	T	3.00	6
150	Electronic (Solid state)	3VA61 (ETU350 LSI std)	MDAE	—	—	—	—	—	—	100	—	35	—	18	—	—	16-150	S	—	6.00	3
			HDAE	—	—	—	—	—	—	100	—	65	—	22	—	—	16-150	S	—	6.00	3
			CDAE	—	—	—	—	—	—	200	—	100	—	35	—	—	16-150	S	—	6.00	3
			LDAE	—	—	—	—	—	—	200	—	150	—	50	—	—	16-150	S	—	6.00	3
225	Thermal Magnetic	QR	QR2	—	—	—	—	—	—	10	—	—	—	—	—	—	100-225	S	—	6.00	3
			QRH2	—	—	—	—	—	—	25	—	—	—	—	—	—	100-225	S	—	6.00	3
			HQR2	—	—	—	—	—	—	65	—	—	—	—	—	—	100-225	S	—	6.00	3
			HQR2H	—	—	—	—	—	—	100	—	—	—	—	—	—	100-225	S	—	6.00	3
250	Thermal Magnetic	3VA52 (TM230 trip)	MFAS	—	—	—	—	—	—	85	—	35	—	18	—	60	100-250	S	—	6.00	3
			HFAS	—	—	—	—	—	—	100	—	65	—	25	—	85	100-250	S	—	6.00	3
			CFAS	—	—	—	—	—	—	200	—	100	—	35	—	100	100-250	S	—	6.00	3
	Electronic (Solid state)	3VA62 (ETU350 LSI std)	MFAE	—	—	—	—	—	—	100	—	35	—	18	—	—	100-250	S	—	6.00	3
			HFAE	—	—	—	—	—	—	100	—	65	—	22	—	—	100-250	S	—	6.00	3
			CFAE	—	—	—	—	—	—	200	—	100	—	35	—	—	100-250	S	—	6.00	3
			LFAE	—	—	—	—	—	—	200	—	150	—	50	—	—	100-250	S	—	6.00	3

① BLG two-pole breaker is one phase and neutral. Three pole is two phases and neutral - See SpeedFax page 7-31
② 1-pole HED4 15-30A rated 65kA; 35-100A rated 25kA: 3-pole HED4 rated 42kA
③ 2-pole only or two outer poles of 3-pole breaker
④ Approved for CSA and UL Listed.
⑤ Approved for CSA but not UL Listed.
⑥ ED6 2-pole only available in 20A, 25A and 30A. ED6 1-pole not UL listed - See SpeedFAX section 7 for more details.
⑦ BT and BTH are only available in 15A and 20A with two 1-pole circuits in one inch of unit space."

Main Lugs Only — Examples of basic P2 Panel numbers w/o devices that add to box height.

Max Panel Amp Rating	Max. 1-pole Circuits	Min. Unit space	Standard or Extended Circuit	3Ø4W 208Y/120V Panel Number	Box Height Inches Min.	1Ø3W 120/240V Panel Number	Box Height Inches Min.	3Ø4W 480Y/277V Panel Number	Box Height Inches Min.
125	18	9	Standard Circuit Panel	P2C18ML125ATS	32	P2A18ML125ATS	32	P2E18ML125ATS	32
	30	15		P2C30ML125ATS	38	P2A30ML125ATS	38	P2E30ML125ATS	38
	42	21		P2C42ML125ATS	44	P2A42ML125ATS	44	P2E42ML125ATS	44
	54	27		P2C54ML125ATS	50	P2A54ML125ATS	50	P2E54ML125ATS	50
	66	33	Extended Circuit Panel	P2C66ML125ATS	56	P2A66ML125ATS	56	P2E66ML125ATS	56
	78	39		P2C78ML125ATS	62	P2A78ML125ATS	62	P2E78ML125ATS	62
	90	45		P2C90ML125ATS	68	P2A90ML125ATS	68	P2E90ML125ATS	68
250	18	9	Standard Circuit Panel	P2C18ML250ATS	32	P2A18ML250ATS	32	P2E18ML250ATS	32
	30	15		P2C30ML250ATS	38	P2A30ML250ATS	38	P2E30ML250ATS	38
	42	21		P2C42ML250ATS	44	P2A42ML250ATS	44	P2E42ML250ATS	44
	54	27		P2C54ML250ATS	50	P2A54ML250ATS	50	P2E54ML250ATS	50
	66	33	Extended Circuit Panel	P2C66ML250ATS	62	P2A66ML250ATS	62	P2E66ML250ATS	62
	78	39		P2C78ML250ATS	68	P2A78ML250ATS	68	P2E78ML250ATS	68
	90	45		P2C90ML250ATS	74	P2A90ML250ATS	74	P2E90ML250ATS	74
400	18	9	Standard Circuit Panel	P2C18ML400ATS	38	P2A18ML400ATS	38	P2E18ML400ATS	38
	30	15		P2C30ML400ATS	44	P2A30ML400ATS	44	P2E30ML400ATS	44
	42	21		P2C42ML400ATS	50	P2A42ML400ATS	50	P2E42ML400ATS	50
	54	27		P2C54ML400ATS	56	P2A54ML400ATS	56	P2E54ML400ATS	56
	66	33	Extended Circuit Panel	P2C66ML400ATS	62	P2A66ML400ATS	62	P2E66ML400ATS	62
	78	39		P2C78ML400ATS	68	P2A78ML400ATS	68	P2E78ML400ATS	68
	90	45		P2C90ML400ATS	74	P2A90ML400ATS	74	P2E90ML400ATS	74
600	18	9	Standard Circuit Panel	P2C18ML600ATS	38	P2A18ML600ATS	38	P2E18ML600ATS	38
	30	15		P2C30ML600ATS	44	P2A30ML600ATS	44	P2E30ML600ATS	44
	42	21		P2C42ML600ATS	50	P2A42ML600ATS	50	P2E42ML600ATS	50
	54	27		P2C54ML600ATS	56	P2A54ML600ATS	56	P2E54ML600ATS	56
	66	33	Extended Circuit Panel	P2C66ML600ATS	62	P2A66ML600ATS	62	P2E66ML600ATS	62
	78	39		P2C78ML600ATS	68	P2A78ML600ATS	68	P2E78ML600ATS	68
	90	45		P2C90ML600ATS	74	P2A90ML600ATS	74	P2E90ML600ATS	74

Main Circuit Breaker — Examples of Panel numbers w/o options that add to box height.

Max Panel Amp Rating	Main Type ref	Max. 1-pole Circuits	Unit space	Standard or Extended	1Ø3W 120/240V Panel Number	Box Ht. Inches Min.	3Ø4W 208Y/120V Panel Number	Box Ht. Inches Min.	3Ø4W 480Y/277V Panel Number	Box Ht. Inches Min.
100	BL/BQD, 3VA41, xGB, ED horiz.	18	9	Standard Circuit Panel	P2A18BL100ATS	26	P2C18BL100ATS	26	P2E18BQ100ATS	26
		30	15		P2A30BL100ATS	32	P2C30BL100ATS	32	P2E30BQ100ATS	32
		42	21		P2A42BL100ATS	38	P2C42BL100ATS	38	P2E42BQ100ATS	38
		54	27		P2A54BL100ATS	44	P2C54BL100ATS	44	P2E54BQ100ATS	44
125	Horiz. Main① BQD, 3VA41, xGB, ED	18	9	Standard Circuit Panel	P2A18BQ125ATS	26	P2C18NB125ATS	26	P2E18E4125ATS	26
		30	15		P2A30BQ125ATS	32	P2C30NB125ATS	32	P2E30E4125ATS	32
		42	21		P2A42BQ125ATS	38	P2C42NB125ATS	38	P2E42E4125ATS	38
		54	27		P2A54BQ125ATS	44	P2C54NB125ATS	44	P2E54E4125ATS	56
		66	33	Extended Circuit Panel	P2A66BQ125ATS	56	P2C66NB125ATS	56	P2E66E4125ATS	56
		78	39		P2A78BQ125ATS	62	P2C78NB125ATS	62	P2E78E4125ATS	62
		90	45		P2A90BQ125ATS	68	P2C90NB125ATS	68	P2E90E4125ATS	68
225	Horiz. Main② QR, FD , 3VA52/61/62 (225A max.)	18	9	Standard Circuit Panel	P2A18QR225ATS	32	P2C18QR225ATS	32	P2E18FX225ATS	38
		30	15		P2A30QR225ATS	38	P2C30QR225ATS	38	P2E30FX225ATS	44
		42	21		P2A42QR225ATS	44	P2C42QR225ATS	44	P2E42FX225ATS	50
		54	27		P2A54QR225ATS	50	P2C54QR225ATS	50	P2E54FX225ATS	56
		66	33	Extended Circuit Panel	P2A66QR225ATS	56	P2C66QR225ATS	56	P2E66FX225ATS	68
		78	39		P2A78QR225ATS	62	P2C78QR225ATS	62	P2E78FX225ATS	74
		90	45		P2A90QR225ATS	68	P2C90QR225ATS	68	n/a	n/a
250	Horiz. Main③ FD, 3VA52/61/62	18	9	Standard Circuit Panel	P2A18FX250ATS	38	P2C18FX250ATS	38	P2E18FX250ATS	38
		30	15		P2A30FX250ATS	44	P2C30FX250ATS	44	P2E30FX250ATS	44
		42	21		P2A42FX250ATS	50	P2C42FX250ATS	50	P2E42FX250ATS	50
		54	27		P2A54FX250ATS	56	P2C54FX250ATS	56	P2E54FX250ATS	56
		66	33	Extended Circuit Panel	P2A66FX250ATS	68	P2C66FX250ATS	68	P2E66FX250ATS	68
		78	39		P2A78FX250ATS	74	P2C78FX250ATS	74	P2E78FX250ATS	74
		90	45		n/a	n/a	n/a	n/a	n/a	n/a
400	Vert. JD, 3VA53/63 Main④	18	9	Standard Circuit Panel	P2A18JX400ATS	50	P2C18JX400ATS	50	P2E18JX400ATS	50
		30	15		P2A30JX400ATS	56	P2C30JX400ATS	56	P2E30JX400ATS	56
		42	21		P2A42JX400ATS	62	P2C42JX400ATS	62	P2E42JX400ATS	62
		54	27		P2A54JX400ATS	68	P2C54JX400ATS	68	P2E54JX400ATS	68
		66	33	Extended	P2A66JX400ATS	74	P2C66JX400ATS	74	P2E66JX400ATS	74
600	Vert. LD, 3VA54/64 Main⑤	18	9	Standard Circuit Panel	P2A18LX600ATS	56	P2C18LX600ATS	56	P2E18LX600ATS	56
		30	15		P2A30LX600ATS	62	P2C30LX600ATS	62	P2E30LX600ATS	62
		42	21		P2A42LX600ATS	68	P2C42LX600ATS	68	P2E42LX600ATS	68
		54	27		P2A54LX600ATS	74	P2C54LX600ATS	74	P2E54LX600ATS	74

General Note: Panel numbers and box sizes are for reference only - COMPAS will configure proper box size needed based on all options.

① 125A: for vert ED & horiz. CED add 6" of box height for both Standard and Extended Circuit.
② 225A: for vert QR & FD add 6" of box height for Standard Circuit. Add 12" of box height for Extended Circuit FD Horizontal.
③ 250A: for vert FD and 3VA52/61/62, add 6" of box height; for vert CFD add 12" of box height. (Standard Circuit- see chart for Extended Circuit)
④ 400A: for CJD add 12" of box height for Standard Circuit.
⑤ 600A: for CLD add 6" of box height for Standard Circuit.

Enclosures

Extra Gutter to Sides or Ends of the Can (Type 1 Only)

Description
6" end gutter 2" side gutter Barrier in gutter (add to extra gutter price – min 4" required) 24" wide
Screw-to-Box Front Hinge-to-Box Front Door-in-Door Front • Piano hinge available for all 3 styles above • Stainless Steel 304 with piano hinge available for all 3 styles above
Trim mounted devices . . . . . See page 11-131 • Pilot lights • Toggle switches • Push buttons
Painted boxes . . . . . See page 11-131 Custom colors . . . . . See painted boxes Increase gauge trims and boxes . . . . . See page 11-131 Stainless steel trims and boxes, Type 1 . . . . . See page 11-131

Meters

(Contact sales for pricing and application engineering for space requirements)

Panel Skirts

See page 11-132

Special Locks (see pg 11-40 for details)

TEY
TEU1
Cat 60
LL803
LL806
Yale 47 (NYC)
National C413A
Best Lock 7-pin tumbler
Southco 1/4 Fastener
Corbin 1001 FAB7

Panel Bus Modifications

Main Bus	Catalog Number Addition Amperes Ratings			
	125A	250A	400A	600A
750 A/Sl AL.	B	B	B	B
Copper (tin pltd.)	F	F	F	F
Copper (silver pltd.)	E	E	E	E
1000 A/Sl Copper (tin pltd.)	G	G	G	G
1000 A/Sl Copper (silver pltd.)	H	H	H	H

This is the 11th character of the interior part number.

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

Subfeed, Feed-Thru and Split Bus (for 2-pole or 3-pole)

Ampere Rating	Connector Cu/Al Wire Range	Unit Space (inches)

Subfeed (Double) Lugs for Main Lug Panelboards Only (400 max)

100/125	(2)—#12 AWG-2/0 kcmil	0.0"
225/250	(2)—#6 AWG-350 kcmil (custom)	+6
400	(4)—250 kcmil (custom) (2)—600 kcmil	+6

Feed-Thru Lugs — Cannot Be Used in Conjunction with TVSS or Subfeed Breakers (200% Neutral not available)

100/125	(1)—#12 AWG-2/0 kcmil	+6
225/250	(1)—#6 AWG-350 kcmil	+6
400	(2)—250 kcmil (1)—600 kcmil	+9
600	(2)—250-500 kcmil	+12

Split Bus (1 per interior)

Requires feed thru lugs also to feed sub panel section and for space requirements.

100/125	(1)—#12 AWG-2/0 kcmil	+6
225/250	(1)—#6 AWG-350 kcmil	+6
400	(2)—250 kcmil (1)—600 kcmil	+6
600	(2)—250-500 kcmil	+6

Contactor Mains or Submain*

See Page 11-130

- Asco 920 through 225 amps – adds 12" unit space as main, 15" unit space as submain
- External with manufacture supplied enclosure
- Siemens LEN through 30 amps - adds 6" as main; 18" for up to 100A submain and 21" for 200A. 7.75" depth cans for up to 100A and 10" depth cans for 200A.

*Call plant for correct can size.

Branch and Main Breaker Accessories

See breaker section of this catalog.
- Handle blocks
- Handle locks
- Aux. Contacts①
- UVR①

Increase Capacity Neutral up to 200% (N/A on Feed Thru Lugs & Subfeed Lugs)

Main Bus Amps
125
250
400
600

See page 11-53 for unit space adders and compatibility with other options.

(Devices mounted and wired to the trim should also have hinged trim specified)

Copper MLO Only

Main Bus Amps			
125	250	400	600

Bus mounted SPD

See Section 10

Service Entrance Label

Type P2 Panelboards are factory labeled suitable for use as service entrance equipment when NEC requirements are met. A panelboard cannot have more than six main disconnects, unless it is a lighting and appliance branch panelboard. Lighting and appliance branch panelboards are limited to two main disconnects. Factory installed and Field installable Service Entrance Barrier kits are now available as required by UL67 (In COMPAS, you must select Service Entrance Required).

Grounding of Panelboards

Ground Bars except for brazed to box are shipped with the panel interior not factory mounted.
- Non-Insulated Equipment Ground Bar
- Copper Non-Insulated Ground Bar
- Al Insulated Equipment Ground Bar
- Cu Insulated Equipment Ground Bar
- Ground Bar Brazed to Box (Not recommended for painted or NEMA 3R enclosures)

Shunt Trip on Main or Branch

BL, BLH, HBL, NGB, HGB, LGB, NGB2, HGB2, LGB2, ED4, HED4, HHED6 uses 1" unit space for shunt trip. All others may be used on mains or subfeeds. See breaker section for list price adders.

Time Clocks

Time clocks may be mounted in a 23" enclosure to be cable connected to the panel. Sangamo, Tork or Paragon time clock can be supplied and mounted in panelboard cabinet. Adds 12" to panel height. Mounts in Sub-area.

Description
Time Clock (1 or 2-pole, single or double throw contacts; 3-pole, single throw) 277V maximum with plain dial
Astronomical dial
An omitting device
Reserve power or carryover
Space and mounting provisions only

Box Size Additions for Optional Features (values in inches)

Main Lugs					Main Breakers																			
125A	250A	400A	600A	← Amps Max. →	100A	125A	125A		150A		225A			250A		250A		400A	600A	400A		600A	
				Horizontal Mount	H	H	H		H		H		H			H							
V	V	V	V	Vertical Mount				V		V		V		V	V		V	V	V	V	V	V	V
32"	32"	38"	38"	← Min. Box Size① →	26"	26"	32"	32"	32"	38"	32"	38"	38"	44"	50"	38"	44"	50"	50"	50"	62"	56"	62"
MLO Panels				Options / Breaker Types	BL, BQD	ED, xGB, 3VA4	CED	ED	3VA61	3VA61	QR	QR	FD	FD	CFD	3VA52/62	3VA52/62	3VA53/63	3VA54/64	JD	CJD	LD	CLD
0	0	6	6	200% Neutral (lug type)	0	0	0	0	n/a	0	n/a	0	n/a	0	0	n/a	0	0	0	0	0	0	0
0	0	0	0	Main w/ Std. Lugs (100% Neutral PNL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	6	0	Main w/ CU Lugs (100% Neutral PNL)	n/a	n/a	n/a	0	0	0	n/a	0	n/a	0	0	0	0	0	0	0	0	0	0
6	6	6	6	Main w/ Comp Lugs (100% Neutral PNL)	n/a	n/a	n/a	0	n/a	n/a	n/a	0	n/a	0	0	n/a	tbd	tbd	tbd	0	0	0	0
6	6	12	12	Feed-Thru w/ Std. Lugs	6	6	6	6	n/a	6	n/a	6	n/a	6	6	n/a	6	12	12	12	12	12	12
6	6	12	n/a	Feed-Thru w/ CU Lugs	n/a	n/a	n/a	6	n/a	6	n/a	6	n/a	6	6	n/a	6	12	12	12	12	n/a	n/a
6	12	12	n/a	Feed-Thru w/ Comp Lugs	n/a	n/a	n/a	6	n/a	n/a	n/a	6	n/a	12	12	n/a	n/a	n/a	n/a	12	12	n/a	n/a
0	6	6	n/a	Main w/Subfeed Std. Lugs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6	6	6	6	Split Bus② → (6" is minimum adder)	6	6	6	6	n/a	6	n/a	6	n/a	6	6	n/a	6	6	6	6	6	6	6
n/a	12	12	12	(1) FD Subfeed (Horiz. mount)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12	12	12	n/a	n/a	12	12	12	12	12	12
n/a	24	24	24	(2) FD Subfeed (Vert. mount)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	24	24	24	n/a	n/a	24	n/a	24	n/a	n/a	n/a
12	12	12	12	SPD -Surge Subfeed Mount	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12

NOTE: n/a = Option Not Available
① Min. Box Size, corresponding to 9" of unit Space

② Split bus is paired with feed-thru lugs by default.
Feed-thru lugs are to feed the section after the split.

MLO Compression Lugs (Aluminum body excepts Al or CU cable, CU only lugs accept CU only cable)

Amp Rating	Compression Connectors	Vert or Horiz	Box Ht adder	Additional comments
125	(1) #6 - 350 Kcmil Al or Cu cable - ref #11-A-1849-01 (AL body)	V	0.0"	CU body not available
250	(1) #6 - 350 Kcmil Al or Cu cable - ref #11-A-1849-01 (AL body)	V	6"	CU body not available
400	(1) 400-600 Kcmil CU only cable CU body lug standard at 400A – ref# 11-D-1861-01 (CU body)	V	6"	Optional Special Mod③
	Two Connectors per phase (1) #6 - 350 Kcmil Al or Cu cable – for each connector – ref #11-A-1849-01 (AL body)	V	6"	CU body not available
600	AL body lug standard at 600A - two Connectors required per phase. Each connector accepts: (1) 400-600 Kcmil AL wire OR (1)400-500 CU wire ref# 11-D-1860-01 (AL body)	V	6"	Optional Special Mod④
	Two Connectors per phase (1) #6 - 350 Kcmil Al or Cu cable – for each connector – ref #11-A-1849-01 (AL body)	V	6"	CU body not available

③ AL Body connector (1)400-600kcmil AL or (1) 400-500 Kcmil CU Cable Ref# 11-D-1860-01 (AL body) Note: 600kcmil AL wire is only good for 340A
④ CU Body connector (1)400-600 CU only cable - ref #11-D-1861-01 (CU body)
⑤ Alternate Lugs (Aluminum body excepts Al or CU cable, CU only lugs accept CU only cable)

Main Breaker Compression Lugs (Aluminum body excepts Al or CU cable, CU only lugs accept CU only cable)

Amp Rating	Main Breaker	Compression Connectors	Vert or Horiz	Box Ht adder	Additional comments
100	BL, BQD	Compression Lugs not available	n/a	n/a	not available
125	3VA41, xGB, xGB2	Compression Lugs not available	n/a	n/a	not available
125	ED4, ED6, HED4, HHED6, CED61	(1)#14-2/0 AWG Cu or Al	H	6"	Box must go to 24" wide on CED6 breaker only (6" H adder for neutral lug)
			V	6"	
225	QR2, QRH2, HQR2, HQR2H	(1)#6 AWG - 350 kcmil Cu or Al	H	0"	Box must go to 24" wide for Horiz only
			V	6"	
250	FXD6, HFD6, CFD6	(1)#6 AWG - 350 kcmil Cu or Al	H	6"	Box must go to 24" wide for all breakers
			V	6"	
400	JD6, JXD6, HJD6, CJD6, SJD6, SHJD6, SCJD6	(2)#1/0 AWG - 500 kcmil Cu or Al	V	9"	
600	LD6, LXD6, HLD6, CJD6, SLD6, SHLD6, SCLD6	(2)#2/0 AWG - 500 kcmil Cu or Al	V	6"	
150	3VA61	tbd	H & V	tbd	tbd
250	3VA52, 3VA62	tbd	H	tbd	tbd
400	3VA53, 3VA63	tbd	V	tbd	tbd
600	3VA54, 3VA64	tbd	V	tbd	tbd

⑤ Alternate Lugs (Aluminum body excepts Al or CU cable, CU only lugs accept CU only cable). See SpeedFax Breaker section for other available configurations.

Enclosure Modifications

Description
20" Panel Width
NEMA 3R enclosures
NEMA 3R/12 enclosures
Gasket between trim and box (Type 1)
24" Panel Width
NEMA 3R enclosures
NEMA 3R/12 enclosures①
Gasket between trim and box (Type 1)

NEMA-4—Water Tight, Dust Tight, Steel Enclosure② (Actual NEMA-4 enclosure is larger than standard Type 1 enclosure. See chart below for reference to approximate actual size.)

Standard Box Height (in inches)	Actual NEMA 4 Enclosure Size③		
	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 (see Page 11-42).

NEMA-4X—Water Tight, Dust Tight and Corrosion Resistant④
(consult plant for actual enclosure size)

Catalog Number	Enclosure – Stainless Steel Size (inches) (304SS is standard)			Enclosure – Non-Metallic Size (inches)		
	H	W	D	H	D	W
B4X26	26	20	5.75	36	30	8
B4X32	32	20	5.75	36	30	8
B4X38	38	20	5.75	48	36	12
B4X44	44	20	5.75	48	36	12
B4X50	50	20	5.75	60	36	12
B4X56	56	20	5.75	60	36	12
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.

Gauge Steel of Boxes/Fronts, Surface and Flush (see pgs. 11-35 thru 11-43)

Dimensions in Inches (mm)		Gauge Steel		
H	W	Box	Front/Door	Type
26-74 (660-1880)	20 (508)	16①	14⑥	Type 1
26-74 (660-1880)	20 (508)	16②	16/14②	Type 3R/12
32-60 (813-1524)	20-36 (508-914)	14③	14③	Type 4
26-74 (660-1879)	20 (508)	14④	14④	Type 4X
36-60 (914-1524)	30-36 (762-914)	N/A⑤	N/A⑤	Type 4X Non-Metallic

① 16 Gauge is Standard (14 Gauge & 12 Gauge are optional)
② 15 Gauge Steel Can with 14 Gauge Door or Similar Approved Construction
③ No Optional Gauge available
④ 304SS 14 Gauge Std., 316SS 14 Gauge optional
⑤ Sizes do not match Standard Enclosure Sizes - See Table P1-21 - material is non-metallic - No Gauge Specified.
⑥ FAS-Latch is 14 GA only.
Screw-to-Box, Hinge-to-Box, Door-in-Door (14 GA Std./12 GA Std. or 10 GA Optional)
STB/HTB/DND with Piano Hinge (14 GA Std./12 GA Optional) (14 GA Stainless 304 Optional)

Standard Enclosures
(See pages 11-34 thru 11-43 for more options and details.)

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

① Same as Type 3R with Gasket added for Type 12 Spec.

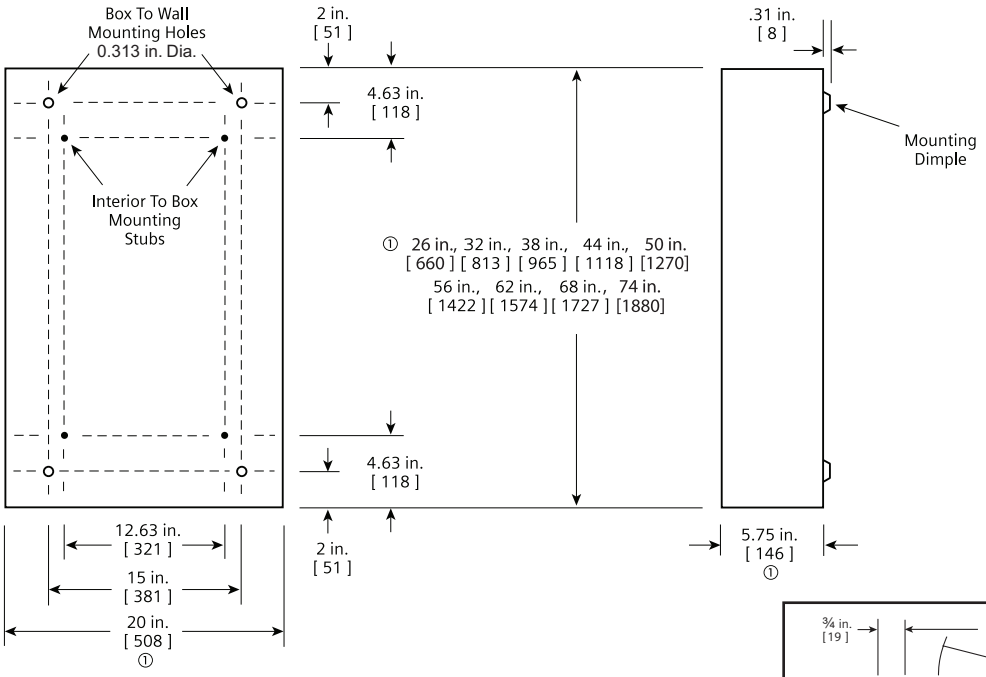
Options For Type 1 Trims
Items must be ordered as manual line item on Spartanburg
- Hinge-to-Box – Replace "B" suffix with "H"
- Door-in-Door – Replace "B" suffix with "D"
- Screw-to-Box - Replace "B" suffix with "C"
- Metal card holder - Add "M" suffix on all trims
- Stainless Steel – 304 Stainless only with piano hinge

Option For 24" Wide Enclosures with Equal Gutter on Both Sides (Excludes NEMA 3R)
- 24" wide with equal gutter on both sides - Add "24" as prefix

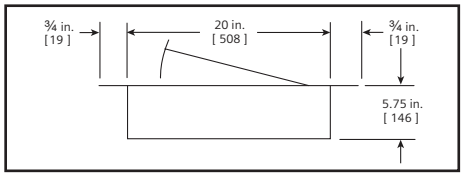
Type 1 Box

Box is symmetrical

P1 and P2 share enclosures:
See more information on pages 11-35 thru 11-43)

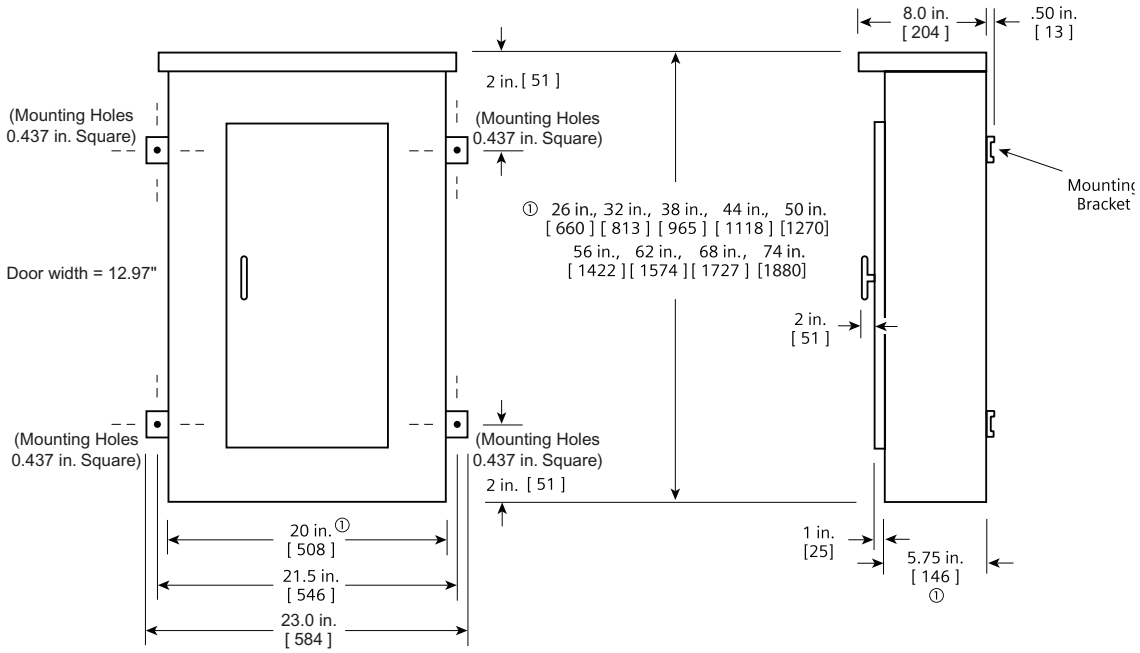


(UL approved construction. 16 Gage Steel or equivalent alternate Construction.
14 or 12 Gage is available as an optional special order.)
A60 Galvannealed is standard without paint.



Flush Mounting

Type 3R and 3R/12 Box



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

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

Dimensions shown in inches and millimeters [ ].

Spare Parts and Field installable Kits for P2/P3 Panels

Kit Number	Current Product: P1 Revised	P2	P3	C1	C2	Old Product is no longer Manufactured, some kits are available: P1 Original	S1, S2, SE	qty/ kit	Product Description Note: Some kits apply to only specific enclosures used or configurations of the product listed	Drawing # ref for part or kit
Strap Kits										
BBKB32		X	X					1	P2/P3 BL/BQD 100A max. Branch Strap kit, uses 3" of unit space for 6 circuits total.	11-D-2267-01
BBKVA4P2P3		X	X					1	P2/P3 3VA41/xGB 125A max. Twin Mount Strap Kit, uses 3" of unit space for 6 circuits.	13-D-2011-13
BBKQR1		X						1	P2 QR 225A max. Single Mount Branch Strap Kit, 6" of unit space for one 2-p or 3-p breaker	11-D-2636-01
BBKQRP1FK		X						1	P2 Filler Kit for QR, Horizontal or vertical mount. Kit contains all cover plates necessary to change from QJ to QR both 2 and 3-pole breakers.	11-D-2644-01
BBKVA5262P2S		X	X					1	P2/P3 250A max. 3VA52/61/62 Single Mount Branch Strap Kit, 1ph or 3ph, uses 6" of unit space for one 2-p or 3-p breaker. (includes 1 #BBKVA5262P2HW kit)	11-D-2894-01
BBKVA5262P2HW		X	X					1	Hardware kit for Branch/Main Horizontal Single mount or for Vertical Mount 3VA52/61/62 in either P2 or P3 panels.	11-D-2895-61
BBKED32①		X	X					1	P2/P3 ED Twin Mount Branch Strap Kit, 3" of unit space for 6 circuits.	Use 3VA41 with BBKVA4P2P3 where possible.
BBKNB32①		X	X					1	P2/P3 xGB Twin Mount Branch Strap Kit, 3" of unit space for 6 circuits.	
BBKGB32①		X	X					1	P2/P3 GB2 Twin Mount Branch Strap Kit, 3" of unit space for 6 circuits.	
BBKQ1 (QJ is not avail. Use QR)		X						1	P2 QJ Sgl Mnt Branch Strap Kit, 6" of unit space for one 2-p or 3-p brkr.	use new kit **BBKQR1**
Deadfront Parts and Filler Plates										
NBK3**		X	X	X	X			1	Press-in Number Kit 1-42 P2/P3 Panelboards	11-A-2A02-03
NBK4**		X	X	X	X			1	Press-in Number Kit 43-84 P2/P3 Panelboards	11-A-2A02-04
NBK5**		X	X	X	X			1	Press-in Number Kit 85-126 P2/P3 Panelboards	11-A-2A02-05
NBK6**		X	X	X	X			1	Press-in Number Kit 127-168 P2/P3 Panelboards	11-A-2A02-06
NBK7**		X	X	X	X			1	Press-in Number Kit 169-210 P2/P3 Panelboards	11-A-2A02-07
NBK8**		X	X	X	X			1	Press-in Number Kit 211-252 P2/P3 Panelboards	11-A-2A02-08
**New Number kits pending									New number kits for BT will replace the ones above later in 2021	
DFFP1A	X	X	X	X	X	X	X	1	DFFP1A Blank filler , 1 inch snap-in, replaced old QF3 and DFFP1 in Systems Products. Ref. old #12-1800-01 and 11-D-4554-01	11-D-4613-01
DFFP3		X	X					1	DFFP3 Kit includes 3 inch high Blank Deadfront filler plates for both P2 (11-D-3014-02) and P3 (11-D-3035-02). Hardware & installation instructions included.	11-D-2269-01
DFFP6		X	X					1	DFFP6 Kit includes 6 inch high Blank Deadfront filler plates for both P2 (11-D-3014-01) and P3 (11-D-3035-01). Hardware & installation instructions included.	11-D-2270-01
DFFPVA5262P2A		X	X					1	3VA52/61/62 Filler, used for P2 and P3 single mount horizontal and vertical applications, 1 piece per kit. Included in all appropriate Strap kits.	11-D-4610-01
DFFPVA5262P2B		X	X					1	3VA52/61/62 Provision kit, Blank Deadfront Plate and barrier included for when there is no breaker installed in a strap kit. Used for P2 and P3 single mount horizontal applications.	11-D-3340-01 11-D-4614-01
DFFPVA5363A	X	X	X					1	3VA53/63 Filler for P2/P3 Main/Subfeed (also used in RP1 main applications with Large MB Deadfront opening only)	11-D-4617-01
DFFPFD01	X	X	X			X	X	1	FD Main Filler Plate (plastic) for 1-Ph and 3-Ph P1 Panels (use for Original or Revised P1 and other applications)(P2/P3 and S1/S2/SE)	11-D-4617-01
DFFPJD01	X	X	X			X	X	1	JD Main Filler Plate (plastic) for 1-Ph and 3-Ph P1 Panels (Small RP1 opening) (use for Original or Revised P1 and other applications)(P2/P3 and S1/S2) [for JD in large RP1 Main opening use DFFPJD02, ref # 11-D-4598-02]	11-D-4522-61
P2QRFP01		X						1	P2 QR Deadfront Filler, Plastic snap-in for P2, Vertical mount Main position, one filler per package.	11-D-4564-01
EBF1		X	X					1	NEB/HEB Filler Plates (replacement parts)	11-D-4529-01
DFP3AP01		X	X					1	Adapter Kit for P2/P3 BL/BQD/ED/xGB/etc. breakers. This adapter plate fills 3 inches of unit space on one side of the Deadfront to allow the smaller breakers and DFFP1A filler to fit correctly.	11-D-3033-61
DFK1		X	X					1	P2/P3 kit to replace center strips in the deadfront when breaker strap kits are changed or modified. Kit includes mounting hardware, seven different lengths of center strip for 3" thru 21". (for BL/BQD/xGB/3VA4/etc. sizes of breakers)	11-D-2273-01
DFK07		X	X					1	P2/P3 kit to replace center strips in the deadfront when breaker strap kits are changed or modified. Kit includes mounting hardware and center strip for 21" of unit space. (for BL/BQD/xGB/etc. sizes of breakers)	11-D-3018-67
DFK08		X	X					1	P2/P3 kit to replace center strips in the deadfront when breaker strap kits are changed or modified. Kit includes mounting hardware and center strip for 24" of unit space. (for BL/BQD/xGB/etc. sizes of breakers)	11-D-3018-68
DFK09 thru DFK21		X	X					1	Individual lengths from 27" thru 63" are available as needed, in 3" increments.	11-D-3018-xx

① These Strap kits may only be available as field replacement. COMPAS may configure all future 125A frame and larger requirements with 3VA Strap kits and associated breakers.

Spare Parts and Field installable Kits for P2/P3 Panels (cont.)

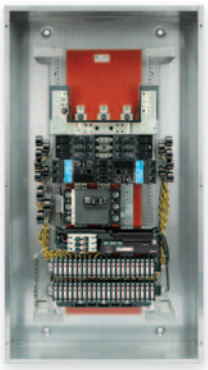
Kit Number	Current Product					Old Product is no longer Manufactured, some kits are available			Product Description Note: Some kits apply to only specific enclosures used or configurations of the product listed	Drawing # ref for part or kit
	P1 Revised	P2	P3	C1	C2	P1 Original	S1, S2, SE	qty/ kit		
Service Entrance Barriers Kits (SEB)										
SEBKP1P2P3V1	X	X	X			X		1	SEB Kit, (RP1, P1, P2, P3), JD/LD and 3VA53/63 Vertical Main	11-D-2740-01
SEBKP2V1		X						1	SEB Kit, P2 BL/BQD Horizontal Main	11-D-2733-01
SEBKP2V2		X						1	SEB Kit, P2 xGB Horizontal Main	11-D-2734-01
SEBKP2V3		X	X					1	SEB Kit, (P2, P2 with SEM3, P3), FD/QJ/QR Horizontal Main	11-D-2735-01
SEBKP2V4		X	X					1	SEB Kit, (P2, P2 w/SEM3, P3) FD/QJ/QR Vertical Main	11-D-2736-01
SEBKP2V5		X						1	SEB Kit, (P2, P2 w/SEM3) ED Horizontal Main	11-D-2738-01
SEBKP2V6		X						1	SEB Kit, (P2, P2 w/SEM3) ED Vertical Main	11-D-2739-01
SEBKP2V7		X	X					1	SEB Kit, P2/P3 3VA52/61/62 Horizontal Main	11-D-2898-01
Neutral, Ground Bar, & Bond Kits										
BNK2		X						1	Neutral Lug Kit, 3-Step, for P2 neutrals and others. (14x #14-1/0 max and 14x #14-#6 max connections). Kit includes mounting hardware & instructions.	11-A-1862
BNK350N		X	X					1	Neutral Lug kit, Narrow 350 kcmil Lug with two mounting screws. Used in P2/P3 neutrals and other locations.	11-A-1869-61
LPP2NB01		X						1	Neutral Lug kit, 2-Step, for P2 neutrals and others. (3x #6-1/0 max and 18x #14-#6 max connections). Kit includes mounting hardware & instructions.	15-A-1800-61
BNKP2EX1		X						1	P2 Neutral Extension (150A max) allows for additional #6 and 1/0 connections closer to AFCI/GFCI breakers and others with pigtails as needed. Requires connection to main neutral with 1/0 Copper cable not included. (11) #6 & (3)1/0 connections included.	11-1850-01 11-C-2011-01"
ECGK	X	X	X			X		1	ECGK Copper Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	31-A-2006
EGK	X	X	X			X		1	EGK Al/Cu Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	31-A-2006
ICGK	X	X	X			X		1	ICGK Insulated Copper Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	31-2011
IGK	X	X	X			X		1	IGK Insulated Al/Cu Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	31-2010
P2BK1		X						1	P2 250A Max Horiz. MB Bonding Strap Kit	11-D-2068-01
P2BK2		X						1	P2 125A max. Main Lug Bonding Strap Assembly	11-D-2068-02
P2BK3		X						1	P2 250-600A MLO and all Vert MB Bonding Kit	11-D-2068-03
General Hardware and misc.										
IMK1	X	X	X			X		1	Interior Mounting Kit with Adjustment Provisions for P1/P2/P3	11-A-2024-01
LPDC01	X	X	X	X	X	X	X	10	Panelboard Directory Card. 5.5""X5"", for 1-90 circuits. Mates with pouch # 11-1824-01	12-1110
LPDC02	X	X	X	X	X	X	X	10	Panelboard Directory Vinyl Pouch, 6.3"x6.1". Mates with Directory Card #12-1110-01	11-1824
MCHK	X	X	X	X	X	X	X	1	MCHK - Metal Card Holder Kit - Field Installable	12-A-2098-00
LPJSPDNUT01	X	X	X	X	X	X	X	25	Replacement J-nuts for use with lighting panel fronts and deadfronts. Also used in miscellaneous other applications.	11-A-1820-61
LPTS01	X	X	X	X	X	X	X	25	Trim Screw, Lighting Panel Front, 0.547" Length, ¼-20 Machine Screw Thread (kit pending - not yet available) ref #11-A-1819-01	11-A-1819
LP3RHP01	X	X	X			X		12	3R/12 Hinge Pin, 0.188"" dia. Steel w/Zinc plate (kit pending, not yet available) ref # 11-1902-01	11-1902
ref 31-1905-01	X	X	X	X	X	X		1	NEMA 3R T-Handle with harware, uses B363A key - does not include key (kit needed with all mounting hardware and keys - in process)	31-1905
XTP060	X	X	X	X	X	X	X	1	TUP61 Grey Touch-up Paint, 12 oz Spray Can	na
P2DFS		X						1	P2 DF Support 4/kit w/ hardware. For General replacement when needed - new heavy duty parts required for 3VA	na
Endwall kits	X	X	X	X	X	X		na	See SpeedFax page 11-34 for Endwall kits that are available	na
Locks and Keys	X	X	X	X	X	X		na	See SpeedFax page 11-38 for Replacement lock & key kits that are available	na

SEM3™ System configured in Panelboards

The Siemens SEM3 system can be configured for factory installation in branch circuit monitoring applications using the Siemens COMPAS configuration tool. This option can lower the installation time of the system for the installer while providing a factory warrantied solution.

The SEM3 system can be factory installed in unit space in type P2, P4, & P5 Siemens panel boards and SB1, SB2, & SB3 type Siemens switchboards. Please note P1 and P3 configurations are not available at this time and the amount of unit space needed varies depending upon the application. Please note that lead time adders will apply and may vary depending upon the configuration of the system.

SEM3 for use in Siemens Panelboards



Type P2: Enclosure

- Available in a NEMA 1, 3R, or 12 rated enclosure.
- Minimum width & depth: 24" width x 5.75" depth
- Height: Up to 74" depending on branch breaker selection
  - – Addition of monitoring on some mains (primary and subfeed) may require additional box length. In these cases the box will be increased to the next size available as a standard design.
  - – In cases where enclosure size is increased all multi-section panels will be increased to match the largest section.



Controller

SEM3 controller is mounted in unit space opposite of the feed location specified in COMPAS (i.e., bottom mount for top feed) and will require 3" of unit space. Each controller will be powered by direct tap connection to the panel section bus. Each controller can monitor up to 45 circuits. Applications that require monitoring more than 45 circuits will require additional controllers.



Current Transformers (CTs)

Five sizes of CTs are available for use in the P2 panel: 50, 125, 250, 400 & 600 amp. All CTs are pre-mounted to a support bracket that attaches to the base rail of the interior of the panel board. Each bracket supports a maximum of 3 CTs and is designed for the breaker selected (brackets are not interchangeable between breaker frames). Each CT will be attached to a data module that is placed in the meter racks.



Meter Racks

Each meter rack requires 3" of unit space. All meter racks will be installed next to the SEM3 controller in unit space. The COMPAS configuration tool will select the appropriate meter rack configuration according to the user's application and will use the 21 space meter rack as a default option where possible. Only one meter rack (regardless of number of positions) can be installed in 3" of unit space.

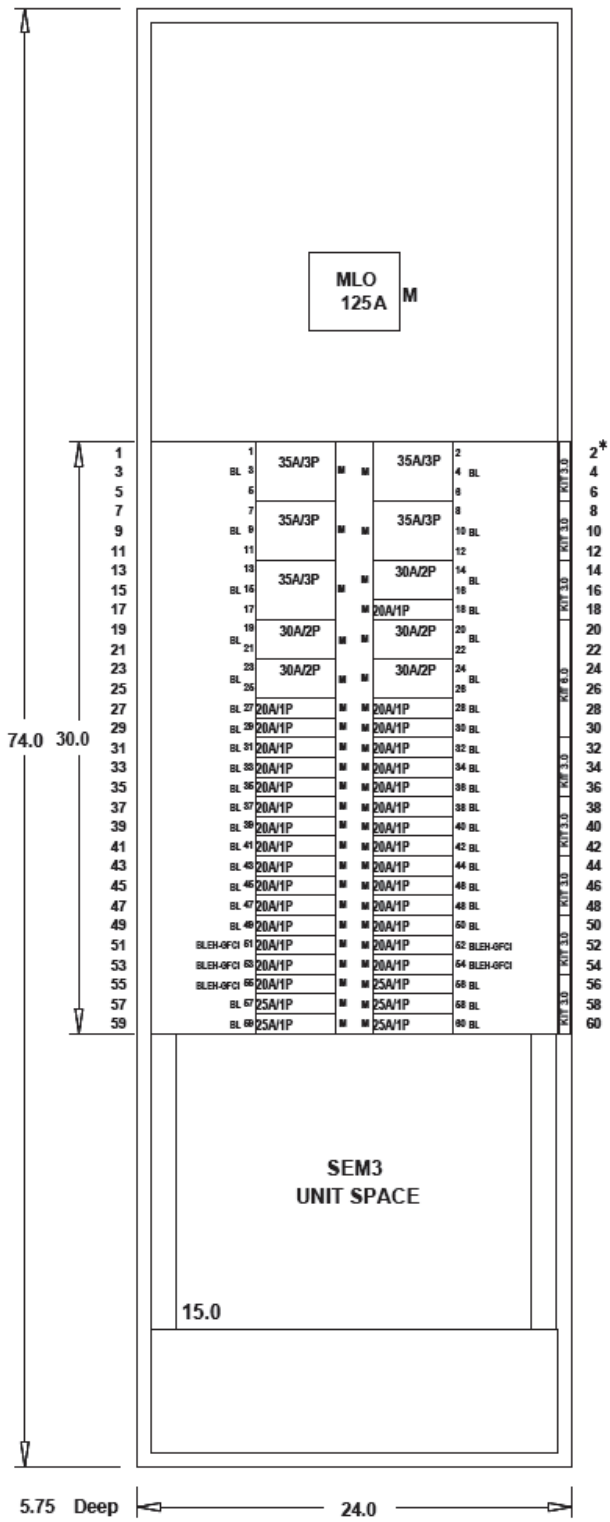
NOTE: Monitoring of 45 circuits will require 9" of unit space: two 21 position racks and one 3 position rack

P2 Devices
Enclosure sizes

Example P2 Panel with SEM3 Type 1 Enclosure (24" Wide x 5.75" Deep)

Enclosure heights are in 6" increments from 26" thru 74".
Enclosure heights: 26", 32", 38", 44", 50", 56", 62", 68", 74"

The COMPAS configuration tool can provide actual dimensions based on the configuration. Example below is largest standard P2 enclosure for factory assembled panel with all small (1") branch breakers installed.



Main Breaker / Main Lug space varies based on selected options

Unit space varies based on selected options

Note: All circuits do not have to be monitored by SEM3 - user can select any circuits in this space to be monitored.

Based on smallest branch breakers and a 3-phase main being monitored.
There is a maximum of 63 circuits that can be monitored with the configuration shown.
Some selections of main breakers and other subfeed options could limit this further.

In this situation there is 30" of unit space available - so 60 branch circuits could be monitored.
If monitoring the main three additional circuits could be monitored with a total of 63 circuits.

This requires two controllers and three 21 position racks using 15" of unit space.
- see below -

SEM3 space varies by number of circuits monitored - this uses unit space.

== > 6" of space for up to 21 circuits monitored
one controller and one 21-pos rack

== > 9" of space for up to 42 circuits monitored
one controller and two 21-pos racks

== > 12" of space for up to 45 circuits monitored
one controller and two 21-pos racks plus one 3-pos rack

== > 15" of space for up to 63 circuits monitored
two controllers and three 21-pos racks

Note: If subfeed space is needed - it will take away from available unit space.

Features

Another innovation from Siemens is the updated P3 panel. It is a smaller footprint distribution panel to fit a large number of applications that require more (or larger) branch devices than the smaller lighting panels typically offer.

- The new 3VA family of breakers is fully implemented from 125A frame up to 800A frame main and branch applications.

Main Breakers are available up to 800A and the 30" wide enclosures allow for Horizontal Mains and Subfeeds up to 600A which dramatically increases the quantity of large branch breakers that can be installed to a maximum of 12 Breakers.

- Both Vertical Mount and Horizontal mount Main Breakers are available in most sizes from 250A frame thru 600A. 800A Mains are Vertical Mount only.

P3 Unit Space is available from 9" to 45"

The P3 panel configurations define the unit space allowed for by a given amperage, main device, and box height combination.

Mixing Branch Breakers in Unit space from 100A frame up to 250A frame using many strap kits that are shared with P2 makes field changes quick and easy.

Standard Enclosure: NEMA Type 1 are 24" wide x 7.75" deep x 56"-to-80" high. Size is determined by main device and other configured components. See SpeedFax charts for box heights.

- Type 1 Vented 30" wide x 7.75" deep boxes are available in 68" and 80" high when required. (30" Wide Vented Nema 3R to be available 2022)

Alternate Enclosures: Various alternate NEMA types are available as required in 24" wide x 7.75" deep. NEMA 3R/12, Type 4 & 4X.

Branch Breaker types available:

1" pole breakers (BL, BQD, xGB, xGB2, ED and 3VA41 frames) are mounted in 3" of unit space (6 pole increments). 3VA41 and xGB share the same strap kits and can be mixed and matched as needed.

Large Frame Branch Breakers, above 125 amps, are mounted in 6" single or twin breaker strap kits.

- QR (225A max) and 3VA52 (250A max) breakers are twin mounted in 6" of unit space.
- 3VA61/62 ETU (Electronic Trip) Breakers single mount in 6" of unit space. Communications Compartments are available in Unit Space for 3VA integration as needed.
- A max of 6 total large frame breakers are allowed in unit space in the standard 24" wide enclosure.
- A max of 12 total large frame breakers are allowed in unit space in the new Vented 30" wide enclosures. (max. unit space available will limit total)

Sub-feed breakers do not use Unit space since they mount outside of unit space. New Horizontal Mount 3VA 400A and 600A use less box height than previous Vertical mounted subfeeds.

- Changes to unit space in the field may require changing the deadfront center strip kit. Check with sales or the factory for additional unit space kits.

Many other Options are readily available: Integrated time clocks, bus mounted contactors, as mains or sub mains, split bus and subfeed lugs (up to 400 amp) are just a few of the options for this unique panel.

P3 Main Lug / Main Breaker specs

Voltage – 600V AC max. / 250V DC max.

Amperage:

- Main Lug: 250 to 800 amp max.
- Main Breaker: 225 to 800 amp max.
- Molded Case Switch: 150 to 800 amp max. (MCS)

Short circuit rating

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

Bussing – The P3 panel has similar options to P2 to meet market requirements. The standard bussing is temperature rated aluminum.

- **P3 Panel Bus is either 400A max. or 800A max. rated**. The rating is per the requirements of UL 67 – the standard for panelboards. All aluminum bussing is tin-plated.
- Optional bussing for the P3 panel is: 750 A/Si aluminum, temperature rated copper, and 1000 A/Si copper.
- Copper bus is tin-plated as standard, but silver plating is an additional option.

Weight – Approximate
Total panelboard weight when filled with a normal quantity of breakers and accessories is about 5 lbs. (2.3 kg) per inch (90g per mm) of box height.

