

# XJ-L™ HD Busway System

## XJ-L HD Busway Introduction

### Competitive Advantages

XJ-L HD Busway is available up to 400A. First introduced in 1960, XJ-L Busway continues to be the leading power distribution solution for demanding applications that require reliable, high quality power. XJ-L HD Busway is the optimal choice for both contractors and users concerned with designing superior electrical systems that require a high plug density and optimal space utilization.

#### Competitive advantages:

- Compact size – small cross section for applications where busway routing is constrained
- Joint Connection – dual spring clamp assemblies ensure reliable, maintenance-free joints
- Safety – plug-in outlets are IP2X finger safe (optional XOC outlet covers increase system to IP40)
- Reliability – fundamental design has a 60 year history of reliability
- Service – simple snap together installation, maintenance free joints, factory stock of critical components and large distribution inventory of bus plugs ensure quick and easy serviceability
- Fittings – elbow, tee, crosses, flanged end, and tap boxes are offered in standard and custom configurations
- Compatibility – the full range of XJ-L HD bus plugs are interchangeable between 100A, 225A and 400A busway



#### Key features:

- Up to twelve 100A bus plugs can be installed per 10' of plug-in busway. Plug-in busway can be configured with six plug-in openings per side (standard) or twelve on one side (high density).
- Bus plugs are readily installed on energized busway and are fully interchangeable between 100, 225 and 400A configurations.
- Bus plugs are available with fusible or circuit breaker disconnects, configured with a wide variety of optional receptacles, branch circuit breakers, drop cords, power monitoring, indicator lights, etc.
- Bus bars are solid copper (98% conductivity) and tin plated for superior electrical performance and corrosion resistance (optional silver plating is also available). The solid bus bar design provides superior short circuit strength (up to 35 kA) compared to channel style conductors and cable.
- Totally enclosed steel housing is robust, guarding against incidental contact and contamination of live parts. Enclosed box design will not twist or distort during bus plug installation.
- Installation is fast and easy. Joint connections simply snap together without special tools, housing couplers, or bus connectors.
- Suitable for horizontal and vertical mounting and under-the floor applications.

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## XJ-L HD Busway Overview

### XJ-L HD Busway

XJ-L HD Busway is well known for its outstanding performance, providing convenient, cost-effective power distribution for high-tech environments, data centers, laboratories, and other applications requiring consistent, quality power distribution. Key XJ-L HD design features include optional isolated ground or 200% neutral across entire product range. For maximum availability, XJ-L HD Busway is maintained as a stock product to meet your quickship requirements.

As a result, XJ-L HD Busway is an intelligent choice for contractors and users concerned with designing superior electrical distribution systems. The compact design is ideal for limited working areas in computer manufacturing, laboratory or test facilities, schools, hospitals, and machine shops.

With XJ-L HD Busway, you get an exclusive, optional isolated ground design that ensures clean power. Unlike bonded ground designs that may convey surges from one electrical device to another, the XJ-L HD optional isolated ground system is well suited for high-tech computer intensive environments. The ground bar is the same size as the phase bars, with the same ampere rating. Installation is easy,

joining one XJ-L HD Busway section to another is as simple as matching ends and snapping them together. Bus bars are held securely in place by spring pressure clips located in the joint insulator. The joint is secured when the external housing plate is attached with captive screws. Thanks to built-in flexibility and a low initial cost, you also benefit from future savings when you need new equipment.

Time to add on busway for new or expanded facilities? The XJ-L Busway you installed years ago matches the XJ-L HD Busway you specify today and years from now the new busway sections, components or system-compatible bus plugs will still fit.

### Dependability

With over one million feet in service, XJ-L HD Busway has a proven track record. The busway joints are easy to install and maintenance free. Solid copper bus bars and totally enclosed steel housings are designed for decades of dependable service.

### Flexibility

Siemens XJ-L HD Busway is available in a wide variety of straight lengths, elbows, tees, crosses, and tap boxes that can be installed and then readily expanded or reconfigured to meet changing requirements. Custom fittings and straight lengths can be engineered to tailor the busway

system to application-specific customer requirements. Bus Plugs can be installed, then relocated as required without de-energizing the busway. All XJ-L HD Bus Plugs are fully interchangeable with all XJ-L HD Busway configurations.

