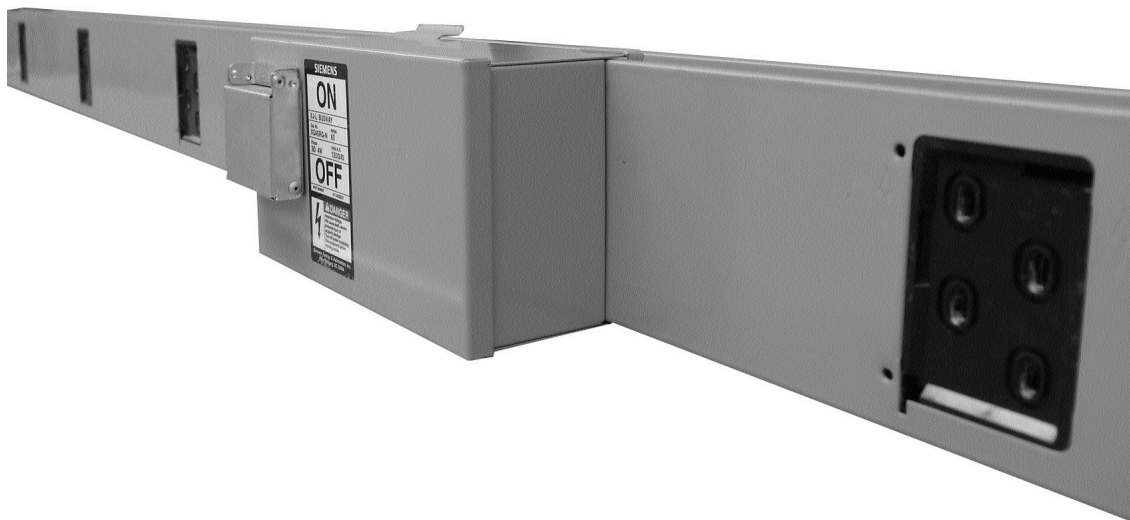





# SIEMENS

## XJ-L Busway Systems

Storage, Installation and  
Maintenance Instructions for...



### XJ-L Busway System

		
<ul style="list-style-type: none"> <li>• Hazardous voltages and exposed electrical conductors will cause death, serious injury, or property damage.</li> <li>• De-energize before working inside busway system. Only qualified personnel should work on or around this equipment after becoming thoroughly familiar with all warnings, safety notices, and maintenance procedures contained herein.</li> </ul>		

## 1.0 Definitions

### 1.1 QUALIFIED PERSONNEL

**FOR THE PURPOSE OF THIS MANUAL AND PRODUCT LABELS, QUALIFIED PERSONNEL IS ONE WHO IS FAMILIAR WITH THE INSTALLATION, CONSTRUCTION AND OPERATION OF THE EQUIPMENT AND THE HAZARDS INVOLVED. IN ADDITION, HE OR SHE HAS THE FOLLOWING QUALIFICATIONS:**

- (a) Is trained and authorized to energize, de-energize, clear, ground and tag circuits and equipment in accordance with established safety practices.
- (b) Is trained in the proper care and use of protective equipment such as rubber gloves, hard hat, safety glasses or face shields, flash clothing, etc., in accordance with established safety practices.
- (c) Is trained in rendering first aid.

### 1.2 DANGER

FOR THE PURPOSE OF THIS MANUAL AND PRODUCT LABELS, DANGER INDICATES AN IMMINENTLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

### 1.3 WARNING

FOR THE PURPOSE OF THIS MANUAL AND PRODUCT LABELS, WARNING INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

### 1.4 CAUTION

FOR THE PURPOSE OF THIS MANUAL AND PRODUCT LABELS, CAUTION INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY.

## 2.0 Storage Instructions

Upon receipt, immediately inspect busway components for possible concealed damage from shipping and/or handling. If damage has occurred, file a claim with the carrier. If there is no damage, restore the packing to its original condition to prepare for job site storage.

Store busway indoors in a clean and dry area. Protect against mechanical damage and exposure to lime dust (concrete), water, corrosive fumes or liquids and salts. Failure to properly store and protect the busway can cause damage and will void the warranty.

## 3.0 Preparing for Installation

Deliver busway to installation location before unpacking. Shipping crates/cartons contain exterior identification of the packaged busway components. Each busway component is further identified by an item number located on the nameplate, which corresponds to that same item number on the busway installation drawing(s).

