

Panelboards

Type P4 Panelboards

General

Features

The P4 panel is a medium sized footprint distribution panel to fit a large number of applications that require more or larger branch devices and higher amp ratings than 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. X Box Height is determined by main device and unit space. See charts for box height.
Voltage – 600V AC max.
250V DC max.

Amperage – 400-800 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 Lugs^①

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)	#16 ^①	#14 (1 piece trim) #14 Ga (4 piece trim)

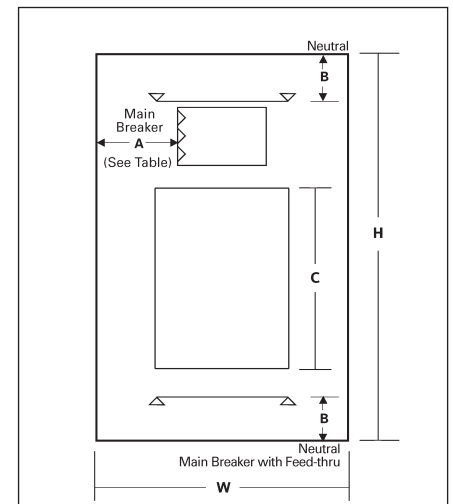
① Box has 16 gauge side panels and 12 gauge back support.

Enclosure Selection^①

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.

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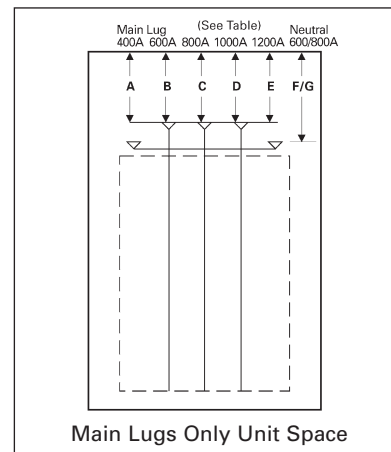
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Dimensions

Ampere Rating	Trip Type	Breaker Family	Frame Type	Maximum Interruption Rating (KAIC)			Unit Space Requirements in Inches (mm)	Trip Amperage
				240V	480V	600V		
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
			NJ	65,000	35,000	25,000	6.25 (159)	250, 400
	Electronic (Solid state)	VL	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, HHL6	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
			NL	65,000	35,000	25,000	6.25 (159)	400, 600
			HL	100,000	65,000	25,000	6.25 (159)	400, 600
	Electronic (Solid state)	VL	LL	200,000	100,000	25,000	6.25 (159)	400, 600
			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
	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
800	Thermal Magnetic	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
	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

Main Lugs Only Wire Bending Space

Lugs	Dimensions in inches (mm)						
	Main Lug					Neutral	
	400A A	600A B	800A C	1000A D	1200A E	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)



Branch Switch Unit Space

Ampere Rating	Number of Poles	Mounting Height in inches (mm)		AC Voltage	Cables Per Connector	Connectors Suitable for Copper or Aluminum
		Twin Mounted	Single Mounted			
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

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Dimensions

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 (117)
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	2.5 (318)
T	11.25 (286)

← A →	BL, BLH, HBL, BQD, BLE BLEH, BLR, BLF, BLHF, BAF, BAHF, BGL, BQD	BL, BLH, HBL, BQD, BLE BLEH, BLR, BLF, BLHF, BAF, BAHF, BGL, BQD	← A →
← B →	NGB, HGB, LGB	NGB, HGB, LGB	← B →
← C →	NEB, HEB	NEB, HEB	← C →
← D →	ED4, ED6, HED4	ED4, ED6, HED4	← D →
← H →	CED	CED	← H →
← E →	QJ2, QJH2, QJ2H, HQJ2H	QJ2, QJH2, QJ2H, HQJ2H	← E →
← F →	FXD6, FD6, HFXD6, HFD6, HHFXD6, HHFD6, SFD6, SHFD6	FXD6, FD6, HFXD6, HFD6, HHFXD6, HHFD6 SFD6, SHFD6	← F →
← Q →	ND, HD, LD	ND, HD, LD	← Q →
← R →	NF, HF, LF	NF, HF, LF	← R →
← I →	CFD6, SCFD6		← I →
← J →	JD6, JXD6, SJD6, HJD6, HXJD6, SHJD6, HHJD6, HHJXD6, LD6, LXD6, SLD6, HLD6, HXLD6, SHLD6, HHL6, 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 →

