



Customer :

**Technical Particulars of PVC Instrumentation Cables**

S.No	Particulars	UNIT	1P X 0.5	2P X 0.5	3P X 0.5	4P X 0.5	5P X 0.5	6P X 0.5	7P X 0.5	8P X 0.5
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 <sup>2</sup>	No X Sq.mm	1P X 0.5	2P X 0.5	3P X 0.5	4P X 0.5	5P X 0.5	6P X 0.5	7P X 0.5	8P X 0.5
4	Voltage Grade	Volts	500							
5	Applicable standard (S)		Generally as per BSEN 50288-7							
6	<b>Conductor</b>									
a)	Material		Annealed Palin Stranded of class2 Electrolytic grade Copper							
b)	Maximum d.c. resistance of conductor at 20° C	Ω/km	36.0	36.7	36.7	36.7	36.7	36.7	36.7	36.7
c)	Shape of conductor		Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular	Stranded Circular
6	<b>Insulation</b>									
a)	Material		Extruded PVC Type 'A'							
b)	Minimum Thickness	mm	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
c)	Pair Identification		White & Blue	White & Blue With Pair Numbered						
7	<b>Collective Screen</b>									
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 <sup>2</sup> (16/0.2 mm)							
8	<b>Innersheath</b>									
a)	Material		Extruded PVC Type ST1							
b)	Minimum Thickness	mm	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
9	<b>Armouring</b>									
a)	Material		Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel	Gal. Steel
b)	Type of armouring		Round Wire	Round Wire	Round Wire	Round Wire	Round Wire	Round Wire	Round Wire	Round Wire
c)	Nominal size of armour	mm	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
10	<b>Outersheath</b>									
a)	Material		Extruded <b>FRLS</b> PVC Type ST1							
b)	Thickness	mm	1.24 (Min.)	1.24 (Min.)	1.24 (Min.)	1.24 (Min.)	1.24 (Min.)	1.24 (Min.)	1.24 (Min.)	1.24 (Min.)
c)	Colour Of Outersheath		Blue	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)	sec	kA/Sec	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
12	Minimum bending radius	mm	12 times Overall diameter							
13	<b>Electrical Parameters</b>									
a)	Max. a.c. resistance of conductor at operating temperature	Ω/km	43.1	43.9	43.9	43.9	43.9	43.9	43.9	43.9
b)	Mutual capacitance	nf/km	<250	<250	<250	<250	<250	<250	<250	<250
c)	Insulation resistance	MΩ/km	10	10	10	10	10	10	10	10
d)	Inductance to resistance ratio (L/R)	μH/Ω	<25	<25	<25	<25	<25	<25	<25	<25
e)	Dielectric strength for 1 minute (H.V Test)	kV	2.0	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 <sup>2</sup> , D is the cable OD in mm							



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15	Approximate Overall diameter of cable	mm	10.0	12.5	13.0	13.5	14.5	15.5	15.5	17.0
16	<b>FRLS PROPERTIES</b>									
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		<b>POLYCAB 500 VOLTS GRADE FRLS</b>							
18	Printing		<b>YEAR POLYCAB 500 VOLTS GRADE FRLS No of Pair x Sqmm SCREENED WITH SEQUENTIAL MARKING AT EVERY ONE METER..</b>							

**FOR POLYCAB WIRES PVT LTD**