### Cost

Siemens XJ-L HD Busway offers a lower cost solution, compared to cable and conduit, sandwich style busway or even light duty track busway. Snap together installation requires no special tools and is fast, easy and maintenance free. Solid, highly conductive bus bars minimize electrical losses and ensure long-term energy savings.

### Equipment protection

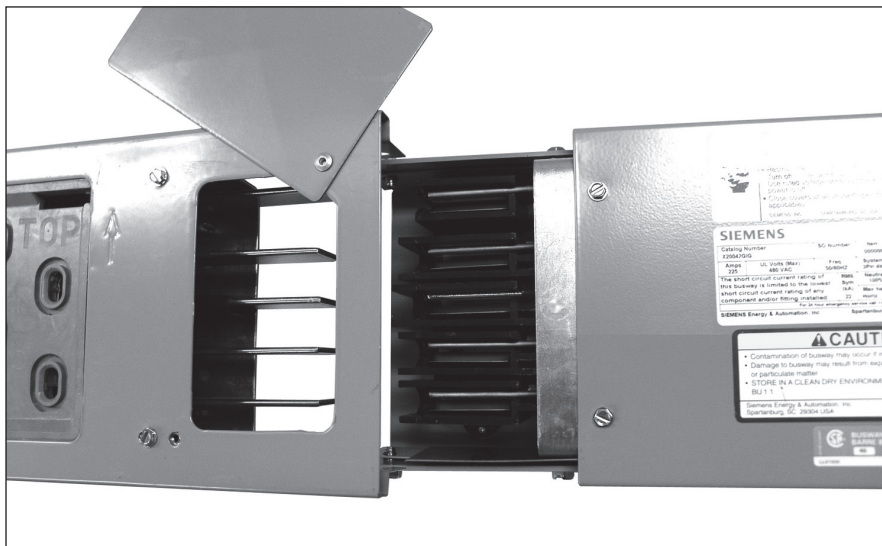
Critical equipment is protected via fuse or circuit breaker plugs. Due to their proximity, the plugs provide a localized method of protection and disconnection.

### Space

Space in critical power/data center facilities is at a premium. XJ-L HD Busway requires less space than conventional power distribution methods such as cable and conduit.

### Availability

XJ-L HD Busway and plugs are stocked to meet your quick-ship requirements. Once you factor in all the advantages, XJ-L HD is clearly the best choice for reliable, flexible, and economical power distribution for data centers, light industrial, and high tech applications.



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## XJ-L HD Busway Specifications

XJ-L HD Busway is available in 100A, 225A and 400A ratings making it the right choice for light industrial and commercial applications where low initial startup and maintenance costs are prerequisites. XJ-L HD Busway is the most logical choice for high tech, data intensive environments, especially when isolated ground is required.

### Housing

XJ-L HD Busway features a totally enclosed, non-ventilated, steel housing. The housing is covered with an electrostatically applied polyester urethane powder paint. Choice of colors: ASA#61 Grey or Graphite Grey. The paint is scratch resistant and has a 500 hour salt spray rating.

### Conductors

The conductors are fabricated from 98% conductivity copper. The bars are "spaced-in-air" and held securely in the housing by the plug-in outlets and joints.

### Neutral

100% neutral is available for standard 4 wire applications. A second neutral bar can be added for 200% neutral capacity.

Note: the 200% neutral bar can be utilized as Isolated Ground.

The internal ground bus is 100% rated for 100A, 60% rated for 225A, and 50% for 400A busway. Isolated ground is rated at 100% for both amperages.

### Plating

The entire length of the bus bar is tin plated to ensure good electrical contact at all joint and plug tap-off points. The plating also serves to protect the bars from corrosion. Optional silver plating is available.

### Plug-in base

XJ-L HD Busway features multiple plug-in locations. The plastic, non-tracking outlets are located on 20 inch centers and support the bus bars providing bracing during short circuit conditions. The plug-in outlets are IP2X (finger safe). Optional plug-in base covers (XOC) are available separately or they can be factory installed.

### Joint connection

Busway sections are connected via a maintenance-free, spring pressure joint. The busway ends are easily aligned and



bus bar ends are held securely in place by spring pressure clips located in the joint insulator. The housings are connected via external housing plates and captive screws.