Inspect each busway component for possible damage. Consult the factory. Confirm that contact surfaces are not damaged and are clean and dry. Abrasives should not be used on these surfaces because contact surfaces are electroplated. Inspect joint insulators for cracking or any sign of damage.

Megger each busway component at 1000 volts, phase to phase and phase to ground, to verify insulation integrity. Minimum readings should be no less than:

$$\text{Megohms} = 200 / \text{length of run in feet}$$

Or

$$= 66 / \text{length of run in meters}$$

If readings are below this minimum, do not apply power to the installed busway and contact Siemens.

## 4.0 XJ-L Busway Plug-In-Duct (X100, X200, X400) INSTALLATION INSTRUCTIONS

### 4.0.1 TO JOIN 2 SECTIONS OF XJ-L BUSWAY:

- 4.0.1.1 For normal edgewise mounting, the word "TOP" (A) is up. (See Fig. 1)
- 4.0.1.2 Loosen screws "B" and remove the external housing connectors. (See Fig. 1)
- 4.0.1.3 Assemble the plain end to the insulator end by aligning the holes in the housing ends. Slide the two sections together until the housing holes are in line. (See Fig. 2) The joint inspection cover must be rotated open. Press the bus bars completely into the spring clips.
- 4.0.1.4 Re-install the external housing connectors so that the guide pins engage the holes in the housings and tighten screws "B" to 20 IN-LBS.
- 4.0.1.5 Verify that the bus bars are fully seated in the spring clips.
- 4.0.1.6 For X400 busway, install the removable joint clip assembly by aligning the assembly over the joint inspection opening and pushing it on to the bus bars until it is just below the surface of the housing. **TIP: Apply pressure to either side of the assembly, left hand and then right hand until fully seated.**
- 4.0.1.7 Close joint inspection cover and secure it with provided hardware. The joint is now complete.

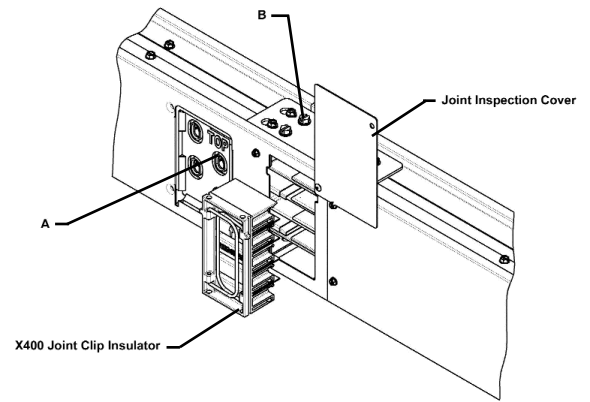


Figure 1

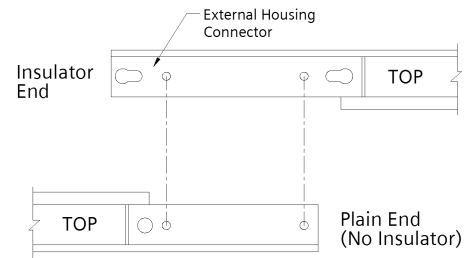
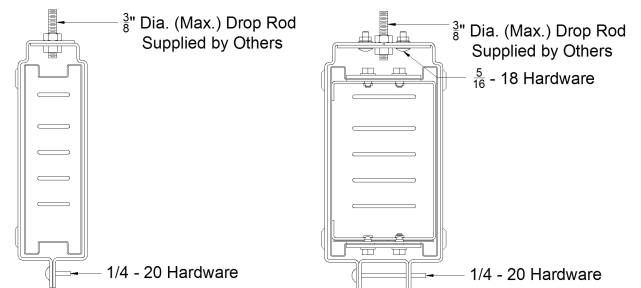


Figure 2

### 4.1 Hanger Instructions (XH2, XH3)

#### 4.1.1 TO HANG XJ-L BUSWAY FROM DROP RODS:

- 4.1.1.1 Position drop rods as required. (Max 10' Spacing).
- 4.1.1.2 Using a double nut configuration, assemble the hanger halves to each drop rod as shown. (See Fig. 3)
- 4.1.1.3 Spread the hanger open at the bottom and slip the duct up into the hanger. For normal edgewise mounting, the word "TOP" is up. Secure the hanger with the 1/4-20 hardware.