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PANELBOARDS

Panelboards

Power and Distribution

Selection

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 "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. 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	240/120V	120/240V or 250 V DC Max
		3-Phase, 4-Wire Catalog Number	3-Phase, 4-Wire Catalog Number	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	480Y/277V	480V ^①
		3-Phase, 3-Wire Catalog Number	3-Phase, 4-Wire Catalog Number	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	240/120V	120/240V or 250 Vdc Max
		3-Phase, 4-Wire Catalog Number	3-Phase, 4-Wire Catalog Number	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	480Y/277V	480V ^①
		3-Phase, 3-Wire Catalog Number	3-Phase, 4-Wire Catalog Number	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 11-49 for 600V rated mains. Change position 5 and 6 and add price from table. Price only 600V rated branch breakers.

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Power and Distribution

Selection

Type P4

Alternate Main Breaker Selection

Breaker Frame Rating	Trip Type	Breaker Family	Frame Type	Alternate Main Breaker 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	NJ	J1	250, 400	6.25	65,000	35,000	25,000
			HJ	J7	250, 400	6.25	100,000	65,000	25,000
			LJ	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	NL	L7	400, 600	6.25	65,000	35,000	25,000
			HL	L2	400, 600	6.25	100,000	65,000	25,000
			LL	SL	400, 600	6.25	200,000	100,000	25,000
		Sentron	SLD6	L6	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	NM	M1	600, 700, 800	8.75	65,000	35,000	25,000
			HM	M2	600, 700, 800	8.75	100,000	65,000	35,000
			LM	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
	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.