Gauge Steel of Boxes/Fronts, Surface & Flush (see pgs. 11-37 & 11-41)

Dimensions in Inches (mm)		Gauge Steel		
H	W	Box	Front/Door	Type
56-80 (1422-2032)	24 (610)	16①	14④⑤⑥	Type 1
68-80 (1727-2032)	30 (762)	12②⑧	14⑦	Type 1, Vented
26-74 (660-1880)	24 (610)	16②	14②	Type 3R/12
26-74 (660-1879)	24 (610)	14③	14③	Type 4X

① 16 Gauge is Standard (14 Gauge & 12 Gauge are optional)
② No Optional Gauge available
③ 304SS 14 Gauge Std., 316SS 14 Gauge optional
④ FAS-Latch is 14 GA only.
⑤ Optional: Hinge-to-Box, Door-in-Door (14 GA Std./12 GA Std. or 10 GA Optional)
⑥ HTB/DND with Piano Hinge (14 GA Std./12 GA Optional) (304SS Optional)
⑦ Use Surface Mount only - any FasLatch, Hinge-to-Box, Door-in-Door style will fit: 56"-80"H to match Panel size. Lower cover available to fill open space.
⑧ Vented front section is painted ANSI 61 only. Allows use of any P3 Surface Front as needed.

Standard Circuit P3 Panels

P3 Panels with Standard Line Side Lugs

Unit Space (starting with 9" and adding 6" or 12" increments) "A" Dimension

Panel Type →		Main Lugs				Main Breakers																
Bus amps max.		400A		800A		400A max bus									800A							
ML/MB amps		250	400	600	800	250 max.					400 max.				600 max.					800 max.		
"B" Dim. Box Height	Type / Family	→				3VA52/ 61/62		FD		CFD	3VA53/3VA63			JD	CJD	3VA54/3VA64			LD	CLD	3VA55 TMTU	3VA65 ETU
	Horiz.	→				H		H			H	H②				H	H②					
	Vertical	→					V①		V①	V①			V①	V①	V①			V①	V	V	V	V
Min. box width		24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	30"	30"	24"	24"	24"	30"	24"
56	values to right are in inches of unit space	27	21	21	21	21	15	21	15	9	15	na	9	9	na	na	na	9	9	na	na	na
62③		33	27	27	27	na	na	27	21	15	na	na	na	15	9	na	na	na	15	9	na	na
68		39	33	33	33	33	27	33	27	21	27	na	21	21	15	27	na	21	21	15	15	15
74③		45	39	39	39	39	na	39	33	27	na	na	na	27	21	na	na	na	27	21	na	na
80		na	45	45	45	na	39	45	39	33	na	42	33	33	27	na	42	33	33	27	27	27
Sub-feed ref.	Breaker available for subfeed →					no	no	no	yes	no	yes④	yes④	no	yes	no	yes④	yes④	no	no	no	no	no
	Sub-Feed orientation →					na	na	na	V	na	H	H	na	V	na	H	H	na	na	na	na	na
	Reduction in Unit Space →					na	na	na	24	na	12	15	na	30	na	12	15	na	na	na	na	na

① The vertical main breaker configurations reduce unit space by 6" or 12" vs. Horizontal Main

② The Special Configuration for 42 inches of unit space applies to only Horizontal Mount 400/600A 3VA mains only. This allows for 84 circuits max. in the 80" high Enclosures. This configuration is not available when Subfeed breakers or other devices are needed outside of unit space.

③ 62" and 74" size interiors may not be available in all configurations. These may require a Special Mod in COMPAS or may not be available at all. The next larger size should be available.

④ Minimum box size available for sub-feed breaker is 68H.

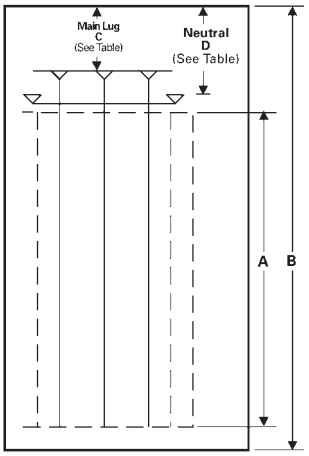
P3 Panels – Main Lug Wire Bending

Panel Bus	Panel Amps	Standard Connectors	Box size adder	C (Main)	D (Neutral)
400 max.	250	AL body, AL/CU cable: (1) #6 AWG-350 kcmil	Std	10.75①	9.68②
		Alt. CU body CU only cable: (1) #6 AWG-350 kcmil	0"	10.56②	9.68②
	400	AL body, AL/CU cable: (2) #1/0 AWG- 250 kcmil or (1) 600 kcmil	Std	16.00	17.88
		AL body, AL/CU cable: (2) #1/0-250 kcmil or (1) 1/0-750 kcmil. Note: Copper cable max. 600 kcmil	0"	15.00	16.00
		Alt. CU body 1 - CU only cable: (1) 1/0-600kcmil	0"	13.96	17.50
		Alt. CU body 2 - CU only cable: (2) #6-250kcmil max.	0"	14.00	16.18
		Alt. AL/CU Compression (two/phase) (1) #6-350kcmil	0"	14.71①	18.75①
		Alt. CU-only Compression (1) 400-600kcmil	0"	13.38①	18.06①
800 max.	600	AL body, AL/CU cable: (2) #2 AWG-600 kcmil (Typical applications will use 500 kcmil or smaller)	Std	16.00	17.88
		Alt. CU body CU only cable: (2)1/0-500kcmil	0"	15.43	17.50
		Alt. Compression1: AL body single port lugs (2) 400-500kcmil CU or (2) 400-600kcmil AL	0"	13.38①	18.06①
		Alt. Compression2: CU body Lug 350kcmil max. (two/phase typical) (1)#6-350kcmil each	0"	14.71①	18.75①
	800	AL body: (2) 600 kcmil CU only cable (for 800A max.)	Std	16.00	17.88
		AL body: (3) #4-500 kcmil max. - AL or CU cable (4-port Lug for phase connections only- Neutral limited to 3)	H + 6"	17.63	23.88
		AL body: (4) #4-750 kcmil max. AL cable ; (4)600kcmil CU max. (two 600kcmil CU or 3-4 500 kcmil CU cables max allowed)	H + 6"	17.63	23.88
		Alt. CU body - CU only cable: (2)1/0-600kcmil (1-port removeable lugs allow less wire bend space)	0"	13.38①	17.50①
		Alt. CU only Compression: (2)400-600kcmil per phase	0"	13.38①	18.06①

① This lug is removable.

② This lug is Lay-in style.

Main Lug Wire Bending Diagram



Box depth = 7.75 in. (197 mm)
Box width = 24 in. (610 mm)

P3 Main Circuit Breakers⑥ and Subfeed

Amp Rating	Trip Type	Breaker Family	Main Breaker Code	Breaker Type	2-P Max IR (kA) at 120/240V	2-Pole and 3-Pole Max IR (kA) at 240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC ①	Amp Ratings Available
250	Thermal Magnetic	Sentron FD	FX, FD	FXD6-A, FD6-A	—	65	—	35	—	22	—	30	70-250
			H2, HF	HFXD6, HFD6	—	100	—	65	—	25	—	30	70-250
			CF	CFD6-A	—	200	—	200	—	100	—	50	70-250
250	Thermal Magnetic	3VA52 (W/TM230 trip)	VA	MFAS	—	85	—	35	—	18	—	60	100-250
			VB	HFAS	—	100	—	65	—	25	—	85	100-250
			VC	CFAS	—	200	—	100	—	35	—	100	100-250
	Electronic (Solid state)	3VA62 (ETU350 LSI std)	WA	MFAE	—	100	—	35	—	18	—	—	100-250
			WB	HFAE	—	100	—	65	—	22	—	—	100-250
			WC	CFAE	—	200	—	100	—	35	—	—	100-250
			WD	LFAE	—	200	—	150	—	50	—	—	100-250
400	Thermal Magnetic	Sentron JD	JX, J6	JXD6-A, JD6-A	—	65	—	35	—	25	—	30	200-400
			H5, H6	HJXD6-A, HJD6-A	—	100	—	65	—	35	—	30	200-400
			CJ	CJD6-A	—	200	—	150	—	100	—	—	200-400
	Electronic (Solid state)	Sentron JD	SJ	SJD6-B	—	65	—	35	—	25	—	—	200-400
			SX	SHJD6-B	—	100	—	65	—	35	—	—	200-400
			SC	SCJD6-B	—	200	—	150	—	100	—	—	200-400
400②	Thermal Magnetic	3VA53 (W/TM230 trip)	VE	MJAS	—	85	—	35	—	18	—	50	200-400
			VF	HJAS	—	100	—	65	—	25	—	85	200-400
			VG	CJAS	—	200	—	100	—	35	—	100	300-400
	Electronic (Solid state)	3VA63 (ETU350 LSI std)	WE	MJAE	—	100	—	35	—	18	—	—	100-400
			WF	HJAE	—	100	—	65	—	22	—	—	100-400
			WG	CJAE	—	200	—	100	—	35	—	—	100-400
			WH	LJAE	—	200	—	150	—	50	—	—	100-400
600	Thermal Magnetic	Sentron LD	LX	LXD6-A	—	65	—	35	—	25	—	30	450-600
			L6	LD6-A	—	65	—	35	—	25	—	30	250-600
			HL, HO	HLXD6-A, HLD6-A	—	100	—	65	—	35	—	30	250-600
			CL	CLD6-A	—	200	—	150	—	100	—	—	250-600
	Electronic (Solid state)	Sentron LD	SL	SLD6-B	—	65	—	35	—	25	—	—	300-600
			S2	SHLD6-B	—	100	—	65	—	35	—	—	300-600
			SI	SCLD6-B	—	200	—	150	—	100	—	—	300-600
600②	Thermal Magnetic	3VA54 (TM230 std)	VJ	MLAS	—	85	—	35	—	18	—	50	450-600
			VK	HLAS	—	100	—	65	—	25	—	85	450-600
			VL	CLAS	—	200	—	100	—	35	—	100	450-600
	Electronic (Solid state)	3VA64 (ETU350 LSI std)	WJ	MLAE	—	100	—	35	—	18	—	—	240-600
			WK	HLAE	—	100	—	65	—	22	—	—	240-600
			WL	CLAE	—	200	—	100	—	35	—	—	240-600
			WM	LLAE	—	200	—	150	—	50	—	—	240-600
800	Thermal Magnetic	3VA55 (TM230 std)	VN	MMAS	—	85	—	35	—	18	—	50	600-800
			VO	HMAS	—	100	—	65	—	25	—	85	600-800
			VP	CMAS	—	200	—	100	—	35	—	100	600-800
	Electronic (Solid state)	3VA65 (ETU350 LSI std)	WM	MMAE	—	100	—	35	—	25	—	—	320-800
			WN	HMAE	—	100	—	65	—	35	—	—	320-800
			WO	CMAE	—	200	—	100	—	50	—	—	320-800

① 250VDC ratings are for 2-pole only (or for 2-poles of a 3-pole breaker)
② Special 80""H interior with 42"" of unit space is available for 84 circuit requirements with 400A & 600A Horizontal 3VA Mains.
- No subfeed space is available in this configuration. Subfeed breaker, Feed-thru Lugs or SPD will drive to different configuration.
③ With Horiz. Mount 3VA 400/600A main: Available Unit space with Sub-feed 3VA breaker is 15" in a 68H box and 27" in a 80H box.

P3 Main Circuit Breakers⑥ and Subfeed (cont)

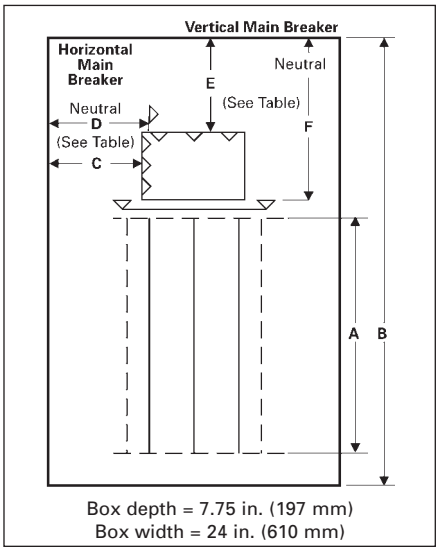
Amp Rating	Trip Type	Breaker Family	Main Breaker Code	Breaker Type	24" Wide enclosure				30" Wide Enclosure				Sub-feed avail. y/n	Subfeed space requirements (xx" reduced unit space)
					Horizontal Main		Vertical Main		Horizontal Main		Vertical Main			
					Min. Box size	Min. unit space	Min. Box size	Min. unit space	Min. Box size	Min. unit space	Min. Box size	Min. unit space		
250	Thermal Magnetic	Sentron FD	FX, FD	FXD6-A, FD6-A	56	21	56	15	Same as 24" Wide - optional 30"W as needed				yes	Twin Vertical mount in 24" of space
			H2, HF	HFXD6, HFD6	56	21	56	15					yes	
			CF	CFD6-A	n/a	n/a	56	9					n/a	n/a
250	Thermal Magnetic	3VA52 (W/TM230 trip)	VA	MFAS	56	21	56	15	Same as 24" Wide - optional 30"W as needed				n/a	Subfeed not required mounts in unit space
			VB	HFAS	56	21	56	15						
			VC	CFAS	56	21	56	15						
	Electronic (Solid state)	3VA62 (ETU350 LSI std)	WA	MFAE	56	21	56	15						
			WB	HFAE	56	21	56	15						
			WC	CFAE	56	21	56	15						
			WD	LFAE	56	21	56	15						
400	Thermal Magnetic	Sentron JD	JX, J6	JXD6-A, JD6-A	n/a		56	9	Same as 24" Wide - optional 30"W as needed				yes	Twin Vertical mount in 30" of space
			H5, H6	HJXD6-A, HJD6-A			56	9					yes	
			CJ	CJD6-A			62	9					n/a	n/a
	Electronic (Solid state)	Sentron JD	SJ	SJD6-B	n/a		56	9					n/a	not available
			SX	SHJD6-B			56	9						
			SC	SCJD6-B			62	9						
400②	Thermal Magnetic	3VA53 (W/TM230 trip)	VE	MJAS	56	15	56	9	Same as 24" Wide - optional 30"W as needed see footnote 2: 84 cir panel avail. with 400A & 600A Horiz. Main only				yes	3VA Single③ Horiz. Mount Subfeed: Unit space reduction is: -12" for 68"H Box OR -15" for 80"H Box
			VF	HJAS	56	15	56	9					yes	
			VG	CJAS	56	15	56	9					yes	
	Electronic (Solid state)	3VA63 (ETU350 LSI std)	WE	MJAE	56	15	56	9					yes	
			WF	HJAE	56	15	56	9					yes	
			WG	CJAE	56	15	56	9					yes	
			WH	LJAE	56	15	56	9					yes	
600	Thermal Magnetic	Sentron LD	LX	LXD6-A	n/a		56	9	Same as 24" Wide - optional 30"W as needed				n/a	not available
			L6	LD6-A			56	9						
			HL, HO	HLXD6-A, HLD6-A			56	9						
			CL	CLD6-A			62	9						
	Electronic (Solid state)	Sentron LD	SL	SLD6-B	n/a		56	9					n/a	not available
			S2	SHLD6-B			56	9						
			SI	SCLD6-B			62	9						
600②	Thermal Magnetic	3VA54 (TM230 std)	VJ	MLAS	n/a		56	9	68	27	68	21	yes	3VA Single③ Horiz. Mount Subfeed: Unit space reduction is: -12" for 68"H Box OR -15" for 80"H Box
			VK	HLAS			56	9	68	27	68	21	yes	
			VL	CLAS			56	9	68	27	68	21	yes	
	Electronic (Solid state)	3VA64 (ETU350 LSI std)	WJ	MLAE	n/a		56	9	68	27	68	21	yes	
			WK	HLAE			56	9	68	27	68	21	yes	
			WL	CLAE			56	9	68	27	68	21	yes	
			WM	LLAE			56	9	68	27	68	21	yes	
800	Thermal Magnetic	3VA55 (TM230 std)	VN	MMAS	n/a		n/a		n/a		68	15	n/a	not available
			VO	HMAS							68	15		
			VP	CMAS							68	15		
	Electronic (Solid state)	3VA65 (ETU350 LSI std)	WM	MMAE	n/a		68	15	n/a		68	15	n/a	
			WN	HMAE			68	15			68	15		
			WO	CMAE			68	15			68	15		

P3 Panels – Main Breaker Wire Bending

Main Breaker Wire Bending		H = Height		24" Wide enclosures				30" Wide enclosures			
Panel Amps	Breaker Frames	Mount-ing	Box size adder	C (Main)	D (Neut)	E (Main)	F (Neut)	C (Main)	D (Neut)	E (Main)	F (Neut)
250	3VA52 (1)#6-350 kcmil AL/CU	Horiz.	std	8.80	—	—	13.93	11.80	—	—	13.93
	3VA61/62 (1)#6-350 kcmil AL/CU	Horiz.	opt	8.29	—	—	13.93	11.29	—	—	13.93
	3VA52 (1)#6-350 kcmil AL/CU	Vert.	std	—	—	15.96	25.43	—	—	15.96	25.43
	3VA61/62 (1)#6-350 kcmil AL/CU	Vert.	opt	—	—	15.45	25.43	—	—	15.45	25.43
	FD (1)#6-350 kcmil AL/CU (same for CU body)	Horiz.	std	7.25	—	—	20.13	10.25	—	—	20.13
	FD (1)#6-350 kcmil AL/CU (same for CU body)	Vert.	std	—	—	12.25	25.38	—	—	12.25	25.38
	CFD (1)#6-350 kcmil AL/CU (same for CU body)	Vert.	std	—	—	13.63	31.38	—	—	13.63	31.38
400	3VA53/63 (2)2/0-600 kcmil Lug (AL/CU) - for CU body lug opt. - use same dimensions	Horiz.	std	6.21	—	—	23.4 or 20.42②	9.21	—	—	23.4 or 20.4③
	3VA53/63 (1)#1AWG-600 kcmil Lug (AL/CU) - for CU body lug opt. - use same dimensions	Horiz.	opt	8.31	—	—	23.4 or 20.42②	11.31	—	—	23.4 or 20.4③
	3VA53/63 (2)2/0-600 kcmil Lug (AL/CU) - for CU body lug opt. - use same dimensions	Vert.	std	—	—	15.78	29.38	—	—	15.78	29.38
	3VA53/63 (1)#1AWG-600 kcmil Lug (AL/CU) - for CU body lug opt. - use same dimensions	Vert.	opt	—	—	18.22	29.38	—	—	18.22	29.38
	JD (1 or 2) 4/0-500 kcmil (AL/CU) CU only (1) 3/0-600kcmil or (2) 3/0-500kcmil	Vert.	std	—	—	15.63	29.38	—	—	15.63	29.38
	JD (3)#4-500kcmil CU/AL	Vert.	H+ 6"	—	—	21.63	35.38	—	—	21.63	35.38
	CJD (1,2) 4/0-500 kcmil (AL/CU) CU only (1) 3/0-600kcmil or (2) 3/0-500kcmil	Vert.	std	—	—	14.75	35.38	—	—	14.75	35.38
	CJD (3)#4-500kcmil CU/AL	Vert.	H+ 6"	—	—	20.75	41.38	—	—	20.75	41.38
600	3VA54/64 (2)600 kcmil Lug (AL/CU) - for CU body lug opt. - use same dimensions	Horiz.	std	—	—	—	—	9.21	—	—	23.4 or 20.4③
	3VA54/64 (2)600 kcmil Lug AL/CU	Vert.	std	—	—	13.78	29.38	—	—	13.78	29.38
	3VA54/64 CU body (2) 600 kcmil Lug	Vert.	opt	—	—	13.78	29.38	—	—	13.78	29.38
	LD (1 or 2) 4/0-500 kcmil (AL/CU) CU only (1) 3/0-600kcmil or (2) 3/0-500kcmil	Vert.	std	—	—	14.75	29.38	—	—	14.75	29.38
	LD (3)#4-500kcmil CU/AL	Vert.	H+ 6"	—	—	21.63	35.38	—	—	21.63	35.38
	CLD (1,2) 4/0-500 kcmil (AL/CU) CU only (1) 3/0-600kcmil or (2) 3/0-500kcmil	Vert.	std	—	—	14.00	35.38	—	—	14.00	35.38
	CLD (3)#4-500kcmil CU/AL	Vert.	H+ 6"	—	—	20.75	41.38	—	—	20.75	41.38
800	3VA55/65 (2)4/0-600 kcmil Lug AL/CU	Vert.	opt	—	—	16.20	34.50	—	—	16.20	34.50
	3VA55/65 (3)4/0-400 kcmil Lug CU only CU body	Vert.	opt	—	—	17.16	30.50	—	—	17.16	30.50
	3VA55/65 (4)4/0-500 kcmil Lug① AL/CU	Vert.	std	—	—	14.39	30.50	—	—	14.39	30.50
	3VA55/65 (2)400-750 kcmil Lug② AL/CU	Vert.	H+ 6"	—	—	20.82	39.81	—	—	20.82	39.81
	3VA55/65 (4)4/0-600 kcmil Lug② AL/CU	Vert.	H+ 6"	—	—	19.70	36.50	—	—	19.70	36.50

① Wire bending space for (4) 500 aluminum or (4) 350 copper
② Requires 6" of unit space compared to standard.
③ The 20.42" Neutral wire bend dimension is only for "84 circuit" configurations (42" of unit space) in the 80" High Enclosure with 3VA Horizontal Mount 400/600A mains. These "84 circuit" configurations are not available when Subfeed breakers or other options are needed outside of unit space.

Main Breaker Wire Bending Diagram



Box depth = 7.75 in. (197 mm)
Box width = 24 in. (610 mm)

P3 Branch Circuit Breakers

Amp Rating	Trip Type	Breaker Family	Breaker Type	1-Pole Max IR (kA) at 120V	277V	347V	125V DC	1-Pole Amp Ratings Avail.	2-Pole and 3-Pole Max IR (kA) at 120/240V	240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC	2-Pole and 3-Pole Amp Ratings Avail.	S = Single Mount S	T = Twin mount T	Unit Space per Kit (in.)	Max 1-pole Circuits per Kit
100	Thermal Magnetic	BL	BL	10	—	—	—	15-70	10	10	—	—	—	—	—	—	15-100④	—	T	3.00	6
			BLH	22	—	—	—	15-70	22	22	—	—	—	—	—	—	15-100④	—	T	3.00	6
			HBL	65	—	—	—	15-50	65	65	—	—	—	—	—	—	15-100	—	T	3.00	6
	Special Application	BLG BL	BLG①	10	—	—	—	15-20	10	—	—	—	—	—	—	—	30	—	T	3.00	6
			BL (HID)	10	—	—	—	15-30	10	—	—	—	—	—	—	—	15-30	—	T	3.00	6
	Thermal Magnetic	BQD	BQD⑥	65	14	—	14	15-100	—	65	14	—	—	—	14	—	15-100	—	T	3.00	6
			BQD6⑦	65	—	—	14	15-70	—	65		—	10	—	14	—	15-70	—	T	3.00	6
xx	Electronic and misc.	BL	AFCI/ GFCI & Dual Function	x	—	—	—	see special table page 11-13	x	—	—	—	—	—	—	—	see special table page 11-13	—	T	3.00	6
125	Thermal Magnetic	GB	NGB	100	25	14	14	15-125	—	100	25	—	14	—	14	—	15-125	—	T	3.00	6
			HGB	100	35	14	14	15-125	—	100	35	—	14	—	14	—	15-125	—	T	3.00	6
			LGB	100	65	14	14	15-125	—	100	65	—	14	—	14	—	15-125	—	T	3.00	6
		Sentron	ED4	—	22	—	30	15-100	—	65	—	18	—	—	—	30	15-125	—	T	3.00	6
			ED6	—	—	—	—	—	—	65	—	25	—	18	—	30	20-125	—	T	3.00	6
			HED4②	—	—	—	—	—	—	65	—	18②	—	—	—	30	15-125	—	T	3.00	6
			HHED6	—	—	—	—	—	—	100	—	65	—	18	—	—	15-50	—	T	3.00	6
		GB2	NGB2	100	25	14	14④	15-125	—	100	—	25	14	—	14⑤	—	15-125	—	T	3.00	6
			HGB2	100	35	22	14④	15-125	—	100	—	35	22	—	14⑤	—	15-125	—	T	3.00	6
			LGB2	100	65	25	14④	15-125	—	100	—	65	25	—	14⑤	—	15-125	—	T	3.00	6
		3VA41③	SEAB	65	25	14	14	15-125	65	65	25	25	14	—	50	50	15-125	—	T	3.00	6
			MEAB	85	35	18	25	15-125	85	85	35	35	18	—	85	85	15-125	—	T	3.00	6
			HEAB	150	65	25	30	15-125	150	150	65	65	25	—	100	100	15-125	—	T	3.00	6
150	Electronic (Solid state)	3VA61 (ETU350 LSI std)	MDAE	—	—	—	—	—	—	100	—	35	—	18	—	—	16-150	S	—	6.00	3
			HDAE	—	—	—	—	—	—	100	—	65	—	22	—	—	16-150	S	—	6.00	3
			CDAE	—	—	—	—	—	—	200	—	100	—	35	—	—	16-150	S	—	6.00	3
			LDAE	—	—	—	—	—	—	200	—	150	—	50	—	—	16-150	S	—	6.00	3
225	Thermal Magnetic	QR	QR2	—	—	—	—	—	—	10	—	—	—	—	—	—	100-225	—	T	6.00	6
			QRH2	—	—	—	—	—	—	25	—	—	—	—	—	—	100-225	—	T	6.00	6
			HQR2	—	—	—	—	—	—	65	—	—	—	—	—	—	100-225	—	T	6.00	6
			HQR2H	—	—	—	—	—	—	100	—	—	—	—	—	—	100-225	—	T	6.00	6
250	Thermal Magnetic	3VA52④ (TM230 trip)	MFAS	—	—	—	—	—	—	85	—	35	—	18	—	60	100-250	S	—	6.00	6 or 3
			HFAS	—	—	—	—	—	—	100	—	65	—	25	—	85	100-250	S	—	6.00	6 or 3
			CFAS	—	—	—	—	—	—	200	—	100	—	35	—	100	100-250	S	—	6.00	6 or 3
	Electronic (Solid state)	3VA62④ (ETU350 LSI std)	MFAE	—	—	—	—	—	—	100	—	35	—	18	—	—	100-250	S	—	6.00	3
			HFAE	—	—	—	—	—	—	100	—	65	—	22	—	—	100-250	S	—	6.00	3
			CFAE	—	—	—	—	—	—	200	—	100	—	35	—	—	100-250	S	—	6.00	3
			LFAE	—	—	—	—	—	—	200	—	150	—	50	—	—	100-250	S	—	6.00	3

Main Breaker Compression Lugs (Aluminum body excepts Al or CU cable, CU only lugs accept CU only cable)

Amp Rating	Main Breaker	Compression Connectors	Vert or Horiz	Box Ht adder	Additional comments
250	FXD6, HFD6, CFD6	(1)#6 AWG - 350 kcmil Cu or Al	H	0"	
			V	0"	
400	JD6, JXD6, HJD6, CJD6, SJD6, SHJD6, SCJD6	(2)#1/0 AWG - 500 kcmil Cu or Al	V	0"	
600	LD6, LXD6, HLD6, CJD6, SLD6, SHLD6, SCLD6	(2)#2/0 AWG - 500 kcmil Cu or Al	V	0"	
150	3VA61 (MDAE, HDAE, CDAE, LDAE)	tbd	H	tbd	tbd
		tbd	V	tbd	tbd
250	3VA52, 3VA62 (MFAS, HFAS, CFAS), (MFAE, HFAE, CFAE, LFAE)	tbd	H	tbd	tbd
		tbd	V	tbd	tbd
400	3VA53. 3VA63 (MJAS, HJAS, CJAS), (MJAE, HJAE, CJAE, LJAE)	tbd	H	tbd	tbd
		tbd	V	tbd	tbd
600	3VA54, 3VA64 (MLAS, HLAS, CLAS), (MLAE, HLAE, CLAE, LLAE)	tbd	H	tbd	tbd
		tbd	V	tbd	tbd
800	3VA55, 3VA65 (MMAS, HMAS, CMAS), (MMAE, HMAE, CMAE, LMAE)	tbd	V	tbd	tbd

① BLG two-pole breaker is one phase and neutral. Three pole is two phases and neutral - See SpeedFax page 7-31
② 1-pole HED 15-30A rated 65kA; 35-100A rated 25kA: 3-pole HED rated 42kA
③ Availability and additional specs tbd, expected late 2019. (COMPAS may allow selection of alternate trip units)
④ 3VA52 TMTU available in single or twin mount kit. 3VA62 with Electronic Trip (ETU) can be used only with the single mount kit.
⑤ 2-pole only or two outer poles of 3-pole breaker
⑥ Approved for CSA and UL Listed.
⑦ Approved for CSA but not UL Listed.
⑧ Twin mounted subfeed breakers are mounted at bottom of panelboard only and adds 24" to the panel height.
⑨ Subfeed breaker is mounted at bottom of panelboard only. 400 amp subfeed breaker adds 30" to the panel height.

Branch Breaker Side Gutters Inches (mm)

	← 30" (762 mm) box width reference →					
	← 24" (610 mm) box width reference →				24" W box	30" W box
Max Amps	**Ref code**	**Breaker type or Family**		**Ref code①**		**Gutter Space inches (mm)**	**Gutter Space inches (mm)**
100	← A →	BL, BLH,HBL	BL, BLH,HBL	← A →	=	7.750 (197)	10.750 (273)
	← B →	BLF2, BLHF2, HBLF2, BLFB, BLHFB	BLF2, BLHF2, HBLF2, BLFB, BLHFB	← B →	=	7.125 (181)	10.125 (258)
		BQD, BQD6③	BQD, BQD6③				
125	← C →	NGB, HGB, LGB	NGB, HGB, LGB	← C →	=	6.625 (168)	9.625 (244)
		NGB2, HGB2, LGB2	NGB2, HGB2, LGB2				
	← D →	3VA41	3VA41	← D →	=	6.625 (168)	9.625 (244)
	← E →	ED4, ED6	ED4, ED6	← E →	=	6.000 (152)	9.000 (228)
		HED4, HHED6	HED4, HHED6				
225	← F →	QR2, QRH2, HQR2, HQR2H (Single Mounted)		← alt →	=	7.000 (178)	10.000 (254)
	← F2 →	QR2, QRH2, HQR2, HQR2H (Twin Mounted)		← F2 →	=	5.000 (127)	8.000 (203)
250	← G →	3VA52 (w/1-port lug) (Single Mount)		← alt →	=	8.83(225)	11.83(301)
	← G2 →	3VA52 (w/1-port lug) (Twin Mount)		← G2 →	=	6.29(160)	9.29(236)
	← H →	3VA61/62 (w/1-port lug) (Single Mount)		← alt →	=	8.29(211)	11.29(287)
400	← S1 →	3VA53/63 (w/1-port lug) (Single Mount - Horizontal Subfeed)		← alt →	=	8.31(211)	11.31(288)
	← S2 →	3VA53/63 (w/2-port lug) (Single Mount - Horizontal Subfeed)		← alt →	=	6.21(158)	9.21(234)
600	← S3 →	3VA54/64 (w/2-port lug) (Single Mount - Horizontal Subfeed)		← alt →	=	not avail	9.21(234)

① "alt" indicates alternate side gutter location for single mount breakers - balancing of load and/or gutter space may be required.

P3 Branch Neutral Connections③ — updated for BT in 2021 — includes new 2/0 options

Connections size range → AL or CU cable allowed	**#14 to #6 cable**	**#14 to 2/0 cable**	**Maximum Connections with all 2/0 neutral strips**							
Neutral Strip configuration	**qty**	**qty**	**Typical Quantity of neutral strips included by size**							
15 Pos Neutral strip①③	11	4	2			4	4	2	2	
23 Pos Neutral strip①③	17	6		2	4	2	4	6	6	8
#14-#6 connections total →			22	34	68	78	112	124	124	136
#14-2/0 connections total →			8	12	24	28	40	44	44	48
Unit Space (inches) →			9	15	21	27	33	39	42	45
# of circuits or Max. 1" positions →			18	30	42	54	66	78	84	90
Total connections on neutral strips →			30	46	92	106	152	168	168	184
BT Max. (qty of breakers) in COMPAS →			10	20	30	30	30	30	30	30
Remaining connections after BT Max. →			10	6	32	46	92	108	108	124
Connections for Large Branch > 125A below										
(1) #6-350kcml②			0-7	0-7	0-7	0-7	0-7	0-12	0-12	0-12
(1) #4-600kcmil or (2) #6-250kcmil (for subfeed breaker or as needed)			0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
Total connections max. →			30-38	46-54	92-100	106-114	152-160	168-181	168-181	184-197

Note: COMPAS will determine actual neutral configuration to be built. Configurations will vary from what is shown – this chart shows max. possible connections for reference only.

① P1 Neutral kits allow for field replacement, or changes in size of neutral strips when needed.
- LNLK4X11B, LNLK6X17B and LNLK7X20B

② Neutral Lug Kit # BNK350N is available for field installations when needed.

③ Reference info: Neutral Lugs are rated for 75°C cable. When running a circuit to a load, the same type of wire should be used on the phase (breaker) and neutral connections in the panel.

a) Cables should be sized per NEC Table 310.16 (formerly Table 310.15(B)(16)) and the 75°C column.

b) Customer can choose to use 90C cable if sized as if it is 75°C.

c) Some 100% rated circuit breakers require the use of 90°C cable sized per the 75°C column. Refer to the Markings on the breaker and use the appropriate cable.

d) Some Circuit breakers 100A or less are marked as being suitable for 60°C, 75°C or 60/75°C cable. Refer to the Markings on the breaker and use the appropriate cable.

Typical Catalog Numbers

Main Lugs Only – Examples of Panel numbers w/o options that add to box height.
– Shown with Aluminum bus, Top fed, and Surface Trims

Max. Panel Amp Rating	Max.Unit Space (inches)	120/240V 1-Phase, 3-Wire Catalog Number	208Y/120V 3-Phase, 4-Wire Catalog Number	240/120V Delta 3Ø4W BØ High Leg Catalog Number	Box Height Inches
250	27	P3A56ML250ATS	P3C56ML250ATS	P3B56ML250ATS	56
	39	P3A68ML250ATS	P3C68ML250ATS	P3B68ML250ATS	68
	45	P3A80ML250ATS	P3C80ML250ATS	P3B80ML250ATS	80
400	21	P3A56ML400ATS	P3C56ML400ATS	P3B56ML400ATS	56
	33	P3A68ML400ATS	P3C68ML400ATS	P3B68ML400ATS	68
	45	P3A80ML400ATS	P3C80ML400ATS	P3B80ML400ATS	80
600	21	P3A56ML600ATS	P3C56ML600ATS	P3B56ML600ATS	56
	33	P3A68ML600ATS	P3C68ML600ATS	P3B68ML600ATS	68
	45	P3A80ML600ATS	P3C80ML600ATS	P3B80ML600ATS	80
800	21	P3A56ML800ATS	P3C56ML800ATS	P3B56ML800ATS	56
	33	P3A68ML800ATS	P3C68ML800ATS	P3B68ML800ATS	68
	45	P3A80ML800ATS	P3C80ML800ATS	P3B80ML800ATS	80

Max. Panel Amp Rating	Max.Unit Space (inches)	480V Delta 3-Phase, 3-Wire Catalog Number	240V Delta 3-Phase, 3-Wire Catalog Number	480Y/277V 3-Phase, 4-Wire Catalog Number	Box Height Inches
250	27	P3F56ML250ATS	P3D56ML250ATS	P3E56ML250ATS	56
	39	P3F68ML250ATS	P3D68ML250ATS	P3E68ML250ATS	68
	45	P3F80ML250ATS	P3D80ML250ATS	P3E80ML250ATS	80
400	21	P3F56ML400ATS	P3D56ML400ATS	P3E56ML400ATS	56
	33	P3F68ML400ATS	P3D68ML400ATS	P3E68ML400ATS	68
	45	P3F80ML400ATS	P3D80ML400ATS	P3E80ML400ATS	80
600	21	P3F56ML600ATS	P3D56ML600ATS	P3E56ML600ATS	56
	33	P3F68ML600ATS	P3D68ML600ATS	P3E68ML600ATS	68
	45	P3F80ML600ATS	P3D80ML600ATS	P3E80ML600ATS	80
800	21	P3F56ML800ATS	P3D56ML800ATS	P3E56ML800ATS	56
	33	P3F68ML800ATS	P3D68ML800ATS	P3E68ML800ATS	68
	45	P3F80ML800ATS	P3D80ML800ATS	P3E80ML800ATS	80

General Note: Panel numbers and box sizes are for reference only - COMPAS will configure proper Box size needed.

Main 3VA Circuit Breaker – Examples of Panel numbers w/o options that add to box height.
– Shown with Aluminum bus, Top fed, and Surface Trims

Max. Panel Amp Rating	Max.Unit Space (inches)	120/240V 1-Phase, 3-Wire Catalog Number	208Y/120V 3-Phase, 4-Wire Catalog Number	240/120V Delta 3Ø4W BØ High Leg Catalog Number	Box Height Inches
250①	21 H / 15 V	P3A56VA250ATS	P3B56VA250ATS	P3C56VA250ATS	56
	33 H / 27 V	P3A68VA250ATS	P3B68VA250ATS	P3C68VA250ATS	68
400②	15 H / 9 V	P3A56VE400ATS	P3B56VE400ATS	P3C56VE400ATS	56
	27 H / 21 V	P3A68VE400ATS	P3B68VE400ATS	P3C68VE400ATS	68
	42 H / 33 V	P3A80VE400ATS	P3B80VE400ATS	P3C80VE400ATS	80
600③	27 H / 21 V	P3A68VJ600ATS	P3B68VJ600ATS	P3C68VJ600ATS	68
	42 H / 33 V	P3A80VJ600ATS	P3B80VJ600ATS	P3C80VJ600ATS	80
800	n/a	n/a	n/a	n/a	56
	15 V	P3A68VN800ATS	P3B68VN800ATS	P3C68VN800ATS	68
	27 V	P3A80VN800ATS	P3B80VN800ATS	P3C80VN800ATS	80

Max. Panel Amp Rating	Max.Unit Space (inches)	480V Delta 3-Phase, 3-Wire Catalog Number	240V Delta 3-Phase, 3-Wire Catalog Number	480Y/277V 3-Phase, 4-Wire Catalog Number	Box Height Inches
250①	21 H / 15 V	P3F56VA250ATS	P3D56VA250ATS	P3E56VA250ATS	56
	33 H / 27 V	P3F68VA250ATS	P3D68VA250ATS	P3E68VA250ATS	68
400②	15 H / 9 V	P3F56VE400ATS	P3D56VE400ATS	P3E56VE400ATS	56
	27 H / 21 V	P3F68VE400ATS	P3D68VE400ATS	P3E68VE400ATS	68
	42 H / 33 V	P3F80VE400ATS	P3D80VE400ATS	P3E80VE400ATS	80
600③	27 H / 21 V	P3F68VJ600ATS	P3D68VJ600ATS	P3E68VJ600ATS	68
	42 H / 33 V	P3F80VJ600ATS	P3D80VJ600ATS	P3E80VJ600ATS	80
800	n/a	n/a	n/a	n/a	56
	15 V	P3F68VN800ATS	P3D68VN800ATS	P3E68VN800ATS	68
	27 V	P3F80VN800ATS	P3D80VN800ATS	P3E80VN800ATS	80

General Note: Panel numbers and box sizes are for reference only - COMPAS will configure proper Box size needed. H = Horizontal / V = Vertical Mount Main.

① 250A: for Vert. 3VA52/61/62 subtract 6" of unit space.

② 400A: For 3VA53/63 Horizontal Main and Vertical Main shown in chart - note 42" is special size for Horizontal mount only.

③ 600A: For 3VA54/64 Horizontal Main and Vertical Main shown in chart - note 42" is special size for Horizontal mount only.

General Modifications

P3 Type 1 Enclosures

Description
Extra Gutter to Sides or Ends of the Can: - 24" Wide only - no modifications for 30" wide series a) 6" end gutter b) 2" side gutter c) Barrier in Gutter (additional to extra gutter price - min 4" required.)
Trims / Fronts available: 24" wide a) FasLatch is std (24" wide) b) Hinge-to-Box Trim (HTB) c) Door-in-Door Trim (DID) d) Piano Hinge Trim (HTB or DID) e) Stainless HTB or DID w/Piano Hinge
30" Wide Type 1 Enclosure notes: a) Always use 24" wide Surface Fronts to match interior size – any style above works. b) For flush applications: order Enclosure with Flushing rail option or Flushing Rail kit, but still use Surface front.
Other Options see Page 11-123 / 11-124 a) Trim mounted devices b) Painted boxes / Custom colors c) Increased Gauge trims and boxes d) Panel Skirts e) Special Locks – see page 11-38

(Devices mounted and wired to the trim should also have Hinge-to-Box front or Door-in-Door front specified)

Panel Bus Modifications

P3 Main Bus Type	Catalog Number Codes Amperes Ratings				
	125A	250A	400A	600A	800A
Temp rated AL (tin plated)(std)	A	A	A	A	A
750 A/SI AL (tin plated)	B	B	B	B	B
Copper (tin plated)	F	F	F	F	F
1000 A/SI Copper (tin plated)	G	G	G	G	G
Optional silver plating has extended lead-times					
Copper (silver plated)	E	E	E	E	E
1000 A/SI Copper (silver plated)	H	H	H	H	H

Subfeed, Feed-Thru and Split Bus (for 2-pole or 3-pole)

Ampere Rating	Connector Cu/Al Wire Range	Unit Space (inches)

Subfeed (Double) Lugs (400A max) for Main Lug Panelboards Only

225/250	(2)—#6 AWG-350 kcmil	6
400	(4)—250 kcmil (2)—600 kcmil	0

Feed-Thru Lugs

Sub-Feed Space typically has room for only one device, for example: Feed-thru Lugs, SPD, Sub-feed Breaker or other.

See page 11-69 for unit space adders and compatibility with other options.

225/250	(1)—#6 AWG-350 kcmil	0
400	(2)—250 kcmil or (1)—600 kcmil	6
600	(2)—250-500 kcmil	0
800	(2)—600 kcmil	6

Split Bus (1 max. per interior))

225/250	(1)—#6 AWG-350 kcmil	6
400	(2)—250 kcmil or (1)—600 kcmil	6
600	(2)—250-500 kcmil	6
800	(2)—600 kcmil	6

Branch and Main Breaker Accessories

See SpeedFax Breaker Sections for more info
- Handle blocks, Handle Ties, Handle locks
- Aux. Contacts① and other options
- UVR - Under Voltage Release①

Increase neutral capacity up to 200%

Main Bus Amps
125A / 250A / 400A / 600A Not available for 800A - Limitations/restrictions may apply

Copper MLO (Main Lug Only)

Main Bus Amps
See Main Lug table for details on page 11-61

Branch and Main Breaker Accessories

Type P3 Panelboards are factory labeled suitable for use as service entrance equipment when NEC requirements are met.

a) When a panelboard is used as service entrance equipment, it must be located near the point of entrance of building supply conductors. The National Electrical Code prior to 2020 allowed a maximum of six service disconnects in the same panelboard. The 2020 NEC now restricts panelboards to one service disconnect in a panelboard enclosure. Adoption of this code vary by state or local jurisdiction. Consult the local code authorities to determine if this has been adopted in the area where the panel is to be installed and configure the panel accordingly. Also, panels must include a connector for bonding and grounding the neutral conductor.

b) Factory installed and Field installable Service Entrance Barrier kits are available as required by UL67 (In COMPAS, you must select "Service Entrance Required"). Siemens includes these barriers in all Factory assembled panels, marked as Service Entrance, and also has available Field Installable kits when needed.

Grounding of Panelboards

Ground Bars except for brazed to box are shipped with the panel interior, not factory mounted.
- Non-Insulated Equipment Ground Bar
- Copper Non-Insulated Ground Bar
- AL Insulated Equipment Ground Bar
- CU Insulated Equipment Ground Bar
- Copper Ground Bar Brazed to Box

(Only available for unpainted Type 1 enclosures 24" wide.)

Shunt Trip on Main or Branch

General notes:

a) 3VA series uses internal Shunt trips and other accessories - generally no additional unit space is needed except for 1-pole that requires "1-pole in a 2-pole frame" where applicable.

b) BL, BLH, HBL, NGB, HGB, LGB, ED4, HED4, ED6, HHED6 uses 1" unit space for shunt trip.

Time Clocks

1) Time clocks may be mounted in a 23" encl. to be cable connected to the panel.
2) Sangamo, Tork or Paragon time clock can be supplied and mounted in panelboard cabinet. This adds 12" to panel height and mounts in Sub-feed space.

Description / features
a) Time Clock (1 or 2-pole, single or double throw contacts; 3-pole, single throw) 277V maximum with plain dial b) Astronomical dial c) An omitting device d) Reserve power or carryover e) Space and mounting provisions only

P3 Box Size Additions (or unit space reduction) for Optional Features (values in inches)

Main Lugs					Main Breakers – Sentron						3VA Main Breakers							
125A	250A	400A	600A	← Amps Max. →	250A		400A		600A		250A		400A		600A		800A TMTU	800A ETU
				Horizontal Mount							H		H		H			
V	V	V	V	Vertical Mount	V	V	V	V	V	V		V		V		V	V	V
56"	56"	56"	56"	← Min. Box Height →	56"	56"	56"	62"	56"	62"	56"	56"	56"	56"	68"	56"	68"	68"
24"	24"	24"	24"	← Min. Box Width →	24"	24"	24"	24"	24"	24"	24"	24"	24"	24"	30"	24"	30"	24"
27"	21"	21"	21"	← Unit Space @ Min. Box →	15"	9"	9"	9"	9"	9"	21"	15"	15"	9"	27"	9"	15"	15"
MLO Panels				Options / Breaker Types	FD	CFD	JD	CJD	LD	CLD	3VA52/62	3VA52/62	3VA53/63	3VA53/63	3VA54/64	3VA54/64	3VA55 TMTU	3VA65 ETU
0	0	6	6	200% Neutral① (lug type)	0	0	0	0	0	0	n/a	0	n/a	0	n/a	0	0 1	0 1
0	0	0	0	Main w/ Std. Lugs (100% Neutral PNL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	6	0	Main w/ CU Lugs (100% Neutral PNL)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	6	6	Main w/ Comp Lugs (100% Neutral PNL)	0	0	0	0	0	0	*	*	*	*	*	*	*	*
6	6	12	12	Feed-Thru w/ Std. Lugs	6	6	6	6	6	6	6	6	12	6	12	6	6	6
6	6	12	n/a	Feed-Thru w/ CU Lugs	6	6	6	6	6③	6③	6	6	12	6	n/a	6③	6	6
6	12	12	n/a	Feed-Thru w/ Comp Lugs	12	12	6②	6②	6②	6②	12	12	12	6④	12	6②	6	6
0	6	6	n/a	Main w/Subfeed Std. Lugs	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
6	6	6	6	Split Bus⑤	6	6	6	6	6	6	6	6	6	6	-	n/a	n/a	n/a
24	24	24	24	(2) FD Subfeed (Vert mnt)	24	24	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	12	12	12	(1) JD Subfeed (Horz mnt)	n/a	n/a	12	12	12	12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	18⑦	18⑦	18⑦	(1) 3VA53/63 Subfeed (Horiz mnt 400A max.) (68" min box)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12	12	12	12	12	12
n/a	n/a	18⑦ +30W	18⑦ +30W	(1) 3VA54/64 Subfeed (Horiz. mnt 600A max.) Requires 30"W Box (68" min box)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12	12 +30W	12	12 +30W
12	12	12	12	SPD -Surge Subfeed Mount	12	12	12	12	12	12	12	12	12	12	12	12	12	12
6	6	6	6	3VA Communications Compartment * (factory installed in unit space)	6*	6*	6*	6*	6*	6*	6*	6*	6*	6*	6*	6*	6*	6*
12	12	12	12	3VA Neutral CT⑥ (max. 2)* Factory installed in Subfeed Space (may require 30"W Box)	12*	12*	12*	12*	12*	12*	n/a	0	12*	n/a	12*	n/a	n/a	n/a

NOTE: n/a = Option Not Available

* Some Options are pending implementation in future COMPAS releases. Expect FY22 availability.

① 200% Neutral may have restrictions based on Lug configurations chosen, for example:

a) 800A 3VA54/64: 200% Neutral is only available with main breaker lugs (2) 600; all other lugs cannot have 200% neutral.

b) COMPAS will restrict as needed during configuration process

② For Sentron: FT compression lugs require only 6" extra box size beyond Main Breaker with non-compression lugs. Feed-thru Compression lug adder not included.

③ (2) 350 CU lugs are available per phase and are sufficient for 600A. (2)500 Cu lugs per phase are not available, but are not needed for 600A with copper wire.

④ Feed-thru compression lugs require only 6" extra box size beyond M/B requirement. Adder for the M/B portion of M/B + FTL is still tbd*

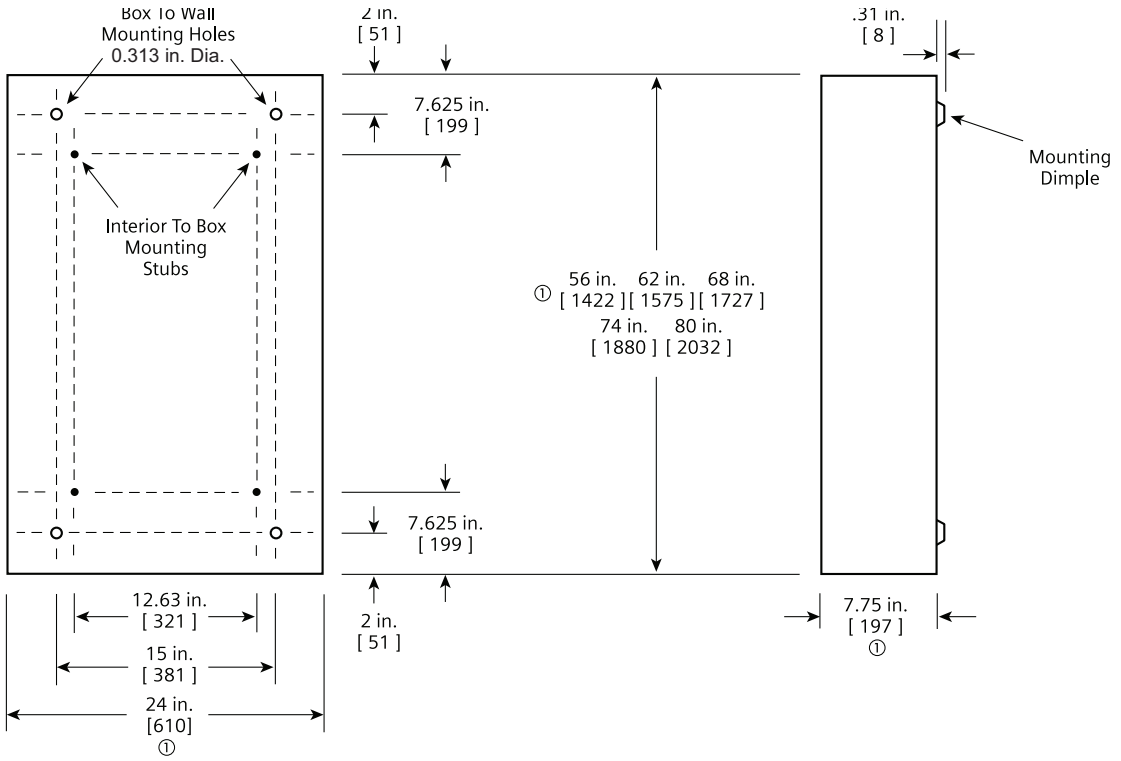
⑤ Split bus is paired with feed-thru lugs by default. Split Bus Guidelines: In COMPAS configure a panel with standard Main Lugs and Feed-Thru lugs, then add all breakers for the top section before selecting "split Bus". (6" of unit space is used for the split.) After the split is shown, add breakers to the next section of bus. Lugs are on each end of the panel. The original System Voltage selected will be shown for the panel. Any variations need to be added per special Mod for tech review before panel is approved.

⑥ 3VA ETU requiring Neutral CT may get pushed to larger panel type. There are limited numbers of CT's that can be mounted in a P3 panel and some Cable sizes require more wire bend space than is available.

⑦ 3VA 400A/600A subfeed - reduced std MLO Unit Space by 18" in 68" and 80" high boxes only, but allows for Main MLO conversion to horizontal Main in the field when kits becomes available.