XH2

XH3

Figure 3

#### 4.1.2 TO WALL-MOUNT XJ-L BUSWAY:

- 4.1.2.1 Attach one hanger half to wall as shown. (See Fig. 4)
- 4.1.2.2 Insert duct into hanger. For normal edgewise mounting, the word "TOP" is up.
- 4.1.2.3 Assemble the hanger complete as shown using the 5/16-18 hardware on top and the 1/4-20 hardware on the bottom.

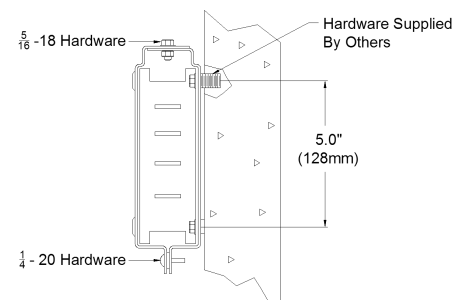


Figure 4

### 4.2 Wall Flange Instructions (WF1, WF2, WF3)

- 4.2.1 Place the flange halves around the duct where it passes through the wall, floor, or ceiling. Using appropriate hardware, attach flanges to wall, floor, or ceiling. (See Fig. 6)

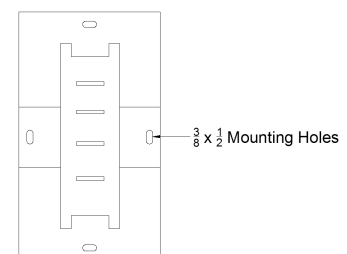


Figure 6

### 4.3 End Closer Instructions (XE100, XE200, XE400)

4.3.1 Remove external housing connectors if present. Loosen last housing screws on top and bottom of duct. Slip end closer over duct, engaging loosened screws. Tighten screws to retain end closer. (See Figure 5)

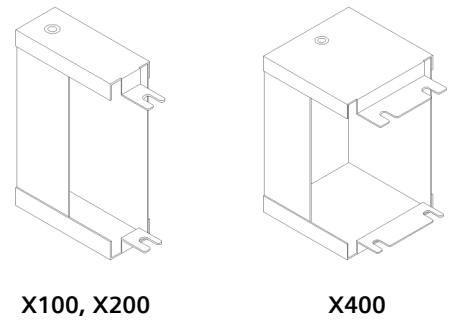


Figure 5

### 5.0 XJ-L Bus Plug Installation and Removal Instructions

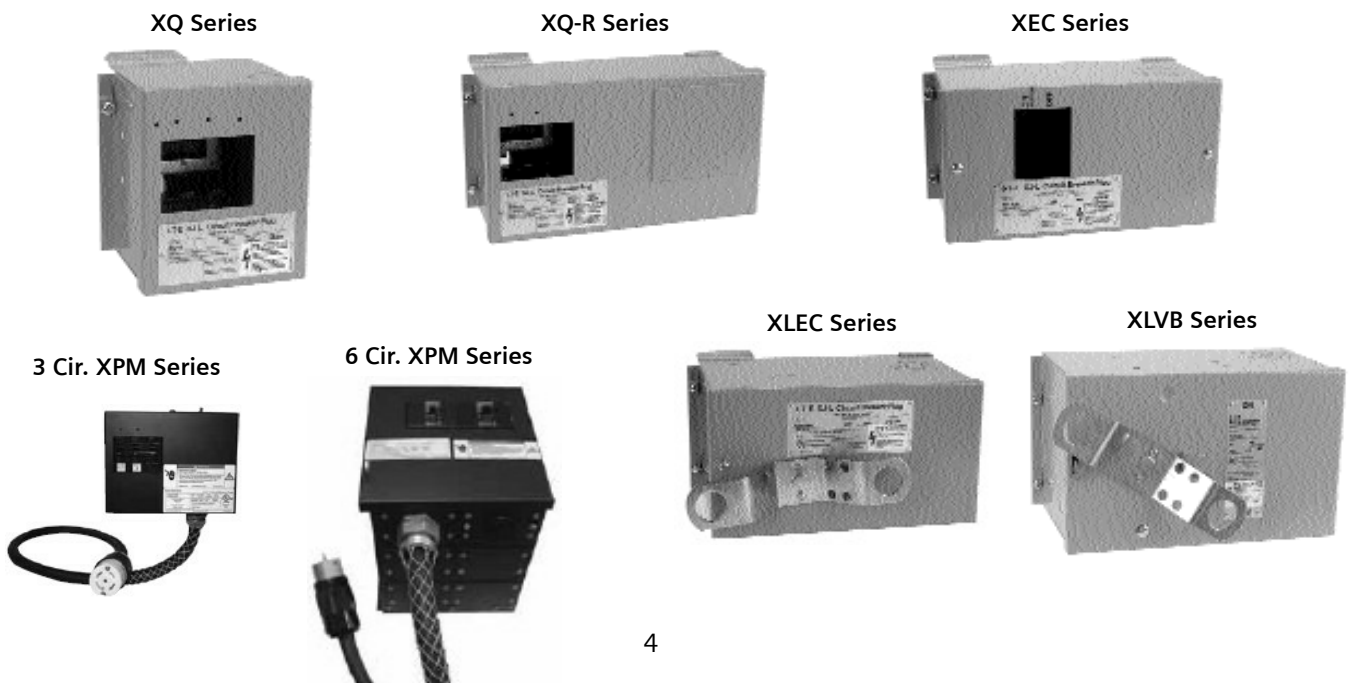
	<b>DANGER</b>	
	<ul style="list-style-type: none"> <li>• Hazardous voltages and exposed electrical conductors will cause death, serious injury, or property damage.</li> <li>• De-energize before working inside busway system. Only qualified personnel should work on or around this equipment after becoming thoroughly familiar with all warnings, safety notices, and maintenance procedures contained herein.</li> </ul>	

