SIEMENS

SELECTION AND APPLICATION GUIDE

SENTRON Busway Systems

The Power to Fit Program can save you both time and money by eliminating uncertainty in busway measurements.
usa.siemens.com/busway

Sentron Busway Systems
Power II Fit Program

What is the PowerIIFit Program?
Siemens Power II Fit (PIIF) Program compensates for dimensional deviations that may result in busway layouts. With the PIIF Program, specific dimensions on straight sections and/or elbows may be left out of factory released drawings. After the busway run has been installed (minus PIIF pieces), final measurements are taken and sent to the factory. The PIIF Program guarantees shipment of straight sections and/or 90 degree angle elbows within 5 business days for IP40 (indoor) and 8 business days for NEMA 3R (outdoor), upon receipt of the PIIF Order Form. The PIIF Program may be used with SENTRON.

Why use the PowerIIFit Program?
The PIIF Program can save you both time and money by eliminating uncertainty in busway measurements. When you take advantage of the PIIF Program, your busway runs fit exactly the first time, eliminating incorrect pieces and costly reordering time.

When should the PowerIIFit Program be used?
The PIIF Program will benefit you when you are uncertain of exact dimensions on long busway runs and when difficult contour situations require special attention.

Program details
- Product Line: SENTRON.
- Pricing: Included with original order entry.
- Quantity: A maximum of 5 pieces per order. (Straight feeder sections and/or 90 degree elbows.)
- Shipment: 5 business days for IP40 (indoor) and 8 business days for NEMA 3R (outdoor), after receipt of PIIF Order Form. All orders ship via standard carrier originating from Spartanburg, SC. Optional air freight shipments available when customer assumes shipping cost.

Ordering details
- Identify Siemens Busway PIIF Pieces at time of original order. Busway Customer Service approves PIIF Pieces.
- Fax PIIF Order Form to Busway Customer Service when exact measurements are known.
- Busway Customer Service acknowledges PIIF Order and PIIF pieces ship within 5 business days for IP40 (indoor) and 8 business days for NEMA 3R (outdoor).

SENTRON Busway Systems
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Overview

Sentron Busway for global power distribution applications

Building on a solid foundation of advanced products for the construction industry, the Siemens Sentron name is recognized worldwide as synonymous with quality and consistent performance. Sentron Busway delivers impressive features and benefits that make it ideal for many types of industrial and construction implementations.

Engineered to ensure the safe and efficient distribution of power in industrial, commercial and institutional environments world-wide, Sentron ampacities range from 225A to 5000A UL and IEC. Thanks to an innovative design, you benefit from labor-saving installation and a flexible, compact bus system that is an ideal fit for most applications. In fact, Sentron Busway is one of the industry's least labor-intensive systems

Sentron Busway installs with minimal hardware and often costs less than cable and conduit installations. The lightweight aluminum housing acts as an integral ground, joint stacks connect with splice plates featuring a single-bolt design, and bus plugs and cable tap boxes offer the industry's largest wire bending space. An optional 200% neutral within the bus bar housing accommodates harmonics common in today's power systems.

Sentron Busway conductors are insulated with a state-of-the-art epoxy insulation system, which is applied using an electrostatic spray process for optimal insulation integrity.

Exemplifying the spirit of continuing innovation, Sentron Busway is now available with economical and convenient elbow stacks for changing left, right, up or down directions at 90 degrees.

And, of course, Sentron Busway is certified to design standards worldwide, including UL, NEMA, IEC, CSA, VDE and BS.

Siemens Busway Business uses industry leading technology in all its manufacturing processes. From bus bar fabrication to Electrostatic Spray Epoxy insulation, all the processes used in the manufacturing of Siemens Sentron Busway are electronically controlled to provide for consistent, high quality results, making Sentron Busway products best in its class.

Housing

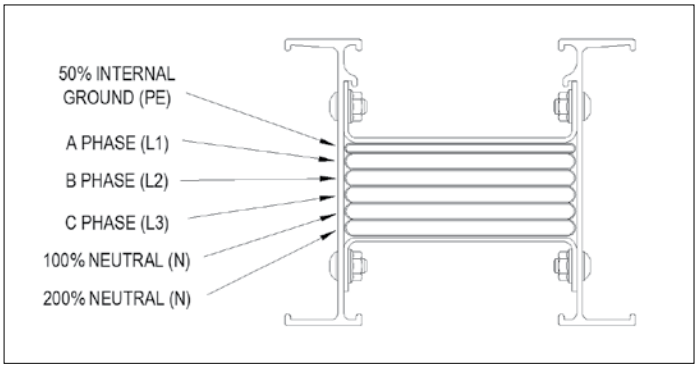
Sentron Busway incorporates an all aluminum housing. This lightweight totally enclosed, non-ventilated housing resists rust and other elements, distributes heat away from the conductors, and provides an excellent ground path. The totally enclosed design also eliminates the need for derating of the system regardless of installation orientation. The housing is covered with an electrostatically applied light gray ANSI 61 polyester urethane powder paint that is scratch resistant and has a 1,000-hour salt spray resistance rating.

Conductors

Sentron Busway conductors have a compact construction and can be configured as 3-phase 3-wire, 3-phase 4-wire or 3-phase 4-wire with 200% neutral. The conductors may be ordered in copper (98% conductivity), 1000A//in^2 M-Rated Copper, Aluminum (58% conductivity) and 750A/in^2 L-Rated Aluminum. The optional 200% neutral helps to handle harmonic conditions that may exist. This system is especially useful with discharge lighting (fluorescent) and computer installations. This will help to minimize overheating and prolong the life cycle of your power distribution equipment.

Ground

Sentron Busway offers ground options to meet your specifications: standard integral aluminum housing ground and optional internal grounding bars. An optional isolated ground is also available which is especially useful in applications where a clean ground is needed.



Plating

All bus bars are electroplated with tin. This unique tin plating provides excellent conductivity and resists outside elements from attaching to the bars. Optional silver plating is also available.

Overview

Insulation

Sentron Busway is insulated with an Epoxy Powder Coating system designed by Siemens Engineers, Epoxy System Engineers and Epoxy Powder Specialists, specifically for Siemens Busway products.

The Siemens exclusive Electrostatic Spray insulation process produces uniform application of Epoxy powder over the entire conductor bar. This is further enhanced by the inline filter process and magnetic separator that helps to eliminate contaminants common to fluidized bed systems. The electrostatic application also provides a better coating consistency than that of the older fluidized bed process. The combination of electrostatic spray and lower oven temperatures produces a consistent coverage with fewer impurities and pinholes in the insulation. The lower oven temperatures reduce the risk of bar annealing, which affects the overall quality of the system.

Sentron Busway insulation is Class B, 130°C Rated. Every bus bar and completed assembly is dielectric tested to ensure the insulation is free of defects.

Joint stack

Each Sentron Busway piece is shipped with a joint stack and joint covers installed at one end of the busway and a shipping end protector at the other end. The joint stacks feature a single bolt design and a special, torque indicating, double headed break-off bolt. This eliminates the need for torque wrenches and assures proper torque at installation of 50 ft.-lbs.(68 N-m).

When the proper torque value is achieved, the top bolt head will shear off. Each joint stack allows for +/- .625 inches (15.8mm) adjustability at each joint. Over adjustment is prevented by the joint covers, which will only allow a .625 inch (15.8mm) adjustment when the knockouts on the joint cover are removed.

It is possible to remove any joint connection assembly to allow electrical isolation or removal of a busway length without disturbing adjacent busway lengths. Isolation joint stacks are available and used to electrically isolate a busway section(s) within a busway run. For easy visual identification, isolation joint stack assemblies are painted white.

Plug-in opening

Sentron Busway offers plug-in style busway which feature plug-in openings rated for finger safety to IP2X in accordance with IEC 529 and BS EN 60439-1, -2 and BS EN 60529.

Each plug-in opening has a reversible hinged dead front designed to protect the contact surfaces from dirt, dust or moisture. Gasketing is used where applications require a splash proof (IP55) rating.

IP ratings

Sentron Busway is available in a variety of IP ratings. Use the chart below to determine the IP rating that best fits your application needs.

Testing

Each piece of Sentron Busway is factory tested before shipping. Tests performed include dielectric tests, which are used to insure integrity of insulation. In addition, Sentron Busway is tested in accordance with both UL and IEC standards. All Sentron Busway is manufactured and inspected in an ISO 9001:2000 registered facility.

Standards

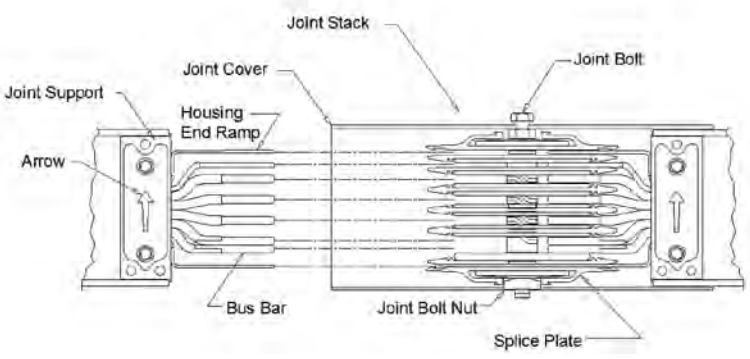
All Sentron Busway products meet the following standards:

UL 857	BS EN 60529
NEMA BU1	BS EN 60439-1, 60439-2
CSA C22.2	UL 1479
IEC 439-1(1993),	DIN 4102 Parts 9&12
IEC 439-2 (1993),	BS 6387 Parts 11.1 and 11.2
IEC 529 (1989)	

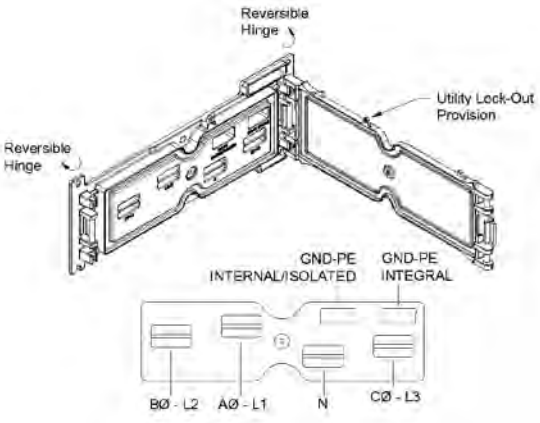
Labor savings

Using Sentron Busway instead of cable and conduit can create savings of up to 20 - 30% on total installed costs. Sentron busway is lightweight, compact and takes half the time to install as cable and conduit. Siemens Busway Systems Cable Conversion Program will show you side by side comparisons of busway vs. cable/conduit. These comparisons include material costs, labor costs, bill of materials, and technical information between busway and cable/ conduit. Contact your local Siemens sales office to find out more information, or visit our web site at www.usa.siemens.com

Overview



Joint assembly



Plug-in opening and cover

Levels of protection description

Code	Description	Sentron Busway		Sentron Bus plugs
		Feeder	Plug-in	
IP 2X	Plug-In outlet protects against access to live parts by .472 in. (12 mm) test probe, even with cover opened. **Finger Safe**	•	•	•
IP 40	Enclosure protects against entry of .039 in. (1.0 mm) test probe. **Indoor** (Typical UL Designation)	•	•	•
IP 55	Enclosure protects against entry of dust and water jets. **Splash Proof**	•	•	•
IP 66	Enclosure is dust tight and protects against powerful water jets. **Outdoor** (International Only)	•		
NEMA 3R	Enclosure protects against rain, sleet and damage from ice formation. **Outdoor** - NAFTA	•		

Bus plug overview

Sentron Bus Plugs are engineered with the installer and end user in mind. The installer will benefit from the numerous features, such as factory installed circuit breakers, compact footprint, generous wirebend space, and dual interlocks. The end user will appreciate the visible position indicator, as well as the spring loaded pad lockable latch which prevents access to unauthorized personnel.

Sentron Bus Plugs are designed with an interlock device to prevent the door from being opened when the disconnect is on. This also prevents the disconnect from being turned on while the door is open. The interlock ensures that the protective device is "OFF" prior to installation or removal of the bus plug. Once the bus plug is properly installed, a spring-loaded, padlock latch provides additional security by preventing unauthorized access to the unit.

Alignment and interlock stabs are features of the Sentron Bus Plugs engineered to prevent improper installation of the unit. Guide stabs prevent installing the bus plug 180 degrees out of rotation. In addition, the stabs provide vertical support for vertical applications. The bus plug ground stabs are designed to ensure positive contact with both the integral and optional internal busway grounds before the bus plug fingers contact the phase and neutral bars. Sentron Bus Plugs also feature bolt-on mounting to the busway housing for secure attachment.

Sentron Bus Plugs can be configured for horizontal or vertical applications. The following Bus Plugs can be mounted (side by side) five (5) per busway side channel (Total 10 per 10' Section).

- 30-600 SLVBH Fusible (Horizontal)[1)]
- 30-200 SLVBR Fusible (Riser) [1)]
- 30-400 Circuit Breaker [1)]

Sentron SLVB Fusible Bus Plugs feature a direct drive mechanism. The operating handle mounts directly to the switch mechanism for fewer moving parts.

Enclosure ratings:

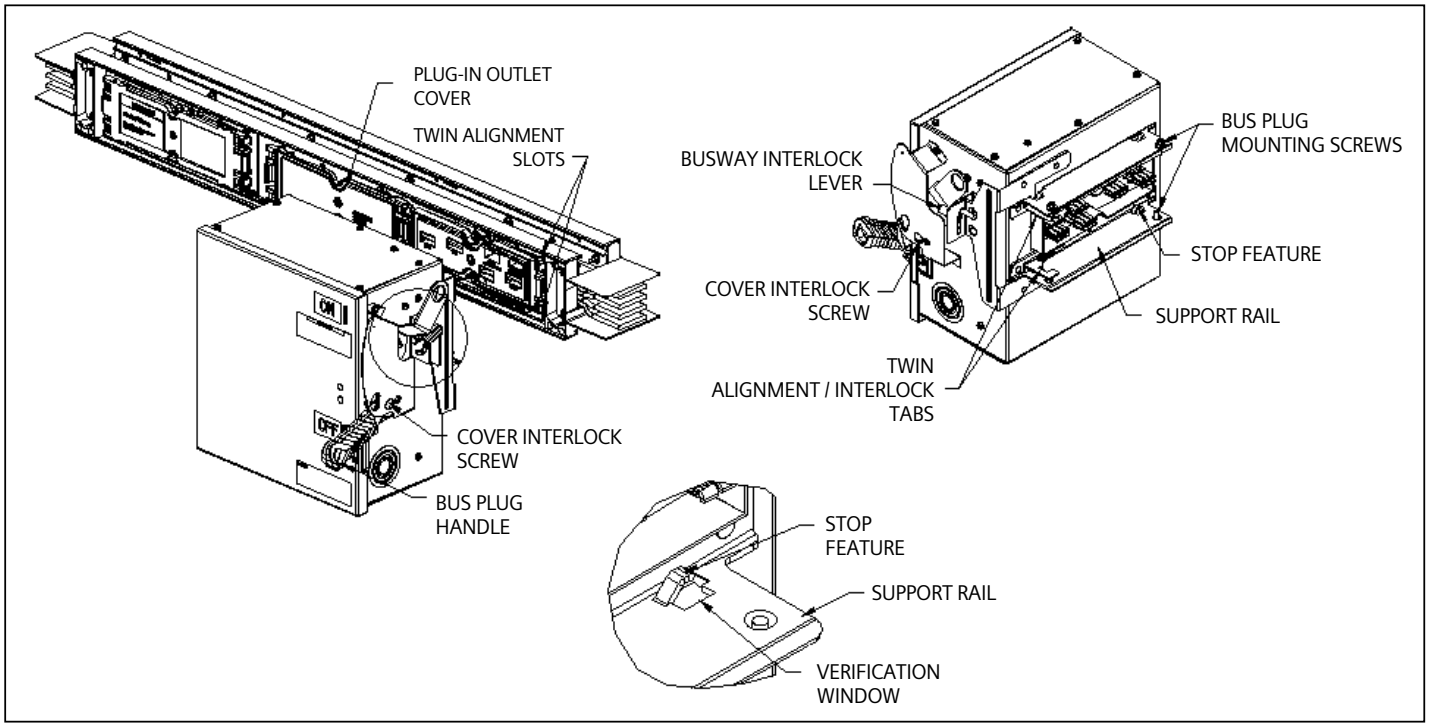
- IP40
- IP55

Conductors:

- 3-phase, 3-wire
- 3-phase, 4-wire
- 3-phase, 4-wire 200% neutral (400A and below)

Grounding:

- Integral (Housing)
- Internal
- Isolated



1) Contact Siemens for 200% Neutral Applications.

Catalog numbering system

S	X	4	0	2	C	1	0

Sentron
SX = US Lengths

Configuration
3 = 3Ø, 3W
4 = 3Ø, 4W 100% Neutral
5 = 3Ø, 4W 200% Neutral

Ampere rating
02 = 225A
04 = 400A
06 = 600A
08 = 800A
10 = 1000A
12 = 1200A
13 = 1350A
16 = 1600A
20 = 2000A
25 = 2500A
30 = 3000A
32 = 3200A
40 = 4000A
50 = 5000A[1)]

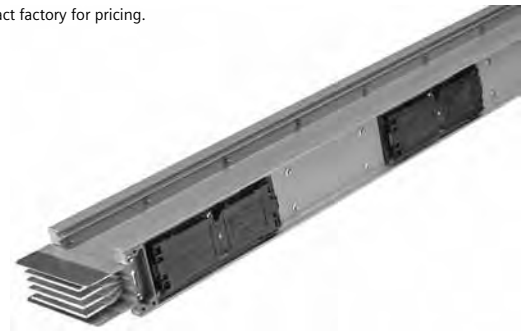
Bus bar material
C = Copper
M= 1000 Amps/In² Copper
A= Aluminum
L= 750 Amps/In² Aluminum

Ground
1 = Integral (Housing)
2 = Internal Bus Bar [2)]
3 = Isolated Ground [2)]

IP rating
0 = IP40 [6)]
4 = IP55 [6)]
6 = IP66 [3) 7) 8)]
9 = NEMA3R [4) 7) 8)]

1) Copper only.
2) Copper or aluminum ground bar.
3) IEC Markets.
4) NEMA Markets.
5) For odd degree angle (other than 90°) specify the degree angle of the turn.
6) Indoor only (Plug-in and Feeder).
7) Outdoor use (Feeder only).
8) Elbow Stack (IP40 and IP55 only).

- Catalog Numbers for Hangers can be found on page 23.
- Specials must be ordered by description (drawing must be included). Contact factory for pricing.

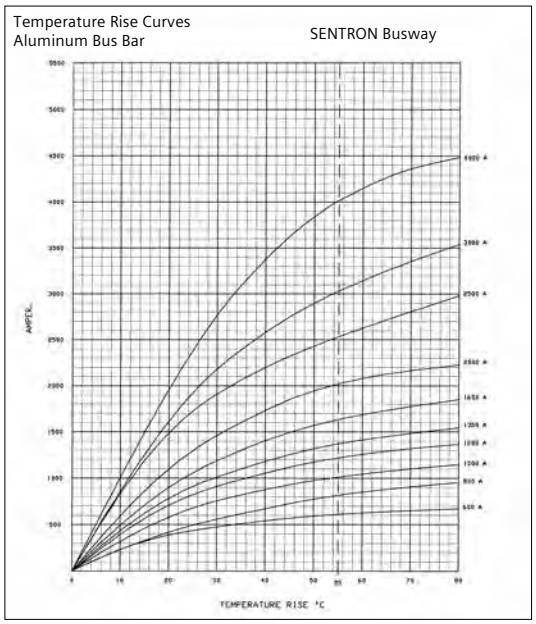


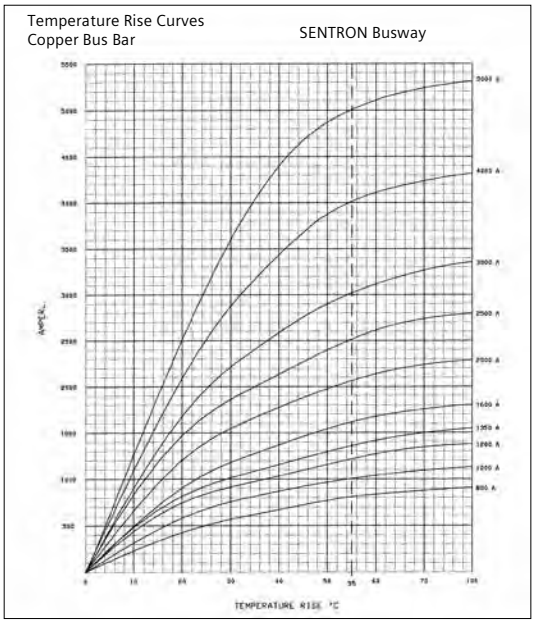
Suffix part of catalog numbers

P	L	0	6

Feeder	**L**ength in Inches, ex.: 2'3" = 027 Feeder lengths available from 1'3" (015 inches) up to 10'0" (120 inches)		
Plug-in	**L**	**L**ength	**04** = 4'0" **06** = 6'0" **08** = 8'0" **10** = 10'0"
Riser	**I**	**L**ength	**04** = 4'0" **06** = 6'0" **08** = 8'0" **10** = 10'0"
Elbows	**S** = Stack [5)] **L** = 90° **O** = Odd	**E**dge	**U**p **D**own
	degree angle [8)]	**F**lat	**R**ight **L**eft
Tees	**E**	**E**dge	**U**p **D**own
		Flat	**R**ight **L**eft
Offsets	**F**	**E**dge	**U**p **D**own
		Flat	**R**ight **L**eft
Combinations	**O**	Edge **U**p Edge **D**own Edge **U**p Edge **D**own	Flat **L**eft Flat **L**eft Flat **R**ight Flat **R**ight
		Flat **L**eft Flat **L**eft Flat **R**ight Flat **R**ight	Edge **U**p Edge **D**own Edge **U**p Edge **D**own
E**X**pansion Fittings	P	**F**	**T**
Center Cable Tap Boxes	**T**	**B**	**S**tandard E**X**panded
End Cable Tap Boxes	T	**V**ertical **H**orizontal	**S**tandard E**X**panded
End Closers	**C**	**L**	**S**
Flan**g**e	**R**oof **W**all	**F**	**L**
Joint Stacks	**S**tandard **I**solation	**S**	**T**
Ser**v**ice Heads	**1** = 1-Phase **3** = 3-Phase **T** = Throat	Transformer	**H**
		Utility	**F**lorida Pwr/Light **H**ouston Pwr/Light **C**ommonwealth ED **P**acific Gas/Electric **D**etroit Edison **O**ther
Reducers	**F**used **N**on-fused	**R** **R**	**F** **N**
Flanged End	**E** = Int'l Standard **R** = U.S. Standard **O** = Other	**N** **N**	**D** **D**
Transposition	**R**	**PG** = Phase and ground **PO** = Phase only **GO** = Ground only	

Technical data





R, X, Z and ohms, voltage drop

Ampere Rating		Bus bar width x 0.25 in. (6.4mm) Thick	Ohms x 10^3 per 100 feet Line to neutral			Voltage drop – Concentrated loads, line-to-line per 100 feet at 100% Rated load, 35°C Ambient 1) 2) 3) Power factor							
			R	X	Z	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
AL	**L-Rated 3)**												
225	—	1.75 (44.5)	3.94	1.13	4.10	0.88	1.02	1.15	1.27	1.39	1.49	1.57	1.54
400	—	1.75 (44.5)	4.08	1.23	4.26	1.66	1.91	2.15	2.38	2.58	2.77	2.91	2.83
600	—	1.75 (44.5)	4.26	1.32	4.46	2.64	3.03	3.40	3.75	4.08	4.37	4.58	4.43
800	400	2.38 (60.5)	3.42	1.06	3.58	2.82	3.24	3.64	4.02	4.36	4.67	4.90	4.74
1000	600	3.25 (82.6)	2.45	0.74	2.56	2.50	2.88	3.24	3.57	3.89	4.17	4.38	4.24
1200	800	4.38 (111.3)	1.86	0.59	1.95	2.32	2.66	2.99	3.29	3.58	3.82	4.01	3.87
1350	1000	5.38 (138.7)	1.39	0.24	1.41	1.50	1.81	2.10	2.39	2.67	2.93	3.17	3.25
1600	1200	6.50 (165.1)	1.21	0.48	1.29	2.19	2.48	2.75	3.00	3.23	3.43	3.56	3.35
2000	1350, 1600	8.75 (222.3)	0.91	0.35	0.98	2.11	2.38	2.64	2.87	3.08	3.26	3.37	3.16
2500	2000	(2) 5.63 (143.0)	0.68	0.29	0.74	2.09	2.34	2.57	2.78	2.97	3.12	3.21	2.95
3000	2500	(2) 6.75 (171.5)	0.54	0.28	0.61	2.24	2.47	2.67	2.85	3.01	3.12	3.16	2.80
3200	2000	(2) 7.50 (190.5)	0.48	0.33	0.58	2.53	2.73	2.91	3.06	3.17	3.23	3.20	2.68
1400	3000, 3200	(2) 9.00 (228.6)	0.62	0.21	0.51	2.34	2.61	2.85	3.08	3.27	3.43	3.51	3.20
CU	**M-Rated 3)**												
225	—	1.75 (44.5)	2.34	1.13	2.60	0.69	0.77	0.84	0.90	0.95	0.99	1.01	0.91
400	—	1.75 (44.5)	2.44	1.13	2.69	1.26	1.40	1.52	1.64	1.74	1.82	1.86	1.69
600	—	1.75 (44.5)	2.58	1.16	2.83	1.96	2.18	2.39	2.58	2.74	2.87	2.94	2.68
800	400	1.75 (44.5)	2.71	1.17	2.95	2.67	2.98	3.28	3.55	3.78	3.97	4.08	3.76
1000	—	2.25 (67.2)	2.12	0.98	2.30	2.58	2.88	3.17	3.44	3.67	3.86	3.98	3.67
1200	600	2.88 (73.2)	1.66	0.77	1.83	2.56	2.85	3.11	3.35	3.56	3.72	3.80	3.45
1350	800	3.50 (88.9)	1.30	0.64	1.45	2.34	2.59	2.82	3.03	3.20	3.33	3.39	3.04
1600	1000	4.50 (114.3)	1.06	0.56	1.20	2.37	2.60	2.66	3.01	3.17	3.29	3.32	2.94
2000	1200, 1350	6.00 (152.4)	0.77	0.44	0.89	2.27	2.48	2.50	2.83	2.96	3.05	3.07	2.66
—	1600	—	—	—	—	—	—	—	—	—	—	—	—
2500	2000	8.50 (215.9)	0.55	0.35	0.65	2.15	2.34	2.50	2.64	2.75	2.82	2.81	2.39
3000	—	(2) 4.75 (120.7)	0.49	0.27	0.56	2.07	2.28	2.46	2.62	2.76	2.86	2.89	2.54
3200	—	(2) 5.50 (139.7)	0.44	0.30	0.53	2.33	2.51	2.67	2.80	2.90	2.96	2.93	2.44
4000	2500, 3000, 3200	(2) 6.50 (165.1)	0.36	0.15	0.39	1.76	1.97	2.17	2.35	2.51	2.63	2.71	2.49
5000	4000	(2) 8.50 (215.9)	0.30	0.21	0.37	2.49	2.69	2.86	3.00	3.11	3.17	3.15	2.63

1) For plug-in distributed loads, divide voltage drop values by 2.
2) Actual voltage drop for different lengths and at loadings less than full rated current can be calculated using the formula:
Vd (actual) = Vd (table) x actual load x actual length (ft) rated load 100 feet.
3) Voltage Drop will decrease in lower ambient temperature. Contact Siemens for Voltage Drop in other ambient conditions.

Notes:
1. To determine voltage drop line-to-neutral, multiply line-to-line values by 0.577.
2. For 50 Hz, multiply reactance (X) by 0.85 and resistance values do not change.
For 400 Hz, multiply reactance by 3.75 and multiply resistance by 1.4. Calculate new voltage drop: Vd = amps load x $\sqrt{3}$(Rcos θ+ X sin θ) per 100 ft, where cos θ = Power Factor.
3. For metric conversion R, X, Z values "in Ohms per meters Line to Neutral"
R x .0328 X x .0328 Z x .0328
4. For metric conversion "Line to Line per meter at 25° C ambient in mV/A/m" (Vd 32.8) / A.
Divide Vd by 2 for distributed loads.

