

1592652/2023/HEP-SWE40900

ANNEXURE A			REV.NO.- 00
BHEL Bhopal SWE	Technical Specification of: Multi Core Control Cable For rate contract.		Page 1 of 2
W.O. Nos. :		Enq. No.:	PURCHASE INDENT :-

### 1.0 TECHNICAL REQUIREMENTS

**Item 1:- 2 Core, 2.5 sqmm, 1100V PVC control cables**

**Item 2:- 4 Core 2.5 sqmm, 1100V PVC control cables**

**Item 3:- 6 Core 2.5 sqmm, 1100V PVC control cables**

**Item 4:-10 Core 2.5 sqmm, 1100V PVC control cables**

### 2.0 Type Tests on Cables

All cables to be supplied shall conform to type tests as per relevant standards and proven type.

### 3.0. TECHNICAL REQUIREMENTS

1.0	Type of cable	Flame Retardant Low Smoke (FRLS)
2.0	Standard applicable in general	IS- 694:2010.
3.0	Voltage Grade	1100V
4.0	Number of cores, cross sectional area of conductors	2,4,6 & 10 Cores, 2.5sqmm
5.0	<b>CONDUCTOR</b>	
(a)	Material	Copper
	Grade and Class	Stranded, Tinned annealed high conductivity, Class 2
(b)	Standard applicable	IS : 8130
(c)	Shape	Circular / shaped as per IS
(d)	Min. number of strands	7
6.0	<b>INSULATION</b>	
(a)	Material	PVC, Type A
(b)	Standard applicable	IS : 5831
(c)	Continuous withstand temperature	70° C
(d)	Short circuit withstand temperature	160° C
(e)	Method of Application	By extrusion; sleeve extrusion not permitted
7.0	<b>CORE IDENTIFICATION</b>	
(a)	Control cables above 5 cores	By numbering as per IS:1554 (Part-I) Insulation to have black colour
8.0	<b>OUTER SHEATH</b>	
(a)	Material	PVC as per IS : 5831
(b)	Colour	Black
(c)	Whether FRLS	YES
(d)	Method of application	Extruded
9.0	<b>TOLERANCE ON OUTER DIAMETER</b>	Upto 30mm; (+/-) 1.5 mm Above 30mm; (+/-) 5% or (+/-)3 mm whichever is less
10.0	<b>MINIMUM BENDING RADIUS</b>	12 x O.D.
11.0	<b>SAFE PULLING FORCE</b>	50N/ sq. mm

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**4.0 Special Notes:**

- 1 The control cables will be 1100V grade, multi core of 2.5 sq.mm cross section stranded copper conductor, PVC insulated, PVC sheathed, unarmoured. The minimum conductor cross section is 2.5 sq.mm.
- 2 The FRLS PVC compound used for outer sheath will also be resistant to termite, fungus and rodent attacks.

S.NO	NOTE	Vendor to give compliance in Yes/No
001	Vendor shall submit Type Test Report from NABL accredited lab after PO placement.	
002	Vendor to submit samples of .2 mtr. of cable along with offer for evaluation(if required), in the absence of which the offer may be rejected.	
003	2 copies of routine test certificates are to be furnished at the time of delivery.	
004	Cable shall be guaranteed for the successful operation of at-least 60 months after receipt at BHEL Bhopal	

**5.0 NOTES:-****ACCEPTANCE CRITERIA:**

- 1) Availability of Routine Test Certificates & technically accepted Samples.
- 2) Visual Inspection for markings, transit damage & cut.

Prep. By:

Approved by:

Date :

Date :