

**Busway Products**

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*Pow-R-Way III Upward Elbow*

## Pow-R-Way III Busway

### Product Description

#### Superior Housing Design and a True Sandwich Design Maximize Busway Performance

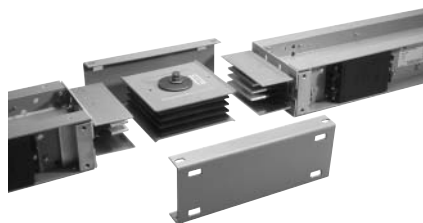
Cutler-Hammer® Pow-R-Way III® by Eaton Corporation is constructed with a lightweight and durable, two-piece, aluminum-extruded housing. The non-ventilated housing design excludes potential points of penetration by moisture or dust. Bus bars for plug-in applications have full-sized conductor tabs welded by a fully automated state-of-the-art welding process. This design extends the contact surfaces outside of the busway housing and into the plug-in outlet. The benefits of the true sandwich design for both plug-in and feeder busway include improved coordination and heat dissipation, better bracing, and the elimination of the "chimney effect."



*Cut-Away Section of Plug-in Busway*

#### Epoxy Insulation Provides Exceptional Performance

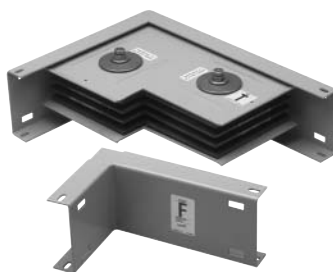
The phase and neutral bars are insulated with Class B, 130°C, epoxy insulation applied by an automated fluidized bed process. This application insulates the conductors in a precise and controlled manner to ensure smooth, continuous, high quality protection. Following the epoxy insulation process, all contact surfaces are silver-plated to provide an extremely durable connection.



*Indoor Joint Assembly*

#### Pow-R-Way III Bridge Joint Reduces Installation Time and Provides Flexibility for Future Modifications

Pow-R-Way III joint connections are made with the rugged Pow-R-Bridge joint package. A Pow-R-Bridge is installed on each section of busway prior to shipment. Job site connections are made quickly by releasing the bridge joint bolt, moving the next section into place, and re-tightening the bolt. Torque-indicating, double-headed bolts with fall-away instruction tags are provided to ensure that proper installation torque is achieved. The Pow-R-Bridge provides an adjustment in section length of up to  $\pm 0.5$ -inch (12.7 mm) at each joint.



*Forward Corner Joint*

#### Pow-R-Way III Offers Grounding and Neutral Options to Meet Every Customer Preference and Need

The aluminum housing is UL® listed as a 50% integral ground path and is provided as a standard, economical ground system. A 50% internal ground bar is also available. In certain industrial applications, a ground path greater than 50% may be required. Pow-R-Way III can solve this problem in a cost-efficient manner through

combining the 50% integral housing ground with the 50% internal ground. To meet the growing demand for grounding isolation, Pow-R-Way III also offers a 50% isolated ground bar. When customers are concerned about harmonics and overheating generated by nonlinear loads, Pow-R-Way III provides a solution through a fully rated 200% capacity neutral bar.



*Joint End*

#### A Space-Saving Innovation — The Corner Joint Elbow

The Pow-R-Way III Corner Joint combines the features of the Pow-R-Bridge with reduced elbow leg lengths. Due to its compact design, the corner joint allows for layouts that provide optimum utilization of space and increases available plug-in openings.



*Upward Corner Joint*



*Straight Lengths*

### Pow-R-Way III Busway

#### A Complete Line of Fittings for Indoor and Outdoor Applications

Pow-R-Way III offers an extensive range of fittings to meet every application need. Flanges, elbows, end cable tap boxes and end closers are used in basic busway routing. For more complex layouts, combination elbows and offsets can be utilized along with transformer throats, vault flanges, reducers and expansion joints.



*End Cable Tap Box*



*Upward Elbow*



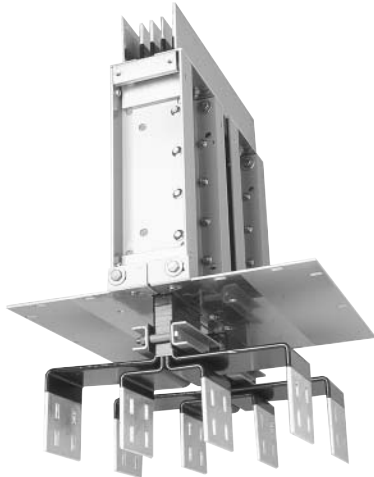
*Rearward Corner Joint Assembly*



*Outdoor Joint Assembly*

#### High 6-Cycle Short-Circuit Ratings Optimize Coordination between Busway and Power Equipment and Meet High Quality Standards

All ratings of Pow-R-Way III have been tested to 6-cycle standards and have achieved a minimum rating of 85 kA and a maximum rating of 200 kA rms symmetrical.



*Standard Switchboard Flange*

#### Enhanced Bus Plug Design Facilitates Installation and Improves Safety

Pow-R-Way III plug-in protective devices are available in circuit breaker and fusible switch designs. Standard features include: oversized enclosures, extended ground and neutral bars, line side barriers, bus plug alignment pin, busway interlock, and improved clamp and guides.

Advanced bus plugs provide protection, communication and coordination capabilities using the Visor™ Series (TVSS), Energy Sentinel™, Digitrip™ OPTIM™, and Advantage™ Motor Control components.



*Typical Busway Installation  
(Torque Indicating Bolt)*



*Plug-in Unit*



*Final Busway Assembly*

### Pow-R-Way III Busway

## Features, Benefits and Functions

### Pow-R-Way III Offers a Full Line of Low Voltage Busway to Meet the Needs of the Global Marketplace

Eaton Corporation has combined the requirements of NEMA®, UL, CSA® and IEC into one design to present a world-class product in the Cutler-Hammer Pow-R-Way III. With standard features that include a two-piece aluminum housing, finger-safe plug-in outlets, an integral ground path and high 6-cycle short-circuit withstand ratings, Pow-R-Way III provides a busway system that can be utilized over a broad spectrum of industrial, commercial and institutional applications worldwide.

### Product Offering

#### ■ Plug-in Busway

225 to 5000 amperes copper and 225 to 4000 amperes aluminum straight sections of plug-in busway are available in 2-foot (.6 m) incremental lengths from a 2-foot (.6 m) minimum to 10-foot (3 m) maximum. Plug-in busway is also available as sprinkler-proof.

#### ■ Feeder Busway

225 to 5000 amperes copper and 225 to 4000 amperes aluminum straight sections of indoor and outdoor feeder busway available in any length in 1/8-inch (3.2 mm) increments from a 16-inch (406 mm) minimum to a 10-foot (3 m) maximum. A wide range of fittings are available in indoor or outdoor feeder busway.

#### ■ Plug-in Units

A full family of busway plug-in units is available. Standard plug-in units include fusible or circuit breaker protection. Advanced plug-in units include Visor Series surge suppression, communicating IQ Energy Sentinel and OPTIM Circuit Breakers, and Advantage combination contactors and starters.

### Product Features and Benefits

- The all-aluminum two-piece housing provides durability and product integrity.
- The lightweight and compact design results in easy installation.

- The housing combined with a true sandwich design in both plug-in and feeder busway contributes to improve coordination and high short-circuit ratings.
- An epoxy insulation process ensures optimum conductor and system protection.
- Silver-plated joint and contact surfaces provide high-quality connections.
- Highly automated manufacturing processes result in a superior product.
- The Pow-R-Bridge joint package and torque indicating bolt gives a rugged, yet flexible and easy-to-install connection.
- Corner Joint Elbows contribute to successful layouts and minimize space limitations.
- High 6-cycle short-circuit ratings optimize coordination between busway and power equipment.
- This world-class product design and manufacturing meets the requirements of NEMA, CSA, Seismic and ISO®.
- Plug-in busway design and an enhanced bus plug-in unit facilitates installation and improves safety.
- Flexible ground and neutral options provide solutions for any application problem.
- A full family of plug-in units is available for every power need.
- Advanced bus plugs provide protection, communication and coordination capabilities.

### Busway Capabilities

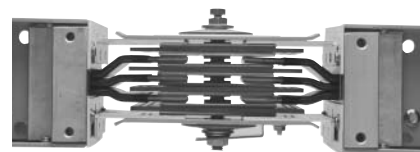
- The busway manufacturing plant in Greenwood, SC is able to meet your emergency or quick ship requirements with quick ship lead-times from 3 days to 2 weeks.
- Customer approval drawings can be available in *2 weeks or less* to meet your project requirements.
- Eaton's Cutler-Hammer Final Field Fit program ensures accurate layout and allows for minor last-minute modifications during installation.
- Advanced system tools including the Bid Manager™ and Pow-R-Designer™ programs provide quick and accurate product information.

### Product Support

- Busway product and application support is available from a professional team of Eaton employees that includes Field Sales Engineers, Application Engineers, Engineering Service Systems and the Greenwood Busway Product Engineering Services.

### Additional Pow-R-Way III Information

Technical Data:	TD01701001E
ABCs of Busway:	IM01701002E
Brochure:	BR01701001E
Busway vs. Cable and Conduit:	SA01701003E
Final Field Fit Program:	SA01701004E
Selling Policy:	25-000
Discount Symbol:	CE3-LV Busway CE4-LV Busway Devices



*Bridge Joint Assembly*

## Standards and Certifications

- Pow-R-Way III meets the requirements of NEMA, UL 857, CSA C22.2 No. 27-94, IEEE, ANSI, IEC 439-1 & 2, IEC 529 and is manufactured in an ISO 9001 certified facility.
- Pow-R-Way III meets the International Building Code standards and is certified in the Uniform Building Code® and the California Building Code to exceed Zone 4 requirements.

## Product Specifications

### Ratings

- B. The busway shall be Cutler-Hammer type Pow-R-Way III by Eaton Corporation:
- [3-phase, 3-wire]
  - [3-phase, 3-wire with 50% housing ground and/or 50% internal ground]
  - [3-phase, 3-wire with 50% housing ground and/or 50% isolated ground]
  - [3-phase, 4-wire with 100% neutral]
  - [3-phase, 4-wire with 100% neutral, 50% housing and/or 50% internal ground]
  - [3-phase, 4-wire with 100% neutral, 50% housing and/or 50% isolated ground]
  - [3-phase, 4-wire with 200% neutral]
  - [3-phase, 4-wire with 200% neutral, 50% housing ground, and/or 50% internal ground]
  - [3-phase, 4-wire with 200% neutral, 50% housing ground, and/or 50% isolated ground]
- with voltage and current ratings as indicated on the contract drawings.
- C. The busway shall have a minimum of 6-cycle short-circuit rating of 85 kA rms symmetrical for ratings through 800 amperes, 100 kA rms symmetrical for ratings through 1350 amperes, 125 kA rms symmetrical for ratings through 1600 amperes, 150 kA rms symmetrical for ratings through 2500 amperes, and 200 kA rms symmetrical for ratings through 5000 amperes.

### Construction

- A. The busway and associated fittings shall consist of [aluminum] [copper] conductors totally enclosed in a two-piece extruded aluminum housing. Outdoor feeder, indoor feeder and indoor plug-in busway shall be interchangeable at the same rating without the use of adapters or

special splice plates. Fittings — such as elbows, tees, flanges, etc. — shall be identical for use with both the plug-in and feeder types of busway. The busway shall be capable of being mounted flatwise, edgewise, or vertically without derating. The busway shall consist of standard 10-foot (3 m) sections with special sections and fittings provided to suit the installation. Horizontal runs shall be suitable for hanging on 10-foot (3 m) maximum centers. Vertical runs shall be suitable for mounting on 16-foot (4 m) maximum centers. Provide one hanger for every 10 feet (3 m) of horizontally mounted duct. On vertical runs provide one adjustable hanger per floor.

### Bus

- A. Bus bars shall be fabricated from high strength, [55% conductivity aluminum] [98% conductivity copper] and suitably plated at all electrical contact surfaces.
- B. Bus bars shall be insulated over their entire length, except at joints and contact surfaces, with a UL listed insulating material consisting of epoxy applied by fluidized bed process. Tape or heat-shrink sleeve insulation, or any other method of insulation which can allow air-gaps or insulation breakdown, shall not be acceptable.
- C. The busway shall be capable of carrying rated current continuously without exceeding a temperature rise of 55°C based on a 40°C ambient.

### Bus Joints

- A. Each busway section shall be furnished complete with joint hardware and covers. The busway joints shall be a single-bolt, non-rotating, removable bridge design. All bridge joints shall be furnished with torque-indicating double head joint bolts and Belleville washers. The bridge joint shall utilize a captive nut retainer on the opposite side of the torque indicating bolt. The bridge joint design shall ensure proper installation without the use of a torque wrench, and provide visual indication that the joint is properly torqued. Each busway joint shall allow for a minimum length adjustment of  $\pm 0.5$  inches (12.7 mm). De-energization of busway shall not be required for safe testing of joint tightness.

### Housing

- A. The busway housing shall be a two-piece design fabricated from extruded aluminum. The two-piece housing shall be bolted together along the bottom flange. The busway enclosure finish shall be ANSI 61 gray baked epoxy powder paint applied by an electrostatic process.
- B. Outdoor feeder busway housing shall be identical to indoor feeder busway housings, and shall be UL listed for outdoor use.

### Pow-R-Way III Busway — Product Specifications

#### Plug-in Busway

- A. Where required, busway shall be of the plug-in type. Plug-in busway shall be available in standard 2-, 4-, 6-, 8- and 10-foot lengths, with plug-in openings provided on both sides of the busway sections on 2-foot (.6 m) centers. Plug-in covers shall prevent dirt and debris from entering contact plug-in openings in the busway. The design shall allow for 10 hinged cover outlets per 10 feet (3 m) of plug-in length. Covers for plug-in openings shall have a positive screw close feature and provisions for the installation of power company seals. The contact surfaces for bus plug stabs shall be silver-plated of the same material, thickness, and rating as the stab bars. The tabs shall be welded to the bus bars. A standard housing ground connection shall be supplied in each plug-in opening. Positive mechanical guides for plug-in units shall be provided at each plug-in opening to facilitate unit alignment and prevent improper installation.
- B. Where required, plug-in units of the types and ratings indicated on the plans and specifications shall be supplied. Plug-in units shall be mechanically interlocked with the busway housing to prevent their installation or removal when the switch is in the ON position. The enclosure of any plug-in unit shall make positive ground connection to the duct housing before the stabs make contact with the bus bars. All plug-in units shall be equipped with a defeatable interlock to prevent the cover from being opened while the switch is in the ON position and prevent accidental closing of the switch while the cover is open. The plugs shall be provided with a means for padlocking the cover closed and padlocking the disconnect device in the OFF position. The operating handle and mechanism shall remain in control of the disconnect device at all times, permitting its easy operation from the floor by means of a hookstick or chain. For safety reasons, no projections shall extend into the busway housing other than the plug-in stabs. All plug-in units shall be interchangeable without alteration or moderation of plug-in duct.
- C. Fusible-type plugs shall have a quick-make/quick-break disconnect switch and positive pressure fuse clips
- OR —
- C. Circuit-breaker-type plugs shall have an interrupting rating of not less than — symmetrical rms amperes or be series-rated as otherwise shown in the contract document and shall meet all requirements of UL Standard 489. It shall be possible to increase the interrupting rating of a breaker plug-in device having ampere ratings through 400 amperes up to 100 kAIC at 480 Vac and 200 kAIC at 240 Vac by changing out the circuit breaker only and leaving the enclosure intact. All breaker plug-in devices shall be Cutler-Hammer type Series C.

#### Transient Voltage Surge Suppression

- A. Provide transient voltage surge suppression as specified in Section 16671.