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Selection

Branch Breaker Selection^①

Breaker Frame Rating	Trip Type	Breaker Family	Frame Type	Poles	Trip Amperage	Unit Space Requirements in Inches		Maximum Interruption Rating (KAIC) Volts AC						
						Single	Twin	120		240	480Y/ 277	480	600Y/ 347	600
100	Thermal Magnetic	General Appli- cation	BL	1, 2, 3	15-60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	10,000	10,000	—	—	—	—	
			BLR	2	15, 20, 30, 40, 50, 60, 70, 80, 90, 100	—	3.75 ^{②③}	10,000	10,000	—	—	—	—	
			BLH	1, 2, 3	15-60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	22,000	22,000	—	—	—	—	
			HBL	1, 2, 3	15-60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	65,000	65,000	—	—	—	—	
			BQD	1, 2, 3	15-50, 60, 70, 80, 90, 100	—	3.75 ^{②③}	65,000	65,000	14,000	—	—	—	
			BQD6	1, 2, 3	15-50, 60, 70	—	3.75 ^{②③}	65,000	65,000	—	—	10,000	—	
	Special Application		BL-HID	1, 2	15, 20, 30	—	3.75 ^{②③}	10,000	10,000	—	—	—	—	
			BL-BG	2, 3	15, 20, 30	—	3.75 ^{②③}	10,000	10,000	—	—	—	—	
	Ground Fault Circuit Interrupter		BLE-GFCI	1, 2	15, 20, 30, 40, 50, 60	—	3.75 ^②	10,000	10,000	—	—	—	—	
			BLEH-GFCI	1, 2	15, 20, 30, 40, 50, 60	—	3.75 ^②	10,000	10,000	—	—	—	—	
			BLF-GFCI	1, 2	15, 20, 30, 40, 50, 60	—	3.75 ^②	10,000	10,000	—	—	—	—	
			BLHF-GFCI	1, 2	15, 20, 30, 40, 50, 60	—	3.75 ^②	10,000	10,000	—	—	—	—	
	Arc Fault Circuit Interrupter		BAF-AFCI	1, 2	15, 20	—	3.75 ^②	10,000	10,000	—	—	—	—	
			BAFH-AFCI	1, 2	15, 20	—	3.75 ^②	10,000	10,000	—	—	—	—	
			BAFC-AFCI	1, 2	15, 20	—	3.75 ^②	10,000	10,000	—	—	—	—	
			BAFCH-AFCI	1, 2	15, 20	—	3.75 ^②	10,000	10,000	—	—	—	—	
125	Thermal Magnetic	General Appli- cation	NGB	1, 2, 3	15-60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	—	100,000	25,000	—	14,000	—	
			HGB	1, 2, 3	15-60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	—	100,000	35,000	—	14,000	—	
			LGB	1, 2, 3	15-60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	—	100,000	65,000	—	14,000	—	
			NEB	1, 2, 3	15-60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	—	85,000	—	35,000	22,000	—	
			HEB	1, 2, 3	15-60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	—	100,000	—	65,000	25,000	—	
			ED4	1, 2, 3	15-50, 60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	—	65,000	—	18,000	—	—	
			HED4 ^{④⑤}	1, 2, 3	15-50, 60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	—	100,000	—	42,000	—	—	
			CED6	2, 3	15-50, 60, 70, 80, 90, 100, 110, 125	—	3.75 ^{②③}	—	200,000	—	200,000	—	100,000	
150	Electronic (Solid state)	VL	ND	3	60, 100, 150	—	5.00	—	65,000	—	35,000	—	18,000	
			HD	3	60, 100, 150	—	5.00	—	100,000	—	65,000	—	20,000	
			LD	3	60, 100, 150	—	5.00	—	200,000	—	100,000	—	25,000	
225	Thermal Magnetic	General Appli- cation	QJ2	2, 3	60-110, 125, 150, 175, 200, 225	—	5.00	—	10,000	—	—	—	—	
			QJH2	2, 3	60-110, 125, 150, 175, 200, 225	—	5.00	—	22,000	—	—	—	—	
			QJ2H	2, 3	60-110, 125, 150, 175, 200, 225	—	5.00	—	42,000	—	—	—	—	
250	Thermal Magnetic	Sentron	FXD6, FD6	2, 3	70-110, 125, 150, 175, 200, 225, 250	5.00	5.00	—	65,000	—	35,000	—	22,000	
			HFXD6, HFD6	2, 3	70-110, 125, 150, 175, 200, 225, 250	5.00	5.00	—	100,000	—	65,000	—	25,000	
			HHFXD6, HHFD6	2, 3	70-110, 125, 150, 175, 200, 225, 250	5.00	5.00	—	200,000	—	100,000	—	25,000	
			CFD6	3	70-110, 125, 150, 175, 200, 225, 250	—	5.00	—	200,000	—	200,000	—	100,000	
	Electronic (Solid state)	VL	NF	3	100, 150, 250	5.00	5.00	—	65,000	—	35,000	—	18,000	
			HF	3	100, 150, 250	5.00	5.00	—	100,000	—	65,000	—	20,000	
			LF	3	100, 150, 250	5.00	5.00	—	200,000	—	100,000	—	25,000	
400	Thermal Magnetic	Sentron	JXD6, JD6	2, 3	200, 225, 250, 300, 350, 400	8.75	—	—	65,000	—	35,000	—	25,000	
			HJXD6, HJD6	2, 3	200, 225, 250, 300, 350, 400	8.75	—	—	100,000	—	65,000	—	35,000	
			HHJXD6, HHJD6	2, 3	200, 225, 250, 300, 350, 400	8.75	—	—	200,000	—	100,000	—	50,000	
			CJD6	3	200, 225, 250, 300, 350, 400	8.75	—	—	200,000	—	150,000	—	100,000	
	Electronic (Solid state)	VL	NJ	3	250, 400	6.25	—	—	65,000	—	35,000	—	25,000	
			HJ	3	250, 400	6.25	—	—	100,000	—	65,000	—	25,000	
			LJ	3	250, 400	6.25	—	—	200,000	—	100,000	—	25,000	
600	Thermal Magnetic	Sentron	SJD6	3	200, 300, 400	8.75	—	—	65,000	—	35,000	—	25,000	
			SHJD6	3	200, 300, 400	8.75	—	—	100,000	—	65,000	—	35,000	
			SCJD6	3	200, 300, 400	8.75	—	—	200,000	—	150,000	—	100,000	
			LXD6	2, 3	450, 500, 600	8.75	—	—	65,000	—	35,000	—	25,000	
	Electronic (Solid state)	VL	LD6	2, 3	250, 300, 350, 400, 450, 500, 600	8.75	—	—	65,000	—	35,000	—	25,000	
HLXD6, HLD6			2, 3	250, 300, 350, 400, 450, 500, 600	8.75	—	—	100,000	—	65,000	—	35,000		
HHLXD6, HHLD6			2, 3	250, 300, 350, 400, 450, 500, 600	8.75	—	—	200,000	—	100,000	—	50,000		
CLD6			3	250, 300, 350, 400, 450, 500, 600	8.75	—	—	200,000	—	150,000	—	100,000		
NL			3	400, 600	6.25	—	—	65,000	—	35,000	—	25,000		
800	Thermal Magnetic	VL	HL	3	400, 600	6.25	—	—	100,000	—	65,000	—	25,000	
			LL	3	400, 600	6.25	—	—	200,000	—	100,000	—	25,000	
			SLD6	3	300, 400, 500, 600	8.75	—	—	65,000	—	35,000	—	25,000	
	Electronic (Solid state)	VL	SHLD6	3	300, 400, 500, 600	8.75	—	—	100,000	—	65,000	—	35,000	
			SCLD6	3	300, 400, 500, 600	8.75	—	—	200,000	—	150,000	—	100,000	
			NM	2, 3	600, 700, 800	8.75	—	—	65,000	—	35,000	—	25,000	
			HM	2, 3	600, 700, 800	8.75	—	—	100,000	—	65,000	—	35,000	
Electronic (Solid state)	VL	LM	2, 3	600, 700, 800	8.75	—	—	200,000	—	100,000	—	50,000		
		NM	3	600, 800	8.75	—	—	65,000	—	35,000	—	25,000		
Electronic (Solid state)	VL	HM	3	600, 800	8.75	—	—	100,000	—	65,000	—	35,000		
		LM	3	600, 800	8.75	—	—	200,000	—	100,000	—	50,000		

