



MUNISU CABLE INDUSTRIES **PVT. LTD.**

INSTRUMENTATION CABLES - BS : 5308



“Quality Is A Global Currency”

“Munisul” Your Quality Insurance Against Fire.



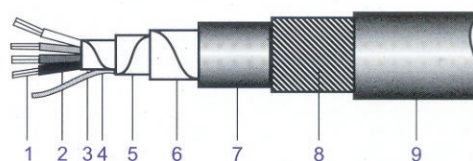
"Munisul" BRAND INSTRUMENTATION CABLES

As per BS : 5308 Part 1 (LDPE/PVC Coated) & Part 11 (PVC Coated), Single Pair, Multi Pair, Single Triad, Multi Triad & Multicore cables.

CONSTRUCTION & IDENTIFICATION OF ELEMENTS

The general construction of Instrumentation Cables is as per BS - 5308 is as given below -

1. Bare / Tinned Annealed Cu Conductor
2. PVC / LDPE Insulation (Cores / Pairs / Triads)
3. Polyester Tape
4. Drain Wire (ATC)
5. Aluminium Mylar Tape
6. PVC Inner Sheath
7. Armour (Wire / Strip)
8. PVC Outer Sheath.



The colour code is as per BS : 5308 Part 1 & Part 11 - 1986. Alternately each Pair / Triad / Quad of insulated Single Cable may be identified by numbered Polyester / Mylar tape. All other types of element identification can be provided, but are subject to written approval from respective client / consultant.

A pair of communication wire can be provided for multi pair / multi triad cables. Each wire shall be of 0.5 sq.mm. of plain bare annealed multi strand copper conductor.

The sheath thickness is maintained constant for eccentricity of the cable. Proper in-line printing / embossing sequential length measurement is provided on the outer jacket. Nylon rip cord can be provided under inner sheath.

The Insulation / sheathing over cable can be provided with (HR) Heat Resistant, Flame Retardant (FR), Flame Retardant Smoke (FRLS) PVC Compounds, EPR, LDPE & Zero Halogen Flame Retardant (ZHFR) Compounds As per our Customer's specifications & Requirements.

APPLICATION:

These Signal Cables, rated at 300 volts rms to Earth or 500 volts rms to core are used to connect electrical instrument circuits and provide communication services in and around process plants. Also places where low noise equipment is installed and also there is the need to protect external & internal noise, this is sought by providing shielded cables with electrostatic / electromagnetic type screening. The armoured cables are suitable for burial underground.

For intrinsically safe circuit installation, the signal cables are designed & manufactured in accordance with BS 5308 Part 1 & 2, EIL 6-52-46, so as to meet most of the specified requirements, but it should not be assumed that these cables will necessarily meet the requirements in every instance, because these cables depend upon the atmosphere in which the installation operates and sometimes upon other circuit parameters.

Application of Instrumentation Cables in Industries

Thermal / Gas / Hydro Based power projects. Petrochemicals, Fertilizer, Refineries, Steel, Cement Plants, RTD's Fire Alarm, PLC'S, DCS, DAS, DDCS, CCTV, Load cells, Transmitters, Control Panel, Industrial, EPABX, Electronic & Digital Instruments, VSAT, LAN/WAN, Data comm., Public Addressing & Computer Networking, Pipe Channel Music Systems in hotels, Resorts, Large I.T. Complex etc.



Why Instrumentation Cables ?

When a particular installation is prone to EMI / RFI / ESI interference either from internal or from external sources, some form of shielding in the cable is necessary.

In any shielded cable the effectiveness of the shield depends on the percentage of coverage offered by the shield. Ideally the shield coverage should be 100%. In a braided cable it is often seen that the coverage is generally in the range of 60% to 85% only and the gaps that exist between the braid weave cause leakage and **leave the cable cores exposed to all kinds of interferences**. Hence foil screen offers 100% coverage with overlap of 25% and above so as not to leave any gaps in screening. Hence Instrumentation cables are superior than ordinary braid screened cables.

Why "Munisul" Brand Instrumentation Cables ?

- Electrolytic bare / tinned Cu
- Insulated with high grade PVC / PE Compound
- Outstanding shield effectiveness
- 100% Spark, HV, IR, CR tested
- Outstanding electrical properties
- Easy to handle & terminate

PERFORMANCE CHARACTERISTICS:

Sr. No.	Size (SQ. MM)	Resistance L/R Ratio (/KM)		Insu. Thick (H/)	Core Dia. (MM)	(MM)
		Bare Cu	Tinned Cu			
1.	0.5	<39.0	<40.1	<25	0.6	2.2
2.	0.75	<26.0	<26.7	<25	0.6	2.5
3.	1.00	<19.5	<20.0	<25	0.6	2.7
4.	1.50	<13.3	<13.7	<40	0.6	2.9

- Mutual Capacitance for pairs & adjacent cores at 1 KHz : For PVC : <250 pF 1 Meter.
- Mutual Capacitance for pairs & adjacent cores at 1 KHz : For LDPE : < 100 pF 1 Meter.
- Capacitance between core & screen at 1 KHz : <400 pF / Meter.
- Other Specifications as per IS : 8130 - 1984, IS : 5831 - 1984 & IS : 3975 - 1999.

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