For a complete product specification in CSI format, see the Cutler-Hammer Product Specification Guide..... **Section 16466**

**Technical Data and Specifications**

**Dimensions — Bus Bar and Housing**

**Table 17-1. 3-Wire with No Neutral**

Ampere Rating		Phase Bar Size (Depth and Width) Inches (mm)	Bar Per Phase	Wire Designation and Housing Size (Width x Height) Inches (mm)			Figure
Cu	Al			50% Integral Housing Ground 3WH	50% Internal Ground Bus 3WHG	50% Internal Isolated Ground 3WI	
225	225	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.38 (120.7 x 111.3)	4.75 x 4.50 (120.7 x 114.3)	4.75 x 4.55 (120.7 x 115.6)	A
400	400	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.38 (120.7 x 111.3)	4.75 x 4.50 (120.7 x 114.3)	4.75 x 4.55 (120.7 x 115.6)	A
600	—	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.38 (120.7 x 111.3)	4.75 x 4.50 (120.7 x 114.3)	4.75 x 4.55 (120.7 x 115.6)	A
800	600	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.38 (120.7 x 111.3)	4.75 x 4.50 (120.7 x 114.3)	4.75 x 4.55 (120.7 x 115.6)	A
1000	—	.25 x 2.25 (6.4 x 57.2)	1	5.38 x 4.38 (136.7 x 111.3)	5.38 x 4.50 (136.7 x 114.3)	5.38 x 4.55 (136.7 x 115.6)	A
1200	800	.25 x 2.75 (6.4 x 70.0)	1	5.88 x 4.38 (149.4 x 111.3)	5.88 x 4.50 (149.4 x 114.3)	5.88 x 4.55 (149.4 x 115.6)	A
1350	1000	.25 x 3.25 (6.4 x 82.3)	1	6.38 x 4.38 (162.1 x 111.3)	6.38 x 4.50 (162.1 x 114.3)	6.38 x 4.55 (162.1 x 115.6)	A
1600	1200	.25 x 4.25 (6.4 x 108.0)	1	7.38 x 4.38 (187.5 x 111.3)	7.38 x 4.50 (187.5 x 114.3)	7.38 x 4.55 (187.5 x 115.6)	A
2000	1350	.25 x 5.50 (6.4 x 139.7)	1	8.64 x 4.38 (219.5 x 111.3)	8.64 x 4.50 (219.5 x 114.3)	8.64 x 4.55 (219.5 x 115.6)	A
—	1600	.25 x 6.25 (6.4 x 158.8)	1	9.40 x 4.38 (238.8 x 111.3)	9.40 x 4.50 (238.8 x 114.3)	9.40 x 4.55 (238.8 x 115.6)	A
2500	2000	.25 x 8.00 (6.4 x 203.2)	1	11.17 x 4.38 (283.7 x 111.3)	11.17 x 4.50 (283.7 x 114.3)	11.17 x 4.55 (283.7 x 115.6)	A
3200	—	.25 x 4.25 (6.4 x 108.0)	2	16.14 x 4.38 (410.0 x 111.3)	16.14 x 4.50 (410.0 x 114.3)	16.14 x 4.55 (410.0 x 115.6)	B
4000	2500	.25 x 5.50 (6.4 x 139.7)	2	18.64 x 4.38 (473.5 x 111.3)	18.64 x 4.50 (473.5 x 114.3)	18.64 x 4.55 (473.5 x 115.6)	B
—	3200	.25 x 6.25 (6.4 x 158.8)	2	20.16 x 4.38 (512.0 x 111.3)	20.16 x 4.50 (512.0 x 114.3)	20.16 x 4.55 (512.0 x 115.6)	B
5000	4000	.25 x 8.00 (6.4 x 203.2)	2	23.70 x 4.38 (602.0 x 111.3)	23.70 x 4.50 (602.0 x 114.3)	23.70 x 4.55 (602.0 x 115.6)	B

Note: Refer to Figure 17-1 on Page 17-8.

**Table 17-2. 4-Wire with 100% Neutral**

Ampere Rating		Phase and Neutral Bar Size (Depth and Width) Inches (mm)	Bar Per Phase	Wire Designation and Housing Size (Width x Height) Inches (mm)			Figure
Cu	Al			50% Integral Housing Ground 4WH	50% Internal Ground 4WHG	50% Internal Isolated Ground 4WI	
225	225	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.38 (120.7 x 111.3)	4.75 x 4.50 (120.7 x 114.3)	4.75 x 4.55 (120.7 x 115.6)	A
400	400	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.38 (120.7 x 111.3)	4.75 x 4.50 (120.7 x 114.3)	4.75 x 4.55 (120.7 x 115.6)	A
600	—	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.38 (120.7 x 111.3)	4.75 x 4.50 (120.7 x 114.3)	4.75 x 4.55 (120.7 x 115.6)	A
800	600	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.38 (120.7 x 111.3)	4.75 x 4.50 (120.7 x 114.3)	4.75 x 4.55 (120.7 x 115.6)	A
1000	—	.25 x 2.25 (6.4 x 57.2)	1	5.38 x 4.38 (136.7 x 111.3)	5.38 x 4.50 (136.7 x 114.3)	5.38 x 4.55 (136.7 x 115.6)	A
1200	800	.25 x 2.75 (6.4 x 70.0)	1	5.88 x 4.38 (149.4 x 111.3)	5.88 x 4.50 (149.4 x 114.3)	5.88 x 4.55 (149.4 x 115.6)	A
1350	1000	.25 x 3.25 (6.4 x 82.3)	1	6.38 x 4.38 (162.1 x 111.3)	6.38 x 4.50 (162.1 x 114.3)	6.38 x 4.55 (162.1 x 115.6)	A
1600	1200	.25 x 4.25 (6.4 x 108.0)	1	7.38 x 4.38 (187.5 x 111.3)	7.38 x 4.50 (187.5 x 114.3)	7.38 x 4.55 (187.5 x 115.6)	A
2000	1350	.25 x 5.50 (6.4 x 139.7)	1	8.64 x 4.38 (219.5 x 111.3)	8.64 x 4.50 (219.5 x 114.3)	8.64 x 4.55 (219.5 x 115.6)	A
—	1600	.25 x 6.25 (6.4 x 158.8)	1	9.40 x 4.38 (238.8 x 111.3)	9.40 x 4.50 (238.8 x 114.3)	9.40 x 4.55 (238.8 x 115.6)	A
2500	2000	.25 x 8.00 (6.4 x 203.2)	1	11.17 x 4.38 (283.7 x 111.3)	11.17 x 4.50 (283.7 x 114.3)	11.17 x 4.55 (283.7 x 115.6)	A
3200	—	.25 x 4.25 (6.4 x 108.0)	2	16.14 x 4.38 (410.0 x 111.3)	16.14 x 4.50 (410.0 x 114.3)	16.14 x 4.55 (410.0 x 115.6)	B
4000	2500	.25 x 5.50 (6.4 x 139.7)	2	18.64 x 4.38 (473.5 x 111.3)	18.64 x 4.50 (473.5 x 114.3)	18.64 x 4.55 (473.5 x 115.6)	B
—	3200	.25 x 6.25 (6.4 x 158.8)	2	20.16 x 4.38 (512.0 x 111.3)	20.16 x 4.50 (512.0 x 114.3)	20.16 x 4.55 (512.0 x 115.6)	B
5000	4000	.25 x 8.00 (6.4 x 203.2)	2	23.70 x 4.38 (602.0 x 111.3)	23.70 x 4.50 (602.0 x 114.3)	23.70 x 4.55 (602.0 x 115.6)	B

Note: Refer to Figure 17-1 on Page 17-8.

Pow-R-Way III Busway — Technical Data and Specifications

Dimensions — Bus Bar and Housing

Table 17-3. 4-Wire with 200% Neutral

Ampere Rating		Phase Bar Size (Depth and Width) Inches (mm) Neutral Bar is 0.5 (12.7) x Width Shown	Bar Per Phase	Wire Designation and Housing Size (Width x Height) Inches (mm)			Figure
Cu	Al			50% Integral Housing Ground 4WNH	50% Internal Ground Bus 4WNG	50% Internal Isolated Ground 4WNI	
225	225	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.92 (120.7 x 125.0)	4.75 x 5.05 (120.7 x 128.3)	4.75 x 5.10 (120.7 x 129.5)	A
400	400	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.92 (120.7 x 125.0)	4.75 x 5.05 (120.7 x 128.3)	4.75 x 5.10 (120.7 x 129.5)	A
600	—	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.92 (120.7 x 125.0)	4.75 x 5.05 (120.7 x 128.3)	4.75 x 5.10 (120.7 x 129.5)	A
800	600	.25 x 1.62 (6.4 x 41.1)	1	4.75 x 4.92 (120.7 x 125.0)	4.75 x 5.05 (120.7 x 128.3)	4.75 x 5.10 (120.7 x 129.5)	A
1000	—	.25 x 2.25 (6.4 x 57.2)	1	5.38 x 4.92 (136.7 x 125.0)	5.38 x 5.05 (136.7 x 128.3)	5.38 x 5.10 (136.7 x 129.5)	A
1200	800	.25 x 2.75 (6.4 x 70.0)	1	5.88 x 4.92 (149.4 x 125.0)	5.88 x 5.05 (149.4 x 128.3)	5.88 x 5.10 (149.4 x 129.5)	A
1350	1000	.25 x 3.25 (6.4 x 82.3)	1	6.38 x 4.92 (162.1 x 125.0)	6.38 x 5.05 (162.1 x 128.3)	6.38 x 5.10 (162.1 x 129.5)	A
1600	1200	.25 x 4.25 (6.4 x 108.0)	1	7.38 x 4.92 (187.5 x 125.0)	7.38 x 5.05 (187.5 x 128.3)	7.38 x 5.10 (187.5 x 129.5)	A
2000	1350	.25 x 5.50 (6.4 x 139.7)	1	8.64 x 4.92 (219.5 x 125.0)	8.64 x 5.05 (219.5 x 128.3)	8.64 x 5.10 (219.5 x 129.5)	A
—	1600	.25 x 6.25 (6.4 x 158.8)	1	9.40 x 4.92 (238.8 x 125.0)	9.40 x 5.05 (238.8 x 128.3)	9.40 x 5.10 (238.8 x 129.5)	A
2500	2000	.25 x 8.00 (6.4 x 203.2)	1	11.17 x 4.92 (283.7 x 125.0)	11.17 x 5.05 (283.7 x 128.3)	11.17 x 5.10 (283.7 x 129.5)	A
3200	—	.25 x 4.25 (6.4 x 108.0)	2	16.14 x 4.92 (410.0 x 125.0)	16.14 x 5.05 (410.0 x 128.3)	16.14 x 5.10 (410.0 x 129.5)	B
4000	2500	.25 x 5.50 (6.4 x 139.7)	2	18.64 x 4.92 (473.5 x 125.0)	18.64 x 5.05 (473.5 x 128.3)	18.64 x 5.10 (473.5 x 129.5)	B
—	3200	.25 x 6.25 (6.4 x 158.8)	2	20.16 x 4.92 (512.0 x 125.0)	20.16 x 5.05 (512.0 x 128.3)	20.16 x 5.10 (512.0 x 129.5)	B
5000	4000	.25 x 8.00 (6.4 x 203.2)	2	23.70 x 4.92 (602.0 x 125.0)	23.70 x 5.05 (602.0 x 128.3)	23.70 x 5.10 (602.0 x 129.5)	B

Note: Refer to Figure 17-1 below.

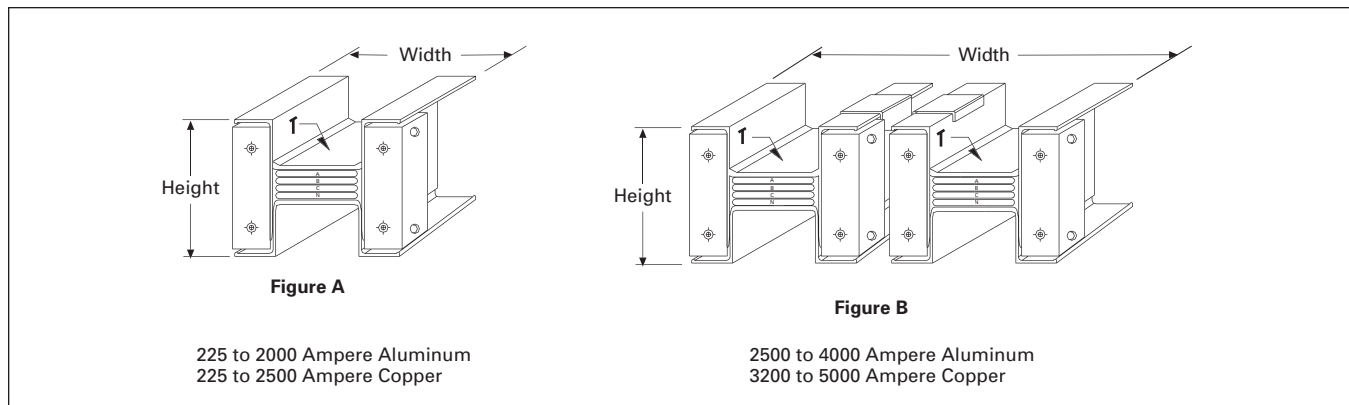


Figure 17-1. Single and Double Module Cross-Sections

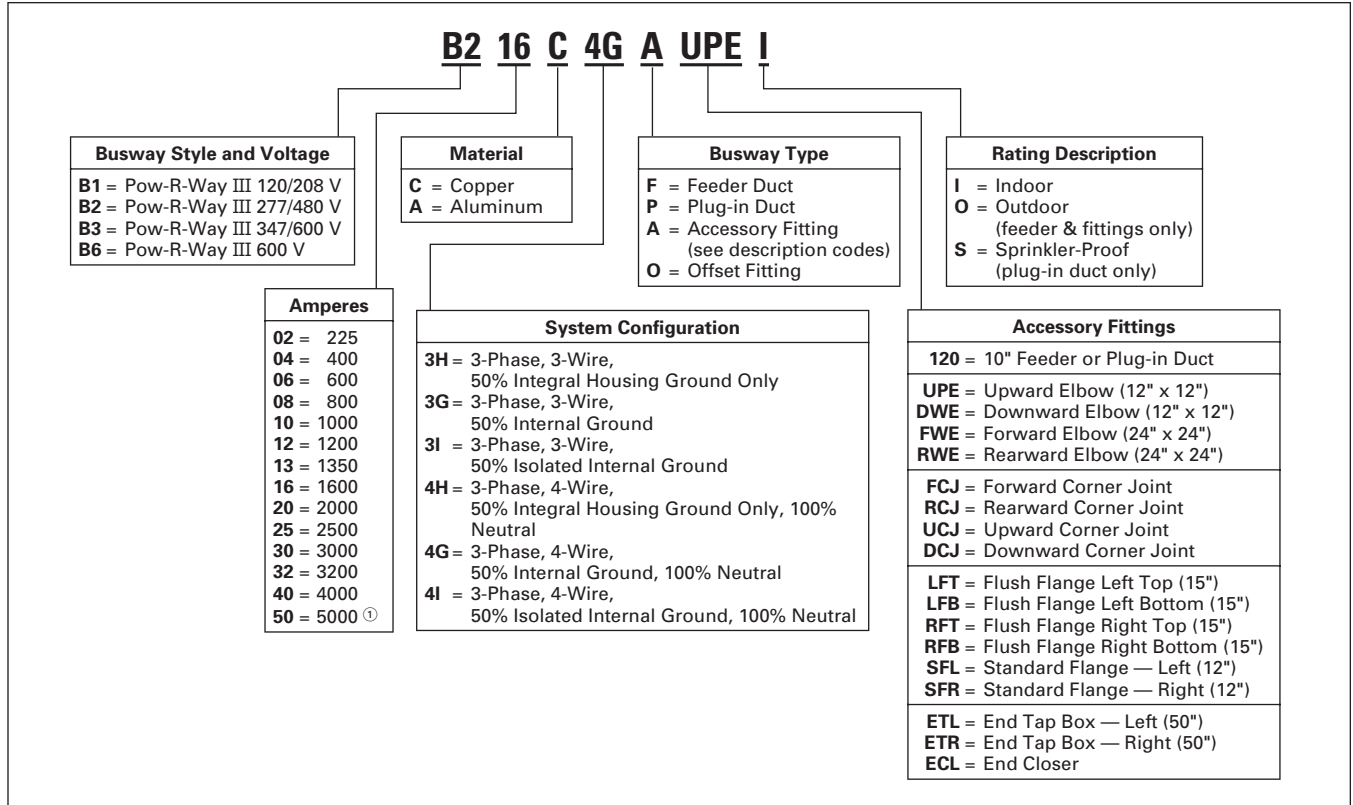


**Pow-R-Way III Catalog Numbering System**

The Pow-R-Way III Catalog Numbering System was created using the logic of Lean Manufacturing. With the use of a single catalog number, the customer will be able to order everything from a standard straight piece of busway, to a variety of accessory fittings in all configurations and materials. Using this process will assist in standardizing the Pow-R-Way III product line and allow manufacturing to reduce lead-times.

The Catalog Numbering System below represents the initial offering available. The numbering system has been loaded into Bid Manager, and soon standard busway pieces can be ordered with the ease of one number. Additional offerings in the future will include straight busway pieces down to 1-inch (25.4 mm) increments and will include all of the standard accessory fittings available today. Busway items not covered in this numbering system will be entered as they are today and will be engineered at the plant.

**Table 17-4. Pow-R-Way III Catalog Numbering System**



① Copper only.

## Product Selection

### General Information

- Determine the total footage, all fittings, and accessories for entire busway run. Price the total footage by type and system requirements. Round footage up to the nearest foot. Add the fabrication charge for the fittings. Add any additional accessories required for the total price of the busway run.

