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2.For EPC contractors only.

Drawing approval subject to valid vendor registration

FINECAB WIRES & CABLES PVT LTD



Guaranteed Technical Particulars

Customer : Transmission corporation of Andhra Pradesh Limited (APTransco)			
PROJECTNAME:-		AS APPLICABLE	
PO :-			
Contractor: AS APPLICABLE			
TITLE: Power Cable			
SR. NO.	PARTICULARS		3.5 C X 300
	Description	Unit	Confirmation/Commitment by the Supplier/Bidder
1	Name of Manufacturer.		FINECAB WIRES & CABLES PVT LTD (BRAND NAME- FINECAB)
2	Applicable Standard.		IS : 7098 (PART-1) 1988
3	Voltage Grade.	Volts	1100
4	Permission variation in a) Voltage	%	±10
	b) Frequency	%	±5
	c) Combined	%	±10
5	Wheather Suitable for Earthed or Uearthed System		Both
6	SIZE	SQ.MM	3.5 C X 300
7	Type.		A2XWY (FRLS & C2 TYPE)
8	Conductor :		
a.	Material		H2 GRADE ALUMINIUM AS PER IS 8130 : 2013
b.	Nominal Size (Phase / Neutral)	SQ.MM	300/150
c.	Number of wires in each conductor (Phase / Neutral)	Nos.	37/19
d.	Diameter of Each Wire (Phase/Neutral) (Before Stranding)	mm	3.22/3.18
e.	Shape of conductor		STRANDED SECTOR SHAPE
f.	DC Resistance at 20°C (MAX.) (Phase / Neutral)	Ohms/Km	0.100/0.206
g.	AC Resistance at 90°C (MAX.) (Phase / Neutral)	Ohms/Km	0.128/0.264
h.	Direction of lay of Conductor		Right Hand Lay
9	Insulation		
a.	Material.		EXTRUDED XLPE
b.	IS Reference		IS : 7098 (PART-1) 1988
c.	Nominal Thickness. (Phase / Neutral)	mm	1.8/1.4
d.	Cores identification		RED, YELLOW, BLUE & BLACK
e.	Cores identification		Confirming to : IS 7098 (P-1)1988
<p>CHIEF ENGINEER/PROJECTS APTRANSCO/VS/VIJAYAWADA</p>		 	

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10	Inner Sheath		
a.	Material.		EXTRUDED PVC TYPE ST-2
b.	IS Reference		IS : 5831 - 1984
c.	Minimum Thickness	mm	0.60
d.	Mimimum Fictitious Diameter over Inner Sheath	mm	53.20
e.	Colour		BLACK
11	Armouring		
a.	Material & Type		GALVANIZED STEEL ROUND WIRE
b.	Extruded OR Wrapped		Wrapped
c.	IS Reference		IS: 3975/1999
d.	Nominal Diameter	mm	2.50
e.	Mimimum Fictitious Diameter over Armour	mm	58.20
f.	Direction of lay of armour		LEFT HAND LAY
h.	DC Resistance of armour (MAX.)	Ohms/Km	As per IS:7098(P-1)1988 Table No-7
12	Outer Sheath		
a.	Material		EXTRUDED PVC
b.	Type.		ST-2 WITH FRLS PROPERTIES
c.	IS Reference		IS : 5831 - 1984
d.	Minimum Thickness	mm	2.36
e.	Colour		BLACK
f.	Mimimum Fictitious Diameter of Cable	mm	62.92
13	FRLS PROPERTIES		
a.	Oxygen Index Minimum	%	29
b.	Temperature index Minimum	Deg C	250
c.	Smoke Density Maximum	%	60
d.	Acid Gas Generation (HCL%) Maximum	%	20
e.	Flamibility Test a.Unefected Portion (min.)	mm	50
	b. Flame Duration (Max.)	sec.	60
	Insulation		
	d) Minimum volume resistivity at (ohm-cm)		
	(i) 27 deg. C.		1×10^{14}
	(ii) 70 deg. C.		NA
	(iii) 90 deg. C.		1×10^{12}
 			

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	Minimum tensile - strength of insulation	N/mm ²	12.5(min)as per IS 7098(Part-1):1988
	Minimum elongation at break	%	200(min)as per IS 7098(Part-1):1988
	Minimum tensile - strength of sheath	N/mm ²	12.5(min)as per IS 5831:1984
	Minimum elongation at break	%	150(min)as per IS 5831:1984
	Minimum tensile - strength of armour	Mpa	300-500 as per IS 3975:1999
	Minimum elongation at break	%	10 (min) as per IS 3975:1999
	High voltage test and duration (PVC cables)		
	a) At room temperature		NA
	b) Under water		NA
	XLPE Cable		
	a) High voltage test		3KV for 5mint as per IS 7098:1988
	Short Circuit Rating for 0.12Sec. Duration of Armour	KA	45 KA
	b)Current carrying capacity in air and corresponding assumptions/conditions of installation		As per IS : 1255
14	ELECTRICAL CHARACTERISTICS		
a.	laying up of cable is accordance with		Confirming to : IS:3961-2-6
b.	Continuous Current Rating for Standard IS Condition when Laid.		
	i. In Ground.at 30°C	Amps	As per IS:3961-2-6
	ii. In Air at 40°C	Amps	
	iii. In Air at 50°C	Amps	
c.	Short Circuit Rating for 0.12 Sec. Duration	KA	45 KA
d.	Conductor Temperature allowed for Continuous Operation condition (Max.)	°C	90
e.	Conductor Temperature allowed for the short circuit condition (Max.)	°C	250
15	GENERAL		
a.	Standard drum length	Mts	500(±5 %)
b.	Cable - Drum		Shall confirm to IS 10418 only
c.	Recommended min. Bending radius of cable	mm	12 X OVERALL DIA OF A CABLE
d.	Recommended Max. Safe pulling force		
	i) When Cable Pulled by pulling eye	N	31500
e.	Packing Material		NON RETURNABLE WOODEN DRUM
f.	Embossing on Cable		PROVIDE AS PER IS-7098 (PART-1)1988 , Name of Customer,Year of manufacturing, FRLS,APTRANSCO
g.	Cable should be ISI Marked		Yes , All cable furnish with ISI - Marked only
h.	Sequential marking of length(Printing)		PROVIDE EVERY METER
i	End cap		Provided both end of cable
<p><i>[Signature]</i></p> <p>CHIEF ENGINEER/PROJECTS APTRANSCO/VIS/VIJAYAWADA</p> 