Technical data

Ground capacity

Ampere rating		Bus bar width inches (mm)	Bars per pole	Min. CSA for ground bus per UL 857 Table 14 in² (mm2)	Sectional area 50% internal ground bar in² (mm2)	Integral (Hsg.) ground In² (mm2)	Effective current carrying capacity of housing		Grd. circuit characteristics under fault Conditions ohms x 103 per 100 ft.					
							% of UL reg.	% of Phase bar	Internal ground			Housing ground		
									R	X	Z	R	X	Z
A	**L-Rated**													
225	—	1.75 (44.5)	1	0.08 (53.5)	0.22 (141.1)	2.30 (1485.1)	1333	253	10.267	9.037	4.872	14.200	12.963	5.797
400	—	1.75 (44.5)	1	0.17 (107.1)	0.22 (141.1)	2.30 (1485.1)	667	253	10.267	9.037	4.872	14.200	12.963	5.797
800	400	2.38 (60.5)	1	0.17 (107.1)	0.30 (191.9)	2.40 (1550.1)	688	192	8.063	7.333	3.351	11.150	10.000	4.932
1000	600	3.25 (82.6)	1	0.20 (126.5)	0.41 (262.1)	2.54 (1639.9)	607	147	7.208	6.628	2.833	9.202	8.442	3.662
1200	800	4.38 (111.1)	1	0.23 (146.5)	0.55 (352.8)	2.72 (1756.6)	552	115	6.358	5.852	2.487	7.625	6.926	3.189
1350	1000	5.38 (136.5)	1	0.29 (189.7)	0.67 (433.5)	2.88 (1859.8)	446	9	5.561	5.115	2.182	6.478	5.883	2.713
1600	1200	6.50 (165.1)	1	0.29 (189.7)	0.81 (524.2)	3.06 (1975.4)	467	84	4.837	4.489	1.801	5.687	5.206	2.289
2000	1350, 1600	8.75 (222.3)	1	0.35 (227.7)	1.09 (705.6)	3.42 (2207.7)	425	69	3.735	3.467	1.390	4.565	4.267	1.623
2500	2000	5.63 (142.9)	2	0.52 (332.3)	1.41 (907.3)	3.85 (2480.7)	320	59	3.169	2.955	1.145	4.129	3.837	1.526
3000	2500	6.75 (171.5)	2	0.59 (380.0)	1.69 (1088.7)	4.20 (2711.9)	301	53	2.848	2.683	0.954	3.835	3.635	1.221
3200	2000	7.50 (190.5)	2	0.81 (522.6)	1.88 (1209.7)	4.44 (2866.8)	229	51	2.648	2.493	0.894	3.614	3.428	1.144
4000	3000, 3200	9.00 (228.6)	2	0.81 (522.6)	2.25 (1451.6)	4.92 (3176.5)	250	50	2.446	2.339	0.715	3.500	3.378	0.916
CU	**M-Rated**													
225	—	1.75 (44.5)	1	0.05 (33.5)	0.22 (141.1)	2.30 (1485.1)	2128	261	7.380	6.330	3.803	11.338	10.083	5.183
400	—													
600	—	1.75 (44.5)	1	0.11 (67.7)	0.22 (141.1)	2.30 (1485.1)	1054	261	7.380	6.330	3.803	11.338	10.083	5.183
800	400													
1000	—	2.25 (57.2)	1	0.13 (85.2)	0.28 (181.5)	2.38 (1536.7)	860	207	6.715	5.993	3.029	10.194	9.191	4.409
1200	600	2.88 (73.0)	1	0.18 (114.2)	0.36 (231.9)	2.48 (1601.8)	661	166	6.186	5.676	2.460	8.996	8.212	3.674
1350	800	3.50 (88.9)	1	0.24 (152.3)	0.44 (282.3)	2.58 (1665.8)	510	140	5.704	5.267	2.188	8.000	7.492	2.807
1600	1000	4.50 (114.3)	1	0.24 (152.3)	0.56 (362.9)	2.74 (1769.0)	534	113	4.719	4.323	1.893	7.411	6.880	2.756
2000	1200, 1350	6.00 (152.4)	1	0.29 (189.7)	0.75 (483.9)	2.98 (1923.8)	457	90	3.507	3.181	1.476	6.422	6.032	2.205
—	1600	6.50 (165.1)	1	0.29 (189.7)	0.81 (524.2)	3.06 (1975.4)	467	84	4.837	4.489	1.801	5.687	5.206	2.289
2500	2000	8.50 (215.9)	1	0.35 (227.7)	1.06 (685.5)	3.38 (2181.9)	421	70	2.294	2.020	1.087	3.072	5.419	1.764
3000	—	4.75 (120.7)	2	0.41 (265.8)	1.19 (766.1)	3.56 (2290.0)	376	66	2.117	1.874	0.984	4.859	4.631	1.470
3200	—	5.50 (139.7)	2	0.59 (380.0)	1.38 (887.1)	3.80 (2453.9)	277	60	1.938	1.691	0.947	4.353	4.129	1.378
4000	2500, 3000, 3200	6.50 (165.1)	2	0.59 (380.0)	1.63 (1048.4)	4.12 (2660.3)	296	54	1.688	1.500	0.773	3.334	3.060	1.323
5000	4000	8.50 (215.9)	2	0.71 (456.1)	2.13 (1371.0)	4.76 (3073.2)	278	50	1.360	1.218	0.606	1.989	1.783	0.882

UL short circuit ratings					UL series connected with fuse		
		RMS symmetrical (kA)			Maximum fuse size for 200kA RMS symmetrical rating		
Ampere rating		6 cycle	1 sec.	3 sec.	Class R	Class J & T	Class L
AL	**L-Rated**						
225							
400	—	85	28	16	600	600 J & T	—
600							
800	400	100	47	27	—	800 T	1200
1000	600	100	50	29	—	—	3000
1200	800	125	60	35	—	—	3000
1350	1000	150	75	43	—	—	3000
1600	1200	150	90	52	—	—	3000
2000	1350,1600	150	110	64	—	—	5000
2500	2000	200	130	75	—	—	5000
3000	2500	200	160	92	—	—	—
3200	2000	200	160	92	—	—	—
4000	3000,3200	200	200	115	—	—	—
CU	**M-Rated**						
225							
400	—	85	40	23	600	600 J & T	—
600							
800	400	85	40	23	—	800 T	1600
1000	—	100	50	29	—	—	3000
1200	600	100	65	38	—	—	3000
1350	800	100	80	46	—	—	3000
1600	1000	125	95	55	—	—	4000
2000	1200,1350	150	115	66	—	—	5000
—	1600	150	90	52	—	—	3000
2500	2000	150	130	75	—	—	5000
3000	—	200	175	101	—	—	—
3200	—	200	175	101	—	—	—
4000	2500,3000,3200	200	200	115	—	—	—
5000	4000	200	200	115	—	—	—

Sentron Busway has UL approved Series Ratings. By using the appropriate line side fuse, short circuit ratings can be enhanced to 200kA for lower amperage busway.

Straight sections – Plug-in, riser and feeder

Straight sections

Sentron Busway can be ordered with
Aluminum or Copper bus bars. Aluminum bars are available in 225-4000 ampere sections. Copper bars are available in 225-5000 ampere sections. Sentron Busway includes an integral housing ground, and is available with an internal ground bar or an isolated ground bar in all ampere ratings. Sentron Busway housing is a four-piece aluminum design.

Plug-In sections

Sentron plug-in sections are designed with plug-in openings centered on 24 in. (610mm) intervals, and are located on both sides of the busway for optimum utilization. Plug-in sections are available in standard lengths of 4 ft. (1.22m), 6 ft. (1.83m), 8 ft. (2.44m) and 10 ft. (3.05m). Sentron plug-in sections meet IP40 (indoor) and IP55 (splash proof) requirements. One joint stack assembly is provided with each plug-in section.

Riser sections

Sentron Riser sections are designed with plug-in openings centered on 24 in. (610mm) intervals on one side of the busway only. This eliminates unusable plug-in outlets in vertical applications. Riser busway is available in standard lengths of 4 ft. (1.22m), 6 ft. (1.83m), 8 ft. (2.44m) and 10 ft. (3.05m). Sentron Riser Busway is available in IP40 (indoor) and IP55 (splash proof). One joint stack assembly is provided with each riser section.

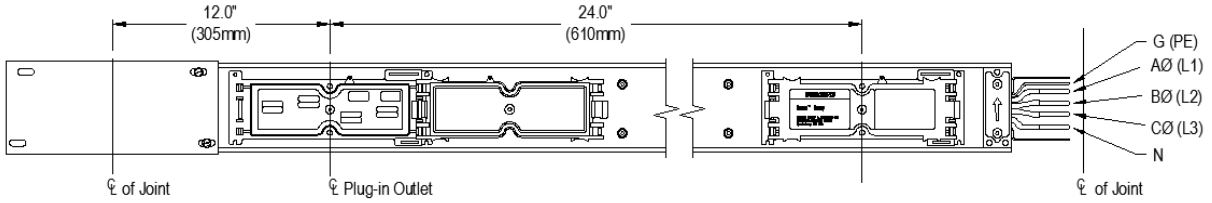
Plug-In outlet features

The plug-in outlet molded guard design prevents incidental finger contact with live conductors. Sentron plug-in outlets are IP 2X rated (with the outlet cover open) which means a .472 in. (12mm) or larger probe is unable to enter a plug-in outlet. The outlet is IP40 Rated with the cover closed and IP55 Rated when configured with gaskets.

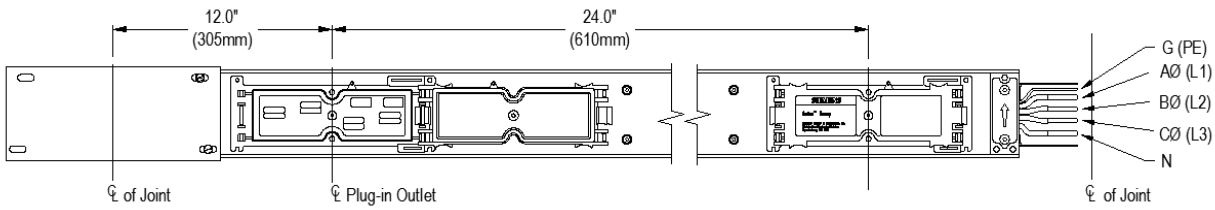
Feeder sections

Feeder busway carries the current of the
busway system from the supply source. Feeder busway does not have plug-in outlets. Sentron Feeder busway is available in custom lengths from 15 in. (.37m) to 10 ft. (3.05m). Feeder sections are rated as IP40 (Indoor), IP55 (Splash Proof), NEMA 3R (Outdoor), and IP66 (Severe Outdoor). One joint stack assembly is provided with each feeder section.

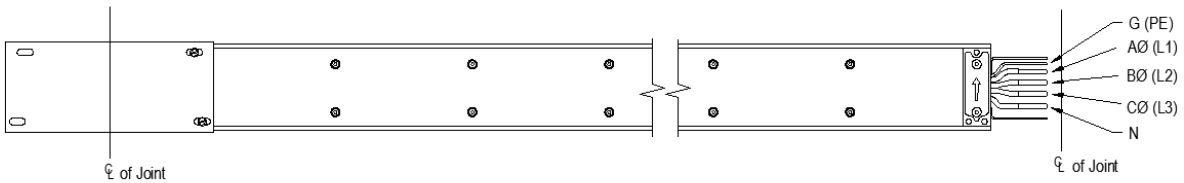
Standard Plug-In Section (Standard plug-in outlets on both sides on 24 in. centers)
Suffix PL04 (4 ft.), PL06 (6 ft.), PL08 (8 ft.), PL10 (10 ft.)



Standard Riser Section (Standard Plug-In outlets on one side on 24 in. centers)
Suffix RI04 (4 ft.), RI06 (6 ft.), RI08 (8 ft.), RI10 (10 ft.)



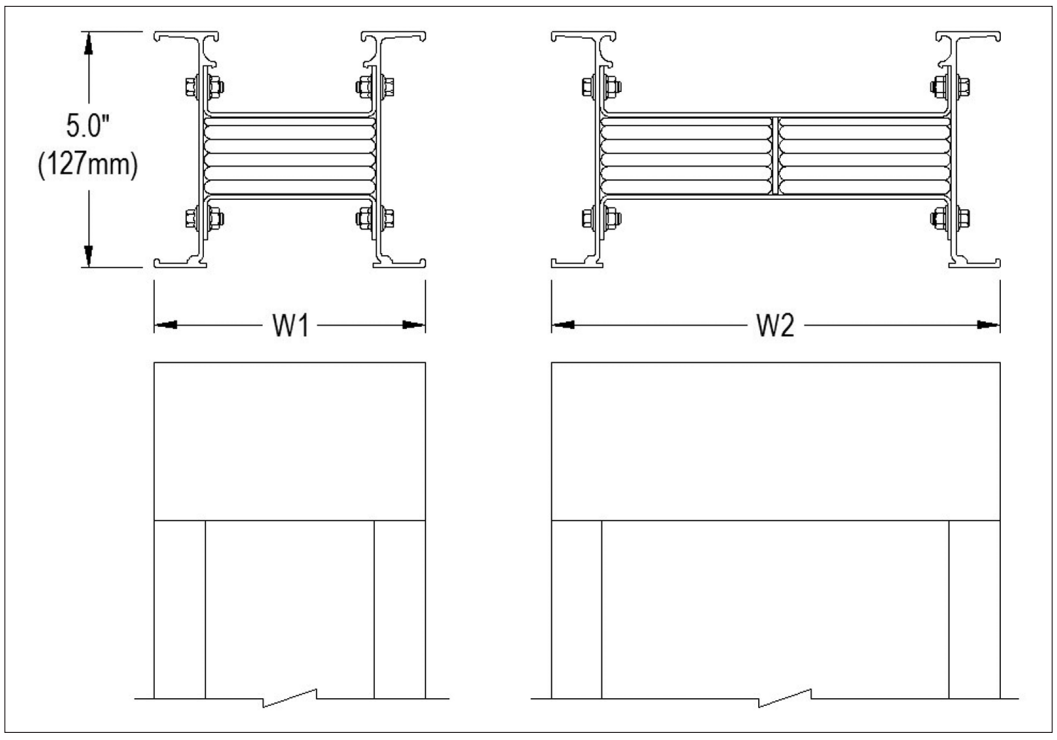
Standard Feeder Section
Suffix F024 – 120 (last 3 digits = length in Inches, 024=24 in., 120=120 in.)



Widths and weights

Sentron busway, widths and weights

Ampere rating		Dimension inches (mm)		Approximate weight - lbs per ft. (kg per meter)					
				3Ø, 3-Wire	3Ø, 3-Wire with internal ground	3Ø, 4-Wire	3Ø, 4-Wire with internal ground	3Ø, 4-Wire 200% neutral	3Ø, 4-Wire 200% neutral with internal ground
AL	**L-Rated**								
225									
400	—	"W1"	3.9 (99)	5 (8)	5 (8)	6 (9)	6 (9)	7 (10)	7 (10)
600									
800	400	"W1"	4.6 (117)	6 (9)	6 (9)	7 (10)	7 (10)	7 (11)	8 (11)
1000	600	"W1"	5.4 (137)	7 (10)	7 (11)	8 (12)	8 (12)	9 (13)	9 (14)
1200	800	"W1"	6.6 (168)	8 (12)	9 (13)	9 (14)	10 (15)	11 (16)	11 (17)
1350	1000	"W1"	7.6 (193)	9 (13)	10 (15)	11 (16)	11 (17)	12 (18)	13 (19)
1600	1200	"W1"	8.7 (221)	10 (15)	11 (17)	12 (18)	13 (19)	14 (21)	15 (22)
2000	1250, 1600	"W1"	10.9 (277)	13 (19)	14 (21)	15 (23)	16 (24)	18 (26)	19 (28)
2500	2000	"W2"	13.7 (348)	15 (22)	17 (25)	18 (27)	20 (30)	22 (33)	23 (34)
3000	2500	"W2"	15.8 (402)	17 (25)	19 (28)	21 (31)	23 (34)	25 (37)	27 (40)
3200	2000	"W2"	17.3 (439)	18 (27)	20 (30)	23 (34)	25 (37)	27 (40)	29 (43)
4000	3000, 3200	"W2"	20.3 (516)	22 (33)	25 (37)	27 (40)	30 (44)	32 (48)	35 (52)
CU	**M-Rated**								
225	—								
400	—	"W1"	3.9 (99)	9 (13)	10 (14)	10 (16)	11 (17)	12 (18)	13 (19)
600	—								
800	400								
1000	—	"W1"	4.4 (112)	10 (15)	11 (17)	12 (19)	14 (20)	15 (22)	16 (23)
1200	600	"W1"	5.1 (130)	12 (18)	14 (20)	15 (23)	16 (24)	18 (26)	19 (29)
1350	800	"W1"	5.7 (145)	14 (21)	16 (24)	17 (26)	19 (29)	21 (31)	23 (34)
1600	1000	"W1"	6.7 (170)	17 (26)	19 (29)	22 (32)	24 (35)	26 (38)	28 (42)
2000	1200, 1350	"W1"	8.2 (208)	22 (32)	25 (37)	28 (41)	30 (45)	33 (50)	36 (54)
—	1600	"W1"	8.7 (221)	24 (35)	27 (40)	30 (44)	32 (48)	36 (54)	39 (58)
2500	2000	"W1"	10.7 (272)	30 (44)	34 (50)	38 (56)	42 (62)	46 (68)	50 (74)
3000	—	"W2"	11.8 (300)	33 (49)	37 (55)	42 (63)	47 (70)	51 (76)	56 (83)
3200	—	"W2"	13.3 (335)	37 (55)	42 (63)	48 (72)	53 (79)	58 (86)	64 (95)
4000	2500, 3000, 3200	"W2"	15.3 (389)	43 (64)	50 (75)	56 (83)	62 (92)	68 (101)	75 (112)
5000	4000	"W2"	19.3 (491)	56 (83)	64 (95)	72 (107)	80 (119)	89 (132)	97 (145)



Elbows

Sentron Busway elbows provide a simple, convenient method of changing the direction (left, right, up or down) of a busway run. Two elbow styles are offered: elbow stack and elbow section.

Flatwise elbow stacks, dimensions (standard/min.)

Ampere rating		Dimensions Inches (mm) "A"
AL	**L-Rated**	
225	—	1.00 (25)
400		
600		
800	400	1.12 (28
1000	600	2.00 (51)
1200	800	2.50 (64)
1350	1000	3.00 (76)
1600	1200	3.50 (89)
2000	1350,1600	4.62 (117)
2500	2000	5.75 (146)
3000	2500	7.00 (178)
3200	2000	7.75 (197)
4000	3000,3200	9.35 (237)
CU	**M-Rated**	
225	—	1.00 (25)
400		
600		
800	400	1.00 (25)
1000	—	1.12 (28)
1200	600	1.25 (33)
1350	800	2.00 (50)
1600	1000	2.50 (64)
2000	1200,1350	3.25 (83)
—	1600	4.62 (117)
2500	2000	4.50 (114)
3000	—	5.00 (127)
3200	—	5.75 (146)
4000	2500, 3000, 3200	6.75 (171)
5000	4000	8.87 (225)

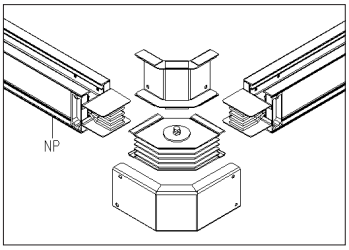
Note: Flatwise elbow stacks can be ordered as either right-hand (ESFR) or left-hand (ESFL) to follow the same nomenclature as an elbow section. The construction is identical and interchangeable.

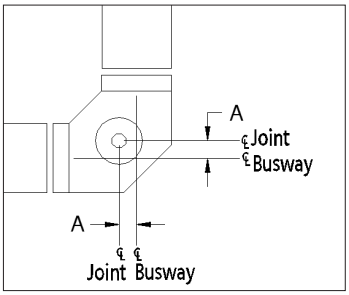
Flatwise elbow stacks

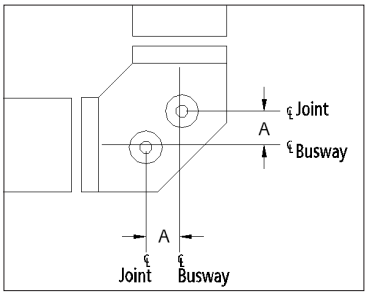
Flatwise elbow stacks are used for left and right directional changes. When the busway system is mounted flatwise in the horizontal plane (bus bars run parallel to the floor).

Flat

Suffix ESFR/ESFL





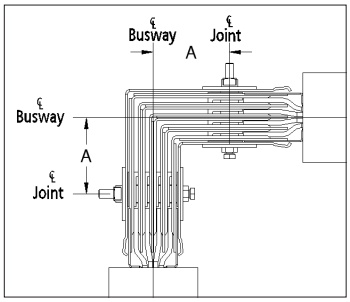


Edgewise elbow stacks, dimensions (standard/min.)

Ampere rating		Dimensions Inches (mm) "A"
AL	**L-Rated**	
225	—	4.25 (108)
400	—	
600	—	
800	400	
1000	600	
1200	800	
1350	1000	
1600	1200	
2000	1350,1600	
2500	2000	
3000	2500	
3200	2000	
4000	3000, 4300	
CU	**M-Rated**	
225	—	4.25 (108)
400	—	
600	—	
800	400	
1000	—	
1200	600	
1350	800	
1600	1000	
2000	1200,1350	
—	1600	
2500	2000	
3000	—	
3200	—	
4000	2500, 3000, 3200	
5000	4000	

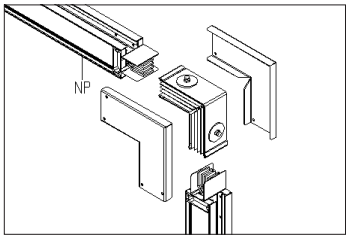
Edgewise elbow stacks

Edgewise elbow stacks create up and down directional changes. The "A" phase is on the inside of the bend for edge up elbow stacks. The "A" phase is on the outside of the bend for edge down elbow stacks.



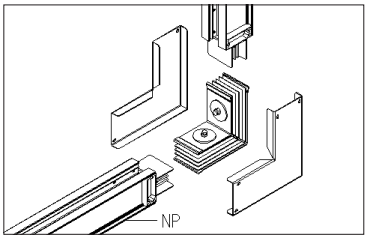
Edge down

Suffix ESED



Edge up

Suffix ESEU



Elbows

Flatwise Elbow Sections, dimensions (standard/min.)

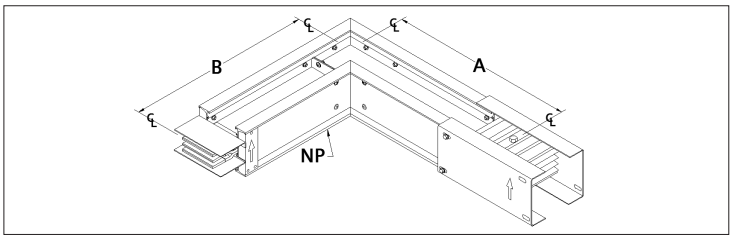
Ampere Rating		Dimensions Inches (mm) "A"	"B"
AL	**L-Rated**		
225	—		
400	—		
600	—	12 (305)	12 (305)
800	400		
1000	600		
1200	800		
1350	1000		
1600	1200		
2000	1350,1600		
2500	2000	18 (457)	18 (457)
3000	2500		
3200	2000		
4000	3000, 3200	24 (610)	24 (610)
CU	**M-Rated**		
225	—		
400	—		
600	—		
800	400		
1000	—	12 (305)	12 (305)
1200	600		
1350	800		
1600	1000		
2000	1200, 1350		
—	1600		
2500	2000		
3000	—	18 (457)	18 (457)
3200	—		
4000	2500, 3000, 3200		
5000	4000	24 (610)	24 (610)

Flatwise elbow sections

Flatwise elbow sections are used for left and right directional changes when the busway system is mounted in the horizontal plane (bus bars run parallel to the floor). The joint stack assembly may be moved to the opposite leg to change the orientation from left to right/right to left.

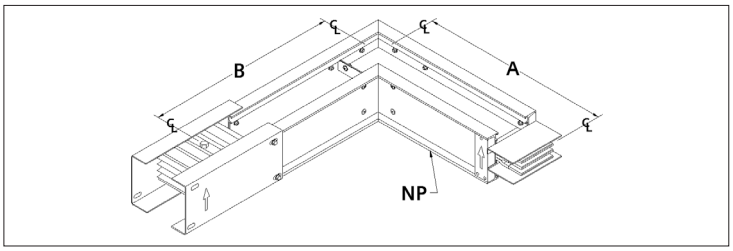
Flat left

Suffix ELEF



Flat right

Suffix ELFR



Edgewise Elbow Sections, dimensions (standard/min.)

Ampere rating		Dimensions Inches (mm) "A"	"B"
AL	**L-Rated**		
225	—		
400	—		
600	—		
800	400		
1000	600		
1200	800		
1350	1000		
1600	1200		
2000	1350,1600		
2500	2000		
3000	2500		
3200	2000		
4000	3000,3200		
CU	**M-Rated**		
225	—		
400	—	10 (254)	10 (254)
600	—		
800	400		
1000	1000		
1200	600		
1350	800		
1600	1000		
2000	1200, 1350		
—	1600		
2500	2000		
3200	—		
4000	2500, 3000, 3200		
5000	4000		

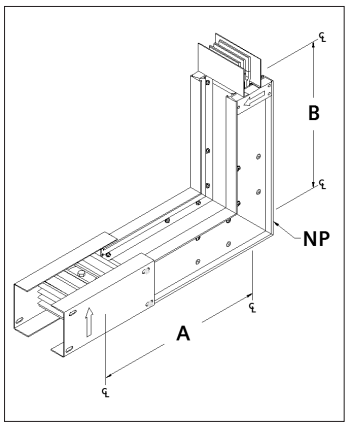
Note: Odd angle elbow flatwise and edgewise elbow sections are available for angles 95° - 175° in 5° increments.

Edgewise elbow sections

Edgewise elbow sections create up and down directional changes. The "A" phase bus bar lies on the inside of the bend for edge up elbows. The "A" phase bus bar lies on the outside of the bend for edge down elbows. The joint stack assembly on edgewise elbows can not be moved in order to change orientation from up to down/down to up. Sentron Busway elbow sections are shipped with a joint stack assembly on one end for direct connection to the busway system.

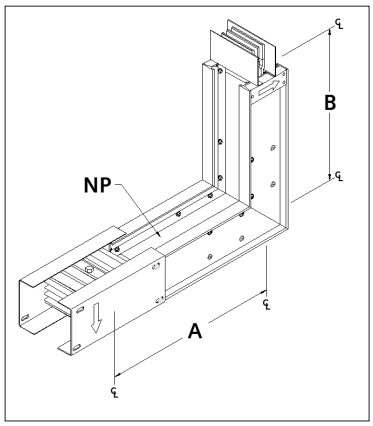
Edge up

Suffix ELEU



Edge down

Suffix ELED



Offsets

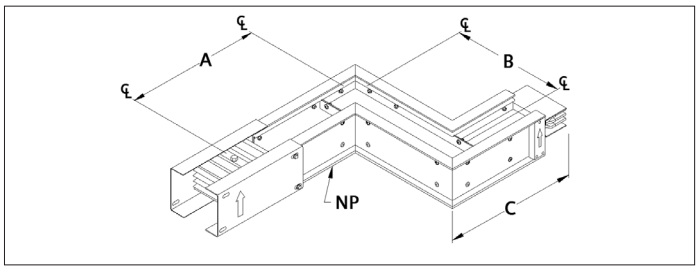
Offsets can be utilized to solve difficult contour problems and save space. In applications where space does not allow for two connected elbows, a single offset can bypass an obstruction. All offsets are supplied with one joint stack assembly.

Flatwise offsets, dimensions (standard/min.)

Ampere rating		Dimensions Inches (mm) *"A"	"B"	"C"
AL	**L-Rated**			
225	—			
400	—			
600	—			
800	400	12 (305)	5 (127)	12 (305)
1000	600			
1200	800			
1350	1000			
1600	1200			
2000	1350, 1600			18 (457)
2500	2000	18 (457)	5 (127)	
3000	2500			
3200	2000			
4000	3000, 3200	24 (610)	8 (203)	24 (610)
CU	**M-Rated**			
225	—			
400	—			
600	—			
800	400			
1000	—	12 (305)	5 (127)	12 (305)
1200	600			
1350	800			
1600	1000			
2000	1200, 1350			
—	1600			
2500	2000			
3000	—	18 (457)	5 (127)	18 (457)
3200	—			
4000	2500, 3000,3200			
5000	4000	24 (610)	8 (203)	24 (610)

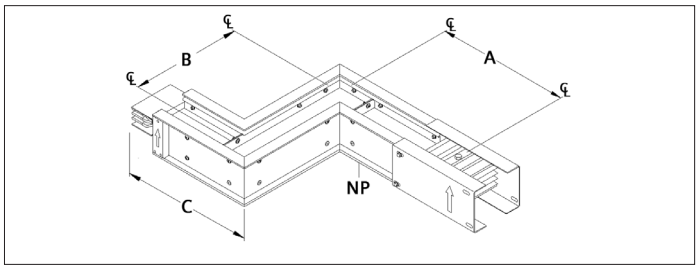
Flat right

Suffix OFFR



Flat left

Suffix OFFL



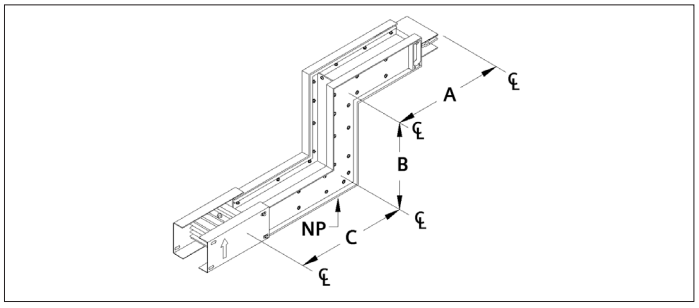
Edgewise Offsets, Dimensions (standard/min.)

Ampere rating		Dimensions Inches (mm) *"A"	"B"	"C"
AL	**L-Rated**			
225	—			
400	—			
600	—			
800	400			
1000	600			
1200	800			
1350	1000	10 (254)	6 (152)	10 (254)
1600	1200			
2000	1350,1600			
2500	2000			
3000	2500			
3200	2000			
4000	3000,3200			
CU	**M-Rated**			
225	—			
400	—			
600	—			
800	400			
1000	—			
1200	600			
1350	800			
1600	1000	10 (254)	6 (152)	10 (254)
2000	1200,1350			
—	1600			
2500	2000			
3000	—			
3200	—			
4000	2500,3000,3200			
5000	4000			

Note: Leg dimensions A and C have been reversed from prior publications.

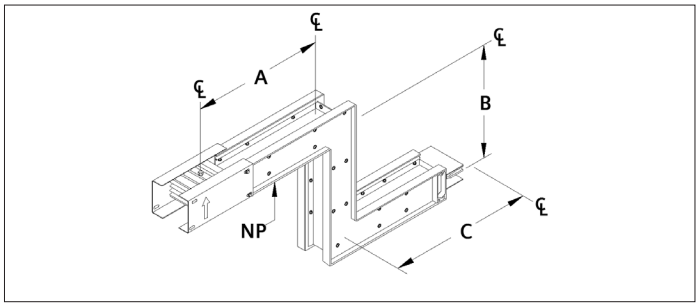
Edge up

Suffix OFEU



Edge down

Suffix OFED



Combinations

Combinations are used to create edge to flat and flat to edge changes in the busway run. One joint stack assembly is shipped with combination.

See drawings for minimum dimensions. Consult Busway Order Service for information on custom lengths.

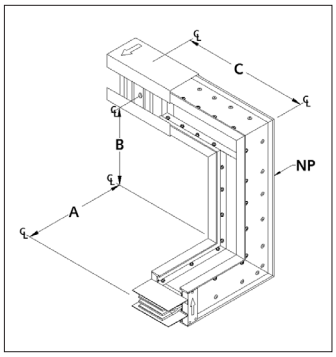
Combinations, dimensions (standard/min.)

Ampere ratings		Dimensions Inches (mm)		
		*"A"	"B"	"C"
AL	**L-Rated**			
225	—			
400	—			
600	—			
800	400	10 (254)	8 (203)	12 (305)
1000	600			
1200	800			
1350	1000			
1600	1200			
2000	1350,1600			
2500	2000	10 (254)	12 (305)	18 (457)
3000	2500			
3200	2000			
4000	3000, 3200	10 (254)	16 (406)	24 (610)
CU	**M-Rated**			
225	—			
400	—			
600	—			
800	400	10 (254)	8 (203)	12 (305)
1000	—			
1200	600			
1350	800			
1600	1000			
2000	1200,1350	10 (254)	8 (203)	12 (305)
—	1600			
2500	2000			
3000	—	10 (254)	12 (305)	18 (457)
3200	—			
4000	2500, 3000, 3200			
5000	4000	10 (254)	16 (406)	24 (610)

Note: Leg Dimensions A and C have been reversed from prior publications.