### Plug-in

- Straight sections of plug-in busway are available in 2-foot (.6 m) increments from 2-foot (.6 m) minimum to 10-foot (3 m) maximum. Pow-R-Bridge joint is included.

### Sprinkler-proof Plug-in

- For sprinkler-proof plug-in, multiply the plug-in price by 1.15 and use outdoor pricing for the feeder busway.

### Feeder

- Straight sections of feeder busway are available in 1/8-inch (3.2 mm) increments from 16 inches (406 mm) minimum to 10-foot (3 m) maximum. Pow-R-Bridge joint is included. Busway must carry at least a 50% load in all outdoor applications.

### Hangers/Pow-R-Bridge

- The busway price includes one horizontal hanger per 10 feet (3 m) of busway and one Pow-R-Bridge joint per connection. All vertical hangers and any additional horizontal hangers should be added to the total price.

### Ground

- A 50% integral housing ground is provided as standard. The housing ground can be used in combination with the internal ground or the isolated ground to achieve a 100% ground rating.

**Table 17-5. Short-Circuit Withstand Ratings — rms Symmetrical Amperes for Copper Pow-R-Way III Plug-in and Feeder Busway**

Ampere Rating	6-Cycle Copper
225	85,000
400	85,000
600	85,000
800	85,000
1000	100,000
1200	100,000
1350	100,000
1600	125,000
2000	150,000
2500	150,000
3200	200,000
4000	200,000
5000	200,000

## Pricing — Copper Busway

**Table 17-6. Busway (Copper) — Copper Straight Lengths**

Ampere Rating	Plug-in	Indoor Feeder	Outdoor Feeder	50% Internal Ground	50% Isolated Ground	200% Neutral
	Price U.S. \$ Per Foot, Busway Only			Price U.S. \$ Per Adder Per Foot		
<b>3-Phase, 3-Wire, 600 Volts with Integral Housing Ground</b>						
225						—
400						—
600						—
800						—
1000						—
1200						—
1350						—
1600						—
2000						—
2500						—
3200						—
4000						—
5000						—
<b>3-Phase, 4-Wire, Full Neutral, 277/480 Volts or 347/600 Volts with Integral Housing Ground</b>						
225						
400						
600						
800						
1000						
1200						
1350						
1600						
2000						
2500						
3200						
4000						
5000						

**Table 17-7. Fabrication Adders for Common Fittings — Cable Tap Boxes and End Closures**

Ampere Rating	End or Center Cable Tap Box	Outdoor Cable Tap Box	Weatherhead	End Closure
	Price U.S. \$			
<b>3-Phase, 3-Wire, 600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3200 – 5000				
<b>3-Phase, 4-Wire, 277/480 Volts or 367/600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3200 – 5000				

### General Information

- When pricing a cable tap box or a weatherhead, include the price of 4-feet (1.2 m) of feeder busway to the fabrication charge.
- Cable tap boxes include 1/0 to 600 kcmil lugs. For additional lugs, larger lugs, or compression type lugs, refer to Eaton's Cutler-Hammer Busway.
- Additional fittings on **Page 17-12**.

**Table 17-8. Accessories and Renewal Parts**

Description	Catalog Number	Price U.S. \$
Wall/Floor Flange	①	
Vertical Hanger	①	
Extra Horizontal Hanger	①	
Roof Flange (Required when Outdoor Busway Penetrates a Roof)	①	
Indoor Joint Cover	①	
Outdoor Joint Cover	①	
Hookstick Kit — 8 – 14 Foot (2.4 – 4.3 m)	HS8-14	
Joint Puller	PWJP	

① Specify the ampere rating and system requirements when ordering as renewal parts.

Discount Symbol ..... **CE3**

**General Information**

- Determine the total footage, all fittings, and accessories for entire busway run. Price the total footage by type and system requirements. Round footage up to the nearest foot. Add the fabrication charge for the fittings. Add any additional accessories required for the total price of the busway run.

**Plug-in**

- Straight sections of plug-in busway are available in 2-foot (.6 m) increments from 2-foot (.6 m) minimum to 10-foot (3 m) maximum. Pow-R-Bridge joint is included.

**Sprinkler-proof Plug-in**

- For sprinkler-proof plug-in, multiply the plug-in price by 1.15 and use outdoor pricing for the feeder busway.

**Feeder**

- Straight sections of feeder busway are available in 1/8-inch (3.2 mm) increments from 16 inches (406 mm) minimum to 10-foot (3 m) maximum. Pow-R-Bridge joint is included. Busway must carry at least a 50% load in all outdoor applications.

**Hangers/Pow-R-Bridge**

- The busway price includes one horizontal hanger per 10 feet (3 m) of busway and one Pow-R-Bridge joint per connection. All vertical hangers and any additional horizontal hangers should be added to the total price.

**Ground**

- A 50% integral housing ground is provided as standard. The housing ground can be used in combination with the internal ground or the isolated ground to achieve a 100% ground rating.

**Table 17-9. Short-Circuit Withstand Ratings — rms Symmetrical Amperes for Aluminum Pow-R-Way III Plug-in and Feeder Busway**

Ampere Rating	6-Cycle Aluminum
225	85,000
400	85,000
600	85,000
800	100,000
1000	100,000
1200	125,000
1350	150,000
1600	150,000
2000	150,000
2500	200,000
3200	200,000
4000	200,000
5000	—

**Pricing — Aluminum Busway**

**Table 17-10. Busway (Aluminum) — Aluminum Straight Lengths**

Ampere Rating	Plug-in	Indoor Feeder	Outdoor Feeder	50% Internal Ground	50% Isolated Ground	200% Neutral
	Price U.S. \$ Per Foot, Busway Only			Price U.S. \$ Per Adder Per Foot		
<b>3-Phase, 3-Wire, 600 Volts with Integral Housing Ground</b>						
225						—
400						—
600						—
800						—
1000						—
1200						—
1350						—
1600						—
2000						—
2500						—
3200						—
4000						—
5000						—

**3-Phase, 4-Wire, Full Neutral, 277/480 Volts or 347/600 Volts with Integral Housing Ground**

225						
400						
600						
800						
1000						
1200						
1350						
1600						
2000						
2500						
3200						
4000						
5000						

**Table 17-11. Fabrication Adders for Common Fittings — Cable Tap Boxes and End Closures**

Ampere Rating	End or Center Cable Tap Box	Outdoor Cable Tap Box	Weatherhead	End Closure
	Price U.S. \$			
<b>3-Phase, 3-Wire, 600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3200 – 5000				
<b>3-Phase, 4-Wire, 277/480 Volts or 367/600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3200 – 5000				

**General Information**

- When pricing a cable tap box or a weatherhead, include the price of 4 feet (1.2 m) of feeder busway to the fabrication charge.

- Cable tap boxes include 1/0 to 600 kcmil lugs. For additional lugs, larger lugs, or compression type lugs, refer to Eaton's Cutler-Hammer Busway.
- Additional Fittings on **Page 17-12**.

**Table 17-12. Accessories and Renewal Parts**

Description	Catalog Number	Price U.S. \$
Wall/Floor Flange	①	
Vertical Hanger	①	
Extra Horizontal Hanger	①	
Roof Flange (Required when Outdoor Busway Penetrates a Roof)	①	
Indoor Joint Cover	①	
Outdoor Joint Cover	①	
Hookstick Kit — 8 – 14 Foot (2.4 – 4.3 m)	<b>HS8-14</b>	
Joint Puller	<b>PWJP</b>	

① Specify the ampere rating and system requirements when ordering as renewal parts.

**General Information**

- For a complete price on these fittings, add the price of the footage through the fitting to the fabrication charge. See **Page 17-10** for copper or **Page 17-11** for aluminum per foot prices.
- A standard flange is used to connect to Eaton's Cutler-Hammer equipment.

**General Information**

- For a complete price on these fittings, add the price of the footage through the fitting to the fabrication charge. See **Page 17-10** for copper or **Page 17-11** for aluminum per foot prices.
- A Corner Joint Elbow is an exclusive Pow-R-Way III feature that provides minimum elbow leg lengths to maximize plug-in usage. Used for indoor applications only.
- For a special degree elbow, double the traditional elbow fabrication charge.

**General Information**

- See NEC® 364-11 for Reducer Application.
- Price fabrication charge at the lower busway rating.
- For a complete price on these fittings, add the price of the footage through the fitting to the fabrication charge. See **Page 17-10** for copper or **Page 17-11** for aluminum per foot prices.
- Fusible reducers are 600 volt maximum. Fuses are not included.

**General Information**

Transformer connections:

- Transformer tap bus extensions do not include drilling or lugs.
- Transformer throats include flexible connectors.
- Add the price of the footage through the fitting to the fabrication charge. See **Page 17-10** for copper or **Page 17-11** for aluminum per foot prices.

Power take-offs:

- To completely price a power take-off, include a power take-off from this table at the busway ampere rating, footage through the fitting, and a bolt-on circuit breaker or fusible unit at the required rating.

**Pricing — Fabrication Adders for Fittings**

**Table 17-13. Flanges and Expansion Joints**

Ampere Rating	Standard Flange	Flush Flange	Special Flange	Vault Flange	Expansion Joint
	Price U.S. \$				
<b>3-Phase, 3-Wire, 600 Volts</b>					
225 – 600					
800 – 1200					
1350 – 2500					
3200 – 5000					
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>					
225 – 600					
800 – 1200					
1350 – 2500					
3200 – 5000					

**Table 17-14. Elbows, Tees and Crosses**

Ampere Rating	Traditional Elbow	Corner Joint Elbow <sup>①</sup>	Tee	Cross
	Price U.S. \$			
<b>3-Phase, 3-Wire, 600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3200 – 5000				
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3200 – 5000				

① For indoor use only.

**Table 17-15. Reducers**

Ampere Rating	No Overcurrent Protection Reducer	Circuit Breaker Protection Reducer	Fusible Protection Reducer
	Price U.S. \$		
<b>3-Phase, 3-Wire, 600 Volts</b>			
225 – 600			
800 – 1200			
1350 – 2000			
2500 – 3200			
4000 – 5000			
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>			
225 – 600			
800 – 1200			
1350 – 2000			
2500 – 3200			
4000 – 5000			

**Table 17-16. Transformer Connections and Power Take-offs**

Ampere Rating	Transformer Connections			Power Take-offs	
	One 3-Phase Tap	Three 1-Phase Taps	Transformer Throat	Built into Straight Length	For Use at Bridge Joint
	Price U.S. \$			Price U.S. \$	
<b>3-Phase, 3-Wire, 600 Volts</b>					
225 – 600					
800					
1000 – 1200					
1350 – 2500					
3200 – 5000					
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>					
225 – 600					
800					
1000 – 1200					
1350 – 2500					
3200 – 5000					

Discount Symbol ..... CE3

**General Information**

- For a complete price on these fittings, add the price of the footage through the fitting to the fabrication charge. See **Page 17-10** or **17-11**.
- For use with 33MM, 37MM and 37SS meter stack modules. Order separately.
- Main breaker units include circuit breaker and trip units.
- 1200 A or greater main devices must be center fed when installing 800 ampere residential meter sockets and 1200 ampere commercial meter sockets.
- Spacer kit 3MMBSK may be required when stacks are mounted on right-hand side in EUSERC areas. See **Page 5-40**.
- Class T fuse clips only; fuses not included.
- Compatible with indoor corner elbow accessory 3MMEB12 and 3MMEB16. See **Page 5-41**.
- In-line metering PTO with no over-current protection should only be used with six meter sockets/tenant main circuit breakers or less, or applied per local code.

**Pricing — Fabrication Adders for Fittings**

**Table 17-17. Circuit Breaker In-line Metering PTO**

Main Circuit Breaker Type	Main Ampere Rating	kAIC	Dimensions in Inches (mm)			Price U.S. \$
			Width (A)	Depth	Height	
<b>3-Phase, 4-Wire, 120/208 Volts</b>						
LD	300 – 400 500 – 600	65	①	20.00 (508.0)	30.00 (762.0)	
			①	20.00 (508.0)	30.00 (762.0)	
HLD	300 – 400 500 – 600	100	①	20.00 (508.0)	30.00 (762.0)	
			①	20.00 (508.0)	30.00 (762.0)	
MDL	700 – 800	65	①	20.00 (508.0)	30.00 (762.0)	
HMDL	700 – 800	100	①	20.00 (508.0)	30.00 (762.0)	
ND	900 – 1200	65	①	20.00 (508.0)	30.00 (762.0)	
HND	900 – 1200	100	①	20.00 (508.0)	30.00 (762.0)	

① 20-inch (508 mm) width for one bar per phase; 33-inch (838 mm) width for two bars per phase.

**Table 17-18. Fusible In-line Metering PTO**

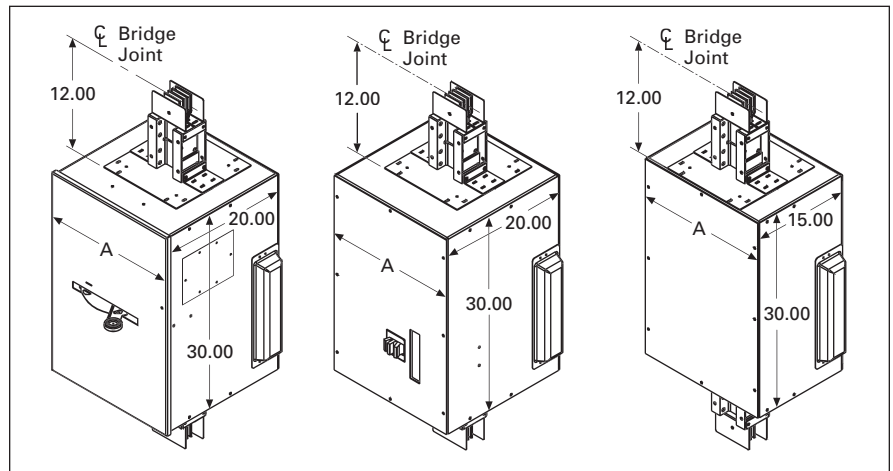
Main Ampere Rating	Class Fuse Clips	kAIC	Dimensions in Inches (mm)			Price U.S. \$
			Width (A)	Depth	Height	
<b>3-Phase, 4-Wire, 120/208 Volts</b>						
400 600 800	T	200	②	20.00 (508.0)	30.00 (762.0)	
			②	20.00 (508.0)	30.00 (762.0)	
			②	20.00 (508.0)	30.00 (762.0)	

② 20-inch (508 mm) width for one bar per phase; 33-inch (838 mm) width for two bars per phase.

**Table 17-19. In-line Metering PTO (No Overcurrent Protection)**

Cross Bus Ampere Rating	kAIC	Dimensions in Inches (mm)			Price U.S. \$
		Width (A)	Depth	Height	
<b>3-Phase, 4-Wire, 120/208 Volts</b>					
1200	100	③	15.00 (381.0)	30.00 (762.0)	

③ 20-inch (508 mm) width for one bar per phase; 33-inch (838 mm) width for two bars per phase.



**Figure 17-2. Metering PTO**

**Pow-R-Way III Busway — Product Selection**

**Pricing — Circuit Breaker Plug-in Units**

**Table 17-20. Circuit Breakers**

100% rated breakers are not available for use in bus plugs. Contact Product Line for guidance.