### Bus plugs

There are twelve plug-in outlets on each 10 foot (3.048 m) section, six openings on 5 foot (1.524 m) sections and two outlets on 2 foot (.616 m) sections. Bus plugs are available with amperages ranging from 15A to 200A. Bus plugs feature circuit breakers or fusible switch disconnects.

### Testing

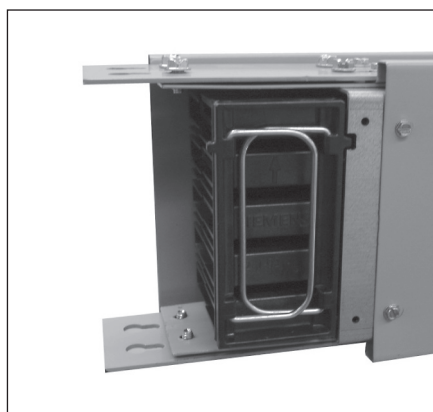
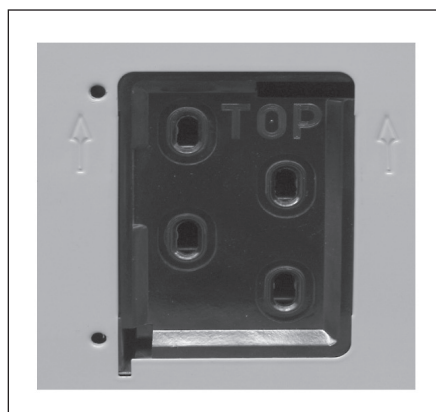
Each piece of XJ-L HD Busway is factory tested prior to shipment. A dielectric test is performed to ensure product integrity. XJ-L HD Busway is manufactured and inspected in accordance to an ISO 9001 registered Quality Management System.

### Standards

XJ-L HD Busway products meet the following standards:  
 UL 857  
 NEMA BU1  
 CSA C22.2

### Ratings

Amperage: 100A, 225A and 400A  
 Voltage: 600 VAC max  
 Short circuit: 100A – 10kAIC  
 225A – 22kAIC



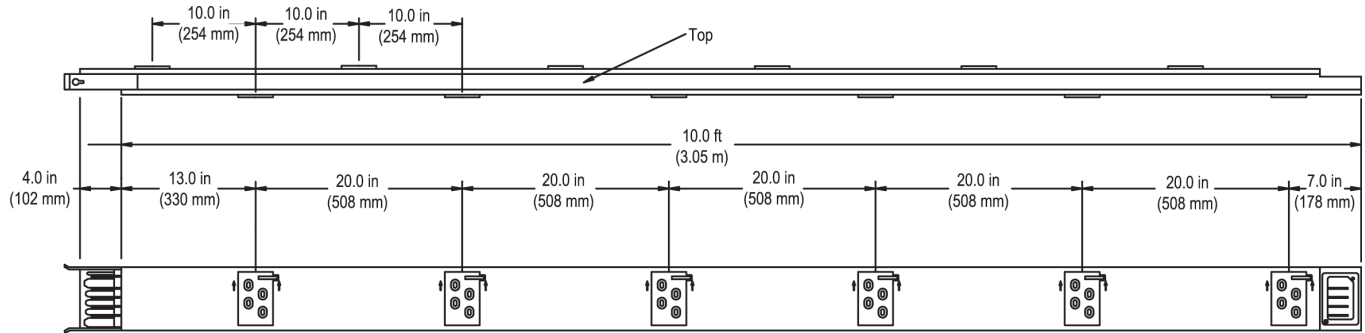
### R,X,Z and voltage drop

Ampere rating	Bus bar width x .125 in. (3.2 mm) thick	Ohm x 10-3 per 100 ft. Line to neutral			Voltage drop – concentrated loads, line-to-line per 100 ft. at 100% rated load, 35°C ambient power factor							
		R	X	Z	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
100	0.50 (13.0)	1.67	8.71	1.88	2.30	2.54	2.75	2.94	3.10	3.21	3.25	2.89
225	1.00 (25.4)	8.20	4.08	9.16	2.48	2.74	2.98	3.19	3.37	3.51	3.57	3.20
400	2.13 (54.1)	4.27	3.01	5.23	2.88	3.10	3.29	3.44	3.56	3.62	3.57	2.96

