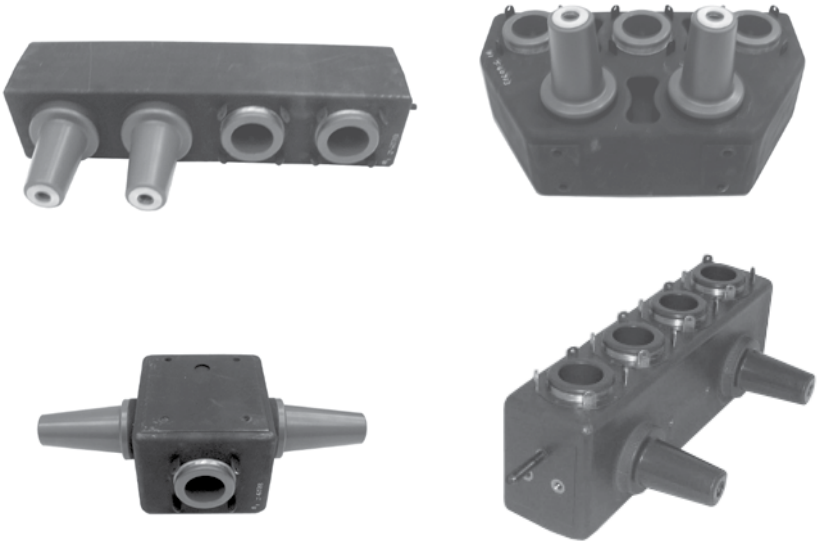
200 A and 600 A, 15, 25, and 35 kV junction bars for separable connectors



General

Eaton designs its Cooper Power™ series junction bars for vault or apparatus applications and can be used for looping, tapping and sectionalizing. They are fully shielded, submersible, resistant to harsh materials and are designed and manufactured in accordance with IEEE Std 386™-2006 standard– "Separable Insulated Connector Systems".

These vacuum cast junctions are made of a high quality silica based thermal setting resin, possessing a high dielectric strength (600 V/mil) and are available for applications up to 35 kV. Junction bars are manufactured in 200 A, 600 A, 900 A or hundreds of combinations of these ratings. The 200 A junctions incorporate a universal bushing well design making it possible to use either a 200 A loadbreak or deadbreak bushing well inserts.

Junction bars are available in several styles including in-line, stacked, and "L" and "Y" splices, which have unique configurations for limited space installations. The "L" and "Y" splices allow streamline cable orientation even in the smallest of vaults reducing the mechanical stress at the connection points. Orderly cable installations also simplify future maintenance and reduce work area safety hazards.

All in-line and "L" junctions bars come standard with stainless steel mounting brackets that provide mounting angles from 0 to 60°. Stacked and "Y" junctions come standard with stainless steel, flush mounting brackets with no angular adjustment. Stainless steel mounting brackets with parking stands are available in a variety of configurations for use in standard and custom applications. U-straps or special mounting arrangements for installation in sectionalizing cubicles are also available. For applications requiring non-standard junctions or mounting provisions, contact your Eaton representative.

Engineered Solutions

While many configurations are included in this section, modifications to these designs can be developed quickly. Contact your Eaton representative to discuss additional configurations.

900 Amp rating

All junction bars are manufactured with an internal copper bus bar. A 900 A rating can be achieved on the 600 A bushings when mated with comparably rated all copper separable connectors.

