

NOTE: 1. Drawings Approval subject to valid test reports, to be checked during acceptance tests.
2.For EPC contractors only.



Customer : Transmission corporation of Andhra Pradesh Limited (APTransco)

PROJECTNAME:- AS APPLICABLE

PO :-

Contractor: AS APPLICABLE

TITLE: Control Cable

SR. NO.	PARTICULARS	Unit	
	Drawing approval subject to valid vendor registration		1 C X 300
	Description	Unit	Confirmation/Commitment by the Supplier/Bidder
1	Name of Manufacturer.		CHANDRESH CABLES LTD(BRAND NAME-AVOCAB)
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 Unerthed System		Both
6	SIZE	SQ.MM	1 C X 300
7	Type.		A2XFaY
8	Conductor :		
a.	Material		H2 GRADE ALUMINIUM AS PER IS 8130 : 2013
b.	Nominal Size	SQ.MM	300
c.	Number of wires in each conductor	Nos.	37
d.	Diameter of Each Wire BEFORE STRANDING	mm	3.22
e.	Shape of conductor		STRANDED CIRCULAR
f.	DC Resistance at 20°C (MAX.)	Ohms/Km	0.100
g.	AC Resistance at 90°C (MAX.)	Ohms/Km	0.128
h.	Direction of lay of Conductor		RIGHT HAND LAY
a.	Material.		EXTRUDED XLPE
b.	IS Reference		IS : 7098 (PART-1) 1988
c.	Nominal Thickness.	mm	2.1
d.	Cores identification		NATURAL
e.	Cores identification		Confirming to : IS 7098
10	Armouring		
a.	Material & Type		ALUMINIUM FLAT STRIP
b.	Extruded OR Wrapped		Wrapped
c.	IS Reference		IS: 7098(P-1)1988
d.	Nominal Diameter	mm	4X0.8
e.	minimum fictitious diameter armoure	mm	25.30
f.	Direction of lay of armour		LEFT HAND LAY
g.	Min . Coverage of armour		upto 90 %

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11	Outer Sheath	2.For EPC contractors only.		
a.	Material.			EXTRUDED PVC
b.	Type.			ST-2 WITH FRLS PROPERTIES
c.	IS Reference	CHIEF ENGINEER/PROJECTS		IS : 5831 - 1984
d.	Minimum Thickness	APTRANSCO/VIS/VIJAYAWADA	mm	1.56
e.	Colour			BLACK
f.	minimum fictitious diameter over outersheath		mm	28.42
12	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}
	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
	b)Current carrying capacity in air and corresponding assumptions/conditions of installation			As per IS : 1255
13	ELECTRICAL CHARACTERISTICS			
a.	laying up of cable is accordance with			Confirming to : IS : 1255
b.	Short Circuit Rating for 0.12 Sec. Duration		KA	45.0
c.	Conductor Temperature allowed for Continues Operation condition (Max.)			90
d.	Conductor Temperature allowed for the short circuit condition (Max.)		°C	250
14	GENERAL			
a.	Standard drum length		Mts	500/1000 (±5 %) OR ACTUAL
b.	Cable - Drum			Shall confirm to IS 10418 only

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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	9000
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



**CHIEF ENGINEER/PROJECTS
APTRANSCO/VISVIJAYAWADA**

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