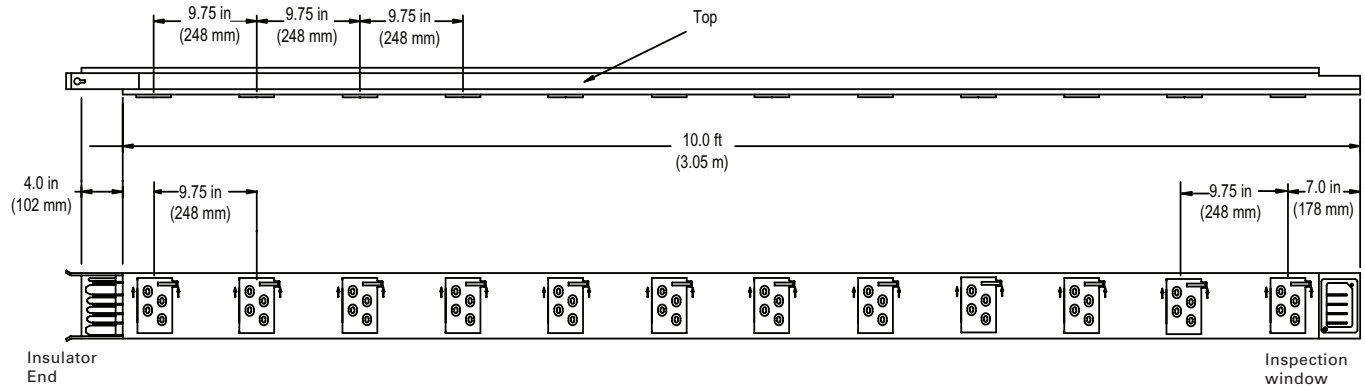
# XJ-L™ HD Busway System

## Straight Sections

### Plug-in Section (Dual Side)



### Plug-in Section (Single Side-Right hand configuration shown)



### Plug-in Section

Ampere Rating	Bus Bar Material	Bar Thickness	Bar Width	Housing Width	Housing Height	Max Voltage	Short Circuit Rating	Length Ft (M)	3 Pole			4 Pole		
									Catalogue Number	Model Number <sup>①</sup>	Wgt. (lb)	Catalogue Number	Model Number <sup>①</sup>	Wgt. (lb)
100	Copper	.125 (3.2)	.5 (13)	2.0 (51)	6.13 (156)	600V	10kA	10.0 (3.05)	XC1003	BWJP12011GS1	42	XC1004	BWJP12015GS1	45
100	Copper	.125 (3.2)	.5 (13)	2.0 (51)	6.13 (156)	600V	10kA	5.0 (1.52)	XC10035	BWJP06011GS1	21	XC10045	BWJP06015GS1	23
100	Copper	.125 (3.2)	.5 (13)	2.0 (51)	6.13 (156)	600V	10kA	2.0 (.61)	XC10032	BWJP02411GS1	8	XC10042	BWJP02415GS1	9
225	Copper	.125 (3.2)	1.0 (25)	2.5 (64)	6.13 (156)	600V	22kA	10.0 (3.05)	X2003	BWJP12021GS1	56	X2004	BWJP12025GS1	62
225	Copper	.125 (3.2)	1.0 (25)	2.5 (64)	6.13 (156)	600V	22kA	5.0 (1.52)	X20035	BWJP06021GS1	28	X20045	BWJP06025GS1	30
225	Copper	.125 (3.2)	1.0 (25)	2.5 (64)	6.13 (156)	600V	22kA	2.0 (.61)	X20032	BWJP02421GS1	10	X20042	BWJP02425GS1	12
400	Copper	.125 (3.2)	2.12 (54)	3.6 (92)	6.13 (156)	600V	35kA	10.0 (3.05)	X4003	BWJP12041GS1	69	X4004	BWJP12045GS1	79
400	Copper	.125 (3.2)	2.12 (54)	3.6 (92)	6.13 (156)	600V	35kA	5.0 (1.52)	X40035	BWJP06041GS1	35	X40045	BWJP06045GS1	40
400	Copper	.125 (3.2)	2.12 (54)	3.6 (92)	6.13 (156)	600V	35kA	2.0 (.61)	X40032	BWJP02441GS1	15	X40042	BWJP02445GS1	17

