CONSTRUCTION

Conductor	Stranded annealed plain copper to IEC60228 Class 2.
Insulation	MICA impregnated glass tape + Cross linked Polyethylene (XLPE) to BS EN 50290-2-29.
Color Code	Black & White with each core numbered for multi pair cables
Pair Construction	Two insulated conductors are uniformly twisted to form a pair with 8-14 twists per meter as per BS EN 50288-1.
Individual Screen	Aluminum backed Mylar tape (25µm) is applied over each pair with an overlap of 25% with metallic side down in contact with a stranded tinned copper drain wire of 0.5mm² (7x0.3mm). All pair/triad shields are electrically isolated from each other.
Cabling	Required numbers of individually screened pairs are assembled with non-hygroscopic filler if required and the assembly is wrapped with a polyester binder tape.
Collective Screen	Aluminum backed Mylar tape (25µm) is applied with an overlap of 25% with the metallic side down in contact with a stranded tinned copper drain wire of 0.5mm² (7x0.3mm) run longitudinally over the binder tape.
Inner Sheathing	Low Smoke Halogen Free thermoplastic as per BS EN50290-2-27 in Black color.
Wire Armor	A single layer of galvanized steel wire armor to BS EN10257-1 is applied over the inner sheath.
Over sheath	Low Smoke Halogen Free thermoplastic as per BS EN50290-2-27. The color of the sheath is as per dimension sheet.
Printing on the sheath	INSTRUMENTATION CABLE CU/MICA/XLPE/SWA/LSZH SHIELDED NO OF PAIRSX 2 X…MM2 500 V MESC YEAR BS EN 50288-7 IEC 60331 IEC 60332-3 CAT A LENGTH METER MARKING

Technical Data:

Temperature Range	- 5°C to 50°C (During installation) - 20°C to 90°C (During Operation)
Voltage Rating	500 Volts
Conductor Resistance (Ω/Km at 20°C)	≤ 12.3 (1.5mm2)
Mutual Capacitance (at 1KHz)	≤ 100nF/Km
Capacitance Unbalance (at 1kHz)	≤ 500 pF/500m (Not applicable for single pair/triad)
L/R Ratio	≤ 40 (1.5mm2) µH/Ω
Insulation Resistance	≥ 5000 MΩ - Km at 20°C (500 V DC 1 minute)
Dielectric Strength Test (Core to core & core to screen)	2000 V_{AC} / 3000 V_{DC}. For 1 minute.

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Flame Behavior Characteristics:

Flame Retardant	IEC 60332-3-22 (CAT-A)
Fire Resistance	IEC 60331-21 (90)
Halogen Acid Gas (Outer Sheath)	MAX. 0.5% (IEC 60754-1)
Limiting Oxygen Index (Outer Sheath)	≥ 30% (ASTM D2863)
Light Transmission	≥ 60% (IEC 61034)
UV / Sunlight Resistance (Outer Sheath)	Passes after 720 hrs. (UL 1581)
Oil Resistance (Outer Sheath)	Passes (ICEA S-73-532)
Min. Bending Radius	12 x Cable Overall Diameter

DIMENSIONAL DATA

SERIAL NO.	MESC CODE	OUTER SHEATH COLOR	PAIR	SIZE (mm²)	STAND (No X MM)	INSULATION THICKNESS (MM)	INNER SHEATH THICKNESS (mm)	DIA OVER INNER SHEATH (mm)	ARMOUR WIRE DIAMETER (mm)	DIA OVER ARMOUR (mm)	OUTER SHEATH THICKNESS (MM)	#DIAMETER OF CABLE (MM)	APPROX. CABLE WEIGHT (kg/km)
9	041E-02P00150-W0BK8-L5	Black	2P	1.5	7 X 0.53	0.5	1.1	15.9	0.9	17.7	1.5	20.7	614.0
10	041E-03P00150-W0BK8-L5	Black	3P	1.5	7 X 0.53	0.5	1.1	17.0	0.9	18.8	1.5	21.8	698.0
11	041E-05P00150-W0BK8-L5	Black	5P	1.5	7 X 0.53	0.5	1.2	20.7	1.25	23.2	1.6	26.4	1096.0
12	041E-05P00150-W0BL8-L5	Blue	5P	1.5	7 X 0.53	0.5	1.2	20.7	1.25	23.2	1.6	26.4	1096.0
13	041E-06P00150-W0BK8-L5	Black	6P	1.5	7 X 0.53	0.5	1.2	22.7	1.25	25.2	1.6	28.4	1209.0
14	041E-08P00150-W0BK8-L5	Black	8P	1.5	7 X 0.53	0.5	1.3	25.8	1.25	28.3	1.7	31.7	1464.0
15	041E-10P00150-W0BK8-L5	Black	10P	1.5	7 X 0.53	0.5	1.4	29.6	1.6	32.8	1.8	36.4	1953.0
16	041E-10P00150-W0BL8-L5	Blue	10P	1.5	7 X 0.53	0.5	1.4	29.6	1.6	32.8	1.8	36.4	1953.0

Note:-The tolerance on the cable overall diameter shall be +/- 2.5mm up to 30mm & +/- 3.0mm above 30mm.

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