Ampere Rating	Interrupting Rating (kA Symmetrical)			Breaker Type
	240 Vac	480 Vac	600 Vac	
15 – 60	18	14	—	EHD
70 – 100	18	14	—	EHD
15 – 60	18	14	14	FDB
70 – 100	18	14	14	FDB
110 – 150	18	14	14	FDB
15 – 60	65	25	18	FD
70 – 100	65	25	18	FD
110 – 150	65	25	18	FD
175 – 225	65	25	18	FD
15 – 60	100	65	25	HFD
70 – 100	100	65	25	HFD
110 – 150	100	65	25	HFD
175 – 225	100	65	25	HFD
15 – 60	200	100	35	FDC
70 – 100	200	100	35	FDC
110 – 225	200	100	35	FDC
15 – 100	200	150	—	FCL
100 – 225	65	—	—	ED
100 – 225	100	—	—	EDH
100 – 225	200	—	—	EDC
70 – 225	65	35	18	JD, JDB
250	65	35	18	JD, JDB
70 – 225	100	65	25	HJD
250	100	65	25	HJD
70 – 225	200	100	35	JDC
250	200	100	35	JDC
125 – 250	200	200	—	LCL
250 – 400	65	—	—	DK
100 – 400	65	35	25	KD, KDB
100 – 400	100	65	35	HKD
100 – 400	200	100	50	KDC
200 – 400	200	200	—	LCL
300 – 600	65	35	25	LD, LDB
300 – 600	100	65	35	HLD
300 – 600	200	100	50	LDC
400 – 800	65	50	25	MDL
400 – 800	100	65	35	HMDL
400 – 800	65	50	25	ND
400 – 800	100	65	35	HND
400 – 800	200	100	50	NDC
600 – 1200	65	50	25	ND
600 – 1200	100	65	35	HND
600 – 1200	200	100	50	NDC

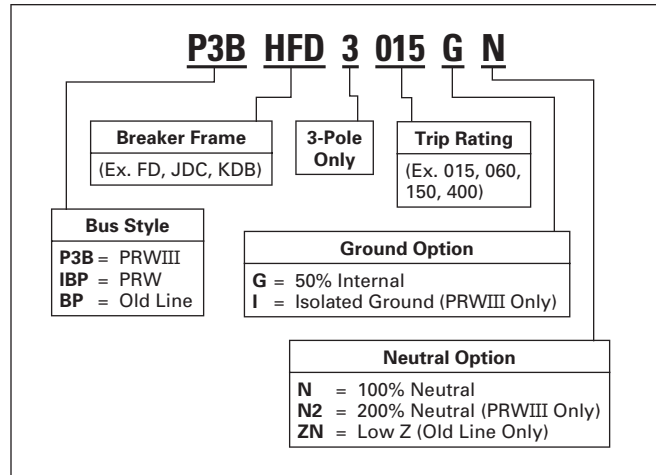
**Table 17-21. Branch Devices Earth Leakage Ground Fault Circuit Breakers**  
(Adjustable pickup from 30 mA to 30 amperes)

Ampere Rating	kAIC (symmetrical)	Breaker Type
	480 Vac	
35 – 60	25	ELFD
70 – 100	25	ELFD
110 – 150	25	ELFD
35 – 60	65	ELHFD
70 – 100	65	ELHFD
110 – 150	65	ELHFD
35 – 60	100	ELFDC
70 – 100	100	ELFDC
110 – 150	100	ELFDC
100 – 250	35	ELJD
100 – 250	65	ELHJD
100 – 250	100	ELJDC
200 – 400	35	ELKD
200 – 400	65	ELHKD
200 – 400	100	ELKDC

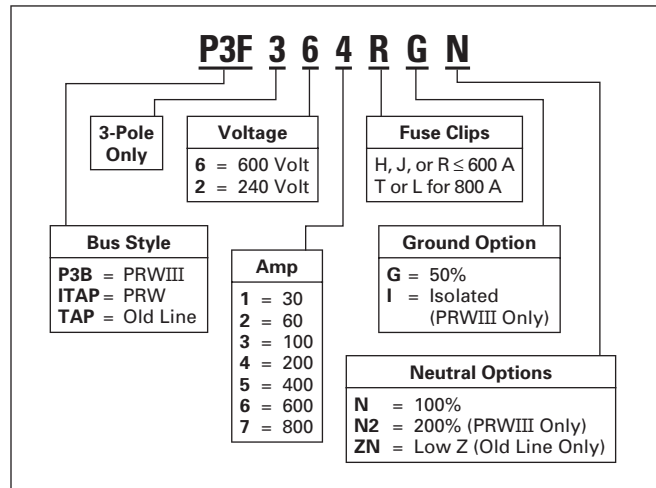
**Table 17-22. Integrally Fused, Current Limiting Circuit Breaker**

Ampere Rating	Interrupting Rating (kA Symmetrical)			Breaker Type
	240 Vac	480 Vac	600 Vac	
15 – 100	200	200	200	FB-P
125 – 225	200	200	200	LA-P
250 – 400	200	200	200	LA-P
400 – 600	200	200	200	NB-P
700 – 800	200	200	200	NB-P

**Table 17-23. Breaker Unit Catalog Numbering System**



**Table 17-24. Fusible Unit Catalog Numbering System**



**Note:** "H" clips are standard for PRW and Old Line unless specified by adding "R" in catalog number.

**Note:** Please call Greenwood Low Voltage Busway department for help in assigning a catalog number for a specific application.

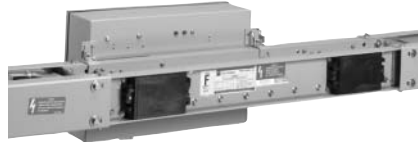
**Note:** Do not leave spaces between characters. Example: P3BFD3100N; ITAP361N.

**Note:** All plug-in units come fully assembled.

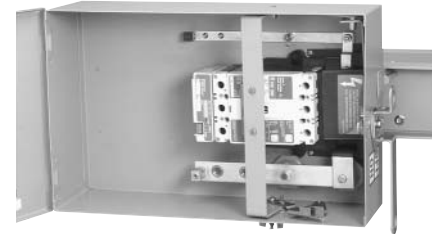
**Pricing — Circuit Breaker Plug-in Units**



*Horizontal Install (Front View)*



*Horizontal Install (Rear View)*



*Circuit Breaker Plug*

**Table 17-25. Circuit Breaker Plug-in Units**

Breaker Frame	Ampere Rating	Plug-in Enclosure		100% Neutral Stab		50% Internal Ground Stab		50% Isolated Ground Stab		200% Neutral Stab	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
ED, EDH, EHD, EDC, FDB, FD, HFD, FDC	10 – 225	P3BFD		P3FDN100 P3FDN225		P3FG100 —		P3FDI100 P3FDI225		P3FD2N100 P3FD2N225	
JDB, JD, HJD, JDC	70 – 250	P3BJD		P3JDN150 P3JDN250		— P3JDG250		P3JDI150 P3JDI250		P3JD2N150 P3JD2N250	
KDB, KD, DK, HKD, KDC	100 – 400	P3BKD		P3KDN400		P3KDG400		P3KDI400		P3KD2N400	
LDB, LD, HLD, LDC	300 – 600	P3BLD		P3MDN800		P3MDG800		P3MDI800		—	—
MDL, HMDL	400 – 800	P3BMD		P3MDN800		P3MDG800		P3MDI800		—	—
ND, HND, NDC	400 – 800	P3BND		P3NDN800		P3NDG800		P3NDI800		—	—
FB TRI-PAC	15 – 100	P3BFBP		P3FBPN100		P3FBPG100		P3BFBI100		—	—
LA TRI-PAC	75 – 400	P3BLAP		P3LAPN400		P3LAPG400		P3LAPI400		—	—
NB TRI-PAC	500 – 800	P3BNBP		P3NBPN800		P3NBPG800		P3BNBI800		—	—

**Note:** See Page 17-14 for Plug Assembled Style Number Configuration.

- Refer to Page 17-14 for breaker data. For reference only.
- The enclosure, circuit breaker, neutral and ground are ordered and shipped assembled.
- Housing ground connection supplied as standard at no additional charge.
- The adder for sprinkler-proof is 15%.

**Table 17-26. Advanced Circuit Breaker Plug-ins**

Digitrip OPTIM	Ampere Rating	Plug-In Enclosure		100% Neutral		50% Internal Ground		50% Isolated Ground	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
L-Frame	70 – 600	P3BORPL		P3BORPLN600		P3BORPLG600		P3BORPLI600	

- The P3BFD, P3BJD and P3BKD plug-in units can be modified to accept breaker mounted IQ Energy Sentinels. See above for pricing.
- The IQ Energy Sentinel and the OPTIM breaker plug-in units permit multiple meters, remote monitoring, and interconnection with programmable logic controllers and building management systems. Applications may range from revenue metering for tenant billing to a full power management system. Consult with an Eaton Application Engineer or the Busway Product Line for assistance.
- Refer to SA.73A.01.T.E and the IQ Energy Sentinel prices.
- The adder for sprinkler-proof is 15%.

Discount Symbol ..... **CE4**

**Pow-R-Way III Busway — Product Selection**

**Pricing — Fusible Plug-in Units**



*Pow-R-Way III Plug-In Opening*



*Pow-R-Way III Plug (Rear View)*

**Table 17-27. Fusible Switch Horsepower Ratings**

Ampere Rating	240 Volts		480 Volts		600 Volts	
	NEC Std.	Max.	NEC Std.	Max.	NEC Std.	Max.
30	3	7.5	5	15	7.5	20
60	7.5	15	15	30	15	50
100	15	30	25	60	30	75
200	25	60	50	125	60	150
400	50	125	100	250	125	350
600	75	200	150	400	200	500
800	100	250	200	500	250	500

**Table 17-28. Fusible Plug-in Units**

Ampere Rating	Enclosure 600 Volt		Enclosure 240 Volt		100% Neutral Stab		50% Internal Ground Stab		50% Isolated Ground Stab		200% Neutral Stab	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
30	P3F361R		P3F321R		P3FN100		P3FG100		P3F1100		P3F2N100	
60	P3F362R		P3F322R		P3FN100		P3FG100		P3F1100		P3F2N100	
100	P3F363R		P3F323R		P3FN100		P3FG100		P3F1100		P3F2N100	
200	P3F364R		P3F324R		P3FN200		P3FG200		P3F1200		P3F2N200	
400	P3F365R		P3F325R		P3FN400		P3FG400		P3F1400		—	—
600	P3F366R		P3F326R		P3FN600		P3FG800		P3F1800		—	—
800	P3F367T		P3F327T		P3FN800		P3FG800		P3F1800		—	—

- Fuses are not included.
- Mechanical lugs are provided. If compression lugs are required, the cable size must be specified.
- Plug-in unit, neutral, and ground are ordered and shipped assembled.
- Housing ground connection supplied as standard at no additional charge.
- R-Fuse clips are supplied as standard.
- If J-Fuse clips are required, replace "R" in the catalog number with a "J" (30 through 600 ampere; 600 volt only).
- 800 ampere 600 volt also available with L-Fuse clips; replace "T" in the catalog number with "L."
- The adder for sprinkler-proof is 15%.

**Note:** See Page 17-14 for Plug Assembled Style Number Configuration.

**Table 17-29. Special Industry Fusible Plug-in Units**

Ampere Rating	Enclosure 600 Volt		100% Neutral Stab		50% Internal Ground Stab		50% Isolated Ground Stab		Terminal Kit Compression Lugs			
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	# Per Phase	Wire Size	Catalog Number	Price U.S. \$
30	P3F361H		ⓐ		ⓐ		ⓐ		1	1 - #12 to #10	CTK30SC	
60	P3F362H		ⓐ		ⓐ		ⓐ		1	1 - #8	CTK60SC	
100	P3F363H		ⓐ		ⓐ		ⓐ		1	1 - #4	CTK100SC	
200	P3F364H		ⓐ		ⓐ		ⓐ		1	1 - 2/0	CTK200BSC	
400	P3F365H		ⓐ		ⓐ		ⓐ		1	1 - 750 kcmil	CTK400SPW	
600	P3F366H		ⓐ		ⓐ		ⓐ		2	2 - 500 kcmil	CTK600DPM	

ⓐ Grounds and neutrals must be factory assembled. Order by description. See Page 17-14.

- Fuses are not included.
- Housing ground connection supplied as standard at no additional charge.
- Grounding compression lug included on 200 ampere and above. Lugs are ordered and shipped separately. Fuses are not included.
- H-Fuse clips are supplied as standard.
- If J- or R-Fuse clips are required, order by description.

Discount Symbol ..... **CB-2**  
Discount Symbol ..... **CE4**



**Pricing — Special Plug-in Units**

**Table 17-30. Plug-in Cable Tap Box Units**

Ampere Rating	Plug-in Cable Tap Box 600 Volt Enclosure		100% Neutral Stab		50% Internal Ground Stab		50% Isolated Ground Stab	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
200	P3PTB200		P3PTBN200		P3PTBG200		P3PTBI200	
400	P3PTB400		P3PTBN400		P3PTBG400		P3PTBI400	
600	P3PTB600		P3PTBN600		P3PTBG600		P3PTBI600	
800	P3PTB800		P3PTBN800		P3PTBG800		P3PTBI800	

- The adder for sprinkler proof is 15%.
- Mechanical lugs are provided. If compression lugs are required, the cable size must be specified.

**Table 17-31. Plug-in Combination Starters and Contactors (Non-Reversing, 3-Pole)**

NEMA Size	Freedom Combination Starters		Freedom Combination Contactors		Advantage Combination Starters		Advantage Combination Contactors		100% Neutral Stab	50% Internal Ground Stab	50% Isolated Ground Stab	Fuse 120 Volt Control Transformer
	Fusible Disconnect	Circuit Breaker or HMCP	Fusible Disconnect	Circuit Breaker or HMCP	Fusible Disconnect	Circuit Breaker or HMCP	Fusible Disconnect	Circuit Breaker or HMCP				
	Price U.S. \$		Price U.S. \$		Price U.S. \$		Price U.S. \$					
0												
1												
2												
3												
4												

**Table 17-32. Advanced Plug-in Units — Visor Series Bus Plug Prices — TVSS Transient Voltage Surge Suppressor**

kA Rating	AdVisor Price U.S. \$	SuperVisor Price U.S. \$	NetVisor Price U.S. \$
100			
120			
160			
200			
250			
300			
400			
500			



*Visor Series Bus Plug*

**Table 17-33. Visor Series Bus Plug Catalog Numbering System**

**P3BCPS 250 480Y S A**

Surge Rating (kA/Phase)	
100	250
120	300
160	400
200	500

Diagnostics Package	
<b>A</b>	<b>AdVisor</b> complete with status indicator lights on each phase, Form C. Audible Alarm — Enable/Disable.
<b>S</b>	<b>SuperVisor</b> complete with status indicator lights on each phase, Form C. Audible Alarm — Enable/Disable, Transient Counter, Push-to-Test, PQ Meter (no date stamp).
<b>N</b>	<b>NetVisor</b> complete with status indicator lights on each phase, Form C. Audible Alarm — Enable/Disable, Transient Counter, Push-to-Test, PQ Meter (no date stamp). Modbus and Ethernet Communications Port, % Life Remaining, % Voltage THD.

Voltage Code	Voltage Requirements			
	120/208 240 V	230/400 400 V	277/480 480 V	347/600 600 V
3-Phase Wye (4W+G)	<b>208Y</b>	<b>400Y</b>	<b>480Y</b>	<b>600Y</b>
3-Phase Delta (4W+G)	<b>240D</b>	—	<b>480D</b>	<b>600D</b>

**Pow-R-Way III Busway — Product Selection**

**Pricing — Bolt-on Units**

**Table 17-34. Circuit Breaker Bolt-on Units**

Breaker Frame	Ampere Rating	Bolt-on Enclosure		100% Neutral Stab		50% Internal Ground Stab		50% Isolated Ground Stab	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
EHD, FDB, FD, HFD, FDC JDB, JD, HJD, JDC KDB, KD, HKD, KDC	15 – 225 70 – 250 250 – 400	P3BFDBO P3BJDBO P3BKDBO		P3FDNBO P3FJDNBO P3KDNBO		P3FDGBO P3JDGBO P3KDGBO		P3FDIBO P3JDIBO P3KDIBO	
LDB, LD, HLD, LDC MDL, HMDL ND, HND	300 – 600 500 – 800 900 – 1200	P3BLDBO P3BMDBO P3BNDBO		P3LDNBO P3MDNBO P3NDNBO		P3LDGBO P3MDGBO P3NDGBO		P3LDIBO P3MDIBO P3NDIBO	

- Factory assembled, Refer to Eaton’s Cutler-Hammer Busway for delivery.
- Refer to **Page 17-14** for breaker data. For reference only.
- Bolt-on units **require a Power Take-off** at the rating of the busway. Price from **Page 17-12**.
- Housing ground connection supplied as standard at no additional charge.
- The adder for sprinkler-proof is 15%.

**Table 17-35. Fusible Bolt-on Units**

Ampere Rating	Enclosure 600 Volt		100% Neutral Stab		50% Internal Ground Stab		50% Isolated Ground Stab	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
30 60 100	P3F361BO P3F362BO P3F363BO		P3FN100BO P3FN100BO P3FN100BO		P3FG100BO P3FG100BO P3FG100BO		P3FI100BO P3FI100BO P3FI100BO	
200 400 600	P3F364BO P3F365BO P3F366BO		P3FN250BO P3FN400BO P3FN600BO		P3FG250BO P3FG400BO P3FG600BO		P3FI250BO P3FI400BO P3FI600BO	
800 1200	P3F367BO P3F369BO		P3FN800BO P3FN1200BO		P3FG800BO P3FG1200BO		P3FI800BO P3FI1200BO	

- Factory assembled. Refer to Eaton’s Cutler-Hammer Busway for delivery.
- Bolt-on units **require a Power Take-off** at the rating of the busway. Price from **Page 17-12**.
- If neutral and ground are required, order by description with bolt-on unit.
- Housing ground connection supplied as standard at no additional charge.
- The adder for sprinkler-proof is 15%.

