INSTRUMENTATION / DATA CABLES

Instrumentation cables are specially designed cables, to transmit various forms of signals without effect of any external electrical interference. They are also called as data cables depending on the application. These cables have a shield with aluminum Mylar tape and / or screen offering excellent immunity to low and high frequency and electrostatic as well as electromagnetic interference. The cables may carry low voltage, 4-20 mA, frequency, digital or analogue or any other form of signals, and hence are sometimes referred to as signal cables.

The instrumentation cables, are manufactured with solid stranded (ATC/ABC) copper conductor PVC insulated, single core, twisted cores to form a pair, 3 twisted cores to form a triad and 4 cores to form a quad. The individual twisted cores can be formed as 'Units' to constitute a multi-core cable. Cabling units are, thus, of any one of the construction type's viz. 'Pair', 'Triple' or 'Quad'. Such units when laid up are overall sheathed with PVC. The core identification is through printed numerals and / or different colour wrappings by non-hygroscopic material. This is either by tapping or extrusion. Core shielding is carried out with polyester backed aluminum Mylar tape. Screening is provided as per customer requirements. A tinned copper drain wire of minimum 0.5 sqmm, in contact with each cabling unit, is provided for every instrumentation cable. Gl flat/round armour is provided as per customer requirements.

Varsha cables manufactures full range of instrumentation cables designed in various configurations such as in pairs, triad or quad. Additionally, depending on the customer requirements, the cables manufactured are individually shielded. Varsha cables manufactures instrumentation signal cables in accordance to national and international code specifications- IS 5608, BS 5308 and IEC 189.

TECHNICAL DATA

Conductor Size In sq. mm.		**0.5**	**0.75**	**1.0**	**1.5**
Conductor resistance in ohm/km at 20°C		39	26	18.5	12.3
Insulation resistance at 20°C in Mohms/km	PVC	.....more than 100.....			
	LDPE	.....more than 5000.....			
	XLPE	.....more than 5000.....			
Capacitance at 0.8 at kHz in nf / km	Between conductors	.....less than 250 nf/km.....			
	Between conductors and screen	.....less than 450 nf/km.....			
Inductance in mH/km		.....less than 1.0.....			