Powering Business Worldwide

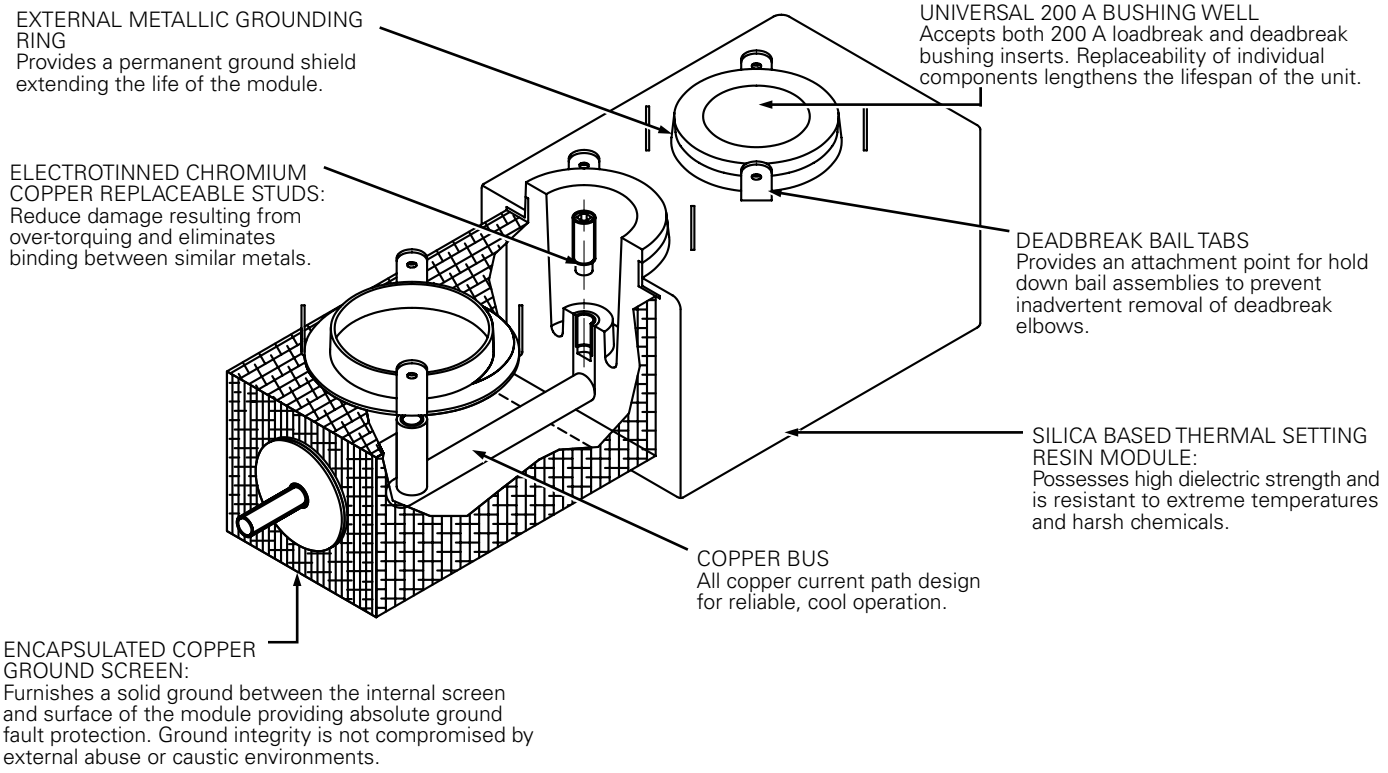


Figure 1. Cut-away view of a three point Junction Bar, JB-3W.

Interchangeability

All junction bars are designed and manufactured in accordance with IEEE Std 386™-2006 standard and are interchangeable with all comparably rated separable connectors currently available from other major manufacturers that meet the requirements of this standard.

Installation

Junction bars are simply bolted to the mounting surface. 200 A and 600 A connectors are assembled onto the junctions as described in the appropriate installation instructions for those connectors.

Production tests

Tests conducted in accordance with IEEE Std 386™-2006 standard.