**17**

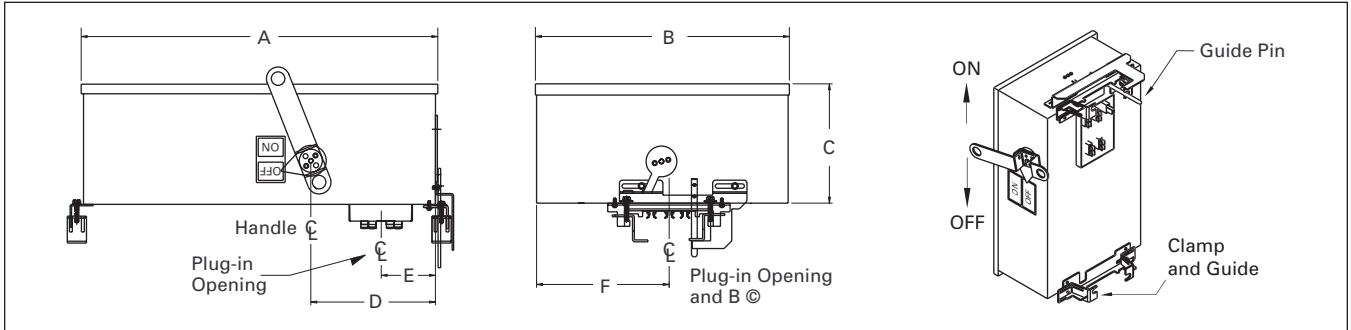
**Table 17-36. Ground Detector Neutralizer Plug (3-Wire)**

Maximum Voltage	Catalog Number	Price U.S. \$
600	P3GND	

Discount Symbol ..... **CE4**

**Dimensions — Plug-in Units**

**Physical Data**



**Figure 17-3. Bus Plugs**

**Table 17-37. Plug-in Units**

Plug-in Unit	Maximum Amperes	Maximum ac Volts	Dimensions in Inches (mm)						Mechanical Terminal Wire Range Per Phase (mm <sup>2</sup> )	Approx. Weights Lbs. (kgs)
			(A) ①	(B)	(C)	(D)	(E)	(F)		
<b>Circuit Breaker Plug-in Units</b>										
P3BFD (E- & F-Frame Breakers)	225	600	19.26 (489.2)	12.36 (314.0)	5.43 (138.0)	6.25 (158.8)	4.00 (101.6)	6.06 (153.7)	100 A – (1) #14 – 1/0 (2.5 – 50) 150 A – (1) #4 – 4/0 (25 – 95)	25 (11.3)
P3BJD (J-Frame Breakers)	250	600	21.33 (541.8)	12.36 (314.0)	6.97 (177.0)	10.44 (265.2)	4.00 (101.6)	6.06 (153.7)	250 A – (1) #14 – 350 kcmil (25 – 185) 225 A – (1) 3 – 350 kcmil (35 – 185)	47 (21.3)
P3BKD (K-Frame Breakers)	400	600	32.50 (825.5)	13.29 (337.6)	7.79 (197.9)	12.56 (319.0)	4.00 (101.6)	6.64 (168.7)	350 A – (1) 250 – 500 kcmil (120 – 240) 400 A – (2) 3/0 – 250 kcmil (45 – 120)	53 (24.0)
P3BLD (L-Frame Breakers)	600	600	44.03 (1118.4)	19.65 (499.1)	10.15 (257.8)	17.38 (441.5)	4.00 (101.6)	9.83 (249.7)	400 A – (1) 4/0 – 600 kcmil (120 – 300) 600 A – (2) 400 – 500 kcmil (185 – 240)	75 (34.0)
P3BMD (M-Frame Breakers)	800	600	44.03 (1118.4)	19.65 (499.1)	10.15 (257.8)	17.38 (441.5)	4.00 (101.6)	9.83 (249.7)	600 A – (2) #1 – 500 kcmil (50 – 240) 800 A – (2) 500 – 750 kcmil (300 – 400)	136 (61.7)
P3BND (N-Frame Breakers)	800	600	44.03 (1118.4)	19.65 (499.1)	10.15 (257.8)	17.38 (441.5)	4.00 (101.6)	9.83 (249.7)	700 A – (2) #1 – 500 kcmil (50 – 240) 800 A – (3) 3/0 – 400 kcmil (95 – 185)	138 (62.6)
P3BLAP (TRI-PAC)	400	600	44.03 (1118.4)	19.65 (499.1)	10.15 (257.8)	13.80 (350.5)	4.00 (101.6)	9.83 (249.7)	225 A – (1) #6 – 350 kcmil (16 – 185) 400 A – (1) #4 – 250 kcmil and (1) 3/0 – 600 kcmil (25 – 120 and 95 – 300)	96 (43.5)
P3BLCL	400	600	40.00 (1016.0)	19.65 (499.1)	10.15 (257.8)	13.80 (350.5)	4.00 (101.6)	9.83 (249.7)	(1) #4 – 250 kcmil (25 – 120) and (1) 3/0 – 600 kcmil (95 – 300)	88 (39.9)
<b>Fusible Plug-in Units</b>										
P3F321R	30	240	20.85 (529.6)	12.36 (314.0)	5.43 (138.0)	7.88 (200.2)	4.00 (101.6)	6.06 (153.9)	Cu – (1) #14 – #3, (2.5 – 35) Al – (1) #12 – #2 (3.2 – 35)	22 (10.0)
P3F361R and P3F361H		600								
P3F322R	60	240	20.85 (529.6)	12.36 (314.0)	5.43 (138.0)	7.88 (200.2)	4.00 (101.6)	6.06 (153.9)	Cu – (1) #14 – #3, (2.5 – 35) Al – (1) #12 – #2 (3.2 – 38)	24 (10.9)
P3F362R and P3F362H		600								
P3F323R and P3F363R and P3F363H	100	240	20.85 (529.6)	12.36 (314.0)	5.43 (138.0)	7.88 (200.2)	4.00 (101.6)	6.06 (153.9)	Cu – (1) #14 – 1/0, (2.5 – 50) Al – (1) #12 – 1/0 (3.2 – 50)	24 (10.9)
		600								
P3F324R and P3F364R	200	240	23.52 (597.4)	15.56 (395.2)	7.19 (182.6)	7.98 (202.7)	4.00 (101.6)	7.63 (193.8)	(1) #4 – 250 kcmil Cu/Al (25 – 120)	47 (21.3)
P3F364H		600								
P3F325R and P3F365R	400	240	46.94 (1192.3)	21.22 (539.0)	10.07 (255.8)	12.67 (321.8)	4.00 (101.6)	10.69 (271.5)	(1) 250 – 750 kcmil Cu/Al (127 – 380) (2) 3/0 – 250 kcmil Cu/Al (85 – 127)	77 (34.9)
P3F365H		600								
P3F326R and P3F366R	600	240	46.94 (1192.3)	26.31 (668.3)	10.59 (270.0)	14.26 (362.2)	4.00 (101.6)	13.16 (334.3)	(2) #2 – 600 kcmil Cu/Al (35 – 300) (3) #4 – 600 kcmil Cu/Al (25 – 300)	82 (37.1)
P3F327R and P3F367R		600								

① The Clamp and Guide mechanism adds 2.50 inches (63.5 mm) to the overall length of the unit.

**Pow-R-Way III Busway — Pricing**

**Pricing — Examples**

**How to Price an End Cable Tap Box**

System configuration:  
2500 ampere indoor 3-phase, 4-wire copper with internal ground.

Fitting fabrication charge for end cable tap box . . . . . **\$ 2,344.**

4-foot (1.2 m) indoor feeder at **\$1,331** per foot . . . . . **5,324.**

4-foot (1.2 m) 50% internal ground at **\$161** per foot . . . . . **644.**

**Total Price \$ 8,312.**

**How to Price a 90° Traditional Elbow (2'6" x 2'6")**

System Configuration:  
1600 ampere indoor 3-phase, 3-wire aluminum with integral housing ground and 50% internal ground.

Fitting fabrication charge for 90° elbow . . . . . **\$ 1,047.**

5-foot (1.5 m) indoor feeder at **\$433** per foot (Includes integral housing ground). . . . . **2,165.**

5-foot (1.5 m) 50% internal ground at **\$54** per foot . . . . . **270.**

**Total Price \$ 3,482.**

**17 How to Price a Corner Joint Elbow (1' x 1')**

System Configuration:  
1200 ampere indoor 3-phase, 3-wire copper with integral housing ground and 50% internal ground.

Fitting fabrication charge for corner joint . . . . . **\$ 851.**

2-foot (.6 m) indoor feeder at **\$470** per foot (includes integral housing ground). . . . . **940.**

2-foot (.6 m) 50% internal ground at **\$73** per foot . . . . . **146.**

**Total Price \$ 1,937.**

**How to Price a Complete Bus Run**

System configuration:  
1200 ampere indoor 3-phase, 4-wire copper with 50% internal ground. Include quantity 4 – 30 ampere, 600 volt fusible plug-in units.

Note: Price footage through entire bus run, add fabrication charges for fittings.

14-foot (4 m) indoor feeder at **\$645** per foot . . . . . **\$ 9,030.**

150-foot (45 m) plug-in at **\$663** per foot . . . . . **99,450.**

164-foot (50 m) 50% internal ground at **\$73** per foot . . . . . **11,972.**

Quantity 1 — standard flange . . . . . **1,348.**

Quantity 3 — 90° traditional elbows at **\$1,135** per each . . . . . **3,405.**

Quantity 2 — wall flanges at **\$136** per each . . . . . **272.**

Quantity 1 — end closures . . . . . **273.**

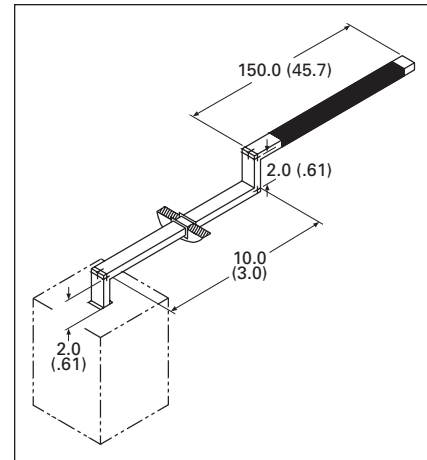
**Total List – Busway \$ 125,750.**

Quantity 4 — P3F361R at **\$466** per each . . . . . **\$ 1,864.**

Quantity 4 — P3FN100 at **\$61** per each . . . . . **244.**

Quantity 4 — P3FG100 internal ground stabs at **\$61** per each . . . . . **244.**

**Total Price — Plug-in Units \$ 2,352.**



**Figure 17-4. Shaded Sections Indicate Plug-in Busway — Dimensions in Feet (m)**

### Product Description

#### Plug-in Busway:

- Pow-R-Way II Plug-in Busway  
225 to 400 Ampere Copper  
225 to 400 Ampere Aluminum
- Pow-R-Way Plug-in Busway  
600 to 4000 Ampere Copper  
600 to 4000 Ampere Aluminum

Straight sections of plug-in busway are available in 2-foot (.6 m) incremental lengths from a 2-foot (.6 m) minimum to a 10-foot (3 m) maximum.

#### Feeder Busway:

- Pow-R-Way II Indoor Feeder Busway  
225 to 400 Ampere Copper  
225 to 400 Ampere Aluminum
- Pow-R-Way Indoor or Outdoor Feeder Busway  
600 to 5000 Ampere Copper  
600 to 4000 Ampere Aluminum

Straight sections of indoor and outdoor feeder busway are available in 1/8-inch (3.2 mm) increments from an 18-inch (457 mm) minimum to 10-foot (3 m) maximum.

#### Plug-in Units:

A full family of busway plug-in units are available. Standard plug-in units include fusible or circuit breaker protection.

#### Pow-R-Way (Single Bolt per Joint, 600 – 5000 Amperes and Pow-R-Way II (Single Bolt per Bus Bar, 225 – 400 Amperes)



*Typical Pow-R-Way Plug-in Straight Length*



*Typical Pow-R-Way Feeder Straight Length*

### Standards and Certifications

Pow-R-Way and Pow-R-Way II busway meet the requirements of UL, CSA and NEMA.

#### Additional Pow-R-Way Information:

- Technical Data: AD30-560.

### Product Specifications

The following systems are available:

- 3-phase, 3-wire.
- 3-phase, 3-wire, with 50% internal ground.
- 3-phase, 4-wire (100% neutral).
- 3-phase, 4-wire (100% neutral) with 50% internal ground.
- All 3-wire systems have a maximum voltage rating of 600 volts and all 4-wire systems have a maximum of 347/600 volts.

**Note:** The Pow-R-Way bus housing is NOT suitable for use as ground.

## Product Selection

### Pricing — Copper Busway

#### General Information

- Determine the total footage, all fittings, and accessories for entire busway run. Price the total footage by type and system requirements. Round footage up to the nearest foot. Add the fabrication charge for the fittings. Add any additional accessories required for the total price of the busway run.

#### Plug-in

- Straight sections of plug-in busway are available in 2-foot (.6 m) increments from a 2-foot (.6 m) minimum to a 10-foot (3 m) maximum.

#### Sprinkler-proof Plug-in

- For sprinkler-proof plug-in multiply the plug-in price by 1.25 and use outdoor pricing for the feeder busway.

#### Feeder

- Straight sections of feeder busway are available in 1/8-inch (3.2 mm) increments from 16 inches (406 mm) minimum to 10-foot (3 m) maximum. Busway must carry at least a 50% load in all outdoor applications.

#### Hangers

- The busway price includes one horizontal hanger per 10 feet (3 m) of busway. All vertical hangers and any additional horizontal hangers should be added to the total price.

**Table 17-38. Short-Circuit Withstand Ratings — rms Symmetrical Amperes for Copper Pow-R-Way Plug-in and Feeder Busway**

Ampere Rating	3-Cycle Copper Plug-in	3-Cycle Copper Feeder
225	18,000	18,000
400	25,000	25,000
600	50,000	75,000
800	50,000	75,000
1000	100,000	100,000
1200	100,000	100,000
1350	100,000	100,000
1600	100,000	100,000
2000	100,000	100,000
2500	150,000	150,000
3000	150,000	150,000
4000	200,000	200,000
5000	—	200,000

**Table 17-39. Busway — Copper Straight Lengths**

Ampere Rating	Plug-in	Indoor Feeder	Outdoor Feeder	50% Internal Ground
	Price U.S. \$ Per Foot, Busway Only			Price U.S. \$ Adder Per Foot
<b>3-Phase, 3-Wire, 600 Volts</b>				
225		—	—	
400		—	—	
600				
800				
1000				
1200				
1350				
1600				
2000				
2500				
3000				
4000				
5000		—		
<b>3-Phase, 4-Wire, Full Neutral, 277/480 Volts or 347/600 Volts</b>				
225		—	—	
400		—	—	
600				
800				
1000				
1200				
1350				
1600				
2000				
2500				
3000				
4000				
5000		—		

**Table 17-40. Fabrication Adders for Common Fittings — Cable Tap Boxes and End Closures**

Ampere Rating	End or Center Cable Tap Box	Outdoor Cable Tap Box	Weatherhead	End Closure
	Price U.S. \$			
<b>3-Phase, 3-Wire, 600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3000 – 5000				
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3000 – 5000				

#### General Information

- When pricing a cable tap box or a Weatherhead, include the price of 4 feet (1.2 m) of feeder busway to the fabrication charge.
- Cable tap boxes include 1/0 to 600 kcmil lugs. For additional lugs, larger lugs, or compression type lugs, refer to Eaton's Cutler-Hammer busway.
- Additional Fittings on **Page 17-24**.

**Table 17-41. Accessories and Renewal Parts**

Description	Catalog Number	Price U.S. \$
Wall/Floor Flange	①	
Vertical Hanger	①	
Extra Horizontal Hanger	①	
Roof Flange (Required when Outdoor Busway Penetrates a Roof)	①	
Indoor Joint Cover	PWIJC	
Outdoor Joint Cover	PWOJC	
Hookstick Kit — 8 – 14 Foot (2.4 – 4.3 m)	HS8-14	
Joint Puller	PWJP	

① Specify the ampere rating and system requirements when ordering as renewal parts.

**Pricing — Aluminum Busway**

**General Information**

- Determine the total footage, all fittings, and accessories for entire busway run. Price the total footage by type and system requirements. Round footage up to the nearest foot. Add the fabrication charge for the fittings. Add any additional accessories required for the total price of the busway run.

**Plug-in**

- Straight sections of plug-in busway are available in 2-foot (.6 m) increments from a 2-foot (.6 m) minimum to a 10-foot (3 m) maximum.

**Sprinkler-proof Plug-in**

- For sprinkler-proof plug-in multiply the plug-in price by 1.25 and use outdoor pricing for the feeder busway.