① Space price covers cost of housing frame plate with blank cover plate. Provision price includes all necessary mounting hardware, less circuit breaker, and includes housing frame cover plate with breaker handle opening.

② 1 to 6 poles may be mounted in 3.75" of unit space.
③ Accessories such as shunt trips on three pole breakers require 6.25" of unit space.

④ HED4 1-pole 15-30A = 65,000 IR
35-100A = 25,000 IR
⑤ HED 4 3-Pole=42,000 IR

Panelboards

Power and Distribution

• Revised •
04/15/14

Selection

Branch Switch Selection

Ampere Rating	Mounting Height (inches)
---------------	--------------------------

240V — Twin Mounted NEC Fuse Clips ^②	
30-30	2½ ^③
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

Ampere Rating	Mounting Height (inches)
---------------	--------------------------

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

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

Connecting Strap Kits — w/o Circuit Breaker

For use with Type P4, Type S4 or Sentron SPP Shallow depth panelboards					
Max Amp Rating	Breaker Family	Breaker Type	Catalog Number ^①	Unit Height (inches)	Mounting
100	General	BL, BQD	SBL	3.75	Twin
125	General	NGB, HGB, LGB	SNB	3.75	Twin
	General	EB	SEB	3.75	Twin
	General	ED	SE6	3.75	Twin
	General	CED	SCE	3.75	Twin
150	VL	DG	SDG	5.00	Twin
225	General	QJ	SQJ	5.00	Twin
250	VL	FG	SFG	5.00	Twin
	Sentron	FD	SF6	5.00	Twin
	Sentron	CFD	SCF	5.00	Single
400	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	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
	Sentron	LMD	SLM1	8.75	Single

For inches / millimeters conversion, see Application Data section.