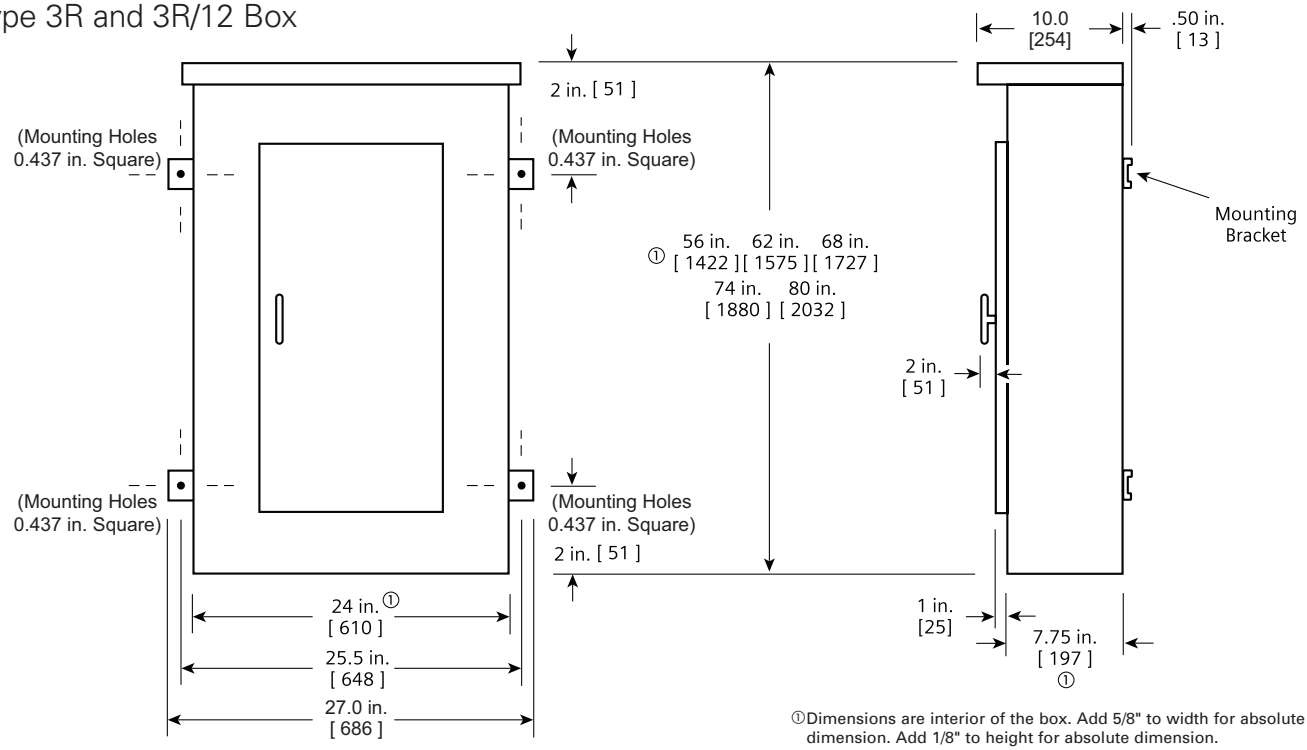
Type 1 Box

Box is symmetrical



(UL approved construction. 16 gage steel or equivalent alternate construction.
14 or 12 gage is available as an optional special order.)
G60 Galvanized is standard without paint.

Type 3R and 3R/12 Box



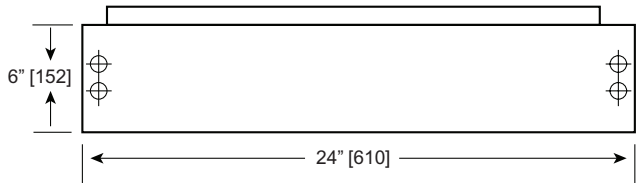
①Dimensions are interior of the box. Add 5/8" to width for absolute dimension. Add 1/8" to height for absolute dimension.
Dimensions shown in inches and millimeters [ ].

(UL approved construction. 16 gage steel can with
14 gage front or similar approved construction.)
A60 Galvannealed with ANSI 61 light gray paint is standard.

P3 Standard Enclosures / Fronts

Box Height (in.)	24" Wide Enclosures - 7.75" Deep Catalog Numbers				
	Type 1 Box	FasLatch Front		Type 3R	Type 3R/12
		Surface	Flush		
56	24WD56	P3S56	P3F56	24NRD56	24WPD56
62*	24WD62	P3S62	P3F62	24NRD62	24WPD62
68	24WD68	P3S68	P3F68	24NRD68	24WPD68
74*	24WD74	P3S74	P3F74	24NRD74	24WPD74
80	24WD80	P3S80	P3F80	24NRD80	24WPD80

*P3 enclosures 62" and 74" will be "Make to Order" with longer Lead-times than other standard sizes.

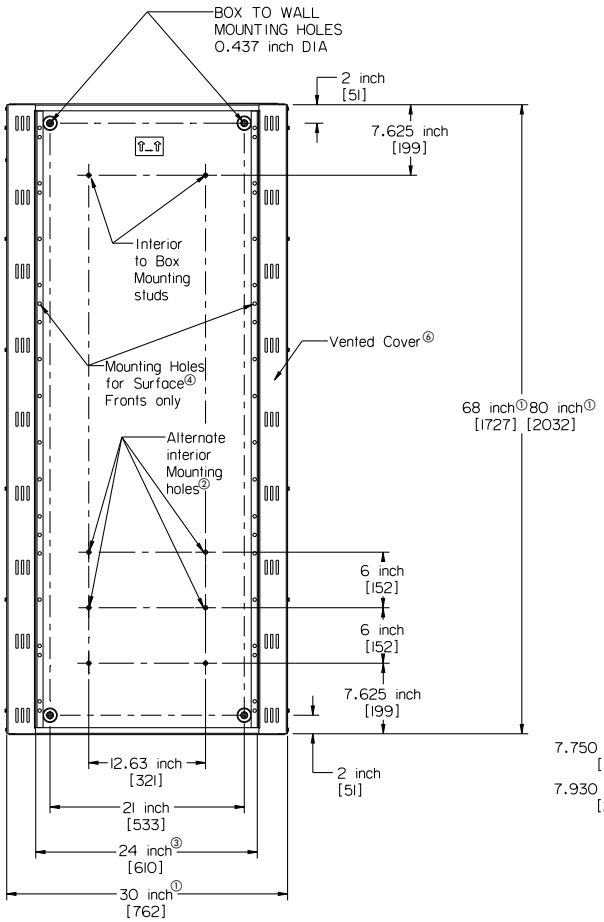


P3 Vented Enclosures / Fronts

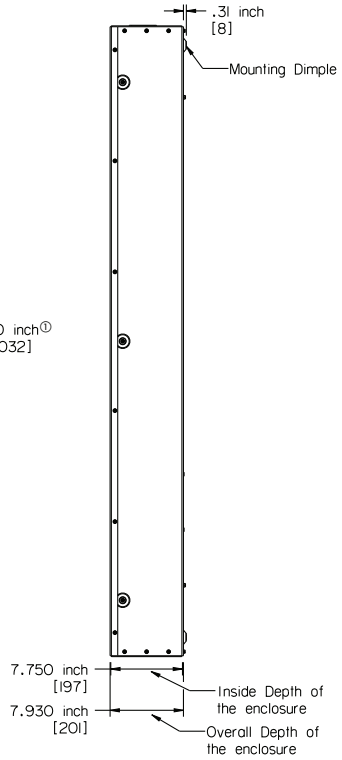
Box Height (in.)	30" Wide Vented Enclosures - 7.75" Deep (inside) Catalog Nos.		
	NEMA Type 1 Vented	Front①②	Type 3R Vented③ Exterior Depth 9.75"
		Use Surface only	
68	30WD68V** Surface Mount box	Use 24" wide Surface Mount Fronts to match interior size and add lower covers as needed.	tbd**④ (FY22)
80	30WD80V*** Surface Mount box		tbd***④ (FY22)
68	30WD68VF** Flush Mount box		Flush Mount Type 1 with external Flushing ring available soon. (FY22)
80	30WD80VF*** Flush Mount box		

** 68" high box mounts 56", 62" and 68" high interiors
*** 80" high box mounts 68", 74" and 80" high interiors
① Lower Cover Kit # BXXCVR06S24W can be used with 24" Fronts to cover 6" of open space below the Type 1 front.
② 30" wide Type 1 Enclosure can mount any standard Surface mount Front; FasLatch, Hinge-to-Box, Door-in-Door and all piano Hinge variations including 304 Stainless Steel.
③ Lower Deadfront Cover Kit # BXXDFK06R24W can be used with 30" NEMA 3R to cover 6" of open space below the deadfront.
④ Standard NEMA 3R are Painted Ansi 61 Grey.
- For Stainless versions add "??" to Enclosure number. (tbd)

P3 Type 1 Ventilated Enclosure 30" Wide



Lower 6-inch-high Cover size for reference



① Dimensions are interior of the box. Add 3/8" to width for outside dimension. Add 3/16" to height for outside dimension. Dimensions shown in inches and millimeters [ ].
① Alternate interior mounting holes to mount interiors smaller than box size:
— Alternate mounting hardware included with lower cover kit # BXXDFK06R24W
68" High box : a) 6" smaller = 62" interior or b) 12" smaller = 56" interior
80" High box : a) 6" smaller = 74" interior or b) 12" smaller = 68" interior
② Use 24" wide P3 Surface mount front that matches height of interior mounted
③ Most standard 24" wide Surface Mount P3 fronts will fit, including FasLatch, Hinge-to-Box, Door-in-Door and all Piano Hinge variations
④ For Flush Mount Requirements: order Flush Enclosure that comes with externally mounted Flushing Ring.
— Use Surface mount fronts for these enclosures also. (to be available late FY22)
⑤ Vented Cover included with Enclosure - Painted ANSI 61 Grey to match standard front.

P3 Standard Enclosures / Fronts

Box Height (in.)	24" Wide Enclosures - 7.75" Deep Catalog Numbers				
		FasLatch Front			
	Type 1 Box	Surface	Flush	Type 3R	Type 3R/12
56	**24WD56**	**P3S56**	**P3F56**	**24NRD56**	**24WPD56**
62*	**24WD62**	**P3S62**	**P3F62**	**24NRD62**	**24WPD62**
68	**24WD68**	**P3S68**	**P3F68**	**24NRD68**	**24WPD68**
74*	**24WD74**	**P3S74**	**P3F74**	**24NRD74**	**24WPD74**
80	**24WD80**	**P3S80**	**P3F80**	**24NRD80**	**24WPD80**

*P3 enclosures 62" and 74" will be "Make to Order" with longer Lead-times than other standard sizes.

P3 Vented Enclosures / Fronts

Box Height (in.)	30" Wide Vented Enclosures - 7.75" Deep (inside) Catalog Nos.		
	NEMA Type 1 Vented	Front①②	Type 3R Vented③
		Use Surface only	Exterior Depth 9.75"
68	30WD68V** Surface Mount box	Use 24" wide Surface Mount Fronts to match interior size and add lower covers as needed.	tbd**④ (FY22)
80	30WD80V*** Surface Mount box		tbd***④ (FY22)
68	30WD68VF** Flush Mount box		Flush Mount Type 1 with external Flushing ring available soon. (FY22)
80	30WD80VF*** Flush Mount box		

** 68" high box mounts 56", 62" and 68" high interiors
*** 80" high box mounts 68", 74" and 80" high interiors
① Lower Cover Kit # BXXCVR06S24W can be used with 24" Fronts to cover 6" of open space below the Type 1 front.
② 30" wide Type 1 Enclosure can mount any standard Surface mount Front; FasLatch, Hinge-to-Box, Door-in-Door and all piano Hinge variations including 304 Stainless Steel.
③ Lower Deadfront Cover Kit # BXXDFK06R24W can be used with 30" NEMA 3R to cover 6" of open space below the deadfront.
④ Standard NEMA 3R are Painted Ansi 61 Grey.
- For Stainless versions add "??" to Enclosure number. (tbd)

P3 Type 3R Ventilated Enclosure 30" Wide

Image coming soon

Spare Parts and Field installable Kits for P2/P3 Panels

Kit Number	Current Product					Old Product is no longer Manufactured, some kits are available			Product Description Note: Some kits apply to only specific enclosures used or configurations of the product listed	Drawing # ref for part or kit
	P1 Revised	P2	P3	C1	C2	P1 Original	S1, S2, SE	qty/ kit		
Strap Kits										
BBKB32		X	X					1	P2/P3 BL/BQD 100A max. Branch Strap kit, uses 3" of unit space for 6 circuits total.	11-D-2267-01
BBKVA4P2P3		X	X					1	P2/P3 3VA41/xGB 125A max. Twin Mount Strap Kit, uses 3" of unit space for 6 circuits.	13-D-2011-13
BBKQR2			X					1	P3 QR 225A max. Single Mount Branch Strap Kit, 6" of unit space for one 2-p or 3-p brk	11-D-2637-01
BBKQRP2FK			X					1	P3 Filler for QR horiz. Dual mnt., Kit contains all cover plates necessary to change from QJ to QR both 2p & 3p breakers. For 1-ph panel, both breakers must change from QJ to QR.	see instruction sheet for details
BBKVA5262P2S		X	X					1	P2/P3 250A max. 3VA52/61/62 Single Mount Branch Strap Kit, 1ph or 3ph, uses 6" of unit space for one 2-p or 3-p breaker. (includes 1 #BBKVA5262P2HW kit)	11-D-2894-01
BBKVA5262P2HW		X	X					1	Hardware kit for Branch/Main Horizontal Single mount or for Vertical Mount 3VA52/61/62 in either P2 or P3 panels.	11-D-2895-61
BBKVA52P3T			X					1	P3 only Twin Mount Branch Kit, 250A max., 1ph/3ph strap kit for 3VA52 only, includes two BBKVA52P3HW kits	11-D-2764-01
BBKVA52P3HW			X					1	3VA52 only P3 HDWR KIT for twin mount locations only, 1ph/3ph Hardware kit for Twin mount Branch Horizontal 3VA52 only in P3 panels.	11-D-2763-01
BBKED32①		X	X					1	P2/P3 ED Twin Mount Branch Strap Kit, 3" of unit space for 6 circuits.	Use 3VA41 with BBKVA4P2P3 where possible.
BBKNB32①		X	X					1	P2/P3 xGB Twin Mount Branch Strap Kit, 3" of unit space for 6 circuits.	
BBKGB32①		X	X					1	P2/P3 GB2 Twin Mount Branch Strap Kit, 3" of unit space for 6 circuits.	
Deadfront Parts and Filler Plates										
NBK3**		X	X	X	X			1	Press-in Number Kit 1-42 P2/P3 Panelboards	11-A-2A02-03
NBK4**		X	X	X	X			1	Press-in Number Kit 43-84 P2/P3 Panelboards	11-A-2A02-04
NBK5**		X	X	X	X			1	Press-in Number Kit 85-126 P2/P3 Panelboards	11-A-2A02-05
NBK6**		X	X	X	X			1	Press-in Number Kit 127-168 P2/P3 Panelboards	11-A-2A02-06
NBK7**		X	X	X	X			1	Press-in Number Kit 169-210 P2/P3 Panelboards	11-A-2A02-07
NBK8**		X	X	X	X			1	Press-in Number Kit 211-252 P2/P3 Panelboards	11-A-2A02-08
**New Number kits pending									New number kits for BT will replace the ones above later in 2022	
DFFP1A	X	X	X	X	X	X	X	1	DFFP1A Blank filler , 1 inch snap-in, replaced old QF3 and DFFP1 in Systems Products. Ref. old #12-1800-01 and 11-D-4554-01	11-D-4613-01
DFFP3		X	X					1	DFFP3 Kit includes 3 inch high Blank Deadfront filler plates for both P2 (11-D-3014-02) and P3 (11-D-3035-02). Hardware & installation instructions included.	11-D-2269-01
DFFP6		X	X					1	DFFP6 Kit includes 6 inch high Blank Deadfront filler plates for both P2 (11-D-3014-01) and P3 (11-D-3035-01). Hardware & installation instructions included.	11-D-2270-01
DFFPFD01	X	X	X			X	X	1	FD Main Filler Plate (plastic) for 1-Ph and 3-Ph P1 Panels (use for Original or Revised P1 and other applications)(P2/P3 and S1/S2/SE)	11-D-4617-01
DFFPJD01	X	X	X			X	X	1	JD Main Filler Plate (plastic) for 1-Ph and 3-Ph P1 Panels (Small RP1 opening) (use for Original or Revised P1 and other applications)(P2/P3 and S1/S2) [for JD in large RP1 Main opening use DFFPJD02, ref # 11-D-4598-02]	11-D-4522-61
DFFPVA5262P2A		X	X					1	3VA52/61/62 Filler, used for P2 and P3 single mount horizontal and vertical applications, 1 piece per kit. Included in all appropriate Strap kits.	11-D-4610-01
DFFPVA5262P2B		X	X					1	3VA52/61/62 Provision kit, Blank Deadfront Plate and barrier included for when there is no breaker installed in a strap kit. Used for P2 and P3 single mount horizontal applications.	11-D-3340-01 11-D-4614-01
DFFPVA5363A	X	X	X					1	3VA53/63 Filler for P2/P3 Main/Subfeed (also used in RP1 main applications with Large MB Deadfront opening only)	11-D-4617-01
DFFPVA5363P3B			X					1	3VA53/63 Provision kit, Blank Deadfront Plate and barrier included for when there is no breaker installed in a strap kit. Used for P3 single mount horizontal applications.	11-D-3373-01 11-D-4627-01
EBF1		X	X					1	NEB/HEB Filler Plates (replacement parts)	11-D-4529-01
DFP3AP01		X	X					1	Adapter Kit for P2/P3 BL/BQD/ED/xGB/etc. breakers. This adapter plate fills 3 inches of unit space on one side of the Deadfront to allow the smaller breakers and DFFP1A filler to fit correctly.	11-D-3033-61
DFK1		X	X					1	P2/P3 kit to replace center strips in the deadfront when breaker strap kits are changed or modified. Kit includes mounting hardware, seven different lengths of center strip for 3" thru 21". (for BL/BQD/xGB/3VA4/etc. sizes of breakers)	11-D-2273-01

① These Strap kits may only be available as field replacement. COMPAS may configure all future 125A frame and larger requirements with 3VA Strap kits and associated breakers.

Spare Parts and Field installable Kits for P2/P3 Panels (cont.)

Kit Number	Current Product					Old Product is no longer Manufactured, some kits are available			Product Description Note: Some kits apply to only specific enclosures used or configurations of the product listed	Drawing # ref for part or kit
	P1 Revised	P2	P3	C1	C2	P1 Original	S1, S2, SE	qty/ kit		
DFK07		X	X					1	P2/P3 kit to replace center strips in the deadfront when breaker strap kits are changed or modified. Kit includes mounting hardware and center strip for 21" of unit space. (for BL/BQD/xGB/etc. sizes of breakers)	11-D-3018-67
DFK08		X	X					1	P2/P3 kit to replace center strips in the deadfront when breaker strap kits are changed or modified. Kit includes mounting hardware and center strip for 24" of unit space. (for BL/BQD/xGB/etc. sizes of breakers)	11-D-3018-68
DFK09 thru DFK21		X	X					1	Individual lengths from 27" thru 63" are available as needed, in 3" increments.	11-D-3018-xx
Service Entrance Barriers Kits (SEB)										
SEBKP1P2P3V1	X	X	X			X		1	SEB Kit, (RP1, P1, P2, P3), JD/LD and 3VA53/63 Vertical Main	11-D-2740-01
SEBKP2V3		X	X					1	SEB Kit, (P2, P2 with SEM3, P3), FD/QJ/QR Horizontal Main	11-D-2735-01
SEBKP2V4		X	X					1	SEB Kit, (P2, P2 w/SEM3, P3) FD/QJ/QR Vertical Main	11-D-2736-01
SEBKP2V7		X	X					1	SEB Kit, P2/P3 3VA52/61/62 Horizontal Main	11-D-2898-01
SEBKP3V2			X					1	Service Entrance Barrier Kit, P3 3VA53/63/54/64 400/600A Horiz. Main	11-E-2018-02
SEBKP3V3			X					1	Service Entrance Barrier Kit, P3 3VA55/65 800A Vert Main	11-D-2988-02
Neutral, Ground Bar, & Bond Kits										
BNK350N		X	X					1	Neutral Lug kit, Narrow 350 kcmil Lug with two mounting screws. Used in P2/P3 neutrals and other locations.	11-A-1869-61
ECGK	X	X	X			X		1	ECGK Copper Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	31-A-2006
EGK	X	X	X			X		1	EGK Al/Cu Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	31-A-2006
ICGK	X	X	X			X		1	ICGK Insulated Copper Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	31-2011
IGK	X	X	X			X		1	IGK Insulated Al/Cu Ground Bus Kit, Connection count: (6) of #14-1/0 and (15) of #14-6 Connections (21 Holes total). Some connections allow multiple wires.	31-2010
General Hardware and misc.										
IMK1	X	X	X			X		1	Interior Mounting Kit with Adjustment Provisions for P1/P2/P3	11-A-2024-01
LPDC01	X	X	X	X	X	X	X	10	Panelboard Directory Card. 5.5""X5"", for 1-90 circuits. Mates with pouch # 11-1824-01	12-1110
LPDC02	X	X	X	X	X	X	X	10	Panelboard Directory Vinyl Pouch, 6.3"x6.1". Mates with Directory Card #12-1110-01	11-1824
MCHK	X	X	X	X	X	X	X	1	MCHK - Metal Card Holder Kit - Field Installable	12-A-2098-00
LPJSPDNUT01	X	X	X	X	X	X	X	25	Replacement J-nuts for use with lighting panel fronts and deadfronts. Also used in miscellaneous other applications.	11-A-1820-61
LPTS01	X	X	X	X	X	X	X	25	Trim Screw, Lighting Panel Front, 0.547" Length, ¼-20 Machine Screw Thread (kit pending - not yet available) ref #11-A-1819-01	11-A-1819
LP3RHP01	X	X	X			X		12	3R/12 Hinge Pin, 0.188"" dia. Steel w/Zinc plate (kit pending, not yet available) ref # 11-1902-01	11-1902
ref 31-1905-01	X	X	X	X	X	X		1	NEMA 3R T-Handle with harware, uses B363A key - does not include key (kit needed with all mounting hardware and keys - in process)	31-1905
XTP060	X	X	X	X	X	X	X	1	TUP61 Grey Touch-up Paint, 12 oz Spray Can	na
BXXCVR06S24W			X					1	Lower 6 inch high cover for use with 30" wide Type 1 P3 Enclosures. Mount one or two as needed to fill space below the Surface mount Front attached to the Interior.	11-E-2003-01
P3DFS			X					1	P3 DF Support 4/kit w/hardware. For General replacement when needed - new heavy duty parts required for 3VA	
Endwall kits	X	X	X	X	X	X		na	See SpeedFax page 11-34 for Endwall kits that are available	na
Locks and Keys	X	X	X	X	X	X		na	See SpeedFax page 11-38 for Replacement lock & key kits that are available	na

Page intentionally left blank
for future P3 information.

Page intentionally left blank
for future P3 information.

Panelboard Specific 3VA Accessories Available in Panelboards

3VA Series Accessories

There are 4 positions on each side of the trip handle of the 3VA52 breaker. Accessories can be 1, 2 or 3 positions wide and fit in specific locations as shown on charts and on the inside cover of each breaker.

Accessory types:

3VA breaker auxiliary releases allow remote electrical tripping of the circuit breaker

- **STL** – Shunt Trip Left
- **STF** – Shunt Trip Flexible
- **UVR** – Undervoltage Releases Trip
- **UNI** – Universal Release - Shunt Trip and an Undervoltage Release are Combined

All Auxiliary and Alarm Switches for 3VA breakers belong to an integrated range of accessories

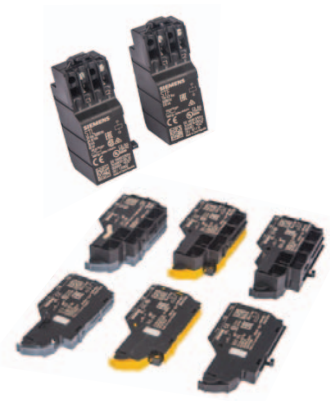
- **AUX_HQ / AUX_HP** – Auxiliary Switches
- **LCS_HQ / LCS_HP** – Leading Changeover Switches
- **TAS_HQ / TAS_HP** – Trip Alarm Switches
- **EAS_HQ / EAS_HP** – Electrical alarm switches

3VA Auxiliary and Alarm Switches have standard (HQ) and high capacity (HP) types as well as "electronic" versions for example: **AUX_HQ_el**

* Padlock accessory will be available in a future release.





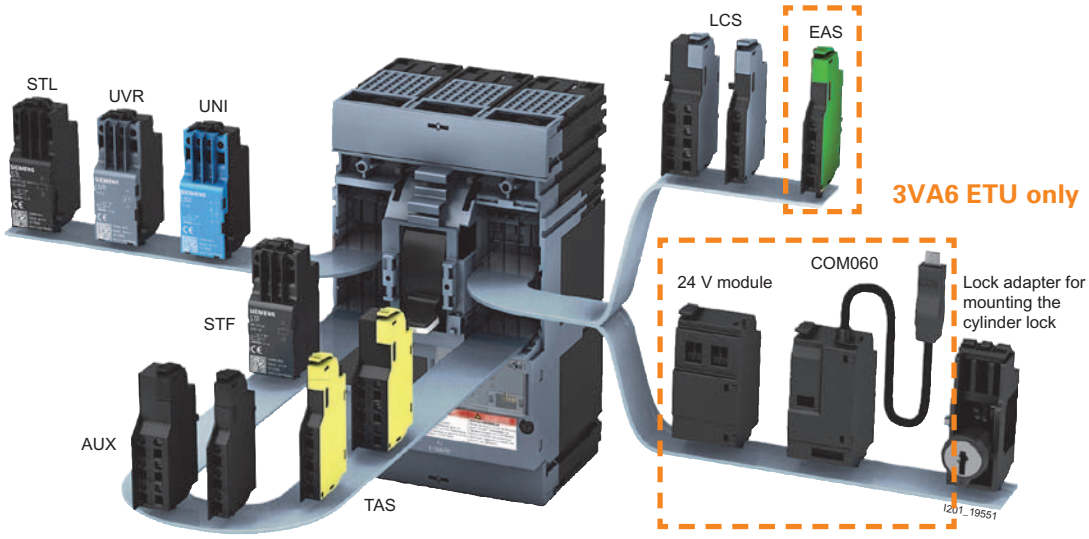


3VA accessories install easily.
Special Hardware kit for P3 Twin Mount aligns screw for easy installation.

3VA Breaker Features

3VA Internal Breaker Accessories configurations	Accessory Slots		
TMTU Thermal-Magnetic trip	Frame width	Amp range	
3VA41 — 1-pole	1p	15-125	0
3VA41 — 1-pole in 2p frame	2p	15-125	3
3VA41 — 2-pole			3
3VA41 — 3-pole	3p	15-125	6
3VA51 — 1-pole	1p	15-125	0
3VA51 — 1 pole in 2p frame	2p	15-125	3
3VA51 — 2 pole			6
3VA51 — 3-pole	3p	15-125	6
3VA52 — 2-pole in 3p frame	3p	100-250	8
3VA52 — 3-pole			8
3VA53 — 2 pole in 3p frame	3p	200-400	10
3VA53 — 3-pole			10
3VA54 — 2-pole in 3P frame	3p	450-600	10
3VA54 — 3-pole			10
3VA55 — 2-pole in 3P frame	3p	600-800	10
3VA55 — 3-pole			10
ETU - Electronic Trip*			
3VA61 — 3 pole	3p	16-150	8
3VA62 — 3-pole	3p	40-250	8
3VA63 — 3-pole	3p	100-400	10
3VA64 — 3-pole	3p	160-600	10
3VA65 — 3-pole	3p	600-800	10

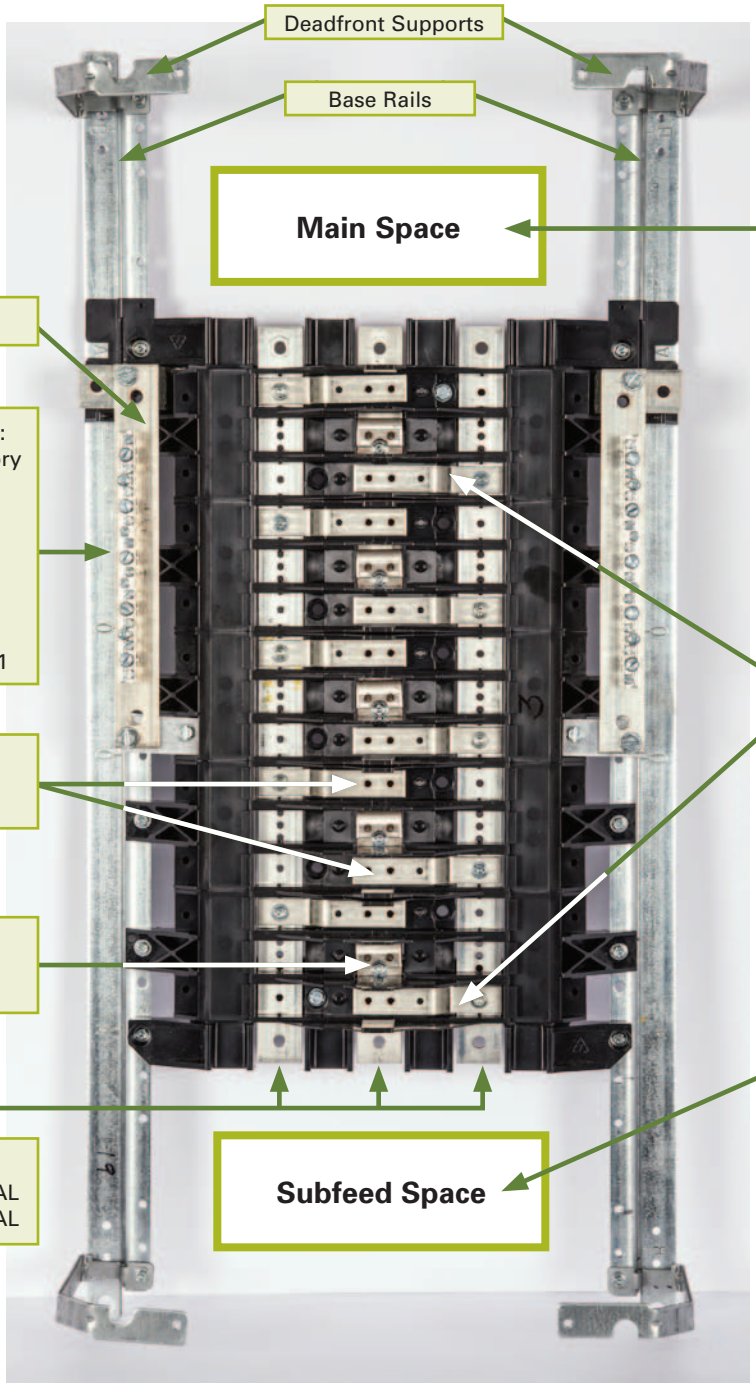
* 100% rated may have reduced ranges



3VA Breaker Configuration Information in Panelboards

P1 Lighting Panelboard

P1 interiors have unit space setup for either:
A) BL/BQD type of breakers only
or
B) xGB and 3VA41 breakers only in same interior
(no BL/BQD allowed)



P1 Lighting Panel

P1 Main Space can include:

Main Lugs: 250A or 400A max
Main Breaker Types:
- 100A max BL/BQD
- 125A max. xGB/3VA41 (TMTU) (horiz. mount)
- 225A max. QR series (horizontal mount)
- 250A max. 3VA52/61/62 (TMTU/ETU) (horiz. mount)
- 400A max. 3VA53/63 (TMTU/ETU) (vertical mount)

(ETU = Electronic Trip Unit)
(TMTU = Thermal Magnetic Trip Unit)
Note: ED, FD, xGB and JD will no longer be selectable in COMPAS by late 2021.

P1 Branch Breakers — Small Frame only:

a) Standard BL/BQD interior unit space will only accept 100A max. BL/BQD series breakers. 15A and 20A BT and BTH Tandem series also available.
b) xGB/3VA41 interior unit space will only accept 125A max. xGB series or 3VA41 TMTU series breakers.
c) BSPD Surge Protective Devices can be added in any location that accepts either BL/BQD or xGB/3VA41 series.
Note: always check dead front labels for allowed breakers.

P1 Subfeed Space offering:

Feed-thru Lugs:
A) 250A or 400A
B) Surge Protection Devices (SPD)
TPS4 01 and TPS4 L1 series of Surge protection is available
C) Subfeed Breakers: (Horizontal only):
- 250A max. 3VA52 TMTU
- 250A max. 3VA61/62 ETU
- 225A max. QR
- 100A max. BL/BQD
- 125A max. xGB/3VA41

Note: xGB, ED & FD will no longer be selectable in COMPAS by late 2021.

3VA Breaker Configuration Information in Panelboards

P2 Lighting Panel General information *Minimum enclosure size: 20" wide x 5.75" deep*

P2 Lighting Panelboard

P2 interiors have flexible unit space setup for Multiple Branch Breaker Types and many different Main/Subfeed options.

Neutral Cross Strap
– positions for mounting Neutral lugs
– many different configurations are used.

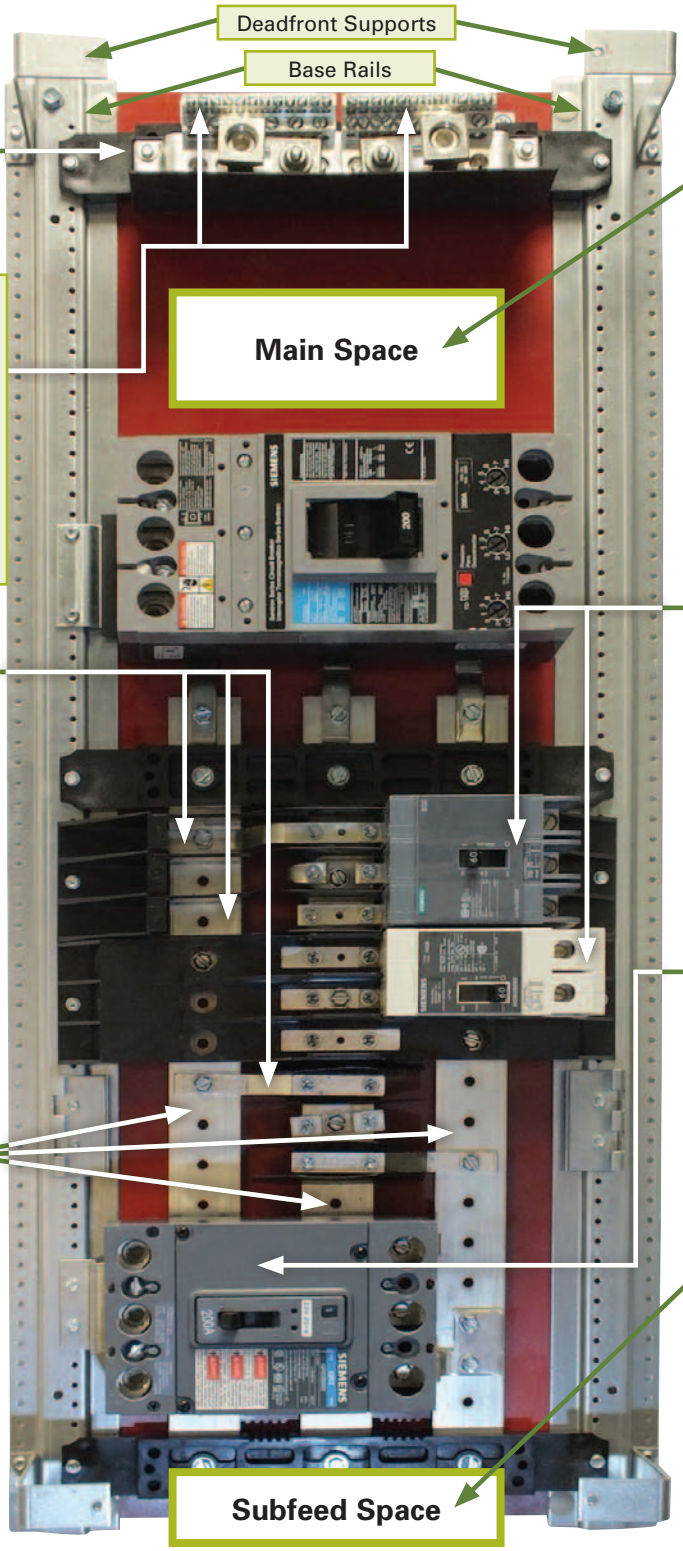
Neutral Strips:
1/0 max. cable size
"Step lugs" and other varieties depending on the configuration
– factory assembled only
– optional field installable kits may be added in near future to include 2/0 capability.

Various Branch Breaker Strap Kits installed

Field installable Neutral Extension can be added for AFCI/GFCI when needed due to short pigtails. It can be positioned anywhere along the base rail on either side.
kit # **BNKP2EX1**

BNKP2EX1

Bus Bars:
250A max
- CU or AL
600A max
- CU or AL



P2 Lighting Panel

P2 Main Space can include:

Main Lugs: 125A, 250A, 400A or 600A
==> also Subfeed Lugs: 125A, 250A or 400A

Main Breaker Types:
- 100A max. BL/BQD or 125A max. 3VA41 225A max. QR
- 250A max. 3VA52/61/62 (TMTU/ETU) (horiz. mount)
- 400A max. 3VA53/63 (TMTU/ETU) (vertical mount)
- 600A max. 3VA54/64 (TMTU/ETU) (vertical mount)

Note: xGB, ED, FD, JD and LD will no longer be selectable in Factory assembled panels by late 2021

(ETU = Electronic Trip Unit)
(TMTU = Thermal Magnetic Trip Unit)

P2 Branch Breakers — Small Frame:

a) 100A max. BL/BQD series
b) 15A and 20A BT Tandem series
c) Various AFCI/GFCI series
d) 125A max. 3VA41 series
- 3VA41 TMTU is 480V Delta capable

Note: BSPD Surge Protective Devices can be added in any location that accepts either BL/BQD or xGB/3VA41 series.
Note: ED, xGB & GB2 series will no longer be selectable in COMPAS late 2021.

P2 Branch Breakers — Large Frame (3 max.)

1) 225A max QR series
2) 150A max 3VA61 ETU single mount
3) 250A max 3VA52/62 TMTU/ETU single mount

(Max. count of QR frame and all 3VA52/61/62 frame breakers is three total per panel)

Subfeed Space offering:

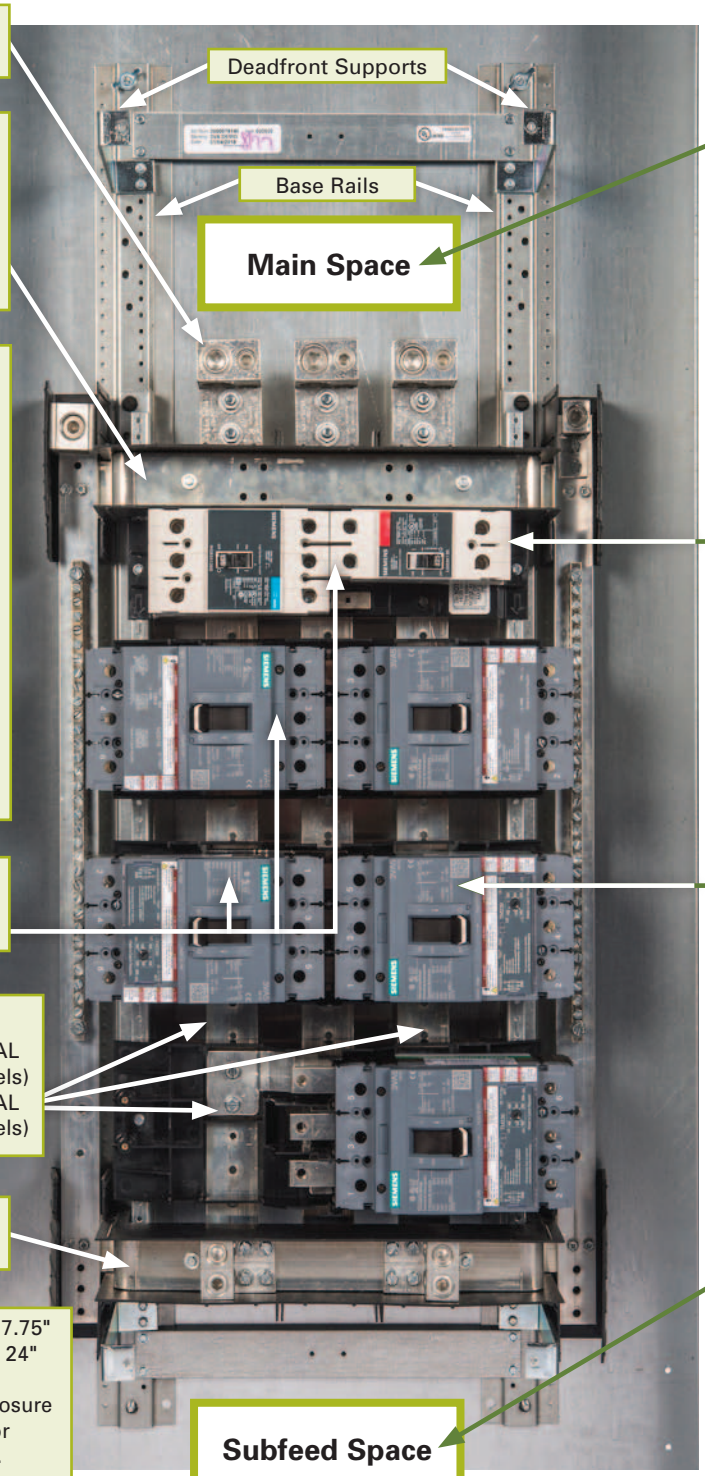
Feed-thru Lugs:
A) 125A, 250A, 400A, or 600A
B) Surge Protection Devices (SPD)
– TPS4 01 and TPS4 L1 series of Surge protection is available
C) Subfeed Breakers:
– No 3VA subfeed available

(FD and JD subfeed options are being removed)

3VA Breaker Configuration Information in Panelboards

P3 Lighting Panelboard

P3 interiors have flexible unit space setup for Multiple Branch Breaker Types and many different Main/Subfeed options.



Main Lugs shown installed

Neutral Cross Straps
– top and bottom
– positions for mounting up to four 350 kcmil Neutral lugs ea.

Neutral Strips:
– New 2/0 neutral strips allow for 125A AL cable in many positions.
– New neutral configurations also allow for many more small neutrals to support BT breakers.
– New Neutral risers in Larger configurations also allow 350kcmil Neutral connections to be added.

Various Branch Breaker Strap Kits installed

Bus Bars:
400A max. - CU or AL - (250A & 400A panels)
800A max. - CU or AL - (600A & 800A panels)

Neutral Cross Straps

P3 interiors require 7.75" box depth and min. 24" wide enclosure.
– New 30" wide enclosure is now available for some applications.
– Many Strap kits are shared with P2

P3 Lighting Panel

P3 Main Space can include:

Main Lugs: 250A, 400A, 600A or 800A
==> also Subfeed Lugs: 250A or 400A

Main Breaker Types:
- 250A max. 3VA52/61/62 (TMTU/ETU) (horizontal mount)
- 400A max. 3VA53/63 (TMTU/ETU) (horizontal or vertical mount)
- 600A max. 3VA54/64 (TMTU/ETU) (horizontal or vertical mount)
- 800A max. 3VA55/65 (TMTU/ETU) (vertical mount) now available.

Note: FD, JD and LD will no longer be selectable in Factory assembled panels by late 2021

(ETU = Electronic Trip Unit)
(TMTU = Thermal Magnetic Trip Unit)

P3 Branch Breakers — Small Frame:

a) 100A max. BL/BQD series
b) 15A and 20A BT Tandem series
c) Various AFCI/GFCI series
d) 125A max. 3VA41 series
– 3VA41 TMTU is 480V Delta capable

Note: BSPD Surge Protective Devices can be added in any location that accepts either BL/BQD or xGB/3VA41 series.

Note: ED, xGB & GB2 series will no longer be selectable in COMPAS late 2021.

P3 Branch Breakers — Large Frame (6 max. 24" wide, 12 max. 30" wide)

1) 225A max. QR series (twin Mount)
2) 250A max. 3VA52 series (twin Mount)
3) 250A max. 3VA52/62 series & 150A 3VA61 series (single Mount) TMTU/ETU

Max. limit of 6 total of these breakers in a 24" wide enclosure.

Max. limit 12 total in 30" wide enclosure. (unit space available limits max.)

New 3VA offering has many field installable accessories available.

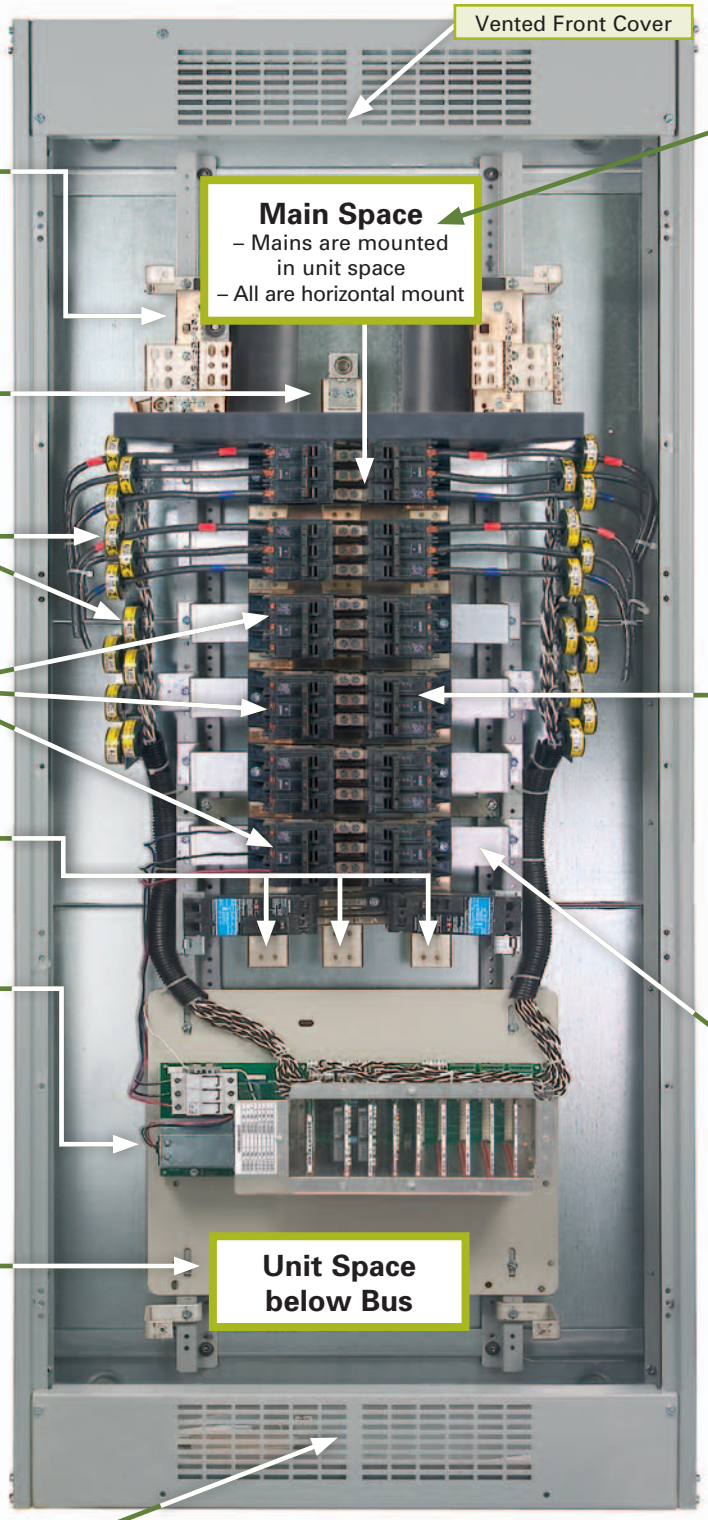
P3 Subfeed Space offering:

Feed-thru Lugs:
A) 225A/250A, 400A, 600A or 800A
B) Surge Protection Devices (SPD)
– TPS4 01 and TPS4 L1 series of Surge protection is available
C) Subfeed Breakers: (only 1 allowed):
– 400A max. 3VA53/63 (TMTU/ETU)
– (Horiz Single Mount only - 24" wide)
or
– 600A max. 3VA54/64 (TMTU/ETU)
– (Horiz Single Mount only - 30" wide enclosure required)
(FD and JD subfeed options are being removed)

3VA Breaker Configuration Information in Panelboards

P4 Power Panel

P4 interiors have unit space setup for Multiple Branch Breaker Types and many different Main Breaker options.



Neutral Connections*
– at Main end of panel
– Various configurations.
* Depends on breaker selection - Consult factory for details

Main Lugs shown installed

SEM3 CT's installed

Various Branch Breaker Strap Kits installed

Bus Bars: CU or AL

SEM3 Controller and Meter module racks

P4 Unit Space below Bus: There is no actual Subfeed space.- All Space is unit space, but at the bottom below the bus, there can be additional components such as the SEM3 devices shown.

Vented Front Cover

P4 Power Panel

P4 Main Space can include:

Main Lugs: 400A, 600A, 800A, 1000A or 1200A

Main Breaker Types: (horizontal mount)
- 400A max. 3VA53/63
- 600A max. 3VA54/64
- 800A max. 3VA55/65 (TMTU/ETU)

(ETU = Electronic Trip Unit)
(TMTU = Thermal Magnetic Trip Unit)

P4 Branch Breakers — Small Frame:

a) 100A max BL series (10, 22, 65 kaic @ 240V)
b) 100A max BQD series (14 kaic @ 480/277V)
c) 125A max. 3VA41 TMTU (480V delta capable)

P4 Branch Breakers — Large Frame (6 max.)

1) 150A 3VA61 ETU Series
2) 225A max QR series
3) 250A max 3VA52/62 TMTU/ETU
4) 400A max. 3VA53/63 (TMTU/ETU)
5) 400A max JD and VL-JG series
6) 600A max. 3VA54/64 (TMTU/ETU)

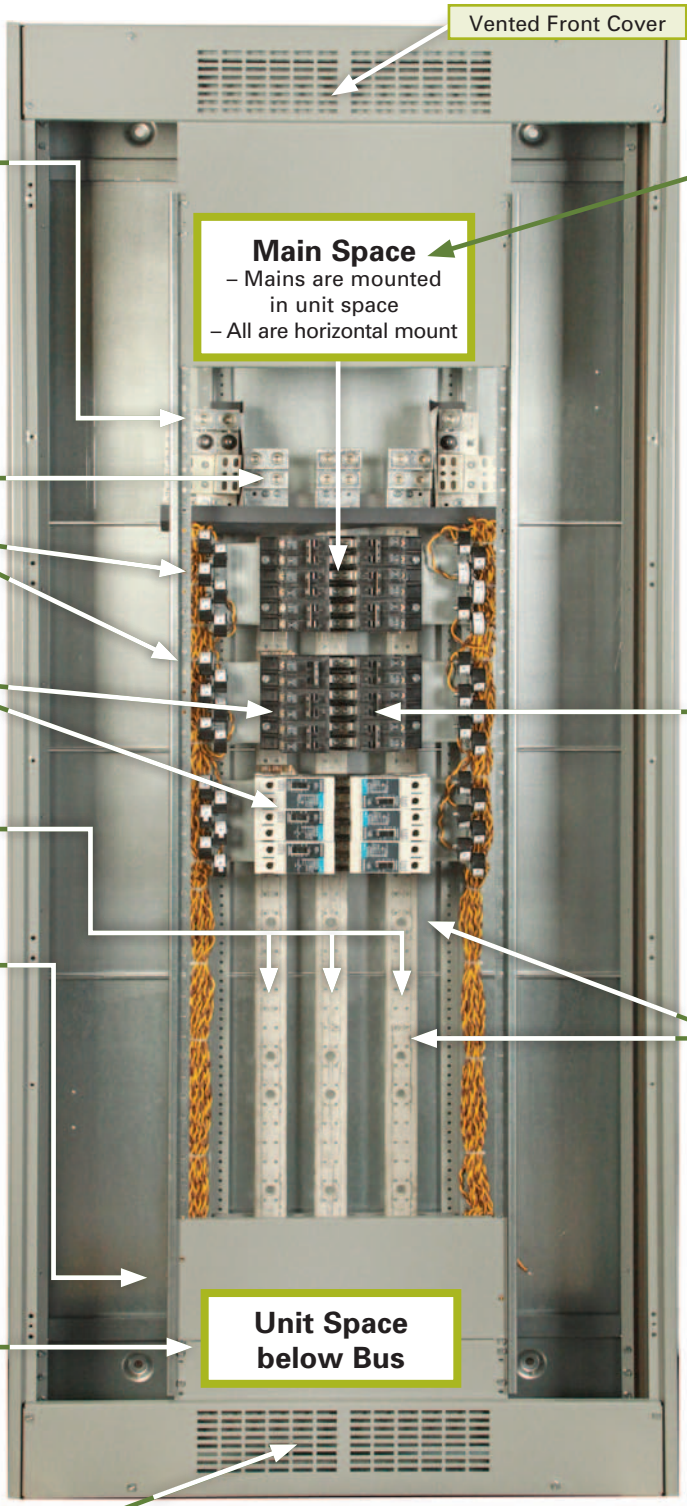
(See Strap Kit Table page 11-104).