**Feeder**

- Straight sections of feeder busway are available in 1/8-inch (3.2 mm) increments from 16 inches (406 mm) minimum to 10-foot (3 m) maximum. Busway must carry a least a 50% load in all outdoor applications.

**Hangers/Pow-R-Bridge**

- The busway price includes one horizontal hanger per 10 feet (3 m) of busway. All vertical hangers and any additional horizontal hangers should be added to the total price.

**Table 17-42. Short-Circuit Withstand Rating — rms Symmetrical Amperes for Aluminum Pow-R-Way Plug-in and Feeder Busway**

Ampere Rating	3-Cycle Aluminum Plug-in	3-Cycle Aluminum Feeder
225	18,000	18,000
400	25,000	25,000
600	50,000	75,000
800	100,000	100,000
1000	100,000	100,000
1200	100,000	100,000
1350	100,000	100,000
1600	100,000	100,000
2000	100,000	100,000
2500	150,000	150,000
3000	150,000	150,000
4000	200,000	270,000
5000	—	—

**Table 17-43. Busway — Aluminum Straight Lengths**

Ampere Rating	Plug-in	Indoor Feeder	Outdoor Feeder	50% Internal Ground
	Price U.S. \$ Per Foot, Busway Only			Price U.S. \$ Adder Per Foot
<b>3-Phase, 3-Wire, 600 Volts</b>				
225		—	—	
400			—	
600				
800				
1000				
1200				
1350				
1600				
2000				
2500				
3000		—	—	—
4000				
5000				
<b>3-Phase, 4-Wire, Full Neutral, 277/480 Volts or 347/600 Volts</b>				
225			—	—
400			—	—
600				
800				
1000				
1200				
1350				
1600				
2000				
2500				
3000				
4000				
5000		—	—	—

**Table 17-44. Fabrication Adders for Common Fittings — Cable Tap Boxes and End Closures**

Ampere Rating	End or Center Cable Tap Box	Outdoor Cable Tap Box	Weatherhead	End Closure
	Price U.S. \$			
<b>3-Phase, 3-Wire, 600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3000 – 5000				
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>				
225 – 600				
800 – 1200				
1350 – 2500				
3000 – 5000				

**General Information**

- When pricing a cable tap box or a weatherhead, include the price of 4-feet (1.2 m) of feeder busway to the fabrication charge.

- Cable tap boxes include 1/0 to 600 kcmil lugs. For additional lugs, larger lugs, or compression type lugs, refer to Eaton's Cutler-Hammer busway.

- Additional fittings on **Page 17-24**.

**Table 17-45. Accessories and Renewal Parts**

Description	Catalog Number	Price U.S. \$
Wall/Floor Flange	①	
Vertical Hanger	①	
Extra Horizontal Hanger	①	
Roof Flange (Required when Outdoor Busway Penetrates a Roof)	①	
Indoor Joint Cover	PWIJC	
Outdoor Joint Cover	PWOJC	
Hookstick Kit — 8 – 14 Foot (2.4 – 4.3 m)	HS8-14	
Joint Puller	PWJP	

① Specify the ampere rating and system requirements when ordering as renewal parts.

**Pow-R-Way Busway — Fittings**

**Pricing — Fabrication Adders for Fittings**

**Table 17-46. Flanges and Expansion Joints**

Ampere Rating	Standard Flange	Flush Flange	Special Flange	Vault Flange	Expansion Joint
	Price U.S. \$				
<b>3-Phase, 3-Wire, 600 Volts</b>					
225 – 600					
800 – 1200					
1350 – 2500					
3000 – 5000					
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>					
225 – 600					
800 – 1200					
1350 – 2500					
3000 – 5000					

**Table 17-47. Elbows, Tees and Crosses**

Ampere Rating	Traditional Elbow	Tee	Cross
	Price U.S. \$		
<b>3-Phase, 3-Wire, 600 Volts</b>			
225 – 600			
800 – 1200			
1350 – 2500			
3000 – 5000			
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>			
225 – 600			
800 – 1200			
1350 – 2500			
3000 – 5000			

**Table 17-48. Reducers**

Ampere Rating	No Overcurrent Protection Reducer	Circuit Breaker Protection Reducer	Fusible Protection Reducer
	Price U.S. \$		
<b>3-Phase, 3-Wire, 600 Volts</b>			
225 – 600			
800 – 1200			
1350 – 2000			
2500 – 3000			
4000 – 5000			
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>			
225 – 600			
800 – 1200			
1350 – 2000			
2500 – 3000			
4000 – 5000			

**Table 17-49. Transformer Connections and Power Take-offs**

Ampere Rating	Transformer Connections			Power Take-offs	
	One 3-Phase Tap	Three 1-Phase Taps	Transformer Throat	Built into Straight Length	For Use at Plug-in Opening
	Price U.S. \$			Price U.S. \$	
<b>3-Phase, 3-Wire, 600 Volts</b>					
600					
800					
1000 – 1200					
1350 – 2500					
3000 – 5000					
<b>3-Phase, 4-Wire, 277/480 Volts or 347/600 Volts</b>					
600					
800					
1000 – 1200					
1350 – 2500					
3000 – 5000					

**General Information**

- For a complete price on these fittings, add the price of the footage through the fitting to the fabrication charge. See **Page 17-22** for copper or **Page 17-23** for aluminum per foot prices.
- A standard flange is used to connect to Eaton’s Cutler-Hammer equipment.

**General Information**

- For a complete price on these fittings, add the price of the footage through the fitting to the fabrication charge. See **Page 17-22** for copper or **Page 17-23** for aluminum per foot prices.
- For a special degree elbow, double the traditional elbow fabrication charge.

**General Information**

- See NEC 364-11 for Reducer Application.
- Price fabrication charge at the lower busway rating.
- For a complete price on these fittings, add the price of the footage through the fitting to the fabrication charge. See **Page 17-22** for copper or **Page 17-23** for aluminum per foot prices.
- Fusible reducers are 600 volt maximum. Fuses are not included.

**General Information**

Transformer connections:

- Transformer tap bus extensions do not include drilling or lugs.
- Transformer throats include flexible connectors.
- Add the price of the footage through the fitting to the fabrication charge. See **Page 17-22** for copper or **Page 17-23** for aluminum per foot prices.

Power take-offs:

- To completely price a power take-off, include a power take-off from this table at the busway ampere rating, footage through the fitting, and a bolt-on circuit breaker or fusible unit at the required rating.

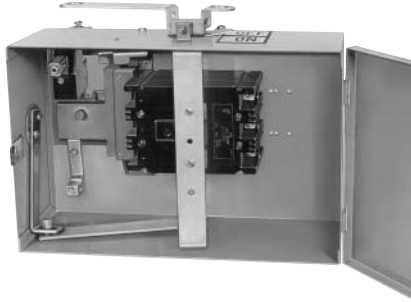
Discount Symbol ..... **CE4**



**Pricing — Circuit Breaker Plug-in Units**



*Pow-R-Way Bus Plug*



*Pow-R-Way Bus Plug (Open View)*

**Table 17-50. Circuit Breaker Plug-in Units**

Breaker Frame	Ampere Rating	Plug-in Enclosure		100% Neutral Stab		50% Internal Ground Stab	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
ED, EHD, FDB, FD, HFD, FDC, EDH, EDC	15 – 150	IBPFD		PWN110 (15 – 110 A) PWN150 (125 – 250 A)		PIGS104	
JDB, JD, HJD, JDC	70 – 250	IBPJD		PWN250 (125 – 250 A)		PIGS104	
KDB, KD, HKD, KDC	100 – 400	IBPKD		PWN400 (150 – 400 A)		PIGS104	
LDB, LD, HLD, LDC	300 – 600	IBPLD		PWN600 (300 – 600 A)		PIGS208	
MDL, HMDL	400 – 800	IBPMD		PWN800 (400 – 800 A)		PIGS608	
FB TRI-PAC	15 – 100	IBPFBP		PWN110 (15 – 100 A)		PIGS104	
LA TRI-PAC	125 – 400	IBPLAP		PWN400 (125 – 400 A)		PIGS104	
NB TRI-PAC	500 – 800	IBPNBP		PWN800 (500 – 800 A)		PIGS208	
FCL Current Limit-R	15 – 100	IBPFCL		PWN110 (15 – 110 A)		PIGS104	
LCL Current Limit-R	125 – 400	IBPLCL		PWN400 (125 – 400 A)		—	—

■ Refer to **Page 17-14** for breaker data. For reference only.

**Note:** The enclosure, circuit breaker, neutral, and ground are ordered and shipped assembled. See **Page 17-14** for Plug Assembled Style Number Configuration.

■ If a Bolt-on Unit is required, double the price of a plug-in unit and order by description. Bolt-on units are factory assembled. Refer to Eaton’s Cutler-Hammer busway for delivery. Bolt-on units require a Power Take-off at the rating of the busway. Prices from **Page 17-24**.

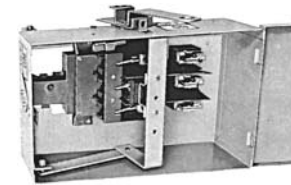
■ The adder for sprinkler-proof is 15%.

**Pow-R-Way Busway — Fusible Plug-in Units**

**Pricing — Fusible Plug-in Units**

**Table 17-51. Fusible Switch Horsepower Ratings**

Ampere Rating	240 Volts		480 Volts		600 Volts	
	NEC Standard	Maximum	NEC Standard	Maximum	NEC Standard	Maximum
30	3	7-1/2	5	15	7-1/2	20
60	7-1/2	15	15	30	15	50
100	15	30	25	60	30	75
200	25	60	50	125	60	150
400	50	125	100	250	125	350
600	75	200	150	400	200	500
800	100	250	200	500	250	500



**Fusible ITAP**

**Table 17-52. Fusible Plug-in Units**

Ampere Rating	Enclosure 600 Volts		Enclosure 240 Volts		100% Neutral Stab		50% Internal Ground Stab		Class R Fuse Clips (If Required)			
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	600 Volts		240 Volts	
									Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
30	ITAP361		ITAP321		PWN110		PIGS104		RFK161		RFK121	
60	ITAP362		ITAP322		PWN110		PIGS104		RFK262		RFK222	
100	ITAP363		ITAP323		PWN110		PIGS104		RFK464		RFK464	
200	ITAP364		ITAP324		PWNF250		PIGS208		RFK464		RFK464	
400	ITAP365		ITAP325		PWN400		PIGS208		RFK666		RFK666	
600	ITAP366		ITAP326		PWN600		PIGS208		RFK666		RFK666	
800	ITAP367		ITAP327		PWN800		PIGS208		—		—	

- Fuses are not included.
- Mechanical lugs are provided. If compression lugs are required, the size must be specified.
- Plug-in unit, neutral, and ground are ordered and shipped assembled.
- H-Fuse clips are supplied as standard.
- If a bolt-on unit is required, double the price of a plug-in unit and order by description. Bolt-on units are factory assembled. Refer to Eaton's Cutler-Hammer busway for delivery. Bolt-on units require a power take-off at the rating of the busway. Prices from Page 17-24.
- If R-Fuse clips are required, add an "R" to the end of the catalog number (30 through 600 amperes only).
- The adder for sprinkler-proof is 15%.

**Note:** See Page 17-14 for Plug Assembled Style Number Configuration.

**Table 17-53. Special Industry Fusible Plug-in Units**

Ampere Rating	Enclosure 600 Volts		100% Neutral Stab		50% Internal Ground Stab		Terminal Kit Compression Lugs			
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	# Per Phase	Wire Size	Catalog Number	Price U.S. \$
30	ITAP361H		①		①		1	1 - #12 to #10	CTK30SC	
60	ITAP362H		①		①		1	1 - #8	CTK60SC	
100	ITAP363H		①		①		1	1 - #4	CTK100SC	
200	ITAP364H		①		①		1	1 - 2/0	CTK200BSC	
400	ITAP365H		①		①		1	1 - 750 kcmil	CTK400SPW	
600	ITAP366H		①		①		2	2 - 500 kcmil	CTK600DPM	

① Grounds and neutrals must be factory assembled. Order by description. See Page 17-14.

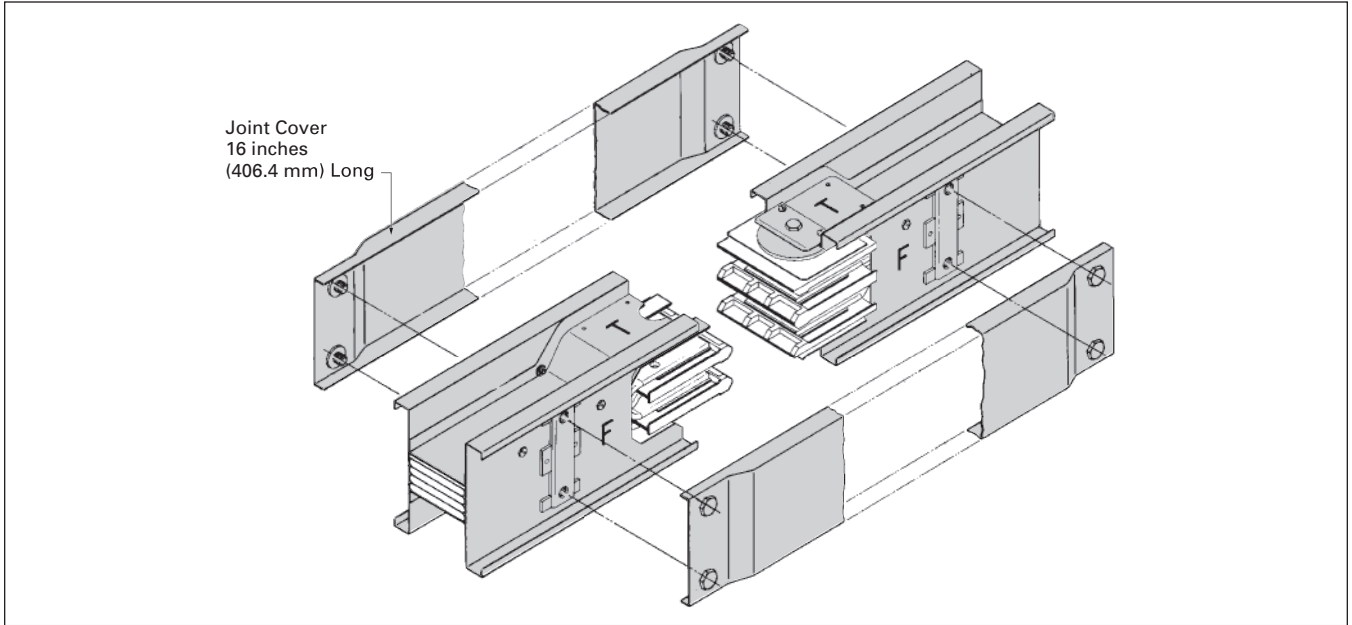
- Fuses are not included.
- Grounding compression lug included on 200 ampere and above. Lugs are ordered and shipped separately. Fuses are not included.
- H-Fuse Clips are supplied as standard.
- If J- or R-Fuse clips are required, order by description.
- The adder for sprinkler-proof is 15%.

