POWELL

Cable Bus

CUSTOM DESIGNED BUS SOLUTIONS UTILIZING CABLE

Ventilated Enclosures

Custom Designed Terminations

Special Enclosure Materials and Finishes Available

Field Assembly of Cable

Engineering Studies

Field Service and Replacement Parts

CABLE BUS

Cable bus consists of a metal enclosure containing conductors that are fully insulated copper cables. Using support blocks, the cables are maintained at spacings slightly greater than two cable diameters between centers to achieve maximum operating current for each cable. Cable bus can be supplied at voltages up to 38kV and currents up to 5000 amps. Applications include the following:

- Connections between transformers and switchgear
- Ties between switchgear and switchgear
- Connections between motor control centers and large motors

ENCLOSURES

Typical enclosures for cable bus systems are fabricated of extruded aluminum side members with formed sheet aluminum covers. Standard indoor designs have ventilated top and bottom covers. Optionally, outdoor cable bus has ventilated side members and ventilated bottom covers with enclosed top covers that have a peaked configuration to aid weather resistance. Standard enclosures have no finish coat, although bus can be coated to meet application requirements or to match connected equipment.

CONDUCTORS

Insulated copper cable conductors are supplied as required. Insulated neutral phase conductors and ground conductors (bare or insulated) can be an added option. Cable insulation and jacketing material is selected based on the application.

OTHER ACCESSORIES

- Cable termination kits
- Lugs and supporting structures

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Cable Bus Design Configurations

	Maximum Current Rating	Cable Options		Total # of Cables	Rows x Cables	Nom Housing Dim (in)	Min Cable OD (in)	Max Cable OD (in)	Weight per Foot (lbs)	Nom Housing Dim (in)	Min Cable OD (in)	Max Cable OD (in)	Weight per Foot (lbs)	Nom Housing Dim (in)	Min Cable OD (in)	Max Cable OD (in)	Weight per Foot (lbs)
		# per Phase	Type			600V				5kV				15kV			
40°C Ambient Deisgn	800A	1	750MCM	3	1 x 3	6 x 15	1.13	1.37	17.5	6 x 15	1.44	1.56	18.5	6 x 18.5	1.59	1.89	22.0
										6 x 18.5	1.57	1.61	21.0				
	1200A	2	500MCM	6	2 x 3	8 x 15	0.92	1.16	22.0	8 x 15	1.25	1.41	24.0	8 x 15	1.41	1.56	25.5
														10 x 18.5	1.57	1.63	28.5
	1600A	2	750MCM	6	2 x 3	8 x 15	1.13	1.37	27.0	8 x 15	1.44	1.56	29.0	10 x 18.5	1.59	1.89	35.0
										10 x 18.5	1.57	1.61	32.5				
	2000A	3	750MCM	9	2 x 5	8 x 21	1.13	1.37	37.0	8 x 21	1.44	1.56	40.5	10 x 25	1.59	1.89	47.5
										10 x25	1.57	1.61	44.0				
	2500A	4	500MCM	12	2 x 6	8 x 25	0.92	1.16	36.5	8 x 25	1.25	1.41	41.0	8 x 25	1.41	1.56	44.0
														10 x 29	1.57	1.63	47.5
	3000A	4	750MCM	12	2 x 6	8 x 25	1.13	1.37	47.0	8 x 25	1.44	1.56	51.5	10 x 29	1.59	1.89	60.0
										10 x 29	1.57	1.61	55.0				
	3500A	4	1000MCM	12	2 x 6	8 x 25	1.28	1.52	56.0	10 x29	1.58	1.80	65.0	10 x 29	1.73	2.04	71.0
	4000A	6	750MCM	18	3 x 6	12 x 25	1.13	1.37	66.0	12 x 25	1.44	1.56	72.5	14 x 29	1.59	1.89	85.0
										14 x 29	1.57	1.61	77.0				
	5000A	6	1000MCM	18	3 x 6	12 x 25	1.28	1.52	80.0	14 x 29	1.58	1.80	92.5	14 x 29	1.73	2.04	102.0

	Maximum Current Rating	Cable Options		Total # of Cables	Rows x Cables	Nom Housing Dim (in)	Min Cable OD (in)	Max Cable OD (in)	Weight per Foot (lbs)	Nom Housing Dim (in)	Min Cable OD (in)	Max Cable OD (in)	Weight per Foot (lbs)	Nom Housing Dim (in)	Min Cable OD (in)	Max Cable OD (in)	Weight per Foot (lbs)
		# per Phase	Type			600V				5kV				15kV			
50°C Ambient Design	**1200A**	**3**	**750MCM**	**9**	**2 x 5**	**8 x 21**	**1.13**	**1.37**	**37.0**	**8 x 21**	**1.44**	**1.56**	**40.5**	**10 x 25**	**1.59**	**1.89**	**47.5**
										10 x 25	**1.57**	**1.61**	**44.0**				
	1600A	**3**	**750MCM**	**9**	**2 x 5**	**8 x 21**	**1.13**	**1.37**	**37.0**	**8 x 21**	**1.44**	**1.56**	**40.5**	**10 x 25**	**1.59**	**1.89**	**47.5**
										10 x 25	**1.57**	**1.61**	**44.0**				
	2000A	**4**	**500MCM**	**12**	**2 x 6**	**8 x 25**	**0.92**	**1.16**	**36.5**	**8 x 25**	**1.25**	**1.41**	**41.0**	**8 x 25**	**1.41**	**1.56**	**44.0**
														10 x 29	**1.57**	**1.63**	**47.5**
	2500A	**4**	**750MCM**	**12**	**2 x 6**	**8 x 25**	**1.13**	**1.37**	**47.0**	**8 x 25**	**1.44**	**1.56**	**51.5**	**10 x 29**	**1.59**	**1.89**	**60.0**
										10 x 29	**1.57**	**1.61**	**55.0**				
	3000A	**5**	**750MCM**	**15**	**3 x 5**	**12 x 21**	**1.13**	**1.37**	**56.0**	**12 x 21**	**1.44**	**1.56**	**61.5**	**14 x 25**	**1.59**	**1.89**	**72.0**
										14 x 25	**1.57**	**1.61**	**66.0**				
	3200A	**5**	**750MCM**	**15**	**3 x 5**	**12 x 21**	**1.13**	**1.37**	**56.0**	**12 x 21**	**1.44**	**1.56**	**61.5**	**14 x 25**	**1.59**	**1.89**	**72.0**
										14 x 25	**1.57**	**1.61**	**66.0**				
	4000A	**7**	**750MCM**	**21**	**3 x 7**	**12 x 29**	**1.13**	**1.37**	**75.5**	**12 x 29**	**1.44**	**1.56**	**83.0**	**14 x 33**	**1.59**	**1.89**	**97.0**
										14 x 33	**1.57**	**1.61**	**88.0**				

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