P4 Standard Box Width is 32" W ==> this is being replaced by 32" W Skinny P5

3VA Breaker Configuration Information in Panelboards

P5 Power Panel

P5 interiors have unit space setup for Multiple Branch Breaker Types and many different Main Breaker options.



Neutral Connections*
– at Main end of panel
– Various configurations.
* Depends on breaker selection - Consult factory for details

Main Lugs shown installed

SEM3 CT's installed

Various Branch Breaker Strap Kits installed

Bus Bars: CU or AL

SEM3 Controller and Meter module racks

P5 Unit Space below Bus: There is no actual Subfeed space.- All Space is unit space, but at the bottom below the bus, there can be additional components such as the SEM3 devices shown.

P5 Power Panel

P5 Main Space can include:

Main Lugs: 800A, 1000A or 1200A

Main Breaker Types: (horizontal mount)
- 800A max. 3VA55/65 (TMTU/ETU). Also, 1000A 3VA66 in same frame size.
- 800A max. Sentron MD, and VL-MG Series
- 1200A max. Sentron ND and VL-NG series

(ETU = Electronic Trip Unit)
(TMTU = Thermal Magnetic Trip Unit)

P5 Branch Breakers — Small Frame:

a) 100A max BL series
b) 100A max BQD series
c) 125A max. 3VA41 TMTU (480V delta capable)

P5 Branch Breakers — Large Frame (6 max.)

1) 150A 3VA61 ETU Series
2) 225A max QR series
3) 250A max 3VA52/62 TMTU/ETU
4) 400A max. 3VA53/63 (TMTU/ETU)
5) 600A max. 3VA54/64 (TMTU/ETU)
6) 800A max. 3VA55/65 (TMTU/ETU) Also, 1000A 3VA66 in same frame size.
7) 1200A max. ND and VL-NG series

(See Strap Kit Table page 11-118).

P5 Standard Box Width is 38" W

3VA6 ETU – "Electronic Trip" versions of 3VA Breakers used in Panelboards

- See following pages for internal accessory pocket locations available in TMTU & ETU versions
- Standard part number shown for base trip unit - other variations available shown in lower chart
- Breakers shown do not include lugs - lugs are ordered separately as needed per application
- COMPAS will allow various Lug configurations based on Panel Type and mounting location

Connector Kits for 3 Pole 3VA6 series Breakers

One Connector Kit is required for each breaker when panel mounted.
NOTE: Use 3-pole kit for 2-pole applications

Connector Kits	AL body for AL or CU Cable	CU body - copper wire only
3VA61/62	3VA9243-0JB12 (1) 350kcmil max.	3VA9243-0JD12 (1) 350kcmil max.
3VA63/64	3VA9373-0JB13 (1) 600kcmil max.	3VA9373-0JD13 (1) 600kcmil max.
	3VA9473-0JJ23 (2) 600kcmil max.	3VA9473-0JE23 (2) 600kcmil max.
3VA65 or 3VA66	3VA9673-0JJ43 (4) 500kcmil max.	3VA9673-0JL43 (4) 500kcmil max.
	3VA9673-0JB32 (3) 400kcmil max.	3VA9673-0JK32 (3) 400kcmil max.
	3VA9573-0JB23 (2) 600kcmil max.	na
	3VA9673-0JJ24 (2) 750kcmil max.	na

3 Pole 3VA6 series Breakers without connectors

Standard in COMPAS includes ETU350 LSI Trip (I_r and I_i are adjustable)			ETU350 LSI included	ETU350 LSI included	ETU350 LSI included	ETU350 LSI included
kA ratings @ 50/60 Hz			3-pole	3-pole	3-pole	3-pole
240 VAC kAIC rating ==>			100	100	200	200
480Y / 277 VAC kAIC rating ==>			35	65	100	150
480 VAC kAIC rating ==>			35	65	100	150
600Y / 347 VAC kAIC rating ==>			18	22	35	50
600 VAC kAIC rating ==>			18	22	35	50
250 VDC kAIC rating ==>			na	na	na	na
amps	**Adj. I_r**	**code**				
3VA61			**UL Type Code / MB code ==>**	**MDAE / W2**	**HDAE / W3**	**CDAE / W4**	**LDAE① / W5**
40	16-40	40	3VA61 3P breaker w/trip	**3VA6140-5HN31-0AA0**	**3VA6140-6HN31-0AA0**	**3VA6140-7HN31-0AA0**	**3VA6140-8HN31-0AA0**
100	40-100	10	3VA61 3P breaker w/trip	**3VA6110-5HN31-0AA0**	**3VA6110-6HN31-0AA0**	**3VA6110-7HN31-0AA0**	**3VA6110-8HN31-0AA0**
150	60-150	15	3VA61 3P breaker w/trip	**3VA6115-5HN31-0AA0**	**3VA6115-6HN31-0AA0**	**3VA6115-7HN31-0AA0**	**3VA6115-8HN31-0AA0**
3VA62			**UL Type Code / MB code ==>**	**MFAE / WA**	**HFAE / WB**	**CFAE / WC**	**LFAE① / WD**
100	40-100	10	3VA62 3P breaker w/trip	**3VA6210-5HN31-0AA0**	**3VA6210-6HN31-0AA0**	**3VA6210-7HN31-0AA0**	**3VA6210-8HN31-0AA0**
250	100-250	25	3VA62 3P breaker w/trip	**3VA6225-5HN31-0AA0**	**3VA6225-6HN31-0AA0**	**3VA6225-7HN31-0AA0**	**3VA6225-8HN31-0AA0**
3VA63			**UL Type Code / MB code ==>**	**MJAE / WE**	**HJAE / WF**	**CJAE / WG**	**LJAE① / WH**
250	100-250	25	3VA63 3P breaker w/trip	**3VA6325-5HN31-0AA0**	**3VA6325-6HN31-0AA0**	**3VA6325-7HN31-0AA0**	**3VA6325-8HN31-0AA0**
400	160-400	40	3VA63 3P breaker w/trip	**3VA6340-5HN31-0AA0**	**3VA6340-6HN31-0AA0**	**3VA6340-7HN31-0AA0**	**3VA6340-8HN31-0AA0**
3VA63 MCS			**UL Type Code / MB code ==>**	**na**	**na**	**CJAE / WG**	**na**
400	na	40	3VA63 3P Molded Case Sw	non adj. short circuit release I_i ==>		**3VA6340-1BB31-0AA0**	na
3VA64			**UL Type Code / MB code ==>**	**MLAE / WJ**	**HLAE / WK**	**CLAE / WL**	**LLAE① / WM**
400	160-400	40	3VA64 3P breaker w/trip	**3VA6440-5HN31-0AA0**	**3VA6440-6HN31-0AA0**	**3VA6440-7HN31-0AA0**	**3VA6440-8HN31-0AA0**
600	240-600	60	3VA64 3P breaker w/trip	**3VA6460-5HN31-0AA0**	**3VA6460-6HN31-0AA0**	**3VA6460-7HN31-0AA0**	**3VA6460-8HN31-0AA0**
3VA64 MCS			**UL Type Code / MB code ==>**	**na**	**na**	**CLAE / WL**	**na**
600	na	60	3VA64 3P Molded Case Sw	non adj. short circuit release I_i ==>		**3VA6460-1BB31-0AA0**	na
3VA65			**UL Type Code / MB code ==>**	**MMAE / WN**	**HMAE / WO**	**CMAE / WP**	**na**
600	240-600	60	3VA65 3P breaker w/trip	**3VA6560-5HN42-0AA0**	**3VA6560-6HN42-0AA0**	**3VA6560-7HN42-0AA0**	na
800	320-800	80	3VA65 3P breaker w/trip	**3VA6580-5HN42-0AA0**	**3VA6580-6HN42-0AA0**	**3VA6580-7HN42-0AA0**	na
3VA66			**UL Type Code / MB code ==>**	**MMNAE / WR**	**HMNAE / WS**	**CMNAE / WT**	**na**
1000	400-1000	60	3VA66 3P breaker w/trip	**3VA6610-5HN32-0AA0**	**3VA6610-6HN32-0AA0**	**3VA6610-7HN32-0AA0**	na

Electronic Trip Units for 3VA61/62/63/64 series (COMPAS may require special Mod for some options)

Part # Differences	Alternate Trips available	I_r	I_i	I_{sd}	I_g	Ground Fault type	Display and/or Metering Included
...HL31-0AA0	ETU320 LI	I_r	I_i	—	—	na	no
...HM31-0AA0	ETU330 LIG	I_r	I_i	—	I_g	Adjustable Protection (b)	no
...JP31-0AA0	ETU550 LSI with Display only	I_r	I_i	I_{sd}	—	na	yes - Display only
...JT31-0AA0	ETU556 LSI(G) with Display only	I_r	I_i	I_{sd}	I_g	Adjustable Alarm (a)	yes - Display only
...JQ31-0AA0	ETU560 LSI(G) with Display only	I_r	I_i	I_{sd}	I_g	Adjustable Protection (b)	yes - Display only
...KL31-0AA0	ETU820 LI w/Display & Metering	I_r	I_i	—	—	na	yes - both
...KM31-0AA0	ETU830 LIG w/Display & Metering	I_r	I_i	—	I_g	Adjustable Protection (b)	yes - both
...KP31-0AA0	ETU850 LSI w/Display & Metering	I_r	I_i	I_{sd}	—	na	yes - both
...KT31-0AA0	ETU856 LSI(G) w/Display & Metering	I_r	I_i	I_{sd}	I_g	Adjustable Alarm (a)	yes - both
...KQ31-0AA0	ETU860 LSIG w/Display & Metering	I_r	I_i	I_{sd}	I_g	Adjustable Protection (b)	yes - both

Trip Unit Feature description and notes	
I_r	Adjustable Overload Protection
I_i	Adjustable Instantaneous Short-Circuit Protection
I_{sd}	Adjustable Delayed Short-Circuit Protection
I_g	Either (a) Adjustable Ground-Fault Alarm or (b) Adjustable Ground-Fault Protection (not both)

① The "L" series of UL type codes may not be available for use in all Panelboard types - check COMPAS for verification.

3VA6 100% rated ETU – "Electronic Trip" versions of 3VA Breakers in Panelboards

- See following pages for internal accessory pocket locations available in TMTU & ETU versions
- Breakers shown do not include lugs - lugs are ordered separately as needed per application
- COMPAS will allow various Lug configurations based on Panel Type and mounting location

Connector Kits for 3 Pole 3VA6 series Breakers

100% rated (Requires CU Connectors or rated lugs with 90C cable)

One Connector Kit is required for each breaker when panel mounted. Use 3-pole kits

Connector Kits	AL body for AL or CU Cable	CU body - copper wire only
3VA61/62	not allowed	3VA9243-0JD12 (1) 350kcmil max.
3VA63/64	not allowed	3VA9373-0JD13 (1) 600kcmil max.
	not allowed	3VA9473-0JE23 (2) 600kcmil max.
3VA65 /66 90C cable only	3VA9673-0JJ43 (4) 500kcmil max.	3VA9673-0JK32 (3) 400kcmil max.
	3VA9673-0JJ24 (2) 750kcmil max.	na

3 Pole 3VA6 series Breakers – 100% rated – without connectors

Standard in COMPAS includes ETU350 LSI Trip (I_r and I_i are adjustable)				ETU350 LSI included	ETU350 LSI included	ETU350 LSI included	ETU350 LSI included
kA ratings @ 50/60 Hz				3-pole	3-pole	3-pole	3-pole
			240 VAC kAIC rating ==>	100	100	200	200
			480Y / 277 VAC kAIC rating ==>	35	65	100	150
			480 VAC kAIC rating ==>	35	65	100	150
			600Y / 347 VAC kAIC rating ==>	18	22	35	50
			600 VAC kAIC rating ==>	18	22	35	50
			250 VDC kAIC rating ==>	na	na	na	na
amps	**Adj. I_r**	**code**					
3VA61			**UL Type Code / MB code ==>**	**MDAE / W2**	**HDAE / W3**	**CDAE / W4**	**LDAE① / W5**
40	16-40	40	3VA61 3P breaker w/trip	**3VA6140-5HN31-2AA0**	**3VA6140-6HN31-2AA0**	**3VA6140-7HN31-2AA0**	**3VA6140-8HN31-2AA0**
100	40-100	10	3VA61 3P breaker w/trip	**3VA6110-5HN31-2AA0**	**3VA6110-6HN31-2AA0**	**3VA6110-7HN31-2AA0**	**3VA6110-8HN31-2AA0**
150	60-150	15	3VA61 3P breaker w/trip	**3VA6115-5HN31-2AA0**	**3VA6115-6HN31-2AA0**	**3VA6115-7HN31-2AA0**	**3VA6115-8HN31-2AA0**
3VA62			**UL Type Code / MB code ==>**	**MFAE / WA**	**HFAE / WB**	**CFAE / WC**	**LFAE① / WD**
100	40-100	10	3VA62 3P breaker w/trip	**3VA6210-5HN31-2AA0**	**3VA6210-6HN31-2AA0**	**3VA6210-7HN31-2AA0**	**3VA6210-8HN31-2AA0**
250	100-250	25	3VA62 3P breaker w/trip	**3VA6225-5HN31-2AA0**	**3VA6225-6HN31-2AA0**	**3VA6225-7HN31-2AA0**	**3VA6225-8HN31-2AA0**
3VA63			**UL Type Code / MB code ==>**	**MJAE / WE**	**HJAE / WF**	**CJAE / WG**	**LJAE① / WH**
250	100-250	25	3VA63 3P breaker w/trip	**3VA6325-5HN31-2AA0**	**3VA6325-6HN31-2AA0**	**3VA6325-7HN31-2AA0**	**3VA6325-8HN31-2AA0**
3VA64			**UL Type Code / MB code ==>**	**MLAE / WJ**	**HLAE / WK**	**CLAE / WL**	**LLAE① / WM**
400	160-400	40	3VA64 3P breaker w/trip	**3VA6440-5HN31-2AA0**	**3VA6440-6HN31-2AA0**	**3VA6440-7HN31-2AA0**	**3VA6440-8HN31-2AA0**
3VA65			**UL Type Code / MB code ==>**	**MMAE / WN**	**HMAE / WO**	**CMAE / WP**	**na**
600	240-600	60	3VA65 3P breaker w/trip	**3VA6560-5HN32-2AA0**	**3VA6560-6HN32-2AA0**	**3VA6560-7HN32-2AA0**	na

Electronic Trip Units available for 3VA61/62/63/64 series

(COMPAS may require special Mods for some options)

Part # Differences	Alternate Trips available	I_r	I_i	I_{sd}	I_g	Ground Fault type	Display and/or Metering Included
...HL31-2AA0	ETU320 LI	I_r	I_i	—	—	na	no
...HM31-2AA0	ETU330 LIG	I_r	I_i	—	I_g	Adjustable Protection (b)	no
...JP31-2AA0	ETU550 LSI with Display only	I_r	I_i	I_{sd}	—	na	yes - Display only
...JT31-2AA0	ETU556 LSI(G) with Display only	I_r	I_i	I_{sd}	I_g	Adjustable Alarm (a)	yes - Display only
...JQ31-2AA0	ETU560 LSIG with Display only	I_r	I_i	I_{sd}	I_g	Adjustable Protection (b)	yes - Display only
...KL31-2AA0	ETU820 LI w/Display & Metering	I_r	I_i	—	—	na	yes - both
...KM31-2AA0	ETU830 LIG w/Display & Metering	I_r	I_i	—	I_g	Adjustable Protection (b)	yes - both
...KP31-2AA0	ETU850 LSI w/Display & Metering	I_r	I_i	I_{sd}	—	na	yes - both
...KT31-2AA0	ETU856 LSI(G) w/Display & Metering	I_r	I_i	I_{sd}	I_g	Adjustable Alarm (a)	yes - both
...KQ31-2AA0	ETU860 LSIG w/Display & Metering	I_r	I_i	I_{sd}	I_g	Adjustable Protection (b)	yes - both

Trip Unit Feature description and notes	
I_r	Adjustable Overload Protection
I_i	Adjustable Instantaneous Short-Circuit Protection
I_{sd}	Adjustable Delayed Short-Circuit Protection
I_g	Either (a) Adjustable Ground-Fault Alarm or (b) Adjustable Ground-Fault Protection (not both)

3VA 100% rated breakers have restrictions as to where and how they can be used in Panels. COMPAS will configure where allowed.

Ex. #1: 3VA62 frame breakers are NOT allowed in any P1 panels, although 3VA61 will be allowed in the 250A 3VA 52/62 Main/subfeed Strap kits. (3VA61 max. trip is 150A)

Ex. #2: 3VA63 frame has a 250A max. trip in a 400A frame, but must mount in a 400A Panel minimum with a 400A Strap Kits. These 400A strap kits can be either Horiz. or Vert. mount — depending on the panel configuration but are limited to 250A trip. (so treated as a 400A breaker but with 250A trip)

Ex. #3: 3VA64 frame has a 400A max. trip in a 600A frame, but must mount in a 600A Panel minimum with a 600A Strap Kits. These 600A strap kits can be either Horiz. or Vert. mount — depending on the panel configuration but are limited to 400A trip. (so treated as a 600A breaker but with 400A trip)

① The "L" series of UL type codes may not be available for use in all Panelboard types - check COMPAS for verification.

3VA6 Communications modules and related accessories for field installation①

- COMPAS may not allow some of these kits for selection - Special Mod may be required.
- Some items may not be installed in panels and may be shipped separate from Panels even if Configured in COMPAS

Description	Quick reference code	Voltage AC max or range	Voltage DC max or range	Accessory Catalog Number②	Qty of slots in breaker req'd	Max. Qty. per Brkr	Position to install for 3VA61/62 and 3VA63/64 only									
							Left side pocket					Right side pocket				
Group②				Pocket reference # ==>			25	24	23	22	21	11	12	13	14	15
COM Modules and Cables																
Communications Module - 3VA61/62	COM060	n/a	24VDC	**3VA9177-0TB10**	4	1						X				
Communications Module - 3VA63/64	COM060	n/a	24VDC	**3VA9377-0TB10**	4	1						X				
COM060-to-T-Connector ext. cable 0.4 m	COM060-to-T	n/a	n/a	**3VA9987-0TF20**	n/a	n/a	External									
COM060-to-T-Connector ext. cable 0.8 m	COM060-to-T	n/a	n/a	**3VA9987-0TF10**	n/a	n/a	External									
COM060 T-Connector (spare part)	T-Connector	n/a	n/a	**3VA9987-0TG10**	n/a	n/a	External									
Terminal Resistor	TermRes	n/a	n/a	**3VA9987-0TE10**	n/a	n/a	External									
COM800 Breaker Data Server = max 8	COM800	n/a	n/a	**3VA9977-0TA10**	n/a	n/a	P4/P5 only and SWBD									
COM100 Breaker Data Server = max 1	COM100	n/a	n/a	**3VA9977-0TA20**	n/a	n/a	P4/P5 only and SWBD									
COM100-800 extension cable 0.4 m	COM ext Cable	n/a	n/a	**3VA9987-0TC10**	n/a	n/a	P4/P5 only and SWBD									
COM100-800 extension cable 1 m	COM ext Cable	n/a	n/a	**3VA9987-0TC20**	n/a	n/a	P4/P5 only and SWBD									
COM100-800 extension cable 2 m	COM ext Cable	n/a	n/a	**3VA9987-0TC30**	n/a	n/a	P4/P5 only and SWBD									
COM100-800 extension cable 4 m	COM ext Cable	n/a	n/a	**3VA9987-0TC40**	n/a	n/a	P4/P5 only and SWBD									
7KM Pac Profibus DP Expansion Module	7KMAB	n/a	n/a	**7KM9300-0AB01-0AA0**	n/a	n/a	P4/P5 only and SWBD									
7KM PAC Switched Ethernet Profinet Expansion Module	7KMAE	n/a	n/a	**7KM9300-0AE01-0AA0**	n/a	n/a	P4/P5 only and SWBD									
7KM PAC RS485 Modbus RTU Exp. Module	7KMAM	n/a	n/a	**7KM9300-0AM00-0AA0**	n/a	n/a	P4/P5 only and SWBD									
DAS, Displays and Related Components																
DAS Module "Maintenance Mode Box"	MMB300	n/a	n/a	**3VA9977-0UF10**	n/a	n/a	P4/P5 only and SWBD									
EFB300 - External function box	EFB300	n/a	n/a	**3VA9977-0UA10**	n/a	n/a	P4/P5 only and SWBD									
Display - DSP800	DSP800	n/a	n/a	**3VA9977-0TD10**	n/a	n/a	P4/P5 only and SWBD									
1.5m Connecting cable for MMB300/EFB300	MMB/EFB 1.5m	n/a	n/a	**3VA9987-UB10**	n/a	n/a	P4/P5 only and SWBD									
3.0m Connecting cable for MMB300/EFB300	MMB/EFB 3.0m	n/a	n/a	**3VA9987-UB20**	n/a	n/a	P4/P5 only and SWBD									
Motor Operators																
M0320 Motor Operator - 24-60V DC	M0320	n/a	24-60V	**3VA9447-0HA10**	n/a	1	P4/P5 only and SWBD									
M0320 Motor Operator - 110-230V AC or 110-250V DC	EFB300	n/a	n/a	**3VA9977-0UA10**	n/a	1	P4/P5 only and SWBD									
Misc. External Components and Cables																
Neutral Current Transformer, In = 25-150A	NCT150	n/a	n/a	**3VA9077-0NA10**	n/a	n/a	P4/P5 only and SWBD									
Neutral Current Transformer, In= 160-350A	NCT350	n/a	n/a	**3VA9177-0NA10**	n/a	n/a	P4/P5 only and SWBD									
Neutral Current Transformer, In = 400-630A	NCT630	n/a	n/a	**3VA9377-0NA10**	n/a	n/a	P4/P5 only and SWBD									
TD300 - Activation & Trip Box	TD300	n/a	n/a	**3VA9977-0MA10**	n/a	n/a	P4/P5 only and SWBD									
TD500 - Test device	TD500	n/a	n/a	**3VA9977-0MB10**	n/a	n/a	P4/P5 only and SWBD									
TD500 External Power Supply	TD500EX	n/a	n/a	**3VA9987-0MX10**	n/a	n/a	P4/P5 only and SWBD									
Cable to connect to TD500 from 3VA6	TD500CBL	n/a	n/a	**3VA9977-0MY10**	n/a	n/a	P4/P5 only and SWBD									
Special Connector Lugs with Control Wire Tap																
#14-3/0 AL wire connector Kit③ w/con-tap	AL-lug	3VA51		**3VA9133-0JG11**	125A TMTU only		Line or Load end as needed									
#14-2/0 CU wire connector Kit③ w/con-tap	CU-lug	3VA51		**3VA9133-0JK11**	125A TMTU only		Line or Load end as needed									
#6-350 kcmil AL wire conn. Kit③ w/con-tap	AL-lug	3VA52		**3VA9233-0JG12**	250A TMTU only		Line or Load end as needed									
#6-350 kcmil CU wire conn. Kit③ w/con-tap	CU-lug	3VA52		**3VA9233-0JK12**	250A TMTU only		Line or Load end as needed									
#14-1/0 AL wire connector Kit③ w/con-tap	AL-lug	3VA61		**3VA9143-0JG11**	150A ETU only		Line or Load end as needed									
#6-350 kcmil AL wire conn. Kit③ w/con-tap	AL-lug	3VA61/62		**3VA9243-0JG12**	150/250A ETU only		Line or Load end as needed									
#14-1/0 CU wire connector Kit③ w/con-tap	CU-lug	3VA61		**3VA9143-0JK11**	150A ETU only		Line or Load end as needed									
#6-350 kcmil CU wire conn. Kit③ w/con-tap	CU-lug	3VA61/62		**3VA9243-0JK12**	150/250A ETU only		Line or Load end as needed									
#1-600 kcmil AL wire conn. Kit③ w/con-tap	AL-lug	3VA53/63		**3VA9373-0JG13**	400A TMTU or ETU		Line or Load end as needed									
#1-600 kcmil CU wire conn. Kit③ w/con-tap	CU-lug	3VA53/63		**3VA9373-0JK13**	400A TMTU or ETU		Line or Load end as needed									
2/0-600 kcmil AL 2 port conn. Kit③ w/con-tap	AL-2lug	3VA54/64		**3VA9473-0JC23**	600A TMTU or ETU		Line or Load end as needed									

① Some accessories may be "field install only" if not available in COMPAS, or not available for use in Panelboards

② Many accessories available for the 3VA5 and 3VA6 breakers may not be suitable for use in Lighting Panelboards.
- COMPAS allows only options that are available for factory assembly.
Some accessories listed above may not be available for all Panelboard configurations.

③ Lugs are NOT supplied with loose breaker as standard - must order seperately or configure in COMPAS to include lugs.
- Factory assembled panels include AL lugs as standard without control wire tap, CU lugs are optional. These kits include 3 connectors and hardware.

3VA41 1 Pole Breakers

3VA41 TMTU 125A max. - breakers include AL lugs installed

TMTU frame	Type	kA code	Type ref	MB code
3VA41	SEAB	S	EAB	V1
3VA41	MEAB	M	EAB	V2
3VA41	HEAB	H	EAB	V3

1 Pole 3VA41

with AL connectors included – for 14 AWG to 3/0 - CU/AL cable

For copper, order kit 3VA9133-0JD10 (15A-40A) or 3VA9133-0JD11 (45A-125A)

3VA41
1-Pole Description

Note: No accessory pockets available – see 1-pole in 2-pole frame

UL Type Code ==>	SEAB	MEAB	HEAB
Panelboard MB codes ==>	V1	V2	V3
120 VAC kAIC rating ==>	65	85	150①
277 VAC kAIC rating ==>	25	35	65
347 VAC kAIC rating ==>	14	18	25
125 VDC kAIC rating② ==>	14	25	30
IC family @ 277 VAC ==>	25kA	35kA	65kA
FTFM Trip included ==>	TM210	TM210	TM210

Amps	Code	Description	Catalog Number 1-pole	Catalog Number 1-pole	Catalog Number 1-pole
15	95	3VA41 1P breaker w/TM210	3VA4195-4ED14-0AA0	3VA4195-5ED14-0AA0	3VA4195-6ED14-0AA0
20	20	3VA41 1P breaker w/TM210	3VA4120-4ED14-0AA0	3VA4120-5ED14-0AA0	3VA4120-6ED14-0AA0
25	25	3VA41 1P breaker w/TM210	3VA4125-4ED14-0AA0	3VA4125-5ED14-0AA0	3VA4125-6ED14-0AA0
30	30	3VA41 1P breaker w/TM210	3VA4130-4ED14-0AA0	3VA4130-5ED14-0AA0	3VA4130-6ED14-0AA0
35	35	3VA41 1P breaker w/TM210	3VA4135-4ED14-0AA0	3VA4135-5ED14-0AA0	3VA4135-6ED14-0AA0
40	40	3VA41 1P breaker w/TM210	3VA4140-4ED14-0AA0	3VA4140-5ED14-0AA0	3VA4140-6ED14-0AA0
45	45	3VA41 1P breaker w/TM210	3VA4145-4ED14-0AA0	3VA4145-5ED14-0AA0	3VA4145-6ED14-0AA0
50	50	3VA41 1P breaker w/TM210	3VA4150-4ED14-0AA0	3VA4150-5ED14-0AA0	3VA4150-6ED14-0AA0
60	60	3VA41 1P breaker w/TM210	3VA4160-4ED14-0AA0	3VA4160-5ED14-0AA0	3VA4160-6ED14-0AA0
70	70	3VA41 1P breaker w/TM210	3VA4170-4ED14-0AA0	3VA4170-5ED14-0AA0	3VA4170-6ED14-0AA0
80	80	3VA41 1P breaker w/TM210	3VA4180-4ED14-0AA0	3VA4180-5ED14-0AA0	3VA4180-6ED14-0AA0
90	90	3VA41 1P breaker w/TM210	3VA4190-4ED14-0AA0	3VA4190-5ED14-0AA0	3VA4190-6ED14-0AA0
100	10	3VA41 1P breaker w/TM210	3VA4110-4ED14-0AA0	3VA4110-5ED14-0AA0	3VA4110-6ED14-0AA0
110	11	3VA41 1P breaker w/TM210	3VA4111-4ED14-0AA0	3VA4111-5ED14-0AA0	3VA4111-6ED14-0AA0
125	12	3VA41 1P breaker w/TM210	3VA4112-4ED14-0AA0	3VA4112-5ED14-0AA0	3VA4112-6ED14-0AA0

1 Pole in 2-Pole Frame 3VA41

with AL connectors included

For copper, order kit 3VA9133-0JD10 (15A-40A) or 3VA9133-0JD11 (45A-125A)

3VA41
1-Pole in 2-Pole Description

Note: Only 3 Left side Accessory pockets available

amps	code	Description	Catalog Number 1-Pole in 2-Pole Frame	Catalog Number 1-Pole in 2-Pole Frame	Catalog Number 1-Pole in 2-Pole Frame
15	95	3VA41 1P breaker w/TM210	3VA4195-4ED54-0AA0	3VA4195-5ED54-0AA0	3VA4195-6ED54-0AA0
20	20	3VA41 1P breaker w/TM210	3VA4120-4ED54-0AA0	3VA4120-5ED54-0AA0	3VA4120-6ED54-0AA0
25	25	3VA41 1P breaker w/TM210	3VA4125-4ED54-0AA0	3VA4125-5ED54-0AA0	3VA4125-6ED54-0AA0
30	30	3VA41 1P breaker w/TM210	3VA4130-4ED54-0AA0	3VA4130-5ED54-0AA0	3VA4130-6ED54-0AA0
35	35	3VA41 1P breaker w/TM210	3VA4135-4ED54-0AA0	3VA4135-5ED54-0AA0	3VA4135-6ED54-0AA0
40	40	3VA41 1P breaker w/TM210	3VA4140-4ED54-0AA0	3VA4140-5ED54-0AA0	3VA4140-6ED54-0AA0
45	45	3VA41 1P breaker w/TM210	3VA4145-4ED54-0AA0	3VA4145-5ED54-0AA0	3VA4145-6ED54-0AA0
50	50	3VA41 1P breaker w/TM210	3VA4150-4ED54-0AA0	3VA4150-5ED54-0AA0	3VA4150-6ED54-0AA0
60	60	3VA41 1P breaker w/TM210	3VA4160-4ED54-0AA0	3VA4160-5ED54-0AA0	3VA4160-6ED54-0AA0
70	70	3VA41 1P breaker w/TM210	3VA4170-4ED54-0AA0	3VA4170-5ED54-0AA0	3VA4170-6ED54-0AA0
80	80	3VA41 1P breaker w/TM210	3VA4180-4ED54-0AA0	3VA4180-5ED54-0AA0	3VA4180-6ED54-0AA0
90	90	3VA41 1P breaker w/TM210	3VA4190-4ED54-0AA0	3VA4190-5ED54-0AA0	3VA4190-6ED54-0AA0
100	10	3VA41 1P breaker w/TM210	3VA4110-4ED54-0AA0	3VA4110-5ED54-0AA0	3VA4110-6ED54-0AA0
110	11	3VA41 1P breaker w/TM210	3VA4111-4ED54-0AA0	3VA4111-5ED54-0AA0	3VA4111-6ED54-0AA0
125	12	3VA41 1P breaker w/TM210	3VA4112-4ED54-0AA0	3VA4112-5ED54-0AA0	3VA4112-6ED54-0AA0

① Although some breakers have a kAIC rating above 100 kAIC – many panels are limited to 100 kAIC or less.

② DC Voltage panels are limited by various factors. These DC ratings apply to the Breaker only.

3VA41 2 and 3 Pole Breakers

3VA41 TMTU 125A max. - breakers include AL lugs installed

TMTU frame	Type	kA code	Type ref	MB code
3VA41	SEAB	S	EAB	V1
3VA41	MEAB	M	EAB	V2
3VA41	HEAB	H	EAB	V3

3 Pole 3VA41

3VA41
3-Pole Description

with AL connectors included – for 14 AWG to 3/0 - CU/AL cable
For copper, order kit 3VA9133-0JD10 (15A-40A) or 3VA9133-0JD11 (45A-125A)

UL Type Code ==>	SEAB	MEAB	HEAB
Panelboard MB codes ==>	V1	V2	V3
Ratings	3-pole I 2-pole	3-pole I 2-pole	3-pole I 2-pole
240 VAC kAIC rating ==>	65 I 65	85 I 85	150① I 150①
480Y / 277 VAC kAIC rating ==>	25 I 25	35 I 35	65 I 65
480 VAC kAIC rating ==>	25 I 25	35 I 35	65 I 65
600Y / 347 VAC kAIC rating ==>	14 I 14	18 I 18	25 I 25
600 VAC kAIC rating ==>	na I na	na I na	na I na
250 VDC kAIC rating② ==>	na I 50	na I 85	na I 100
IC family @ 277 VAC ==>	25kA	35kA	65kA
FTFM Trip included ==>	TM210	TM210	TM210

Amps	Code	Description	Catalog Number 3-pole	Catalog Number 3-pole	Catalog Number 3-pole
15	95	3VA41 3P breaker w/TM210	3VA4195-4ED34-0AA0	3VA4195-5ED34-0AA0	3VA4195-6ED34-0AA0
20	20	3VA41 3P breaker w/TM210	3VA4120-4ED34-0AA0	3VA4120-5ED34-0AA0	3VA4120-6ED34-0AA0
25	25	3VA41 3P breaker w/TM210	3VA4125-4ED34-0AA0	3VA4125-5ED34-0AA0	3VA4125-6ED34-0AA0
30	30	3VA41 3P breaker w/TM210	3VA4130-4ED34-0AA0	3VA4130-5ED34-0AA0	3VA4130-6ED34-0AA0
35	35	3VA41 3P breaker w/TM210	3VA4135-4ED34-0AA0	3VA4135-5ED34-0AA0	3VA4135-6ED34-0AA0
40	40	3VA41 3P breaker w/TM210	3VA4140-4ED34-0AA0	3VA4140-5ED34-0AA0	3VA4140-6ED34-0AA0
45	45	3VA41 3P breaker w/TM210	3VA4145-4ED34-0AA0	3VA4145-5ED34-0AA0	3VA4145-6ED34-0AA0
50	50	3VA41 3P breaker w/TM210	3VA4150-4ED34-0AA0	3VA4150-5ED34-0AA0	3VA4150-6ED34-0AA0
60	60	3VA41 3P breaker w/TM210	3VA4160-4ED34-0AA0	3VA4160-5ED34-0AA0	3VA4160-6ED34-0AA0
70	70	3VA41 3P breaker w/TM210	3VA4170-4ED34-0AA0	3VA4170-5ED34-0AA0	3VA4170-6ED34-0AA0
80	80	3VA41 3P breaker w/TM210	3VA4180-4ED34-0AA0	3VA4180-5ED34-0AA0	3VA4180-6ED34-0AA0
90	90	3VA41 3P breaker w/TM210	3VA4190-4ED34-0AA0	3VA4190-5ED34-0AA0	3VA4190-6ED34-0AA0
100	10	3VA41 3P breaker w/TM210	3VA4110-4ED34-0AA0	3VA4110-5ED34-0AA0	3VA4110-6ED34-0AA0
110	11	3VA41 3P breaker w/TM210	3VA4111-4ED34-0AA0	3VA4111-5ED34-0AA0	3VA4111-6ED34-0AA0
125	12	3VA41 3P breaker w/TM210	3VA4112-4ED34-0AA0	3VA4112-5ED34-0AA0	3VA4112-6ED34-0AA0
		Molded Case Switch			
100	10	3VA41 3P MCS 65 kA	na	na	3VA4110-1BB31-0AA0

2 Pole 3VA41 with AL connectors included

3VA41
2-Pole Description

For copper, order kit 3VA9133-0JD10 (15A-40A) or 3VA9133-0JD11 (45A-125A)
Note: Only 3 Left side Accessory pockets available

Amps	Code	Description	Catalog Number 2-pole	Catalog Number 2-pole	Catalog Number 2-pole
15	95	3VA41 2P breaker w/TM210	3VA4195-4ED24-0AA0	3VA4195-5ED24-0AA0	3VA4195-6ED24-0AA0
20	20	3VA41 2P breaker w/TM210	3VA4120-4ED24-0AA0	3VA4120-5ED24-0AA0	3VA4120-6ED24-0AA0
25	25	3VA41 2P breaker w/TM210	3VA4125-4ED24-0AA0	3VA4125-5ED24-0AA0	3VA4125-6ED24-0AA0
30	30	3VA41 2P breaker w/TM210	3VA4130-4ED24-0AA0	3VA4130-5ED24-0AA0	3VA4130-6ED24-0AA0
35	35	3VA41 2P breaker w/TM210	3VA4135-4ED24-0AA0	3VA4135-5ED24-0AA0	3VA4135-6ED24-0AA0
40	40	3VA41 2P breaker w/TM210	3VA4140-4ED24-0AA0	3VA4140-5ED24-0AA0	3VA4140-6ED24-0AA0
45	45	3VA41 2P breaker w/TM210	3VA4145-4ED24-0AA0	3VA4145-5ED24-0AA0	3VA4145-6ED24-0AA0
50	50	3VA41 2P breaker w/TM210	3VA4150-4ED24-0AA0	3VA4150-5ED24-0AA0	3VA4150-6ED24-0AA0
60	60	3VA41 2P breaker w/TM210	3VA4160-4ED24-0AA0	3VA4160-5ED24-0AA0	3VA4160-6ED24-0AA0
70	70	3VA41 2P breaker w/TM210	3VA4170-4ED24-0AA0	3VA4170-5ED24-0AA0	3VA4170-6ED24-0AA0
80	80	3VA41 2P breaker w/TM210	3VA4180-4ED24-0AA0	3VA4180-5ED24-0AA0	3VA4180-6ED24-0AA0
90	90	3VA41 2P breaker w/TM210	3VA4190-4ED24-0AA0	3VA4190-5ED24-0AA0	3VA4190-6ED24-0AA0
100	10	3VA41 2P breaker w/TM210	3VA4110-4ED24-0AA0	3VA4110-5ED24-0AA0	3VA4110-6ED24-0AA0
110	11	3VA41 2P breaker w/TM210	3VA4111-4ED24-0AA0	3VA4111-5ED24-0AA0	3VA4111-6ED24-0AA0
125	12	3VA41 2P breaker w/TM210	3VA4112-4ED24-0AA0	3VA4112-5ED24-0AA0	3VA4112-6ED24-0AA0

① Although some breakers have a kAIC rating above 100 kAIC – many panels are limited to 100 kAIC or less.

② DC Voltage panels are limited by various factors. These DC ratings apply to the Breaker only.

Accessories for 3VA41/51 TMTU 125A max.

- 6 slots max. are available - 3 on each side of trip handle.\
- COMPAS will allow only modules that will be allowed in panel being configured.
- Note: 3VA41/51 2-pole and "1-pole in 2-pole frame" have only 3 Left side Accessory pockets available.

	Description	Quick reference code	Voltage AC max or range	Voltage DC max or range	Accessory Catalog Number②	Qty of slots in breaker req'd	Max. Qty. per Brkr	Position to install for 3VA41/51 only					
								Left side			Right side		
Accessories					Pocket reference # ==>			23	22	21	11	12	13
Internal Accessories Left side only Only one per breaker allowed	Shunt trip left -10	STL-10	n/a	12	**3VA9978-0BL10**	3	1	X					
	Shunt trip left -20	STL-20	380...600	n/a	**3VA9978-0BL20**	3	1	X					
	Shunt trip left -30	STL-30	24	24...30	**3VA9978-0BL30**	3	1	X					
	Shunt trip left -31	STL-31	48...60	n/a	**3VA9978-0BL31**	3	1	X					
	Shunt trip left -32	STL-32	110...127	110...127	**3VA9978-0BL32**	3	1	X					
	Shunt trip left -33	STL-33	208...277	220...250	**3VA9978-0BL33**	3	1	X					
	Shunt trip flexible -20	STF-20	24	n/a	**3VA9978-0BA20**	3	1	X					
	Shunt trip flexible -21	STF-21	48...60	n/a	**3VA9978-0BA21**	3	1	X					
	Shunt trip flexible -22	STF-22	110...127	n/a	**3VA9978-0BA22**	3	1	X					
	Shunt trip flexible -23	STF-23	208...277	n/a	**3VA9978-0BA23**	3	1	X					
	Shunt trip flexible -24	STF-24	380...500	n/a	**3VA9978-0BA24**	3	1	X					
	Shunt trip flexible -25	STF-25	600	n/a	**3VA9978-0BA25**	3	1	X					
	Undervoltage release -10	UVR-10	n/a	12	**3VA9978-0BB10**	3	1	X					
	Undervoltage release -11	UVR-11	n/a	24	**3VA9978-0BB11**	3	1	X					
	Undervoltage release -12	UVR-12	n/a	48	**3VA9978-0BB12**	3	1	X					
	Undervoltage release -14	UVR-14	n/a	125...127	**3VA9978-0BB14**	3	1	X					
	Undervoltage release -16	UVR-16	n/a	250	**3VA9978-0BB16**	3	1	X					
	Undervoltage release -20	UVR-20	24	n/a	**3VA9978-0BB20**	3	1	X					
	Undervoltage release -24	UVR-24	120...127	n/a	**3VA9978-0BB24**	3	1	X					
	Undervoltage release -25	UVR-25	208...230	n/a	**3VA9978-0BB25**	3	1	X					
	Undervoltage release -27	UVR-27	440...480	n/a	**3VA9978-0BB27**	3	1	X					
	Universal release (Shunt trip & UVR)	UNI-11	n/a	12vdc	**3VA9978-0BD11**	3	1	X					
	Universal release (Shunt trip & UVR)	UNI-12	n/a	24vdc	**3VA9978-0BD12**	3	1	X					
	Universal release (Shunt trip & UVR)	UNI-13	n/a	48vdc	**3VA9978-0BD13**	3	1	X					
Internal Accessories Right side or left side options	Auxiliary switch - standard	AUX_HQ	240VAC	n/a	**3VA9978-0AA12**	1	6	X	X	X	X	X	X
	Leading Chg-over SW - standard	LCS_HQ	240VAC	n/a	**3VA9978-0AA22**	1	1				X		
	Trip alarm (bell alarm) - standard	TAS_HQ	240VAC	250VDC	**3VA9978-0AB12**	1	4		X	X	X	X	
	Auxiliary switch - High capacity①	AUX_HP	600VAC	n/a	**3VA9978-0AA11**	2	2	X			X		
									X			X	
	Leading Chg-over SW - High Cap①	LCS_HP	600VAC	250VDC	**3VA9978-0AA21**	1	1				X		
	Trip alarm (bell alarm) - High Cap①	TAS_HP	600VAC	250VDC	**3VA9978-0AB11**	2	2		X		X		
	Auxiliary switch - electronic④	AUX_HQ_el	24VAC	24VDC	**3VA9978-0AA13**	1	6	X	X	X	X	X	X
	Leading Chg-over SW - electronic④	LCS_HQ_el	24VAC	n/a	**3VA9978-0AA23**	1	1				X		
	Trip alarm (bell alarm) - electronic④	TAS_HQ_el	24VAC	24VDC	**3VA9978-0AB13**	1	4		X	X	X	X	
External② Accessories and field kits	#14-3/0 AL wire connector Kit③	AL-lug	n/a	n/a	**3VA9133-0JB11**	n/a	n/a	Included w/ 3VA41 only					
	#14-2/0 CU wire connector Kit③	CU-lug	n/a	n/a	**3VA9133-0JD11**	n/a	n/a	Load end as required					
	Compression Lugs (future offering - details tbd)	tbd	n/a	n/a	**tbd**	n/a	n/a	availability and usage locations tbd					
	3VA41 only Padlock Device	tbd	n/a	n/a	**3VA9038-0LB11**	n/a	n/a	for 1p, 2p or 3p					
	3VA41 2" Handle tie Device	tbd	n/a	n/a	**3VA9032-0LB20**	n/a	n/a	2" wide for 1p only					
	3VA41 3" Handle tie Device	tbd	n/a	n/a	**3VA9033-0LB20**	n/a	n/a	3" wide for 1p only					

① High capacity/power (HP) max. Amps load capacity is higher than standed module (.55A up to 6.0A) depends on Voltage and AC/DC requirements - see SpeedFax section 7 or 3VA documentation for more information.

② Many accessories available for the 3VA4, 3VA5 and 3VA6 breakers may not be suitable for use in Lighting Panelboards.
– COMPAS allows options that are available. All accessories listed above can be used with Panelboards in general, but there will be exceptions.

③ Lugs are NOT supplied with loose breaker – must order separately or configured in COMPAS to include lugs. 3VA41 is an exception – AL connectors are included as standard – Factory assembled panels include AL lugs as standard, CU lugs are optional. These kits include 3 connectors and hardware

④ Special electronically-compatible (el) variants are available for applications that require the auxiliary switch signals to be linked to low voltage systems.
– May need special Mod in COMPAS.

3VA52 2 and 3 Pole Breakers

3VA52 TMTU 250A max.

- Part numbers shown are without Lugs.
- Standard Lug kits used in Panelboards are shown in tables below.

TMTU frame	Type	kA code	Type ref	MB code
3VA52	MFAS	M	FAS	VA
3VA52	HFAS	H	FAS	VB
3VA52	CFAS	C	FAS	VC

3 Pole 3VA52 without connectors

The default for Panelboard in COMPAS will be AL 1-conductor connectors:
for AL order one 3VA9233-0JB12 (accepts (1) #6 AWG-350kcmil AL/CU conductor)
for CU order one 3VA9233-0JD12 (accepts (1) #6 AWG-350kcmil CU only conductor)

3VA52
3-Pole Description

UL Type Code ==>	MFAS	HFAS	CFAS
Panelboard MB codes ==>	VA	VB	VC
Ratings	3-pole I 2-pole	3-pole I 2-pole	3-pole I 2-pole
240 VAC kAIC rating ==>	85 I 85	100 I 100	200① I 200①
480Y / 277 VAC kAIC rating ==>	35 I 35	65 I 65	100 I 100
480 VAC kAIC rating ==>	35 I 35	65 I 65	100 I 100
600Y / 347 VAC kAIC rating ==>	18 I 18	25 I 25	35 I 35
600 VAC kAIC rating ==>	18 I 18	25 I 25	35 I 35
250 VDC kAIC rating ==>	na I 50	na I 85	na I 100
IC family @ 480 VAC ==>	35kA	65kA	100kA
FTAM Trip included ==>	TM230	TM230	TM230

Amps	Code	Description	Catalog Number 3-pole	Catalog Number 3-pole	Catalog Number 3-pole
100	10	3VA52 3P breaker w/TM230	**3VA5210-5EC31-0AA0**	**3VA5210-6EC31-0AA0**	**3VA5210-7EC31-0AA0**
110	11	3VA52 3P breaker w/TM230	**3VA5211-5EC31-0AA0**	**3VA5211-6EC31-0AA0**	**3VA5211-7EC31-0AA0**
125	12	3VA52 3P breaker w/TM230	**3VA5212-5EC31-0AA0**	**3VA5212-6EC31-0AA0**	**3VA5212-7EC31-0AA0**
150	15	3VA52 3P breaker w/TM230	**3VA5215-5EC31-0AA0**③	**3VA5215-6EC31-0AA0**	**3VA5215-7EC31-0AA0**
175	17	3VA52 3P breaker w/TM230	**3VA5217-5EC31-0AA0**	**3VA5217-6EC31-0AA0**	**3VA5217-7EC31-0AA0**
200	20	3VA52 3P breaker w/TM230	**3VA5220-5EC31-0AA0**③	**3VA5220-6EC31-0AA0**③	**3VA5220-7EC31-0AA0**
225	22	3VA52 3P breaker w/TM230	**3VA5222-5EC31-0AA0**③	**3VA5222-6EC31-0AA0**	**3VA5222-7EC31-0AA0**
250	25	3VA52 3P breaker w/TM230	**3VA5225-5EC31-0AA0**③	**3VA5225-6EC31-0AA0**③	**3VA5225-7EC31-0AA0**
		Molded Case Switch		**HFAS**	**CFAS**
100	10	3VA52 3P MCS 100kA	na	na	**3VA5210-1BB31-0AA0**
150	15	3VA52 3P MCS 65kA/100kA	na	**3VA5215-0BB31-0AA0**	**3VA5215-1BB31-0AA0**
250	25	3VA52 3P MCS 65kA/100kA	na	**3VA5225-0BB31-0AA0**	**3VA5225-1BB31-0AA0**

2 Pole 3VA52 (in 3-Pole frame) without connectors

The default for Panelboard in COMPAS will be AL 1-conductor connectors:
for AL order one 3VA9233-0JB12 (accepts (1) #6 AWG-350kcmil AL/CU conductor)
for CU order one 3VA9233-0JD12 (accepts (1) #6 AWG-350kcmil CU only conductor)

3VA52
2-Pole Description

Amps	Code	Description	Catalog Number 2-pole	Catalog Number 2-pole	Catalog Number 2-pole
100	10	3VA52 2P breaker w/TM230	**3VA5210-5EC61-0AA0**	**3VA5210-6EC61-0AA0**	**3VA5210-7EC61-0AA0**
110	11	3VA52 2P breaker w/TM230	**3VA5211-5EC61-0AA0**	**3VA5211-6EC61-0AA0**	**3VA5211-7EC61-0AA0**
125	12	3VA52 2P breaker w/TM230	**3VA5212-5EC61-0AA0**	**3VA5212-6EC61-0AA0**	**3VA5212-7EC61-0AA0**
150	15	3VA52 2P breaker w/TM230	**3VA5215-5EC61-0AA0**	**3VA5215-6EC61-0AA0**	**3VA5215-7EC61-0AA0**
175	17	3VA52 2P breaker w/TM230	**3VA5217-5EC61-0AA0**	**3VA5217-6EC61-0AA0**	**3VA5217-7EC61-0AA0**
200	20	3VA52 2P breaker w/TM230	**3VA5220-5EC61-0AA0**	**3VA5220-6EC61-0AA0**	**3VA5220-7EC61-0AA0**
225	22	3VA52 2P breaker w/TM230	**3VA5222-5EC61-0AA0**	**3VA5222-6EC61-0AA0**	**3VA5222-7EC61-0AA0**
250	25	3VA52 2P breaker w/TM230	**3VA5225-5EC61-0AA0**	**3VA5225-6EC61-0AA0**	**3VA5225-7EC61-0AA0**
		Molded Case Switch		**HFAS**	**CFAS**
100	10	3VA52 2P MCS 100kA	na	na	**3VA5210-1BB61-0AA0**
150	15	3VA52 2P MCS 65kA/100kA	na	**3VA5215-0BB61-0AA0**	**3VA5215-1BB61-0AA0**
250	25	3VA52 2P MCS 65kA/100kA	na	**3VA5225-0BB61-0AA0**	**3VA5225-1BB61-0AA0**

① Although some breakers have a kAIC rating above 100 kAIC – many panels are limited to 100 kAIC or less.

② DC Voltage panels are limited by various factors. These DC ratings apply to the Breaker only.

③ P1 has Main Breaker kits available with these 3VA52 sizes — see page 11-14.

Accessories for 3VA52, 3VA61 and 3VA62 breakers

- 3VA52 TMTU 250A max. and 3VA61 ETU 150A max. and 3VA62 ETU 250A max.
- 6 - 8 slots max. are available – 4 on each side of trip handle.
- COMPAS will allow only modules that will be allowed in panel being configured.