- AC 60 Hz 1 Minute Withstand
  - 15 kV Class – 34 kV
  - 25 kV Class – 40 kV
  - 35 kV Class – 50 kV
- Minimum Corona Voltage Level
  - 15 kV Class – 11 kV
  - 25 kV Class – 19 kV
  - 35 kV Class – 26 kV

Tests conducted in accordance with Eaton requirements:

- Physical Inspection

Table 1. Voltage Ratings and Characteristics

15 kV Class	
Description	**kV**
Maximum Rating Phase-Ground	8.3
AC 60 Hz 1 Minute Withstand	34
DC 15 Minute Withstand	53
BIL and Full Wave Crest	95
Minimum Corona Voltage Level	11
25 kV Class	
Description	**kV**
Maximum Rating Phase-Ground	15.2
AC 60 Hz 1 Minute Withstand	40
DC 15 Minute Withstand	78
BIL and Full Wave Crest	125
Minimum Corona Voltage Level	19
35 kV Class	
Description	**kV**
Maximum Rating Phase-Ground	21.1
AC 60 Hz 1 Minute Withstand	50
DC 15 Minute Withstand	103
BIL and Full Wave Crest	150
Minimum Corona Voltage Level	26

Voltage ratings and characteristics are in accordance with IEEE Std 386™-2006 standard.

Table 2. Current Ratings and Characteristics

200 A Class Product	
Description	**Amperes**
Continuous	200 A rms
Short Time	10,000 A rms symmetrical for 0.17 s
	3,500 A rms symmetrical for 3.0 s
600 A/900 A Class Product	
Description	**Amperes**
Continuous	600 A rms
Short Time	25,000 A rms symmetrical for 0.17 s
	10,000 A rms symmetrical for 3.0 s

Current ratings and characteristics are in accordance with IEEE Std 386™-2006 standard.

Ordering information

Each Junction Bar Kit Contains:

- Thermal Set Junction Bar
- Stainless Steel Mtg. Bracket
- Installation Instructions

To order 200, 600, or 900 A, 15/25 and 35 kV In-Line Junction Bars; **See Table 4**

To order 200/600 A Combination 15/25 and 35 kV In-Line Junction Bars; **See Table 5**

To order 15/25 and 35 kV L-Splices; **See Table 6**

To order 15/25 kV Y-Splices; **See Table 7**

To order 35 kV Y-Splices; **See Table 8**

To order 15/25 and 35 kV 200 A or 200/600 A combination Stacked Junction Bars; **See Table 9**

Table 3. Available Mounting Provisions

Junction Type	S.S. Mtg. Bracket 0-60° Mtg. Angles	Non-Adjustable S.S. Flush Mtg. Bracket	S.S. U-Straps*	S.S. Mtg. Bracket with (2) Parking Stands**
In-Line Junction Bar	Std.		Yes	Yes
Stacked Junction Bar		Std.	**No**	Yes
"L" Splice	Std.		Yes	Yes
"Y" Splice		Std.	**No**	**No**

* For U-straps add suffix U on the end of the standard catalog number.

** For Parking Stand Bracket add suffix PS on the end of the standard catalog number.

Figure 2. Combination in-line junction bar with stainless steel parking stand bracket.

Junction Bar Catalog Numbering Key

"JBI" = Junction Bar, In-Line
"JBL" = Junction Bar, "L" Splice
"JBY" = Junction Bar, "Y" Splice
"JBS" = Junction Bar, Stacked
"25" = 15/25 kV Rating
"35" = 35 kV Rating
"335" = 3-Phase, 35 kV Rating
"U" = With U-Straps (see Table 3)
"PS" = Bracket with (2) Parking Stands (see Table 3)
"W" = 200 A Well
"B" = 600 A Bushing
"S" = 600 A Straight Interface Bushing
"C" = Copper