### 5.1 General Information

5.1.1 XJ-L Bus plugs are available with molded case circuit breakers or Vacu-Break® fusible switches. Bus plugs may be operated with a pull-chain or hookstick from the floor. Lightweight and portable, plugs are easily moved from one location to another. Captive hardware allows for easy removal and re-installation.

5.1.2 The bus plug contact fingers are lubricated with an oxide inhibiting grease at the factory. This grease should not be removed.

#### 5.1.3 Types of XJ-L Bus Plugs:



## 5.2 Bus Plug Installation Procedures

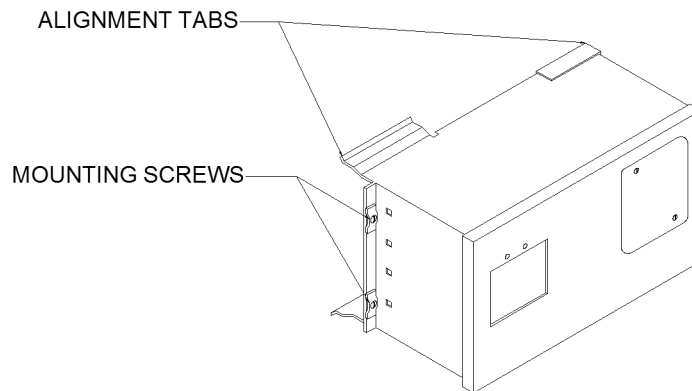
**Note:** The following are general procedures for installing all XJ-L Series bus plugs.

- 5.2.1 Ensure that the bus plug handle or breaker (if so equipped) is in the **OFF** position.
- 5.2.2 Back out all mounting screws. Screws should not be removed from the bus plug. Each plug has 1 or 2 mounting screws on the left endwall that thread into the busway sidechannel. There are additional mounting/retaining screws threaded into the top and/or bottom sides of the plug enclosure. These screw, when tightened, will lock the bus plug enclosure onto the busway sidechannel.
- 5.2.3 Remove the XOC outlet cover (if so equipped). Locate the bus plug alignment finger slot in the lower left hand corner of the busway outlet opening.
- 5.2.4 Locate the bus plug housing alignment tabs on the top of the bus plug. Position the bus plug over the outlet opening with the bus plug housing alignment tabs resting on the top of the busway.
- 5.2.5 Guide the bus plug into the outlet opening, ensuring that the bus plug alignment finger and bus plug conductor fingers enter their corresponding openings in the outlet.
- 5.2.6 Push the bus plug firmly into the busway plug-in outlet.
- 5.2.7 Make sure the bus plug is fully seated on the busway housing, and then tighten all mounting screws.
- 5.2.8 6 and 12 circuit XPMs are provided with drop rod brackets and require auxiliary support. Drop rod brackets can be used with Siemens UJ100 Universal Hanger J-Hooks.

