

**4X10 SQ.MM FLEX.COPPER.MULTI.STRD CABLE**

**Un-Armoured, FR-LSH, PVC insulated, Multistrand, ISI marked, flexible copper cable with electrolytic grade annealed copper. Suitable for Voltage upto and including 1100 Volts confirming to IS:1554/Part-1/1988**

**PVC insulated Copper multistrand Flexible Power Cable Requirement & Specification**

PR Item No.	Cable Size	Cable Specification	Qty. (MTR)
60	SIZE : 4 x 10.0 SQ.MM		500

Sl. No.	Description	BHEL's requirement	Bidder's Response
	Name of the Cable Manufacturer	Bidder to specify	
1	Cable Code	Bidder to specify	
2	Working Voltage	1100 Volts	
3	Applicable Standards	IS:8130-1984, IS:5831-1984, IS : 1554(Part-I) : 1988, IS: 3961(Part-II)-1967, IS:10810-1984 & IS:10418-1982 - All the IS with latest amendments	
4	<b>Conductor</b>		
4.1	Material	Electrolytic grade annealed plain Copper Conductor (Class-2)	
4.2	Shape of the Conductor	Non-compacted circular	
4.3	Maximum DC Resistance of Conductor at 20 <sup>0</sup> C (Ohm/KM)	Bidder to specify	
4.4	Nominal Area of Cross Section (sq. mm)	Bidder to specify	
4.5	No. of Strands	Bidder to specify	
4.6	Strand Dia. in mm	Bidder to specify	
4.7	Conductor cable shall be manufactured in accordance with	National specifications IS:8130	
5	<b>Dielctric Insulation</b>		
5.1	Material	Extruded PVC Type 'A' of IS: 5831- 84 with latest amendment	
5.2	Nominal thickness of Insulation	Bidder to specify	
5.3	Suitability with regard to temp, moisture, Acid, Oil & Alkaline Surrounding	Yes or No	
6	<b>Inner Sheath</b>		
6.1	Material	Extruded PVC type (ST-2) as per IS: 5831 : 84 with latest Amendment	
6.2	Minimum thickness of inner sheath (mm)	Bidder to specify	
7	<b>Outer Sheath</b>		
7.1	Material	Extruded Black PVC type (ST-2) as per IS: 5831 : 84 with latest Amendment	
7.2	Minimum thickness of outer sheath (mm)	Bidder to specify	

7.3	Nominal thickness of Outer sheath (mm)	Bidder to specify	
8	Overall minimum diameter of cable (mm)	Bidder to specify	
9	Method of Core identification	As PER IS:1554 (Part-I & II) 1988 with latest amendments	
10	Maximum operating temperature of Conductor	Bidder to specify	
11	Maximum temperature of conductor during short circuit	Bidder to specify	
12	Drum length & tolerance of each drum	± 5%	
13	Overall tolerance in total quantity	-1%	
14	Continuous Current Carrying capacity in air at 40 <sup>0</sup> C	Bidder to specify	
15	Sealing of cable ends	The ends of the cable shall be sealed with heat shrinkable caps	
16	Approximate net weight of Cable (Kg./KM)		
17	Cable identification & sequential length marking	<p><b>Cable identification by Embossing</b>  The following shall be embossed on the outer sheath of the cable throughout the length of cable at 1.0 meter spacing for identification:</p> <ul style="list-style-type: none"> <li>i) Manufacturer's Name or Trade Mark</li> <li>ii) Name of the purchaser</li> <li>iii) Voltage Grade of Cable</li> <li>iv) Type of insulation, material of conductor</li> <li>v) Number of cores &amp; nominal cross sectional area of conductor</li> <li>vi) Cable Code</li> <li>vii) Marking "Electric".</li> <li>viii) Month &amp; Year of manufacture</li> </ul> <p><b>Sequential length marking by printing</b>  Sequential length shall be marked on the outer sheath of the cable throughout the length by Printing in each meter length interval.</p>	

18	Marking on each drum	The following information shall be stenciled on each drum: a) Reference to this Indian Standard, for example, Ref IS:1554(Part-I) b) Manufacturer's Name, brand name or Trade Mark c) Type of Cable and Voltage Grade Example - 1.1 KV grade PVC insulated PVC sheathed Aluminium Cable (armoured/unarmoured) d) Number of cores e) Nominal cross sectional area of Conductor f) Cable Code g) Length of Cable on the Drum h) Number of length on the drum(if more than one) i) Direction of rotation of Drum by means of arrow. j) Approximate gross weight & tare weight k) Running end of Cable l) Country of Manufacture m) Month & Year of manufacture n) License Number o) Serial number of the Drum p) Name of the purchaser q) Purchase Order No. & Date	
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Note to Supplier:

1. The indented cables are required for transmission of electrical power. Working voltage levels up to and including 1.1kV.
2. These power cables shall be installed through cables trays, underground cellars, cable trenches, through metal/pvc conduits, etc. inside an industrial process plant.
3. Relevant catalogues and NABL test certificates shall be submitted along with the offer.