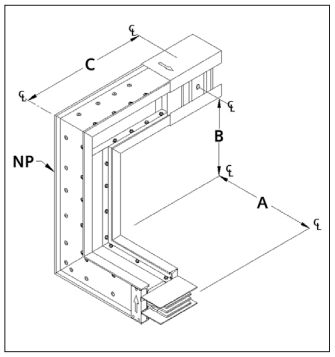
Flat right - Edge up

Suffix CORU



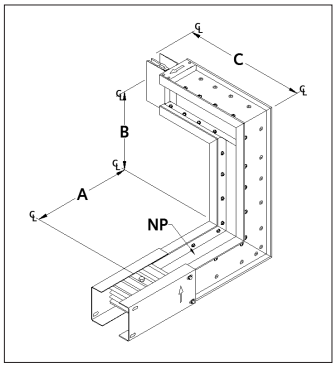
Flat left - Edge up

Suffix COLU



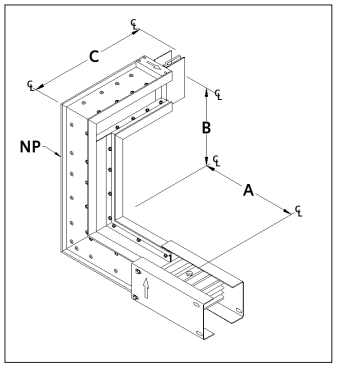
Edge up - Flat left

Suffix COUL



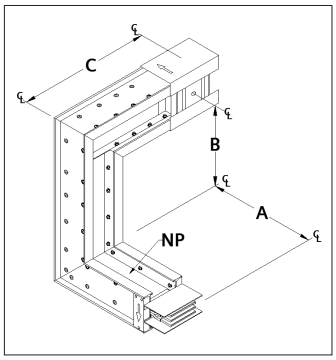
Edge up - Flat right

Suffix COUR



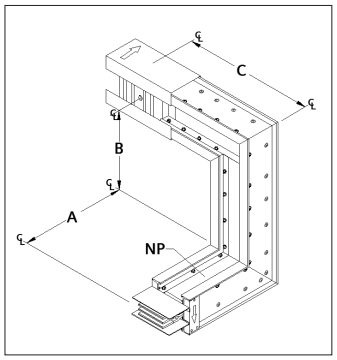
Flat right - Edge down

Suffix CORD



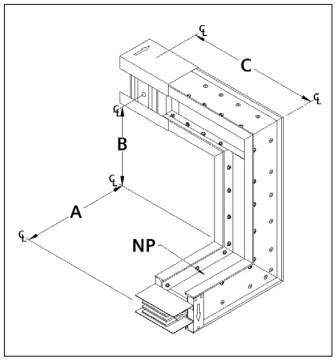
Flat left - Edge down

Suffix COLD



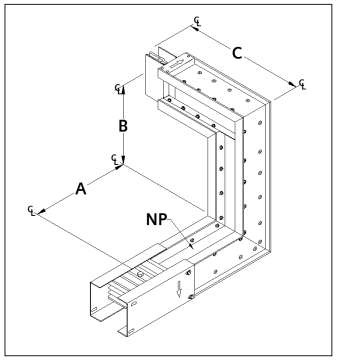
Edge down - Flat left

Suffix CODL



Edge down - Flat right

Suffix CODR



Tees

Tees are used to simplify directional and plane orientation changes in a busway system. Tees can make 90° bends left or right, and up and down along the busway run. All tees are supplied with two joint stack assemblies.

Flatwise tees, dimensions (standard/min.)

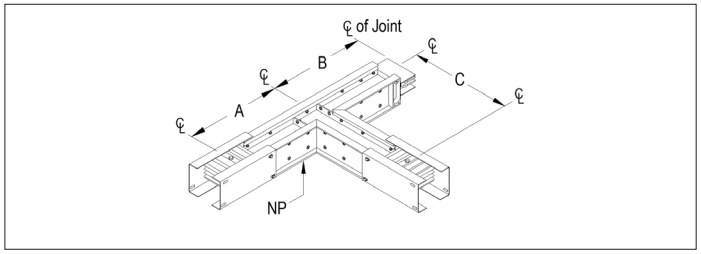
Ampere Rating		Dimensions Inches (mm) "A", "B", "C"
AL	**L-Rated**	
225	—	
400	—	
600	—	
800	400	12 (305)
1000	600	
1200	800	
1350	1000	
1600	1200	
2000	1350,1600	
2500	2000	18 (457)
3000	2500	
3200	2000	
4000	3000,3200	24 (610)
CU	**M-Rated**	
225	—	
400	—	
600	—	
800	400	
1000	—	12 (305)
1200	600	
1350	800	
1600	1000	
2000	1200,1350	
—	1600	
2500	2000	
3000	—	18 (457)
3200	—	
4000	2500,3000,3200	
5000	4000	24 (610)

Flatwise tees

Flatwise tees are used to create left and right branches.

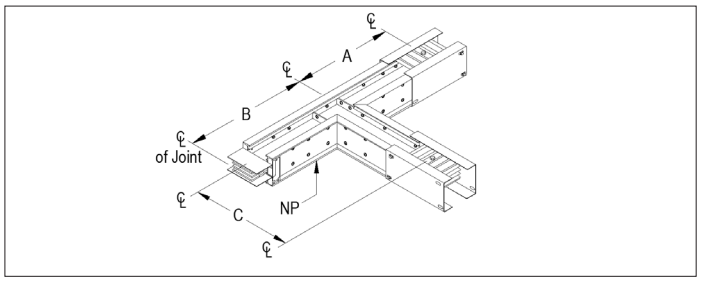
Flat right

Suffix TEFR



Flat left

Suffix TEFL



Edgewise tees, dimensions (standard/min.)

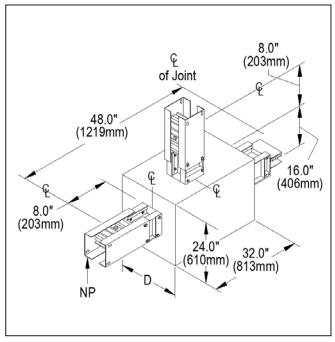
Ampere rating		Dimensions Inches (mm) "D"
AL	**L-Rated**	
225	—	
400	—	
600	—	13 (330)
800	400	
1000	600	
1200	800	
1350	1000	18 (457)
1600	1200	
2000	1350,1600	
2500	2000	
3000	2500	27 (686)
3200	2000	
4000	3000,3200	29 (737)
CU	**M-Rated**	
225	—	
400	—	
600	—	
800	400	13 (330)
1000	—	
1200	600	
1350	800	
1600	1000	
2000	1200,1350	18 (457)
—	1600	
2500	2000	
3000	—	
3200	—	27 (686)
4000	2500,3000,3200	
5000	4000	29 (737)

Edgewise tees

Edgewise tees are used to create branches that stem up or down from the busway run.

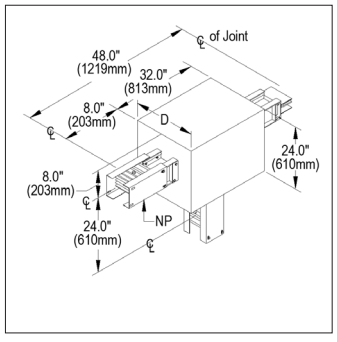
Edge up

Suffix TEEU



Edge down

Suffix TEED



1) 12.0" (305mm) For Isolated Ground.

End tap boxes

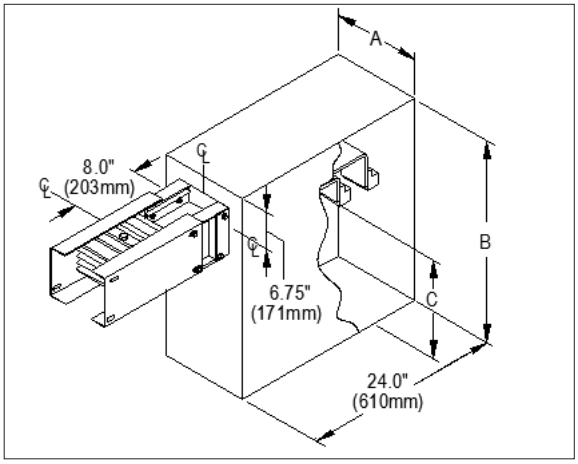
End tap boxes are non-fusible devices used to connect cable and conduit to the end of a busway run or where busway runs connect without the need for over-current protection. End tap boxes may be installed at the end or beginning of a run. Vertical end tap boxes and horizontal end tap boxes can be installed in both horizontal and vertical applications. Extended end tap boxes are available if the application requires additional wire bending space. One joint stack assembly is shipped with each end tap box.

Standard and extended horizontal end tap boxes, dimensions

Ampere rating		Dimensions inches (mm)			Wire bend space Per phase & neutral		Cable lugs Per phase & neutral		Ground lugs[1]
		"A"	"B" Std.	"B" Ext.	"C" Std.	"C" Ext.	Qty.	Size	
AL	**L-Rated**								
225	—	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	1	[1]	1
400	—	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	1	[2]	1
600	—	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	2	[2]	1
800	400	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	3	[2]	1
1000	600	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	4	[2]	1
1200	800	18 (457)	32 (813)	37 (940)	20 (508)	24 (610)	4	[2]	1
1350	1000	18 (457)	33 (838)	37 (940)	20 (508)	24 (610)	4	[2]	1
1600	1200	18 (457)	33 (838)	37 (940)	20 (508)	24 (610)	5	[2]	1
2000	1350, 1600	18 (457)	33 (838)	37 (940)	20 (508)	24 (610)	6	[2]	2
2500	2000	27 (686)	33 (838)	37 (940)	20 (508)	24 (610)	8	[2]	2
3000	2500	27 (686)	33 (838)	37 (940)	20 (508)	24 (610)	9	[2]	2
3200	2000	27 (686)	33 (838)	37 (940)	20 (508)	24 (610)	9	[2]	2
4000	3000, 3200	29 (737)	33 (838)	37 (940)	20 (508)	24 (610)	12	[2]	3
CU	**M-Rated**								
225	—	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	1	[1]	1
400	—	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	1	[2]	1
600	—	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	2	[2]	1
800	400	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	3	[2]	1
1000	—	13 (330)	30 (762)	34 (863)	17 (432)	21 (533)	4	[2]	1
1200	600	13 (330)	33 (838)	37 (940)	20 (508)	24 (610)	4	[2]	1
1350	800	13 (330)	33 (838)	37 (940)	20 (508)	24 (610)	4	[2]	1
1600	1000	18 (457)	33 (838)	37 (940)	20 (508)	24 (610)	5	[2]	1
2000	1200, 1350	18 (457)	33 (838)	37 (940)	20 (508)	24 (610)	6	[2]	2
—	1600	18 (457)	33 (838)	37 (940)	20 (508)	24 (610)	5	[2]	1
2500	2000	18 (457)	33 (838)	37 (940)	20 (508)	24 (610)	8	[2]	2
3000	—	27 (686)	33 (838)	37 (940)	20 (508)	24 (610)	9	[2]	2
3200	—	27 (686)	33 (838)	37 (940)	20 (508)	24 (610)	9	[2]	2
4000	2500, 3000, 3200	27 (686)	33 (838)	37 (940)	20 (508)	24 (610)	12	[2]	3
5000	4000	29 (737)	33 (838)	37 (940)	20 (508)	24 (610)	15	[2]	4

Horizontal end tap box

Suffix ETHS (Standard)
Suffix ETHX (Extended)



[1] #6 AWG -350 kcmil, Cu/Al.
[2] #4 AWG -600 kcmil, Cu/Al.

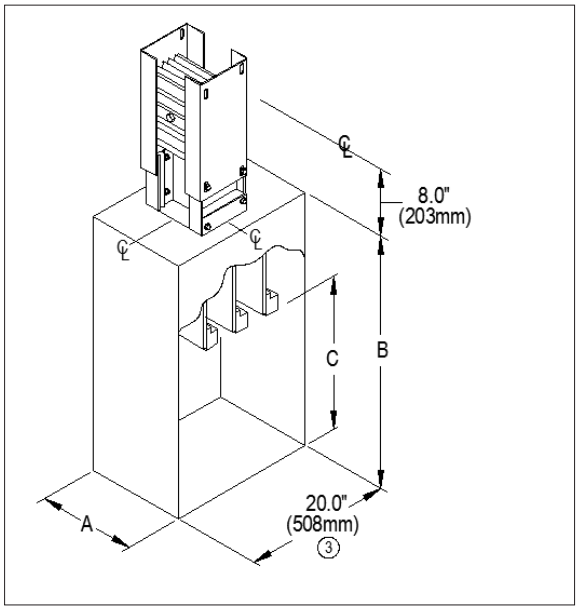
End tap boxes

Standard and extended vertical end tap boxes, dimensions

Ampere rating		Dimensions inches (mm) "A"	"B" Std.	"B" Ext.	Wire bend space Per phase & neutral "C" Std.	"C" Ext.	Cable lugs Per phase & neutral Qty.	Size	Ground lugs [1]
225	—	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	1	[1]	1
400	—	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	1	[2]	1
600	—	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	2	[2]	1
800	400	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	3	[2]	1
1000	600	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	4	[2]	1
1200	800	18 (457)	28 (711)	32 (813)	20 (508)	24 (610)	4	[2]	1
1350	1000	18 (457)	28 (711)	32 (813)	20 (508)	24 (610)	4	[2]	1
1600	1200	18 (457)	28 (711)	32 (813)	20 (508)	24 (610)	5	[2]	1
2000	1350, 1600	18 (457)	28 (711)	32 (813)	20 (508)	24 (610)	6	[2]	2
2500	2000	27 (686)	28 (711)	32 (813)	20 (508)	24 (610)	8	[2]	2
3000	2500	27 (686)	28 (711)	32 (813)	20 (508)	24 (610)	9	[2]	2
3200	2000	29 (737)	28 (711)	32 (813)	20 (508)	24 (610)	9	[2]	2
4000	3000, 3200	29 (737)	28 (711)	32 (813)	20 (508)	24 (610)	12	[2]	3
CU	**M-Rated**								
225	—	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	1	[1]	1
400	—	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	1	[2]	1
600	—	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	2	[2]	1
800	400	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	3	[2]	1
1000	—	13 (330)	25 (635)	29 (737)	17 (432)	21 (533)	4	[2]	1
1200	600	13 (330)	28 (711)	32 (813)	20 (508)	24 (610)	4	[2]	1
1350	800	13 (330)	28 (711)	32 (813)	20 (508)	24 (610)	4	[2]	1
1600	1000	18 (457)	28 (711)	32 (813)	20 (508)	24 (610)	5	[2]	1
2000	1200, 1350	18 (457)	28 (711)	32 (813)	20 (508)	24 (610)	6	[2]	2
—	1600	18 (457)	28 (711)	32 (813)	20 (508)	24 (610)	5	[2]	1
2500	2000	18 (457)	28 (711)	32 (813)	20 (508)	24 (610)	8	[2]	2
3000	—	27 (686)	28 (711)	32 (813)	20 (508)	24 (610)	9	[2]	2
3200	—	27 (686)	28 (711)	32 (813)	20 (508)	24 (610)	9	[2]	2
4000	2500, 3000, 3200	27 (686)	28 (711)	32 (813)	20 (508)	24 (610)	12	[2]	3
5000	4000	29 (737)	28 (711)	32 (813)	20 (508)	24 (610)	15	[2]	4

Vertical end tap box

Suffix ETVS (Standard)
Suffix ETVX (Extended)



1) #6 AWG -350 kcmil, Cu/Al.
2) #4 AWG -600 kcmil, Cu/Al.
3) 24.0" (610mm) for isolated ground.

Center tap boxes

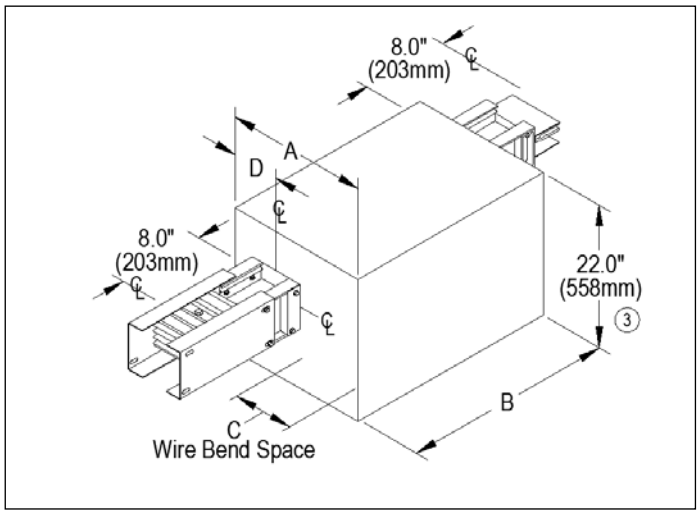
Center tap boxes are non-fusible devices utilized to feed to or take off power from the busway run. When loads served by the busway run do not require over-current protection, center tap boxes may be used. If the application requires additional wiring bending space, extended center tap boxes are available. One joint stack assembly is provided with each center tap box.

Standard and extended center tap boxes, dimensions

Ampere rating		Dimensions Inches (mm)			Wire bend space			Cable lugs per phase & neutral		Ground Lugs [1]
		"A" Std.	"B"	"D"	"A" Ext.	"C" Std.	"C" Ext.	Qty.	Size	
AL	**L-Rated**									
225	—	25 (635)	16 (406)	3.9 (99)	29 (737)	17 (432)	21 (533)	1	1)	1
400	—	25 (635)	16 (406)	3.9 (99)	29 (737)	17 (432)	21 (533)	1	2)	1
600	—	25 (635)	16 (406)	3.9 (99)	29 (737)	17 (432)	21 (533)	2	2)	1
800	400	25 (635)	16 (406)	4.2 (107)	29 (737)	17 (432)	21 (533)	3	2)	1
1000	600	25 (635)	16 (406)	4.6 (117)	29 (737)	17 (432)	21 (533)	4	2)	1
1200	800	29 (737)	16 (406)	5.2 (132)	33 (838)	20 (508)	24 (610)	4	2)	1
1350	1000	29 (737)	16 (406)	5.7 (145)	33 (838)	20 (508)	24 (610)	4	2)	1
1600	1200	33 (838)	20 (508)	6.3 (160)	37 (940)	20 (508)	24 (610)	5	2)	1
2000	1350,1600	33 (838)	20 (508)	7.4 (188)	37 (940)	20 (508)	24 (610)	6	2)	2
2500	2000	37 (940)	24 (610)	8.7 (221)	41 (1041)	20 (508)	24 (610)	8	2)	2
3000	2500	37 (940)	24 (610)	9.7 (246)	41 (1041)	20 (508)	24 (610)	9	2)	2
3200	2000	37 (940)	24 (610)	9.7 (246)	41 (1041)	20 (508)	24 (610)	9	2)	2
4000	3000, 3200	45 (1143)	28 (711)	11.9 (302)	49 (1245)	20 (508)	24 (610)	12	2)	3
CU	**M-Rated**									
225	—	25 (635)	16 (406)	3.9 (99)	29 (737)	17 (432)	21 (533)	1	1)	1
400	—	25 (635)	16 (406)	3.9 (99)	29 (737)	17 (432)	21 (533)	1	2)	1
600	—	25 (635)	16 (406)	3.9 (99)	29 (737)	17 (432)	21 (533)	2	2)	1
800	400	25 (635)	16 (406)	4.2 (107)	29 (737)	17 (432)	21 (533)	3	2)	1
1000	—	25 (635)	16 (406)	4.2 (107)	29 (737)	18 (457)	22 (559)	4	2)	1
1200	600	29 (737)	16 (406)	4.5 (114)	33 (838)	22 (559)	26 (660)	4	2)	1
1350	800	29 (737)	16 (406)	4.8 (122)	33 (838)	21 (533)	25 (635)	4	2)	1
1600	1000	29 (737)	20 (508)	5.3 (135)	33 (838)	21 (533)	25 (635)	5	2)	1
2000	1200,1350	29 (737)	20 (508)	6.1 (155)	33 (838)	20 (508)	24 (610)	6	2)	2
—	1600	33 (838)	20 (508)	6.3 (160)	37 (940)	20 (508)	24 (610)	5	2)	1
2500	2000	33 (838)	24 (610)	7.3 (185)	37 (940)	23 (584)	17 (432)	8	2)	2
3000	—	33 (838)	24 (610)	7.9 (201)	37 (940)	20 (508)	24 (610)	9	2)	2
3200	—	33 (838)	24 (610)	7.9 (201)	37 (940)	20 (508)	24 (610)	9	2)	2
4000	2500,3000, 3200	37 (940)	28 (711)	9.4 (239)	41 (1041)	20 (508)	24 (610)	12	2)	3
5000	4000	40(1016)	34 (863)	11.7(297)	44 (1118)	19 (483)	23 (584)	15	2)	4

Center tap box

Suffix CTBS (Standard)
Suffix CTBX (Extended)

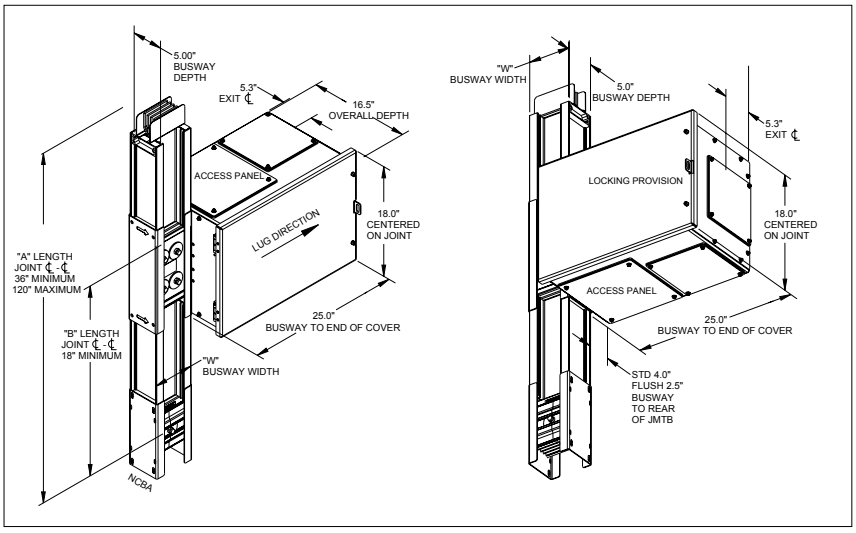


1) #6 AWG -350 kcmil, Cu/Al.
2) #4 AWG -600 kcmil, Cu/Al.
3) 24.0" (610mm) for isolated ground.

Joint mounted tap boxes

The joint mounted tap box (JMTB) is used to tap off power via the busway joint. This device does not provide over-current protection and therefore, must be installed in compliance with NEC 240.21(B)[1]. The small footprint is ideal for space limited applications. The JMTB is compatible with Power Mod, Lighting Panels, Power Panels, and Switchboards 1200A and lower.

Horizontal orientation JMTB



Product features

- Lug Orientation: Vertical or Horizontal
- Maximum Voltage: 600V
- Maximum UL Short Circuit Rating: 150kA[2]
- Amperage Range: 100- 1200A
- Lug Type: Compression Only

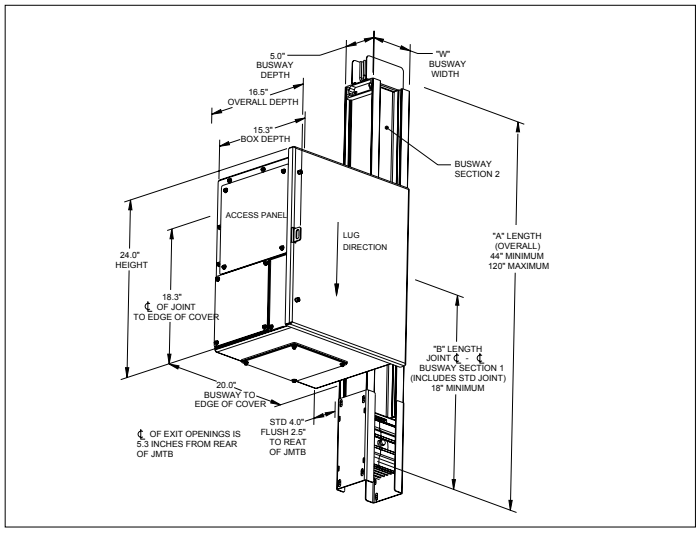
Configuration types

Given a vertical bus run, the JMTB can be configured such that it is on the Left, Right, or Both sides. The JMTB is shipped from the factory installed on the busway.

When installed on vertical busway, the lug orientation matches the orientation of the tap box. If using the horizontal JMTB the lug orientation will be left/right, if vertical JMTB it will be up/down.

The standard JMTB extends 4" beyond the rear plane of the busway however a flush mount variation is available extending 2.5" from the rear of the busway.

Vertical orientation JMTB



Compression lugs

The JMTB requires compression lugs, which aid in minimizing product size. The JMTB is shipped with UL listed crimp type compression lugs, which are sized to the amperage of the load side device.

Should additional lugs be required, please reference the table below. The JMTB utilizes general purpose aluminum 2 hole NEMA lugs,compatible with Aluminum and Copper wire. Homac AL-N series or equivalent are recommended.[3]

If housing ground is selected the JMTB will contain a standard 4-hole NEMA pattern on a dedicated ground bar. If internal/ isolated ground is selected, two ground bars will be included, each with the standard NEMA 4-hole pattern.

Compressions lugs

Wire size	Straight Lug catalog number	Stacking lug catalog number
1/0	**AL1/0-NTN**	**ASL1/0-NTN**
2/0	**AL2/0-NTN**	**ASL2/0-NTN**
3/0	**AL3/0-NTN**	**ASL3/0-NTN**
4/0	**AL4/0-NTN**	**ASL4/0-NTN**
250	**AL250-NTN**	**ASL250-NTN**
300	**AL300-NTN**	**ASL300-NTN**
350	**AL350-NTN**	**ASL350-NTN**

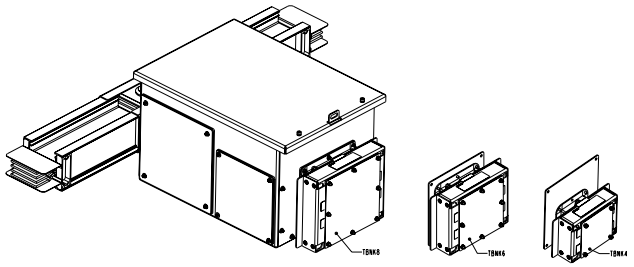
1) This device requires compliance with NEC 240.21(B), see 2017 NEC, commonly referred to as the 10ft feeder tap rule. Feeder tap conductors cannot be over 10ft without overcurrent protection. Main circuit protection device is required downsteam. Please reference the NEC before using this device.
2) For series ratings reference the UL short circuit table in the Technical Data section.
3) Replacement lugs to be supplied by others.

TBNK fittings for joint mounted tap boxes

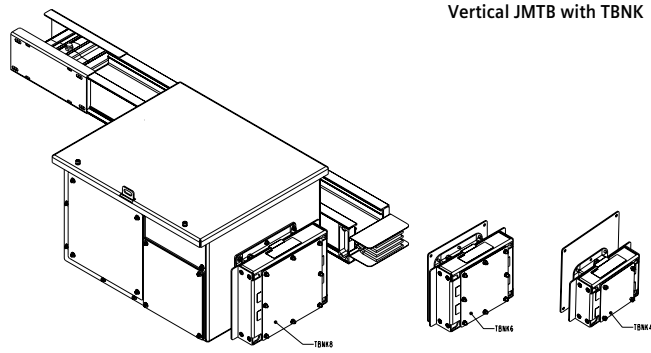
TBNK flexible fittings

TBNK flexible fittings are a UL listed, factory installed series of wireway couplings for use with Sentron Joint Mounted Tap Boxes (JMTBs). TBNK fittings provide a nominal 4.25" long flexible wireway for coupling the JMTB and rigidly mounted downstream equipment. TBNK fittings allow for expansion and contraction of the Busway absorbing up to an inch of movement. Available in 4, 6, and 8-inch sizes, TBNK fittings are suitable for a wide range of equipment amperages and cabling requirements. TBNK fittings if desired should be selected when ordering Sentron JMTBs.

Horizontal JMTB with TBNK



Vertical JMTB with TBNK



Installation and grounding

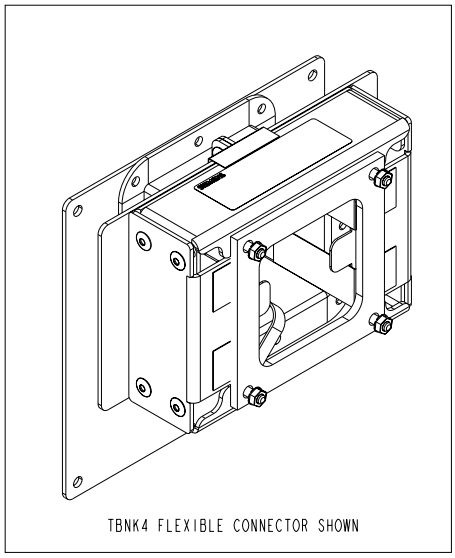
TBNK flexible fittings must be field installed onto downstream equipment. JMTBs ordered with TBNK fittings include Installation Instructions and a template for making the required cut-out in the downstream equipment enclosure. Location of equipment, cut out and cabling must comply with applicable standards including NEC, Local Building Codes and any other authorities having jurisdiction. Consult codes in advance to assure compliance. The JMTB is shipped from the factory with a braided copper ground cable riveted onto the TBNK. During installation, the opposite end of the ground cable must be connected to the enclosure of the downstream equipment. The Installation Instructions provide details of the ground cable installation procedure.