	Description	Quick reference code	Voltage AC max or range	Voltage DC max or range	Accessory Catalog Number②	Qty of slots in breaker req'd	Max. Qty. per Brkr	Position to install for 3VA52/61/62 only							
								Left side pocket				Right side pocket			
Accessories					Pocket reference # ==>			24	23	22	21	11	12	13	14
Internal Accessories Left side only Only one per breaker allowed	Shunt trip left -10	STL-10	n/a	12	**3VA9978-0BL10**	3	1		X						
	Shunt trip left -20	STL-20	380...600	n/a	**3VA9978-0BL20**	3	1		X						
	Shunt trip left -30	STL-30	24	24...30	**3VA9978-0BL30**	3	1		X						
	Shunt trip left -31	STL-31	48...60	n/a	**3VA9978-0BL31**	3	1		X						
	Shunt trip left -32	STL-32	110...127	110...127	**3VA9978-0BL32**	3	1		X						
	Shunt trip left -33	STL-33	208...277	220...250	**3VA9978-0BL33**	3	1		X						
	Shunt trip flexible -20	STF-20	24	n/a	**3VA9978-0BA20**	3	1		X			Right side opt. 3VA6 only			
	Shunt trip flexible -21	STF-21	48...60	n/a	**3VA9978-0BA21**	3	1		X						
	Shunt trip flexible -22	STF-22	110...127	n/a	**3VA9978-0BA22**	3	1		X						
	Shunt trip flexible -23	STF-23	208...277	n/a	**3VA9978-0BA23**	3	1		X						
	Shunt trip flexible -24	STF-24	380...500	n/a	**3VA9978-0BA24**	3	1		X						
	Shunt trip flexible -25	STF-25	600	n/a	**3VA9978-0BA25**	3	1		X						
	Undervoltage release -10	UVR-10	n/a	12	**3VA9978-0BB10**	3	1		X						
	Undervoltage release -11	UVR-11	n/a	24	**3VA9978-0BB11**	3	1		X						
	Undervoltage release -12	UVR-12	n/a	48	**3VA9978-0BB12**	3	1		X						
	Undervoltage release -14	UVR-14	n/a	125...127	**3VA9978-0BB14**	3	1		X						
	Undervoltage release -16	UVR-16	n/a	250	**3VA9978-0BB16**	3	1		X						
	Undervoltage release -20	UVR-20	24	n/a	**3VA9978-0BB20**	3	1		X						
	Undervoltage release -24	UVR-24	120...127	n/a	**3VA9978-0BB24**	3	1		X						
	Undervoltage release -25	UVR-25	208...230	n/a	**3VA9978-0BB25**	3	1		X						
	Undervoltage release -27	UVR-27	440...480	n/a	**3VA9978-0BB27**	3	1		X						
	Universal release (Shunt trip & UVR)	UNI-11	n/a	12vdc	**3VA9978-0BD11**	3	1		X						
	Universal release (Shunt trip & UVR)	UNI-12	n/a	24vdc	**3VA9978-0BD12**	3	1		X						
	Universal release (Shunt trip & UVR)	UNI-13	n/a	48vdc	**3VA9978-0BD13**	3	1		X						
Internal Accessories Right or left side options 3VA52, and 3VA61, 3VA62 (ETU)	Auxiliary switch - standard	AUX_HQ	240VAC	n/a	**3VA9978-0AA12**	1	6	X	X	X	X	X	X	X	X
	Leading Chg-over SW - standard	LCS_HQ	240VAC	n/a	**3VA9978-0AA22**	1	1					X			
	Trip alarm (bell alarm) - standard	TAS_HQ	240VAC	250VDC	**3VA9978-0AB12**	1	4			X	X	X	X		
	Electrical Alarm Switch std. (ETU 0nly)	EAS_HQ	240VAC	250VDC	**3VA9978-0AB22**	1	1								X
	Auxiliary switch - high capacity①	AUX_HP	600VAC	n/a	**3VA9978-0AA11**	2	2	X		X		X		X	
									X				X		
	Leading Chg-over SW - High Cap①	LCS_HP	600VAC	250VDC	**3VA9978-0AA21**	1	1					X			
	Trip alarm (bell alarm) - High Cap①	TAS_HP	600VAC	250VDC	**3VA9978-0AB11**	2	2			X		X			
	Auxiliary switch - electronic④	AUX_HQ_el	24VAC	24VDC	**3VA9978-0AA13**	1	6	X	X	X	X	X	X	X	X
	Leading Chg-over SW - electronic④	LCS_HQ_el	24VAC	n/a	**3VA9978-0AA23**	1	1					X			
	Trip alarm (bell alarm) - electronic④	TAS_HQ_el	24VAC	24VDC	**3VA9978-0AB13**	1	4			X	X	X	X		
	Electrical Alarm Switch electronic④ (ETU 0nly)	EAS_HQ_el	24VAC	24VDC	**3VA9978-0AB23**	1	1								X
	Ronis adapter FOR 3VA63/64	Ronis Adapter	n/a	n/a	**3VA9347-0LF10**	4	1					X			
	Cylinder Lock (type Ronis) Key 1	Ronis Key 1	n/a	n/a	**3VA9980-0VL10**	one per adapter	one per adapter					installs in adapter above			
	Cylinder Lock (type Ronis) Key 2	Ronis Key 2	n/a	n/a	**3VA9980-0VL20**										
	Cylinder Lock (type Ronis) Key 3	Ronis Key 3	n/a	n/a	**3VA9980-0VL30**										
	Cylinder Lock (type Ronis) Key 4	Ronis Key 4	n/a	n/a	**3VA9980-0VL40**										

① High capacity/power (HP) max. Amps load capacity is higher than standed module (.55A up to 6.0A) depends on Voltage and AC/DC requirements - see SpeedFax section 7 or 3VA documentation for more information.

② Many accessories available for the 3VA5 and 3VA6 breakers may not be suitable for use in Lighting Panelboards.
– COMPAS allows options that are available. All accessories listed above can be used with Panelboards in general, but there will be exceptions."

③ Lugs are NOT supplied with loose breaker as standard - must order separately or configure in COMPAS to include lugs.
– Factory assembled panels include AL lugs as standard, CU lugs are optional. These kits include 3 connectors and hardware.

④ Special electronically-compatible (el) variants are available for applications that require the auxiliary switch signals to be linked to low voltage systems.
– May need special Mod in COMPAS.

Accessories for 3VA52, 3VA61 and 3VA62 breakers

- 3VA52 TMTU 250A max. and 3VA61 ETU 150A max. and 3VA62 ETU 250A max.
- 6 - 8 slots max. are available – 4 on each side of trip handle.
- COMPAS will allow only modules that will be allowed in panel being configured.

Accessories (continued)

	Description	Quick reference code	Voltage AC max or range	Voltage DC max or range	Accessory Catalog Number②	Qty of slots in breaker req'd	Max. Qty. per Brkr	Position to install for 3VA52/61/62 only							
								Left side pocket				Right side pocket			
					Pocket reference # ==>			24	23	22	21	11	12	13	14
Internal Accessories 3VA61/62 (ETU) only	Communications Module - 3VA61/62	COM060	n/a	24VDC	**3VA9177-0TB10**	4	1					X			
	COM060-to-T-Connector ext. cable 0.4 m	COM060-to-T	n/a	n/a	**3VA9987-0TF20**	n/a	n/a								
	COM060-to-T-Connector ext. cable 0.8 m	COM060-to-T	n/a	n/a	**3VA9987-0TF10**	n/a	n/a								
	COM060 T-Connector (spare part)	T-Connector	n/a	n/a	**3VA9987-0TG10**	n/a	n/a								

External② Accessories and Field Kits	#6-350 kcmil AL wire connector Kit③	AL-lug	n/a	n/a	**3VA9233-0JB12**	TMTU only		3VA52 Load end as required
	#6-350 kcmil CU wire connector Kit③	CU-lug	n/a	n/a	**3VA9233-0JD12**	TMTU only		3VA52 Load end as required
	#14-1/0 AL wire connector Kit③	AL-lug	n/a	n/a	**3VA9143-0JB11**	ETU only		3VA61/62 Load end as required
	#6-350 kcmil AL wire connector Kit③	AL-lug	n/a	n/a	**3VA9243-0JB12**	ETU only		3VA61/62 Load end as required
	#14-1/0 CU wire connector Kit③	CU-lug	n/a	n/a	**3VA9143-0JD11**	ETU only		3VA61/62 Load end as required
	#6-350 kcmil CU wire connector Kit③	CU-lug	n/a	n/a	**3VA9243-0JD12**	ETU only		3VA61/62 Load end as required
	Compression Lugs (future offering - details tbd)	tbd	n/a	n/a	tbd	n/a	n/a	availability and usage locations tbd
	3VA52/61/62 PadLock Device	tbd	n/a	n/a	**3VA9138-0LB11**	n/a	n/a	
	M0320 Motor Operator - 24-60V DC	M0320	n/a	24-60V	**3VA9277-0HA10**	n/a	1	P4/P5 and SWBD only
	M0320 Motor Operator - 110-230V AC or 110-250V DC	M0320	110-230V	110-250V	**3VA9277-0HA20**	n/a	1	P4/P5 and SWBD only
	COM100 and COM800 modules and cables can be found on Communications Tables with ETU Breakers earlier in this section.							

① High capacity/power (HP) max. Amps load capacity is higher than standed module (.55A up to 6.0A) depends on Voltage and AC/DC requirements - see SpeedFax section 7 or 3VA documentation for more information.

② Many accessories available for the 3VA5 and 3VA6 breakers may not be suitable for use in Lighting Panelboards.
– COMPAS allows options that are available. All accessories listed above can be used with Panelboards in general, but there will be exceptions."

③ Lugs are NOT supplied with loose breaker as standard - must order separately or configure in COMPAS to include lugs.
– Factory assembled panels include AL lugs as standard, CU lugs are optional. These kits include 3 connectors and hardware.

④ Special electronically-compatible (el) variants are available for applications that require the auxiliary switch signals to be linked to low voltage systems.
– May need special Mod in COMPAS.

3VA53 Breakers

3VA53 TMTU 400A max.

- Part numbers shown are without Lugs.
- Standard Lug kits used in Panelboards are shown in tables below.

TMTU frame	Type	kA code	Type ref	MB code
3VA53	MJAS	M	JAS	VE
3VA53	HJAS	H	JAS	VF
3VA53	CJAS	C	JAS	VG

3 Pole 3VA53 without connectors

The default for Panelboard in COMPAS will be AL 2-conductor connectors:
for AL order one 3VA9473-0JJ23 (accepts (2) 2/0-600kcmil AL/CU conductors)
for CU order one 3VA9473-0JE23 (accepts (2) 2/0-600kcmil CU only conductors)
Alternate single conductor lugs are available:
for AL order one 3VA9473-0JB13 (accepts (1) #1 AWG-600kcmil AL/CU conductors)
for CU order one 3VA9473-0JD13 (accepts (1) #1 AWG-600kcmil CU only conductors)

3VA53
3-Pole Description

UL Type Code ==>	MJAS	HJAS	CJAS
Panelboard MB codes ==>	VE	VF	VG
Ratings	3-pole I 2-pole	3-pole I 2-pole	3-pole I 2-pole
240 VAC kAIC rating ==>	85 I 85	100 I 100	200① I 200①
480Y / 277 VAC kAIC rating ==>	35 I 35	65 I 65	100 I 100
480 VAC kAIC rating ==>	35 I 35	65 I 65	100 I 100
600Y / 347 VAC kAIC rating ==>	18 I 18	25 I 25	35 I 35
600 VAC kAIC rating ==>	18 I 18	25 I 25	35 I 35
250 VDC kAIC rating② ==>	na I 50	na I 85	na I 100
IC family @ 480 VAC ==>	35kA	65kA	100kA
FTAM Trip included ==>	TM230	TM230	TM230

Amps	Code	Description	Catalog Number 3-pole	Catalog Number 3-pole	Catalog Number 3-pole
200	20	3VA53 3P breaker w/TM230	**3VA5320-5EC31-0AA0**	**3VA5320-6EC31-0AA0**	**3VA5320-7EC31-0AA0**
225	22	3VA53 3P breaker w/TM230	**3VA5322-5EC31-0AA0**	**3VA5322-6EC31-0AA0**	**3VA5322-7EC31-0AA0**
250	25	3VA53 3P breaker w/TM230	**3VA5325-5EC31-0AA0**	**3VA5325-6EC31-0AA0**	**3VA5325-7EC31-0AA0**
300	30	3VA53 3P breaker w/TM230	**3VA5330-5EC31-0AA0**③	**3VA5330-6EC31-0AA0**③	**3VA5330-7EC31-0AA0**
350	35	3VA53 3P breaker w/TM230	**3VA5335-5EC31-0AA0**	**3VA5335-6EC31-0AA0**	**3VA5335-7EC31-0AA0**
400	40	3VA53 3P breaker w/TM230	**3VA5340-5EC31-0AA0**③	**3VA5340-6EC31-0AA0**③	**3VA5340-7EC31-0AA0**
		Molded Case Switch		**HJAS**	**CJAS**
400	40	3VA53 3P MCS 65kA/100kA	na	**3VA5340-0BB31-0AA0**	**3VA5340-1BB31-0AA0**

2 Pole 3VA53 (in 3-Pole frame) without connectors

The default for Panelboard in COMPAS will be AL 2-conductor connectors:
for AL order one 3VA9473-0JJ23 (accepts (2) 2/0-600kcmil AL/CU conductors)
for CU order one 3VA9473-0JE23 (accepts (2) 2/0-600kcmil CU only conductors)
Alternate single conductor lugs are available:
for AL order one 3VA9473-0JB13 (accepts (1) #1 AWG-600kcmil AL/CU conductors)
for CU order one 3VA9473-0JD13 (accepts (1) #1 AWG-600kcmil CU only conductors)

3VA53
2-Pole Description

Amps	Code	Description	Catalog Number 2-pole	Catalog Number 2-pole	Catalog Number 2-pole
200	20	3VA53 2P breaker w/TM230	**3VA5320-5EC61-0AA0**	**3VA5320-6EC61-0AA0**	**3VA5320-7EC61-0AA0**
225	22	3VA53 2P breaker w/TM230	**3VA5322-5EC61-0AA0**	**3VA5322-6EC61-0AA0**	**3VA5322-7EC61-0AA0**
250	25	3VA53 2P breaker w/TM230	**3VA5325-5EC61-0AA0**	**3VA5325-6EC61-0AA0**	**3VA5325-7EC61-0AA0**
300	30	3VA53 2P breaker w/TM230	**3VA5330-5EC61-0AA0**③	**3VA5330-6EC61-0AA0**	**3VA5330-7EC61-0AA0**
350	35	3VA53 2P breaker w/TM230	**3VA5335-5EC61-0AA0**	**3VA5335-6EC61-0AA0**	**3VA5335-7EC61-0AA0**
400	40	3VA53 2P breaker w/TM230	**3VA5340-5EC61-0AA0**③	**3VA5340-6EC61-0AA0**	**3VA5340-7EC61-0AA0**
		Molded Case Switch		**HJAS**	**CJAS**
400	40	3VA53 2P MCS 65kA/100kA	na	**3VA5340-0BB61-0AA0**	**3VA5340-1BB61-0AA0**

① Although some breakers have a kAIC rating above 100 kAIC – many panels are limited to 100 kAIC or less.

② DC Voltage panels are limited by various factors. These DC ratings apply to the Breaker only.

③ P1 has Main Breaker kits available with these 3VA53 sizes — see page 11-14.

3VA54 Breakers

3VA54 TMTU 600A max.

- Part numbers shown are without Lugs.
- Standard Lug kits used in Panelboards are shown in tables below.

TMTU frame	Type	kA code	Type ref	MB code
3VA54	MLAS	M	LAS	VJ
3VA54	HLAS	H	LAS	VK
3VA54	CLAS	C	LAS	VL

3 Pole 3VA54 without connectors

The default for Panelboard in COMPAS will be AL 2-conductor connectors:
for AL order one 3VA9473-0JJ23 (accepts (2) 2/0-600kcmil AL/CU conductors)
for CU order one 3VA9473-0JE23 (accepts (2) 2/0-600kcmil CU only conductors)
Alternate single conductor lugs are available:
for AL order one 3VA9473-0JB13 (accepts (1) #1 AWG-600kcmil AL/CU conductors)
for CU order one 3VA9473-0JD13 (accepts (1) #1 AWG-600kcmil CU only conductors)

3VA54
3-Pole Description

UL Type Code ==>	MLAS	HLAS	CLAS
Panelboard MB codes ==>	VJ	VK	VL
Ratings	3-pole I 2-pole	3-pole I 2-pole	3-pole I 2-pole
240 VAC kAIC rating ==>	85 I 85	100 I 100	200① I 200①
480Y / 277 VAC kAIC rating ==>	35 I 35	65 I 65	100 I 100
480 VAC kAIC rating ==>	35 I 35	65 I 65	100 I 100
600Y / 347 VAC kAIC rating ==>	18 I 18	25 I 25	35 I 35
600 VAC kAIC rating ==>	18 I 18	25 I 25	35 I 35
250 VDC kAIC rating② ==>	na I 50	na I 85	na I 100
IC family @ 480 VAC ==>	35kA	65kA	100kA
FTAM Trip included ==>	TM230	TM230	TM230

Amps	Code	Description	Catalog Number 3-pole	Catalog Number 3-pole	Catalog Number 3-pole
450	45	3VA54 3P breaker w/TM230	**3VA5445-5EC31-0AA0**	**3VA5445-6EC31-0AA0**	**3VA5445-7EC31-0AA0**
500	50	3VA54 3P breaker w/TM230	**3VA5450-5EC31-0AA0**	**3VA5450-6EC31-0AA0**	**3VA5450-7EC31-0AA0**
600	60	3VA54 3P breaker w/TM230	**3VA5460-5EC31-0AA0**	**3VA5460-6EC31-0AA0**	**3VA5460-7EC31-0AA0**
		Molded Case Switch		**HLAS**	**CLAS**
600	60	3VA54 3P MCS 65kA/100kA	na	**3VA5460-0BB31-0AA0**	**3VA5460-1BB31-0AA0**

2 Pole 3VA54 (in 3-Pole frame) without connectors

The default for Panelboard in COMPAS will be AL 2-conductor connectors:
for AL order one 3VA9473-0JJ23 (accepts (2) 2/0-600kcmil AL/CU conductors)
for CU order one 3VA9473-0JE23 (accepts (2) 2/0-600kcmil CU only conductors)
Alternate single conductor lugs are available:
for AL order one 3VA9473-0JB13 (accepts (1) #1 AWG-600kcmil AL/CU conductors)
for CU order one 3VA9473-0JD13 (accepts (1) #1 AWG-600kcmil CU only conductors)

3VA54
2-Pole Description

Amps	Code	Description	Catalog Number 2-pole	Catalog Number 2-pole	Catalog Number 2-pole
450	45	3VA54 2P breaker w/TM230	**3VA5445-5EC61-0AA0**	**3VA5445-6EC61-0AA0**	**3VA5445-7EC61-0AA0**
500	50	3VA54 2P breaker w/TM230	**3VA5450-5EC61-0AA0**	**3VA5450-6EC61-0AA0**	**3VA5450-7EC61-0AA0**
600	60	3VA54 2P breaker w/TM230	**3VA5460-5EC61-0AA0**	**3VA5460-6EC61-0AA0**	**3VA5460-7EC61-0AA0**
		Molded Case Switch		**HLAS**	**CLAS**
600	60	3VA54 2P MCS 65kA/100kA	na	**3VA5460-0BB61-0AA0**	**3VA5460-1BB61-0AA0**

① Although some breakers have a kAIC rating above 100 kAIC – many panels are limited to 100 kAIC or less.

② DC Voltage panels are limited by various factors. These DC ratings apply to the Breaker only.

3VA55 Breakers

3VA55 TMTU 800A max.

- Part numbers shown are without Lugs.
- Standard Lug kits used in Panelboards are shown in tables below.

TMTU frame	Type	kA code	Type ref	MB code
3VA55	MMAS	M	MAS	VN
3VA55	HMAS	H	MAS	VO
3VA55	CMAS	C	MAS	VP

3 Pole 3VA55 without connectors

The default for Panelboard in COMPAS will be AL 3 or 4 conductor connectors:
for AL order one 3VA9673-0JJ43 (accepts (4) 4/0-500kcmil AL/CU conductors)
for CU order one 3VA9673-0JK32 (accepts (3) 4/0-400kcmil CU only conductors)
Alternate conductor lugs are available: (these are not all available options)
for AL order one 3VA9573-0JB23 (accepts (2) 4/0-600kcmil AL/CU conductors)
for AL order one 3VA9673-0JJ24 (accepts (2) 400kcmil-750kcmil AL/CU conductors)

3VA55
3-Pole Description

UL Type Code ==>	MMAS	HMAS	CMAS
Panelboard MB codes ==>	VN	VO	VP
Ratings	3-pole I 2-pole	3-pole I 2-pole	3-pole I 2-pole
240 VAC kAIC rating ==>	85 I 85	100 I 100	200① I 200①
480Y / 277 VAC kAIC rating ==>	35 I 35	65 I 65	100 I 100
480 VAC kAIC rating ==>	35 I 35	65 I 65	100 I 100
600Y / 347 VAC kAIC rating ==>	18 I 18	25 I 25	50 I 50
600 VAC kAIC rating ==>	18 I 18	25 I 25	50 I 50
250 VDC kAIC rating② ==>	na I 50	na I 85	na I 100
IC family @ 480 VAC ==>	35kA	65kA	100kA
FTAM Trip included ==>	TM230	TM230	TM230

Amps	Code	Description	Catalog Number 3-pole	Catalog Number 3-pole	Catalog Number 3-pole
600	60	3VA55 3P breaker w/TM230	**3VA5560-5EC32-0AA0**	**3VA5560-6EC32-0AA0**	**3VA5560-7EC32-0AA0**
700	70	3VA55 3P breaker w/TM230	**3VA5570-5EC32-0AA0**	**3VA5570-6EC32-0AA0**	**3VA5570-7EC32-0AA0**
800	80	3VA55 3P breaker w/TM230	**3VA5580-5EC32-0AA0**	**3VA5580-6EC32-0AA0**	**3VA5580-7EC32-0AA0**
		Molded Case Switch		**HMAS**	**CMAS**
800	80	3VA55 3P MCS 65kA/100kA	na	**3VA5580-0BB32-0AA0**	**3VA5580-1BB32-0AA0**

2 Pole 3VA55 (in 3-Pole frame) without connectors

The default for Panelboard in COMPAS will be AL 3 or 4 conductor connectors:
for AL order one 3VA9673-0JJ43 (accepts (4) 4/0-500kcmil AL/CU conductors)
for CU order one 3VA9673-0JK32 (accepts (3) 4/0-400kcmil CU only conductors)
Alternate conductor lugs are available: (these are not all available options)
for AL order one 3VA9573-0JB23 (accepts (2) 4/0-600kcmil AL/CU conductors)
for AL order one 3VA9673-0JJ24 (accepts (2) 400kcmil-750kcmil AL/CU conductors)

3VA55
2-Pole Description

Amps	Code	Description	Catalog Number 2-pole	Catalog Number 2-pole	Catalog Number 2-pole
600	60	3VA55 2P breaker w/TM230	**3VA5560-5EC62-0AA0**	**3VA5560-6EC62-0AA0**	**3VA5560-7EC62-0AA0**
700	70	3VA55 2P breaker w/TM230	**3VA5570-5EC62-0AA0**	**3VA5570-6EC62-0AA0**	**3VA5570-7EC62-0AA0**
800	80	3VA55 2P breaker w/TM230	**3VA5580-5EC62-0AA0**	**3VA5580-6EC62-0AA0**	**3VA5580-7EC62-0AA0**
		Molded Case Switch		**HMAS**	**CMAS**
800	80	3VA55 2P MCS 65kA/100kA	na	**3VA5580-0BB62-0AA0**	**3VA5580-1BB62-0AA0**

① Although some breakers have a kAIC rating above 100 kAIC – many panels are limited to 100 kAIC or less.

② DC Voltage panels are limited by various factors. These DC ratings apply to the Breaker only.

Accessories for 3VA53/63, 3VA54/64 breakers (also with 3VA55/65/66 frame)

- 3VA53 TMTU 400A max. and 3VA63 ETU 400A max.3VA54 TMTU 600A max. and 3VA64 ETU 600A max.
- 10 slots max. are available - 5 on each side of trip handle.
- COMPAS will allow only modules that will be allowed in panel being configured.

	Description	Quick reference code	Voltage AC max or range	Voltage DC max or range	Accessory Catalog Number②	Qty of slots in breaker req'd	Max. Qty. per Brkr	Position to install for 3VA53/63 and 3VA54/64 only									
								Left side pocket					Right side pocket				
Accessories					Pocket reference # ==>			25	24	23	22	21	11	12	13	14	15
Internal Accessories Left side preferred Only one per breaker allowed	Shunt trip left -10	STL-10	n/a	12	**3VA9978-0BL10**	3	1			X							
	Shunt trip left -20	STL-20	380...600	n/a	**3VA9978-0BL20**	3	1			X							
	Shunt trip left -30	STL-30	24	24...30	**3VA9978-0BL30**	3	1			X							
	Shunt trip left -31	STL-31	48...60	n/a	**3VA9978-0BL31**	3	1			X							
	Shunt trip left -32	STL-32	110...127	110...127	**3VA9978-0BL32**	3	1			X							
	Shunt trip left -33	STL-33	208...277	220...250	**3VA9978-0BL33**	3	1			X							
	Shunt trip flexible -20	STF-20	24	n/a	**3VA9978-0BA20**	3	1			X			Right side opt. 3VA6 only				
	Shunt trip flexible -21	STF-21	48...60	n/a	**3VA9978-0BA21**	3	1			X							
	Shunt trip flexible -22	STF-22	110...127	n/a	**3VA9978-0BA22**	3	1			X							
	Shunt trip flexible -23	STF-23	208...277	n/a	**3VA9978-0BA23**	3	1			X							
	Shunt trip flexible -24	STF-24	380...500	n/a	**3VA9978-0BA24**	3	1			X							
	Shunt trip flexible -25	STF-25	600	n/a	**3VA9978-0BA25**	3	1			X							
	Undervoltage release -10	UVR-10	n/a	12	**3VA9978-0BB10**	3	1			X							
	Undervoltage release -11	UVR-11	n/a	24	**3VA9978-0BB11**	3	1			X							
	Undervoltage release -12	UVR-12	n/a	48	**3VA9978-0BB12**	3	1			X							
	Undervoltage release -14	UVR-14	n/a	125...127	**3VA9978-0BB14**	3	1			X							
	Undervoltage release -16	UVR-16	n/a	250	**3VA9978-0BB16**	3	1			X							
	Undervoltage release -20	UVR-20	24	n/a	**3VA9978-0BB20**	3	1			X							
	Undervoltage release -24	UVR-24	120...127	n/a	**3VA9978-0BB24**	3	1			X							
	Undervoltage release -25	UVR-25	208...230	n/a	**3VA9978-0BB25**	3	1			X							
	Undervoltage release -27	UVR-27	440...480	n/a	**3VA9978-0BB27**	3	1			X							
	Universal release (Shunt trip & UVR)	UNI-11	n/a	12vdc	**3VA9978-0BD11**	3	1			X							
	Universal release (Shunt trip & UVR)	UNI-12	n/a	24vdc	**3VA9978-0BD12**	3	1			X							
	Universal release (Shunt trip & UVR)	UNI-13	n/a	48vdc	**3VA9978-0BD13**	3	1			X							
Internal Accessories Right or left side options 3VA53/54 and 3VA63/64 (ETU)	Auxiliary switch - standard	AUX_HQ	240VAC	n/a	**3VA9978-0AA12**	1	6	X	X	X	X	X	X	X	X	X	X
	Leading Chg-over SW - standard	LCS_HQ	240VAC	n/a	**3VA9978-0AA22**	1	1						X				
	Trip alarm (bell alarm) - standard	TAS_HQ	240VAC	250VDC	**3VA9978-0AB12**	1	4				X	X	X	X			
	Electrical Alarm Switch std. (ETU 0nly)	EAS_HQ	240VAC	250VDC	**3VA9978-0AB22**	1	1										X
	Auxiliary switch - high capacity①	AUX_HP	600VAC	n/a	**3VA9978-0AA11**	2	2	X	X	X	X	X	X	X	X	X	X
	Leading Chg-over SW - High Cap①	LCS_HP	600VAC	250VDC	**3VA9978-0AA21**	1	1						X				
	Trip alarm (bell alarm) - High Cap①	TAS_HP	600VAC	250VDC	**3VA9978-0AB11**	2	2				X		X				
	Auxiliary switch - electronic④	AUX_HQ_el	24VAC	24VDC	**3VA9978-0AA13**	1	6	X	X	X	X	X	X	X	X	X	X
	Leading Chg-over SW - electronic④	LCS_HQ_el	24VAC	n/a	**3VA9978-0AA23**	1	1						X				
	Trip alarm (bell alarm) - electronic④	TAS_HQ_el	24VAC	24VDC	**3VA9978-0AB13**	1	4				X	X	X	X			
	Electrical Alarm Switch electronic④ (ETU 0nly)	EAS_HQ_el	24VAC	24VDC	**3VA9978-0AB23**	1	1										X
	Ronis adapter FOR 3VA63/64	Ronis Adapter	n/a	n/a	**3VA9347-0LF10**	4	1						X				
	Cylinder Lock (type Ronis) Key 1	Ronis Key 1	n/a	n/a	**3VA9980-0VL10**	one per adapter	one per adapter						installs in adapter above				
	Cylinder Lock (type Ronis) Key 2	Ronis Key 2	n/a	n/a	**3VA9980-0VL20**												
	Cylinder Lock (type Ronis) Key 3	Ronis Key 3	n/a	n/a	**3VA9980-0VL30**												
	Cylinder Lock (type Ronis) Key 4	Ronis Key 4	n/a	n/a	**3VA9980-0VL40**												

① High capacity/power (HP) max. Amps load capacity is higher than standed module (.55A up to 6.0A) depends on Voltage and AC/DC requirements - see SpeedFax section 7 or 3VA documentation for more information.

② Many accessories available for the 3VA5 and 3VA6 breakers may not be suitable for use in Lighting Panelboards.
– COMPAS allows options that are available. All accessories listed above can be used with Panelboards in general, but there will be exceptions.

③ Lugs are NOT supplied with loose breaker as standard - must order separately or configure in COMPAS to include lugs.
– Factory assembled panels include AL lugs as standard, CU lugs are optional. These kits include 3 connectors and hardware.

④ Special electronically-compatible (el) variants are available for applications that require the auxiliary switch signals to be linked to low voltage systems.
– May need special Mod in COMPAS.

Accessories for 3VA53/63, 3VA54/64 breakers (also with 3VA55/65/66 frame)

- 3VA53 TMTU 400A max. and 3VA63 ETU 400A max.3VA54 TMTU 600A max. and 3VA64 ETU 600A max.
- 10 slots max. are available - 5 on each side of trip handle.
- COMPAS will allow only modules that will be allowed in panel being configured.

Accessories (continued)

	Description	Quick reference code	Voltage AC max or range	Voltage DC max or range	Accessory Catalog Number②	Qty of slots in breaker req'd	Max. Qty. per Brkr	Position to install for 3VA53/63 and 3VA54/64 only									
								Left side pocket					Right side pocket				
					Pocket reference # ==>			25	24	23	22	21	11	12	13	14	15
Internal Accessories 3VA63/64 (ETU) only	Communications Module - 3VA63/64	COM060	n/a	24VDC	**3VA9377-0TB10**	4	1						X				
	COM060-to-T-Connector ext. cable 0.4 m	COM060-to-T	n/a	n/a	**3VA9987-0TF20**	n/a	n/a										
	COM060-to-T-Connector ext. cable 0.8 m	COM060-to-T	n/a	n/a	**3VA9987-0TF10**	n/a	n/a										
	COM060 T-Connector (spare part)	T-Connector	n/a	n/a	**3VA9987-0TG10**	n/a	n/a										
External② Accessories and Field Kits	600A max. connector Kit③ accepts 2/0-600kcmil AL/CU cable	AL-lug	n/a	n/a	**3VA9373-0JB13**	TMTU or ETU 600A max.		Line or Load end as needed									
	600A max. connector Kit③ accepts 2/0-600kcmil CU cable only	CU-lug	n/a	n/a	**3VA9373-0JD13**												
	600A max. connector Kit③ accepts (2) 2/0-600kcmil AL/CU cable (2 port)	AL-2lug	n/a	n/a	**3VA9473-0JJ23**												
	600A max. connector Kit③ accepts (2) 2/0-600kcmil CU cable only (2 port)	CU-2lug	n/a	n/a	**3VA9473-0JE23**												
	600A max. Compression Lugs (future offering - details tbd)	tbd	n/a	n/a	tbd	n/a	n/a	availability and usage locations tbd									
	3VA53/63 or 54/64 PadLock Device	tbd	n/a	n/a	**3VA9338-0LB11**	n/a	n/a										
	800A-1000A connector Kit③ accepts (4) 4/0-500kcmil AL/CU conductors	AL-lug	n/a	n/a	**3VA9673-0JJ43**	3VA55 TMTU or 3VA65 ETU 800A max. also for 3VA66 ETU 1000A max.		Line or Load end as needed									
	800A-1000A connector Kit③ accepts (3) 4/0-400kcmil CU only conductors	CU-lug	n/a	n/a	**3VA9673-0JK32**												
	800A-1000A connector Kit③ accepts (2) 4/0-600kcmil AL/CU conductors	AL-lug	n/a	n/a	**3VA9573-0JB23**												
	800A-1000A connector Kit③ accepts (2) 400kcmil-750kcmil AL/CU conductors	AL-lug	n/a	n/a	**3VA9673-0JJ24**												
	Compression Lugs (future offering - details tbd)	tbd	n/a	n/a	tbd	n/a	n/a	availability and usage locations tbd									
	800A 3VA55/65 PadLock Device	tbd	n/a	n/a	tbd	n/a	n/a										
	M0320 Motor Operator - 24-60V DC	M0320	n/a	24-60V	**3VA9277-0HA10**	n/a	1	P4/P5 only									
	M0320 Motor Operator - 110-230V AC or 110-250V DC	M0320	110-230V	110-250V	**3VA9277-0HA20**	n/a	1	P4/P5 only									
	COM100 and COM800 modules and cables can be found on Communications Tables with ETU Breakers earlier in this section.																

① High capacity/power (HP) max. Amps load capacity is higher than standed module (.55A up to 6.0A) depends on Voltage and AC/DC requirements - see SpeedFax section 7 or 3VA documentation for more information.

② Many accessories available for the 3VA5 and 3VA6 breakers may not be suitable for use in Lighting Panelboards.
– COMPAS allows options that are available. All accessories listed above can be used with Panelboards in general, but there will be exceptions."

③ Lugs are NOT supplied with loose breaker as standard - must order separately or configure in COMPAS to include lugs.
– Factory assembled panels include AL lugs as standard, CU lugs are optional. These kits include 3 connectors and hardware.

④ Special electronically-compatible (el) variants are available for applications that require the auxiliary switch signals to be linked to low voltage systems.
– May need special Mod in COMPAS.

Features

The P4 panel has a medium sized footprint and fits a larger number of applications that require larger branch devices and higher amp ratings than what the lighting panel class offers. Even with the increased capacity, this panel is a space saver with its 32" width and 10" depth. The P4 panel offers a wide array of factory-assembled options and has the ability to mix breaker frames in unit space up to 800 amps and fusible switches up to 200 amps. Bussing options for the P4 vary from the standard temperature rated aluminum to temperature rated copper and 750A/SI aluminum and 1000A/SI copper designs. All aluminum bussing in the P4 panel is tin-plated as a standard. Silver-plated is offered as the default for copper bus and tin as an option. Integrated time clocks, bus mounted contactors as mains or submains, split bus and subfeed lugs (up to 600 amp) are just a few of the options of this flexible panel.

The 3 panel configurations defined by the unit space allowed for a given amperage, main device and box height. The P4 panel starts with a 60" high box. All of the branch devices are unit space mounted. Breakers and switches can be mixed and matched to meet customer requirements.

Main Lug / Main Breaker

Enclosure – Standard Type 1 enclosure is 32" wide x 10" deep. The Box Height is determined by main device and unit space. See charts for box height.
Voltage – 600V AC max.
250V DC max.

Amperage – 400-800 amp main breaker or 400-1200 amp main lug only.

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 P4 panel is limited to 42 KAIC. Note that the main device may be mounted remote from the panel.

Bussing – The P4 panel has more options to meet market requirements. The standard bussing is temperature rated aluminum. The rating is per the requirements of UL 67 – the standard for panelboards. All aluminum bussing is tin-plated. Optional bussing for the P4 panel is: 750 A/SI aluminum, temperature rated copper, and 1000 A/SI copper. The copper bus option for this panel is silver-plated.

Weight – Approximate

Total panelboard weight when filled with a normal quantity of breakers and accessories is about 8 lbs. (1 kg) per inch (54g per mm) of box height.

Main Lugs①

Ampere Rating	Connectors Suitable for Copper or Aluminum
400	(1) - #3/0 AWG-500 kcmil
	(2) - #3/0 AWG-250 kcmil
600	(2) - #3/0 AWG-500 kcmil
800	(3) - #3/0 AWG-500 kcmil
1000	(4) - #3/0 AWG-500 kcmil
1200	(4) - #3/0 AWG-500 kcmil

① Alternate lugs for 750 kcmil cable are available, but result in significant loss of branch unit mounting space. Consult Siemens.

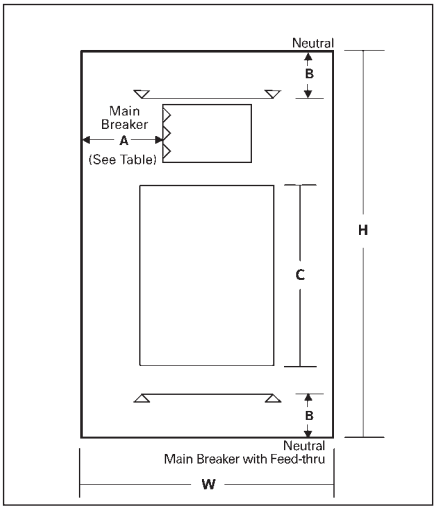
Gauge Steel of Boxes Fronts, Surface and Flush

Dimensions in inches (mm)		Gauge Steel	
Width	Height	Box	Fronts
32" (813)	60 - 75 - 90 (1524, 1905, 2286)	#16①	#14 (1 piece trim) #14 Ga (4 piece trim)
		#12	#12 (1 piece trim, door in door)
		#10	#10 (1 piece door trim in)
		#16	#16 (4 piece trim)

① Box has 16 gauge side panels, 14 gauge backplates and 12 gauge back support.

Enclosure Selection①

Enclosure Dimension in Inches (mm)			Available Circuit Space in Inches (mm) Dimension "C"	
H	W	D	Main Lug	Main Breaker
Type 1 and Type 3R/12			400-800A	400-800A
60 (1524)	32 (813)	10 (254)	30 (762)	21.25 (540)
75 (1905)	32 (813)	10 (254)	45 (1143)	36.25 (921)
90 (2286)	32 (813)	10 (254)	60 (1524)	51.25 (1302)



Main Breaker Unit Space Dimensions

Ampere Rating	Breaker Type	Breaker Family	Dimensions in Inches (mm)	
			A	B
400	JXD6, JD6, HJXD6, HJD6, HHJXD6, HHJD6	Sentron	10.425 (265)	13.125 (333)
400	NJ, HJ, LJ ②	VL	12.500 (318)	
400	SJD6, SHJD6	Sentron	10.425 (265)	
400	CJD6, SCJD6	Sentron	8.250 (210)	
600	LXD6, LD6, HLXD6, HLD6, HHLXD6, HHLD6	Sentron	10.425 (265)	
600	NL, HL, LL ②	VL	11.250 (286)	
600	SLD6, SHLD6	Sentron	10.425 (265)	
600	CLD6, SCLD6	Sentron	8.250 (210)	
800	NM, HM, LM	VL	10.500 (267)	

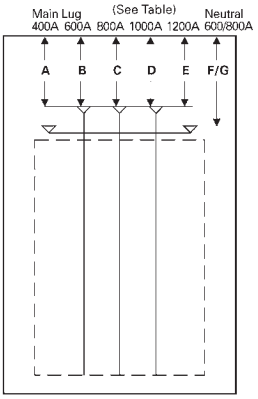
① Standard trim is four piece without door. Surface or flush one piece trim is available for 32 in. (813 mm) wide circuit breaker panel.
② Solid state (electronic) trip units only.

Main Breaker Selection

Ampere Rating	Trip Type	Breaker Family	Frame Type	Maximum Interruption Rating (KAIC) 240V	480V	600V	Unit Space Requirements in Inches (mm)	Trip Amperage
400	Thermal Magnetic	Sentron	JXD6, JD6	65,000	35,000	25,000	8.75 (222)	200, 225, 250, 300, 350, 400
			HJXD6, HJD6	100,000	65,000	35,000	8.75 (222)	200, 225, 250, 300, 350, 400
			HHJXD6, HHJD6	200,000	100,000	50,000	8.75 (222)	200, 225, 250, 300, 350, 400
			CJD6	200,000	150,000	100,000	8.75 (222)	200, 225, 250, 300, 350, 400
	Electronic (Solid state)	VL	NJ	65,000	35,000	25,000	6.25 (159)	250, 400
			HJ	100,000	65,000	25,000	6.25 (159)	250, 400
			LJ	200,000	100,000	25,000	6.25 (159)	250, 400
		Sentron	SJD6	65,000	35,000	25,000	8.75 (222)	200, 300, 400
			SHJD6	100,000	65,000	35,000	8.75 (222)	200, 300, 400
			SCJD6	200,000	150,000	100,000	8.75 (222)	200, 300, 400
600	Thermal Magnetic	Sentron	LXD6	65,000	35,000	25,000	8.75 (222)	450, 500, 600
			LD6	65,000	35,000	25,000	8.75 (222)	250, 300, 350, 400, 450, 500, 600
			HLXD6, HLD6	100,000	65,000	35,000	8.75 (222)	250, 300, 350, 400, 450, 500, 600
			HHLXD6, HHLD6	200,000	100,000	50,000	8.75 (222)	250, 300, 350, 400, 450, 500, 600
			CLD6	200,000	150,000	100,000	8.75 (222)	250, 300, 350, 400, 450, 500, 600
	Electronic (Solid state)	VL	NL	65,000	35,000	25,000	6.25 (159)	400, 600
			HL	100,000	65,000	25,000	6.25 (159)	400, 600
			LL	200,000	100,000	25,000	6.25 (159)	400, 600
		Sentron	SLD6	65,000	35,000	25,000	8.75 (222)	300, 400, 500, 600
			SHLD6	100,000	65,000	35,000	8.75 (222)	300, 400, 500, 600
			SCLD6	200,000	150,000	100,000	8.75 (222)	300, 400, 500, 600
800	Thermal Magnetic	VL	NM	65,000	35,000	25,000	8.75 (222)	600, 700, 800
			HM	100,000	65,000	35,000	8.75 (222)	600, 700, 800
			LM	200,000	100,000	50,000	8.75 (222)	600, 700, 800
	Electronic (Solid state)	VL	NM	65,000	35,000	25,000	8.75 (222)	600, 800
			HM	100,000	65,000	35,000	8.75 (222)	600, 800
			LM	200,000	100,000	50,000	8.75 (222)	600, 800

Main Lugs Only Wire Bending Space

Lugs	Dimensions in inches (mm) Main Lug 400A A	600A B	800A C	1000A D	1200A E	Neutral 400-600A F	800-1200A G
Standard	16.500 (419)	16.750 (419)	15.969 (406)	15.969 (406)	15.969 (406)	13.125 (333)	13.125 (333)
Oversize	16.500 (419)	21.750 (552)	25.969 (660)	25.969 (660)	25.969 (660)	18.125 (460)	23.125 (587)
Crimp	19.187 (487)	18.250 (464)	18.687 (475)	18.250 (464)	18.250 (464)	15.937 (405)	15.937 (405)
Standard w/Subfeed	16.750 (425)	15.969 (406)	—	—	—	13.125 (333)	13.125 (333)
Standard w/Feed-thru	16.500 (419)	16.750 (419)	—	—	—	13.125 (333)	13.125 (333)



Main Lugs Only Unit Space

Branch Switch Unit Space

Ampere Rating	Number of Poles	Mounting Height in inches (mm) Twin Mounted	Single Mounted	AC Voltage	Cables Per Connector	Connectors Suitable for Copper or Aluminum
30-30	2, 3	2.50 (64)	—	240	1	#14 - #8 AWG (Cu Only)
30-30	2, 3	5.00 (127)	—	240	1	#14 - #4 AWG
30-60	2, 3	5.00 (127)	—	240	1	#14 - #4 AWG
60-60	2, 3	5.00 (127)	—	240	1	#14 - #4 AWG
60-100	2, 3	7.50 (191)	—	240	1	#10 - #1/0 AWG
100-100	2, 3	7.50 (191)	—	240	1	#10 - #1/0 AWG
200-200	3	10.00 (254)	—	240	1	#6 AWG - 350 kcmil
200	2	—	7.50 (191)	240	1	#6 AWG - 350 kcmil
200	3	—	10.00 (254)	240	2	#6 AWG - 350 kcmil
30-30	2, 3	7.5 (191)	—	600	1	#14 - #8 AWG
30-60	2, 3	7.5 (191)	—	600	1	#14 - #4 AWG
60-60	2, 3	7.5 (191)	—	600	1	#14 - #4 AWG
60-100	2, 3	7.5 (191)	—	600	1	#10-#1/0 AWG
100-100	2, 3	7.5 (191)	—	600	1	#10-#1/0 AWG
200-200	3	10.00 (254)	—	600	1	#6 AWG - 250 kcmil
100	2, 3	—	7.50 (191)	600	1	#10-#1/0 AWG
200	2, 3	—	10.00 (254)	600	1	#6 AWG - 250 kcmil

Branch Breaker Side Gutter Inches (mm)

Reference Letter	Panel Width 32 Inches Dimensions in inches (mm)
A	11.0 (279)
B	10.98 (279)
C	8.62 (219)
D	7.0 (178)
E	5.75 (146)
F	5.25 (133)
H	4.62 (177)
I	8.76 (223)
J	10.42 (265)
K	10.0 (254)
L	8.25 (210)
M	10.0 (254)
N	7.0 (178)
O	5.0 (127)
P	7.50 (191)
Q	7.9 (200)
R	7.9 (200)
S	12.5 (318)
T	11.25 (286)
AA	7.06 (179)
AB	6.55 (166)
AC	6.55 (166)

A	BL, BLH, HBL, BQD, BLE, BLEH, BLR, BLF2, BLHF2, HBLF2,BLFB, BLHFB, BAF, BAHF, BGL, BQD	BL, BLH, HBL, BQD, BLE, BLEH, BLR, BLF2, BLHF2, HBLF2, BLFB, BLHFB, BAF, BAHF, BGL, BQD	A
B	NGB, HGB, LGB NGB2, HGB2, LGB2	NGB, HGB, LGB NGB2, HGB2, LGB2	B
D	ED4, ED6, HED4	ED4, ED6, HED4	D
H	CED	CED	H
E	QR2, QRH2, HQR2, HQR2H	QR2, QRH2, HQR2, HQR2H	E
F	FXD6, FD6, HFXD6, HFD6, HHFXD6, HHFD6, SFD6, SHFD6	FXD6, FD6, HFXD6, HFD6, HHFXD6, HHFD6 SFD6, SHFD6	F
AA	3VA52 – [MFAS, HFAS, CFAS]	3VA52 – [MFAS, HFAS, CFAS]	AA
Q	ND, HD, LD	ND, HD, LD	Q
AB	3VA61 – [MDAE, HDAE, CDAE, LDAE]	3VA61 – [MDAE, HDAE, CDAE, LDAE]	AB
R	NF, HF, LF	NF, HF, LF	R
AC	3VA62 – [MFAE, HFAE, CFAE, LFAE]	3VA62 – [MFAE, HFAE, CFAE, LFAE]	AC
I	CFD6, SCFD6		I
J	JD6, JXD6, SJD6, HJD6, HXJD6, SHJD6, HHJD6, HHJXD6, LD6, LXD6, SLD6, HLD6, HXLD6, SHLD6, HHLD6, HHLXD6		J
L	CJD6, SCJD6, CLD6, SCLD6		L
S	NJ, HJ, LJ		S
T	NL, HL, LL		T
K	NM, HM, LM		K
M	VB 30A, VB 60A (5″)	VB 30A, VB 60A (5″)	M
N	VB 30A, VB 60A (5″)	VB 30A, VB 60A (5″)	N
O	VB 100 - 200A	VB 100 - 200A	O
P	VB 100 - 200A Single		P

Type P4

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 "E" (silver-plated copper bus).

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. Use price adders from main breaker section table. Horizontally mounted.

Main Lugs Only — shown with aluminum bus, top fed, and surface trims.

Maximum Panel Amps	Unit Space (inches)	208Y/120V 3-Phase, 4-Wire Catalog Number	240/120V 3-Phase, 4-Wire Catalog Number	120/240V or 250 V DC Max 1-Phase, 3-Wire Catalog Number
400	30	P4C60ML400ATS	P4B60ML400ATS	P4A60ML400ATS
	45	P4C75ML400ATS	P4B75ML400ATS	P4A75ML400ATS
	60	P4C90ML400ATS	P4B90ML400ATS	P4A90ML400ATS
600	30	P4C60ML600ATS	P4B60ML600ATS	P4A60ML600ATS
	45	P4C75ML600ATS	P4B75ML600ATS	P4A75ML600ATS
	60	P4C90ML600ATS	P4B90ML600ATS	P4A90ML600ATS
800	30	P4C60ML800ATS	P4B60ML800ATS	P4A60ML800ATS
	45	P4C75ML800ATS	P4B75ML800ATS	P4A75ML800ATS
	60	P4C90ML800ATS	P4B90ML800ATS	P4A90ML800ATS
1000	30	P4C60ML101ATS	P4B60ML101ATS	P4A60ML101ATS
	45	P4C75ML101ATS	P4B75ML101ATS	P4A75ML101ATS
	60	P4C90ML101ATS	P4B90ML101ATS	P4A90ML101ATS
1200	30	P4C60ML120ATS	P4B60ML120ATS	P4A60ML120ATS
	45	P4C75ML120ATS	P4B75ML120ATS	P4A75ML120ATS
	60	P4C90ML120ATS	P4B90ML120ATS	P4A90ML120ATS
Maximum Panel Amps	**Unit Space (inches)**	**240V 3-Phase, 3-Wire Catalog Number**	**480Y/277V 3-Phase, 4-Wire Catalog Number**	**480V① 3-Phase, 3-Wire Catalog Number**
400	30	P4D60ML400ATS	P4E60ML400ATS	P4F60ML400ATS
	45	P4D75ML400ATS	P4E75ML400ATS	P4F75ML400ATS
	60	P4D90ML400ATS	P4E90ML400ATS	P4F90ML400ATS
600	30	P4D60ML600ATS	P4E60ML600ATS	P4F60ML600ATS
	45	P4D75ML600ATS	P4E75ML600ATS	P4F75ML600ATS
	60	P4D90ML600ATS	P4E90ML600ATS	P4F90ML600ATS
800	30	P4D60ML800ATS	P4E60ML800ATS	P4F60ML800ATS
	45	P4D75ML800ATS	P4E75ML800ATS	P4F75ML800ATS
	60	P4D90ML800ATS	P4E90ML800ATS	P4F90ML800ATS
1000	30	P4D60ML101ATS	P4E60ML101ATS	P4F60ML101ATS
	45	P4D75ML101ATS	P4E75ML101ATS	P4F75ML101ATS
	60	P4D90ML101ATS	P4E90ML101ATS	P4F90ML101ATS
1200	30	P4D60ML120ATS	P4E60ML120ATS	P4F60ML120ATS
	45	P4D75ML120ATS	P4E75ML120ATS	P4F75ML120ATS
	60	P4D90ML120ATS	P4E90ML120ATS	P4F90ML120ATS

Main Circuit Breaker — shown with standard mains, aluminum bus, top fed, and surface trims.