① Includes housing frame plate without breaker handle opening. Provisions include all necessary mounting hardware less breakers.

② For Class J, R or T fuse clip prices, refer to page 11-52.
For Class J fuse clips price 600V, 7½" high units.
③ NEC fuse clips only.

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 ED2, ED4, ED6 HED4, NGB, HGB, LGB	DFFP1 ^③
NEB, HEB	EBF1

Connecting Strap Kits^④ 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	7.5	F657
200	10	F671
200-200	10	F672

④ Normal stock item.

⑤ Suitable to replace QF3 in P1 thru P5 Panelboards and Switchboards.

Panelboards

Modifications and Additions

• Revised •
04/15/14

Selection

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
400	800
600	1200
800	1200

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

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 Branches ④

Description
BL, BQD, NGB, HGB, LGB (branch only)
QJ2, QJH2, QJ2H, HQJ2H, NEB, HEB, 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 NMY®, HMY®, LMY®
800A	MXD6H, HMXD6H, CMD6H SMD6H, SHMD6H, SCMD6H

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.

Panelboards

Modifications and Additions

Selection

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		All compression lugs	
Main Breaker	400	JD6, JXD6, HJD6, HJXD6, HHJD6, HHJXD6, CJD6, SJD6, SHJD6, SCJD6	(2)#2/0 AWG - 500 Kcmil Cu or Al	Deduct 0" of Unit Space
Main Breaker	600	LD6, LXD6, HLD6, HLXD6, HHLD6, HHLXD6, CLD6, SLD6, SHLD6, SCLD6	(2) #2/0 AWG - 500 Kcmil Cu or Al	Deduct 0" of Unit Space

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

11

PANELBOARDS

Panelboards

Kits and Accessories

Selection

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 75" w/Hinged gutter covers	P475VVHG
P4 VBS Std (4 piece trim) vented 90" 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 75" w/Hinged gutter covers	P475NVVHG
P4 VBS Std (4 piece trim) unvented 90" 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