① Model Numbers Effective Aug 2011

### Feeder Section

Ampere Rating	Bus Bar Material	Bar Thickness	Bar Width	Housing Width	Housing Height	Max Voltage	Short Circuit Rating	Length In. (mm)	3 Pole			4 Pole		
									10' Catalogue Number	10' Model Number <sup>①</sup>	Wgt. (lb/ft)	10' Catalogue Number	10' Model Number <sup>①</sup>	Wgt. (lb/ft)
100	Copper	.125 (3.2)	.5 (13)	2.0 (51)	6.13 (156)	600V	10kA	16.0-120.0 (406 - 3048)	XC1003-Spec	BWJF12011GS1	4.2	XC1004-Spec	BWJF12015GS1	4.5
225	Copper	.125 (3.2)	1.0 (26)	2.5 (64)	6.13 (156)	600V	22kA		X2003-Spec	BWJF12021GS1	5.6	X2004-Spec	BWJF12025GS1	6.2
400	Copper	.125 (3.2)	2.12 (54)	3.6 (92)	6.13 (156)	600V	35kA		X4003-Spec	BWJF12041GS1	6.9	X4004-Spec	BWJF12045GS1	7.9

① Model Numbers Effective Aug 2011



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## Elbows

### Fittings

Prefix	Type	Fitting Type				Amp	Configuration	Colour
<b>BW</b>	<b>J</b>	<b>E</b>	<b>L</b>	<b>E</b>	<b>L</b>	<b>1</b>	<b>7</b>	<b>A</b>
		E = Edge L = Left F = Flat R = Right				1 = 100 2 = 225 4 = 400	1 = 3Ø 2 = 3Ø + Internal Grd 3 = 3Ø + Isolated Grd 4 = 3Ø + Internal Grd + Isolated Grd 5 = 3Ø + Neutral 6 = 3Ø + Neutral + Internal Grd 7 = 3Ø + Neutral + Isolated Grd 8 = 3Ø + Neutral + Internal Grd + Isolated Grd 9 = 3Ø + 200% Neutral 0 = 3Ø + 200% Neutral + Internal Ground	A = Graphite G = ANSI 61 X = Other

### Flat elbows

Right hand or left hand XJ-L HD Busway system 90 degree flat elbows are available. When specifying be sure to use the proper catalogue number suffix to identify the required fitting.

#### Flat Elbow

Ampere Rating	Poles	Catalogue Number	Model Number <sup>①</sup>	Catalogue Number	Model Number <sup>①</sup>
100	3	XC1003L1	BWJELFR11G	XC1003L3	BWJELFL11G
100	4	XC1004L1	BWJELFR15G	XC1004L3	BWJELFL15G
225	3	X2003L1	BWJELFR21G	X2003L3	BWJELFL21G
225	4	X2004L1	BWJELFR25G	X2004L3	BWJELFL25G
400	3	X4003L1	BWJELFR41G	X4003L3	BWJELFL41G
400	4	X4004L1	BWJELFR45G	X4004L3	BWJELFL45G

① Model Numbers Effective Aug 2011

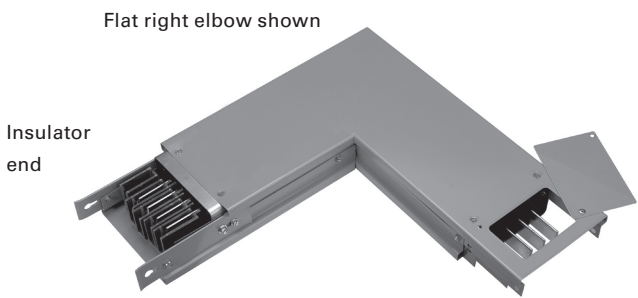
### Edge elbows

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#### Edge Elbow

Ampere Rating	Poles	Catalogue Number	Model Number <sup>①</sup>	Catalogue Number	Model Number <sup>①</sup>
100	3	XC1003L2	BWJELER11G	XC1003L4	BWJELEL11G
100	4	XC1004L2	BWJELER15G	XC1004L4	BWJELEL15G
225	3	X2003L2	BWJELER21G	X2003L4	BWJELEL21G
225	4	X2004L2	BWJELER25G	X2004L4	BWJELEL25G
400	3	X4003L2	BWJELER41G	X4003L4	BWJELEL41G
400	4	X4004L2	BWJELER45G	X4004L4	BWJELEL45G

① Model Numbers Effective Aug 2011



Left Elbow (-3)

Flat Right Elbow (-1)

