

21379/Spec Ph-III/P&S/22/MAP  
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13 Jul 2012

(All PMs & DEPMCs)

**SPECIFICATIONS: BUS TRUNKING SYSTEM (BUSBAR)**

1. Refer this Headquarters letter No 21378/Vendor PH-III/P&S/03/MAP dt 29 Jun 2012.
2. Given in the succeeding sub paragraphs are the specifications for bus trunking system (busbar) for the future projects of MAP Phase-II & Phase-III:-

(a) The busbar will have the following specifications:-

(i)	Compliance of standard	IEC 60439 (1&2) & IS 8623 (1&2)
(ii)	Independent Certification Authority	ASTA-UK, CPRI-India
(iii)	Busbar Arrangement	Sandwich Type
(iv)	Busbar Ratings	Copper 630-6600 A Aluminium 400-5000A
(v)	Busbar Configuration	3 Phase+100% Neutral+50% Internal Earth
(vi)	Rated Operational Voltage (Ue)	1000 Volt, AC
(vii)	Rated Insulation Voltage	1000 Volt, AC
(viii)	Rated Dielectric Voltage	3.5 KV r.m.s
(ix)	Rated Impulse Withstand Voltage (Uimp)	12 KV (1.2/50 us)
(x)	Rated Frequency	50 Hz / 60 Hz
(xi)	Enclosure Material	1.6mm G.I.
(xii)	Surface Coating on Enclosure	Epoxy polyster powder coated (RAL- 7032)
(xiii)	Busbar Material (Phase/Neutral)	Aluminium (Full round edge), 99.5% pure.
(xiv)	Busbar Material (Internal Earth)	G.I 1.5mm
(xv)	Busbar Insulation	Multi layer Class-'F' Insulation (Polyster+Mica)
(xvi)	Degree of Protection	IP 54 for Plug in type. IP 55/IP65/IP67 for feeder bustrunking.
(xvii)	Fire Rating	240 Min. (ISO 834) 55
(xviii)	Seismic Compliance	Zone-5 (IS: 1893/IEEE 693)
(xix)	Joint	Uniblock joint (With Isolation and tamper proof shear off nut)
(xx)	Plug-in-Box	32-800A

- (b) The End Feed will have the following characteristics:-
- (i) End feed should have sufficient space for direct connection through lugs and bolts. MCCB, SFU isolators, fuse holders etc can be fitted is end feed as per requirement.
  - (ii) 300 mm length of bustrunking is integrally fitted and measured with bustrunking along with End Feed as standard practice so that joint between End Feed and bustrunking is exactly same as joint of two normal bustrunking lengths.
  - (iii) Undrilled cable gland plate to be provided at bottom for multiple cable entry.
- (c) The plug-in-box will have the following characteristics:-
- (i) Plug in box enclosure should be made of G.I with side hinged door.
  - (ii) Plug in contacts to be made out of silver plated copper with spring steel backup pressure clips for ensuring uniform pressure and low contact resistance.
  - (iii) For cables entry, provision of gland plates should be provided on both sides and bottom of plug in box.
  - (iv) Earth contact of Plug-in-boxes should make first & break last.
  - (v) Plug in box are suitable for MCCB/SFU's with rotary handle and door interlocking.
  - (vi) Plug in boxes to be interlocking with bustrunking to ensure "plug-in" and Plug-Out" possible only in "Off" condition.
  - (vii) Silver Plated contacts are properly shrouded / isolated.
  - (viii) Plug in box up to 400 Amp be compatible to all rating of Bustrunking with 400 A plug in points.
  - (ix) Plug in box up to 500 A to 800 A be compatible to all ratings of bustrunking with 800 A plug in points.
  - (x) Plug in boxes be fitted on to the bustrunking with corrected polarity i.e. ENRYBE.

(JS Sodhi)  
Lt Col  
SO 1 (P&S)  
for DG MAP

**Internal**

Team 'A'	-	for necessary action please
Team 'B'	-	-do-
Contract Section Team 'A'	-	-do-
Contract Section Team 'B'	-	-do-
Arch Section	-	-do-