Maximum Panel Amps	Unit Space (inches)	208Y/120V 3-Phase, 4-Wire Catalog Number	240/120V 3-Phase, 4-Wire Catalog Number	120/240V or 250 Vdc Max 1-Phase, 3-Wire Catalog Number
400	21.25	P4C60JX400ATS	P4B60JX400ATS	P4A60JX400ATS
	36.25	P4C75JX400ATS	P4B75JX400ATS	P4A75JX400ATS
	51.25	P4C90JX400ATS	P4B90JX400ATS	P4A90JX400ATS
600	21.25	P4C60LX600ATS	P4B60LX600ATS	P4A60LX600ATS
	36.25	P4C75LX600ATS	P4B75LX600ATS	P4A75LX600ATS
	51.25	P4C90LX600ATS	P4B90LX600ATS	P4A90LX600ATS
800	21.25	P4C60M1800ATS	P4B60M1800ATS	P4A60M1800ATS
	36.25	P4C75M1800ATS	P4B75M1800ATS	P4A75M1800ATS
	51.25	P4C90M1800ATS	P4B90M1800ATS	P4A90M1800ATS
Maximum Panel Amps	**Unit Space (inches)**	**240V 3-Phase, 3-Wire Catalog Number**	**480Y/277V 3-Phase, 4-Wire Catalog Number**	**480V① 3-Phase, 3-Wire Catalog Number**
400	21.25	P4D60JX400ATS	P4E60JX400ATS	P4F60JX400ATS
	36.25	P4D75JX400ATS	P4E75JX400ATS	P4F75JX400ATS
	51.25	P4D90JX400ATS	P4E90JX400ATS	P4F90JX400ATS
600	21.25	P4D60LX600ATS	P4E60LX600ATS	P4F60LX600ATS
	36.25	P4D75LX600ATS	P4E75LX600ATS	P4F75LX600ATS
	51.25	P4D90LX600ATS	P4E90LX600ATS	P4F90LX600ATS
800	21.25	P4D60M1800ATS	P4E60M1800ATS	P4F60M1800ATS
	36.25	P4D75M1800ATS	P4E75M1800ATS	P4F75M1800ATS
	51.25	P4D90M1800ATS	P4E90M1800ATS	P4F90M1800ATS

① For 600V application, change "F" in position 3 to "G". See alternate main breaker table on page 11-101 for 600V rated mains. Change position 5 and 6 and add price from table. Price only 600V rated branch breakers.

Type P4

Alternate Main Breaker Selection

Breaker Frame Rating	Trip Type	Breaker Family	Frame Type	Type Reference Code	Trip Amperage	Unit Space Requirements in Inches	Maximum Interruption Rating (KAIC) Volts AC		
							240	480	600
400	Thermal Magnetic	Sentron	JXD6	JX	200, 225, 250, 300, 350, 400	8.75	65,000	35,000	25,000
			JD6	J6	200, 225, 250, 300, 350, 400	8.75	65,000	35,000	25,000
			HJXD6	H5	200, 225, 250, 300, 350, 400	8.75	100,000	65,000	35,000
			HJD6	H6	200, 225, 250, 300, 350, 400	8.75	100,000	65,000	35,000
			HHJXD6	H9	200, 225, 250, 300, 350, 400	8.75	200,000	100,000	50,000
			HHJD6	6H	200, 225, 250, 300, 350, 400	8.75	200,000	100,000	50,000
			CJD6	CJ	200, 225, 250, 300, 350, 400	8.75	200,000	150,000	100,000
	Electronic (Solid state)	VL	NJX	J1	250, 400	6.25	65,000	35,000	25,000
			HJX	J7	250, 400	6.25	100,000	65,000	25,000
			LJX	J3	250, 400	6.25	200,000	100,000	25,000
		Sentron	SJD6	SJ	200, 300, 400	8.75	65,000	35,000	25,000
			SHJD6	SX	200, 300, 400	8.75	100,000	65,000	35,000
			SCJD6	SC	200, 300, 400	8.75	200,000	150,000	100,000
600	Thermal Magnetic	Sentron	LXD6	LX	450, 500, 600	8.75	65,000	35,000	25,000
			LD6	L6	250, 300, 350, 400, 450, 500, 600	8.75	65,000	35,000	25,000
			HLXD6	HO	250, 300, 350, 400, 450, 500, 600	8.75	100,000	65,000	35,000
			HLD6	HL	250, 300, 350, 400, 450, 500, 600	8.75	100,000	65,000	35,000
			HHLXD6	XH	250, 300, 350, 400, 450, 500, 600	8.75	200,000	100,000	50,000
			HHLD6	HH	250, 300, 350, 400, 450, 500, 600	8.75	200,000	100,000	50,000
			CLD6	CL	250, 300, 350, 400, 450, 500, 600	8.75	200,000	150,000	100,000
	Electronic (Solid state)	VL	NLX	L7	400, 600	6.25	65,000	35,000	25,000
			HLX	L2	400, 600	6.25	100,000	65,000	25,000
			LLX	L3	400, 600	6.25	200,000	100,000	25,000
		Sentron	SLD6	SL	300, 400, 500, 600	8.75	65,000	35,000	25,000
			SHLD6	S2	300, 400, 500, 600	8.75	100,000	65,000	35,000
			SCLD6	SI	300, 400, 500, 600	8.75	200,000	150,000	100,000
800	Thermal Magnetic	VL	NMG	M4	600, 700, 800	8.75	65,000	35,000	25,000
			HMG	M5	600, 700, 800	8.75	100,000	65,000	35,000
			LMG	M6	600, 700, 800	8.75	200,000	100,000	50,000
	Electronic (Solid state)	VL	NM	M1	600, 800	8.75	65,000	35,000	25,000
			HM	M2	600, 800	8.75	100,000	65,000	35,000
			LM	M3	600, 800	8.75	200,000	100,000	50,000

For inches / millimeters conversion, see Application Data section.

P4 Branch Circuit Breakers

Amp Rating	Trip Type	Breaker Family	Breaker Type	1-Pole Max IR (kA) at 120V	277V	347V	125V DC	1-Pole Amp Ratings Avail.	2-Pole and 3-Pole Max IR (kA) at 120/240V	240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC	2-Pole and 3-Pole Amp Ratings Avail.	S = Single Mount S	T = Twin mount T	Unit Space per Kit (in.)	Max 1-pole Circuits per Kit
100	Thermal Magnetic	BL	BL	10	—	—	—	15-70	10	10	—	—	—	—	—	—	15-100④	—	T	3.75⑤	6
			BLH	22	—	—	—	15-70	22	22	—	—	—	—	—	—	15-100④	—	T	3.75⑤	6
			HBL	65	—	—	—	15-50	65	65	—	—	—	—	—	—	15-100	—	T	3.75⑤	6
	Special Application	BLG BL	BLG①	10	—	—	—	15-20	10	—	—	—	—	—	—	—	30	—	T	3.75⑤	6
			BL (HID)	10	—	—	—	15-30	10	—	—	—	—	—	—	—	15-30	—	T	3.75⑤	6
	Thermal Magnetic	BQD	BQD⑥	65	14	—	14	15-100	—	65	14	—	—	—	14	—	15-100	—	T	3.75⑤	6
			BQD6⑦	65	—	—	14	15-70	—	65		—	10	—	14	—	15-70	—	T	3.75⑤	6
xx	Electronic and misc.	BL	AFCI/ GFCI & Dual Function	x	—	—	—	see special table page 11-13	x	—	—	—	—	—	—	—	see special table page 11-13	—	T	3.75⑤	6
125	Thermal Magnetic	GB	NGB	100	25	14	14	15-125	—	100	25	—	14	—	14	—	15-125	—	T	3.75⑤	6
			HGB	100	35	14	14	15-125	—	100	35	—	14	—	14	—	15-125	—	T	3.75⑤	6
			LGB	100	65	14	14	15-125	—	100	65	—	14	—	14	—	15-125	—	T	3.75⑤	6
		Sentron	ED4	—	22	—	30	15-100	—	65	—	18	—	—	—	30	15-125	—	T	3.75⑤	6
			ED6	—	—	—	—	—	—	65	—	25	—	18	—	30	20-125	—	T	3.75⑤	6
			HED4②	—	—	—	—	—	—	65	—	42	—	18	—	30	15-125	—	T	3.75⑤	6
			HHED6	—	—	—	—	—	—	100	—	65	—	18	—	—	15-50	—	T	3.75⑤	6
		GB2	NGB2	100	25	14	14④	15-125	—	100	—	25	14	—	14④	—	15-125	—	T	3.75⑤	6
			HGB2	100	35	22	14④	15-125	—	100	—	35	22	—	14④	—	15-125	—	T	3.75⑤	6
			LGB2	100	65	25	14④	15-125	—	100	—	65	25	—	14④	—	15-125	—	T	3.75⑤	6
		3VA41③	info not yet available	x	x	x	x		x	x	x	—	x	—	—	x					6
				x	x	x	x		x	x	x	—	x	—	—	x					6
				x	x	x	x		x	x	x	—	x	—	—	x					6
150	Electronic (Solid state)	VL	NDX	—	—	—	—	—	—	65	—	35	18	—	—	—	60-150	—	T	5.00	6
			HDX	—	—	—	—	—	—	100	—	65	20	—	—	—	60-150	—	T	5.00	6
			LDX	—	—	—	—	—	—	200	—	100	25	—	—	—	60-150	—	T	5.00	6
	Electronic (Solid state)	3VA61③ (ETU350 LSI standard)	MDAE	—	—	—	—	—		100	35	35	18	18	—	—	40-150	—	T	5.00	6
			HDAE	—	—	—	—	—		100	65	65	22	22	—	—	40-150	—	T	5.00	6
			CDAE	—	—	—	—	—		200	100	100	35	35	—	—	40-150	—	T	5.00	6
			LDAE	—	—	—	—	—		200	150	150	50	50	—	—	40-150	—	T	5.00	6
225	Thermal Magnetic	General Application	QR2	—	—	—	—	—	—	10	—	—	—	—	—	—	100-225	—	T	5.00	6
			QRH2	—	—	—	—	—	—	25	—	—	—	—	—	—	100-225	—	T	5.00	6
			HQR2	—	—	—	—	—	—	65	—	—	—	—	—	—	100-225	—	T	5.00	6
			HQR2H	—	—	—	—	—	—	100	—	—	—	—	—	—	100-225	—	T	5.00	6
250	Thermal Magnetic	Sentron	FXD6, FD6	—	—	—	—	—	—	65	—	35	—	22	—	30	70-250	S	T	5.00	3 or 6
			HFXD6, HFD6	—	—	—	—	—	—	100	—	65	—	25	—	30	70-250	S	T	5.00	3 or 6
			HHFXD6, HHFD6	—	—	—	—	—	—	200	—	100	—	25	—	—	70-250	S	T	5.00	3 or 6
			CFD6	—	—	—	—	—	—	200	—	200	—	100	—	30	70-250	S	-	5.00	3
	Electronic (Solid state)	VL	NFX	—	—	—	—	—	—	65	—	35	18	—	—	—	100-250	S	T	5.00	3 or 6
			HFX	—	—	—	—	—	—	100	—	65	20	—	—	—	100-250	S	T	5.00	3 or 6
			LFX	—	—	—	—	—	—	200	—	100	25	—	—	—	100-250	S	T	5.00	3 or 6
	Thermal Magnetic	3VA52③ (W/TM230 trip)	MFAS	—	—	—	—	—	85	85	—	35	—	18	—	50	100-250	—	T	5.00	6
			HFAS	—	—	—	—	—	100	100	—	65	—	25	—	85	100-250	—	T	5.00	6
			CFAS	—	—	—	—	—	200	200	—	100	—	35	—	100	100-250	—	T	5.00	6
	Electronic (Solid state)	3VA62③ (ETU350 LSI standard)	MFAE	—	—	—	—	—	—	100	35	35	18	—	—	—	100-250	—	T	5.00	6
			HFAE	—	—	—	—	—	—	100	65	65	22	—	—	—	100-250	—	T	5.00	6
			CFAE	—	—	—	—	—	—	200	100	100	35	—	—	—	100-250	—	T	5.00	6
			LFAE	—	—	—	—	—	—	200	150	150	50	—	—	—	100-250	—	T	5.00	6

① BLG two-pole breaker is one phase and neutral. Three pole is two phases and neutral - See SpeedFax page 7-31
② 1-pole HED 15-30A rated 65kA; 35-100A rated 25kA: 3-pole HED rated 42kA
③ Availability and additional specs tbd, expected late 2019. (COMPAS may allow selection of alternate trip units)
④ 2-pole only or two outer poles of 3-pole breaker
⑤ Accessories such as shunt trips on 3 pole breakers require 6.25" of unit space
⑥ Approved for CSA and UL Listed.
⑦ Approved for CSA but not UL Listed.

P4 Branch Circuit Breakers (cont.)

Amp Rating	Trip Type	Breaker Family	Breaker Type	1-Pole Max IR (kA) at 120V	277V	347V	125V DC	1-Pole Amp Ratings Avail.	2-Pole and 3-Pole Max IR (kA) at 120/240V	240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC	2-Pole and 3-Pole Amp Ratings Avail.	S = Single Mount S	T = Twin mount T	Unit Space per Kit (in.)	Max 1-pole Circuits per Kit
400	Thermal Magnetic	Sentron	JXD6, JD6	—	—	—	—	—	—	65	—	35	—	25	—	30	200-400	S	—	8.75	3
			HJXD6, HJD6	—	—	—	—	—	—	100	—	65	—	35	—	30	200-400	S	—	8.75	3
			HHJXD6, HHJD6	—	—	—	—	—	—	200	—	100	—	50	—	—	200-400	S	—	8.75	3
			CJD6	—	—	—	—	—	—	200	—	150	—	100	—	30	200-400	S	—	8.75	3
	Electronic (Solid state)	VL	NJX	—	—	—	—	—	—	65	—	35	—	25	—	—	250-400	S	—	6.25	3
			HJX	—	—	—	—	—	—	100	—	65	—	25	—	—	250-400	S	—	6.25	3
			LJX	—	—	—	—	—	—	200	—	100	—	25	—	—	250-400	S	—	6.25	3
		Sentron	SJD6	—	—	—	—	—	—	65	—	35	—	25	—	—	200-400	S	—	8.75	3
			SHJD6	—	—	—	—	—	—	100	—	65	—	35	—	—	200-400	S	—	8.75	3
			SCJD6	—	—	—	—	—	—	200	—	100	—	100	—	—	200-400	S	—	8.75	3
600	Thermal Magnetic	Sentron	LXD6	—	—	—	—	—	—	65	—	35	—	25	—	30	450-600	S	—	8.75	3
			LD6	—	—	—	—	—	—	65	—	35	—	25	—	30	250-600	S	—	8.75	3
			HLXD6, HLD6	—	—	—	—	—	—	100	—	65	—	35	—	30	250-600	S	—	8.75	3
			HHLXD6, HHLD6	—	—	—	—	—	—	200	—	100	—	50	—	—	250-600	S	—	8.75	3
			CLD6	—	—	—	—	—	—	200	—	150	—	100	—	—	250-600	S	—	8.75	3
	Electronic (Solid state)	VL	NLX	—	—	—	—	—	—	65	—	35	—	18	—	—	400-600	S	—	6.25	3
			HLX	—	—	—	—	—	—	100	—	65	—	18	—	—	400-600	S	—	6.25	3
			LLX	—	—	—	—	—	—	200	—	100	—	18	—	—	400-600	S	—	6.25	3
		Sentron	SLD6	—	—	—	—	—	—	65	—	35	—	25	—	—	300-600	S	—	8.75	3
			SHLD6	—	—	—	—	—	—	100	—	65	—	35	—	—	300-600	S	—	8.75	3
			SCLD6	—	—	—	—	—	—	200	—	150	—	100	—	—	300-600	S	—	8.75	3
800	Thermal Magnetic	VL	NMX	—	—	—	—	—	—	65	—	35	—	25	—	22	600-800	S	—	8.75	3
			HMX	—	—	—	—	—	—	100	—	65	—	35	—	25	600-800	S	—	8.75	3
			LMX	—	—	—	—	—	—	200	—	100	—	50	—	42	600-800	S	—	8.75	3
	Electronic (Solid state)		NMX	—	—	—	—	—	—	65	—	35	—	25	—	—	600-800	S	—	8.75	3
			HMX	—	—	—	—	—	—	100	—	65	—	35	—	—	600-800	S	—	8.75	3
			LMX	—	—	—	—	—	—	200	—	100	—	50	—	—	600-800	S	—	8.75	3

① BLG two-pole breaker is one phase and neutral. Three pole is two phases and neutral - See SpeedFax page 7-31
② 1-pole HED 15-30A rated 65kA; 35-100A rated 25kA: 3-pole HED rated 42kA
③ Availability and additional specs tbd, expected late 2019. (COMPAS may allow selection of alternate trip units)
④ 2-pole only or two outer poles of 3-pole breaker
⑤ Accessories such as shunt trips on 3 pole breakers require 6.25" of unit space
⑥ Approved for CSA and UL Listed.
⑦ Approved for CSA but not UL Listed.

Type S4/P4/SPP (10" deep) and F1/P4/FPP (10" deep)

Connecting Strap Kits — w/o Circuit Breaker – Branch Breakers Only

For use with Type P4, Type S4 or Sentron SPP Shallow depth panelboards					
Max Amp Rating	**Breaker Family**	**Breaker Type**	**Catalog Number**①④	**Unit Height (inches)**	**Mounting**
100	General	BL, BQD	**SBL**	3.75	Twin
125	3VA	3VA41, xGB	**S3VA41T**⑨	3.75	Twin
	General	xGB2	**SGB2**	3.75	Twin
	General	ED	**SE6**	3.75	Twin
	General	CED	**SCE**	3.75	Twin
150	3VA	3VA61	**S3VA52T**⑪	5.00	Twin
	VL	DG	**SDGD**	5.00	Twin
225	General	QR	**SQR**	5.00	Twin
250	3VA	3VA52, 3VA62	**S3VA52T**⑪	5.00	Twin
	VL	FG	**SFG**	5.00	Twin
	Sentron	FD	**SF6**	5.00	Twin
	Sentron	CFD	**SCF**	5.00	Single
400	3VA	3VA53	**S3VA53T**⑩	6.25	Single
	3VA	3VA63	**S3VA63T**⑩	6.25	Single
	VL	JG	**SJG**	6.25	Single
	Sentron	JD	**SJ1**	8.75	Single
	Sentron	CJD	**SCJ**	8.75	Single
	Sentron	SJD	**SSJ1**	8.75	Single
	Sentron	SCJD	**SSCJ**	8.75	Single
600	3VA	3VA54	**S3VA54T**⑩	6.25	Single
	3VA	3VA64	**S3VA64T**⑩	6.25	Single
	VL	LG	**SLG**	6.25	Single
	Sentron	LD	**SL6**	8.75	Single
	Sentron	CLD	**SCL**	8.75	Single
	Sentron	SLD	**SSL6**	8.75	Single
	Sentron	SCLD	**SSCL**	8.75	Single
800	VL	MG	**MG1**	8.75	Single

3VA Breaker Provision Kits

Breaker Type	Catalog Number	Description
3VA52, 3VA61 or 3VA62 Breaker	**S3VA52PR**⑧	Only required when installing a 3VA52, 3VA61, or 3VA62 breaker to an existing provision in the field. Parts are included with kit S3VA52T.

Service Entrance Barriers

Field installable Barriers to meet UL 67 service entrance requirements	
Breaker Type	**Catalog Number**
(S)JD, (S)LD, MG	**SEBP4V1**
CJD, CLD	**SEBP4V2**
JG, LG	**SEBP4V3**

Connecting Strap Kits④ Fusible

For use with Sentron Shallow Depth or Type SPP/FPP/F1/P4 power panels		
Ampere Rating	**Unit Height (inches)**	**10" Deep Box Catalog Number**
30–30	2.5	F602
30–60	5, 7.5	F657
30–60	5, 7.5	F657
60–60	5, 7.5	F657
60–100	5, 7.5	F657
100–100	5, 7.5	F657
100	7.5	F657
200	10	F671
200–200	10	F672

Branch Switch Selection

Ampere Rating	Mounting Height (inches)
240V — Twin Mounted	**NEC Fuse Clips**②
30-30	2½③
30-30	5
30-60	5
60-60	5
60-100	7½
100-100	7½
200-200	10
240V — Single Mounted	**NEC Fuse Clips**②
30	7½
60	7½
100	7½
200	10
200	7½
600V — Twin Mounted	**NEC Fuse Clips**②
30-30	7½
30-60	7½
60-60	7½
60-100	7½
100-100	7½
200-200	10
600V — Single Mounted	**NEC Fuse Clips**②
100	7½
200	10

Blank Plates — Circuit Breaker and Vacu-Break

For use with Type P4, Type S4 or Sentron SPP Shallow depth panelboards	
Height (inches)	**Catalog Number**
1.25	**6FPB01**
2.5	**6FPB02**
3.75	**6FPB03**
5.0	**6FPB05**
10.0	**6FPB10**

Filler Plates

For use with Type P4, Type S4 or Sentron SPP Shallow depth panelboards	
Breaker Type	**Filler Plate Catalog Number**
BL, BLH, HBL ED4, ED6, HED4, HHED6, NGB, HGB, LGB, NGB2, HGB2, LGB2	**DFFP1**⑤
NEB, HEB	**EBF1**

Cover Plates

For use with Sentron Shallow Depth or Type SPP/FPP/F1/P4 power panels	
Breaker Type	**Catalog Number**
QR	**SQRC**⑥

For inches / millimeters conversion, see Application Data section.

① Includes housing frame plate without breaker handle opening.
② For Class J, R or T fuse clip prices, refer to page 11-105. For Class J fuse clips price 600V, 7½" high units.
③ NEC fuse clips only.
④ Normal stock item.
⑤ Suitable to replace QF3 in P1 thru P5 Panelboards and Switchboards.
⑥ To replace a QJ with a QR only a new cover is needed up to 225A
⑦ Although QR is rated 250A, it is limited to 225A in panelboard.
⑧ Only required when installing a 3VA52, 3VA61, or 3VA62 breaker to an existing provision in the field. Parts are included with kit S3VA52T.
⑨ Strap Kit can also accommodate xGB breakers, reference Installation Instructions
⑩ Consult Sales for availability
⑪ Kit includes breaker nut keepers & bus extensions

P4 Panelboards

Devices Mounted on Gutter Cover Includes Device, Mounting – Wired or Unwired

Description
One piece front with door
Hinged Gutter Covers 4 pc front
Toggle Switch — SPST or 3-way
15A, 277V maximum
Pilot Light — General Purpose
Neon or Incandescent
Pushbutton

Increased Capacity Neutral

Ampere Rating		Unit Space (inches)
Phase	Neutral	
400	600	0
400	800	0
600	1200	0
800	1200	0

Subfeed or Feed-Thru Lugs (One Set Per Panel) Subfeed Double Lugs (Main Lug Panels)

Amp Rating	Unit Spaces (Additional inches)
	MLO
400	0
600	0
800	N/A
1200	N/A

Feed-Thru Lugs

Ampere Rating	Unit Space (inches)
400	10
600	10
800	17.5
1200	17.5

Grounding of Panelboards Ground Bars (except for brazed-to-box) are shipped with the panel interior factory mounted.

- 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 (Copper Only)

Fuse Clip Provisions (Add to 250 Volts or 600 Volts Unit Prices Per Switch)

Amp Rating	Class J	Class R	Class T
30		•	•
60		•	•
100		•	•
200		•	•

Spanner Wrenches (for Vacu-Break Switches)

Ground Fault on Main Breaker

Description
Conventional Ground Fault ① Includes: ground fault relay, ground sensor, CPT & shunt trip
Test and Monitor Panel ②
Ground Fault add to Sensitrip III breaker price

Time Clocks ③

Sangamo, Tork or Paragon time clock can be supplied, mounted in panelboard cabinet. For required increase in enclosure dimension, consult local sales office.

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

Circuit Breaker Accessories Handle Blocking Device Blocks handle in either the "ON" or "OFF" position.

Padlocking Device – Padlocks in "OFF" position.

Main Bus

Standard main bus and ground bus are tin-plated aluminum. For copper main bus, neutral bus and ground bus, add from the table for each panel.

Lugs – For Main Lug Only Panels

Standard main lugs and neutral lugs are tin-plated aluminum, UL listed for use with aluminum/copper cables. Copper only lugs are an option.

Ampere Rating
400 - 1200

Shunt Trip on Main and Branches④

Description
BL, BQD, NGB, HGB, LGB, NGB2, HGB2, LGB2 (branch only)
QR2, QRH2, HQR2, HQR2H, ED4, ED6, HED4, HHED6, CED6
All others to 800A

100% Rated Main Circuit Breakers

Ampere Rating	Breaker Type
400A	JXD6H, HJXD6H
	SCJD6H, SHJD6H
	NJY, HJY, LJY
600A	LXD6H, HLXD6H
	NMY⑤, HMY⑤, LMY⑤

① Available in 90" high enclosure only. Unit space is 42 1/2" with Test and Monitor Panel; 45" without Test and Monitor Panel.

② Not available on Sensitrip III.
③ For required unit space, consult local sales office.
④ Shunt Trip on 100A frame breakers increases mounting height to 6.25" for twin mounting.

⑤ The 600A, 100% rated breaker requires the use of an 800A frame breaker.

SEM3 System configured in Panelboards

The Siemens SEM3 system can be configured for factory installation in branch circuit monitoring applications using the Siemens COMPAS configuration tool. This option can lower the installation time of the system for the installer while providing a factory warrantied solution.

The SEM3 system can be factory installed in unit space in type P2, P4, & P5 Siemens panel boards. Please note P1 and P3 configurations are not available at this time and the amount of unit space needed varies depending upon the application. Please note that lead time adders will apply and may vary depending upon the configuration of the system.

SEM3 for use in Siemens Panelboards

Available in a NEMA 1, 3R, or 12 rated enclosure



Controller

SEM3 controller is mounted in unit space opposite of the feed location specified in COMPAS (i.e., bottom mount for top feed) and will require 3″ of unit space. Each controller will be powered by direct tap connection to the panel section bus. Each controller can monitor up to 45 circuits. Applications that require monitoring more than 45 circuits will require additional controllers.



Current Transformers (CTs)

Seven sizes of CTs are available for use in the P4 panel: 50, 125, 250, 400, 600, 800, 1200 amp. All CTs are pre-mounted to a support bracket that attaches to the base rail of the interior of the panel board. Each bracket supports a maximum of 3 CTs and is designed for the breaker selected (brackets are not interchangeable between breaker frames). Each CT will be attached to a data module that is placed in the meter racks.



Meter Racks

Each meter rack requires 3″ of unit space. All meter racks will be installed next to the SEM3 controller in unit space. The COMPAS configuration tool will select the appropriate meter rack configuration according to the user's application and will use the 21 space meter rack as a default option where possible. Only one meter rack (regardless of number of positions) can be installed in 3″ of unit space.

NOTE: Monitoring of 45 circuits will require 9" of unit space: two 21 position racks and one 3 position rack

Other Considerations

Configuration: Data modules from CTs monitoring a circuit breaker must be mounted adjacent to one another in the meter rack. Any field changes to the factory configuration must take this into account.

Start-up & Commissioning: Siemens can provide these services. Contact your local SIEMENS PDS Power Solutions Business Developer for more details.

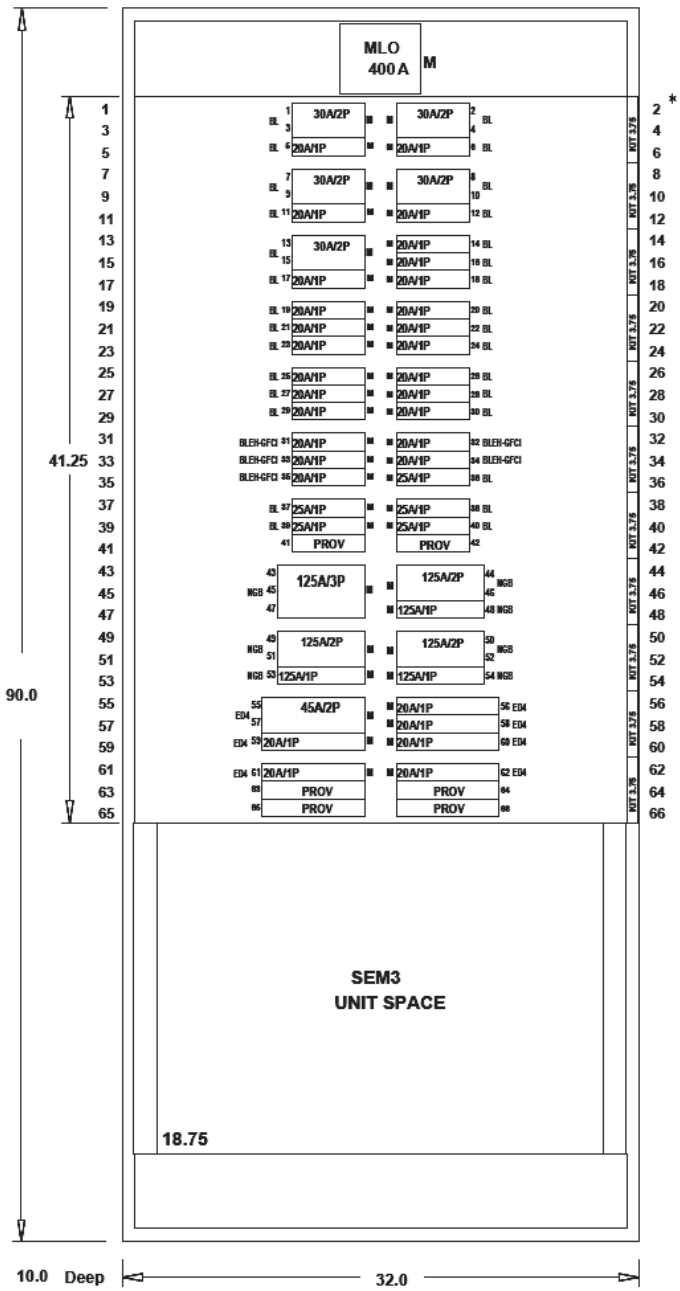
Billing Services for sub billing applications: Billing services are available. Contact your local SIEMENS PDS Power Solutions Business Developer for more details.

P4 Devices
Enclosure sizes

Example P4 Panel with SEM3 Type 1 Enclosure
P4 = (32" Wide x 10" Deep)

Enclosure heights are in 15" increments from 60" thru 90".
Enclosure heights: 60", 75", 90" (there are optional depths also)

The COMPAS configuration tool can provide actual dimensions based on the configuration. Example below is largest standard P4 enclosure for factory assembled panel - unit space is in 3.75" increments - up to 6 circuits can occupy each 3.75" of unit space.



32" std. width for P4

Main Breaker / Main Lug space varies based on selected options

Unit space varies based on selected options

Note: All circuits do not have to be monitored by SEM3 - user can select any circuits in this space to be monitored.

Based on smallest branch breakers and a 3-phase main being monitored. There is a maximum of 63 circuits that can be monitored with the configuration shown. Some selections of main breakers and other subfeed options could limit this further.

In this situation there is 37.5" of unit space available - so 60 branch circuits could be monitored.
If monitoring the main three additional circuits could be monitored with a total of 63 circuits.

This requires two controllers and three 21 position racks using 18.75" of unit space.
- see below -

SEM3 space varies by number of circuits monitored - this uses unit space.

== > 7.5" of space for up to 21 circuits monitored
one controller and one 21-pos rack

== > 11.25" of space for up to 42 circuits monitored
one controller and two 21-pos racks

== > 15" of space for up to 45 circuits monitored
one controller and two 21-pos racks plus one 3-pos rack

== > 18.75" of space for up to 63 circuits monitored
two controllers and three 21-pos racks

Note: If subfeed space is needed - it will take away from available unit space.

Due to gutter space limitations, SEM3 is not available in a P4 Powerpanel for 3VA52, 3VA61, or 3VA62 breakers.

Lug Modifications

Compression Lugs

Style	Amp Rating	Breaker Type	Compression Connectors	Available Unit Space Reduction
MLO	400	N/A	All compression lugs	Deduct 5.0″ of Unit Space
	600	N/A	All compression lugs	
	800	N/A	All compression lugs	
	1000	N/A	All compression lugs	
	1200	N/A	All compression lugs	
Main Breaker	400	JD6, JXD6, HJD6, HJXD6, HHJD6, HHJXD6, CJD6, SJD6, SHJD6, SCJD6 LD6, LXD6, HLD6, HLXD6,	(2)#2/0 AWG - 500 Kcmil Cu or Al	Deduct 0″ of Unit Space
		NL, HL, LL	(1)#6 - 350 Kcmil Cu or Al	
Main Breaker	600	HHLD6, HHLXD6, CLD6, SLD6, SHLD6, SCLD6	(2)#2/0 AWG - 500 Kcmil Cu or Al	Deduct 0″ of Unit Space
		NJ, HJ, LJ	(2)#6 - 350 Kcmil Cu or Al	

Alternate Lugs

Amp Rating	Breaker Type	Compression Connectors	Available Unit Space Reduction
400	N/A	(1)#3/0 AWG - 750 Kcmil or (2)#3/0 AWG 250 Kcmil Cu or Al	Deduct 0″ of Unit Space
600	N/A	(2)#3/0 AWG - 750 Kcmil	Deduct 5″ of Unit Space
800	N/A	(3)#3/0 AWG - 750 Kcmil Cu or Al	Deduct 10″ of Unit Space
1200	N/A	(4)#3/0 AWG - 600 Kcmil Cu or Al (4)#3/0 AWG - 750 Kcmil Cu or Al	Deduct 10″ of Unit Space

P4 Enclosures

Description	Catalog number
P4 Type 1 32″ W x 10″ D x 60″ H	**PB60**
P4 Type 1 32″ W x 10″ D x 75″ H	**PB75**
P4 Type 1 32″ W x 10″ D x 90″ H	**PB90**
P4 Type 3R/12 60″ H	**WP260**
P4 Type 3R/12 75″ H	**WP275**
P4 Type 3R/12 90″ H	**WP290**

P4 Trims

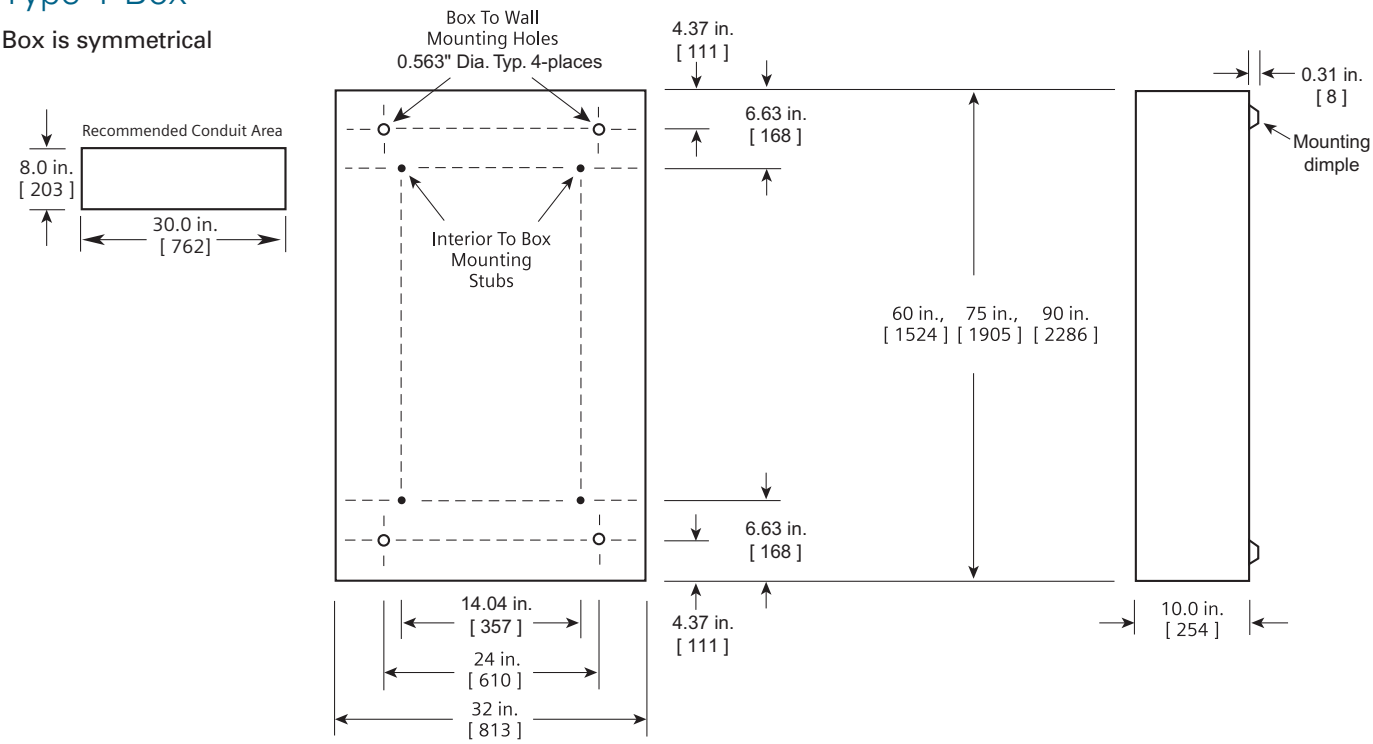
Description	Catalog number
P4 Std (4 piece trim) vented 60″	**P460V**
P4 Std (4 piece trim) vented 75″	**P475V**
P4 Std (4 piece trim) vented 90″	**P490V**
P4 VBS Std (4 Piece trim) vented 60″	**P460VV**
P4 VBS Std (4 Piece trim) vented 75″	**P475VV**
P4 VBS Std (4 Piece trim) vented 90″	**P490VV**
P4 Std (4 piece trim) unvented 60″	**P460NV**
P4 Std (4 piece trim) unvented 75″	**P475NV**
P4 Std (4 piece trim) unvented 90″	**P490NV**
P4 VBS Std (4 Piece trim) unvented 60″	**P460NVV**
P4 VBS Std (4 Piece trim) unvented 75″	**P475NVV**
P4 VBS Std (4 Piece trim) unvented 90″	**P490NVV**
P4 Std (4 piece trim) vented 60″ with hinged gutter covers	**P460VHG**
P4 Std (4 piece trim) vented 75″ with hinged gutter covers	**P475VHG**
P4 Std (4 piece trim) vented 90″ with hinged gutter covers	**P490VHG**
P4 VBS Std (4 piece trim) vented 60″ w/Hinged gutter covers	**P460VVHG**
P4 VBS Std (4 piece trim) vented 60″ w/Hinged gutter covers	**P475VVHG**
P4 VBS Std (4 piece trim) vented 60″ w/Hinged gutter covers	**P490VVHG**
P4 Std (4 piece trim) unvented 60″ with hinged gutter covers	**P460NVHG**
P4 Std (4 piece trim) unvented 75″ with hinged gutter covers	**P475NVHG**
P4 Std (4 piece trim) unvented 90″ with hinged gutter covers	**P490NVHG**
P4 VBS Std (4 piece trim) unvented 60″ w/Hinged gutter covers	**P460NVVHG**
P4 VBS Std (4 piece trim) unvented 60″ w/Hinged gutter covers	**P475NVVHG**
P4 VBS Std (4 piece trim) unvented 60″ w/Hinged gutter covers	**P490NVVHG**
P4 Std (1 PC Door) vented 60″	**P460VD**
P4 Std (1 PC Door) vented 75″	**P475VD**
P4 Std (1 PC Door) vented 90″	**P490VD**
P4 Std (1 PC Door) unvented 60″	**P460NVD**
P4 Std (1 PC Door) unvented 75″	**P475NVD**
P4 Std (1 PC Door) unvented 90″	**P490NVD**
P4 Std (1 PC Door-in-door) vented 60″	**P460VDD**
P4 Std (1 PC Door-in-door) vented 75″	**P475VDD**
P4 Std (1 PC Door-in-door) vented 90″	**P490VDD**
P4 Std (1 PC Door-in-door) unvented 60″	**P460NVDD**
P4 Std (1 PC Door-in-door) unvented 75″	**P475NVDD**
P4 Std (1 PC Door-in-door) unvented 90″	**P490NVDD**

P4 Flush mounting kits

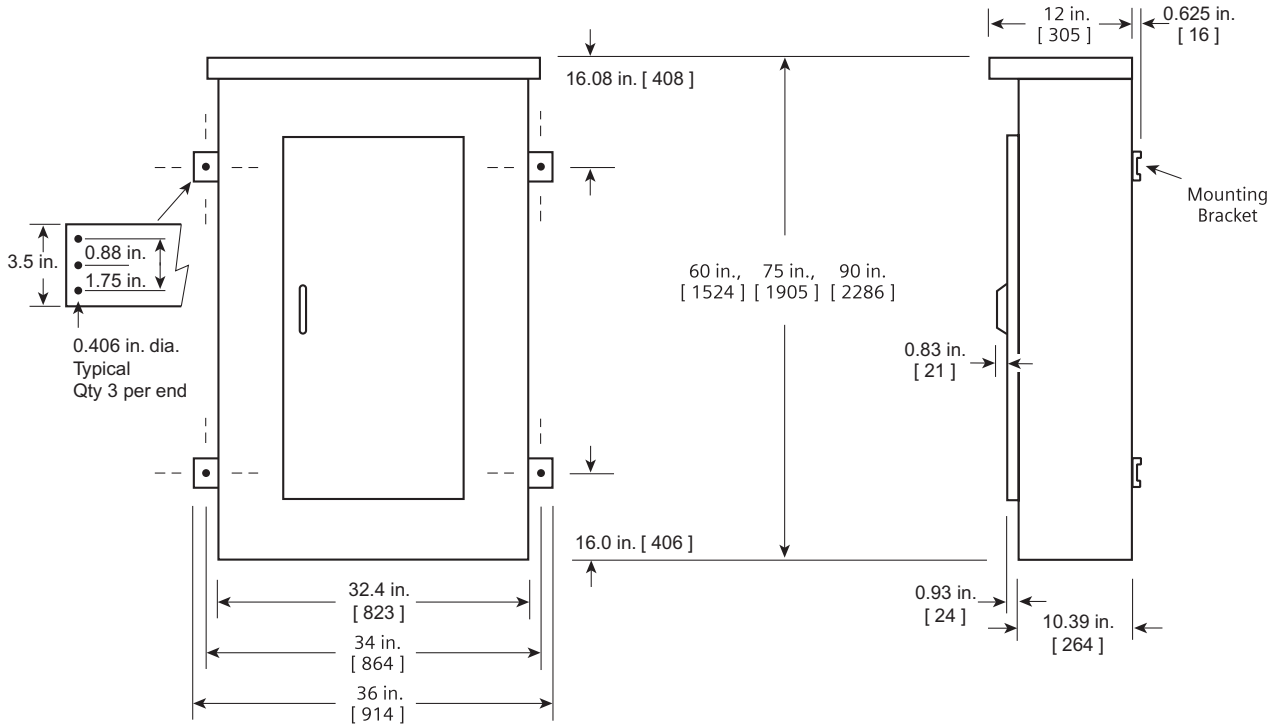
Description	Catalog number
Flush kit for P4 60″ High	F60
Flush kit for P4 75″ High	F75
Flush kit for P4 90″ High	F90

Type 1 Box

Box is symmetrical



Type 3R and 3R/12 Box



Dimensions shown in inches and millimeters [ ].

Features

The P5 is the largest distribution panel in the Siemens' panel family. Even with a larger footprint, the P5 is still a space saver with its 38" width and 12.75" depth. The panel offers higher main ratings to fit applications that require larger branch devices.

This panel offers a wide array of factory assembled options and has the ability to mix breaker frames in unit space up to 1200 amps and fusible switches up to 1200 amps. Bussing options for the P5 vary from the standard temperature rated aluminum to temperature rated copper and 750 A/SI aluminum and 1000A/SI copper designs. All aluminum bussing in the P5 panel is tin-plated as a standard. Silver-plated is offered as the default for copper bus and tin as an option. Integrated time clocks, bus mounted contactors as mains or submains, split bus and subfeed lugs (up to 600 amps) are just a few of the options of this flexible panel.

The P5 panel configurations defined by the unit space allowed for a given amperage, main device and box height. The P5 panel starts with a 60" high box. All of the branch devices are unit space mounted. Breakers and switches can be mixed and matched to meet customer requirements.

Main Lug / Main Breaker / Main Switch

Enclosure – Standard Type 1 enclosure is 38" wide x 12.75" deep. X Box Height is determined by main device and unit space. See charts for box height.

Voltage – 600V AC max.
250V DC max.

Amperage – 400-1200 amp main breaker, 400-1200 amp main lug only or 200-1200 amp main switch.

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 P5 panel is limited to 42 Kaic. Note that the main device may be mounted remote from the panel.

Bussing – The P5 panel has more options to meet market requirements. The standard bussing is temperature rated aluminum. The rating is per the requirements of UL 67 – the standard for panelboards. All aluminum bussing is tin-plated. Optional bussing for the P5 panel is: 750 A/SI aluminum, temperature rated copper, and 1000 A/SI copper. The copper bus option for this panel is tin-plated.

Weight – Approximate

Total panelboard weight when filled with a normal quantity of breakers and accessories is about 10 lbs. (4.53 kg) per inch (178g per mm) of box height.

Main Lugs ①

Ampere Rating	Connectors Suitable for Copper or Aluminum
400	(1) 250-500Kcmil
600	(2) #3/0-500Kcmil
800	(3) #3/0 AWG-500 Kcmil
1000	(4) #3/0 AWG-500 Kcmil
1200	(4) #3/0 AWB-500 Kcmil

① Alternate lugs for 750 kcmil cable are available, but result in significant loss of branch unit mounting space. Consult Siemens.

Gauge Steel of Boxes Fronts, Surface and Flush

Dimensions in inches (mm)		Gauge Steel	
Width	Height	Box	Fronts
38" (965)	60 - 75 - 90 (1524,1905, 2286)	#16①	#14 (1 piece trim) #14 (4 piece trim)
	60 - 75 - 90 (1524,1905, 2286)	#14	#12 (1 piece & door in door) #10 (1 piece & door in door)
	60 - 75 - 90 (1524,1905, 2286)	#14	#16 (4 piece, top and bottom over) #10 (4 piece, side/ gutter cover)

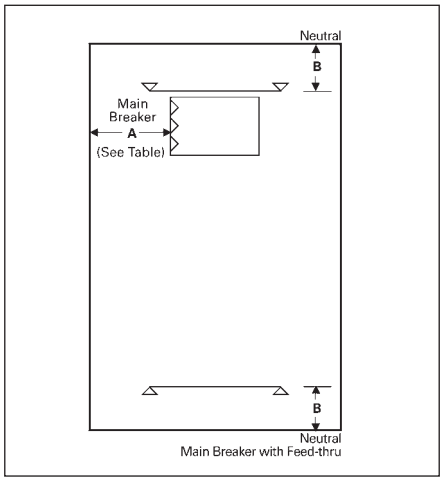
① 16 gauge side panels, 12 gauge back support, 14 gauge back panels.

Enclosure Selection ①

Enclosure Dimension in Inches (mm)				Available Unit Space in Inches (mm)					
H	W	D		Main Lug Only	Main Breaker		Main VB Switch		Main HCP Switch
Type 1 or 3R/12		Type 1	Type 3R/12	400 - 1200A	400-800A	1200A	200A	400A-600A	400-1200A
60 (1524)	38 (965)	12.75 (324)	14.25 (362)	30 (762)	21.25 (540)	20 (508)	20 (508)	-	13.75 (349)
75 (1905)	38 (965)	12.75 (324)	14.25 (362)	45 (1143)	36.25 (921)	35 (889)	40 (1016)	25 (889)	28.75 (730)
90 (2286)	38 (965)	12.75 (324)	14.25 (362)	60 (1524)	51.25 (1302)	50 (1270)	55 (1397)	40 (1270)	43.75 (1111)

Main Breaker Unit Space Dimensions

Ampere Rating	Breaker Family	Breaker Type	Dimensions in inches (mm) A	B
400	Sentron	JXD6, JD6, HJXD6, HJD6, HHJXD6, HHJD6	13.425 (265)	13.125 (333)
	VL②	NJX, HJX, LJX	15.500 (318)	
	Sentron	SJD6, SHJD6	13.425 (265)	
		CJD6, SCJD6	11.250 (210)	
600	Sentron	LXD6, LD6, HLXD6, LD6, HHLXD6, HHLD6	13.425 (265)	
	VL②	NLX, HLX, LLX	14.250 (286)	
	Sentron	SLD6, SHLD6	13.425 (265)	
		CLD6, SCLD6	11.250 (210)	
800	VL	NMG/X, HMG/X, LMG/X	13.425 (265)	
	Sentron	MXD6, MD6, HMXD6, HMD6, CMD6, SMD6, SHMD6, SCMD6	13.00 (330) 10.42 (265	
1200	VL	NN, HN, LN	13.425 (265)	
	Sentron	NXD6, ND6, HNXD6, HND6, CND6, SND6, SHMD6, SCND6	13.00 (330) 13.00 (330)	



Main Breaker Wire Bending Space Dimensions & Main Switch

Main Switch

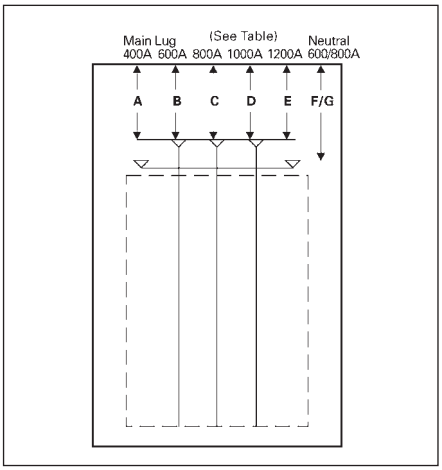
Maximum Ampere Rating	A	B
400A/600A VB	9.30 (236)	13.125 (333)
800A/1200A HCP	10.30 (262)	
200A VB	13.425 (265)	

Main Switch Connectors

Ampere Rating	Connectors suitable for Copper or Aluminum
400	(1) #3/0 AWG-500 kcmil (2) #3/0 AWG-250 kcmil
600	(2) #3/0 AWG-500 kcmil
800	(3) #3/0 AWG-500 kcmil
1200	(4) #3/0 AWG-500 kcmil

Main Lugs Only Wire Bending Space

Lugs	Dimensions in inches (mm) Main Lug 400A A	600A B	800A C	1000A D	1200A E	Neutral 800A G
Standard	16.500 (419)	16.750 (425)	15.969 (406)	15.969 (406)	15.969 (406)	13.125 (333)
Oversize	16.500 (419)	21.750 (552)	25.969 (660)	25.969 (660)	25.969 (660)	23.125 (587)
Crimp	19.187 (487)	18.250 (464)	18.687 (475)	18.250 (464)	18.250 (464)	15.937 (405)
Standard with Subfeed	16.750 (425)	15.969 (406)	—	—	—	13.125 (333)
Standard with Feed-thru	16.500 (419)	16.750 (425)	—	—	—	13.125 (333)



Main Lugs Only Wire Bending Space

① Standard trim is for space without door. Surface flush one piece trim is available for 32" (813mm) wide circuit breaker panel.

② Available with solid state (electronic) trip units only.

Type P5

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 "E" (silver-plated copper bus).

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. Use price adders from main breaker section table. Horizontally mounted.

Main Lugs Only — shown with aluminum bus, top fed, and surface trims.

Maximum Panel Ampere Rating	Unit Space (inches)	208Y/120V 3-Phase, 4-Wire Catalog Number	240/120V 3-Phase, 4-Wire Catalog Number	120/240V or 250 Vdc Max 1-Phase, 3-Wire Catalog Number
800②	30 45 60	P5C60ML800ATS P5C75ML800ATS P5C90ML800ATS	P5B60ML800ATS P5B75ML800ATS P5B90ML800ATS	P5A60ML800ATS P5A75ML800ATS P5A90ML800ATS
1000	30 45 60	P5C60ML101ATS P5C75ML101ATS P5C90ML101ATS	P5B60ML101ATS P5B75ML101ATS P5B90ML101ATS	P5A60ML101ATS P5A75ML101ATS P5A90ML101ATS
1200	30 45 60	P5C60ML120ATS P5C75ML120ATS P5C90ML120ATS	P5B60ML120ATS P5B75ML120ATS P5B90ML120ATS	P5A60ML120ATS P5A75ML120ATS P5A90ML120ATS
Maximum Panel Ampere Rating	**Unit Space (inches)**	**240** **3-Phase, 3-Wire Catalog Number**	**480Y/277V** **3-Phase, 4-Wire Catalog Number**	**480V①** **1-Phase, 3-Wire Catalog Number**
800②	30 45 60	P5D60ML800ATS P5D75ML800ATS P5D90ML800ATS	P5E60ML800ATS P5E75ML800ATS P5E90ML800ATS	P5F60ML800ATS P5F75ML800ATS P5F90ML800ATS
1000	30 45 60	P5D60ML101ATS P5D75ML101ATS P5D90ML101ATS	P5E60ML101ATS P5E75ML101ATS P5E90ML101ATS	P5F60ML101ATS P5F75ML101ATS P5F90ML101ATS
1200	30 45 60	P5D60ML120ATS P5D75ML120ATS P5D90ML120ATS	P5E60ML120ATS P5E75ML120ATS P5E90ML120ATS	P5F60ML120ATS P5F75ML120ATS P5F90ML120ATS

Main Circuit Breaker — shown with aluminum bus, top fed, and surface trims.