TBNK flexible fittings

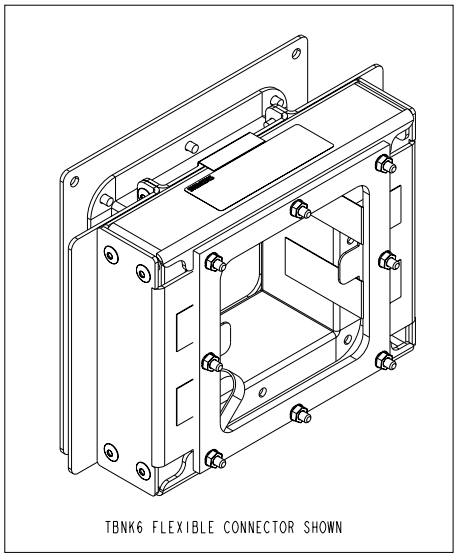
Catalog number	Cutout size	Wireway size	Maximum cable size
TBNK4	3.8"x 3.8"	4"x 4" (16 sq. inch)	900MCM
TBNK6	5.8"x 5.8"	6"x 6" (36 sq. inch)	500MCM
TBNK8	7.8"x 7.8"	8"x 8" (64 sq. inch)	4/0

TBNK fittings for joint mounted tap boxes

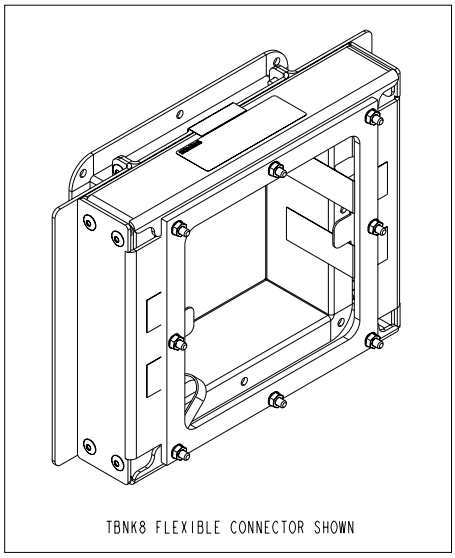
TBNL4, TBNK6 and TBNK8



TBNK4 FLEXIBLE CONNECTOR SHOWN

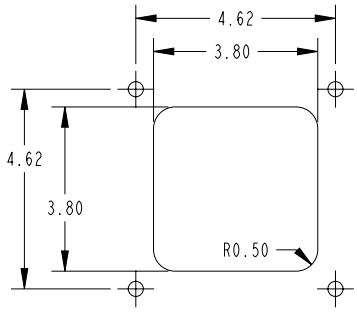


TBNK6 FLEXIBLE CONNECTOR SHOWN

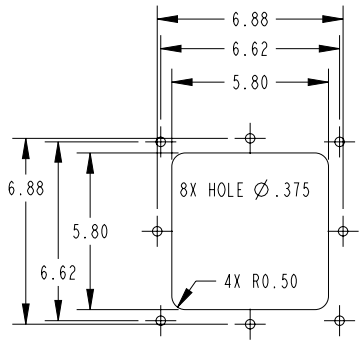


TBNK8 FLEXIBLE CONNECTOR SHOWN

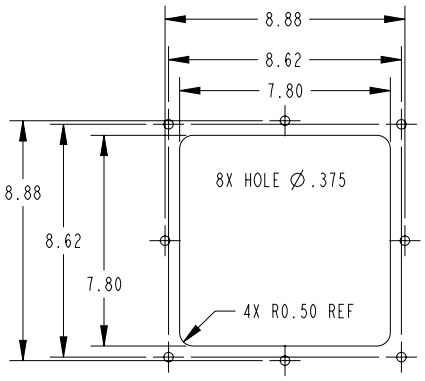
TBNK cut-out pattern



4X HOLE Ø.375
TBNK4 CUT-OUT PATTERN
(SYMMETRICAL ABOUT CENTERLINE)



TBNK6 CUT OUT PATTERN
(DIMENSIONS SYMMETRICAL ABOUT CENTERLINE)



TBNK8 CUT OUT PATTERN
(DIMENSIONS SYMMETRICAL ABOUT CENTERLINE)

In-ine disconnect cubicles and expansion fittings

In-line disconnect cubicle, dimensions [1]

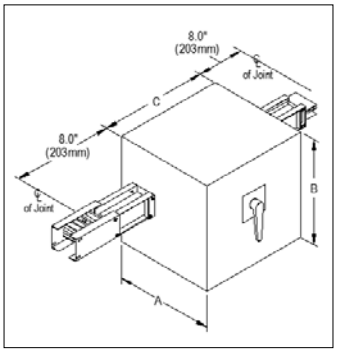
Description of unit	Type of disconnect
Fusible Switch	400-600A FK Visible Blade 800-1200A Vacu-Break
Molded Case Circuit Breaker	JD6, LD6, MD6, ND6 PD6, RD6
Digital Sentron Series MCCBs	SJD6, SLD6, SMD6, SND6 SPD6 1600A Frame
Power Circuit Breaker	200-5000A WL[2]
Bolted Pressure Switch	800A 1200-2500A 3000A 4000A
ACCESS-compatible	

1) Consult your local Siemens sales office for details on WL breakers.
2) Consult factory for dimensions.

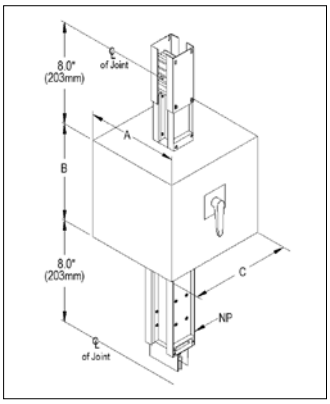
In-line disconnect cubicles

Cubicles provide a means of mounting switches or circuit breakers where power feeds to or pulls from the busway system. When bolted connections are preferred, cubicles may be used in place of plug-in units. Cubicles can also be used at ampere ratings that exceed standard plug-in unit ratings. Modifications to cubicles can be made in order to accommodate key interlocks, ground fault detector systems and power monitoring systems.

In-Line disconnect cubicle



Horizontal



Vertical

Expansion fittings, dimensions (standard/min.)

Ampere rating		Dimensions Inches (mm) "A"
AL	**L-Rated**	
225	—	13 (330)
400	—	
600	—	
800	400	
1000	600	
1200	800	18 (457)
1350	1000	
1600	1200	
2000	1350, 1600	
2500	2000	23 (584)
3000	2500	
3200	2000	25 (635)
4000	3000, 3200	
CU	**M-Rated**	
225	—	13 (330)
400	—	
600	—	
800	400	13 (330)
1000	—	
1200	600	
1350	800	
1600	1000	18 (457)
2000	1200, 1350	
—	1600	
2500	2000	
3000	—	23 (584)
3200	—	
4000	2500, 3000, 3200	
5000	4000	25 (635)

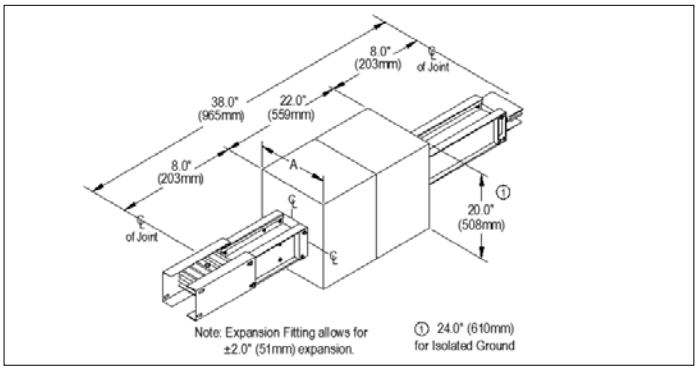
Expansion fittings

Expansion fittings accommodate for expansion and contraction of a busway run and building movement. Expansion fittings typically are installed in the center of long busway runs, and at the beginning of riser runs (within the first 20ft of vertical busway when total vertical run length is equal to or greater then 40ft) to minimize stress on the lower most device or where a busway run crosses an expansion joint of a building.

Qty (1) Expansion Section should be used for every 200ft of continuous Busway run length and for each building expansion joint. The Busway run must be positioned accordingly to accommodate the Expansion Section(s).

Expansion fitting

Suffix XPFT



1) 24.0" (610mm) for isolated ground.

Reducers and phase rotation fittings

Fused reducers, dimensions (standard/min.)

Ampere rating		Dimensions inches (mm) "A"
AL	**L-Rated**	
225	—	
400	—	
600	—	11.4 (289)
800	400	
1000	600	
1200	800	12.5 (318)
1350	1000	13.5 (343)
1600	1200	14.6 (372)
2000	1350, 1600	16.9 (429)
2500	2000	19.6 (498)
3000	2500	21.3 (541)
3200	2000	22.9 (582)
4000	3000, 3200	31.5 (800)
CU	**M-Rated**	
225	—	
400	—	
600	—	10.4 (264)
800	400	
1000	—	
1200	600	11.0 (280)
1350	800	11.6 (296)
1600	1000	12.6 (321)
2000	1200, 1350	14.1 (359)
—	1600	14.6 (372)
2500	2000	16.6 (423)
3000	—	17.9 (455)
3200	—	18.9 (480)
4000	2500, 3000, 3200	20.9 (531)
5000	4000	31.5 (800)

Phase rotation fittings, dimensions (standard/min.)

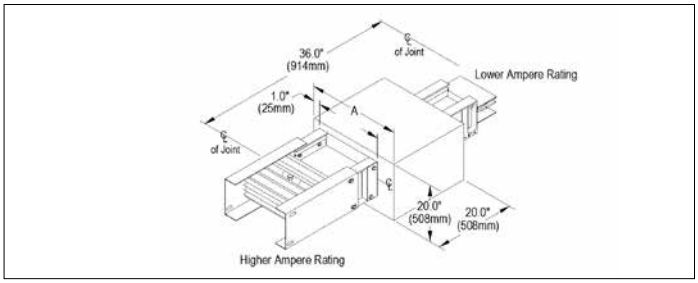
Ampere Rating		Dimensions Inches (mm) "A"
AL	**L-Rated**	
225	—	
400	—	7.9 (200)
600	—	
800	400	8.5 (216)
1000	600	9.4 (239)
1200	800	10.5 (267)
1350	1000	11.5 (293)
1600	1200	12.6 (321)
2000	1350, 1600	14.9 (376)
2500	2000	17.6 (447)
3000	2500	19.8 (503)
3200	2000	21.3 (541)
4000	3000, 3200	24.3 (617)
CU	**M-Rated**	
225	—	
400	—	7.9 (200)
600	—	
800	400	
1000	—	8.4 (213)
1200	600	9.0 (229)
1350	800	9.6 (245)
1600	1000	10.6 (270)
2000	1200, 1350	12.1 (372)
—	1600	12.6 (321)
2500	2000	14.6 (200)
3000	—	15.8 (402)
3200	—	17.3 (439)
4000	2500, 3000, 3200	19.3 (490)
5000	4000	23.3 (592)

Fused reducers

The National Electric Code requires over current protection when busway systems are reduced in ampacity. A fused reducer is used to reduce the allowable ampere rating in those sections of the busway that do not require a higher rating (i.e. at branch circuit junctures).

Fused reducer, Class "L" size fuses

Suffix RFRF



Non-fused reducers

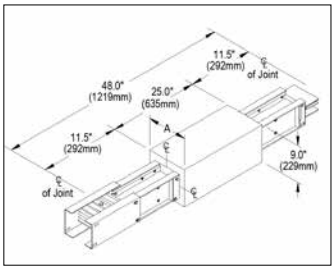
Non-fused reducers are used in conjunction with the following exception to the Fused Reducer in the National Electric Code: "For industrial establishments only,omission of over current protection shall be permitted at points where busways are reduced in ampacity, provided that the length of the busway having the smaller ampacity does not exceed 50 ft. and has an ampacity of at least equal to one-third the rating or setting of the over current device next back on the line, and provided that such busway is free from contact with combustible material." Special joint stack connections are provided for non-fused reducer connections. Consult factory for specific design guidelines

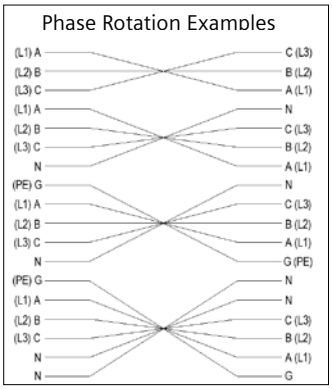
Phase-rotation fittings

Phase-rotation fittings can be used when the application requires a phase rotation in the power supply. Phase rotation fittings can be ordered for "phase and ground", "phase only" and "ground only" rotations.

Phase rotation fitting

Suffix TRPG, Phase and Ground
TRPO, Phase Only
TRGO, Ground Only





Service heads

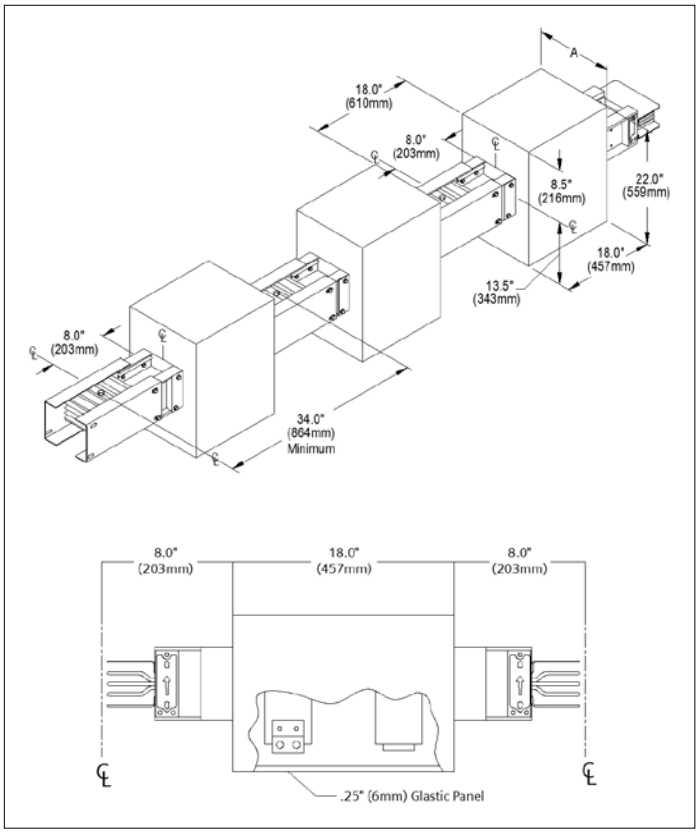
Service heads are used to connect busway to a service entrance. In the Sentron Busway line, 3 single-phase service heads and 3-phase service head connections are available. The standard service entrance connection is the 3-phase service head which consists of one service head for all three phases. 3 single-phase service heads consist of three heads – one for each phase and may be used to meet the requirements of certain applications. To ensure ease of installation of incoming cables, both types of Sentron service heads are constructed so that the lugs face the Glastic bottom of the box. The Glastic bottom provides insulation and protection to the incoming cables.

Single-phase service heads, dimensions (standard/min.)

Ampere rating		Dimensions inches (mm)	Cable lugs per Phase and neutral		Ground Lugs[1)]
		Single-Phase "A"	Qty.	Size	
AL	**L-Rated**				
225	—	13 (330)	1	1)	1
400	225	13 (330)	1	2)	1
600	—	13 (330)	2	2)	1
800	400	13 (330)	3	2)	1
1000	600	13 (330)	4	2)	1
1200	800	18 (457)	4	2)	1
1350	1000	18 (457)	4	2)	1
1600	1200	18 (457)	5	2)	1
2000	1350,1600	20 (508)	6	2)	2
2500	2000	27 (686)	8	2)	2
3000	2500	29 (737)	9	2)	2
3200	2000	29 (737)	9	2)	2
4000	3000,3200	29 (737)	12	2)	3
CU	**M-Rated**				
225	—	13 (330)	1	1)	1
400	—	13 (330)	1	2)	1
600	—	13 (330)	2	2)	1
800	400	13 (330)	3	2)	1
1000	—	13 (330)	4	2)	1
1200	600	13 (330)	4	2)	1
1350	800	13 (330)	4	2)	1
1600	1000	18 (457)	5	2)	1
2000	1200,1350	20 (508)	6	2)	2
—	1600	18 (457)	5	2)	1
2500	2000	20 (508)	8	2)	2
3000	—	27 (686)	9	2)	2
3200	—	27 (686)	9	2)	2
4000	2500, 3000, 3200	27 (686)	12	2)	3
5000	4000	29 (737)	15	2)	4

1) #6 AWG - 350 kcmil, Cu / Al.
2) #4 AWG - 600 kcmil, Cu / Al.

Three single-phase service heads
Suffix V1TX



Service Heads

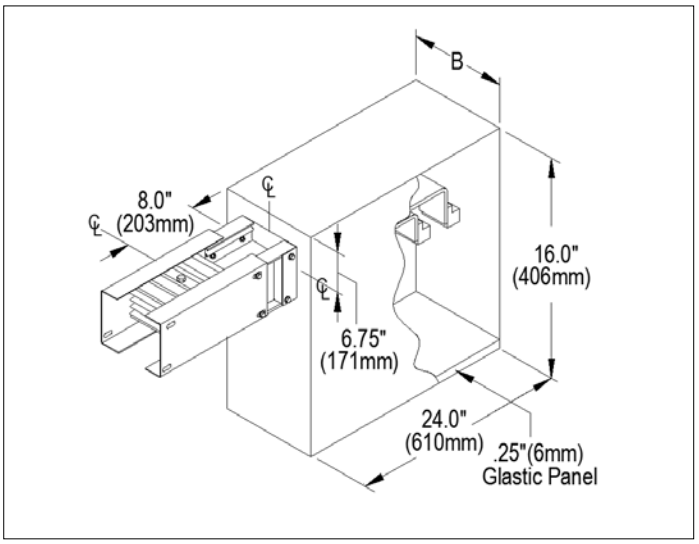
Three-Phase service heads, dimensions (standard/min.)

Ampere rating		Dimensions inches (mm)	Cable lugs per phase and neutral		Ground lugs [1]
		Three-Phase BA"	Qty.	Size	
AL	**L-Rated**				
225	—	13 (330)	1	[1]	1
400	225	13 (330)	1	[2]	1
600	—	13 (330)	2	[2]	1
800	400	13 (330)	3	[2]	1
1000	600	13 (330)	4	[2]	1
1200	800	18 (457)	4	[2]	1
1350	1000	18 (457)	4	[2]	1
1600	1200	18 (457)	5	[2]	1
2000	1350,1600	18 (457)	6	[2]	2
2500	2000	27 (686)	8	[2]	2
3000	2500	27 (686)	9	[2]	2
3200	2000	27 (686)	9	[2]	2
4000	3000,3200	29 (737)	12	[2]	3
CU	**M-Rated**				
225	—	13 (330)	1	[1]	1
400	—	13 (330)	1	[2]	1
600	—	13 (330)	2	[2]	1
800	400	13 (330)	3	[2]	1
1000	—	13 (330)	4	[2]	1
1200	600	13 (330)	4	[2]	1
1350	800	13 (330)	4	[2]	1
1600	1000	18 (457)	5	[2]	1
2000	1200,1350	18 (457)	6	[2]	2
—	1600	18 (457)	5	[2]	1
2500	2000	18 (457)	8	[2]	2
3000	—	27 (686)	9	[2]	2
3200	—	27 (686)	9	[2]	2
4000	2500,3000,3200	27 (686)	12	[2]	3
5000	4000	29 (737)	15	[2]	4

[1] #6 AWG - 350 kcmil, Cu / Al.
[2] #4 AWG - 600 kcmil, Cu / Al.

Three-Phase Service Head

Suffix V3TX



Hangers

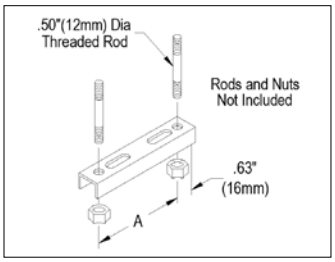
Trapeze hanger, dimensions and catalog numbers

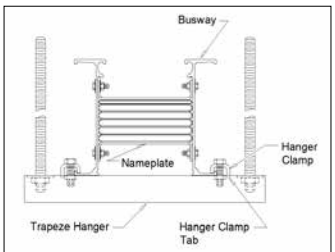
Ampere rating		"A" Dimensions inches (mm)	Flat mounted Catalog number [1]
AL	**L-Rated**		
225	—	10.0 (254)	**SXTH1**
400	—		
600	—		
800	400		
1000	600		
1200	800		
1350	1000	13.5 (343)	**SXTH2**
1600	1200		
2000	1350,1600		
2500	2000	18.5 (470)	**SXTH3**
3000	2500		
3200	2000		
4000	3000,3200	23.0 (584)	**SXTH4**
CU	**M-Rated**		
225	—	10.0 (254)	**SXTH1**
400	—		
600	—		
800	400		
1000	—		
1200	600		
1350	800		
1600	1000		
2000	1200,1350	13.5 (343)	**SXTH2**
—	1600		
2500	2000		
3000	—	18.5 (470)	**SXTH3**
3200	—		
4000	2500, 3000, 3200		
5000	4000	23.0 (584)	**SXTH4**

1) Use SXTH1 for Edge Mounted.

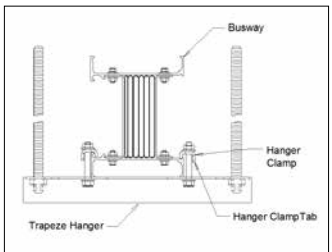
Trapeze hanger

A complete offering of hangers is available to support Sentron Busway in both vertical and horizontal applications. Standard trapeze hangers support Sentron Busway in horizontal applications on 10 ft. (3.05m) centers. Additional hangers may be used if structural requirements mandate their use. The contractor must supply drop rods to complete assembly for trapeze hangers.





Flat Mounted



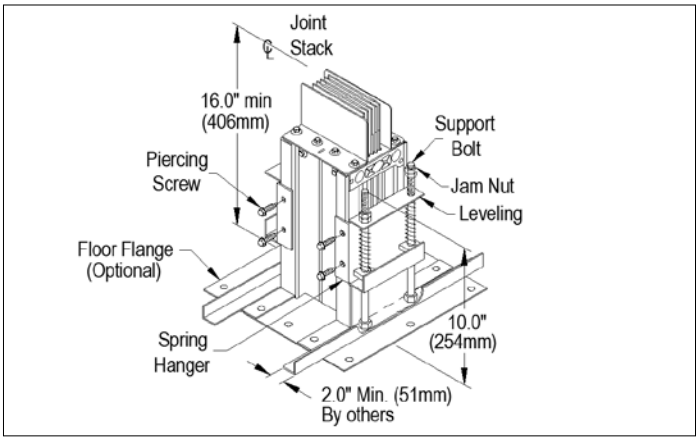
Side Mounted

Spring hanger, catalog numbers

Ampere rating		Catalog assembly floor to ceiling height				
		10ft.	**12 ft.**	**14 ft.**	**16 ft.**	**18 ft.**
AL	**L-Rated**					
225	—	**SXSH4**	**SXSH4**	**SXSH4**	**SXSH4**	**SXSH4**
400	—					
600	—					
800	400					
1000	600					
1200	800					
1350	1000					
1600	1200					
2000	1350, 1600					
2500	2000	**SXSH4**	**SXSH4**	**SXSH4**	**SXSH6**	**SXSH6**
3000	2500					
3200	2000					
4000	3000, 3200	**SXSH4**	**SXSH6**	**SXSH6**	**SXSH6**	**SXSH8**
CU	**M-Rated**					
225	—	**SXSH4**	**SXSH4**	**SXSH4**	**SXSH4**	**SXSH4**
400	—					
600	—					
800	400					
1000	—					
1200	600					
1350	800					
1600	1000	**SXSH4**	**SXSH4**	**SXSH4**	**SXSH6**	**SXSH6**
2000	1200, 1350					
—	1600					
2500	2000	**SXSH6**	**SXSH6**	**SXSH8**	**SXSH8**	**SXSH8**
3000	—	**SXSH6**	**SXSH8**	**SXSH8**	**SXSH10**	**SXSH10**
3200	—	**SXSH6**	**SXSH8**	**SXSH8**	**SXSH10**	**SXSH12**
4000	2500, 3000, 3200	**SXSH6**	**SXSH8**	**SXSH10**	**SXSH12**	**SXSH12**
5000	4000	**SXSH6**	**SXSH10**	**SXSH12**	**SXSH14**	**SXSH14**

Spring hanger

Spring hangers and floor supports must be used to provide secure mounting of the busway run in vertical applications. Spring hangers support the weight of the busway on each floor and also compensate for minimal building movement and thermal expansion. Maximum distance between spring hangers may not exceed 16 ft. (4.88m). Intermediate support(s) and spring hanger(s) are needed for floor to ceiling heights greater than 16ft (4.88 m).



Note: Flanges do not offer support to the busway. Flanges provide a means of covering the hole created in the existing structure.

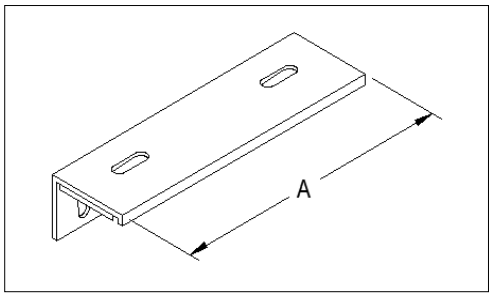
Hangers

Structural steel hanger, dimensions and catalog numbers

Ampere rating		"A" Dimensions Inches (mm)	Catalog number
AL	**L-Rated**		
225	—		
400	—		
600	—	10.0 (254)	**SXSS1**
800	400		
1000	600		
1200	800		
1350	1000		
1600	1200	13.5 (343)	**SXSS2**
2000	1350,1600		
2500	2000	18.5 (470)	**SXSS3**
3000	2500		
3200	2000		
4000	3000,3200	23.0 (584)	**SXSS4**
CU	**M-Rated**		
225			
400	—	10.0 (254)	**SXSS1**
600			
800	400		
1000	—		
1200	600	10.0 (254)	**SXSS1**
1350	800		
1600	1000		
2000	1200,1350		
—	1600		
2500	2000	13.5 (343)	**SXSS2**
3000	—		
3200	—		
4000	2500, 3000, 3200		
5000	4000	23.0 (584)	**SXSS4**

Structural steel hanger

A complete offering of hangers is available to support Sentron Busway in both vertical and horizontal applications. Structural Steel hangers support Sentron Busway in horizontal applications on 10 ft. (3.05m) centers. Additional hangers may be used if structural requirements mandate their use.

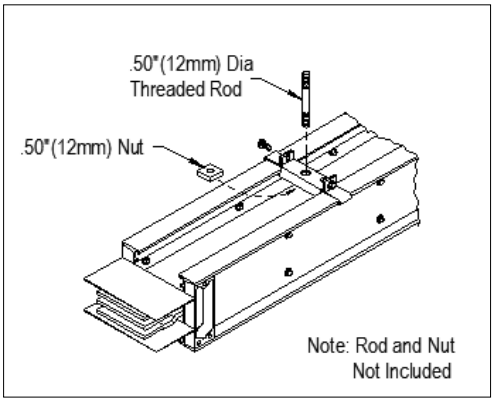


Single drop rod hanger, catalog numbers

Ampere rating		Catalog number
AL	**L-Rated**	
225	—	
400	—	**SXDRA1**
600	—	
800	400	**SXDRA2**
1000	600	**SXDRA3**
1200	800	**SXDRA4**
1350	1000	**SXDRA5**
1600	1200	**SXDRA6**
2000	1350,1600	**SXDRA7**
2500	2000	**—**
3000	2500	**—**
3200	2000	**—**
4000	3000,3200	—
CU	**M-Rated**	
225	—	
400	—	**SXDRC1**
600	—	
800	—	
1000	—	**SXDRC2**
1200	600	**SXDRC3**
1350	800	**SXDRC4**
1600	1000	**SXDRC5**
2000	1200,1350	**SXDRC6**
—	1600	**SXDRC6**
2500	2000	**SXDRC7**
3000	—	**—**
3200	—	**—**
4000	2500,3000,3200	**—**
5000	4000	**—**

Single drop rod hanger

A complete offering of hangers is available to support Sentron Busway in both vertical and horizontal applications. Single drop rod hangers support Sentron Busway in horizontal applications on 10 ft. (3.05m) centers. Additional hangers may be used if structural requirements mandate their use. The contractor must supply drop rods to complete assembly for single drop rod hangers.



Note: Drop rod hangers can only be used when phase arrows are pointing up.

Hangers and end closers

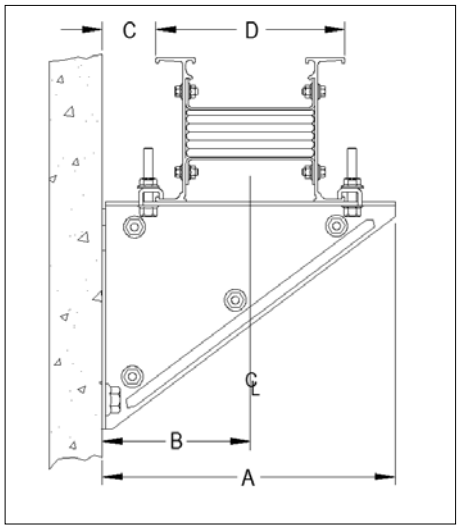
Wall mounted hanger, dimensions and catalog numbers

Ampere rating		Dimensions inches (mm)			Catalog number
		"A"	"B"	"C"	
AL	**L-Rated**				
225					
400	—	12.3 (311)	6.1 (156)	4.2 (107)	**SXWH1**
600					
800	400	12.3 (311)	6.1 (156)	3.8 (97)	**SXWH1**
1000	600				
1200	800	12.3 (311)	6.1 (156)	2.8 (72)	**SXWH1**
1350	1000	16.3 (413)	8.1 (206)	4.4 (111)	**SXWH2**
1600	1200	16.3 (413)	8.1 (206)	3.9 (98)	**SXWH2**
2000	1350, 1600	16.3 (413)	8.1 (206)	2.8 (70)	**SXWH2**
2500	2000	20.8 (527)	10.4 (264)	3.6 (92)	**SXWH3**
3000	2500	20.8 (527)	10.4 (264)	2.5 (64)	**SXWH3**
3200	2000	20.8 (527)	10.4 (264)	1.8 (46)	**SXWH3**
4000	3000, 3200	25.3 (641)	12.6 (321)	2.5 (64)	**SXWH4**
CU	**M-Rated**				
225	—				
400	—	12.3 (311)	6.1 (156)	4.2 (107)	**SXWH1**
600	—				
800	400	12.3 (311)	6.1 (156)	3.8 (97)	**SXWH1**
1000	—				
1200	600				
1350	800	12.3 (311)	6.1 (156	2.8 (72)	**SXWH1**
1600	1000				
2000	1200, 1350	16.3 (413)	8.1 (206)	4.4 (111)	**SXWH2**
—	1600	16.3 (413)	8.1 (206)	3.9 (98)	**SXWH2**
2500	2000	16.3 (413)	8.1 (206)	2.8 (70)	**SXWH2**
3000	—	20.8 (527)	10.4 (264)	3.6 (92)	**SXWH3**
3200	—	20.8 (527)	10.4 (264)	2.5 (64)	**SXWH3**
4000	2500, 3000, 3200	20.8 (527)	10.4 (264)	1.8 (46)	**SXWH3**
5000	4000	25.3 (641)	12.6 (321)	2.5 (64)	**SXWH4**

Wall mounted hanger

Wall mounted hangers are used for horizontal applications close to a wall. The busway can be mounted either edgewise or flatwise to the wall.

