

## INSTRUMENTATION CABLES

### Application

For use in normal or hazardous area, with or without flame retardant properties, suitable in process control, A/D converters and other modern microprocessor based instrumentation circuits. These cables are designed to offer excellent resistance to noise and induction phenomena encountered in instrumentation circuits. Voltage grade 650/1100 Volts ( $U_0/U$ ). Conforming to standard specifications like IS 1554 (Pt-1), BS 5308 (Pt-1 & 2), IEC 189 (Pt-1 & 2), VDE0815&0816 etc.

### Configuration

Multi-core/multi-pair/multi-quad laid up concentrically or in units.

### Construction

#### **Conductor**

Solid/stranded, tinned/bare/silver-plated annealed high conductivity EC grade copper, sizes ranging from 0.5 sq. mm to 2.5 sq. mm.

#### **Insulation**

PVC/ Solid PE/ special thermoplastic materials, heat resistant PVC-85°C/105°C operation. Halogen free polymeric or elastomeric insulation can be provided. Core identification by color-coding or printed numerals/letters.

#### **Core-Wrap**

One or more Plastic Tape.

#### **Screen**

Cores/Pairs/Quads can be individually or overall screened or both. Screening by Cu/Al-Mylar Tape or copper braid or aluminium wire for reinforced armour types.

#### **Drain Wire**

Drain-Wire of solid/stranded, bare/tinned copper wire normally provided with both individual and overall screen.

#### **Mechanical Protection**

Cables can be armoured with galvanized steel wires & strips or double helical steel tape.

#### **Inner and Outer Sheath**

PVC Black/Grey. HR/FRLS PVC sheathing or Halogen Free polymeric/elastomeric sheathing also available.



**Multipair, Stranded annealed copper conductor, PVC Insulated, Overall/individually & Overall shielded with Aluminium Mylar Tape along with tinned copper drain wire, PVC sheathed Cable.**

No. of Pairs	No. & Diameter of Wires	Insulation Thickness (Nom.) mm	Nominal Overall Diameter		Approx. Weight		Min. Installed bending radius	
			Overall shielded mm	Individual & Overall Shielded mm	Overall shielded Kg./Km.	Individual & Overall Shielded Kg./Km.	Overall shielded mm.	Individual & Overall Shielded mm.
2	7/0.3	0.35	7.0	8.7	65	90	70	90
4	7/0.3	0.35	10.0	10.9	110	135	100	110
6	7/0.3	0.35	10.9	13.0	140	200	110	130
8	7/0.3	0.35	12.4	14.9	180	245	125	150
10	7/0.3	0.35	13.6	16.3	215	295	140	160
12	7/0.3	0.35	14.9	17.9	315	350	150	180
16	7/0.3	0.35	17.0	20.4	330	450	170	210
20	7/0.3	0.35	18.7	22.6	390	555	190	230
24	7/0.3	0.35	20.4	24.7	465	670	210	250
36	7/0.3	0.35	24.7	29.9	680	960	250	300
50	7/0.3	0.35	29.1	35.5	905	1330	300	350

### GENERAL ELECTRICAL CHARACTERISTICS

Particulars	Value	Units
Conductor resistance @ 20°C	< 39.0	Ohms/Km.
Insulation resistance @ 20°C	> 100.0	M Ohms/Km.
Max. Working voltage	600	VDC
Capacitance of pairs	< 150	nf/Km.
Inductance @ 1 KHz	< 1.0	mH/Km.
L/R Ratio	< 25	µH/Ohms
Cross talk between pairs at 1 KHz	<100	dB/100 mtr.

Data for other sizes can be provided on request.



#### Corporate Office

Paramount House

C-125, Naraina Industrial Area Phase - I, New Delhi - 110028, INDIA.

Ph No: +91 11 25897421 - 30 Fax No: +91 11 25893719 - 20

Email: [mktg@paramountcables.com](mailto:mktg@paramountcables.com) URL: [www.paramountcables.com](http://www.paramountcables.com)

#### Mumbai Office:

201, ROYAL PLAZA, New Link Road, Andheri (West), Mumbai 400 053, INDIA.

Ph No: +91 22 26398048 Fax No: +91 22 26390168

Email: [mumbai@paramountcables.com](mailto:mumbai@paramountcables.com)

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