Maximum Panel Ampere Rating	Unit Space (inches)	208Y/120V 3-Phase, 4-Wire Catalog Number	240/120V 3-Phase, 4-Wire Catalog Number	120/240V or 250 Vdc Max 1-Phase, 3-Wire Catalog Number
800②	21.25	P5C60M1800ATS	P5B60M1800ATS	P5A60M1800ATS
	36.25	P5C75M1800ATS	P5B75M1800ATS	P5A75M1800ATS
	51.25	P5C90M1800ATS	P5B90M1800ATS	P5A90M1800ATS
1200	20	P5C60N1120ATS	P5B60N1120ATS	P5A60N1120ATS
	35	P5C75N1120ATS	P5B75N1120ATS	P5A75N1120ATS
	50	P5C90N1120ATS	P5B90N1120ATS	P5A90N1120ATS
Maximum Panel Ampere Rating	**Unit Space (inches)**	**240** **3-Phase, 4-Wire Catalog Number**	**480Y/277V** **3-Phase, 4-Wire Catalog Number**	**480V①** **1-Phase, 3-Wire Catalog Number**
800②	21.25	P5D60M1800ATS	P5E60M1800ATS	P5F60M1800ATS
	36.25	P5D75M1800ATS	P5E75M1800ATS	P5F75M1800ATS
	51.25	P5D90M1800ATS	P5E90M1800ATS	P5F90M1800ATS
1200	20	P5D60N1120ATS	P5E60N1120ATS	P5F60N1120ATS
	35	P5D75N1120ATS	P5E75N1120ATS	P5F75N1120ATS
	50	P5D90N1120ATS	P5E90N1120ATS	P5F90N1120ATS

For inches / millimeters conversion, see Application Data section.

① For 600V, change "F" in position 3 to "G". Price only branch breakers with 600V ratings.
② Alternate main breaker requires additional 1.25" unit space.

Main Fusible Switch (fuses not included)

Maximum Panel Ampere Rating	Unit Space (inches)	208Y/120V 3-Phase, 4-Wire Catalog Number	240/120V 3-Phase, 4-Wire Catalog Number	120/240V 1-Phase, 3-Wire Catalog Number	240V 3-Phase, 3-Wire Catalog Number	480Y/277V 3-Phase, 4-Wire Catalog Number	480V① 3-Phase, 3-Wire Catalog Number
400	25	P5C75MS400ATS	P5B75MS400ATS	P5A75MS400ATS	P5D75MS400ATS	P5E75MS400ATS	P5F75MS400ATS
	40	P5C90MS400ATS	P5B90MS400ATS	P5A90MS400ATS	P5D90MS400ATS	P5E90MS400ATS	P5F90MS400ATS
600	25	P5C75MS600ATS	P5B75MS600ATS	P5A75MS600ATS	P5D75MS600ATS	P5E75MS600ATS	P5F75MS600ATS
	40	P5C90MS600ATS	P5B90MS600ATS	P5A90MS600ATS	P5D90MS600ATS	P5E90MS600ATS	P5F90MS600ATS
800④	28.75	P5C75MS800ATS	P5B75MS800ATS	P5A75MS800ATS	P5D75MS800ATS	P5E75MS800ATS	P5F75MS800ATS
	43.75	P5C90MS800ATS	P5B90MS800ATS	P5A90MS800ATS	P5D90MS800ATS	P5E90MS800ATS	P5F90MS800ATS
1200④	28.75	P5C75MS120ATS	P5B75MS120ATS	P5A75MS120ATS	P5D75MS120ATS	P5E75MS120ATS	P5F75MS120ATS
	43.75	P5C90MS120ATS	P5B90MS120ATS	P5A90MS120ATS	P5D90MS120ATS	P5E90MS120ATS	P5F90MS120ATS

Alternate Main Breaker Selection②

Breaker Frame Rating	Trip Type	Breaker Family	Frame Type	Type Ref. Code③	Trip Amperage	Unit Space Requirements in Inches	Maximum Interruption Rating (KAIC) Volts AC 240	480	600
400	Thermal Magnetic	Sentron	JXD6	JX	200, 225, 250, 300, 350, 400	8.75	65,000	35,000	25,000
			JD6	J6	200, 225, 250, 300, 350, 400	8.75	65,000	35,000	25,000
			HJXD6	H5	200, 225, 250, 300, 350, 400	8.75	100,000	65,000	35,000
			HJD6	H6	200, 225, 250, 300, 350, 400	8.75	100,000	65,000	35,000
			HHJXD6	H9	200, 225, 250, 300, 350, 400	8.75	200,000	100,000	50,000
			HHJD6	6H	200, 225, 250, 300, 350, 400	8.75	200,000	100,000	50,000
			CJD6	CJ	200, 225, 250, 300, 350, 400	8.75	200,000	150,000	100,000
	Electronic (Solid state)	VL	NJX	J1	250, 400	6.25	65,000	35,000	25,000
			HJX	J7	250, 400	6.25	100,000	65,000	25,000
			LJX	J3	250, 400	6.25	200,000	100,000	25,000
		Sentron	SJD6	SJ	200, 300, 400	8.75	65,000	35,000	25,000
			SHJD6	SX	200, 300, 400	8.75	100,000	65,000	35,000
			SCJD6	SC	200, 300, 400	8.75	200,000	150,000	100,000
600	Thermal Magnetic	Sentron	LXD6	LX	450, 500, 600	8.75	65,000	35,000	25,000
			LD6	L6	250, 300, 350, 400, 450, 500, 600	8.75	65,000	35,000	25,000
			HLXD6	HO	250, 300, 350, 400, 450, 500, 600	8.75	100,000	65,000	35,000
			HLD6	HL	250, 300, 350, 400, 450, 500, 600	8.75	100,000	65,000	35,000
			HHLXD6	XH	250, 300, 350, 400, 450, 500, 600	8.75	200,000	100,000	50,000
			HHLD6	HH	250, 300, 350, 400, 450, 500, 600	8.75	200,000	100,000	50,000
			CLD6	CL	250, 300, 350, 400, 450, 500, 600	8.75	200,000	150,000	100,000
	Electronic (Solid state)	VL	NLX	L7	400, 600	6.25	65,000	35,000	25,000
			HLX	L2	400, 600	6.25	100,000	65,000	25,000
			LLX	L3	400, 600	6.25	200,000	100,000	25,000
		Sentron	SLD6	SL	300, 400, 500, 600	8.75	65,000	35,000	25,000
			SHLD6	S2	300, 400, 500, 600	8.75	100,000	65,000	35,000
			SCLD6	SI	300, 400, 500, 600	8.75	200,000	150,000	100,000
800	Thermal Magnetic	VL	NMG	M1	600, 700, 800	8.75	65,000	35,000	25,000
			HMG	M2	600, 700, 800	8.75	100,000	65,000	35,000
			LMG	M3	600, 700, 800	8.75	200,000	100,000	50,000
		Sentron	LMXD6	LM	500, 600, 700, 800	8.75	65,000	50,000	25,000
			LMD6	L1	500, 600, 700, 800	8.75	65,000	50,000	25,000
			HLMXD6	HK	500, 600, 700, 800	8.75	100,000	65,000	50,000
			HLMD6	HJ	500, 600, 700, 800	8.75	100,000	65,000	50,000
			MXD6	MX	500, 600, 700, 800	10.00	65,000	50,000	25,000
			MD6	MD	500, 600, 700, 800	10.00	65,000	50,000	25,000
			HMXD6	HR	500, 600, 700, 800	10.00	100,000	65,000	50,000
			HMD6	HM	500, 600, 700, 800	10.00	100,000	65,000	50,000
			CMD6	C9	500, 600, 700, 800	10.00	200,000	100,000	65,000
	Electronic (Solid state)	VL	NMX	M1	600, 800	8.75	65,000	35,000	25,000
			HMX	M2	600, 800	8.75	100,000	65,000	35,000
			LMX	M3	600, 800	8.75	200,000	100,000	50,000
		Sentron	SMD6	SM	600, 700, 800	10.00	65,000	50,000	25,000
			SHMD6	S5	600, 700, 800	10.00	100,000	65,000	50,000
			SCMD6	SO	600, 700, 800	10.00	200,000	100,000	65,000
1200	Thermal Magnetic	VL	NNG	N7	800, 900, 1000, 1200	10.00	65,000	35,000	25,000
			HNG	N8	800, 900, 1000, 1200	10.00	100,000	65,000	35,000
			LNG	N9	800, 900, 1000, 1200	10.00	200,000	100,000	65,000
		Sentron	NXD6	NX	900, 1000, 1200	10.00	65,000	50,000	25,000
			ND6	ND	900, 1000, 1200	10.00	65,000	50,000	25,000
			HNXD6	HT	900, 1000, 1200	10.00	100,000	65,000	50,000
			HND6	HN	900, 1000, 1200	10.00	100,000	65,000	50,000
			CND6	Cn	900, 1000, 1200	10.00	200,000	100,000	65,000
	Electronic (Solid state)	VL	NNX	N1	800, 1000, 1200	10.00	65,000	35,000	25,000
			HNX	N2	800, 1000, 1200	10.00	100,000	65,000	35,000
			LNX	N3	800, 1000, 1200	10.00	200,000	100,000	65,000
		Sentron	SND6	SN	800, 1000, 1200	10.00	65,000	50,000	25,000
			SHND6	AD	800, 1000, 1200	10.00	100,000	65,000	50,000
			SCND6	SR	800, 1000, 1200	10.00	200,000	100,000	65,000

For inches / millimeters conversion, see Application Data section.

① For 600V, change "F" in position 3 to "G". Price only branch breakers with 600V ratings.
② For ground fault, see page 11-119.
③ Replace "MS" in catalog number with code letter. (See Main Fusible Switch Table above)
④ 800 and 1200 ampere switches have "L" class fuse provisions (Type HCP).

P5 Branch Circuit Breakers

Amp Rating	Trip Type	Breaker Family	Breaker Type	1-Pole Max IR (kA) at 120V	277V	347V	125V DC	1-Pole Amp Ratings Avail.	2-Pole and 3-Pole Max IR (kA) at 120/240V	240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC	2-Pole and 3-Pole Amp Ratings Avail.	S = Single Mount S	T = Twin mount T	Unit Space per Kit (in.)	Max 1-pole Circuits per Kit
100	Thermal Magnetic	BL	BL	10	—	—	—	15-70	10	10	—	—	—	—	—	—	15-100④	—	T	3.75⑤	6
			BLH	22	—	—	—	15-70	22	22	—	—	—	—	—	—	15-100④	—	T	3.75⑤	6
			HBL	65	—	—	—	15-50	65	65	—	—	—	—	—	—	15-100	—	T	3.75⑤	6
	Special Application	BLG BL	BLG①	10	—	—	—	15-20	10	—	—	—	—	—	—	—	30	—	T	3.75⑤	6
			BL (HID)	10	—	—	—	15-30	10	—	—	—	—	—	—	—	15-30	—	T	3.75⑤	6
	Thermal Magnetic	BQD	BQD⑥	65	14	—	14	15-100	—	65	14	—	—	—	14	—	15-100	—	T	3.75⑤	6
			BQD6⑦	65	—	—	14	15-70	—	65		—	10	—	14	—	15-70	—	T	3.75⑤	6
xx	Electronic and misc.	BL	AFCI/ GFCI & Dual Function	x	—	—	—	see special table page 11-13	x	—	—	—	—	—	—	—	see special table page 11-13	—	T	3.75⑤	6
125	Thermal Magnetic	GB	NGB	100	25	14	14	15-125	—	100	25	—	14	—	14	—	15-125	—	T	3.75⑤	6
			HGB	100	35	14	14	15-125	—	100	35	—	14	—	14	—	15-125	—	T	3.75⑤	6
			LGB	100	65	14	14	15-125	—	100	65	—	14	—	14	—	15-125	—	T	3.75⑤	6
		Sentron	ED4	—	22	—	30	15-100	—	65	—	18	—	—	—	30	15-125	—	T	3.75⑤	6
			ED6	—	—	—	—	—	—	65	—	25	—	18	—	30	20-125	—	T	3.75⑤	6
			HED4②	—	—	—	—	—	—	65	—	42	—	18	—	30	15-125	—	T	3.75⑤	6
			HHED6	—	—	—	—	—	—	100	—	65	—	18	—	—	15-50	—	T	3.75⑤	6
		GB2	NGB2	100	25	14	14④	15-125	—	100	—	25	14	—	14④	—	15-125	—	T	3.75⑤	6
			HGB2	100	35	22	14④	15-125	—	100	—	35	22	—	14④	—	15-125	—	T	3.75⑤	6
			LGB2	100	65	25	14④	15-125	—	100	—	65	25	—	14④	—	15-125	—	T	3.75⑤	6
		3VA41③	info not yet available	x	x	x	x		x	x	x	—	x	—	—	x					6
				x	x	x	x		x	x	x	—	x	—	—	x					6
				x	x	x	x		x	x	x	—	x	—	—	x					6
150	Electronic (Solid state)	VL	NDX	—	—	—	—	—	—	65	—	35	18	—	—	—	60-150	—	T	5.00	6
			HDX	—	—	—	—	—	—	100	—	65	20	—	—	—	60-150	—	T	5.00	6
			LDX	—	—	—	—	—	—	200	—	100	25	—	—	—	60-150	—	T	5.00	6
	Electronic (Solid state)	3VA61③ (ETU350 LSI standard)	MDAE	—	—	—	—	—		100	35	35	18	18	—	—	40-150	—	T	5.00	6
			HDAE	—	—	—	—	—		100	65	65	22	22	—	—	40-150	—	T	5.00	6
			CDAE	—	—	—	—	—		200	100	100	35	35	—	—	40-150	—	T	5.00	6
			LDAE	—	—	—	—	—		200	150	150	50	50	—	—	40-150	—	T	5.00	6
225	Thermal Magnetic	QR	QR2	—	—	—	—	—	—	10	—	—	—	—	—	—	100-225	—	T	5.00	6
			QRH2	—	—	—	—	—	—	25	—	—	—	—	—	—	100-225	—	T	5.00	6
			HQR2	—	—	—	—	—	—	65	—	—	—	—	—	—	100-225	—	T	5.00	6
			HQR2H	—	—	—	—	—	—	100	—	—	—	—	—	—	100-225	—	T	5.00	6
250	Thermal Magnetic	Sentron	FXD6-A, FD6-A	—	—	—	—	—	—	65	—	35	—	22	—	30	70-250	S	T	5.00	3 or 6
			HFXD6, HFD6	—	—	—	—	—	—	100	—	65	—	25	—	30	70-250	S	T	5.00	3 or 6
			HHFXD6, HHFD6	—	—	—	—	—	—	200	—	100	—	25	—	—	70-250	S	—	5.00	3
			CFD6-A	—	—	—	—	—	—	200	—	200	—	100	—	30	70-250	S	—	5.00	3
	Electronic (Solid state)	VL	NFX	—	—	—	—	—	—	65	—	35	—	18	—	—	100-250	—	T	5.00	6
			HFX	—	—	—	—	—	—	100	—	65	—	20	—	—	100-250	—	T	5.00	6
			LFX	—	—	—	—	—	—	200	—	100	—	25	—	—	100-250	—	T	5.00	6
	Thermal Magnetic	3VA52③ (W/TM230 trip)	MFAS	—	—	—	—	—	85	85	—	35	—	18	—	50	100-250	—	T	5.00	6
			HFAS	—	—	—	—	—	100	100	—	65	—	25	—	85	100-250	—	T	5.00	6
			CFAS	—	—	—	—	—	200	200	—	100	—	35	—	100	100-250	—	T	5.00	6
	Electronic (Solid state)	3VA62③ (ETU350 LSI standard)	MFAE	—	—	—	—	—	—	100	35	35	18	—	—	—	100-250	—	T	5.00	6
			HFAE	—	—	—	—	—	—	100	65	65	22	—	—	—	100-250	—	T	5.00	6
			CFAE	—	—	—	—	—	—	200	100	100	35	—	—	—	100-250	—	T	5.00	6
			LFAE	—	—	—	—	—	—	200	150	150	50	—	—	—	100-250	—	T	5.00	6

① BLG two-pole breaker is one phase and neutral. Three pole is two phases and neutral - See SpeedFax page 7-31
② 1-pole HED 15-30A rated 65kA; 35-100A rated 25kA: 3-pole HED rated 42kA
③ Availability and additional specs tbd, expected late 2019. (COMPAS may allow selection of alternate trip units)
④ 2-pole only or two outer poles of 3-pole breaker
⑤ Accessories such as shunt trips on 3 pole breakers require 6.25" of unit space
⑥ Approved for CSA and UL Listed.
⑦ Approved for CSA but not UL Listed.

P5 Branch Circuit Breakers cont.

Amp Rating	Trip Type	Breaker Family	Breaker Type	1-Pole Max IR (kA) at 120V	277V	347V	125V DC	1-Pole Amp Ratings Avail.	2-Pole and 3-Pole Max IR (kA) at 120/240V	240V	480Y/277V	480V	600Y/347V	600V	125/250V DC	250V DC	2-Pole and 3-Pole Amp Ratings Avail.	S = Single Mount S	T = Twin mount T	Unit Space per Kit (in.)	Max 1-pole Circuits per Kit
400	Thermal Magnetic	Sentron	JXD6-A, JD6-A	—	—	—	—	—	—	65	—	35	—	25	—	30	200-400	S	T	8.75	3 or 6
			HJXD6-A, HJD6-A	—	—	—	—	—	—	100	—	65	—	35	—	30	200-400	S	T	8.75	3 or 6
			HHJXD6, HHJD6	—	—	—	—	—	—	200	—	100	—	50	—	—	200-400	S	T	8.75	3 or 6
			CJD6-A	—	—	—	—	—	—	200	—	150	—	100	—	30	200-400	S	—	8.75	3
	Electronic (Solid state)	VL	NJX	—	—	—	—	—	—	65	—	35	—	25	—	—	250-400	S	T	6.25	3 or 6
			HJX	—	—	—	—	—	—	100	—	65	—	25	—	—	250-400	S	T	6.25	3 or 6
			LJX	—	—	—	—	—	—	200	—	100	—	25	—	—	250-400	S	T	6.25	3 or 6
		Sentron	SJD6-B	—	—	—	—	—	—	65	—	35	—	25	—	—	200-400	S	—	8.75	3
			SHJD6-B	—	—	—	—	—	—	100	—	65	—	35	—	—	200-400	S	—	8.75	3
			SCJD6-B	—	—	—	—	—	—	200	—	100	—	100	—	—	200-400	S	—	8.75	3
600	Thermal Magnetic	Sentron	LXD6	—	—	—	—	—	—	65	—	35	—	25	—	30	450-600	S	—	8.75	3
			LD6	—	—	—	—	—	—	65	—	35	—	25	—	30	250-600	S	—	8.75	3
			HLXD6, HLD6	—	—	—	—	—	—	100	—	65	—	35	—	30	250-600	S	—	8.75	3
			HHLXD6, HHLD6	—	—	—	—	—	—	200	—	100	—	50	—	—	250-600	S	—	8.75	3
			CLD6	—	—	—	—	—	—	200	—	150	—	100	—	—	250-600	S	—	8.75	3
	Electronic (Solid state)	VL	NLX	—	—	—	—	—	—	65	—	35	—	18	—	—	400-600	S	—	6.25	3
			HLX	—	—	—	—	—	—	100	—	65	—	18	—	—	400-600	S	—	6.25	3
			LLX	—	—	—	—	—	—	200	—	100	—	18	—	—	400-600	S	—	6.25	3
		Sentron	SLD6	—	—	—	—	—	—	65	—	35	—	25	—	—	300-600	S	—	8.75	3
			SHLD6	—	—	—	—	—	—	100	—	65	—	35	—	—	300-600	S	—	8.75	3
			SCLD6	—	—	—	—	—	—	200	—	150	—	100	—	—	300-600	S	—	8.75	3
800	Thermal Magnetic	VL	NMG	—	—	—	—	—	—	65	—	35	—	25	—	22	600-800	S	—	8.75	3
			HMG	—	—	—	—	—	—	100	—	65	—	35	—	25	600-800	S	—	8.75	3
			LMG	—	—	—	—	—	—	200	—	100	—	50	—	42	600-800	S	—	8.75	3
		Sentron	MXD6	—	—	—	—	—	—	65	—	50	—	25	—	30	600-800	S	—	10.00	3
			MD6	—	—	—	—	—	—	65	—	50	—	25	—	30	500-800	S	—	10.00	3
			HMXD6	—	—	—	—	—	—	100	—	65	—	50	—	30	600-800	S	—	10.00	3
			HMD6	—	—	—	—	—	—	100	—	65	—	50	—	30	500-800	S	—	10.00	3
			CMD6	—	—	—	—	—	—	200	—	100	—	65	—	—	600-800	S	—	10.00	3
	Electronic (Solid state)	VL	NMX	—	—	—	—	—	—	65	—	35	—	25	—	—	600-800	S	—	8.75	3
			HMX	—	—	—	—	—	—	100	—	65	—	35	—	—	600-800	S	—	8.75	3
			LMX	—	—	—	—	—	—	200	—	100	—	50	—	—	600-800	S	—	8.75	3
		Sentron	SMD6	—	—	—	—	—	—	65	—	50	—	25	—	—	600-800	S	—	10.00	3
			SHMD6	—	—	—	—	—	—	100	—	65	—	50	—	—	600-800	S	—	10.00	3
			SCMD6	—	—	—	—	—	—	200	—	100	—	65	—	—	600-800	S	—	10.00	3
1200	Thermal Magnetic	VL	NNG	—	—	—	—	—	—	65	—	35	—	25	—	22	800-1200	S	—	10.00	3
			HNG	—	—	—	—	—	—	100	—	65	—	35	—	25	800-1200	S	—	10.00	3
			LNG	—	—	—	—	—	—	200	—	100	—	50	—	42	800-1200	S	—	10.00	3
		Sentron	NXD6	—	—	—	—	—	—	65	—	50	—	25	—	30	900-1200	S	—	10.00	3
			ND6	—	—	—	—	—	—	65	—	50	—	25	—	30	800-1200	S	—	10.00	3
			HNXD6	—	—	—	—	—	—	100	—	65	—	50	—	30	900-1200	S	—	10.00	3
			HND6	—	—	—	—	—	—	100	—	65	—	50	—	30	800-1200	S	—	10.00	3
			CND6	—	—	—	—	—	—	200	—	100	—	65	—	—	900-1200	S	—	10.00	3
	Electronic (Solid state)	VL	NNX	—	—	—	—	—	—	65	—	35	—	25	—	—	800-1200	S	—	10.00	3
			HNX	—	—	—	—	—	—	100	—	65	—	35	—	—	800-1200	S	—	10.00	3
			LNX	—	—	—	—	—	—	200	—	100	—	65	—	—	800-1200	S	—	10.00	3
		Sentron	SND6	—	—	—	—	—	—	65	—	50	—	25	—	—	800-1200	S	—	10.00	3
			SHND6	—	—	—	—	—	—	100	—	65	—	50	—	—	800-1200	S	—	10.00	3
			SCND6	—	—	—	—	—	—	200	—	100	—	65	—	—	800-1200	S	—	10.00	3

① BLG two-pole breaker is one phase and neutral. Three pole is two phases and neutral - See SpeedFax page 7-31
② 1-pole HED 15-30A rated 65kA; 35-100A rated 25kA: 3-pole HED rated 42kA
③ Availability and additional specs tbd, expected late 2019. (COMPAS may allow selection of alternate trip units)
④ 2-pole only or two outer poles of 3-pole breaker
⑤ Accessories such as shunt trips on 3 pole breakers require 6.25" of unit space
⑥ Approved for CSA and UL Listed.
⑦ Approved for CSA but not UL Listed.

Ampere Rating	Mounting Height (inches)
240V — Twin Mounted	**NEC Fuse Clips①**
30-30	2½②
30-30	5
30-60	5
60-60	5
60-100	7½
100-100	7½
200-200	10
240V — Single Mounted	**NEC Fuse Clips①**
30	7½
60	7½
100	7½
200	10
200	7½
400	10
400	15
600	15
800 (HCP)	16¼
1200 (HCP)	16¼

Ampere Rating	Mounting Height (inches)
600V — Twin Mounted	**NEC Fuse Clips①**
30-30	7½
30-60	7½
60-60	7½
60-100	7½
100-100	7½
200-200	10
600V — Single Mounted	**NEC Fuse Clips①**
100	7½
200	10
400	10
400	15
400 (HCP)	15
600	15
600	15
800③ (HCP)	16¼
1200③ (HCP)	16¼

Branch Breaker Side Gutter Inches (mm)

Reference Letter	Panel Width 38 Inches Dimensions in inches (mm)
A	14.00 (356)
B	13.98 (355)
C	11.62 (295)
D	10.00 (254)
E	7.61 (193)
F	8.75 (222)
G	8.25 (210)
H	10.90 (276)
I	10.90 (276)
J	11.76 (299)
K	7.92 (201)
L	8.00 (203)
M	13.42 (341)
N	12.00 (305)
O	15.50 (393)
P	14.25 (362)
Q	13.42 (341)
R	13.42 (341)
S	10.00 (254)
T	8.00 (203)
U	10.50 (267)
V	10.50 (267)
W	9.30 (236)
X	10.30 (262)
Y	9.30 (236)
Z	10.30 (262)
AA	10.10 (257)
AB	9.59 (244)
AC	9.59 (244)

A	BL, BLH, HBL, BQD	BL, BLH, HBL, BQD	A
B	NGB, HGB, LGB NGB2, HGB2, LGB2	NGB, HGB, LGB NGB2, HGB2, LGB2	B
D	ED4, ED6, HED4, HHED6	ED4, ED6, HED4, HHED6	D
E	CED6	CED6	E
F	QR2, QRH2, HQR2, HQR2H	QR2, QRH2, HQR2, HQR2H	F
G	FD6, FXD6, HFD6, HHFD6	FD6, FXD6, HFD6, HHFD6	G
AA	3VA52 – [MFAS, HFAS, CFAS]	3VA52 – [MFAS, HFAS, CFAS]	AA
H	ND, HD, LD	ND, HD, LD	H
AB	3VA61 – [MDAE, HDAE, CDAE, LDAE]	3VA61 – [MDAE, HDAE, CDAE, LDAE]	AB
I	NF, HF, LF	NF, HF, LF	I
AC	3VA62 – [MFAE, HFAE, CFAE, LFAE]	3VA62 – [MFAE, HFAE, CFAE, LFAE]	AC
J	CFD		J
K	JD6, JXD6, HJD6, HHJD6	JD6, JXD6, HJD6, HHJD6	K
L	NJ, HJ, LJ	NJ, HJ, LJ	L
M	SJD6, SHJD6, LD6, LXD6, HLD6, HHLD6, SLD6, SHLD6		M
N	CJD6, SCJD6, CLD6, SCLD6		N
O	NJ, HJ, LJ		O
P	NL, HL, LL		P
Q	NM, HM, LM		Q
R	NN, HN, LN		R
S	VB 30 A	VB 30 A	S
T	VB 30 - 60A	VB 30 - 60A	T
U	VB 60 -100A	VB 60 -100A	U
V	VB 200A	VB 200A	V
W	VB 100A Single		W
X	VB 200A Single		X
Y	VB 400 – 600A Single		Y
Z	HCP 400 – 1200A Single		Z

For inches / millimeters conversion, see Application Data section.

① For Class J, R or T fuse clip prices, refer to page 11-119.
② NEC fuse clips only.
③ 800 and 1200 ampere switches have class "L" fuse provisions. (Type HCP).

Types P5 and SPP/FPP, F2 (12 3/4" deep)

Connecting Strap Kits①②③ Circuit Breaker

For use with P5, Sentron Deep or Type S5 Power Panels					
Max Amp Rating	**Breaker Family**	**Breaker Type**	**Catalog Number**	**Unit Height (inches)**	**Mounting**
100	General	BL, BQD	**SBLBD**	3.75	Twin
125	3VA	3VA41, xGB	**S3VA41TD**⑨	3.75	Twin
	3VA	3VA41, xGB	**S3VA41TDHD**⑨⑩	7.50	Twin, High Density
	General	XGB2	**SGB2D**	3.75	Twin
	General	ED	**SE6D**	3.75	Twin
	General	CED	**6CLE2**	3.75	Twin
150	3VA	3VA61	**S3VA52TD**⑫	5.00	Twin
	VL	DG	**SDGD**	5.00	Twin
225	General	QR	**6QR2**	5.00	Twin
250	3VA	3VA52, 3VA62	**S3VA52TD**⑫	5.00	Twin
	VL	FG	**SFGD**	5.00	Twin
	Sentron	FD	**SF6D**	5.00	Twin
	Sentron	CFD	**SCFD**	5.00	Single
400	3VA	3VA53	**S3VA53TD**⑪	6.25	Single
	3VA	3VA63	**S3VA63TD**⑪	6.25	Single
	VL	JG	**SJG2D**	6.25	Twin
	VL	JG	**SJG1D**	6.25	Single
	Sentron	JD	**SJ1D**	8.75	Single
	Sentron	JD	**SJ2D**	8.75	Twin
	Sentron	CJD	**SCJD**	8.75	Single
	Sentron	SJD	**SCJD**	8.75	Single
600	3VA	3VA54	**S3VA54TD**⑪	6.25	Single
	3VA	3VA64	**S3VA64TD**⑪	6.25	Single
	VL	LG	**SLGD**	6.25	Single
	Sentron	LD	**SL6D**	8.75	Single
	Sentron	CLD	**SCLD**	8.75	Single
	Sentron	SLD	**SSL6D**	8.75	Single
	Sentron	SCLD	**SSCLD**	8.75	Single
800	VL	MG	**MG1D**	8.75	Single
	Sentron	LMD	**SLM1D**	8.75	Single
	Sentron	MD, CMD	**SMND**	10.00	Single
	Sentron	SMD	**SSMND**	10.00	Single
1200	VL	NG	**NG1D**	10.00	Single
	Sentron	ND	**SMND**	10.00	Single
	Sentron	SND	**SSMND**	10.00	Single

3VA Breaker Provision Kits

Breaker Type	Catalog Number	Description
3VA52, 3VA61 or 3VA62 Breaker	**S3VA52PR**⑧	Only required when installing a 3VA52, 3VA61, or 3VA62 breaker to an existing provision in the field. Parts are included with kit S3VA52TD.

Service Entrance Barriers

Field installable Barriers to meet UL 67 service entrance requirements	
Breaker Type	**Catalog Number**
(S)JD, (S)LD, MG	**SEBP4V1**
CJD, CLD	**SEBP4V2**
JG, LG	**SEBP4V3**
(S)MD,(S)ND without shield	**SEBP5V1**
(S)MD,(S)ND with shield	**SEBP5V2**
Vacu-Break Switches	**SEBP5V3**
HCP Switches	**SEBP5V4**

Connecting Strap Kits③ Fusible

For use with P5, Sentron FPP Deep or Type F2 power panels		
Ampere Rating	**Unit Height (inches)**	**12. 75" Deep Box CatalogNumber**
30–30	2.5	**F602D**
30–30	5, 7.5	**F657D**
30–60	5, 7.5	**F657D**
60–60	5, 7.5	**F657D**
60–100	5, 7.5	**F657D**
100–100	5, 7.5	**F657D**
100	7.5	**F657D**
200	7.5	**F657D**
200	10	**F671D**
200–200	10	**F672D**
400–600	15	**F6150D**
800–1200④	16.25	**F6162D**

Blank Plates Circuit Breaker and Vacu-Break①

For use with P5, Sentron SPP and Type S5 power panels	
Height (inches)	**Catalog Number**
1.25	**6FPB01**
2.5	**6FPB02**
3.75	**6FPB03**
5.0	**6FPB05**
10.0	**6FPB10**

Filler Plates

For use with P5, Sentron SPP and Type S5 power panels	
Breaker Type	**Filler Plate Catalog Number**
BL, BLH, HBL, BQD, ED4, ED6, HED4, HHED6, NGB, HGB, LGB, NGB2, HGB2, LGB2,	**DFFP1**⑤
NEB, HEB	**EBF1**

Note: When a front filler plate is not completely filled with breakers, the openings in the unused space must be closed with filler plates selected from this table.

Cover Plates

For use with P5, Sentron SPP and Type S5 power panels	
Breaker Type	**Catalog Number**
QR	**SQRC**⑥

For inches / millimeters conversion, see Application Data section.

① Normal stock item.
② Includes cover plate and mounting hardware, less circuit breaker.
③ Also fits Types FCI, FCII, SB1 and SB2 switchboards.
④ 800–1200 amp units are HCP switch.
⑤ Suitable to replace QF3 in P1 thru P5 Panelboards and Switchboards
⑥ To replace a QJ with a QR only a new cover is needed up to 225A
⑦ Although QR is rated 250A, it is limited to 225A in panelboard.
⑧ Only required when installing a 3VA52, 3VA61, or 3VA62 breaker to an existing provision in the field. Parts are included with kit S3VA52TD.
⑨ Strap Kit can also accommodate xGB breakers, reference Installation Instructions
⑩ High Density Kit, requires 7.5" Unit Space to fit QTY (6) 2 Pole breakers
⑪ Consult Sales for availability
⑫ Kit includes breaker nut keepers & bus extensions

Type P5 Panelboards

Devices Mounted on Gutter Cover Includes Device, Mounting – Wired or Unwired

Description
One piece front with door
(Depth increases to 14.25")
Hinged Gutter Covers 4 pc front
Toggle Switch — SPST or 3-way
15A, 277V maximum
Pilot Light — General Purpose
Neon or Incandescent
Pushbutton

Feed-Thru Lugs

Ampere Rating	Unit Space (inches)
400	10
600	10
800	17.5
1200	17.5

Grounding of Panelboards

Ground Bars except for brazed to box are shipped with the panel interior factory mounted.

- 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 (Copper only)

Fuse Clip Provisions (Add to 250 Volts or 600 Volts

Amp Rating	Class J	Class R	Class T
30	•	•	N/A
60	•	•	N/A
100	•	•	•
200①	•	•	•
400	N/A	•	•
600	•	•	•

• Indicates available

Ground Fault on Main Breaker

Description	Amp Rating
Conventional Ground Fault② Includes:	
Ground Fault Relay, Ground Sensor, CPT and Shunt Trip	800-1200
Test and Monitor Panel ③	
Ground Fault add to Sensitrip III breaker price (takes 5" of unit space)	800-1200

Time Clocks④

Sangamo, Tork or Paragon time clock can be supplied, mounted in panelboard cabinet. For required increase in enclosure dimension, consult local sales office.

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

Circuit Breaker Accessories Handle Blocking Device Blocks handle in either the "ON" or "OFF" position.

Padlocking Device – Padlocks in "OFF" position.

Main Bus

Standard main bus and ground bus are tin-plated aluminum. For copper main bus, neutral bus and ground bus, add from the table for each panel.

Lugs – For Main Lug Only Panels

Standard main lugs and neutral lugs are tin-plated aluminum, UL listed for use with aluminum/copper cables. Copper only lugs are an option.

Ampere Rating
400 - 1200

Shunt Trip on Main and Branches⑤

Description
BL, BQD, NGB, HGB, LGB, NGB2, HGB2, LGB2 (branch only)
QR2, QRH2, HQR2, HQR2H ED4, HED4, HHED6, CED6 (branch only)
All others to 1200A

100% Rated Main Circuit Breakers

Ampere Rating	Breaker Type
400	JXD6H, HJXD6H
	NJY, HJY, LJY
600	LXD6H, HLXD6H
600⑥	NMY, HMY, LMY
800⑦	NNY, HNY, LNY
	MXD6H, HMXD6U, SMD6, SHMD6, SND6, SHND6, NXD6H, HNXD6H
1200	NNY, HNY, LNY
	NXD6H, HNXDH,

① For use on main lug, main breaker or main switch panels without subfeed breakers.
② Available in 90" high enclosure only. Unit space is 42½" with Test and Monitor Panel; 45" without Test Monitor Panel.
③ Not available on Sensitrip III.
④ For required unit space, consult local sales office.
⑤ Shunt Trip on 100A frame breakers increases mounting height to 6.25" for twin mounting.
⑥ The 600A, 100% rated braaker application requires the use of an 800A frame breaker.
⑦ The 800A, 100% rated breaker application requires the use of a 1200A frame breaker.

SEM3 System configured in Panelboards

The Siemens SEM3 system can be configured for factory installation in branch circuit monitoring applications using the Siemens COMPAS configuration tool. This option can lower the installation time of the system for the installer while providing a factory warrantied solution.

The SEM3 system can be factory installed in unit space in type P2, P4, & P5 Siemens panel boards. Please note P1 and P3 configurations are not available at this time and the amount of unit space needed varies depending upon the application. Please note that lead time adders will apply and may vary depending upon the configuration of the system.

SEM3 for use in Siemens Panelboards

Available in a NEMA 1, 3R, or 12 rated enclosure



Controller

SEM3 controller is mounted in unit space opposite of the feed location specified in COMPAS (i.e., bottom mount for top feed) and will require 3″ of unit space. Each controller will be powered by direct tap connection to the panel section bus. Each controller can monitor up to 45 circuits. Applications that require monitoring more than 45 circuits will require additional controllers.



Current Transformers (CTs)

Seven sizes of CTs are available for use in the P5 panel: 50, 125, 250, 400, 600, 800, 1200 amp. All CTs are pre-mounted to a support bracket that attaches to the base rail of the interior of the panel board. Each bracket supports a maximum of 3 CTs and is designed for the breaker selected (brackets are not interchangeable between breaker frames). Each CT will be attached to a data module that is placed in the meter racks.



Meter Racks

Each meter rack requires 3″ of unit space. All meter racks will be installed next to the SEM3 controller in unit space. The COMPAS configuration tool will select the appropriate meter rack configuration according to the user's application and will use the 21 space meter rack as a default option where possible. Only one meter rack (regardless of number of positions) can be installed in 3″ of unit space.

NOTE: Monitoring of 45 circuits will require 9" of unit space: two 21 position racks and one 3 position rack

Other Considerations

Configuration: Data modules from CTs monitoring a circuit breaker must be mounted adjacent to one another in the meter rack. Any field changes to the factory configuration must take this into account.

Start-up & Commissioning: Siemens can provide these services. Contact your local SIEMENS PDS Power Solutions Business Developer for more details.

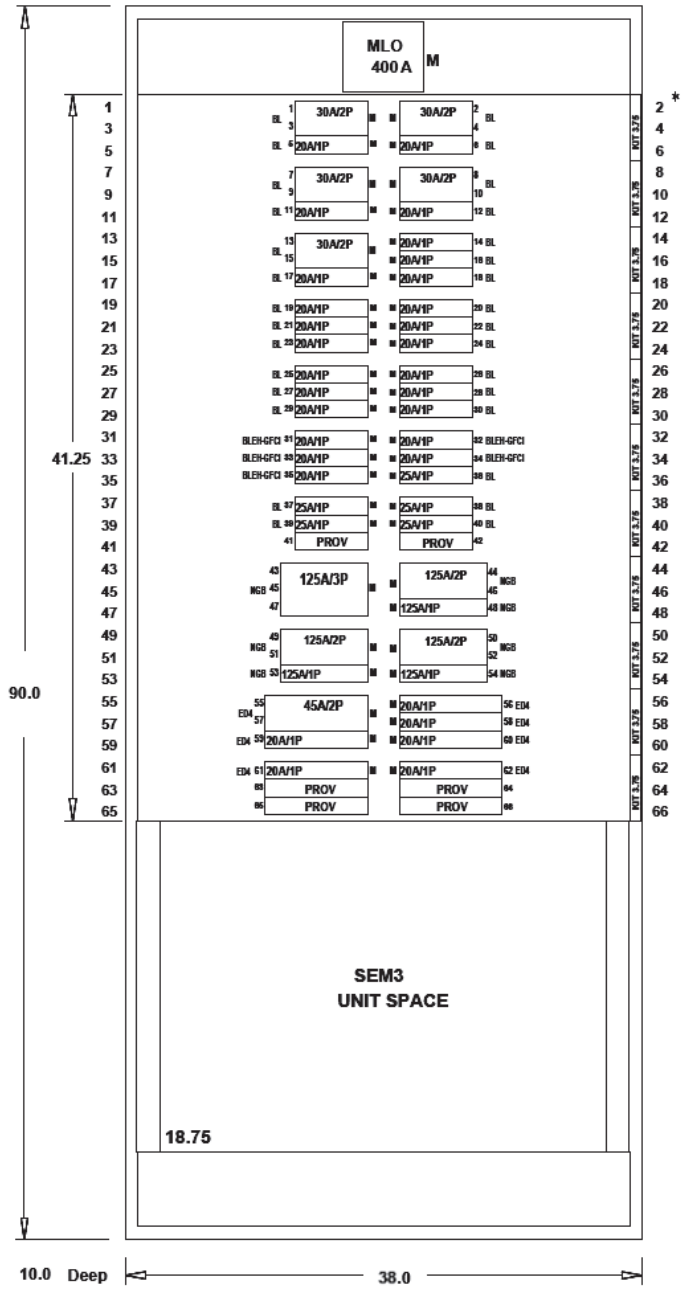
Billing Services for sub billing applications: Billing services are available. Contact your local SIEMENS PDS Power Solutions Business Developer for more details.

P5 Devices
Enclosure sizes

Example P5 Panel with SEM3 Type 1 Enclosure
P5 = (38" or 46" Wide x 10" Deep)

Enclosure heights are in 15" increments from 60" thru 90".
Enclosure heights: 60", 75", 90" (there are optional depths also)

The COMPAS configuration tool can provide actual dimensions based on the configuration. Example below is largest standard P4 enclosure for factory assembled panel - unit space is in 3.75" increments - up to 6 circuits can occupy each 3.75" of unit space.



38" std. width for P5

Main Breaker / Main Lug space varies based on selected options

Unit space varies based on selected options

Note: All circuits do not have to be monitored by SEM3 - user can select any circuits in this space to be monitored.

Based on smallest branch breakers and a 3-phase main being monitored. There is a maximum of 63 circuits that can be monitored with the configuration shown. Some selections of main breakers and other subfeed options could limit this further.

In this situation there is 37.5" of unit space available - so 60 branch circuits could be monitored.
If monitoring the main three additional circuits could be monitored with a total of 63 circuits.

This requires two controllers and three 21 position racks using 18.75" of unit space.
- see below -

SEM3 space varies by number of circuits monitored - this uses unit space.

== > 7.5" of space for up to 21 circuits monitored
one controller and one 21-pos rack

== > 11.25" of space for up to 42 circuits monitored
one controller and two 21-pos racks

== > 15" of space for up to 45 circuits monitored
one controller and two 21-pos racks plus one 3-pos rack

== > 18.75" of space for up to 63 circuits monitored
two controllers and three 21-pos racks

Note: If subfeed space is needed - it will take away from available unit space.

Type P5 Panelboards

Vacu-Break Fusible Switches

For Branch Circuit Use with AC Combination Full Voltage Starters ①

Amp Rating	Horsepower Ratings				Mounting Height in Inches (mm)				Min. Section Width Inches (mm)
	240V AC		480V AC		240V AC		480V AC		
	With NEC Fuse	With Dual-Element Fuse	With NEC Fuse	With Dual-Element Fuse	Twin	Single	Twin	Single	
30-30	3	7.5	—	—	2.50 ② (64)	—	—	—	32 (813)
30-30	3	7.5	5	10	5.00 (127)	—	7.50 (191)	—	32 (813)
30-60	3-7.5	7.5-15	5-15	25	5.00 (127)	—	7.50 (191)	—	32 (813)
60-60	7.5	15	15	25	5.00 (127)	—	7.50 (191)	—	32 (813)
60-100	7.5-15	15-30	15-25	25-50	7.50 (191)	—	7.50 (191)	—	32 (813)
100-100	15	30	25	50	7.50 (191)	—	7.50 (191)	—	32 (813)
100	—	—	25	50	—	—	—	7.50 (191)	32 (813)
200	25	50	50	100	—	10.00 (254)	—	10.00 (254)	32 (813)
200-200	—	50	—	100	10.00 (254)	—	10.00 (254)	—	32 (813)
400	50	100	100	—	—	10.00 (254)	—	10.00 (254)	38 (965)
400	50	100	100	—	—	15.00 (381)	—	15.00 (381)	38 (965)
600	75	100	—	—	—	15.00 (381)	—	15.00 (381)	38 (965)

Connector Modifications

Compression Lugs

Style	Amp Rating	Breaker Type	Compression Connectors	Available Unit Space Reduction
MLO	800	N/A	All compression lugs	Deduct 5.0″ Unit Space
	1000	N/A	All compression lugs	Deduct 5.0″ Unit Space
	1200	N/A	All compression lugs	Deduct 5.0″ Unit Space
Main Breaker	800	MD6, HMD6, CMD6, SMD6, SHMD6, SCMD6	(3)#2/0 AWG - 500 Kcmil CU or Al	0
	1200	ND6, HND6, CND6, SND6, SHND6. SCND6	(4)#250 - 500 Kcmil Cu or Al	0

Alternate Lugs

Style	Amp Rating	Breaker Type	Compression Connectors	Available Unit Space Reduction
MLO	800	N/A	(3)#3/0 AWG - 750 Kcmil Cu or Al	Deduct 10″ Unit Space
	1000	N/A	(4)#3/0 - 600 Kcmil Cu or Al (4)#3/0 AWG - 750 Kcmil Cu or Al	Deduct 10″ Unit Space
	1200	N/A	(4)#3/0 AWG - 600 Kcmil Cu or Al (4)#3/0 AWG - 750 Kcmil CU or Al	Deduct 10″ Unit Space

① 100,000 kA at 480V with Class J or Class RK5 fuses.

② The 2.50 inch (64mm) high unit is suitable for NEC Class H and K5 fuses only. Class R rejection type fuse holders are not available.

Type P5 Panelboards

Enclosures

Description	Catalog number
P5 Type 1 36" W x 12.75" D x 60" H	**PB860**
P5 Type 1 36" W x 12.75" D x 75" H	**PB875**
P5 Type 1 36" W x 12.75" D x 90" H	**PB890**
P5 Type 1 36" W x 14.75" D x 60" H	**PBD860**①
P5 Type 1 36" W x 14.75" D x 75" H	**PBD875**①
P5 Type 1 36" W x 14.75" D x 90" H	**PBD890**①
P5 Type 3R/12 60" H	**WP860**
P5 Type 3R/12 75" H	**WP875**
P5 Type 3R/12 90" H	**WP890**

Trims

Description	Catalog number
P5 Std (4 piece trim) vented 60"	**P560V**
P5 Std (4 piece trim) vented 75"	**P575V**
P5 Std (4 piece trim) vented 90"	**P590V**
P5 Std (4 piece trim) unvented 60"	**P560NV**②
P5 Std (4 piece trim) unvented 75"	**P575NV**②
P5 Std (4 piece trim) unvented 90"	**P575NV**②
P5 Std (4 piece trim) vented 60" with hinged gutter covers	**P560VHG**
P5 Std (4 piece trim) vented 75" with hinged gutter covers	**P575VHG**
P5 Std (4 piece trim) vented 90" with hinged gutter covers	**P590VHG**
P5 Std (4 piece trim) unvented 60" with hinged gutter covers	**P560NVHG**
P5 Std (4 piece trim) unvented 75" with hinged gutter covers	**P575NVHG**
P5 Std (4 piece trim) unvented 90" with hinged gutter covers	**P590NVHG**
P5 Std (1 PC Door) vented 60"	**P560VD**③
P5 Std (1 PC Door) vented 75"	**P575VD**③
P5 Std (1 PC Door) vented 90"	**P590VD**③
P5 Std (1 PC Door) unvented 60"	**P560NVD**③
P5 Std (1 PC Door) unvented 75"	**P575NVD**③
P5 Std (1 PC Door) unvented 90"	**P590NVD**③
P5 Std (1 PC Door-in-door) vented 60"	**P560VDD**③
P5 Std (1 PC Door-in-door) vented 75"	**P575VDD**③
P5 Std (1 PC Door-in-door) vented 90"	**P590VDD**③
P5 Std (1 PC Door-in-door) unvented 60"	**P560NVDD**③
P5 Std (1 PC Door-in-door) unvented 75"	**P575NVDD**③
P5 Std (1 PC Door-in-door) unvented 90"	**P590NVDD**③

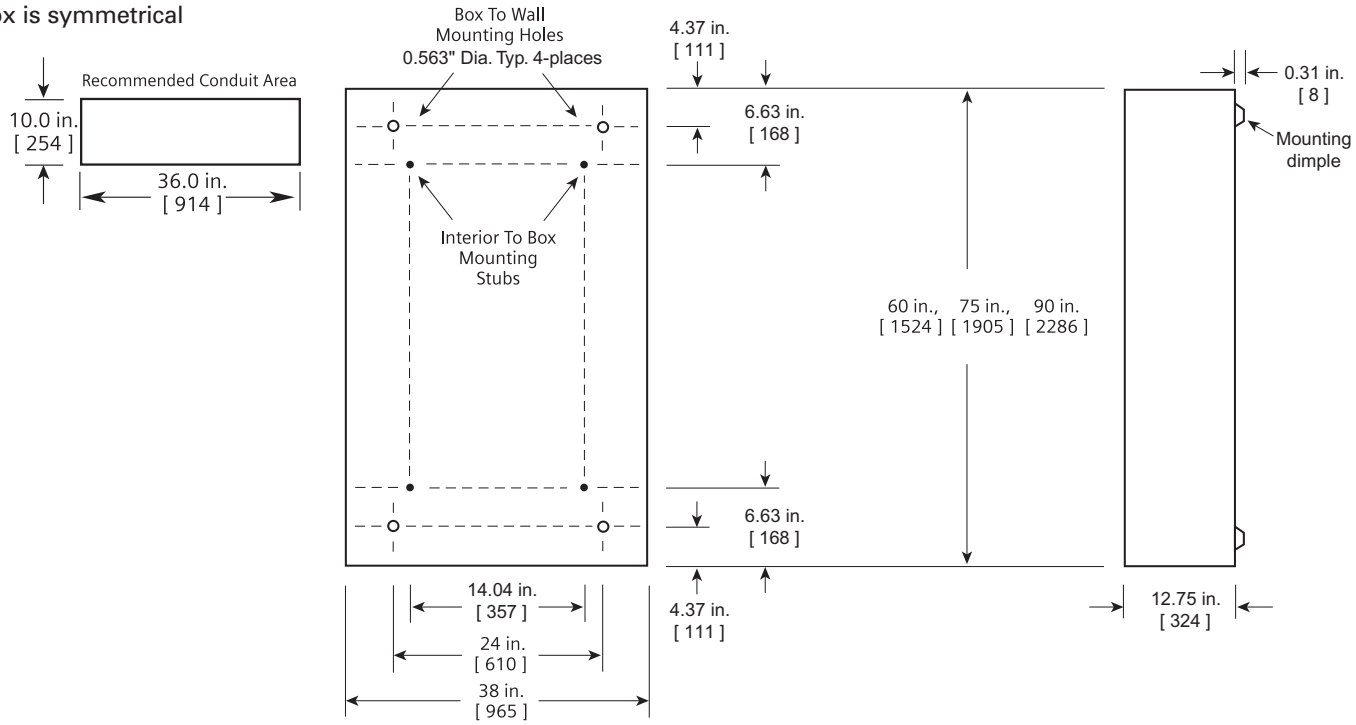
Flush mounting kits

Description	Catalog number
Flush kit to P5 60" High	**F860**
Flush kit to P5 75" High	**F875**
Flush kit to P5 90" High	**F890**

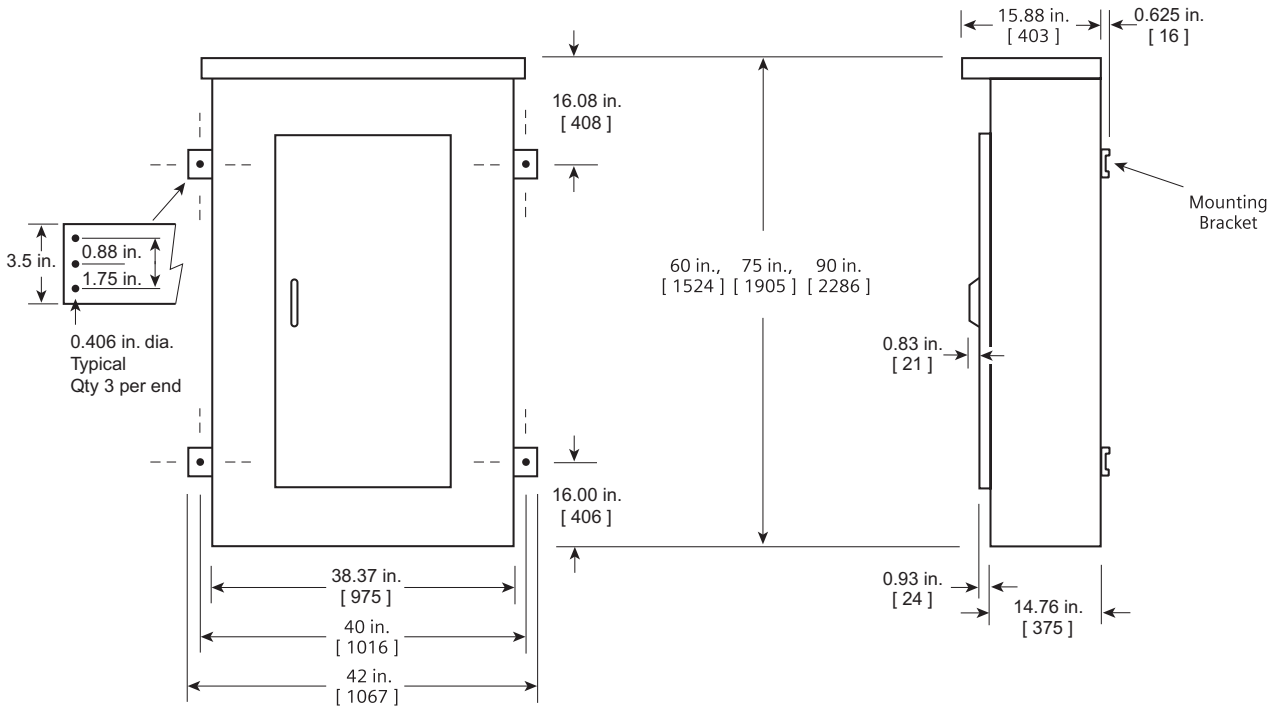
① Required with door over breaker handles.
② Unvented trims require amps per square inch bussing.
③ Requires 14.5" deep box.