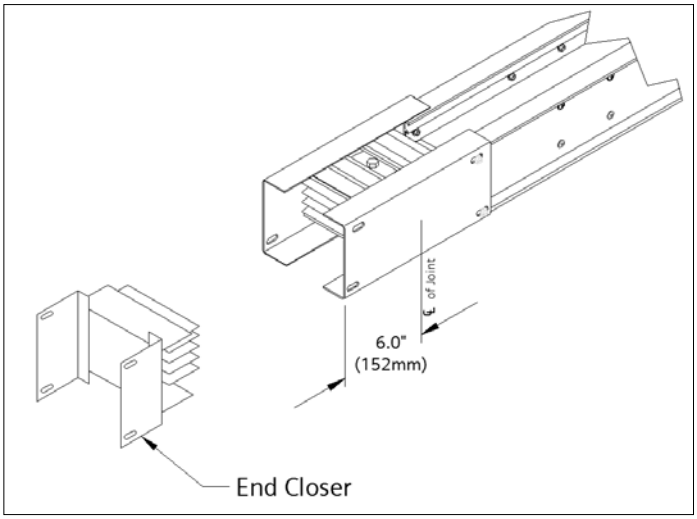
Wall Mounted Hanger ensures the minimum clearance between the wall and the busway run.



End closers

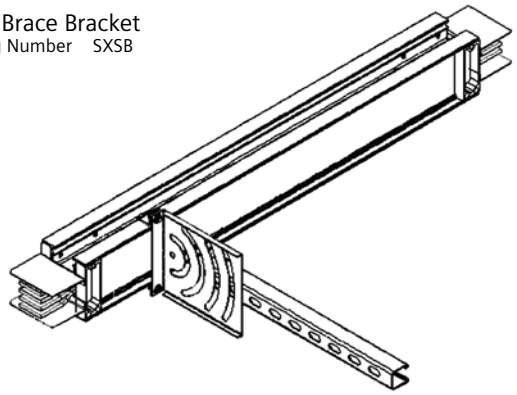
End closers safely terminate a busway run and protect the bus bar ends. End closers may be removed easily in order to extend a busway run. End closers are shipped with Glastic insulation pieces, however, joint stacks and inspection covers are not included.

End closers
(Joint stack and covers not included)
Suffix ECLS

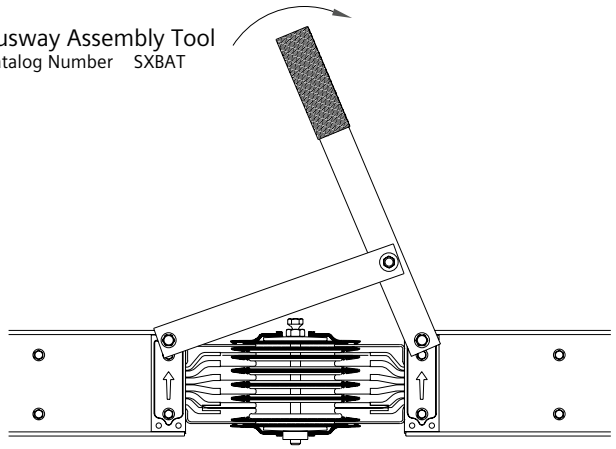


Accessories

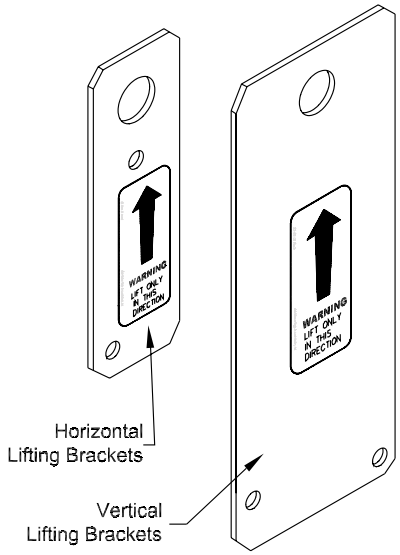
Sway Brace Bracket
Catalog Number SXSB



Busway Assembly Tool
Catalog Number SXBAT



Lifting Kit
Catalog Number SXLK



Roof and wall flanges

Roof, wall and floor flanges are available for Sentron Busway. When the busway run passes thorough a roof, wall or ceiling, a flange should be used. Flanges do not offer support to the busway. Flanges provide a means of covering the hole created in the existing structure. Additional sealant may be required to meet fire codes and all other local requirements. No caulking or gasketing is provided with Sentron flanges.

Roof flanges, dimensions

Ampere Rating		Dimensions Inches (mm) "A"	"B"
AL	**L-Rated**		
225	—		
400	—		
600	—	12 (305)	18 (457)
800	400		
1000	600		
1200	800		
1350	1000		
1600	1200	16 (406)	22 (559)
2000	1350,1600		
2500	2000	20.5 (521)	22 (559)
3000	2500	20.5 (521)	26.5 (673)
3200	2000		
4000	3000,3200	25 (635)	31 (787)
CU	**M-Rated**		
225	—		
400	—		
600	—		
800	400	12 (305)	18 (457)
1000	—		
1200	600		
1350	800		
1600	1000		
2000	1200, 1350		
—	1600	16 (406)	22 (559)
2500	2000		
3000	—	20.5 (521)	26.5 (673)
3200	—		
4000	2500, 3000, 3200		
5000	4000	25 (635)	31 (787)

Wall, ceiling and floor flanges, dimensions

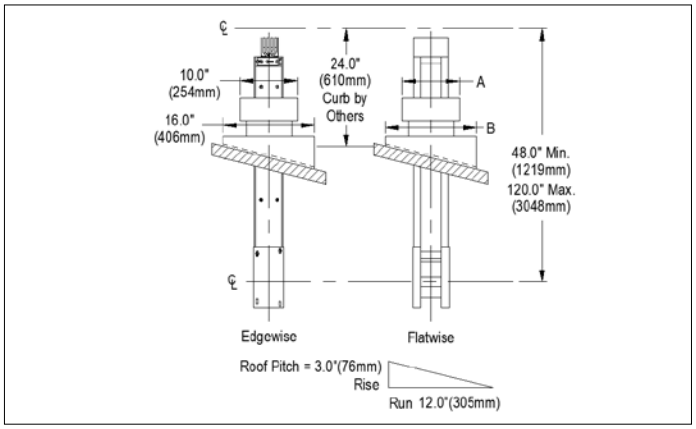
Ampere rating		Dimensions inches (mm) A	B
AL	**L-Rated**		
225	—		
400	—	11 (279)	7 (178)
600	—		
800	400		
1000	600	12 (305)	8 (203)
1200	800	13 (330)	9 (229)
1350	1000	14 (356)	10 (254)
1600	1200	15 (381)	11 (279)
2000	1350, 1600	17 (432)	13 (330)
2500	2000	20 (508)	16 (406)
3000	2500	22 (559)	18 (457)
3200	2000	24 (610)	20 (508)
4000	3000, 3200	26 (660)	22 (559)
CU	**M-Rated**		
225	—		
400	—	10 (254)	6 (152)
600	—		
800	400		
1000	—	11 (279)	7 (178)
1200	600	12 (305)	8 (203)
1350	800		
1600	1000	13 (330)	9 (229)
2000	1200, 1350	15 (381)	11 (279)
—	1600	15 (381)	11 (279)
2500	2000	17 (432)	13 (330)
3000	—	18 (457)	14 (356)
3200	—	19 (483)	15 (381)
4000	2500, 3000, 3200	21 (533)	17 (432)
5000	4000	26 (660)	22 (559)

Roof flanges

Roof flanges are available for Sentron Busway. When the busway run passes thorough a roof, a flange should be used. Flanges do not offer support to the busway. Flanges provide a means of covering the hole created in the existing structure. Additional sealant may be required to meet fire codes and all other local requirements. No caulking or gasketing is provided with Sentron flanges. Roof flanges provide a watertight seal for use with NEMA 3R and IP66 rated busway. Roof pitch must be indicated on drawings when ordering roof flanges.

Roof flanges

Suffix GRFL

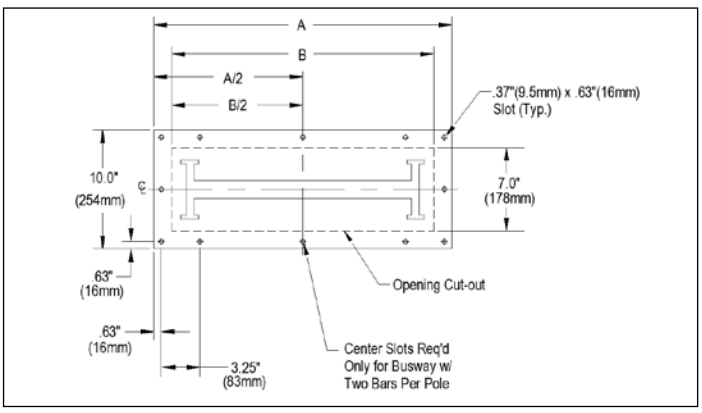


Wall, ceiling and floor flanges

Wall/Floor flanges are available for Sentron Busway. When the busway run passes thorough a wall or ceiling, a flange should be used. Flanges do not offer support to the busway. Flanges provide a means of covering the hole created in the existing structure. Additional sealant may be required to meet fire codes and all other local requirements. No caulking or gasketing is provided with Sentron flanges.

Wall, ceiling and floor flanges

Suffix GWFL



Flanged Ends

Flanged ends provide a direct connection to low voltage switchgear, switchboards, motor control centers, large power panels, and other electrical distribution equipment.

Flanged ends are shipped with one joint stack assembly. The switchgear manufacture supplies lugs and mounting hardware. See illustration for flanged end drilling patterns.

Flanged end, dimensions

Ampere rating		Dimensions inches (mm) "W"	Fig. No.
AL	**L-Rated**		
225	—		
400	—	1.75 (44.4)	1
600	—		
800	400	2.38 (60.5)	1
1000	600	3.25 (82.6)	1
1200	800	4.38 (111.3)	1
1350	1000	5.38 (136.7)	1
1600	1200	6.50 (165.1)	1
2000	1350, 1600	8.75 (222.3)	1
2500	2000	5.63 (143.0)	2
3000	2500	6.75 (171.5)	2
3200	2000	7.50 (191.0)	2
4000	3000, 3200	9.00 (228.6)	2
CU	**M-Rated**		
225	—		
400	—	1.75 (44.4)	1
600	—		
800	400		
1000	—	2.25 (57.2)	1
1200	600	2.88 (73.2)	1
1350	800	3.50 (88.9)	1
1600	1000	4.50 (114.3)	1
2000	1200,1350	6.00 (152.4)	1
—	1600	6.50 (165.1)	1
2500	2000	8.50 (215.9)	1
3000	—	4.75 (120.7)	2
3200	—	5.50 (139.7)	2
4000	2500,3000,3200	6.50 (165.1)	2
5000	4000	8.50 (215.9)	2

Flanged ends

Suffix FRND

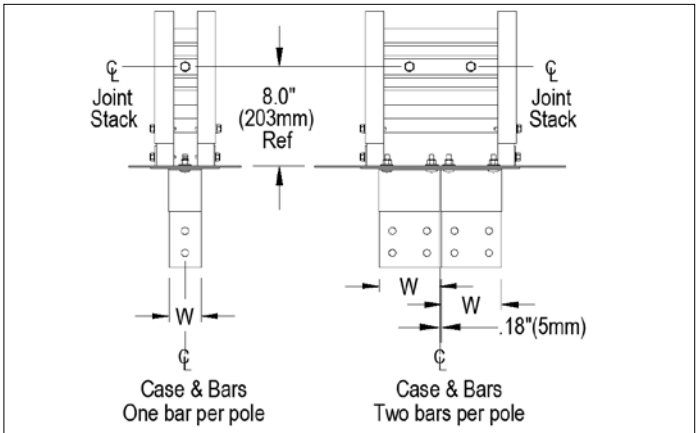
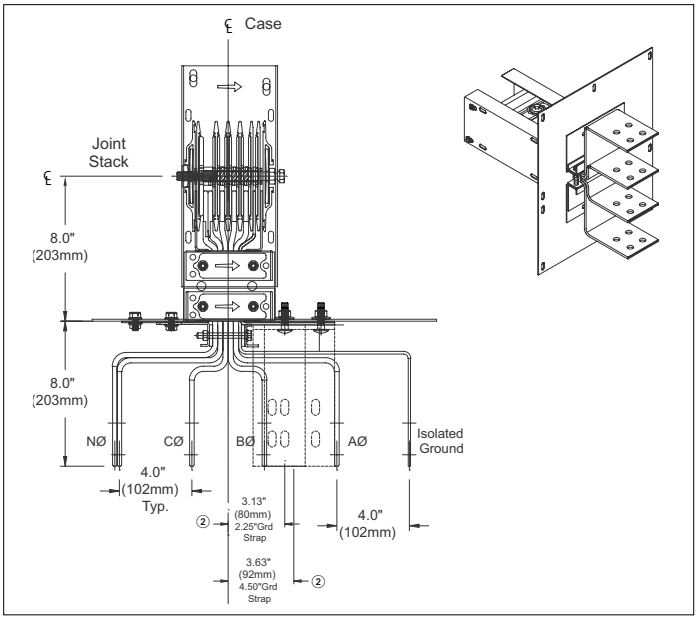
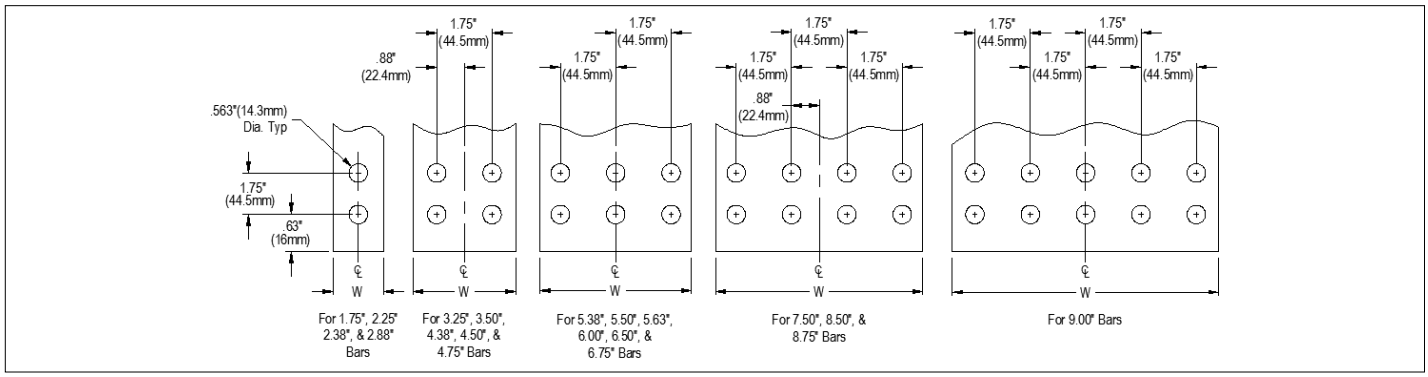


Figure 1 **Figure 2**



Flanged end bus bar drilling pattern (NEMA) [1)]

(Same pattern for 2 bus bars per pole, see figure 2 above.)



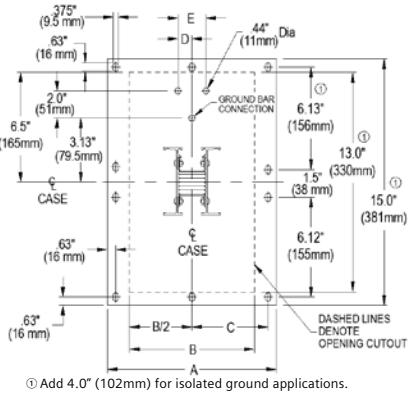
1) Other drilling patterns are available and must be specified at order entry. 2) See Figures 4 & 5 on Page 28 (Ground strap not provided on NEMA flange).

Flanged Ends

Flanged End, Dimensions (standard/min.)

		Dimensions Inches (mm)									
Ampere Rating		**Ref. Bar Width**	**Fig. No.**	**"A"**	**"B"**	**"C"**	**"D"**	**"E"**	**"F"**	**"G"**	**Fig No.**
AL	**L-Rated**										
225	—	2.38 (60.5)	1	10.0 (254)	8.00 (203)	4.38 (111)	1.94 (49)	3.88 (99)	—	6.00 (152)	4, 5
400	—										
600	—										
800	400										
1000	600	3.25 (82.6)	2	10.0 (254)	8.00 (203)	4.38 (111)	1.94 (49)	2.06 (52)	—	6.00 (152)	4, 6
1200	800	4.38 (111.3)	2	15.50 (395)	13.50 (343)	7.13 (181)	1.60 (41)	3.19 (81)	—	8.50 (216)	4, 6
1350	1000	5.38 (136.7)	2	15.50 (395)	13.50 (343)	7.13 (181)	2.10 (53)	4.19 (106)	—	8.50 (216)	4, 6
1600	1200	6.50 (165.1)	2	15.50 (395)	13.50 (343)	7.13 (181)	2.66 (67)	5.31 (135)	—	8.50 (216)	4, 6
2000	1350,1600	8.75 (222.3)	2	15.50 (395)	13.50 (343)	7.13 (181)	3.78 (96)	7.56 (192)	—	8.50 (216)	4, 6
2500	2000	5.63 (143.0)	3	20.0 (508)	18.00 (457)	4.50 (114)	0.68 (17)	1.37 (36)	4.44 (113)	`a	4, 6
3000	2500	6.75 (171.5)	3	20.0 (508)	18.00 (457)	4.50 (114)	0.68 (17)	1.37 (36)	5.56 (141)	13.25 (337)	4, 6
3200	2000	7.50 (190.5)	3	24.0 (610)	22.0 (569)	5.50 (140)	0.68 (17)	1.37 (36)	6.32 (161)	13.25 (337)	4, 6
4000	3000,3200	9.00 (228.6)	3	24.0 (610)	22.0 (569)	5.50 (140)	0.68 (17)	1.37 (36)	7.81 (198)	14.25 (362)	4, 6
CU	**M-Rated**										
225	—	1.75 (44.4)	1	10.0 (254)	8.00 (203)	4.38 (111)	1.63 (41)	3.25 (83)	—	6.00 (152)	4, 5
400	—										
600	—										
800	400										
1000	—	2.25 (57.2)	1	10.0 (254)	8.00 (203)	4.38 (111)	1.88 (48)	3.75 (95)	—	6.00 (152)	4, 5
1200	600	2.88 (73.2)	2	10.0 (254)	8.00 (203)	4.38 (111)	0.85 (21)	1.69 (43)	—	6.00 (152)	4, 6
1350	800	3.50 (88.9)	2	10.0 (254)	8.00 (203)	4.38 (111)	1.16 (29)	2.31 (59)	—	6.00 (152)	4, 6
1600	1000	4.50 (114.3)	2	15.50 (395)	13.50 (343)	7.13 (181)	1.66 (42)	3.31 (84)	—	8.50 (216)	4, 6
2000	1200,1350	6.00 (152.4)	2	15.50 (395)	13.50 (343)	7.13 (181)	2.41 (42)	4.81 (122)	—	8.50 (216)	4, 6
—	1600	6.50 (165.1)	2	15.50 (395)	13.50 (343)	7.13 (181)	2.66 (67)	5.31 (135)	—	8.50 (216)	4, 6
2500	2000	8.50 (215.9)	1	15.50 (395)	13.50 (343)	7.13 (181)	3.66 (93)	7.31 (186)	—	8.50 (216)	4, 6
3000	—	4.75 (120.7)	3	20.0 (508)	18.00 (457)	4.50 (114)	0.68 (17)	1.37 (36)	3.56 (90)	13.25 (337)	4, 6
3200	—	5.50 (139.7)	3	20.0 (508)	18.00 (457)	4.50 (114)	0.68 (17)	1.37 (36)	4.32 (110)	13.25 (337)	4, 6
4000	2500,3000,3200	6.50 (165.1)	3	20.0 (508)	18.00 (457)	4.50 (114)	0.68 (17)	1.37 (36)	5.31 (135)	13.25 (337)	4, 6
5000	4000	8.50 (215.9)	3	24.0 (610)	22.00 (569)	5.50 (140)	0.68 (17)	1.37 (36)	7.31 (186)	14.25 (362)	4, 6

Figure 1



① Add 4.0" (102mm) for isolated ground applications.

Figure 2

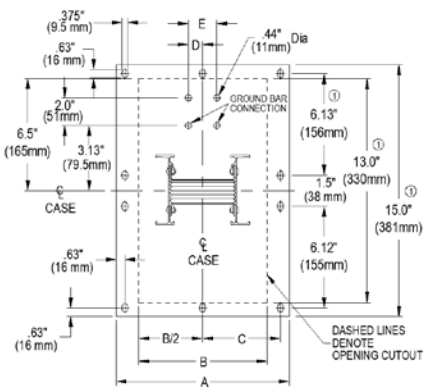
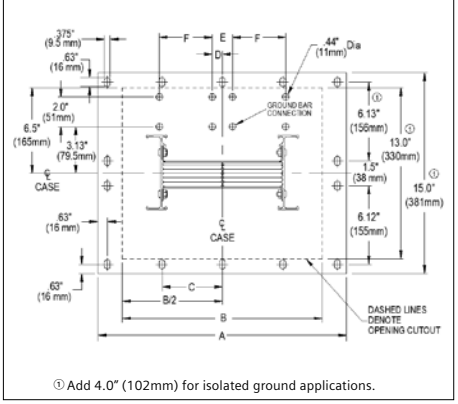


Figure 3



① Add 4.0" (102mm) for isolated ground applications.

Integral and Internal Ground Strap Drilling Detail

Figure 4

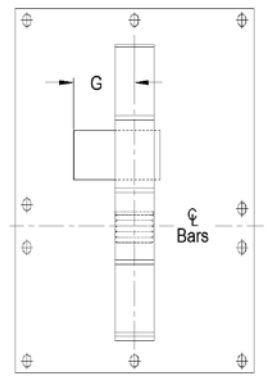


Figure 5

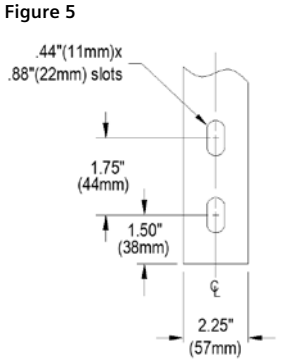
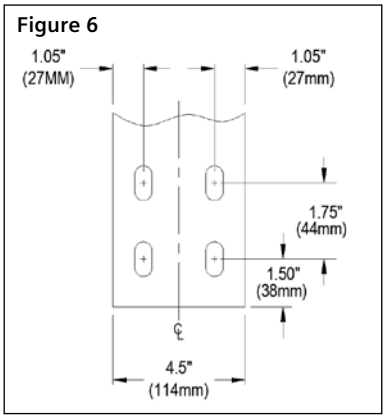


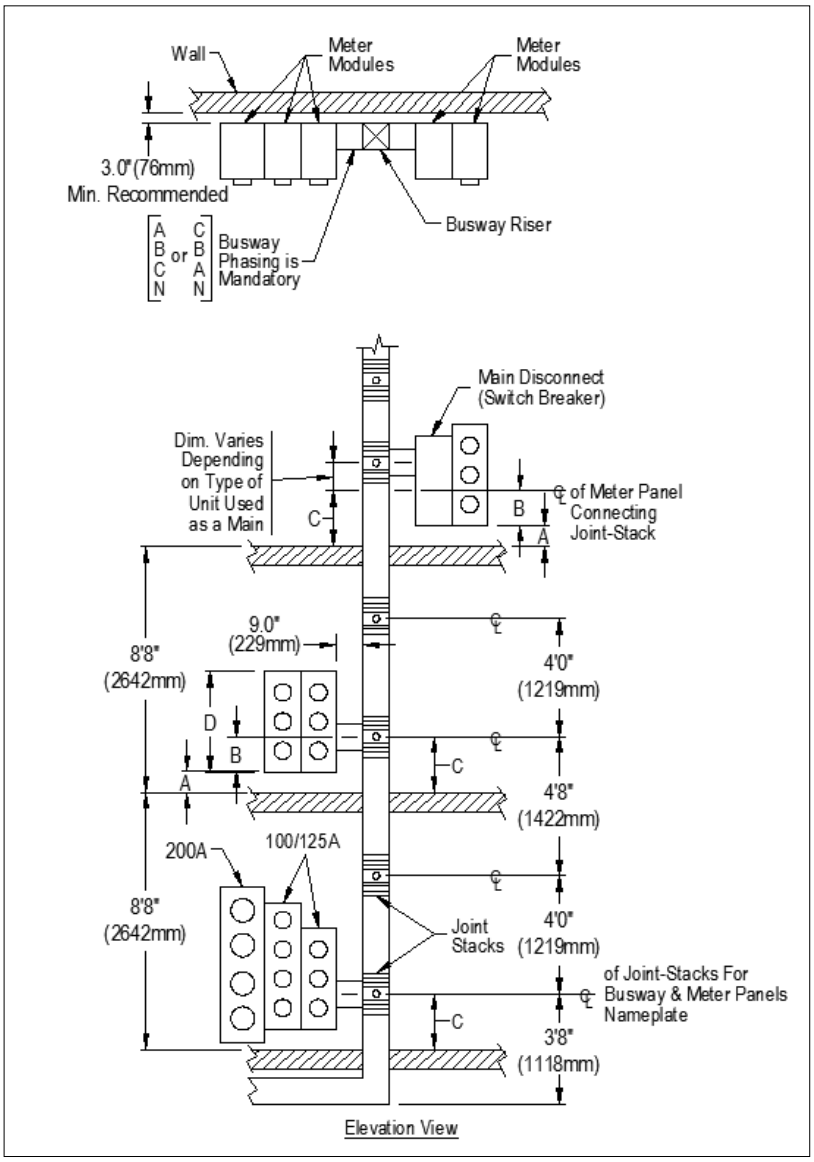
Figure 6



Panelboards and meter center modules

Meter center modules provide a quick and convenient method of connecting to metering devices for both commercial and industrial applications.

Meter center modules connect at the side of a busway run to special joint stacks; these special joints can be added to existing busway to accommodate meter center module connections. When using multiple metering stacks, main disconnects are available if the system reaches the 6 circuit rule (see metering bulletin for further information).



Dimensional data required

Dimensions inches (mm)

"A" Distance between floor and bottom of meter center as required by the customer.

"B" Dimension from bottom of meter center to centerline of meter center joint connection stack:
100-125A Panel, B = 16.5 (419)
200A Panel, B = 22.0 (559)

"C" Equals "A" plus "B", Minimum 16.0 (406)

"D" Individual meter center height. Consult Modular Metering application information.

Meter center cubicles

Meter center cubicles provide a quick and convenient method of connecting to metering devices for both commercial and industrial applications and have the main disconnect circuit breaker factory installed.

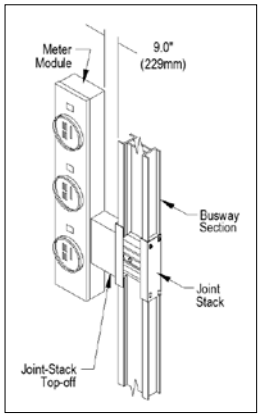
Having the main disconnect built into the device reduces the required space on the right and left side of the busway. Meter center modules connect at the side of the cubicle frame box using an SBJ4 stack.

Meter center cubicles are available for 600 – 1200 Amp (L, M and N Frames). They are available with flexible meter center connections, left side, right side or both. (When ordering a meter center cubicle a SBJ4 stack must be ordered separately.)

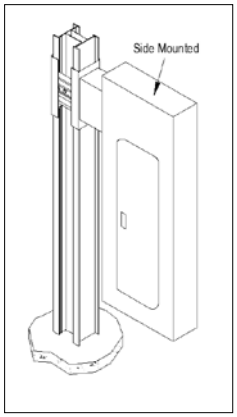
Molded Case Circuit Breaker with meter tap stack provisions dimensions, inches (mm)

Ampere rating		Busway width W	L Frame breaker (250-600A)			M frame breaker (250-600A)			N frame Breaker (800-1200A)		
			A	B	C	A	B	C	A	B	C
AL	**L-Rated**										
225	—										
400	—	3.9 (99)	32 (813)	24 (620)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
600	—										
800	400	4.6 (117)	32 (813)	24 (610)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
1000	600	5.4 (137)	32 (813)	24 (610)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
1200	800	6.6 (168)	32 (813)	24 (610)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
1350	1000	7.6 (193)	32 (813)	24 (610)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
1600	1200	8.7 (221)	32 (813)	24 (610)	20 (490)	37 (940)	26 (660)	20 (490)	37 (940)	26 (660)	20 (490)
2000	1350,1600	10.9 (277)	32 (813)	24 (610)	20 (490)	37 (940)	26 (660)	20 (490)	37 (940)	26 (660)	20 (490)
2500	2000	13.7 (348)	32 (813)	24 (610)	23.5 (597)	37 (940)	26 (660)	23.5 (597)	37 (940)	26 (660)	23.5 (597)
3000	2500	15.8 (401)	32 (813)	24 (610)	23.5 (597)	37 (940)	26 (660)	23.5 (597)	37 (940)	26 (660)	23.5 (597)
3200	2000	17.3 (439)	32 (813)	24 (610)	23.5 (597)	37 (940)	26 (660)	28 (711)	37 (940)	26 (660)	28 (711)
4000	3000,3200	20.3 (516)	32 (813)	24 (610)	28 (711)	37 (940)	26 (660)	28 (711)	37 (940)	26 (660)	28 (711)
4000	3000,3200	20.3 (516)	32 (813)	24 (610)	28 (711)	37 (940)	26 (660)	28 (711)	37 (940)	26 (660)	28 (711)
CU	**M-Rated**										
225	—										
400	—	3.9 (99)	32 (813)	24 (620)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
600	—										
800	400										
1000	—	4.4 (112)	32 (813)	24 (610)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
1200	600	5.1 (130)	32 (813)	24 (610)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
1350	800	5.7 (145)	32 (813)	24 (610)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
1600	1000	6.7 (170)	32 (813)	24 (610)	16 (406)	37 (940)	26 (660)	16 (406)	37 (940)	26 (660)	16 (406)
2000	1200,1350	8.2 (208)	32 (813)	24 (610)	20 (490)	37 (940)	26 (660)	20 (490)	37 (940)	26 (660)	20 (490)
—	1600	8.7 (221)	32 (813)	24 (610)	20 (490)	37 (940)	26 (660)	20 (490)	37 (940)	26 (660)	20 (490)
2500	2000	10.7 (272)	32 (813)	24 (610)	20 (490)	37 (940)	26 (660)	20 (490)	37 (940)	26 (660)	20 (490)
3000	—	11.8 (300)	32 (813)	24 (610)	20 (490)	37 (940)	26 (660)	20 (490)	37 (940)	26 (660)	20 (490)
3200	—	13.3 (335)	32 (813)	24 (610)	20 (490)	37 (940)	26 (660)	23.5 (597)	37 (940)	26 (660)	23.5 (597)
4000	2500,3000,3200	15.3 (389)	32 (813)	24 (610)	23.5 (597)	37 (940)	26 (660)	23.5 (597)	37 (940)	26 (660)	23.5 (597)
5000	4000	19.3 (491)	32 (813)	24 (610)	28 (711)	37 (940)	26 (660)	28 (711)	37 (940)	26 (660)	28 (711)

Meter center module

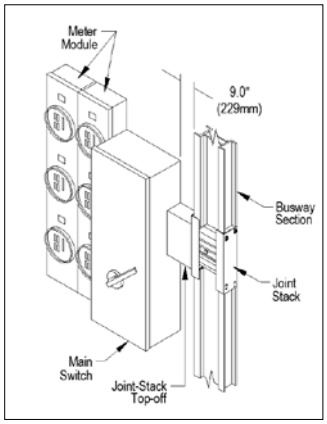


Side mount panelboard

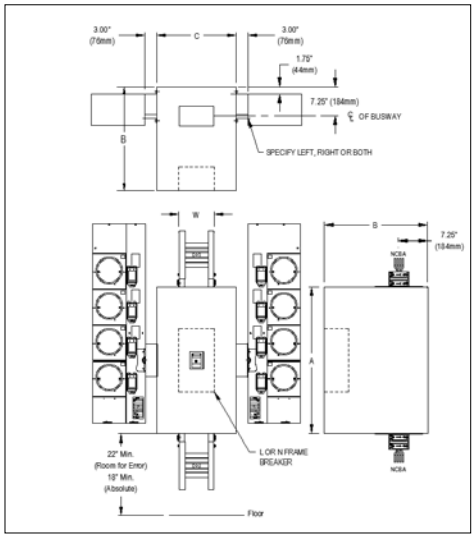


For this panelboard configuration, please contact Spartanburg plant for mounting information.

