

**GUARANTEED TECHNICAL PARTICULARS FOR 1.1 KV GRADE MULTI CORE (3½)**  
**XLPE INSULATED & PVC SHEATHED HEAVY DUTY ALUMINIUM CONDUCTOR**  
**3.5x240 SQ.MM. ARMOURED CABLE.**

Sl. No.	Particulars	3.5x 240 Sq. mm.
1.	Name and address of Manufacturer	
2.	Type and make of cable.	
3.	Location of factory.	
4.	Standard specification to which cable shall conform.	
5.	Standard specification to which conductor shall conform.	
6.	Voltage rating.	
7.	Permissible variation in voltage, frequency and combined voltage & frequency.	
8.	Standard specification to which drum shall conform.	
9.	<b><u>CONDUCTOR:</u></b>	
9.1	Material and its composition.	
9.2	Shape of conductor.	
9.3	No. of Cores	
9.4	Total area of each core before stranding and shaping (in Sq. mm.)	
	Total area of each core after stranding & shaping (in Sq. mm.)	
9.5	Stranding details:	
	i) No. of nominal strands in each core (a) Main (b) Neutral	
	ii) Dia of each strand in each core before stranding & shaping (in mm.) (a) Main (b) Neutral	
9.6	Maximum D.C. Resistance/Core at 20°C (in Ohms/Km.) (a) Main (b) Neutral	
9.7	Minimum Guaranteed weight of Aluminium per Km. in cable.	
10.	<b><u>INSULATION:</u></b>	
10.1	Type of Insulation	
10.2	Composition of Insulation	

10.3	Nominal thickness of Insulation (in mm.) (a) Main (b) Neutral	
10.4	Tolerance on thickness of Insulation. (a) Main (b) Neutral	
10.5	Dia of core over insulation	
10.6	Minimum volume resistivity at 27°C	
10.7	Minimum volume resistivity at 90°C	
10.8	Specific Insulation resistance at 27°C	
10.9	Colour Scheme of Identification core.	
10.10	Minimum tensile strength of Insulation material.	
10.11	Minimum Elongation percentage	
10.12	Average dielectric strength.	
10.13	Suitability with regard to moisture, Ozone, Acid, Oil and Alkaline surroundings.	
11.	<b>SHEATHING DETAILS:</b>	
11.1	INNER SHEATH	
i)	Material & Composition	
ii)	Type of sheathing	ST-2
iii)	Mode of sheathing (extruded/wrapped)	
iv)	Thickness of sheathing (in mm.)	
v)	Tolerance on thickness of sheathing	
vi)	Calculated diameter over stranded cores of the cable.	
vii)	Nominal diameter of cable over inner sheath.	
viii)	Whether the inner sheath and the filling material are suitable for the operating temperature of cable.	
11.2	<b>OUTER SHEATH:</b>	<b>Black</b>
i)	Material & Composition.	
ii)	Type of sheathing by extrusion.	ST-2
iii)	Thickness of sheathing (in mm.)	
iv)	Tolerance on thickness of sheathing	
v)	Calculated diameter under the sheath (in mm.)	
vi)	Nominal diameter of cable over outer sheath (in mm.)	
vii)	Whether anti-termite treatment has been given in the outer sheath.	
12.0	<b>ARMOURING:</b>	
12.1	Type of Armouring	
12.2	Material & Composition	
12.3	Nominal Thickness of steel strip / armouring	
12.4	Whether Galvanized	
13.0	<b>ELECTRICAL PROPERTIES:</b>	
13.1	ASSUMED CONDITIONS FOR CURRENT RATING OF CABLES	

	Maximum permissible conductor temp. Under continuous full load.	
	Under transient conditions.	
13.2	Thermal Resistivity of Soil.	
13.3	Thermal Resistivity of PVC.	
13.4	Depth of laying (to the highest point of cable laid direct in the ground or to the top surface of ducts).	
13.5	CURRENT RATINGS OF THE CABLE UNDER BASIC ASSUMPTIONS:	
	i) Laid in ground (at ground temp. 30oC).	
	ii) Laid in duct (duct temp. 30oC).	
	iii) Laid in air (Air temp. 40°C).	
13.6	Rating factors under various conditions of installation.	
13.7	Capacitive reactance per Km. of cable at 50 C/S (Ohms per KM).	
13.8	Inductive reactance per Km. of cable at 50 C/s (Ohms per KM).	
14.0	<b>MECHANICAL DATA:</b>	
14.1	Overall dia of cable.	
14.2	Minimum bending radius of cable.	
14.3	Minimum guaranteed weight of cable in (Kg./Km.) without any minus tolerance.	
14.4	Standard drum length of cable (in meters)	
14.5	Tolerance of drum length.	
14.6	Appx. Total weight of cable drum.	
14.7	Max. safe pulling force in (Kg/mm2)	
14.8	Appx. Flange dia including battens.	
14.9	Appx. Barrel dia.	
14.10	Appx. Traverse width.	
14.11	Whether identification marking i.e.	YES / NO
	i) Property of PVVNL & Spec. No. PVVNL-MT/218-2004.	
	ii) Name of manufacturer.	
	iii) Voltage & grade & size.	
	iv) Month & Year of manufacture is being provided at the regular intervals of two meters of outer most sheath of cable.	
	v) Whether sequential length of cable at every interval of one meter shall be printed over outer most sheaths.	YES/NO
14.12	Name of manufacturers of bought out raw materials	
(i)	Aluminium	
(ii)	PVC	
(iii)	Galvanised steel strip / wire for armouring.	
(iv)	Any other	
14.13	a) Whether similar cable has been type tested.	YES/NO
	b) If yes, when and where was it tested?	
	c) It is expected that you will enclose an electrostat copy	

	of type test report of similar cable. Please inform whether or not you have enclosed the same.	YES/NO
	d) If yes, how many sheets does it contain.	No. of Sheets
	e) Only a design better than or equal to what type tested and proven shall be accepted. Please inform whether you will abide by this condition.	YES/NO
14.14	Whether wood preservative shall be applied to whole drum?	YES/NO
14.15	Whether all ferrous parts shall be treated with rust preventive finish or coating?	YES/NO
14.16	Whether waterproof paper layer shall be applied to the surface or drum & over the outer cable layer.	YES/NO
14.17	Reference of license in use – ISI Certification mark, if any.	
14.18	Do you agree to all the provisions of Technical specification? In case of any deviation, state clearly.	