Table 4. In-Line Junction Bars, 15/25 and 35 kV, for 200, 600 & 900 A

Illustration (not to scale)	Description	Catalog Number**	Dimensions							
			Length		Width		Height		Weight	
			mm	in	mm	in	mm	in	kg	lb
	2 Point 200 A	JBI25C2W	216	8.5	102	4	121	4.75	4	9
	3 Point 200 A	JBI25C3W	330	13	102	4	121	4.75	7	14
	4 Point 200 A	JBI25C4W	432	17	102	4	121	4.75	9	19
	5 Point 200 A	JBI25C5W	533	21	102	4	121	4.75	11	23
	6 Point 200 A	JBI25C6W	635	25	102	4	121	4.75	12	27
	2 Point 600/900 A*	JBI25C2B	216	8.5	102	4	203	8	8	18
	3 Point 600/900 A*	JBI25C3B	330	13	102	4	203	8	11	24
	4 Point 600/900 A*	JBI25C4B	432	17	102	4	203	8	14	30
	5 Point 600/900 A*	JBI25C5B	533	21	102	4	203	8	17	38
	6 Point 600/900 A*	JBI25C6B	635	25	102	4	203	8	21	45

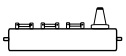
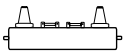
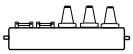
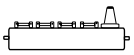
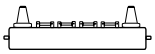
* A 900 A rating can be achieved when mated with comparably rated all copper seperable connectors.

** For 35 kV, change "25" to "35" in the catalog numbers listed above.

Figure 3. "L" splice junction bar.

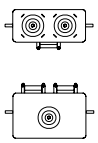
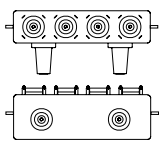
Figure 4. "Y" splice junction bar.

Table 5. In-Line Junction Bars, 15/25 and 35 kV, for Combination 200/600 A

Illustration (not to scale)	Description	Catalog Number*	Dimensions							
			Length		Width		Height		Weight	
			mm	in	mm	in	mm	in	kg	lb
	3 Point 1 x 200 A 2 x 600 A	JBI25C1W2B	330	13	102	4	203	8	10	21
	3 Point 1 x 600 A 1 x 200 A 1 x 600 A	JBI25C1B1W1B	330	13	102	4	203	8	10	21
	3 Point 2 x 200 A 1 x 600 A	JBI25C2W1B	330	13	102	4	203	8	8	18
	4 Point 1 x 200 A 3 x 600 A	JBI25C1W3B	432	17	102	4	203	8	12	27
	4 Point 2 x 200 A 2 x 600 A	JBI25C2W2B	432	17	102	4	203	8	11	24
	4 Point 3 x 200 A 1 x 600 A	JBI25C3W1B	432	17	102	4	203	8	10	21
	4 Point 1 x 600 A 2 x 200 A 1 x 600 A	JBI25C1B2W1B	432	17	102	4	203	8	11	24
	5 Point 1 x 200 A 4 x 600 A	JBI25C1W4B	533	21	102	4	203	8	16	35
	5 Point 2 x 200 A 3 x 600 A	JBI25C2W3B	533	21	102	4	203	8	12	32
	5 Point 4 x 200 A 1 x 600 A	JBI25C4W1B	533	21	102	4	203	8	12	26
	5 Point 1 x 600 A 3 x 200 A 1 x 600 A	JBI25C1B3W1B	533	21	102	4	203	8	13	29
	6 Point 3 x 200 A 3 x 600 A	JBI25C3W3B	635	25	102	4	203	8	17	36
	6 Point 1 x 600 A 4 x 200 A 1 x 600 A	JBI25C1B4W1B	635	25	102	4	203	8	15	33

* For 35 kV, change "25" to "35" in the catalog numbers listed above.

Table 6. L-Splices 15/25 and 35 kV

Illustration (not to scale)	Description	Catalog Number*	Dimensions							
			Length		Width		Height		Weight	
			mm	in	mm	in	mm	in	kg	lb
	3 Point 1 Phase 2 x 200 A 1 x 200 A	JBL25C2W1W	330	13	121	4.75	121	4.75	7	14
	6 Point 1 Phase 4 x 200 A 2 x 600 A	JBL25C4W2B	441	17.38	257	10.13	146	5.75	12	26

* For 35 kV, change "25" to "35" in the catalog numbers listed above.