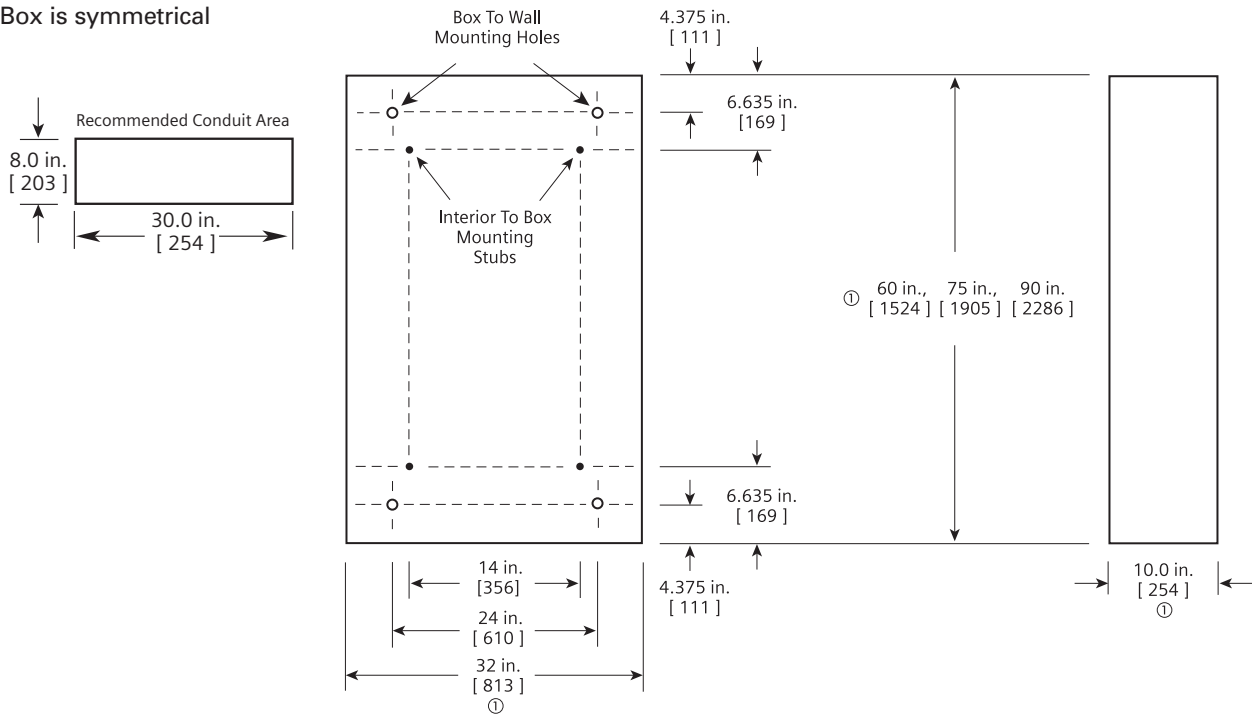
Panelboards

Type P4 Panelboards

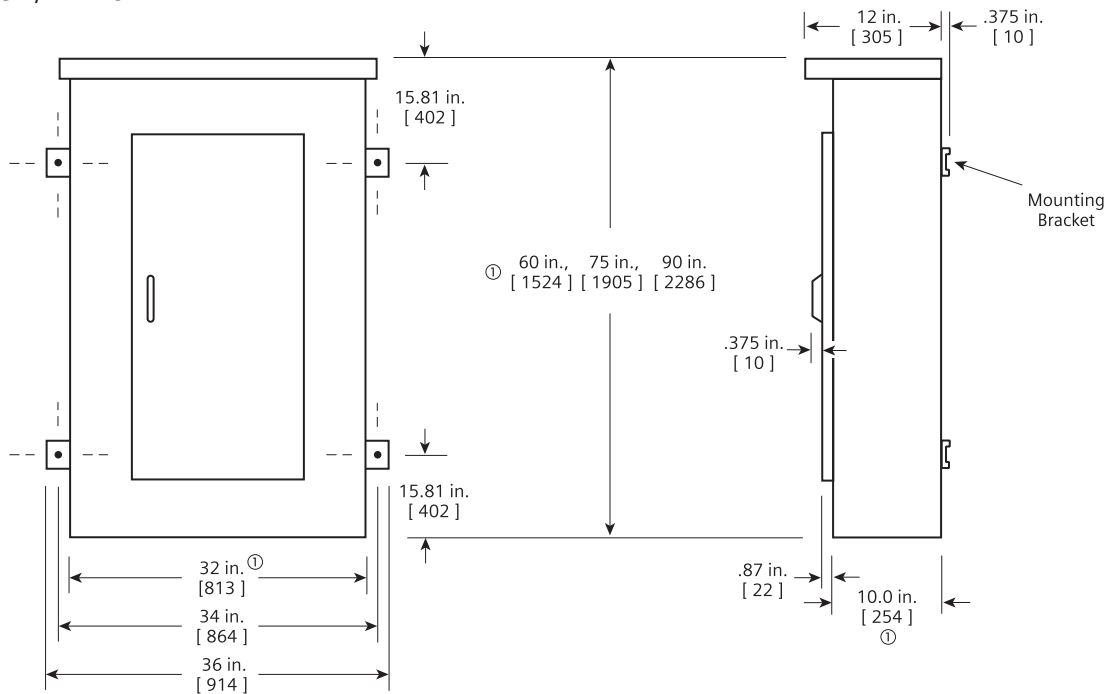
Dimensions

Type 1 Box

Box is symmetrical



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 [].