## 5.3 Bus Plug Removal Procedures

**Note:** The following are general procedures for removing all XJ-L Series bus plugs.

- 5.3.1 Ensure that the bus plug handle or breaker (if so equipped) is in the **OFF** position.
- 5.3.2 Unplug all power cables from receptacles (if so equipped).
- 5.3.3 Loosen all mounting/retaining screws and visually verify there is clearance between the retaining screws and the busway sidechannel. Do not remove screws from bus plug.
- 5.3.4 Grasp both sides of the bus plug along the bottom edge, pull out, and then lift off of the busway.
- 5.3.5 Re-install the XOC outlet cover (if so equipped).



**Typical XJ-L Bus Plug**

## 6.0 Maintenance Procedures

- 6.0.1 Keep busway free of dust, dirt and/or foreign matter. Moisture from roof leaks or dripping pipes should be eliminated. Should the busway become contaminated with water contact the local Siemens sales office.
- 6.0.2 Inspect the busway system periodically. An infrared thermometer may be used to thermally scan the run to identify potential hot spots.
- 6.0.3 For general information regarding handling, installation, operating and maintenance of busway systems, refer to NEMA Publication No. BU1.1.

### 6.1 De-energize the busway before performing any of the following operations:



- 6.1.1 If there are signs of overheating, visually check for deterioration or contamination of insulation and contact surfaces. Check tightness of nuts, bolts, etc.
- 6.1.2 Check for missing or broken parts, corrosion, wear, dirt or signs of arcing. Clean or replace parts as required. After any repair or rework, isolate the busway and megger the busway system. Minimum readings should be no less than:

$$\text{Megohms} = 200 / \text{length of run in feet}$$

or

$$= 66 / \text{length of run in meters}$$

Contact Siemens if readings are below this minimum.

	<b>⚠ DANGER</b>	
	<ul style="list-style-type: none"><li>• Hazardous voltages and exposed electrical conductors will cause death, serious injury, or property damage.</li><li>• De-energize before working inside busway system. Only qualified personnel should work on or around this equipment after becoming thoroughly familiar with all warnings, safety notices, and maintenance procedures contained herein.</li></ul>	

THESE PROCEDURES DO NOT REPRESENT AN EXHAUSTIVE SURVEY OF MAINTENANCE STEPS NECESSARY TO ENSURE SAFE OPERATION OF THE EQUIPMENT. PARTICULAR APPLICATIONS MAY REQUIRE ADDITIONAL PROCEDURES. SHOULD ADDITIONAL INFORMATION BE DESIRED OR SHOULD PARTICULAR PROBLEMS ARISE WHICH ARE NOT COVERED SUFFICIENTLY FOR THE PURCHASER'S PURPOSES, THE MATTER SHOULD BE REFERRED TO THE LOCAL SIEMENS SALES OFFICE, OR CALL 1-800-241-4453 FOR EMERGENCY CUSTOMER SERVICE.

**NOTE:** THESE INSTRUCTIONS DO NOT PURPORT TO COVER ALL DETAILS OR VARIATIONS IN EQUIPMENT, NOR TO PROVIDE FOR EVERY POSSIBLE CONTINGENCY TO BE MET IN CONNECTION WITH THE INSTALLATION, OPERATION OR MAINTENANCE OF A SIEMENS BUSWAY SYSTEM. SHOULD ADDITIONAL INFORMATION BE DESIRED OR SHOULD PARTICULAR PROBLEMS ARISE WHICH ARE NOT COVERED SUFFICIENTLY FOR THE PURCHASER'S PURPOSES, THE MATTER SHOULD BE REFERRED TO THE LOCAL SIEMENS SALES OFFICE. THE CONTENTS OF THIS INSTRUCTION MANUAL SHALL NOT BECOME PART OF OR MODIFY ANY PRIOR OR EXISTING AGREEMENT, COMMITMENT OR RELATIONSHIP. THE SALES CONTRACT CONTAINS THE ENTIRE OBLIGATION OF SIEMENS. THE WARRANTY CONTAINED IN THE CONTRACT BETWEEN THE PARTIES IS THE SOLE WARRANTY OF SIEMENS. ANY STATEMENTS CONTAINED HEREIN DO NOT CREATE NEW WARRANTIES OR MODIFY THE EXISTING WARRANTY.

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