**Table 17-54. Pow-R-Way Plug-in Cable Tap Box Units**

Ampere Rating	Enclosure 600 Volts		100% Neutral Stab		50% Internal Ground Stab	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
225	IPTB225		PWN225		PIGS208	
400	IPTB400		PWN400		PIGS208	
600	IPTB600		PWN600		PIGS208	
1000	IPTB1000		PWN1000		PIGS208	

Discount Symbol ..... **CB-15**  
Discount Symbol ..... **CE4**

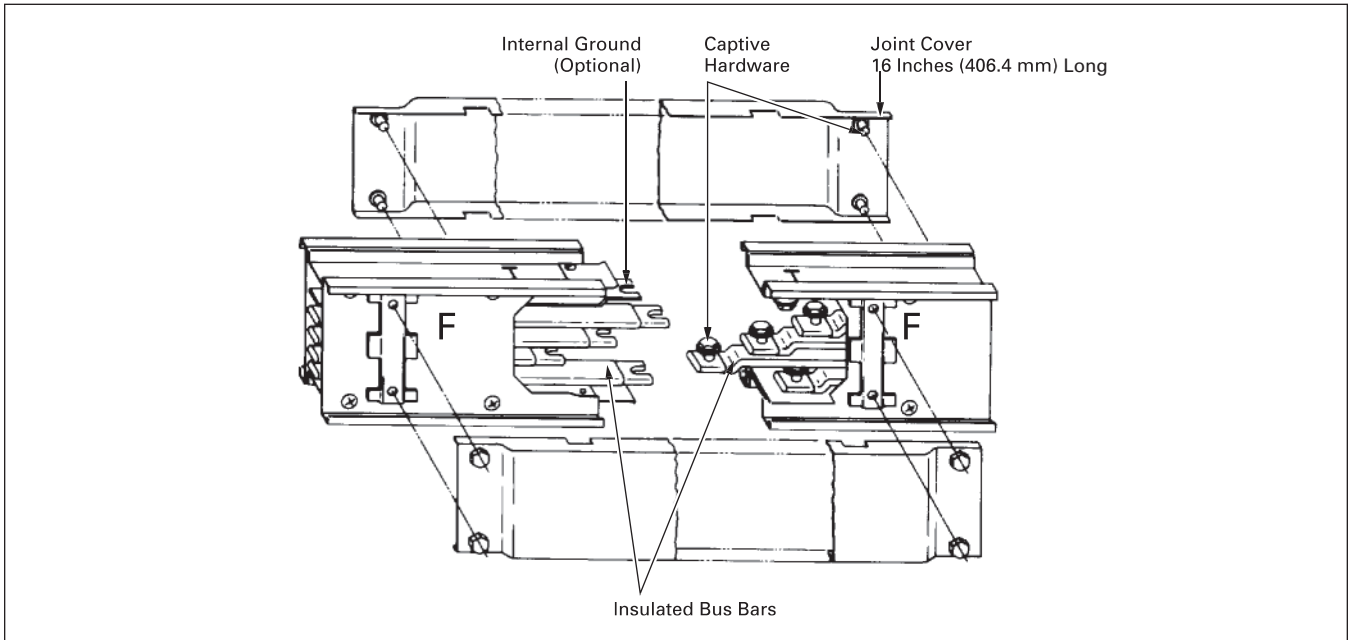
**Technical Data and Specifications**



**Figure 17-5. Typical Pow-R-Way Joint**  
(Single Bolt Construction, 1 Bar per Phase, See AD 30-560)



**Typical Pow-R-Way II Plug-in Straight Length**



**Figure 17-6. Typical Pow-R-Way II Joint**  
(Single Bolt per Bus Bar, Pow-R-Way II)

**100 Ampere Busway**

**Product Description**

**Plug-in Busway**

- 100 ampere copper.
- Straight sections of plug-in busway.
- 3-phase 3-wire, 3-phase 4-wire, and 1-phase 3-wire applications.

**Application Description**

The Cutler-Hammer 100 ampere busway by Eaton Corporation is an alternative to cable in supplying small blocks of power for the normal commercial and industrial power systems. 100 ampere busway is practical for small shops, laboratories, classrooms, and light manufacturing.

**Options and Accessories**

**100 Ampere Busway Plug-in Units**

Plug-in units for 100 ampere busway are available with or without overcurrent protection. All plug-in units include a neutral stab and are suitable for 3-phase, 3-wire, and 3-phase, 4-wire applications.

The PINQP circuit breaker enclosures and the LCNQP and LCNFD receptacle enclosures are all suitable for 1-phase, 3-wire applications. Ground stabs are available for field installation.

**Fusible Units**

Fusible units are available for 30, 60 and 100 ampere service for 240 or 600 volts.

**Circuit Breaker Units**

If you are using circuit breaker units, the load must be distributed evenly among A, B and C phases. To accomplish this, distribute the load evenly among 1-, 2- and 3-pole breakers. Available are QUICKLAG® "HQP" circuit breaker units for 50 A – 240 V maximum service, "EHD, FDB and FD" circuit breakers for 100 A – 600 V maximum service.

**External Handle Operating Mechanism**

An external operating mechanism is attached on top of the breaker switch for hookstick or chain operation. This is available for all circuit breakers.

**Receptacle Enclosures**

The receptacle enclosures (loadcenters) include space for three breaker poles and provisions for 1, 2 or 3 conventional, single-gang outlets, and blank covers to fill unused spaces. Include neutral stab. Do not include breakers, outlets or wiring.

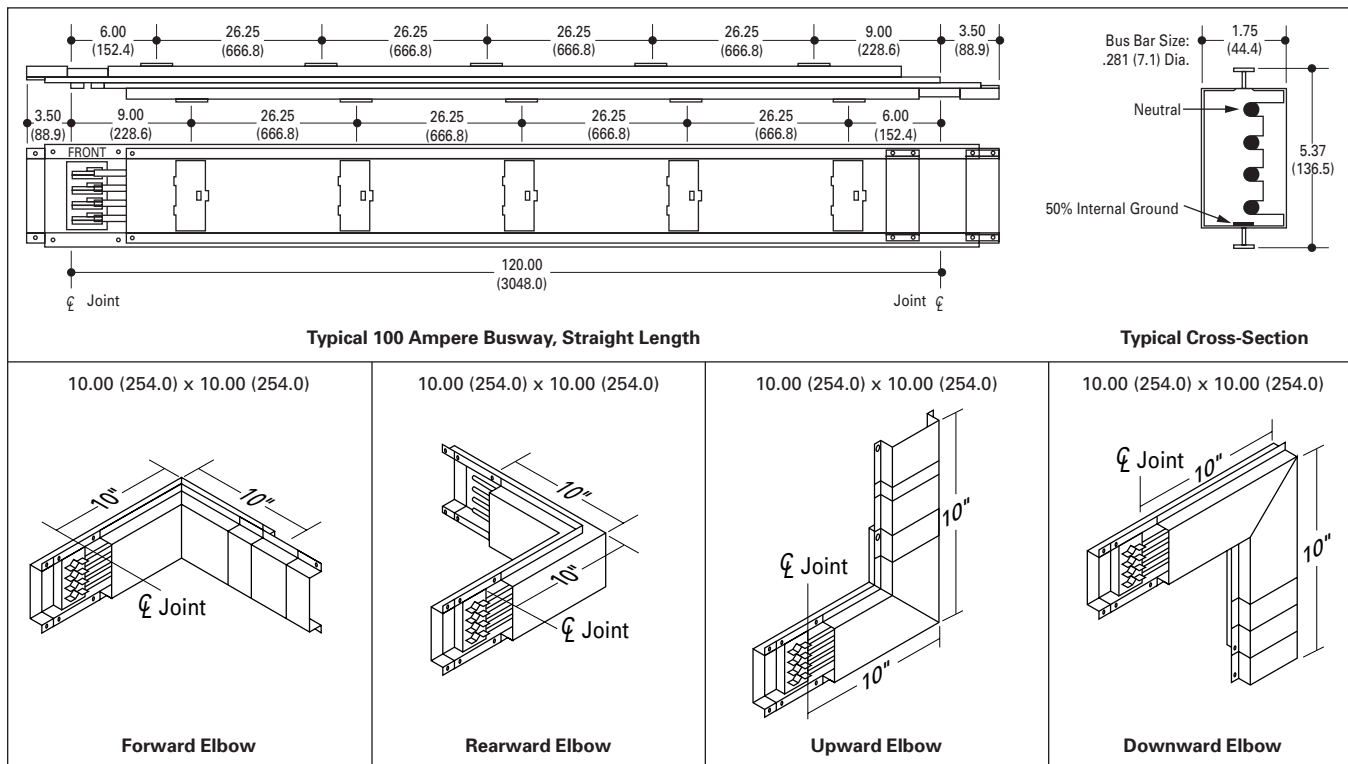
The enclosure, circuit breaker (if required) and ground are ordered separately and shipped unassembled. If the unit is to be factory assembled, please indicate on the order, add 15% to the total price, and allow additional time for shipment. For circuit breaker selection and pricing, see **Page 17-14**.



**Bus Plug Receptacle**

**Technical Data and Specifications**

17



**Figure 17-7. 100 Ampere Busway and Fittings**

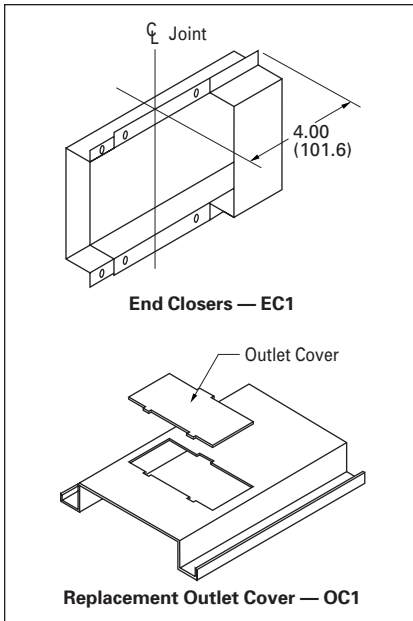


Figure 17-8. Accessories

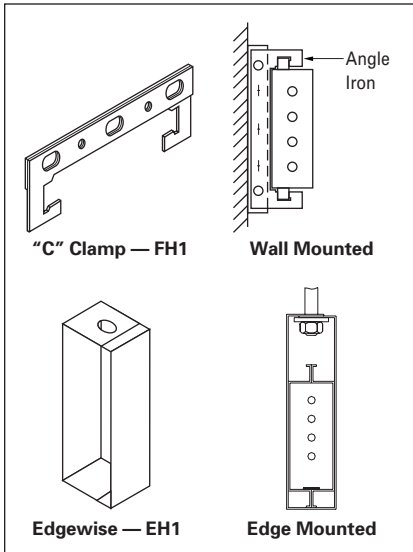


Figure 17-9. Hangers

Note: The busway price does not include hangers.

Table 17-55. Accessories

Item	Catalog Number	Price U.S. \$
End Closer	EC1	
Outlet Cover	OC1	
Edgewise Hanger	EH1	
"C" Clamp Hanger	FH1	
Slip-on Wall Flange	WF1	

Note: The above items can be used with or without ground, 3-wire or 4-wire.

**Product Specifications**

Electrical conductors are silver-plated round copper rods. A 50% internal ground bar is supplied as standard. Busway with ground will match existing busway without ground. The housing is formed from two channels of 20-gauge steel riveted together in a solid assembly and painted ANSI 61.

Conductor joints are made by means of boltless pressure clips that require no assembly or adjustment by the installer. The bus bars are firmly supported by molded insulators on the alternate side of the busway.

**Product Selection**

Table 17-56. Busway

Description	3-Phase, 3-Wire 600 Volts Maximum		3-Phase, 4-Wire FN 277/480 Volts		1-Phase, 3-Wire 120/240 Volts	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
<b>Copper (Includes 50% Internal Ground Bar)</b>						
10-ft. (3048 m)	CST13G		CST14G		CST13NG	
5-ft. (1524 m)	CST135G		CST145G		CST13N5G	
3-ft. (914.4 m)	CST133G		CST143G		CST13N3G	
2-ft. (609.6 m)	CST132G		CST142G		CST13N2G	
1-ft. (304.8 m)	CST131G		CST141G		CST13N1G	

Elbows 10-inch x 10-inch (254.0 mm x 254.0 mm)

Forward	CFE13G		CFE14G		CFE13NG	
Rearward	CRE13G		CRE14G		CRE13NG	
Upward	CUE13G		CUE14G		CUE13NG	
Downward	CDE13G		CDE14G		CDE13NG	

Table 17-57. Cable Tap Boxes

Type	3- or 4-Wire		Ground (If Required)	
	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
Plug-in End (R or L) Center	PIB14 EB14 CBIB14G		PIGS100 GL100 Included	

Table 17-58. Fusible Plug-in Units

Voltage Rating	Ampere Rating	Fusible Enclosure		Ground (If Required)	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
240	30	FAN321		PIGS100	
	60	FAN322		PIGS100	
	100	FAN323		PIGS100	
600	30	FAN361		PIGS100	
	60	FAN362		PIGS100	
	100	FAN363		PIGS100	

Table 17-59. Circuit Breakers for Plug-in Units

Breaker Frame	Ampere Rating	Circuit Breaker Enclosure		Receptacle Enclosure		Ground (If Required)		External Handle (Required for Hook-Stick Operation)	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
QUICKLAG HQP	15 – 50	PINQP		LCNQP		PIGS100		HMQP	
FD, EHD, FDB	15 – 100	PINFD		LCNFD		PIGS100		HMFD	

Discount Symbol ..... CE3  
Discount Symbol ..... CE4

## Application Description

### Non-Segregated Bus Duct

Non-Segregated Phase 600 Volt, 10 kV BIL – 5 kV, 60 kV BIL – 15 kV, 95 kV BIL – 38 kV, 170 kV BIL



Typical 5/15 kV Bus Run Section



End View

### Application Description

Eaton's Cutler-Hammer non-segregated phase bus runs are designed for use on circuits whose importance requires greater reliability than power cables provide. Typical of such applications are the connections from transformers to switchgear assemblies in unit substations, connections from switchgear assemblies to rotating apparatus, and tie connections between switchgear assemblies. Non-segregated phase bus is an assembly of bus conductors with associated connections, joints, and insulating supports confined within a metal enclosure without interphase barriers. The conductors are adequately separated and insulated from each other and ground by insulating bus supports. Each conductor for 2400 volt service and above is insulated with a fluidized bed epoxy coating throughout which reduces the possibility of corona and electrical tracking.

### Features, Benefits and Functions

#### Ease of Installation

Because of its compact dimensions, relative light weight, and user-friendly design, non-segregated phase bus is easily installed. The inherent rigidity of the design permits hanging rods to be spaced approximately every 4 feet (1.2 m) for indoor bus runs, and allows supporting frames to be spaced approximately every 8 feet (2.4 m) for outdoor runs. Standard length of bus run sections is 100 inches (2540 mm) or less.

#### Short Circuit Force Withstand Ability

Non-segregated phase bus runs in 600 volt, 5 kV and 15 kV are designed to withstand 3-phase and phase-to-ground short-circuit current of 78 kA

rms asymmetrical (132 kA peak) for 10 cycles and 50 kA rms symmetrical for 2 seconds. Momentary 4-cycle withstand ratings up to 158 kA peak (98.8 kA rms asymmetrical) are also available. For 27 kV non-segregated phase bus runs, short-circuit withstand ratings of 64 kA rms asymmetrical (108 kA peak) for 10 cycles and 40 kA rms symmetrical for 2 seconds are standard.

#### Construction

Enclosures are fabricated from 11 gauge steel or aluminum, and are welded for maximum rigidity. Removable covers are secured with bolts for ease of access when making joints and subsequent and periodic inspection.

Enclosures are painted with a baked-on polyester powder coat paint system resulting in a very durable finish with uniform thickness and gloss. This cosmetically pleasing finish minimizes the risk of problems in harsh environments. The standard color is ANSI-61 light gray, and special paint colors are available upon request.

Expansion joints are supplied in all straight bus runs at approximately 50 foot (15.2 m) intervals to allow for the expected expansion when the conductors are energized and are carrying rated current.

A variety of terminations is available to accommodate most termination requirements. Bus runs can be terminated with flexible shunts, potheads, porcelain bushings, or conductor stub ends for connection to riser bars in switchgear assemblies.

#### Conductors

All conductors are 100% conductivity copper bars. Bus joints are made by solidly bolting the bus bars together with splice plates on each side. All joint surfaces are silver-plated to ensure

maximum conductivity through the joint. After bolting, each standard joint is covered by a preformed, flame retardant insulating boot, providing full insulation for bus conductors. These boots are easily removable for inspection of the joints at any future time.

#### Temperature Rise

The bus will be capable of carrying rated current continuously without exceeding a conductor temperature rise of 65°C above an outside ambient temperature of 40°C, as required by ANSI Standard C37.23.

### Standards and Certifications

The metal-enclosed bus runs are designed for 600 volt, 5 kV, 15 kV, 27 kV and 38 kV service in accordance with ANSI C37.23. 600V, 5 kV and 15 kV bus is available with continuous current ratings of 1200, 2000, 3000, 3200 or 4000 amperes. 27 kV and 38 kV bus is available in 1200 and 2000 amperes continuous ratings.

#### Tests

The design of non-segregated bus runs has been tested per ANSI C37.23. Certification of momentary current testing, impulse testing, and heat rise are available upon request.

#### Seismic Application

Bus run assemblies are designed to meet Uniform Building Code (UBC) and California Code Title 24 for Seismic Zones 4, 3, 2A, 2B, 1 and 0. Complete guidelines for proper supports are provided on each seismic specified order.