Type 1 Box

Box is symmetrical



Type 3R and 3R/12 Box



Dimensions shown in inches and millimeters [ ].

Type C1

240 Volts AC Maximum
250 Ampere Mains
250 Ampere Maximum Branch
UL Short Circuit Rating — 200,000 IR Maximum

Branch Breaker Symmetrical Interrupting Rating

Based on Underwriters' Test Procedure

Type C2

480Y/277 Volts AC Maximum
250 Ampere Mains
250 Ampere Maximum Branch
UL Short Circuit Rating — 100,000 IR Maximum

Meets NEC wire bending requirement, section 312–6.

Panelboards

Listed by Underwriter's Laboratories, Inc., under "Panelboards" File #E2269.

Meets Federal Specification W–C375B/Gen.

Service

240 Volts Maximum. 1-Phase, 3-Wire, or 3-Phase, 4-Wire.

Panelboards Fronts and Doors

Standard panelboards are furnished with trim with a flush door lock. All are factory assembled for ease of installation. Fronts are fabricated from code gauge steel and finished ANSI-61.

Main Breakers C1

BL, BLH and HBL frame breakers are mounted horizontally. All other frames are mounted vertically.

Main Breakers C2

BQD frame breakers are mounted horizontally. All other frames are mounted vertically.

Boxes

C1 — 7⅝" wide, 5¾" deep.
C2 — 8½" wide, 5¾" deep.

Branch Breaker Side Gutters

Type	Circuit Breaker	Side Gutter (inches)
C1	BL, BLH, HBL	3.505
C2	BQD	3.5

Weight–Approximate

Total panelboard weight when filled with a normal quantity of breakers and accessories is:
*About 3 lbs. per inch of box height.

Gauge Steel Boxes

Type	Width	Height	Gauge Steel
C1	7⅝"	48", 73", 85"	#14
C2	8½"	48", 73", 85"	#14

Fronts

C1	7⅝"	48", 73", 85"*	#14
C2	8½"	48", 73", 85"*	#14

***Note:** Feed thru lugs and subfeed breaker not available for this height.

Main Breaker Connectors

Ampere Rating	Connectors suitable for Cu or Al
100	(1) #14–1/0 AWG
125	(1) #4–1/0 AWG
225	(1) #6 AWG–300 kcmil
250	(1) #4 AWG–350 kcmil Al (1) #6 AWG–350 kcmil Cu

Main Lugs

125	(1) #6 AWG–350 kcmil
250	(1) #6 AWG–350 kcmil

For inches / millimeters conversion, see Application Data section.

① Connector ranges indicated do not apply to all main breaker types. Refer to molded case circuit breaker standard pressure wire connectors in the breaker section of this catalog for the wire ranges for a specific breaker frame.

Main Lugs Only C1 — 240 Volts Maximum

Maximum Panel Ampere Rating	Maximum 1-Pole Circuits	Box Height (inches)	208Y/120V 3-Phase, 4-Wire Catalog Number	120/240V 1-Phase, 3-Wire Catalog Number
125	18	48	C1C18ML125CTS	C1A18ML125CTS
	30	73	C1C30ML125CTS	C1A30ML125CTS
	42	85	C1C42ML125CTS	C1A42ML125CTS
250	18	48	C1C18ML250CTS	C1A18ML250CTS
	30	73	C1C30ML250CTS	C1A30ML250CTS
	42	85	C1C42ML250CTS	C1A42ML250CTS

Main Circuit Breaker①② C1 — 240 Volts Maximum

100	18	48	C1C18BL100CTS	C1A18BL100CTS
	30	73	C1C30BL100CTS	C1A30BL100CTS
	42	85	C1C42BL100CTS	C1A42BL100CTS
125	18	48	C1C18E4125CTS	C1A18E4125CTS
	30	73	C1C30E4125CTS	C1A30E4125CTS
	42	85	C1C42E4125CTS	C1A42E4125CTS
225	18	48	C1C18QR225CTS	C1A18QR225CTS
	30	73	C1C30QR225CTS	C1A30QR225CTS
	42	85	C1C42QR225CTS	C1A42QR225CTS
250	18	48	C1C18FX250CTS	C1A18FX250CTS
	30	73	C1C30FX250CTS	C1A30FX250CTS
	42	85	C1C42FX250CTS	C1A42FX250CTS

Main Lugs Only C2 — 480Y/277 Volts Maximum

Maximum Panel Ampere Rating	Maximum 1-Pole Circuits	Box Height (inches)	480Y/277V 3-Phase, 4-Wire Catalog Number
125	18	48	C2E18ML125CTS
	30	73	C2E30ML125CTS
	42	85	C2E42ML125CTS
250	18	48	C2E18ML250CTS
	30	73	C2E30ML250CTS
	42	85	C2E42ML250CTS

Main Circuit Breaker①② C2 — 480Y/277 Volts Maximum

100	18	48	C2E18BD100CTS
	30	73	C2E30BD100CTS
	42	85	C2E42BD100CTS
125	18	48	C2E18E4125CTS
	30	73	C2E30E4125CTS
	42	85	C2E42E4125CTS
225	18	48	C2E18FX225CTS
	30	73	C2E30FX225CTS
	42	85	C2E42FX225CTS
250	18	48	C2E18FX250CTS
	30	73	C2E30FX250CTS
	42	85	C2E42FX250CTS

Alternate Main Breaker Selection①② C1

Ampere Rating	Breaker Type	Maximum Interrupting Rating (KA)	Catalog Number	Available Trip Values
100	BL	10	BL	50, 60, 70, 80, 90, 100
	BLH	22	LH	50, 60, 70, 80, 90, 100
	HBL	65	HL	50, 60, 70, 80, 90, 100
125	ED4	65	E4	50, 60, 70, 80, 90, 100, 110, 125
	HED4	100	H4	50, 60, 70, 80, 90, 100, 110, 125
	HHED6	100	HA	50 (3-pole only)
225	QR2	10	QR	100, 110, 125, 150, 175, 200, 225
225	FXD6	65	FX	70, 80, 90, 100, 110, 125, 150, 175, 200, 225
	HFD6②	100	HF	70, 80, 90, 100, 110, 125, 150, 175, 200, 225
250	FXD6	65	FX	250
	HFD6②	100	HF	250

For inches / millimeters conversion, see Application Data section.

① BL, BLH, HBL and BQD are horizontally mounted. All others vertically mounted.

② Interchangeable trip breakers such as FD6 and HFD6 cannot be back fed. Must be top feed only.

Branch Breaker Selection C1

Breaker Type	Available Ampere Rating	Availability			Maximum Interrupting Rating (kA)		
		1-Pole	2-Pole	3-Pole	120V	120/240V	240V
BL (120V)	15, 20, 30, 40, 50, 60	√	√	√	—	10	—
	70	√	√	√	—	10	—
	70, 80, 90, 100	—	√	√	—	10	—
BL (HID)	15, 20, 30	√	√	—	—	—	—
BLF (GFCI)	15, 20, 30	√	√	—	10	—	—
	40, 50, 60	—	√	—	10	—	—
BLE (EQGFI)	15, 20, 30	√	√	—	10	—	—
BGL (SWN)	15, 20, 30	—	√	√	10	—	—
BLR (240V)	15, 20, 30, 40, 50	—	√	—	—	—	10
		—	√	—	—	—	10
BLH (120V)	15, 20, 30, 40, 50, 60	√	√	√	—	22	—
	70	√	√	√	—	22	—
	70, 80, 90, 100	—	√	√	—	22	—
BLHF (GFCI)	15, 20, 30	√	√	—	—	22	—
	40, 50, 60	—	√	—	—	22	—
HBL	15, 20, 30, 40, 50	√	√	√	—	65	65
	60, 70, 80, 90, 100	—	√	√	—	65	65

Subfeed Breakers — Limit One Per Panel② C1 (Not available for 42 circuit panels)

ED4	15, 20, 30, 40, 50, 60, 70, 80, 90, 100	—	√	√	—	—	65
	110, 125	—	√	√	—	—	65
HED4	15, 20, 30, 40, 50, 60, 70, 80, 90, 100	—	√	√	—	—	65
	110, 125	—	√	√	—	—	100
HHED6	15, 20, 30, 40, 50 (3-pole only)	—	—	√	—	—	100
QR2	100, 110, 125, 150, 175, 200, 225	—	√	√	—	—	10
FXD6	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250	—	√	√	—	—	65
HFD6③	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250	—	√	√	—	—	100

Alternate Main Breaker Selection①②③ C2

Ampere Rating	Breaker Type	IR	Catalog Number	Available Trip Values
100	BQD	14	**BD**	50, 60, 70, 80, 90, 100
125	ED4	18	**E4**	50, 60, 70, 80, 90, 100, 110, 125
	ED6	25	**E6**	50, 60, 70, 80, 90, 100, 110, 125
	HED4	42	**H4**	50, 60, 70, 80, 90, 100, 110, 125
	HHED6	65	**HA**	50 (3-pole only)
225	FXD6	35	**FX**	70, 80, 90, 100, 110, 125, 150, 175, 200, 225
	HFD6	65	**HF**	170, 80, 90, 100, 110, 125, 150, 175, 200, 225
250	FXD6	35	**FX**	250
	HFD6	65	**HF**	250

Branch Circuit Breakers C2

Breaker Type	Available Ampere Rating	Availability			Maximum Interrupting Rating (kA)		
		1-Pole	2-Pole	3-Pole	277V	480/277V	480V
BQD	15, 20, 30, 40, 50, 60	√	√	√	14	14	—
	70, 80, 90, 100	√	√	√	14	14	—

Subfeed Breakers — Limit One Per Panel①② C2 (Not available for 42 circuit panels)

ED4	15, 20, 30, 40, 50, 60, 70, 80, 90, 100	—	√	√	—	18	18
	110, 125	—	√	√	—	18	18
ED6④	15, 20, 30, 40, 50, 60, 70, 80, 90, 100	—	√	√	—	—	25
	110, 125	—	√	√	—	—	25
HED4	15, 20, 30, 40, 50, 60, 70, 80, 90, 100	—	√	√	—	—	42
	110, 125	—	√	√	—	—	42
FXD6	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250	—	√	√	—	—	35
HFD6	70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250	—	√	√	—	—	65

① No increase in box height. Space is already built into C1 panel.
② BL, BLH, HBL and BQD are horizontally mounted. All others vertically mounted.
③ Interchangeable trip breakers such as FD6 and HFD6 cannot be back fed. Must be top feed only.
④ ED6/CED6 2-pole limited amps available (20-50A)

Type C1/C2

When required, special constructions or additions to standard panelboards may be specified for factory-assembled column panelboards.

Box Modifications

Description
Metal Card Holder
Welded Metal Card Holder
Nameplate
Al Ground Bar
Cu Ground Bar
Insulated Al Ground Bar
Insulated Cu Ground Bar

Interior Modifications

Description
Feed-Thru Lugs
Cu Neutral Lugs
Cu main Lugs 125A
Cu main Lugs 250A

Box Sizing Chart

Certain modifications such as subfeed breakers and feed-thru lugs require additional unit space. Use this chart to determine proper enclosure size.

Panel Configuration	Box Height (inches)
All MLO 18 Circuit All MLO 30 Circuit All MLO 42 Circuit	48 73 85
All MLO 18 Circuit with feed-thru lugs All MLO 30 Circuit with feed-thru lugs	73 85
All MLO 18 Circuit with subfeed breaker All MLO 30 Circuit with subfeed breaker	73 85
All Main Breaker 18 Circuit All Main Breaker 30 Circuit All Main Breaker 42 Circuit	48 73 85
All Main Breaker 18 Circuit with feed-thru lugs All Main Breaker 30 Circuit with feed-thru lugs	73 85
All Main Breaker 18 Circuit with subfeed breaker All Main Breaker 30 Circuit with subfeed breaker	73 85

Column Extension

Available in various standard lengths, extensions are 5¼ inches deep and 7 inches wide.

Height (inches)	Catalog Number①
14	**LXX-14**
20	**LXX-20**
26	**LXX-26**
32	**LXX-32**
38	**LXX-38**
41	**LXX-41**
44	**LXX-44**
53	**LXX-53**
56	**LXX-56**
62	**LXX-62**
65	**LXX-65**
68	**LXX-68**
74	**LXX-74**
80	**LXX-80**
86	**LXX-86**

Pull Boxes

Two styles of pull boxes are available, top and front mounted. When the panel and its extensions are mounted in a structural WF beam a front mounted pull box is required. When the panels are surface mounted, a top mounted pull box may be used. Provisions are made so that the neutral bar may be mounted in the pull box when required. (Front mounted pull box dimensions are 14" H. X 20" W.)

Description	Catalog Number①
Top Mount	**LXXP-T**
Front Mount②	**LXX50-F**

Breaker Kits and Accessories

Kit Number	Description	Contents
MBKQRC1FK	C1 Filler for QR in Main position 1PH or 3PH	Kit contains all cover plates necessary to change from QJ to QR both 2 and 3-pole breakers.

For inches / millimeters conversion, see Application Data section.

① Must be ordered as a manual line.
② Includes 50" extension.

Telephone and Equipment Cabinets: Conform to requirements of Underwriters' Laboratories, Inc., for all cabinets and boxes bearing their label. Surface and Flush enclosures: box and front constructed of code-gauge steel, box galvanized and front only finished with light gray, ANSI-61. Cabinets provided without backboards.

Boxes: Standard construction has blank end walls, without knockouts.

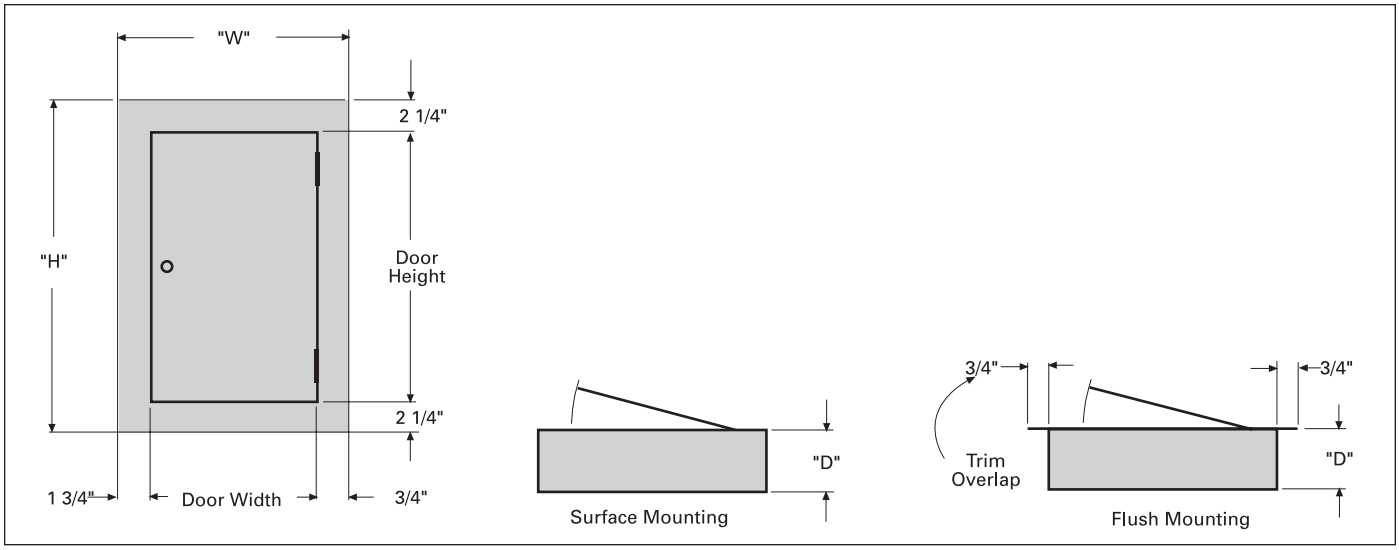
Fronts: Siemens Fas Latch fronts feature concealed hinges and fastening screws. Match P1 and P2 Panels in appearance. Two locks supplied on doors more than 51 inches high.

Cabinets

Dimensions (inches)			Surface Mount Catalog Number	Flush Mount Catalog Number
Height	Width	Depth		
With FAS Latch Front				
29	20	5.75	**TCS29B**	**TCF29B**
41	20	5.75	**TCS41B**	**TCF41B**
47	20	5.75	**TCS47B**	**TCF47B**
59	20	5.75	**TCS59B**	**TCF59B**



Dimensions



For inches / millimeters conversion, see Application Data section.

① Add S for Surface, F for Flush.

Customer Relay Cabinets

Dimensions			Catalog Number
H	W	D	
23	20	5.75	RC(1)23B①
23	24	5.75	RCW(1)23B②

Ampere Rating	ASCO #920 Mechanically held		ASCO #911 — Mechanically held remote control switch suitable for all classes of loads (Total system loads). Voltage rated to 480V AC, UL listed.	Siemens LEN Electrically Held	
	2-Pole	3-Pole	3-Pole	2-Pole	3-Pole
20	—	—	—	—	—
30	√	√	—	—	√
60	√	√	—	—	√
75	√	√	—	—	—
100	√	√	√	—	√
150	√	√	√	—	—
200	√	√	—	—	√
225	√	√	—	—	—
260	—	—	√	—	—
300	—	—	√	—	—
400	—	—	√	—	—
600	—	—	√③	—	—
800	—	—	√	—	—
1000	—	—	√	—	—
1200	—	—	√	—	—

√ = available configurations

Application (See individual panel sections for application information)

Remote Control Switch Modification

Description
Auxiliary Contacts (Mounted Not Wired) Ea.
2-Wire Control (add 6" to panel height.)

Control Power Transformer

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

① Replace (1) with "S" for surface applications and "F" for flush applications.

② Includes Fas latch trim and steel mounting pan. If 2 or more cabinets are to be stackedn order (no extra charge for connecting hardware).

③ Available in P4 or P5 only.

Standard Enclosures Made From Special Materials — Type P1, P2, P3

Stainless Steel Options

14GA 304 SS Grade (Brush Front)	Front Front

* Stainless available only for Screw-to-Box, Hinge-to-Box, and Door-in-Door. All have piano hinges only.
**No special sizes. 20" and 24" wide only.

Stainless Steel Additions to Enclosure Size (Type 1 Only)

	Lighting Panel	Distribution Panels
Width	Order in 2" increments (30" max)	Order in 2" increments
Depth	Order in 2" increments (10" max)	Order in 2" increments

Consult factory for dimension limitations.

Miscellaneous

Description.
Conduit Hubs — Up to 1 1/2 in. Each 2 in. to 2 1/2 in. Each 3 in. Each

Painted Finish

Set-up Charge Net . Box Only Alternate Color Trim

Front And Door Modifications

Two Panels with Common Trim (14 GA only)②

Devices Mounted On Interior-Includes Device, Mounting (Wired or Unwired)①

Toggle Switch-SPST or 3-way; 15A, 277 V Maximum
Pilot Light-General Purpose, Neon or Incandescent
Pushbutton

Gauge Steel of Boxes/Fronts, Surface and Flush (see pgs. 11-6 & 11-7)

Dimensions in Inches (mm)		Gauge Steel		
H	**W**	**Box**	**Front/Door**	**Type**
26-74 (660-1880)	20 (508)	16①	14⑥	Type 1
26-74 (660-1880)	20 (508)	16②	16/14②	Type 3R/12
32-60 (813-1524)	20-36 (508-914)	14③	14③	Type 4
26-74 (660-1879)	20 (508)	14④	14④	Type 4X
36-60 (914-1524)	30-36 (762-914)	N/A⑤	N/A⑤	Type 4X Non-Metallic

① 16 Gauge is Standard (14 Gauge & 12 Gauge are optional)
② 15 Gauge Steel Can with 14 Gauge Door or Similar Approved Construction
③ No Optional Gauge available
④ 304SS 14 Gauge Std., 316SS 14 Gauge optional
⑤ Sizes do not match Standard Enclosure Sizes - See Table P1-21 - material is non-metallic - No Gauge Specified.
⑥ FAS-Latch is 14 GA only.
Screw-to-Box, Hinge-to-Box, Door-in-Door (14 GA Std./12 GA Std. or 10 GA Optional)
STB/HTB/DND with Piano Hinge (14 GA Std./12 GA Optional)

Note: For retro fit interiors and fronts into existing can, retro fit must match or exceed minimum height, width, and depth requirements of standard Type 1 enclosures.

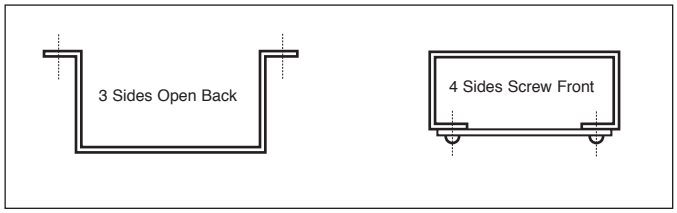
①Panels having doors over 48 in. high, 2 locks are standard.
② Lighting panels only. Field must supply dimensional information and panel orientation.

Conduit Enclosing Shield (Panel Skirts)

Sheet metal to cover conduits above or below a standard panelboard box.

Skirt Length	Width	Depth
8, 9, 11, 12, 14, 17, 18, 23, 25	20.00	5.75
26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36		
37, 38, 39, 40, 41, 42, 43, 44		
8, 9, 11, 12, 14, 17, 18, 23, 25	24.00	7.75
26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36		
37, 38, 39, 40, 41, 42, 43, 44		

Panel Skirts Standard Configurations



Notes:
A) 4-sided skirts have standard Part Numbers (not catalog numbers).
B) 3-sided skirts are ordered as Custom in COMPAS.
C) Order in COMPAS with interior when possible.
D) If ordered separate from interior, use a manual line in COMPAS.
E) Must note if Top Entry or Bottom Entry required.

Molded Case Switches①

(Non-Automatic Circuit Interrupters)

When Molded case switches are substituted for thermal breakers deduct from the installed thermal breaker price:

Ampere Rating	Breaker Frame	Availability	
		3-Pole	2-Pole
100	ED2 ED4 ED6	√ √ √	√ √ √
225	QR2	√	√
250	FXD6	√	√
400	JXD2 JXD6	√ √	√ √
600	LXD6	√	√
800	MD6	√	√
1200	ND6	√	—

① Available only as a main switch for non-service equipment applications. Not available for branch devices.

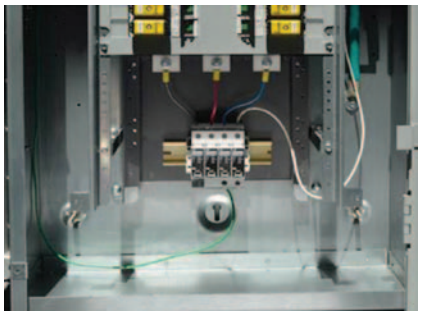


QuickShip™

All SQSCP configurations of the standard NEMA 1 enclosure can be specified for shipment within 10 business days of order when specified.

Mains	MLO (Main Lug Only)
	Fused disconnect switch
	Non-fused disconnect switch
Assembly SCCRs	200kA, 100kA or 50kA AC, 100kA or 20kA@125Vdc①
Voltage ratings	Applicable on any 600Vac or less, or 125Vdc② or less systems
Bus amperages	400A, 225A, 200A, 100A, 60A or 30A
Branch circuits	Circuits: 18, 30 or 42*
	Amps: Up to 100A
	Type: 1-, 2- and 3-Pole
Panels	Feed: top & bottom
	Mounting: surface or flush
	Door/Trim: regular or door-in-door
	NEMA Ratings: 1 & 3R. Other ratings available, consult factory.
Through-lugs & loadside disconnect	Feed-Through: single and double
	Sub-Feed
	Feed/Sub-Through
	Fused loadside disconnect, (up to 1/2 of main amp rating)
Neutrals	200A, 400A and 800A unbonded and bonded
Grounds	Non-isolated or isolated
Enclosure sizes	Standard size panelboard (20" W x 5¾" D x 33"- 69" H)*
Spare fuses	Spare fuse compartment holds up to six fuses
Options	Surge protection device (SPD) for high and low energy transients.*

① Depending on configuration.
② 125Vdc rating applicable to only 80 amp or less CCPBs on MLO panels only.



*Factory installed SPD options

System & Voltage	Catalog Number	Discharge Current		Response Time	SCCR	Data Sheet Number
		Nominal (I_n)	Maximum (I_{max})			
Single-phase, 120/240	**BSPM2240S3G**	20 kA	40 kA	≤25 ns	200 kA	2150
Three-phase Wye, 208/120	**BSPM4208WYNG**					2152
Three-phase Wye, 480/277	**BSPM4480WYNG**					2152
Delta, 480	**BSPM3480DLG**					2151

Catalog Symbol: SQSCP4

Description

Panelboards for commercial/industrial branch or service entrance applications on systems up through 600Vac.

The SQSCP is specifically designed to address the NEC® Selective Coordination Requirements for Emergency, Legally Required Standby, Healthcare Essential Electrical and Critical Operation Power Systems (COPS) per NEC® 700.28, 701.27, 645.27 and 708.54. Not for applications requiring AFCI protected circuits. The SQSCP is configured to order for the application. To confirm availability of options and constructions, contact your Siemens distributor.

Ratings

Volts: 600Vac (or less), 125 Vdc
Amps: 30, 60, 100, 200, 225, 400A
SCCR: 20kA or 100kA @ 125Vdc–See panelboard short circuit ratings table for AC ratings.

Agency information

- UL 67–Standard for panelboards
- UL 50/UL 50E–Enclosures for electrical equipment
- CSA 22.2, No. 29-M1989–Panelboards and encl. panelboards
- UL listed, class CTL panelboard (meets editions of the NEC prior to 2008 with regard to the NEC® 408.15 limit of 42 overcurrent devices per panel)
- UBC and CBC Seismic Qualified and IBC Approved

Main options

- Main lug only (MLO)
- Fused main disconnect
- Non-fused main disconnect

Branch disconnect options

- 1-, 2-, and 3-pole 15, 20, 30, 40, 50, 60, 70, 90, and 100A rejecting branch disconnects (see table for details).

  Branch ampacity on 125Vdc panels limited to SCCPB 80A or less.

Branch circuit positions

- 18, 30 and 42

Neutral options

- Unbonded and bonded 200A, 400A and 800A

Ground options

- Isolated and non-isolated

Enclosures

- NEMA 1 and NEMA 3R. Other ratings available. Consult factory.

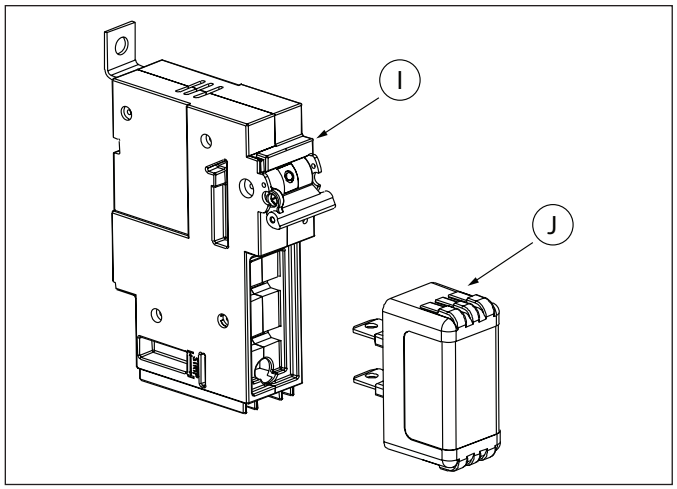
Spare fuse compartment

- Six space spare fuse compartment standard on all models

Panelboard Short-circuit Current Ratings

	AC main options				DC
SCCR	Main lug only (MLO)①	70-200A main disc. no fuses① or w/ Class J fuses	225-400A main disc. no fuses① or w/ Class J fuses	SCCP_CF main disc. (60A) ②	Main lug only (MLO)①
High	200kA	200kA	100kA	200kA	100kA
Std.	50kA	50kA	50kA	50kA	20kA

① Class J, T or RK1 fuses upstream, max amps = panel amps.
② CUBEFuse® disconnect



I – CCPB Branch Disconnects

Poles	Ampacity	Part No.
1-pole	15A, 20A, 30A, 40A, 50A, 60A, 70A, 90A, 100A	SCCPB-1-(amp)CF
2-pole		SCCPB-2-(amp)CF
3-pole		SCCPB-3-(amp)CF

J – CUBEFuse® Fuses

For CCPB① Part No.	Non-indicating Part No. STCF(amps)RN	Indicating② Part No. STCF(amps)
SCCPB-(# of poles)-15CF	STCF1RN, STCF3RN, STCF6RN, STCF10RN, STCF15RN	STCF6 STCF10 STCF15
SCCPB-(# of poles)-20CF	STCF17-1/2 RN STCF20RN	STCF17-1/2 STCF20
SCCPB-(# of poles)-30CF	STCF25RN STCF30RN	STCF25 STCF30
SCCPB-(# of poles)-40CF	STCF35RN STCF40RN	STCF35 STCF40
SCCPB-(# of poles)-50CF	STCF45RN STCF50RN	STCF45 STCF50
SCCPB-(# of poles)-60CF	STCF60RN	STCF60
SCCPB-(# of poles)-70CF	STCF70RN	STCF70
SCCPB-(# of poles)-90CF	STCF80RN STCF90RN	STCF80 STCF90
SCCPB-(# of poles)-100CF	STCF100RN	STCF100

① CCPB disconnect can accept CUBEFuses® with amp ratings less than or equal to the amp rating of the SCCPB disconnect.
② 1A indicating CUBEFuse® not available. Correct fit with SCCPB disconnect requires indicating CUBEFuse® with date code R38 or later.

Fuse and disconnect performance data

For details and specifications, access the following data sheets online at *www.usa.siemens.com/panelboards*

CUBEFuse® Specifications Catalog Symbols

STCF_ (6-100A Indicating version)
STCF_RN (1-100A Non-indicating version)

Description

The CUBEfuse® is a finger-safe, dual-element, time delay UL Class CF power fuse with Class J fuse electrical performance charcteristics. 10 Seconds minimum operating time at 500% rated current.

Ratings

Volts: 600Vac/300Vdc
Amps: 1-100 (non-indicating version)
6-100 (indicating version)
IR: 300kA RMS Sym. (UL)
200kA RMS. Sym (CSA)
100kA DC (UL & CSA)

Agency Information

- UL Listed Special Purpose Fuse: Guide JFHR, File E56412
- CSA Certified Fuse: Class 1422- 02, File 53787
- CE compliance for the European Union low voltage directive

Other Ratings/Specifications

Watts Loss at rated current: STCF30: 3.99W
STCF60: 6.23W
STCF100: 9.51W

Operating and Storage Temperature Range

14 to 149°F(-10 to 65°C)

Material Specifications

- Case: Glass filled PES (Polyethersulfone)
- Terminals: Copper alloy
- Terminal plating: Electroless tin
- Indicator lens: PES (Polyethersulfone) (indicating version only)
- Indicator: Energetic chemical

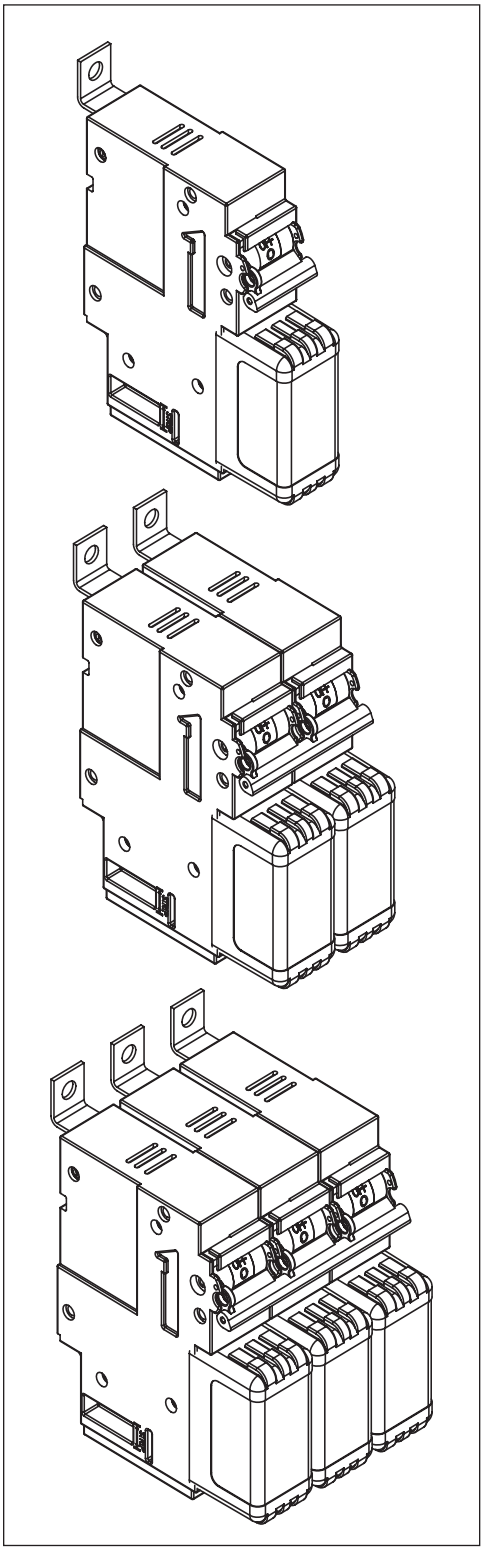
CUBEFuse®, Low-Peak®, Quik-Spec™, QuickShip™, and easyID™ are valuable trademarks of Cooper Industries in the United States and other countries.

SCCPB Horsepower Ratings

SCCPB Disconnect	Amp Rating	HP Rating @ Vac			
		120	240	480	600
SCCPB-(poles)-15CF	15	0.5	3	5	7.5
SCCPB-(poles)-20CF	20	0.75	3	7.5	10
SCCPB-(poles)-30CF	30	1.5	5	15	10
SCCPB-(poles)-40CF	40	2	7.5	20	10
SCCPB-(poles)-50CF	50	3	7.5	20	10
SCCPB-(poles)-60CF	60	3	7.5	20	10
SCCPB-(poles)-70CF	70	3	15	30	40
SCCPB-(poles)-90CF	80	5	20	40	50
SCCPB-(poles)-100CF	100	5	20	50	50

Branch Disconnects

SCCPB① Part No.	Poles	Fuse Amp Range	Max. SCCBP Amp.	Non-indicating Fuses (Standard)	Indicating Fuses (Opt'l)②
SCCPB-1-15CF	1	1-15	15	STCF1RN, STCF3RN, STCF6RN, STCF10RN, STCF15RN	STCF6 STCF10 STCF15
SCCPB-2-15CF	2				
SCCPB-3-15CF	3				
SCCPB-1-20CF	1	17.5-20	20	STCF17-1/2 RN STCF20RN	STCF17-1/2 STCF20
SCCPB-2-20CF	2				
SCCPB-3-20CF	3				
SCCPB-1-30CF	1	25-30	30	STCF25RN STCF30RN	STCF25 STCF30
SCCPB-2-30CF	2				
SCCPB-3-30CF	3				
SCCPB-1-40CF	1	35-40	40	STCF35RN STCF40RN	STCF35 STCF40
SCCPB-2-40CF	2				
SCCPB-3-40CF	3				
SCCPB-1-50CF	1	45-50	50	STCF45RN STCF50RN	STCF45 STCF50
SCCPB-2-50CF	2				
SCCPB-3-50CF	3				
SCCPB-1-60CF	1	60	60	STCF60RN	STCF60
SCCPB-2-60CF	2				
SCCPB-3-60CF	3				
SCCPB-1-70CF	1	70	70	STCF70RN	STCF70
SCCPB-2-70CF	2				
SCCPB-3-70CF	3				
SCCPB-1-90CF	1	80-90	90	STCF80RN STCF90RN	STCF80 STCF90
SCCPB-2-90CF	2				
SCCPB-3-90CF	3				
SCCPB-1-100CF	1	100	100	STCF100RN	STCF100
SCCPB-2-100CF	2				
SCCPB-3-100CF	3				



① SCCPB disconnect can accept CUBEFuses® with amp ratings less than or equal to the amp rating of the SCCPB disconnect.
② Correct fit with SCCPB disconnect requires indicating CUBEFuses® with date code R38 or later.

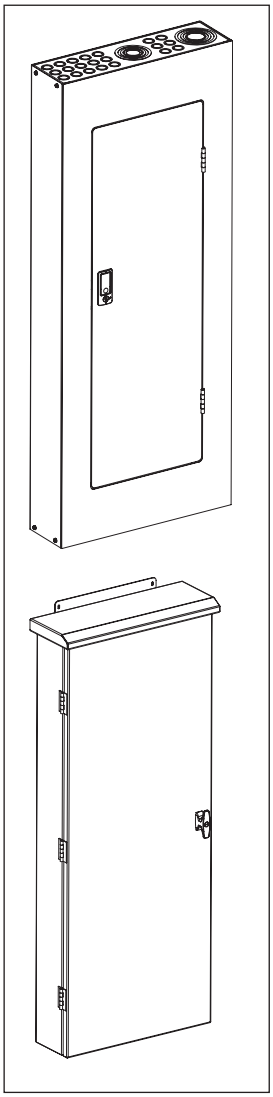
Enclosure/System Types, AC & DC Voltages

NEMA 1

- Flush or surface mount.
- Galvanized steel with removable end walls –blank or with knockouts to order.
- Box sizes: 20" W x 5.75" D x 33", 50", 59" or 69" H (510 W x 145 D x 838, 1270, 1500 or 1753mm H). Box can be rotated 180° to accommodate conduit feed.
- Enclosure and chassis mounting instructions are found in supplied literature.
- Chassis mounts directly onto studs in the enclosure.
- Trim finished with gray powder coat paint over phosphatized steel (ANSI 61).
- Door and door-in-door configurations with locks.
- Door locks use key #2A1910-2.
- Circuit directory card is located on the inside of the door.
- Trim screws are concealed.

NEMA 3R

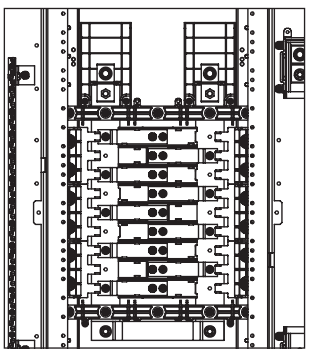
- Surface mount only.
- Finished with gray powder coat paint over phosphatized steel (ANSI 61).
- Bottom feed only, no knockouts
- Box sizes: 20" W x 7.7" D x 34.5", 51.5", 60.5" or 70.5 H (510 W x 195 D x 876, 1310, 1535 or 1791mm H).
- Enclosure and chassis mounting instructions are found in supplied literature
- Chassis mounts directly onto studs in the enclosure.
- Gasketed door has vault handle with lock.
- Door locks use key #2A1910-1.
- Circuit directory card is located on the inside of the door.



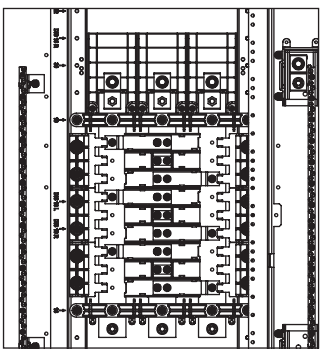
Busing

Tin-plated copper with sufficient cross section to meet UL 67 temperature rise requirements.

Distributed 1- & 3-phase busing
All SCCPB branch disconnects can be mounted in any branch circuit position.



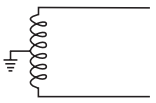
Single-phase



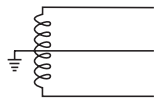
Three-phase

AC Voltages

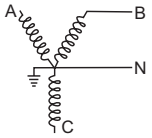
1 phase, 2 wire
- 120V 1 phase, 2 wire
- 240V 1 phase, 2 wire



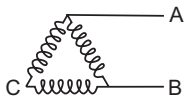
1 phase, 3 wire
- 120/240V 1 phase, 3 wire



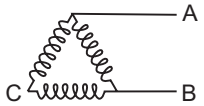
1 phase, 2 wire, Wye
- 277V 1 phase, 2 wire



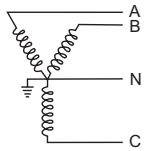
1 phase, 2 wire, Delta
- 480V 1 phase, 2 wire



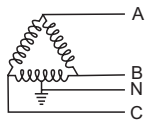
1 phase, 3 wire, Delta
- 240/480V 1 phase, 3 wire



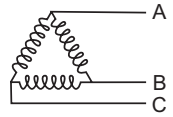
3 phase, 4 wire, Wye
- 208Y/120V 3 phase, 4 wire
- 480Y/277V 3 phase, 4 wire
- 600Y/347V 3 phase, 4 wire

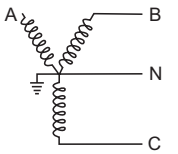


3 phase, 4 wire, Delta
- 240/120V 3 phase, 4 wire
- 480/240V 3 phase, 4 wire



3 phase, 3 wire, Delta
- 240V, 3 phase, 3 wire
- 480V, 3 phase, 3 wire
- 600V, 3 phase, 3 wire
- 240V, 3 phase, 3 wire, grounded B
- 480V, 3 phase, 3 wire, grounded B
- 600V, 3 phase, 3 wire, grounded B



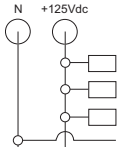


1 phase, 3 wire, Wye
- 208Y/120V 1 phase, 3 wire
- 480Y/277V 1 phase, 3 wire

DC voltage

1 phase, 2 wire
- 125Vdc, 2 wire

(Up to 125Vdc, MLO option only, SCCPB 40A or less.)



NEMA 1 and 3R Enclosure Dimensions

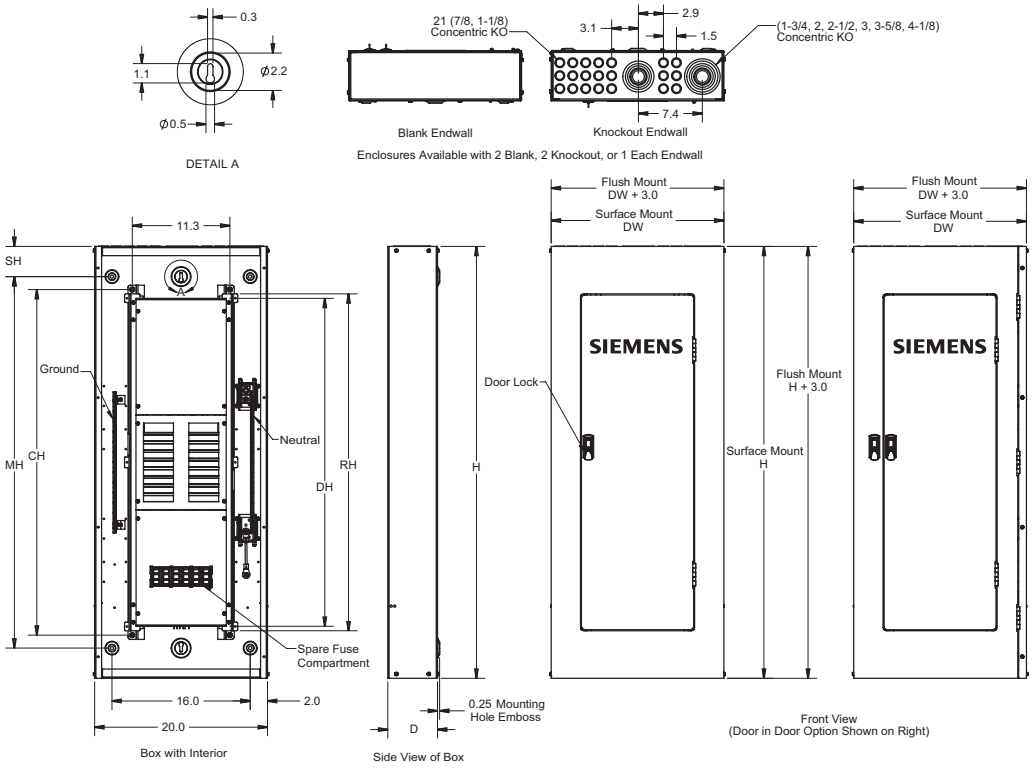
Encl. Type	Encl. Height	Dimensions (inches) H	HC	MH	CH	DH	RH	SH	DW	D
NEMA 1	33	33.0	N/A	29.0	26.0	28.9	25.0	2.0	20.0	5.7
	50	50.0	N/A	43.0	40.0	37.9	39.0	3.5	20.0	5.7
	59	59.0	N/A	52.0	49.0	46.9	48.0	3.5	20.0	5.7
	69	69.0	N/A	62.0	59.0	56.9	58.0	3.5	20.0	5.7
NEMA 3R	33	33.0	34.5	35.5	26.0	28.9	25.0	2.0	20.0	6.3
	50	50.0	51.5	52.5	40.0	37.9	39.0	2.0	20.0	6.3
	59	59.0	60.5	61.5	49.0	46.9	48.0	2.0	20.0	6.3
	69	69.0	70.5	71.5	59.0	56.9	58.0	2.0	20.0	6.3

Available panelboard configurations

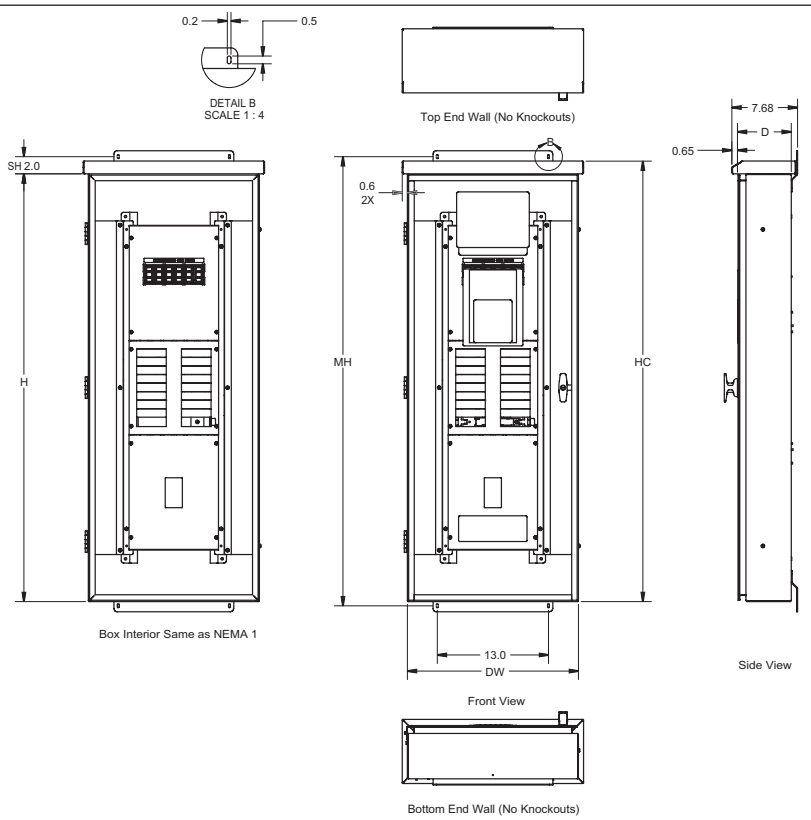
Based on enclosure height, panel amp rating and number of branch circuit positions

Encl. height (inches)	Panel amp rating	Branch positions	Available configurations
33″	30–200	18	· Main lug only, with or without feed-through lugs · Non-fused disconnect, no loadside options
		30	· Main lug only, no loadside options
50″	30–60	18	· 30 through 60A fused main disconnect with or without feed-through lugs or TVSS device
		30	· 30 through 60A fused main disconnect with or without feed-through lugs or TVSS device
		42	· 30 through 60A fused main disconnect with or without feed-through lugs or TVSS device
	70–200	18	· 70 through 200A fused main disconnect with or without feed-through lugs or TVSS device
		30	· 70 through 200A fused disconnect with or without feed-through lugs
	30–200	18	· Main lug only with TVSS device · Non-fused disconnect, with feed-through lugs or TVSS device
		30	· Main lugs only, with feed-through lugs or TVSS device · Non-fused disconnect, with or without feed through lugs
		42	· Main lug only, with or without feed-through lugs or TVSS device · Non-fused disconnect, with or without feed-through lugs
	225–400A	18	· Main lug only, with ot without feed through lugs or TVSS device · Non-fused disconnect, with or without feed-through lugs
		30	· Main lug only, with or without feed-through lugs
59″	70–200	30	· 70 through 200A fused main disconnect, with TVSS device
		42	· 70 through 200A fused main disconnect with or without feed-through lugs or TVSS device
	30–200	42	· Non-fused disconnect with TVSS device
	225–400A	18	· Main lug only with loadside disconnect · Non-fused disconnect, with TVSS device · 225 through 400A fused disconnect with or without feed-through lugs or TVSS device
		30	· Main lug only, with TVSS device · 225 through 400A fused disconnect, with no loadside options
		42	· Main lug only, with or without feed-through lugs or TVSS device · Non-fused disconnect, with no loadside options
69″	225–400A	18	· Non-fused disconnect, with loadside disconnect
		30	· Main lug only with loadside disconnect · 225 through 400A fused disconnect with feed-through lugs or TVSS device
		42	· Non-fused disconnect, with or without feed through lugs or TVSS device · 225 through 400A fused main disconnect, with or without feed-through lugs or TVSS device

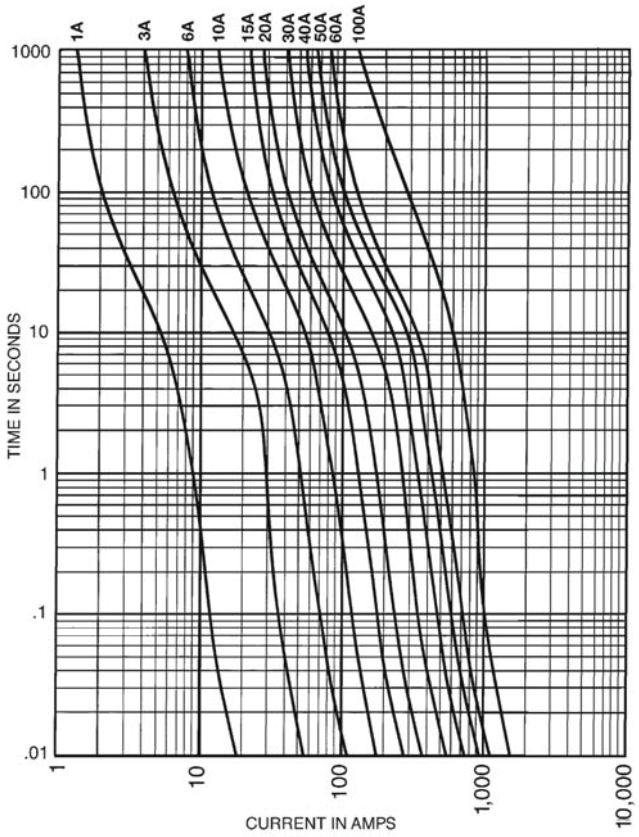
NEMA 1 Enclosures and Interior



NEMA 3R Enclosures Interior same as NEMA 1



Time-Current Characteristic Curves–Average Melt



Current Limitation Curves