Main disconnect meter module



Meter center cubicle



Installation and application information

Installation

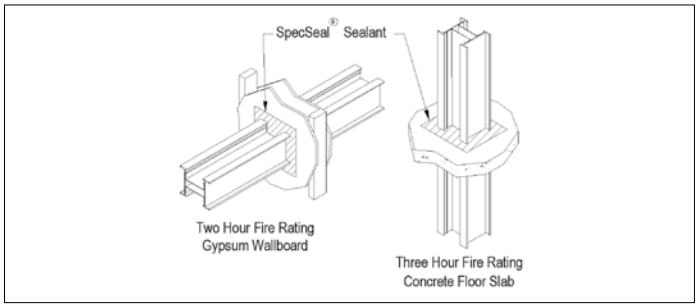
In preparation for installation of your busway systems, it is important to familiarize yourself with the following installation publications:

- General Instructions For Handling, Installation, Operation and Maintenance of Busway Rated 600 volts or less (NEMA Standards Publication BU1)
- Storage, Installation and Maintenance Instructions for Sentron Busway

These publications should be read through thoroughly and used as reference during installation to ensure proper installation procedures. All equipment should be inspected upon delivery. If the busway is not installed immediately, it should be stored in a clean, dry location. Factory supplied record drawings as well as installation tools should be accessible in preparation for installation.

UL 1479 fire rated installations

Sentron Busway has been tested in accordance with UL 1479 and offers a certified two hour fire rating for gypsum wallboard construction and a three hour fire rating for concrete slab or block penetrations. These ratings were achieved using standard busway installed with SpecSeal® sealant from Specified Technologies Inc. The SpecSeal® fire stop system provides superior performance at the industry's lowest installed cost. Sentron is the first busway system to achieve a fire rating for gypsum wallboard construction.

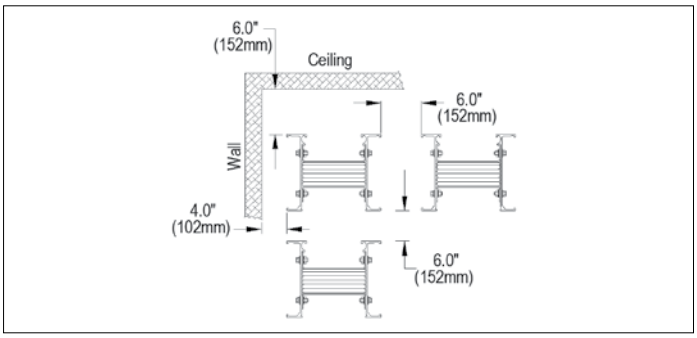


Measuring

Critical to the success of any busway installation is the layout and the accurate measuring of the busway. First and foremost: Select a route for your busway that will require the fewest fittings and the maximum number of 10' (3.05m) sections.

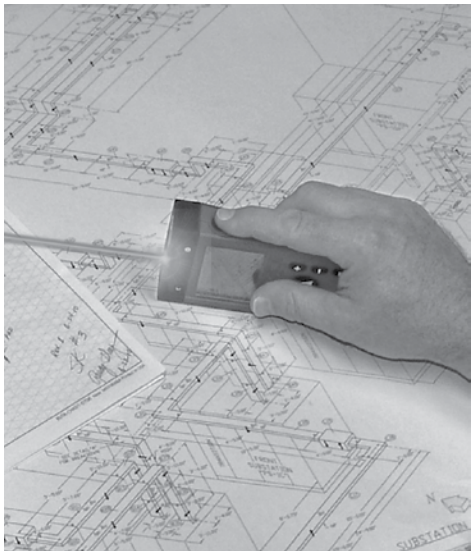
It is important that the busway system be designed to meet the requirements of the National Electric Code for Busway. There are a number of techniques that may be used to ensure an accurate measurement before purchasing and installing the busway. The following tools will be required during layout and measuring:

- Best route requires fewest fittings and maximum number of 10' straight sections
- Flashlight, 25' tape measure, Orthographic paper, pencil and chalk
- Laser measuring devices project a laser beam which is reflected on an object as a wall, ceiling, floor, or piece of machinery



Minimal clearances

Minimum clearances for installing feeder busway are shown. Additional clearance may be required for plug-in devices larger than 100A fusible and 250A circuit breaker.



Order entry checklist

Date Submitted: _____
Compas Order #: _____
Purchase Order #: _____
Project Name: _____
Sales Support: _____
Sales Engineer: _____
Release ☐ Hold For Release ☐ YES
Run Designation _____
Busway Catalog # _____

Service _____ _____ Amps

Bus Material	☐ CU	☐ AL	☐ "M" Rated	☐ "L" Rated
Neutral	☐ None		☐100%	☐ 200%
Ground	☐ Case		☐ Internal	☐ Isolated
IP Rating	☐ IP 40 Indoor			
	☐ IP 55 Splash Proof			
	☐ NEMA 3R Outdoor			

A) Engineering information

☐ Field sketches or factory approval drawings attached?
☐ Dimensions from walls, column lines, etc.
☐ Wall, floor and roof thickness and pitch
Floor elevations
☐ Floor to floor
☐ Floor to ceiling
☐ Wall locations
☐ Equipment pads Height _____
☐ Existing Busway to be extended cat # _____
☐ Phasing
☐ Nameplate information
☐ Match to competitor, Contact the plant
☐ Special SWBD connection, provide details
☐ Phase Transitions: Provide phasing on drawings
☐ Riser Bus
☐ Load side of bus plug (top or bottom)
☐ Required distance from floor to top of panels

☐ Transformer Connections
☐ Standard XFMR Service head
☐ Single phase
☐ Three single phase
☐ Special drawing required (Transformer Vendor)
☐ Dimensions between phases
☐ LV spade detail, including drilling and thickness
☐ Dimensions of LV spade from tank wall
☐ Throat opening and bolt pattern, if any
☐ Utility Vault Connection Utility type Ex. FP&L
☐ Required drawing attached?

☐ End Cable Tap Box
☐ Horizontal ☐ Vertical
☐ Standard lugs
☐ Special Lugs, specify below,
☐ Intermediate Hangers Qty. ☐

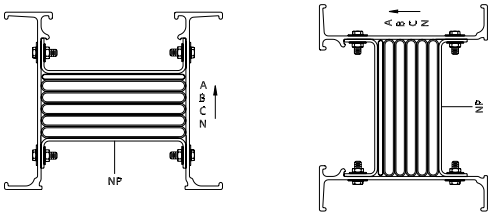
Note: Intermediate Hangers are for floor to ceiling height greater than 16ft. Consult factory if greater than 32 ft.

☐ Expansion Sections Qty. ☐

Note: Expansion section is required for every 200ft of continuous Busway run length and for each building expansion joint. The Busway run must be positioned accordingly to accommodate the Expansion Section.

Notes:
1. For OUTDOOR BUSWAY, contact the factory before quoting out door busway runs over 50 ft.
2. Ambient Temperature = -30°C to +40°C
3. Consult Factory if site has any of the following: Coke, Coal or other conductive airborne contaminants. Also, any corrosive conditions

Busway mounting position in reference to floor



B) Specifications (check or fill appropriate blanks)

☐ Standard busway meet specifications
☐ Exceptions to specifications, note comments below
Short-circuit bracing 100KAIC Amps symmetrical
Voltage drop requirement _____
Temperature-rise requirement _____
Special paint, provide paint chip _____

Special Comments

Quick reference

Critical dimensions:

Busway that passes through a wall, ceiling or floor:
- centerline of a joint to the wall, ceiling or floor = 7 in. min.
- centerline of a joint (above a floor support) to a floor = 16 in. min.
- joints cannot be positioned inside a wall, ceiling or floor (joints must be accessible for maintenance)

Feeder Busway clearances:
- from the top of the busway to a ceiling/floor/wall or other busway = 6 in. min.
- from the side of the busway to a ceiling/floor/wall or other busway = 4 in. min

Plug-in Busway clearances:
- plug-In busway clearances depend on the configuration of bus plugs (see bus pug clearance charts in the Sentron Selection and Application Guide)
- otherwise, clearances for feeder busway apply
- note orientation of the operating handle and provide clearance for access and operation

Feeder Busway length:
- minimum Length: IP40 = 14.38 in.
  IP55, IP66 and Nema 3R = 15.38 in.
- maximum length = 10 ft.

Plug-In and Riser length:
- available only in 4, 6, 8 and 10 ft. lengths

Flat Elbow section:
- maximum leg length = 4 ft.
- minimum leg length: Varies according to amperage and bus bar material

Edge Elbow section:
- maximum length = 4 ft.
- minimum leg length = 10 in.

Combination and Offset Elbows:
- maximum leg lengths = 4 ft.
- minimum leg lengths: varies according to amperage and bus bar material (See Sentron Selection and Application Guide)

Elbow - Stub Combinations:
- maximum leg length = 4 ft.
- minimum leg length = 2.50 in. + (case size x .5)

Critical details:
- busway DRAWINGs must include all relevant dimensions
- CENTERLINE dimensions are expected (please note any dimensions that are not center line dimensions)
- WALLs and FLOORs must be located (wall & floor thickness must be included)
- locate the **FRONT of all switchboards** and provide the phasing of any existing boards (advise if any PADs are located under boards)
- when using RISER plug-in busway please note the desired direction of the load side of bus plugs (G,A,B,C,N from left to right will position the load side to the bottom and "UP is On" handle operation)
- TRANSFORMER THROAT connections require complete details.
- Horizontal plug-in busway must be oriented with the A phase on top (bolt head on top).
- In-Line Disconnect CUBICLEs are engineered to order. The **FRONT** of the cubicle and **Breaker** information must be specified.
- Panels - panel type and size / if a certain panel or breaker height is required (those dimensions)
- Curb height

Intermediate hangers
- Add qty (1) Intermediate Hanger for floor to ceiling height greater than 16ft. Consult factory if greater than 32 ft.

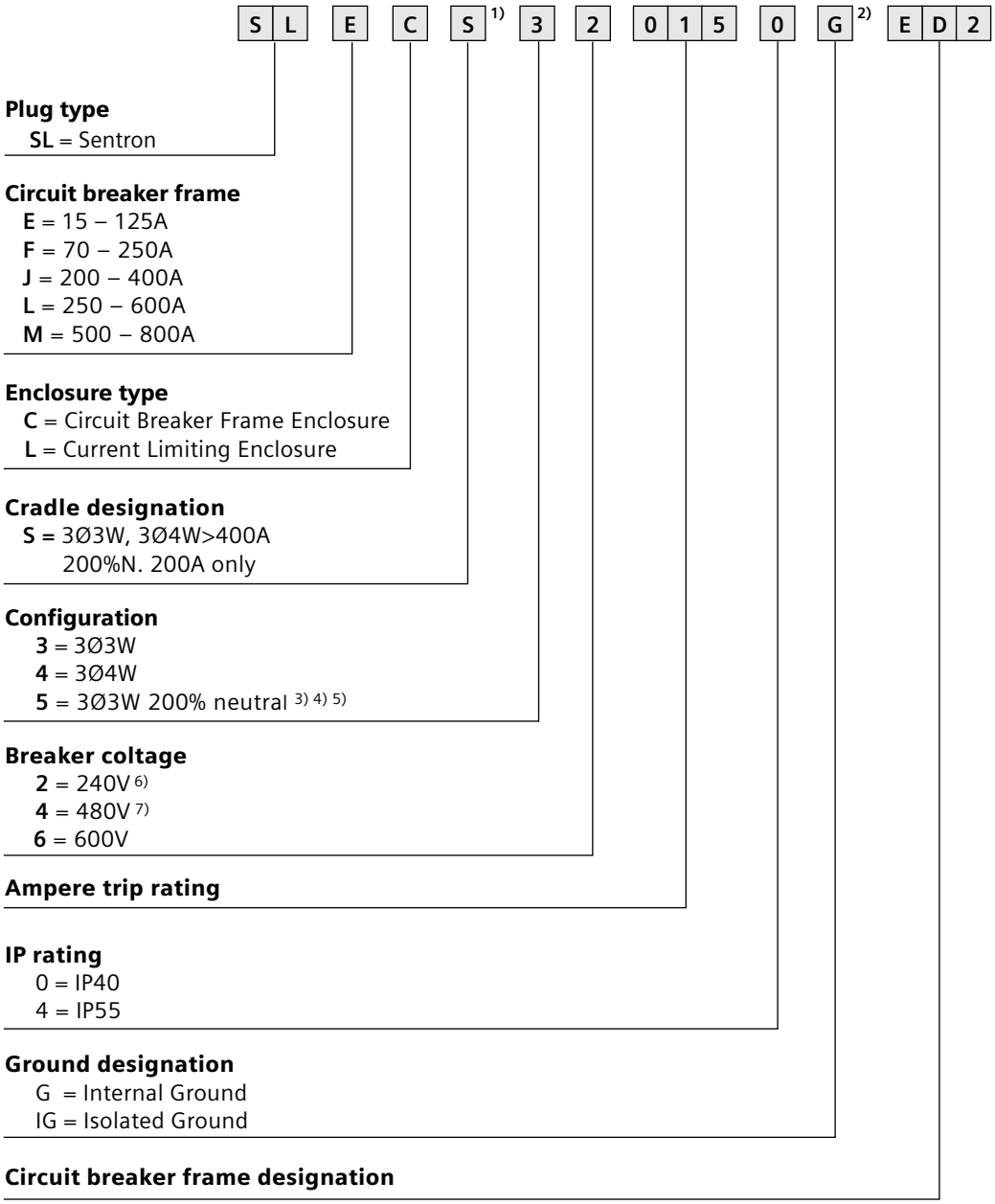
Expansion sections:
- Qty (1) Expansion Section should be used for every 200ft of continuous Busway run length and for each building expansion joint. The Busway run must be positioned accordingly to accommodate the Expansion Section(s).

Outdoor busway:
- route busway to minimize outdoor busway run length
- call factory before quoting outdoor busway runs over 50 ft.
- avoid installing busway near exhaust pipes that may generate steam or caustic vapors

Bus plug table of contents

Bus plug catalog numbering system

Sentron Bus Plugs – Circuit breaker (installed)



1) The S digit is only used on 3- and 4-wire (100%N) plugs that are greater than 400A. Lower amperage plugs do not require this digit. (Ex. SLEC32060ED2).
2) The G and IG digits are used to specify internal and isolated ground respectively. Integral (housing) ground plugs do not require this digit.
3) Available through 400A only.
4) Available with E, F and J Frame breakers only.
5) 400A and larger plugs cover (2) Outlet Enclosures.
6) Available with ED2 breakers only.
7) Available with ED4 and HED4 breakers only.

Circuit breaker bus plugs ratings

Standard circuit breakers, bus plug ratings [1)]

Plug-in units series	Circuit breaker max. rating	Frame size	Max. short circuit current rating
SLEC	125A, 600V	E Frame	100KA, 240V, 3 ph 42KA, 480V, 3 ph [2)] 25KA, 600V, 3 ph
SLFC	250A, 600V	F Frame	100KA, 240V, 3 ph 65KA, 480V, 3 ph 25KA, 600V, 3 ph
SLJC	400A, 600V	J Frame	100KA, 240V, 3 ph 65KA, 480V, 3 ph 5KA, 600V, 3 ph
SLLCS	600A, 600V	L Frame	100KA, 240V, 3 ph 65KA, 480V, 3 ph 35KA, 600V, 3 ph
SLMCS	800A, 600V	M Frame	100KA, 240V, 3 ph 65KA, 480V, 3 ph 50KA, 600V, 3 ph

Current limiting circuit breakers, bus plug ratings [1)]

Plug-In units series	Circuit breaker max. rating	Frame size	Max. short circuit current rating
SLEL	125A, 600V	CED Frame	200KA, 240V, 3 ph 200KA, 480V, 3 ph 100KA, 600V, 3 ph
SLFL	250A, 600V	CFD Frame	200KA, 240V, 3 ph 200KA, 480V, 3 ph 100KA, 600V, 3 ph
SLJL	400A, 600V	CJD Frame	200KA, 240V, 3 ph 150KA, 480V, 3 ph 100KA, 600V, 3 ph
SLLLS	600A, 600V	CLD Frame	200KA, 240V, 3 ph 150KA, 480V, 3 ph 100KA, 600V, 3 ph
SLMLS	800A, 600V	CMD Frame	200KA, 240V, 3 ph 100KA, 480V, 3 ph 65KA, 600V, 3 ph

1) Available Ingress Protection = IP40, IPSS.
2) 65KA up to 30A using HHED6.

Sentron Circuit Breaker Bus Plugs feature an easy to read “position indicator” label, designed to be visible from the shop floor, that clearly marks whether the bus plug is in the “Off,” “On,” or “Tripped” position. Circuit breaker bus plugs are available in frame sizes from 125 amps to 800 amps with interrupting ratings of standard, high or current limiting.

Circuit breaker bus plugs will be shipped complete with factory installed circuit breakers. The following Siemens molded case circuit breaker frames may be ordered with Sentron Circuit Breaker Bus Plugs: ED2, ED4, ED6, HED4, HHED6, CED6, FXD6, FD6, HFD6, CFD6 JXD6, JD6, HJD6, CJD6, LXD6, HLD6, CLD6, MXD6, HMD6, CMD6.

Refer to the diagram on page 34 for easy ordering instructions.

Sentron circuit breaker bus plugs can be custom configured to meet application specific requirements.

The following custom devices are available in custom configurations:

- 100% rated IEC circuit breakers.
- Ground fault pick-up.
- Shunt Trip
- Audible Alarms

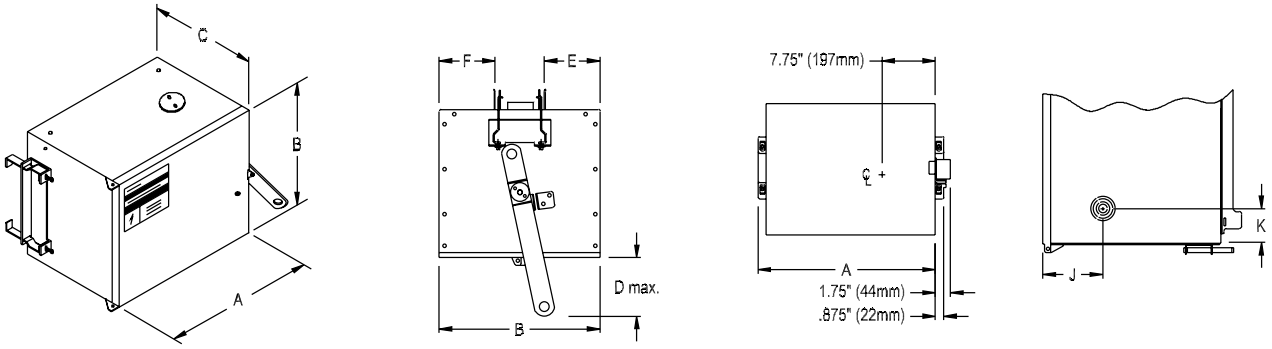
Consult your local Siemens sales office for details on custom pricing and ordering.

Circuit breaker bus plugs dimensions and weights

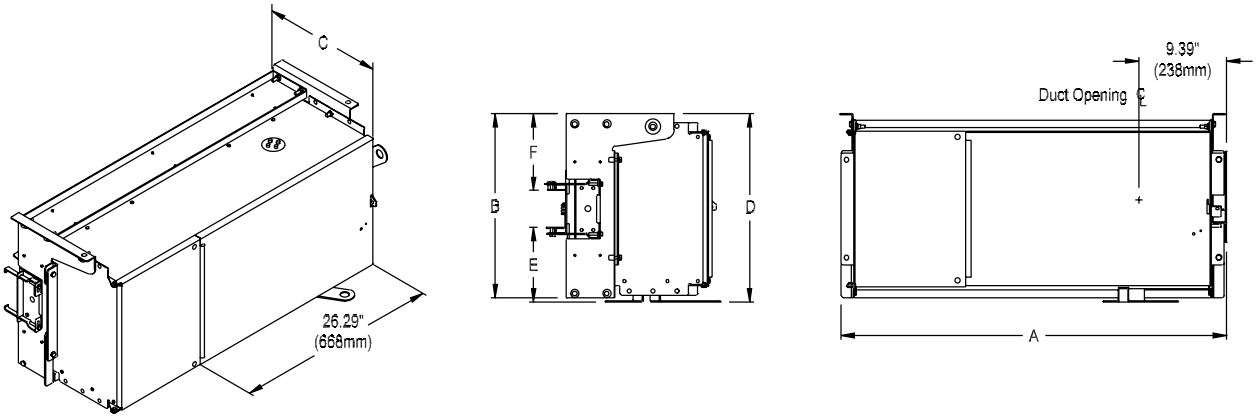
Circuit breaker bus plugs, dimensions and weights (enclosure only

Ampere rating	Dimensions inches (mm) "A"	"B"	"C"	"D" max.	"E"	"F"	"J"	"K"	Weight lbs (kg)
125	15.13 (384)	10.18 (259)	9.75 (248)	1.60 (41)	2.50 (64)	2.50 (64)	3.50 (89)	2.25 (57)	35 (15.87)
250	20.25 (514)	10.18 (259)	9.75 (248)	1.60 (41)	2.50 (64)	2.50 (64)	3.25 (83)	3.25 (83)	50 (22.68)
400	21.75 (552)	16.75 (425)	11.75 (298)	1.60 (41)	5.75 (146)	5.75 (146)	4.00 (102)	3.25 (83)	83 (37.64)
600	41.50 (1054)	19.75 (502)	15.75 (400)	2.31 (59)	7.00 (178)	7.75 (197)	—	—	130 (58.97)
800	41.50 (1054)	19.75 (502)	15.75 (400)	2.31 (59)	7.00 (178)	7.75 (197)	—	—	177 (80.29)

125 – 400A Bus plugs



600 – 800A Bus plugs



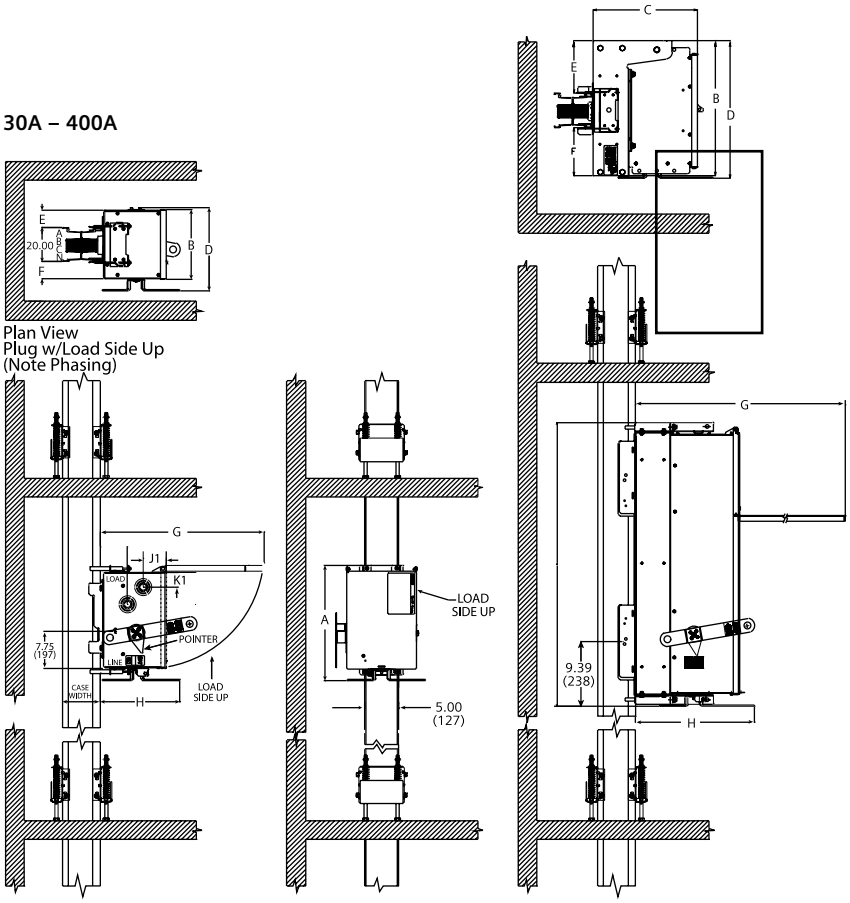
Circuit breaker bus plugs, load lugs and knockouts

Frame size	Ground lug Cu/Al	Neutral lug Cu/Al	Phase lug Cu/Al	Knockout sizes In. (mm)
E Frame	#14-2	#14-2	#14-1/0	7/8 (22)
F Frame	#14-2	#6-350 kcmil	#6-350 kcmil	7/8 (22)
J Frame	#14-2	(2) #4-500 kcmil	(2) 3/0-500 kcmil	7/8 (22)
L Frame	#6-350 kcmil	(2) 3/0-500 kcmil	(2) 3/0-500 kcmil	No Knockouts
M Frame	#4-500 kcmil	(3) #1-500 kcmil	(3) #1-500 kcmil	No Knockouts

Wall clearance and circuit breaker bus plug dimensions

600A and 800A Cradle Mounted

30A – 400A



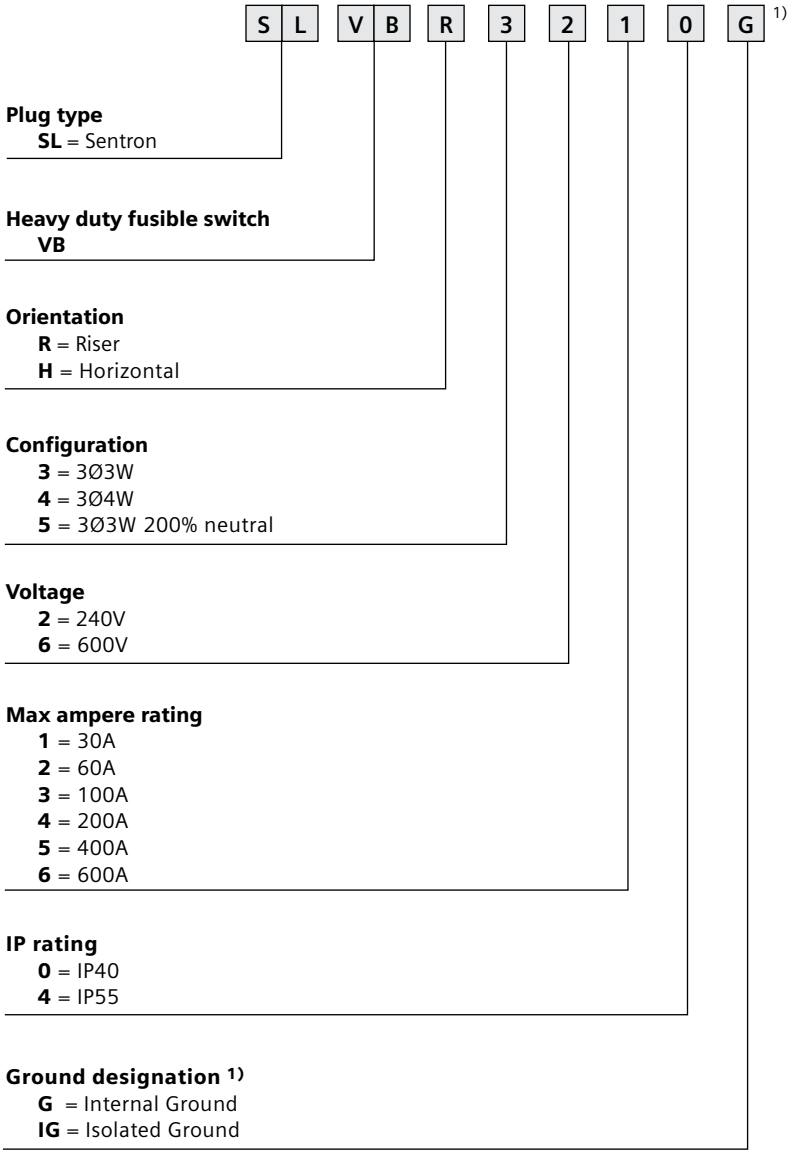
Dim. legend	Circuit breaker plugs no cradle						Circuit breaker plugs w/cradle			
	E Frame current		F Frame current		J Frame 1) current		L Frame current		M Frame current	
	Standard	Limiting	Standard	Limiting	Standard	Limiting	Standard	Limiting	Standard	Limiting
A	17.00 (432)	22.00 (559)	22.00 (559)	27.00 (686)	23.50 (597)	30.50 (775)	41.50 (1054)	41.50 (1054)	41.50 (1054)	41.50 (1054)
B	10.25 (260)	10.25 (260)	10.25 (260)	10.25 (260)	16.75 (425)	16.75 (425)	19.75 (502)	19.75 (502)	19.75 (502)	19.75 (502)
C	9.75 (248)	9.75 (248)	9.75 (248)	9.75 (248)	11.75 (298)	11.75 (298)	15.75 (400)	15.75 (400)	15.75 (400)	15.75 (400)
D	12.25 (311)	12.25 (311)	12.25 (311)	12.25 (311)	18.75 (476)	18.75 (476)	20.25 (514)	20.25 (514)	20.25 (514)	20.25 (514)
E	2.50 (64)	2.50 (64)	2.50 (64)	2.50 (64)	5.75 (146)	5.75 (146)	7.75 (197)[1]	7.75 (197)	7.75 (197)	7.75 (197)
F	2.50 (64)	2.50 (64)	2.50 (64)	2.50 (64)	5.75 (146)	5.75 (146)	7.00 (178)	7.00 (178)	7.00 (178)	7.00 (178)
G	24.00 (610)	29.00 (737)	34.00 (864)	29.00 (737)	32.50 (826)	39.50 (1003)	41.50 (1054)	41.50 (1054)	41.50 (1054)	41.50 (1054)
H	11.25 (286)	11.25 (286)	11.25 (286)	11.25 (286)	13.50 (343)	13.50 (343)	18.00 (457)	18.00 (457)	18.00 (457)	18.00 (457)
J1	3.50 (89)	3.50 (89)	3.25 (83)	3.25 (83)	4.00 (102)	4.00 (102)	—	—	—	—
K1	2.25 (57)	2.25(57)	3.25 (83)	3.25 (83)	3.25 (83)	3.25 (83)	—	—	—	—

Legend:
A = Length of enclosure including handle
B = Height of enclosure
C = Depth of enclosure
D = Height of enclosure including optional handle location
E = Extension of plug above top of busway
F = Extension of plug below bottom of busway
G = Cover (depth) clearance for enclosure
H = Depth of enclosure from handle to edge of busway
J = Knockout/ pilot hole location (horizontal)
K = Knockout/ pilot hole location (vertical)

200%N applications
- for J-Frame use L-Frame Dims.
- for 400A Fusible switch use 600A Switch Dims.