#### Further Information:

Technical Data .....	TD01702001E
Brochure .....	BR01702001E
Final Fit Program .....	SA01702001E
Consulting Application Guide, 13th Edition .....	CA08104001E

### Technical Data and Specifications

**Table 17-60. Available Non-Segregated Bus Ratings per ANSI/IEEE Standard C37.23-1987 ①**

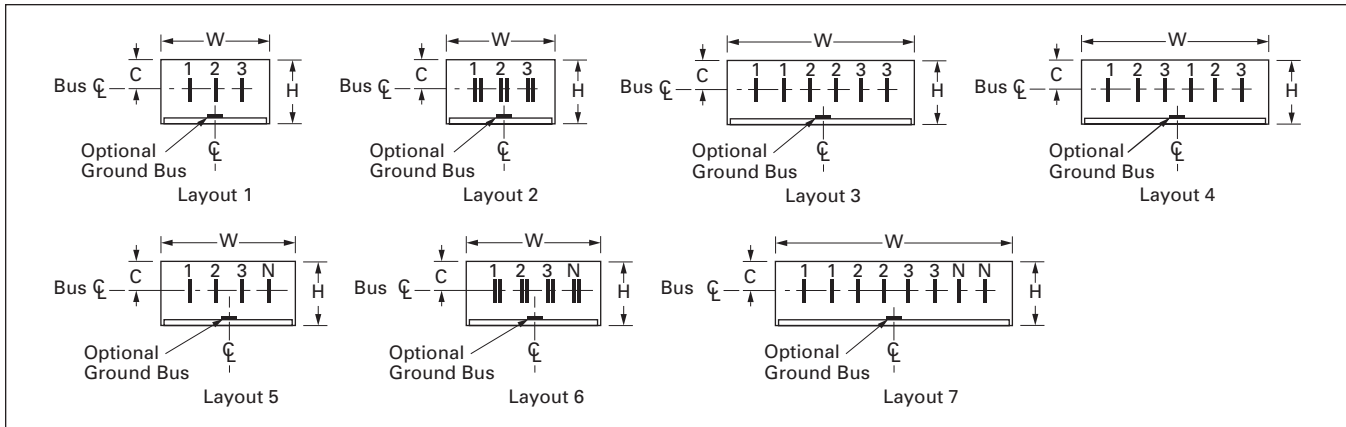
Rated Maximum Voltage kV rms	Rated Power Frequency Hz	Power Frequency Withstand 1 min. Dry kV rms	Impulse Withstand (1.2 x 50 microsec) kV Peak	Rated Continuous Current Amperes	Rated Short-Time Short Circuit Withstand Current (kA rms Symmetrical)		Rated Momentary Short Circuit Withstand Current	
					2 Sec.	1 Sec. ②	10 Cycle ③	
							kA Peak	kA rms Asym.
0.635	60	2.2	10	1200 2000 3000 4000 5000	49	69	132	78
0.635	60	2.2	10	1200 2000 3000	63	89	170	100.8
4.76	60	19	60	1200 2000 3000 4000 5000	49	—	132	78
4.76	60	19	60	1200 2000 3000	63	—	170	100.8
8.25	60	36	95	1200 2000 3000 4000 5000	41	—	111	66
8.25	60	36	95	1200 2000 3000	63	—	170	100.8
15	60	36	95	1200 2000 3000 4000 5000	48	—	130	77
15	60	36	95	1200 2000 3000	63	—	170	100.8
27	60	60	125	1200 2000	40	—	108	64
38	60	80	170	1200 2000	40	—	104	64

 ① Refer to **Section 22 Tables 22-4 – 22-7** for available CSA and UL listings.

 ② This is a value calculated from 2 second short-circuit current withstand rating based on relationship  $I^2t = \text{constant}$ .

③ For 600 volt application, 4-cycle momentary current withstand rating up to 158 kA peak (98.8 kA rms asymmetrical) is also available.

**Technical Data and Specifications**



**Figure 17-10. Dimensional Data for 635 Volt/5 kV/15 kV Non-Segregated Phase Bus — Standard Configurations**

**Table 17-61. Dimensional Data for 635 Volt/5 kV/15 kV Bus Rated up to 132 kA Peak Momentary, 49 kA rms Symmetrical 2 Second**

Wire Type	Rated Maximum Voltage kV ①	Rated Continuous Current Amperes	Layout No.	Enclosure Material		Enclosure Size (Inches)			No. of Bars Ph and Size, Cu (inches) ①	Ph-Ph Bus Spacing (Inches)	Insulating Supports		Optional Ground Bus, Cu (Inches)	Approx. Average Weight per Foot (Lbs.) ③	Listing		
				Standard	Optional	W	H	C			Standard	Optional ②			CSA	UL	
3	0.635/5/15	1200	1	Aluminum	—	20.00	17.38	8.13	(1) 0.50 x 3	5.38	④	⑤	⑥	0.25 x 2	38	Yes	No
	0.635/5/15	2000	1	Aluminum	—	20.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	⑥	0.25 x 2	47	Yes	No
	0.635/5/15	3000	1	Aluminum	—	20.00	17.38	8.13	(1) 0.50 x 8	5.38	④	⑤	⑥	0.25 x 2	68	Yes	No
	0.635	3200	2	Aluminum	—	20.00	17.38	8.13	(2) 0.38 x 6	5.38	④	—	—	0.25 x 2	68	Yes	No
	0.635/5/15	4000	3	Aluminum	—	35.75	17.38	8.13	(2) 0.50 x 6	5.38	④	⑤	⑥	0.25 x 2	101	Yes	No
	0.635/5/15	5000	4	Aluminum	—	35.75	17.38	8.13	(2) 0.50 x 6	5.38	④	⑤	⑥	0.25 x 2	101	Yes	No
3	0.635/5/15	1200	1	—	Steel	20.00	17.38	8.13	(1) 0.50 x 3	5.38	④	⑤	⑥	0.25 x 2	58	No	No
	0.635/5/15	2000	1	—	Steel	20.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	⑥	0.25 x 2	67	No	No
	0.635/5/15	3000	3	—	Steel	35.75	17.38	8.13	(2) 0.50 x 4	5.38	④	⑤	⑥	0.25 x 2	106	No	No
	0.635	3200	3	—	Steel	35.75	17.38	8.13	(2) 0.50 x 6	5.38	④	—	—	0.25 x 2	130	No	No
	0.635/5/15	4000	3	—	Steel	35.75	17.38	8.13	(2) 0.50 x 8	5.38	④	⑤	⑥	0.25 x 2	154	No	No
	0.635/5/15	5000	4	—	Steel	35.75	17.38	8.13	(2) 0.50 x 8	5.38	④	⑤	⑥	0.25 x 2	154	No	No
4	0.635/5/15	1200	5	Aluminum	—	26.00	17.38	8.13	(1) 0.50 x 3	5.38	④	⑤	⑥	0.25 x 2	48	No	No
	0.635/5/15	2000	5	Aluminum	—	26.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	⑥	0.25 x 2	60	No	No
	0.635/5/15	3000	5	Aluminum	—	26.00	17.38	8.13	(1) 0.50 x 8	5.38	④	⑤	⑥	0.25 x 2	88	No	No
	0.635	3200	6	Aluminum	—	26.00	17.38	8.13	(2) 0.38 x 6	5.38	④	—	—	0.25 x 2	88	No	No
	0.635	4000	7	Aluminum	—	35.75	17.38	8.13	(2) 0.50 x 6	4.00	④	—	—	0.25 x 2	127	No	No
	4	0.635/5/15	1200	5	—	Steel	26.00	17.38	8.13	(1) 0.50 x 3	5.38	④	⑤	⑥	0.25 x 2	72	No
0.635/5/15		2000	5	—	Steel	26.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	⑥	0.25 x 2	84	No	No
0.635		3000	7	—	Steel	35.75	17.38	8.13	(2) 0.50 x 4	4.00	④	—	—	0.25 x 2	124	No	No
0.635		3200	7	—	Steel	35.75	17.38	8.13	(2) 0.50 x 6	4.00	④	—	—	0.25 x 2	156	No	No
0.635		4000	7	—	Steel	35.75	17.38	8.13	(2) 0.50 x 8	4.00	④	—	—	0.25 x 2	188	No	No
5/15		3000	—	—	Steel	NA	NA	—	—	—	—	—	—	—	—	—	—
5/15		4000	—	—	Steel	NA	NA	—	—	—	—	—	—	—	—	—	—

① All bus bars for applications above 600 volts are fully insulated with fluidized epoxy coating for the rated maximum voltage.

All bus bars for applications at 600 volts or below are bare. Epoxy coating at 600 volts and below is available as an option.

② Check with Eaton for availability.

③ Add 3 lbs. to the weights shown when using Poly/Porcelain or Epoxy insulating supports in place of Glass Polyester.

④ Glass Polyester.

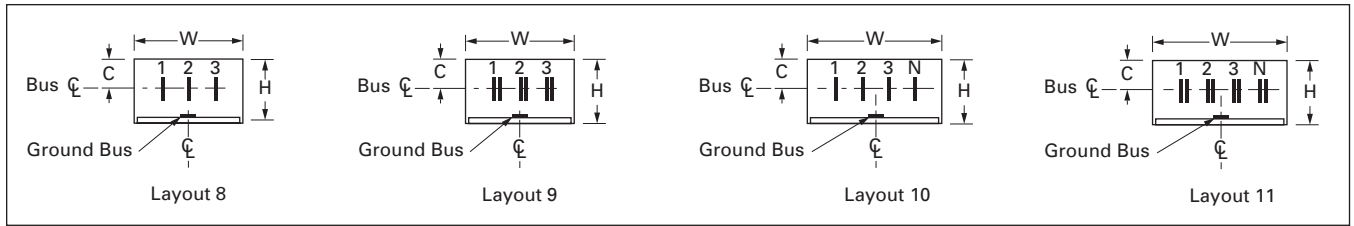
⑤ Polyester/Porcelain.

⑥ Epoxy.

**Note:** For dimensions in mm, multiply inches by 25.4.



**Technical Data and Specifications**



**Figure 17-11. Dimensional Data for 635 Volt/5 kV/15 kV Non-Segregated Phase Bus — 63 kA Configurations**

**Table 17-62. Dimensional Data for 635 Volt/5 kV/15 kV Bus Rated up to 170 kA Momentary, 63 kA rms Symmetrical 2 Second**

Wire Type	Rated Maximum Voltage kV ①	Rated Continuous Current Amperes	Layout No.	Enclosure Material		Enclosure Size (Inches)			No. of Bars Ph and Size, Cu (Inches) ①	Ph-Ph Bus Spacing (Inches)	Insulating Supports		Optional Ground Bus, Cu (Inches)	Approx. Average Weight per Foot (Lbs.) ③	Listing	
				Standard	Optional	W	H	C			Standard	Optional ②			CSA	UL
3	0.635/5/15	1200	8	Aluminum	—	20.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	0.25 x 3	48	Yes	No
	0.635/5/15	2000	8	Aluminum	—	20.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	0.25 x 3	48	Yes	No
	0.635/5/15	3000	9	Aluminum	—	20.00	17.38	8.13	(2) 0.38 x 6	5.38	④	⑤	0.25 x 3	78	Yes	No
	0.635	3200	9	Aluminum	—	20.00	17.38	8.13	(2) 0.38 x 6	5.38	④	—	0.25 x 3	78	No	No
3	0.635/5/15	1200	8	—	Steel	20.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	0.25 x 3	68	No	No
	0.635/5/15	2000	8	—	Steel	20.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	0.25 x 3	68	No	No
4	0.635/5/15	1200	10	Aluminum	—	26.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	0.25 x 3	61	No	No
	0.635/5/15	2000	10	Aluminum	—	26.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	0.25 x 3	61	No	No
	0.635/5/15	3000	11	Aluminum	—	26.00	17.38	8.13	(2) 0.38 x 6	5.38	④	⑤	0.25 x 3	101	No	No
	0.635	3200	11	Aluminum	—	26.00	17.38	8.13	(2) 0.38 x 6	5.38	④	—	0.25 x 3	101	No	No
4	0.635/5/15	1200	10	—	Steel	26.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	0.25 x 3	85	No	No
	0.635/5/15	2000	10	—	Steel	26.00	17.38	8.13	(1) 0.38 x 6	5.38	④	⑤	0.25 x 3	85	No	No

① All bus bars for applications above 600 volts are fully insulated with fluidized epoxy coating for the rated maximum voltage. All bus bars for applications at 600 volts or below are bare. Epoxy coating at 600 volts and below is available as an option.

② Check with Eaton for availability.

③ Add 3 lbs. to the weights shown when using Poly/Porcelain or Epoxy insulating supports in place of Glass Polyester.

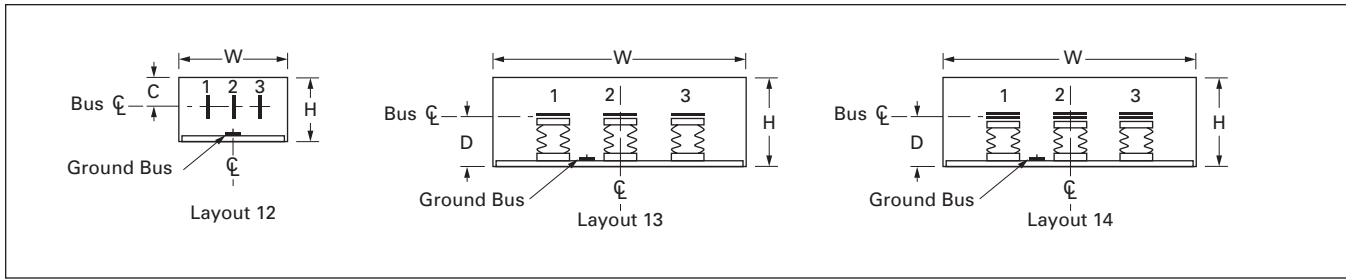
④ Glass Polyester.

⑤ Polyester/Porcelain.

⑥ Epoxy.

**Note:** For dimensions in mm, multiply inches by 25.4.

**Technical Data and Specifications**



**Figure 17-12. Dimensional Data for 27 kV/38 kV Non-Segregated Phase Bus — Standard Configurations.**

**Table 17-63. Dimensional Data for 27 kV Bus Rated up to 108 kA Peak Momentary, 40 kA rms Symmetrical 2 Second**

Wire Type	Rated Maximum Voltage kV <sup>①</sup>	Rated Continuous Current Amperes	Layout No.	Enclosure Material		Enclosure Size (Inches)			No. of Bars Ph and Size, Cu (Inches) <sup>①</sup>	Ph-Ph Bus Spacing (Inches)	Insulating Supports		Optional Ground Bus, Cu (Inches)	Approx. Average Weight per Foot (Lbs.) <sup>③</sup>	Listing		
				Standard	Optional	W	H	C			Standard	Optional <sup>②</sup>			CSA	UL	
3	27	1200	12	Aluminum	—	30.00	21.00	9.88	(1) 0.25 x 4	7.00	④	⑤	⑥	0.25 x 2	37	Yes	No
	27	2000	12	Aluminum	—	30.00	21.00	9.88	(1) 0.50 x 4	7.00	④	⑤	⑥	0.25 x 2	49	Yes	No
3	27	1200	12	—	Steel	30.00	21.00	9.88	(1) 0.25 x 4	7.00	④	⑤	⑥	0.25 x 2	37	Yes	No
	27	2000	12	—	Steel	30.00	21.00	9.88	(1) 0.50 x 4	7.00	④	⑤	⑥	0.25 x 2	49	Yes	No

① All bus bars for applications above 600 volts are fully insulated with fluidized epoxy coating for the rated maximum voltage.

② Check with Eaton for availability.

③ Add 3 lbs. to the weights shown when using Poly/Porcelain or Epoxy insulating supports in place of Glass Polyester.

④ Glass Polyester.

⑤ Polyester/Porcelain.

⑥ Epoxy.

**Note:** For dimensions in mm, multiply inches by 25.4.

**Table 17-64. Dimensional Data for 38 kV Bus Rated up to 104 kA Peak Momentary, 40 kA rms Symmetrical 2 Second**

Wire Type	Rated Maximum Voltage kV <sup>⑦</sup>	Rated Continuous Current Amperes	Layout No.	Enclosure Material		Enclosure Size (Inches)			No. of Bars Ph and Size, Cu (Inches) <sup>⑦</sup>	Ph-Ph Bus Spacing (Inches)	Insulating Supports		Optional Ground Bus, Cu (Inches)	Approx. Average Weight per Foot (Lbs.)	Listing		
				Standard	Optional	W	H	C			Standard	Optional			CSA	UL	
3	38	1200	13	Aluminum	—	40.25	21.50	10.23	(1) 0.25 x 4	10.50	Epoxy	—	—	0.25 x 2	61	Yes	No
	38	2000	14	Aluminum	—	40.25	21.50	10.64	(1) 0.38 x 4	10.50	Epoxy	—	—	0.25 x 2	89	Yes	No
3	38	1200	13	—	Steel	40.25	21.50	10.23	(1) 0.25 x 4	10.50	Epoxy	—	—	0.25 x 2	88	No	No
	38	2000	14	—	Steel	40.25	21.50	10.64	(1) 0.38 x 4	10.50	Epoxy	—	—	0.25 x 2	116	No	No

⑦ All bus bars for applications above 600 volts are fully insulated with fluidized epoxy coating for the rated maximum voltage.

**Note:** For dimensions in mm, multiply inches by 25.4.

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