



Customer :

Technical Particulars of PVC Instrumentation Cables

S.No	Particulars	UNIT	10P X 1.5	12P X 1.5	14P X 1.5	16P X 1.5	18P X 1.5	19P X 1.5	24P X 1.5
1	Name of Manufacturer		Polycab Wires Pvt. Ltd,						
2	Type of Cable		Overall Screened PVC insulated Armored Instrument Cable						
3	No of Elements X Size in mm ²	No X Sq.mm	10P X 1.5	12P X 1.5	14P X 1.5	16P X 1.5	18P X 1.5	19P X 1.5	24P X 1.5
4	Voltage Grade	Volts	500						
5	Applicable standard (S)		Generally as per BSEN 50288-7						
6	Conductor								
a)	Material		Annealed Palin Stranded of class2 Electrolytic grade Copper						
b)	Maximum d.c. resistance of conductor at 20° C	Ω/km	12.3	12.3	12.3	12.3	12.3	12.3	12.3
c)	Shape of conductor		Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular
6	Insulation								
a)	Material		Extruded PVC Type 'A'						
b)	Minimum Thickness	mm	0.44	0.44	0.44	0.44	0.44	0.44	0.44
c)	Pair Identification		White & Blue With Pair Numbered						
7	Collective Screen								
a)	Material		Aluminium mylar tape						
b)	Nominal Thickness	mm	0.018						
c)	Material of Drain Wire		Flexible ATC						
d)	Size of Drain Wire	Sq.mm	0.5 mm ² (16/0.2 mm)						
8	Innersheath								
a)	Material		Extruded PVC Type ST1						
b)	Minimum Thickness	mm	0.3	0.3	0.3	0.3	0.3	0.3	0.3
9	Armouring								
a)	Material		Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel
b)	Type of armouring		Flat Strip	Flat Strip	Flat Strip	Flat Strip	Flat Strip	Flat Strip	Flat Strip
c)	Nominal size of armour	mm	4.0 x 0.8	4.0 x 0.8	4.0 x 0.8	4.0 x 0.8	4.0 x 0.8	4.0 x 0.8	4.0 x 0.8
10	Outersheath								
a)	Material		Extruded FRLS PVC Type ST1						
b)	Thickness	mm	1.40 (Min.)	1.40 (Min.)	1.40 (Min.)	1.40 (Min.)	1.40 (Min.)	1.40 (Min.)	1.56 (Min.)
c)	Colour Of Outersheath		Blue	Blue	Blue	Blue	Blue	Blue	Blue
11 a)	Maximum conductor temperature under normal operating conditions	°C	70						
b)	Maximum conductor temperature at the termination of short circuit	°C	160						
c)	Short Circuit rating of conductor for the duration of 1 sec	kA/Sec	0.17	0.17	0.17	0.17	0.17	0.17	0.17
12	Minimum bending radius	mm	12 times Overall diameter						
13	Electrical Parameters								
a)	temperature	Ω/km	14.7	14.7	14.7	14.7	14.7	14.7	14.7
b)	Mutual capacitance	nf/km	<250	<250	<250	<250	<250	<250	<250
c)	Insulation resistance	MΩ/km	10	10	10	10	10	10	10



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d)	Inductance to resistance ratio (L/R)	$\mu\text{H}/\Omega$	<40	<40	<40	<40	<40	<40	<40
e)	Dielectric strength for 1 minute (H.V Test)	kV	2.0	2.0	2.0	2.0	2.0	2.0	2.0
16	Max. tensile strength for Cables pulled with stocking	Newtons	9 x D ² , D is the cable OD in mm						
15	Approximate Overall diameter of cable	mm	23.5	24.0	25.0	26.5	27.5	27.5	32.0
16	FRLS PROPERTIES								
a)	Oxygen Index		Min. 29% as per ASTM D- 2863						
b)	Temperature Index		Min. 250 Deg.C as per ASTM D- 2863						
c)	Smoke Density Rating		Max. 60% as per ASTM D- 2843						
d)	Acid Gas Generation		Max. 20% as per IEC- 754- 1						
e)	Flammability Test		As per IEC:332-I						
17	Embossing		POLYCAB 500 VOLTS GRADE FRLS						
18	Printing		YEAR POLYCAB 500 VOLTS GRADE FRLS No of Pair x Sqmm SCREENED WITH SEQUENTIAL MARKING AT EVERY ONE METER..						

FOR POLYCAB WIRES PVT LTD