Bus plug catalog numbering system

Sentron Bus Plugs – Fusible



1) The G and IG digits are used to specify internal and isolated ground respectively. Integral (housing) ground plugs do not require this digit.

Note: Ground Detector and Potentializer Bus Plugs for 2 or 3 pole 240V and 480V service. (IP40 construction only)

Fusible bus plugs

The Sentron SLVB Bus Plug meets all UL and CSA standards to assure reliable performance in all environments. The installer and end user will appreciate new features like Highly Visible Position Indicator, Dual Stab Busway Interlocks, Dual Cover Interlocks, and Bolt-on Mounting.

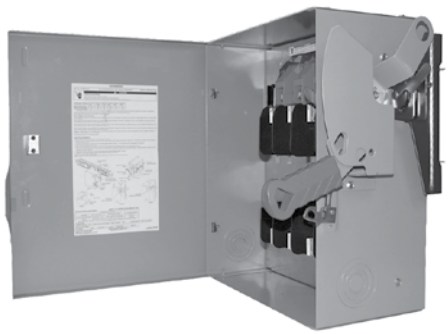
Sentron SLVB Fusible Bus Plugs are available in 30, 60, 100, 200, 400 and 600 amp ratings (compatible with H, R, T, K and J fuses).

Standard fusible, bus plug ratings

Plug-in units series	Max. rating fused switch	Fuse class	Fuse kits		Max. short circuit current rating
			R fuse kits	T fuse kits	
SLVB_21	30A, 240V	H, K, R	HR21	—	200kA, 240V, 3ph
SLVB_61	30A, 600V	H, K, R, J	HR612	—	200kA, 600V, 3ph
SLVB_22	60A, 240V	H, K, R	HR612	—	200kA, 240V, 3ph
SLVB_62	60A, 600V	H, K, R, J	HR62	—	200kA, 600V, 3ph
SLVB_23	100A, 240V	H, K, R, J, T	HR63	—	200kA, 240V, 3ph
SLVB_63	100A, 600V	H, K, R, J, T	HR63	HT63	200kA, 600V, 3ph
SLVB_24	200A, 240V	H, K, R, J, T	HR64	HT24	200kA, 240V, 3ph
SLVB_64	200A, 600V	H, K, R, J, T	HR64	HT64	200kA, 600V, 3ph
SLVB_25	400A, 240V	H, K, R, J, T	HR656	—	200kA, 240V, 3ph
SLVB_65	400A, 600V	H, K, R, J, T	HR656	—	200kA, 600V, 3ph
SLVB_26	600A, 240V	H, K, R, J, T	HR656	—	200kA, 240V, 3ph
SLVB_66	600A, 600V	H, K, R, J, T	HR656	—	200kA, 600V, 3ph

Standard fusible, bus plug horsepower ratings

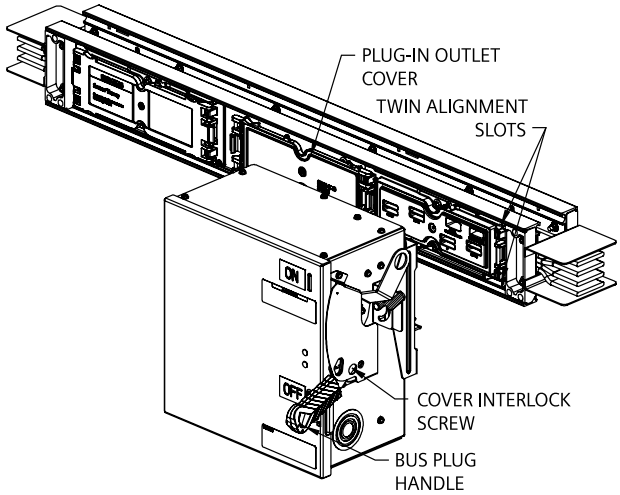
Plug-in units series	Fused switch max. rating	240V, 1 ph		240V, 3 ph		480V, 3 ph		600V, 3 ph	
		Std.	Max.	Std.	Max.	Std.	Max.	Std.	Max.
SLVB_21	30A, 240V	1.5	3.0	3.0	7.5	—	—	—	—
SLVB_61	30A, 600V	—	—	—	—	5.0	15.0	7.5	20.0
SLVB_22	60A, 240V	3.0	10.0	7.5	15.0	—	—	—	—
SLVB_62	60A, 600V	—	—	—	—	15.0	30.0	15.0	50.0
SLVB_23	100A, 240V	7.5	15.0	15.0	30.0	—	—	—	—
SLVB_63	100A, 600V	—	—	—	—	25.0	60.0	30.0	75.0
SLVB_24	200A, 240V	15.0	—	25.0	60.0	—	—	—	—
SLVB_64	200A, 600V	—	—	—	—	50.0	125.0	60.0	150.0
SLVB_25	400A, 240V	15.0	—	50.0	125.0	—	—	—	—
SLVB_65	400A, 600V	—	—	—	—	100.0	250.0	125.0	350.0
SLVB_26	600A, 240V	15.0	—	75.0	200.0	—	—	—	—
SLVB_66	600A, 600V	—	—	—	—	150.0	400.0	200.0	500.0

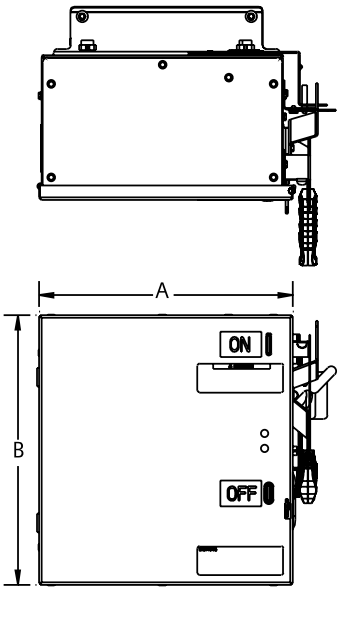


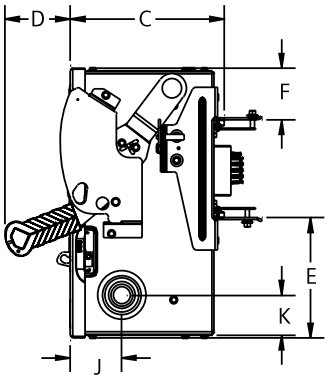
Fusible bus plugs dimensions and weights

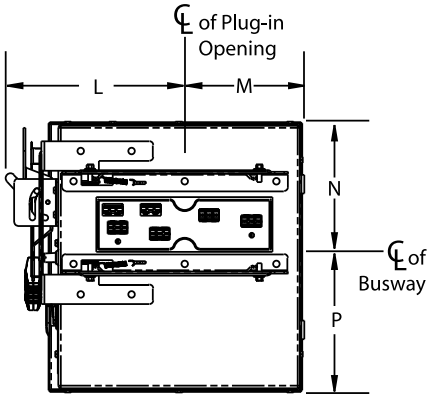
Horizontal fusible bus plug dimensions and weighs (enclosure only)

Ampere rating	Dimensions Inches (mm)												Weight lbs (kg)
	"A"	"B"	"C"	"D max."	"E"	"F"	"J"	"K"	"L"	"M"	"N"	"P"	
30	13.13 (333)	13.86 (352)	7.96 (202)	2.60 (66)	6.18 (156)	2.66 (67)	2.65 (67)	2.06 (52)	9.81 (249)	6.22 (157)	5.27 (134)	8.59 (2.18)	23.5 (10.66)
60	13.13 (333)	14.86 (377)	7.96 (202)	2.60 (66)	7.18 (182)	2.66 (67)	2.65 (67)	2.06 (52)	9.81 (249)	6.22 (157)	5.27 (134)	9.59 (244)	25.5 (11.56)
100	13.13 (333)	15.86 (402)	7.96 (202)	2.60 (66)	8.18 (207)	2.66 (67)	2.65 (67)	2.06 (52)	9.81 (249)	6.22 (157)	5.27 (134)	10.59 (269)	28.0 (12.70)
200	14.88 (377)	22.86 (580)	10.58 (268)	2.60 (66)	15.88 (403)	2.66 (67)	3.40 (86)	3.06 (78)	9.81 (249)	7.95 (201)	5.27 (134)	17.59 (447)	49.0 (22.22)
400	18.63 (473)	25.48 (647	15.67 (398)	5.50 (140)	12.67 (322)	7.67 (195)	12.15 (309)	3.06 (78)	11.80 (299)	9.43 (239)	11.91 (303)	15.14 (385)	100.0 (254)
600	18.63 (473)	25.48 (647	15.67 (398)	5.50 (140)	12.67 (322)	7.67 (195)	12.15 (309)	3.06 (78)	11.80 (299)	9.43 (239)	11.91 (303)	15.14 (385)	100.0 (254)





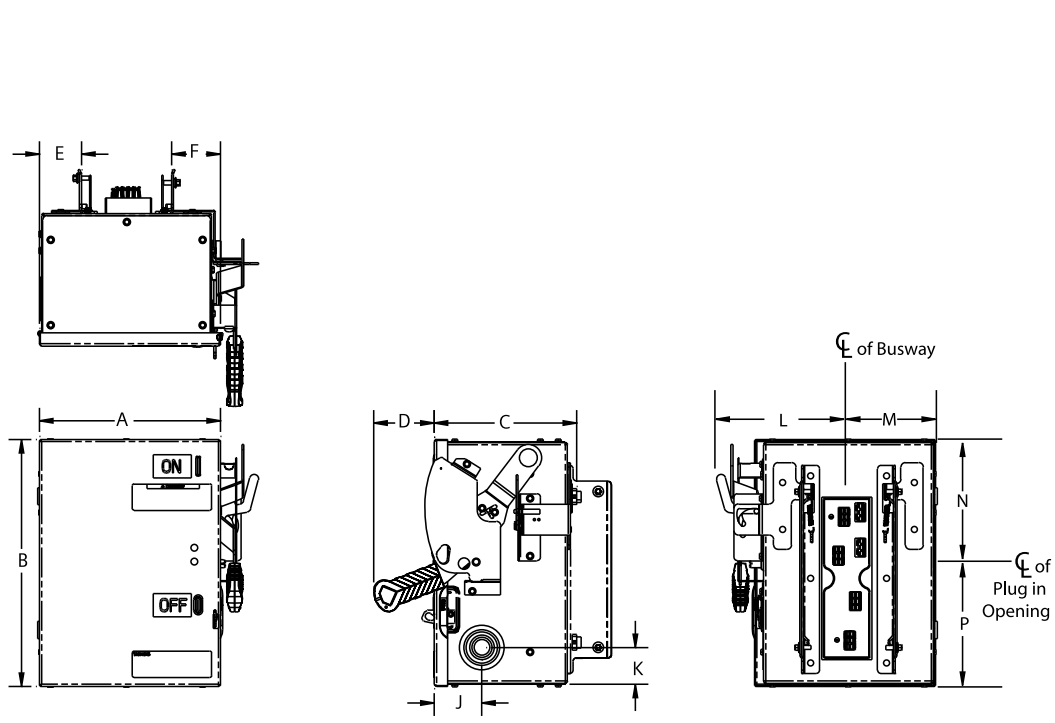




Fusible bus plugs dimensions and weights

Riser fusible bus plug dimensions and weighs (enclosure only)

Ampere rating	Dimensions Inches (mm) "A"	"B"	"C"	"D max."	"E"	"F"	"J"	"K"	"L"	"M"	"N"	"P"	Weight lbs (kg)
30	10.13 (257)	13.86 (352)	7.96 (202)	5.25 (133)	2.74 (69)	2.36 (59)	2.65 (67)	2.06 (52)	8.06 (204)	5.08 (129)	7.8 (198)	6.06 (154)	23.5 (10.66)
60	10.13 (257)	14.86 (377)	7.96 (202)	5.25 (133)	2.74 (69)	2.36 (59)	2.65 (67)	2.06 (52)	8.06 (204)	2.08 (52)	7.8 (198)	7.06 (180)	25.5 (11.56)
100	11.13 (282)	15.86 (402)	7.96 (202)	5.25 (133)	2.74 (69)	3.36 (85)	2.65 (67)	2.06 (52)	8.06 (204)	6.08 (154)	7.8 (198)	8.06 (205)	28.0 (12.70)
200	14.88 (377)	22.86 (580)	10.58 (268)	5.90 (149)	5.11 (129)	4.74 (120)	3.40 (86)	3.06 (78)	10.42 (264)	7.35 (186)	9.05 (230)	13.81 (351)	49.0 (22.22)
400	18.63 (473)	25.48 (647)	15.67 (398)	5.50 (140)	6.60 (167)	7.10 (180)	12.15 (309)	3.06 (78)	11.97 (304)	9.25 (234)	13.56 (344)	13.49 (342)	100.0 (2540)
600	18.63 (473)	25.48 (647)	15.67 (398)	5.50 (140)	6.60 (167)	7.10 (180)	12.15 (309)	3.06 (78)	11.97 (304)	9.25 (234)	13.56 (344)	13.49 (342)	100.0 (2540)



Fusible switch plug, load lugs, and knockouts

Ampere rating	Ground lug Cu/Al	Neutral lug Cu/Al	Phase lug Cu/Al	Knockout sizes inches (mm)
30	#14-1/0	#14-2	#14-2	7/8 (22)
60	#14-1/0	#14-1/0	#14-2	7/8 (22)
100	#14-1/0	#14-1/0	#14-1/0	7/8 (22)
200	#14-1/0	#6-300MCM	#6-300MCM	7/8 (22)
400	#6-350MCM	(2) 1/0-250MCM or (1) 1/0-750MCM	(2) 1/0-250MCM or (1) 1/0-750MCM	7/8 (22)
600	#6-350MCM	(4) 1/0-250MCM or (2) 1/0-750MCM	(4) 1/0-250MCM or (2) 1/0-750MCM	7/8 (22)

Fusible SPD Bus Plugs

The Siemens advantage...

Siemens history of innovation and safety continues with our line of UL 1449 3rd Edition SPDs. The TPS Series utilizes thermally protected MOVs specifically designed for safe operation in high fault current or sustained overvoltage conditions that can cause other SPDs to fail in an unsafe manner and damage other equipment in the distribution system. Every MOV, including N-G, is monitored. Indicator lights for each phase provide indication of loss of protection and phase loss protection. The direct bus, integral design reduces circuit impedance resulting in the lowest possible let-through voltages providing maximum protection to facility equipment and systems.

All TPS series SPDs:

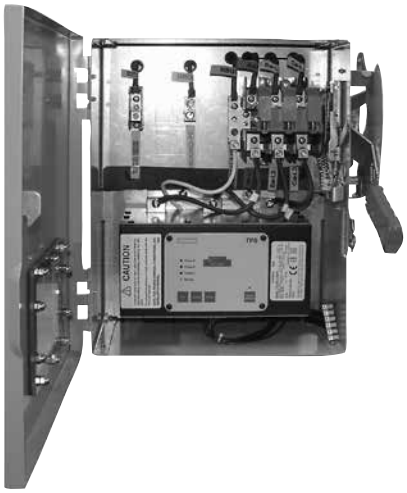
- UL 1449 3rd Edition Listed, CUL, CE Mark
- Designed, tested, manufactured to ANSI/IEEE C62.42.1 – 2002, C62.41.2 – 2002, C62.45 – 2002
- Provide indication of loss of protection on each phase and phase loss
- Include all UL-required over current protection and safety coordination inside
- Prevent internally generated surges from propagating throughout a facility and externally generated surges from reaching sensitive load

High exposure applications – TPS6

- 400kA – 500kA per phase
- 200kA SCCR
- 20kA nominal discharge current
- Indicator lights, audible alarm and dry contacts standard
- Individually fused, thermally protected MOVs
- EMI/RFI filtering
- Surge counter optional

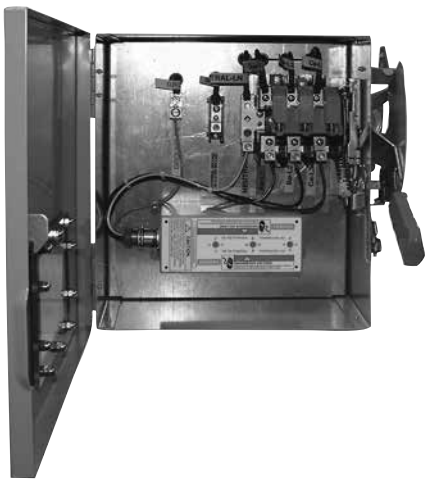
Medium exposure applications – TPS1

- 100kA – 300kA per phase
- 200kA SCCR
- 20kA nominal discharge current
- Indicator lights, audible alarm and dry contacts standard
- Individually fused, thermally protected MOVs
- EMI/RFI filtering
- Surge counter optional



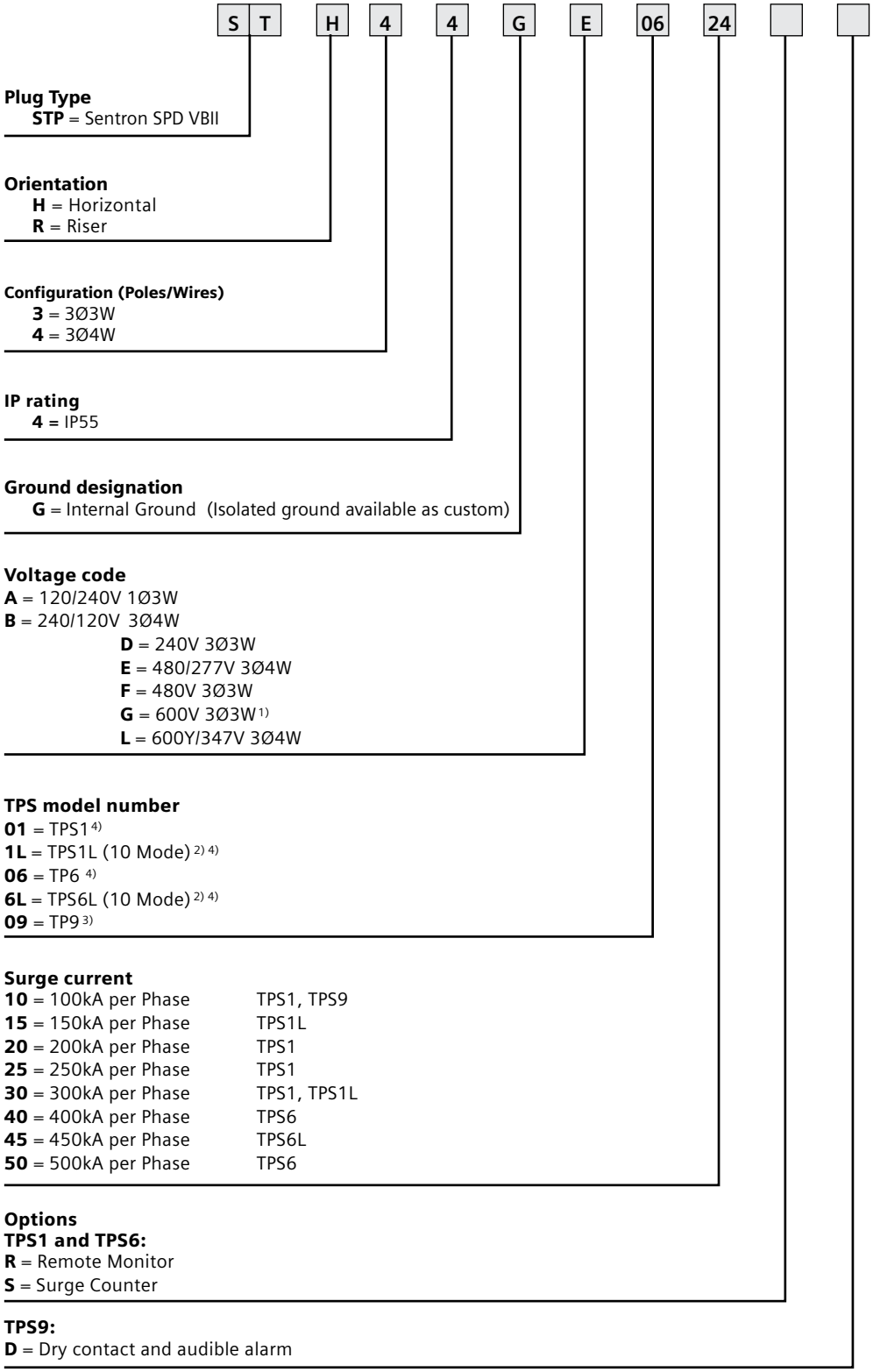
Low exposure applications – TPS9

- 100kA per phase
- 200kA SCCR
- 20kA nominal discharge current
- Indicator lights standard
- Individually fused, thermally protected MOVs
- Dry contacts and audible alarm optional



Fusible SPD Bus Plugs

Sentron SPD Bus Plugs — Numbering system



1) Available in 100kA and 150kA for TPS1 and 100kA, 150kA, 200kA and 250kA for TPS6.

2) The 10 mode devices provide additional circuit protection for Line to Neutral and Neutral to Ground. The 10 modes of protection are: L1-G, L2-G, L3-G, L1-L2, L2-L3, L1-L3, L1-N, L2-N, L3-N, N-G.

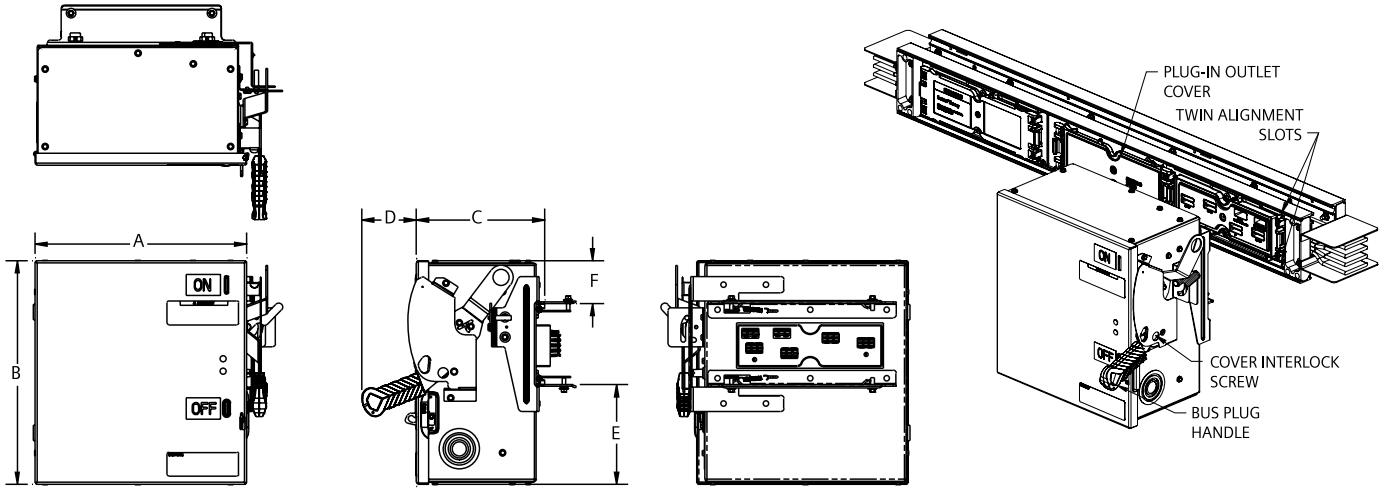
3) Standard features: indicator lights.

4) Standard features: indicator lights, dry contacts, audible alarm with silence switch, test button.

Fusible SPD Bus Plugs

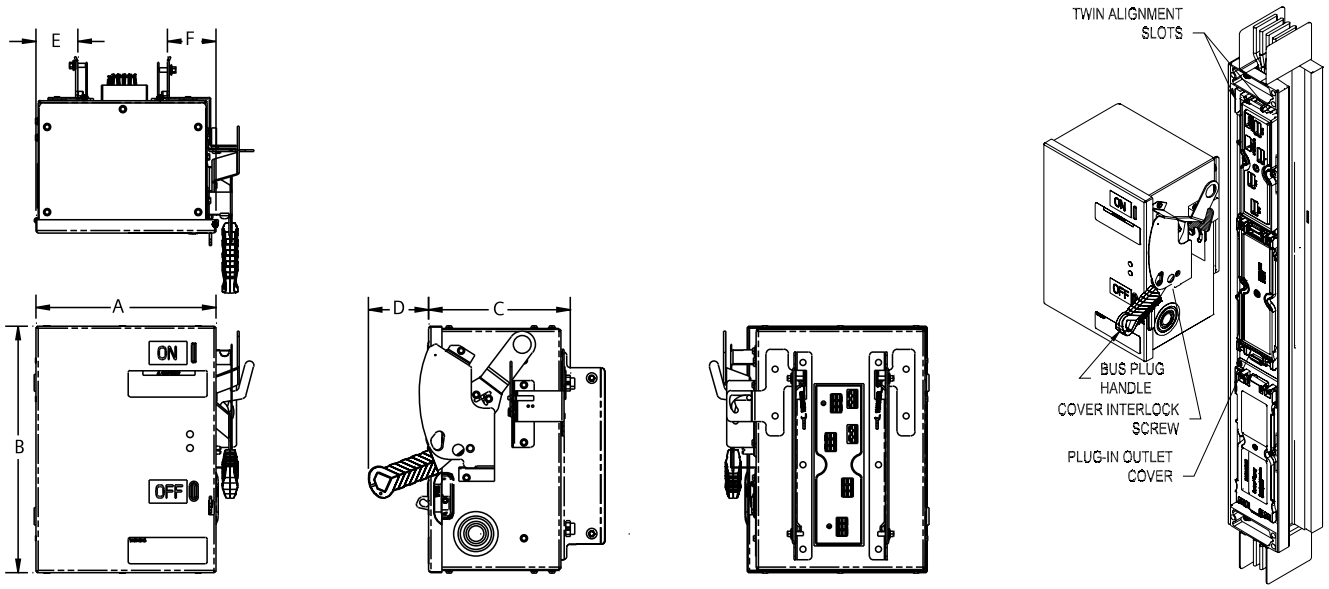
Horizontal SPD bus plugs dimensions and weights

	Dimensions inches (mm)						
Plug type	**"A"**	**"B"**	**"C"**	**"D" max.**	**"E"**	**"F"**	**Weight lbs. (kgs)**
TPS 9	13.25 (336)	13.86 (352)	7.96 (202)	2.60 (66)	6.18 (156)	2.66 (67)	30 (13.63)
TPS 1	13.25 (336)	15.86 (402)	7.96 (202)	2.60 (66)	8.18 (207)	2.66 (67)	35 (15.90)
TPS 6	13.25 (336)	19.86 (504)	7.96 (202)	2.60 (66)	12.18 (372)	2.66 (67)	38 (17.27)



Riser SPD Bus Plugs dimensions and weights

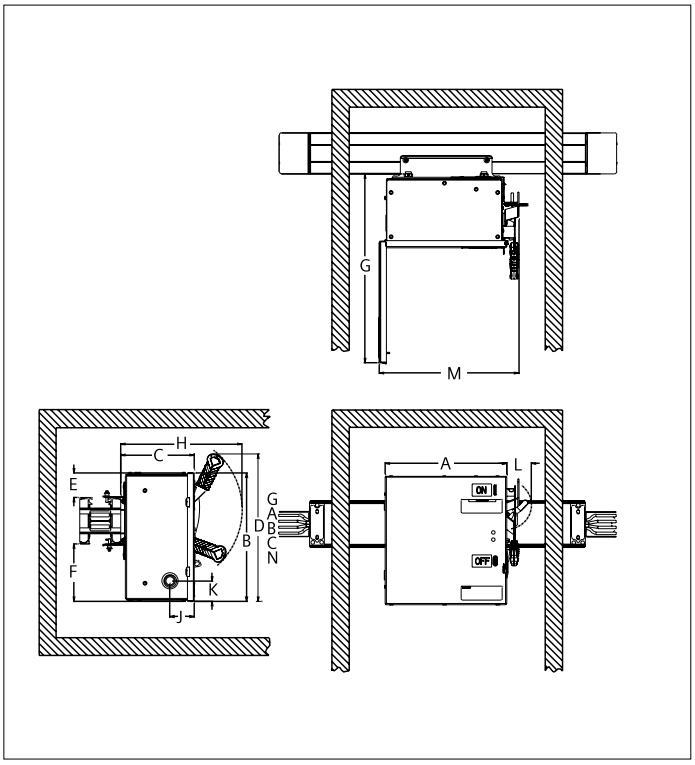
	Dimensions inches (mm)						
Plug type	**"A"**	**"B"**	**"C"**	**"D" max.**	**"E"**	**"F"**	**Weight lbs. (kgs)**
TPS 9	10.25 (260)	13.86 (352)	7.96 (202)	5.25 (133)	2.74 (69)	2.36 (59)	25 (11.36)
TPS 1	11.25 (286)	19.36 (492)	7.96 (202)	5.25 (133)	7.74 (196)	3.36 (85)	35 (15.90)
TPS 6	15.00 (381)	22.86 (580)	10.58 (268)	5.25 (133)	5.11 (129)	4.74 (120)	45 (20.45)