Table 7. Y-Splices 3-Phase, 15/25 kV

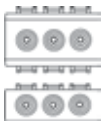
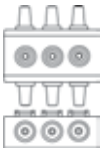
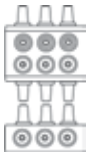
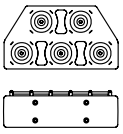
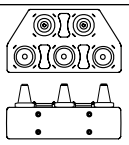
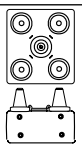
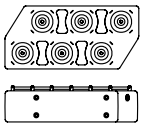
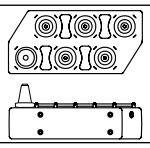
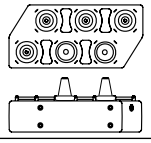
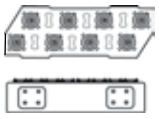
Illustration (not to scale)	Description	Catalog Number	Dimensions							
			Length		Width		Height		Weight	
			mm	in	mm	in	mm	in	kg	lb
	9 Point 3 Phase 3 x 200 A Per Phase	JBY325C3W	330	13	159	6.25	121	4.75	10	21
	9 Point 3 Phase 2 x 600 A 1 x 200 A Per Phase	JBY325C1W2B	330	13	413	16.25	152	6	18	39
	9 Point 3 Phase 3 x 600 A Straight Per Phase	JBY325C3S	386	15.2	267	10.5	406	16	21	45
	12 Point 3 Phase 3 x 600 A 1 x 200 A Per Phase	JBY325C1W3B	330	13	470	18.5	289	11.38	27	60

Table 8. Y-Splices 3-Phase, 35 kV

Illustration (not to scale)	Description	Catalog Number	Dimensions							
			Length		Width		Height		Weight	
			mm	in	mm	in	mm	in	kg	lb
	9 Point 3 Phase 2 x 600 A 1 x 200 A Per Phase	JBY335C1W2B	511	20.13	502	19.75	248	9.75	32	70
	9 Point 3 Phase 2 x 600 A 1 x 200 A Per Phase	JBY335C1W2S	511	20.13	502	19.75	248	9.75	32	70

Table 9. Stacked Junction Bars, 15/25 and 35 kV, 200 A or Combination 200 A and 600 A

Illustration (not to scale)	Description	Catalog Number*	Dimensions							
			Length		Width		Height		Weight	
			mm	in	mm	in	mm	in	kg	lb
	5 Point 5 x 200 A	JBS25C2W3W	368	14.5	203	8	121	4.75	14	30
	5 Point 2 x 200 A 3 x 600 A	JBS25C2W3B	368	14.5	203	8	203	8	18	39
	5 Point 2 x 600 A 1 x 200 A 2 x 600 A	JBS25C2B1W2B	292	11.5	267	10.5	254	10	23	50
	6 Point 6 x 200 A	JBS25C3W3W	432	17	203	8	121	4.75	17	36
	6 Point 3 x 200 A 1 x 600 A 2 x 200 A	JBS25C3W1B2W	432	17	203	8	203	8	18	39
	6 Point 3 x 200 A 1 x 200 A 2 x 600 A	JBS25C3W1W2B	432	17	203	8	203	8	19	42
	8 Point 8 x 200 A	JBS25C4W4W	648	25.5	216	8.5	121	4.75	22.2	49

* For 35 kV, change “25” to “35” in the catalog numbers listed above.

Figure 5. Stacked junction bar with stainless steel bracket.

200 A and 600 A, 15, 25, and 35 kV junction bars for separable connectors

Eaton
1000 Eaton Boulevard
Cleveland, OH 44122
United States
Eaton.com

Eaton's Cooper Power Systems Division
2300 Badger Drive
Waukesha, WI 53188
United States
Eaton.com/cooperpowerseries

Powering Business Worldwide

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For Eaton's Cooper Power series product information call 1-877-277-4636 or visit: www.eaton.com/cooperpowerseries.