Wall clearance and fusible bus plugs dimensions

Wall clearance and bus plug dimensions Horizontal (inches/mm)

	No Cradle					
Dim.	**30**	**60**	**100**	**200**	**400**	**600**
A	13.13 (333)	13.13 (333)	13.13 (333)	14.88 (377)	18.63 (473)	18.63 (473)
B	13.86 (352)	14.86 (377)	15.86 (402)	22.86 (580)	27.00 (686)	27.00 (686)
C	7.96 (202)	7.96 (202)	7.96 (202)	10.58 (268)	15.67 (398)	15.67 (398)
D	15.89 (403)	16.68 (423)	17.68 (449)	24.66 (626)	20.00 (508)	20.00 (508)
E	6.19 (157)	7.19 (182)	8.19 (208)	15.19 (385)	12.67 (322)	12.67 (322)
F	2.67 (67)	2.67 (67)	2.67 (67)	2.67 (67)	7.67 (195)	7.67 (195)
G	20.39 (517)	20.39 (517)	20.39 (517)	24.76 (628)	33.75 (857)	33.75 (857)
H	13.09 (332)	13.09 (332)	13.09 (332)	16.55 (420)	21.17 (538)	21.17 (538)
J	2.65 (67)	2.65 (67)	2.65 (67)	3.40 (86)	12.15 (309)	12.15 (309)
K	2.06 (52)	2.06 (52)	2.06 (52)	3.06 (78)	3.06 (78)	3.06 (78)
L	2.65 (67)	2.65 (67)	2.65 (67)	2.65 (67)	2.65 (67)	2.65 (67)
M	15.07 (382)	15.07 (382)	15.07 (382)	16.82 (427)	21.00 (533)	21.00 (533)



Wall clearance and bus plug dimensions Riser (inches/mm)

	No Cradle					
Dim.	**30**	**60**	**100**	**200**	**400**	**600**
A	10.13 (237)	10.13 (237)	11.13 (282)	14.68 (372)	18.63 (473)	18.63 (473)
B	13.86 (352)	14.86 (377)	15.86 (402)	22.86 (580)	27.00 (686)	27.00 (686)
C	7.96 (202)	7.96 (202)	7.96 (202)	10.58 (268)	15.67 (398)	15.67 (398)
D	15.89 (403)	16.68 (423)	17.68 (449)	24.66 (626)	20.00 (508)	20.00 (508)
E	2.74 (69)	2.74 (69)	7.74 (196)	5.11 (129)	6.60 (167)	6.60 (167)
F	2.36 (59)	2.36 (59)	3.36 (85)	4.74 (120)	7.10 (180)	7.10 (180)
G	17.39 (441)	17.39 (441)	18.39 (467)	24.76 (628)	33.75 (857)	33.75 (857)
H	13.09 (332)	13.09 (332)	13.09 (332)	16.55 (420)	21.17 (538)	21.17 (538)
J	2.65 (67)	2.65 (67)	2.65 (67)	3.40 (86)	12.15 (309)	12.15 (309)
K	2.06 (52)	2.06 (52)	2.06 (52)	3.06 (78)	3.06 (78)	3.06 (78)
L	3.55 (90)	3.55 (90)	3.55 (90)	3.55 (90)	2.65 (67)	2.65 (67)
M	12.07 (306)	12.07 (306)	13.07 (331)	16.82 (427)	21.00 (533)	21.00 (533)

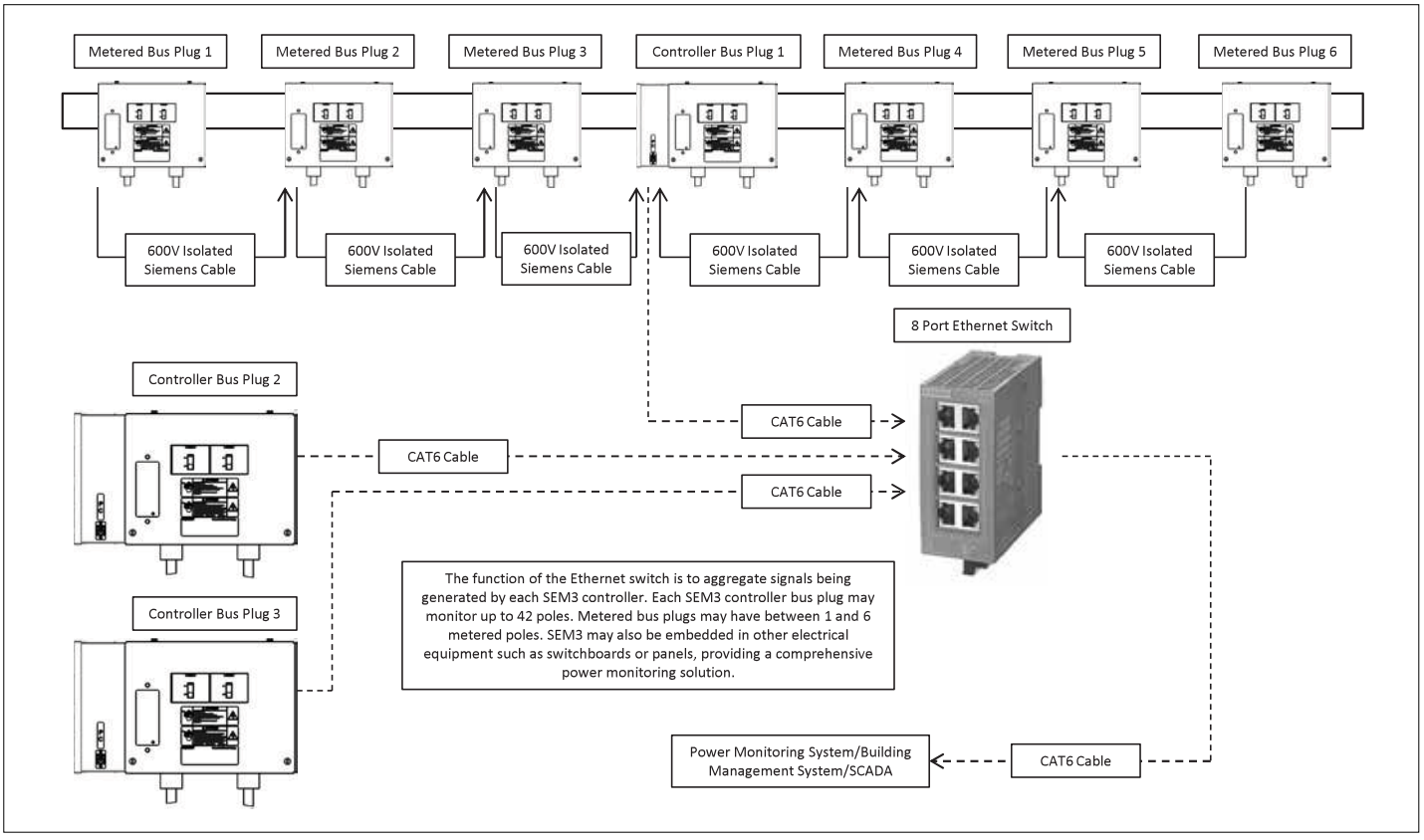
Sentron 3/6 Bus Plugs

Product overview

The Sentron 3/6 bus plug is designed for light industrial, commercial, and datacenter applications. Optional factory installed receptacles range from 10 to 100A per pole, and the bus plug allows for anywhere between 1 and 6 poles of distribution (i.e. two 3Ø receptacles per plug), this product combines plug-and-play capabilities, minimizing installation time and cost, with the option for preconfigured embedded branch circuit metering utilizing SEM3™.

Product application

Building your metered network of Sentron 3/6 bus plugs is easy. There are two variations of metered bus plugs, simple bus plugs (child) and controller bus plugs (parents). Each SEM3 controller can monitor 42 bus plug poles. Depending on the number of metered poles per bus plug, one parent controller plug can monitor between 6 to 41 bus plugs. An example of a network of seven 6-pole bus plugs is shown below (in this case there is one controller and six metered plugs.) Outputs from multiple controller plugs may be consolidated at an Ethernet switch (shown below) or integrated directly into a building or site management system.



Sentron 3/6 Bus Plugs – Circuit breaker (installed)

Catalog numbering system

B	P	S	A	1	A	0	A	1	A	0	0	N	N

Plug type
BP = Bus Plug

Type
S = Sentron

Enclosure
A = 13 x 10in (60A max branch, corded receptacle
C = 13x 14in (60A max branch, flush mount receptacle
D = 13x 14in (100A max branch, any receptacle

System configuration
1 = 3Ø
2 = 3Ø + Internal Grd
3 = 3Ø + Isolated Grd
5 = 3Ø + Neutral
6 = 3Ø + Neutral + Internal Grd
7 = 3Ø + Neutral + Isolated Grd
9 = 3Ø + 200% Neutral
0 = 3Ø + 200% Neutral + Internal Grd
Z = 3Ø + 200%

Color
A = Graphite
B = ANSI 61
C = Other

Connection type
0 = Enclosure Only
1 = Breaker Only
2 = Flush Mount Receptacle
3 = 3ft Corded Connector
4 = 7ft Corded Connector
5 = 10ft Corded Connector
7 = Custom

Number of circuits and phasing
A1-D4

Breaker frame
A = BL
B = BLH
C = HBL
D = BQD
E = NEB

Device amps

00 = No Breaker	**SH** = 45A
9A = 10A	**9J** = 50A
9B = 15A	**9K** = 60A
9C = 20A	**9L** = 70A
9D = 25A	**9M** = 80A
9E = 30A	**9N** = 90A
9F = 35A	**9P** = 100A
9G = 40A	

Metering system
N = None
C = SEM3 Controller
M = SEM3 Meter Only

Meter type
N = None
G = 3 Meter Rack, Low Accuracy Meters
H = 3 Meter Rack, High Accuracy Meters
X = 6 Meter Rack, Low Accuracy Meters
H = 6 Meter Rack, High Accuracy Meters

Sentron 3/6 Bus Plugs

Product configurations

Field wire-able bus plugs

Enclosure height of 14.20"
Customer supplied receptacle or corded connector
Stocking program for specific variants

Non-metered bus plug

Standard enclosure height of 10.18" at 60A (per pole) and below
Enclosure height of 13.20 for all surface mounted receptacle variants
Factory installed corded or surface mount receptacles/connectors

Metered bus plug

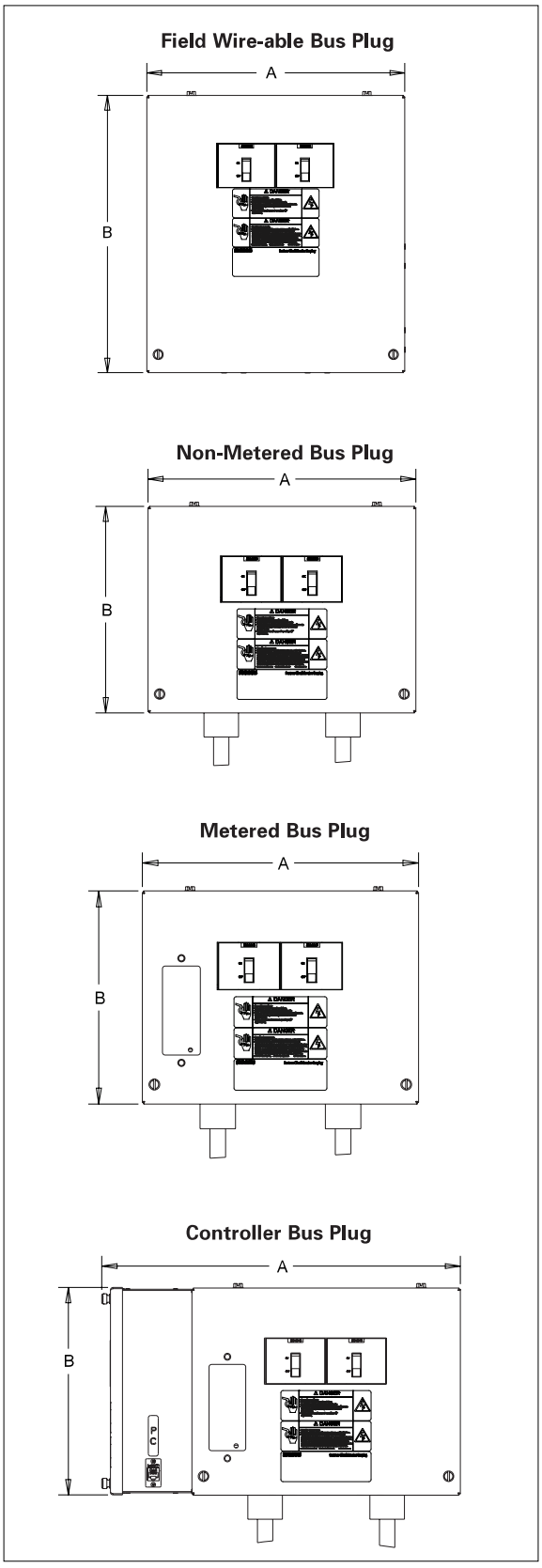
Standard enclosure height of 10.18" at 60A (per panel) and below
Enclosure height of 14.20" for all surface mounted receptacle variants
Factory installed corder or surface mount receptacles/connectors
Preconfigured SEM3 meter rack and controller (parents)

Controller bus plug

Standard enclosure height on 10.18" at 60A (per pole) and below
Enclosure height of 14.20" for all surface mounted receptacle variants

Product Configurations

Circuit	• 1-6 poles of distribution • 10-100A per pole • 100 and 200% neutral options
Siemens breaker frames	BL, BLH, HBL, BQD, NGB
Load connection	• Field wired (with KO's), no receptacles • Surface or flush mount receptacles • Corded Connector(s) or receptacles at 3, 5, 7, or 10 ft
Branch circuit metering (SEM3)	• Meter only lug or meter and controller plug • 3 and 6 meter racks available • Low (1%) and high (.2%) accuracy meters available

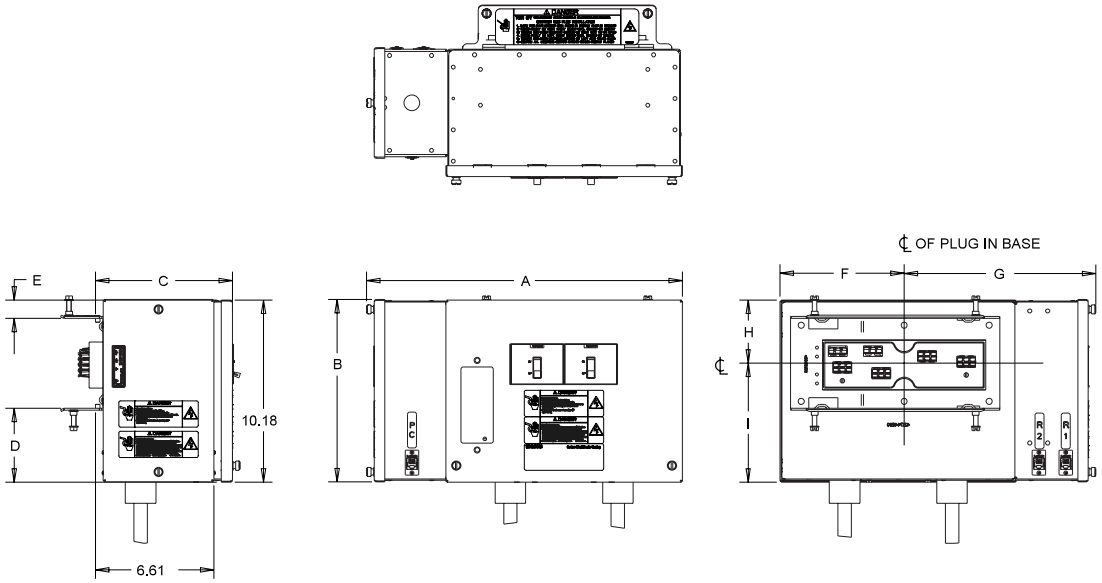


Sentron 3/6 Bus Plugs

Corded bus plug (non-metered and metered) dimensions and weights

Ampere rating	Dimensions inches (mm) "A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	Weight lbs. (kgs)*
10-60A	13.21 (336)	10.18 (259)	7.64 (194)	4.12 (105)	1.03 (26)	6.93 (176)	6.29 (160)	3.55 (90)	6.64 (169)	21 (9.52
70-100A	13.21 (336)	14.20 (361)	7.64 (194)	8.12 (206)	1.03 (26)	6.93 (176)	6.29 (160)	3.55 (90)	10.64 (270)	23 (10.43)

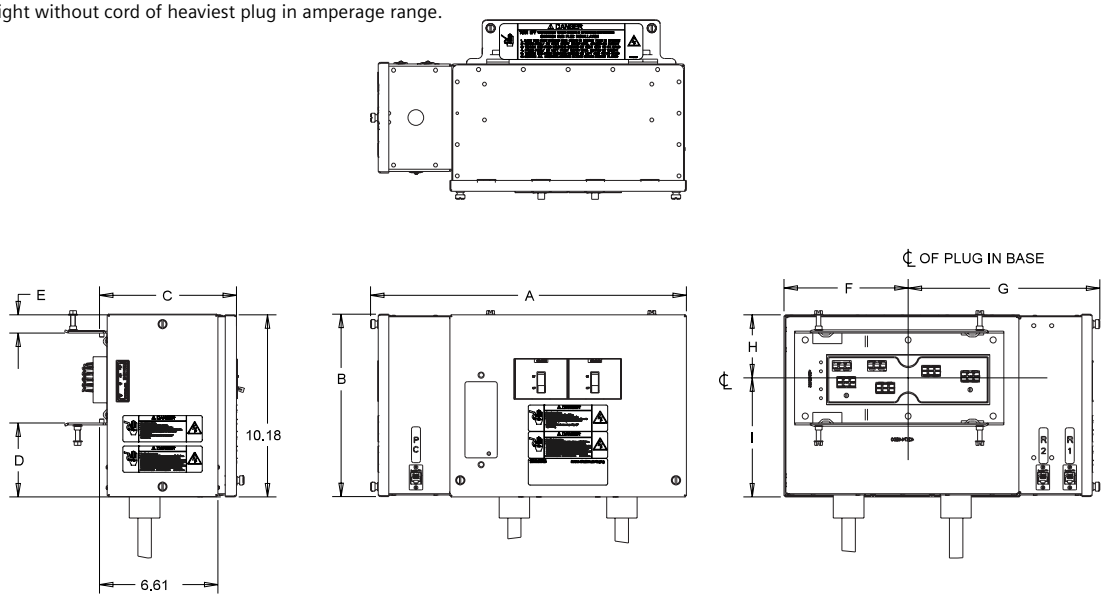
* Approximate weight without cord of heaviest plug in amperage range.



Corder bus plug (controller) dimensions and weights

Ampere rating	Dimensions inches (mm) "A"	"B"	"C"	"D" max.	"E"	"F"	"G"	"H"	"I"	Weight lbs. (kgs)
10-60A	17.64 (448)	10.20 (259)	7.64 (194)	4.12 (105)	1.03 (26)	8.93 (272)	10.71 (272)	3.55 (90)	8.64 (169)	28 (13.19)
70-100A	17.64 (488)	14.20 (361)	7.64 (194)	8.12 (2066)	1.03 (26)	8.93 (272)	10.71 (272)	3.55 (90)	10.64 (90)	32 (14.06(

* Approximate weight without cord of heaviest plug in amperage range.

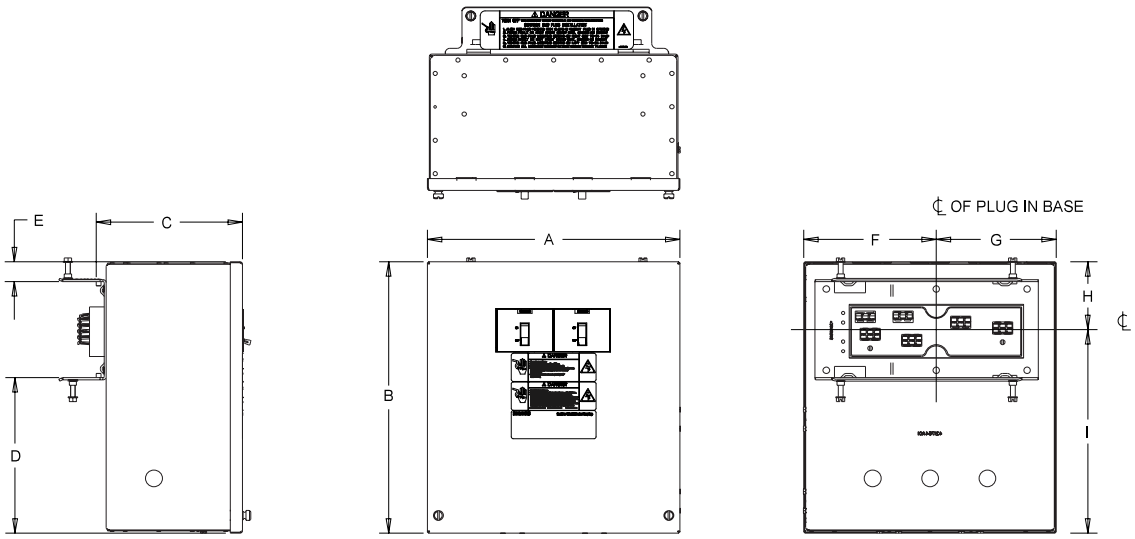


Sentron 3/6 Bus Plugs

Surface mount receptacle bus plug (non-metered and metered) dimensions and weights

	Dimensions inches (mm)									
Ampere rating	**"A"**	**"B"**	**"C"**	**"D"**	**"E"**	**"F"**	**"G"**	**"H"**	**"I"**	**Weight lbs. (kgs)•**
10-100A	13.21 (336)	14.20 (361)	7.64 (194)	8.12 (206)	1.03 (26)	6.93 (176)	6.29 (160)	3.55 (90)	10.64 (270)	23 (10.43)

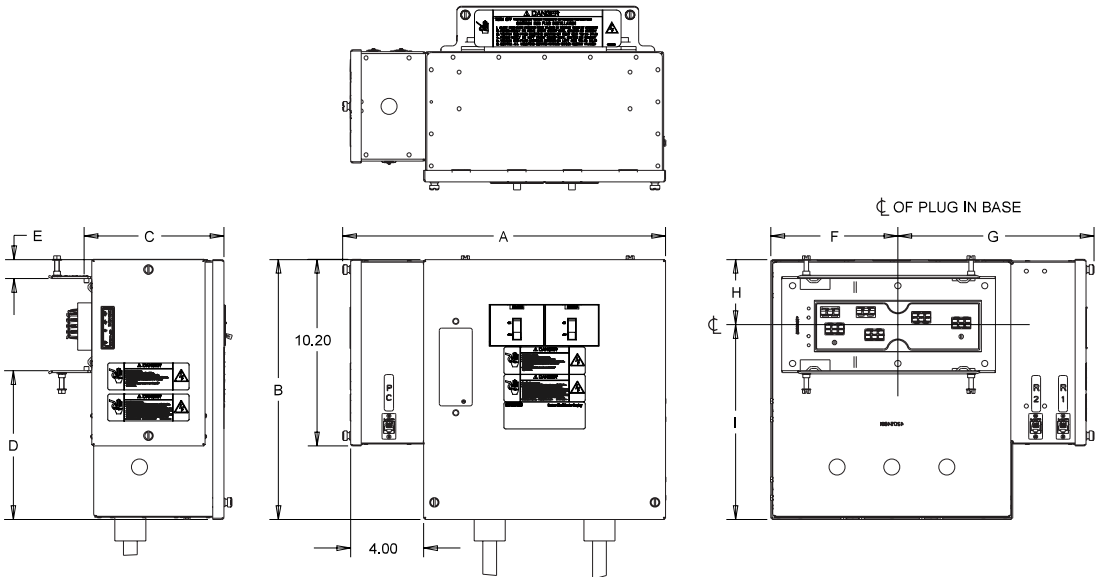
* Approximate weight without cord of heaviest plug in amperage range.



Surface mount receptacle bus plug (controller) dimensions and weights

	Dimensions inches (mm)									
Ampere rating	**"A"**	**"B"**	**"C"**	**"D" max.**	**"E"**	**"F"**	**"G"**	**"H"**	**"I"**	**Weight lbs. (kgs)***
10-100A	17.64 (448)	14.20 (361)	7.64 (194)	8.12 (206)	1.03 (26)	6.93 (176)	6.93 (176)	3.55 (90)	10.64 (270)	33 (14.97)

* Approximate weight without cord of heaviest plug in amperage range.



General information

Recommended measurement steps

1. Using systems requirements for amperage, voltage, and conductors, determine the physical size of the busway. This is important when setting minimum clearances from walls, columns, ceilings and other obstructions. See page 30 for minimal clearances.
2. Prior to any layout, review the complete area to determine the best location for the run. Special attention needs to be given to existing equipment such as plumbing, HVAC, steel columns, beams and permanent structures.
3. Measure all dimensions from fixed points such as columns, walls, floors and ceilings.
4. Make a preliminary sketch showing proposed busway routing, elevations and obstructions. Be sure to show all floor and wall locations including thickness.
5. Where plug-in devices are being used, be sure to allow for proper operation clearances. See dimensional requirements shown in the bus plug section of this publication.

Reference the following documents online at www.usa.siemens.com/busway

- Sentron Quick Reference
- Busway Order Entry Checklist
- Sentron Busway Installation and Instruction Guide

Maintenance

In order to maintain system performance, it is necessary to perform regular maintenance on your busway system. Siemens Storage, Installation and Maintenance Instructions, and NEMA Publication BU1.1 should be used as a guide to proper maintenance procedures. Routine maintenance of your busway system will increase its life and performance.

Custom product

With a 60 year history in designing and manufacturing Busway Systems, Siemens can develop custom solutions to meet specific job requirements. Siemens specializes in custom engineered busway sections, connections, and bus plugs. Consult your local Siemens sales office for details on custom pricing and ordering.

Connecting to existing equipment

Do you have existing power distribution equipment (non-Sentron) that you would like to run Sentron Busway to or from? Siemens can engineer special connection pieces that allow you to connect Sentron Busway quickly and efficiently.

Transformer connections

Siemens can connect Sentron Busway to almost any transformer. All you need to do is provide complete drawings of transformer secondary connections with detailed drilling pattern and phasing information to your local Siemens sales engineer and they can order you a custom designed connection piece.

Paint

Sentron Busway products have a protective finish of ANSI 61 gray (standard) polyester urethane powder paint. The paint is electrostatically applied to all housing surfaces. Colors other than ANSI 61 gray may be special ordered.

Low Current Density Busway Sentron Busway may be ordered as 1000 A/in^2 Copper or 750 A/in^2 Aluminum.

Conversion is as follows:

Required M or L rating	
AL	**L-Rated**
225	—
400	—
600	—
800	400
1000	600
1200	800
1350	1000
1600	1200
2000	1350,1600
2500	2000
3000	2500
3200	2000
4000	3000,3200

Required M or L rating	
AL	**L-Rated**
225	—
400	—
600	—
800	400
1000	—
1200	600
1350	800
1600	1000
2000	1200, 1350
—	1600
2500	2000
3000	—
3200	—
4000	2500, 3000
5000	4000

"L" Rating = 750 A/in^2 Aluminum
"M" Rating = 1000 A/in^2 Copper

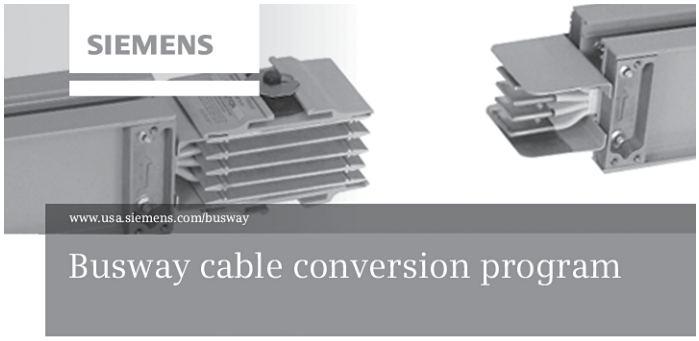
General information

Applications – 200% neutral option

Power system harmonics are created by numerous types of non-linear loads which are often very high in harmonic content. The harmonics generated create problems in electrical systems and equipment. The presence of nonlinear loads can result in overheated neutrals and lead to deterioration of equipment performance and a reduced equipment life cycle. In order to prevent such problems from occurring, the Computer and Business Equipment Manufacturers Association (CBEMA) recommends that the neutral be oversized to at least 173% of the ampacity of the phase conductors to prevent problems. Sentron Busway offers two fully rated bus bars, therefore providing twice the current carrying surface as the phase bars. Each neutral bar is plated with the same tin plating and insulated with the same electrostatically applied epoxy insulation as the phase bars. This 200% neutral capacity helps prevent overheating caused by non-linear loads.

Isolated ground

Sentron Busway is available with an optional isolated ground. This isolated ground provides a clean ground path for high frequency signals coming through the ground. This option is very useful in applications where there are computers or diagnostic equipment. The isolated ground option is often used in hospitals and higher technology industry applications.



Services – PowerIIFit final Connection program

A “Final Connection” section is a length of busway inserted into a run of busway after the major portion of the busway run has been installed. This allows the release of the majority of the busway run long before the final dimensions are known.

Final Connection pieces will be shipped from Spartanburg, SC within five working days after the receipt of the Final Connection order (maximum five pieces, IP40 and IP55 only). Final Connection pieces must be identified at the time of the original order release with approximate date of Final Connection order. The Final Connection order form should be faxed or emailed to Busway Customer Service. For program details visit our website: www.usa.siemens.com/busway or contact your local Siemens sales office.

Cable/Conduit conversion

The next time a job calls for value engineering, consider using Sentron Busway as an alternative to cable and conduit and save your customer valuable time and money. Our cable/conduit comparison program generates reports with your specific job parameters and allows you to see a side-by-side total installed cost comparison between Sentron Busway and cable conduit. Consult your local Siemens sales office for more information and a copy of the software. After initial installation, program updates may be downloaded from our website: www.usa.siemens.com/busway

Measuring and layout

For large jobs, Siemens Busway Systems offer assistance with measuring and layout of the busway. This service is negotiated on a job by job basis.

Emergency service

Siemens provides a 24-hour emergency service call center where you can call at any time for emergency service. **1.800.241.4453** will put you in touch with a trained professional who will help assess the situation and put you in touch with a product expert.

Legal Manufacturer

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Peachtree Corners, GA 30092
United States of America

Telephone: +1 (800) 241-4453
www.usa.siemens.com/busway

Order No. BUSA-SENT1-0222

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