

Middle East Specialized Cables Co.

INSTRUMENTATION CABLE
SINGLE PAIR/TRIAD, COLLECTIVELY SCREENED, ARMORED FLAME RETARDANT
CU/ XLPE/OS/SWA/PVC
SPECIFICATION: BS EN 50288-7 & IEC 60332-3
MES C Doc. No.: TD-U100576-01-00

Dated: 22/07/2014

Customer PO No.:- 2133



CONSTRUCTION

Conductor

Stranded Annealed Plain copper to Class 2 of IEC 60228.

Insulation

Extruded XLPE.

Pair/Triad Construction

Two/three insulated conductors are uniformly twisted to form a pair/triad with 10-14 twists per meter with non-hygroscopic filler and polyester binder tape.

Color Code

Single Pair: Black & White
Single Triad: Black, White & Red

Cabling

Required numbers of individually screened pairs/triads are assembled with non-hygroscopic filler and the assembly is wrapped with a polyester binder tape.

Collective Screen

Aluminum backed Mylar tape (25 μ m) is applied with an overlap of 25% with the metallic side down in contact with a drain wire of 0.5mm² (7/0.3mm) run longitudinally over the binder tape.

Inner Sheathing

Flame Retardant PVC in Black Color.

Wire Armor

A single layer of galvanized steel wire armor to BS EN 10257 is applied spirally over the inner sheath.

Over Sheath

Flame Retardant PVC TYPE 9 to BS 7655. The outer sheath color is as per Dimension sheet

Printing on the sheath

INSTRUMENTATION CABLE CU/XLPE/SWA/PVC SHIELDED NO OF TRIADS X
3 X...MM2 500V MES C YEAR BS EN 50288-7 IEC60332-3 CAT-A LENGTH
METER MARKING

Technical Data:

Temperature Range

- 5°C to 50°C (During installation) & - 30°C to 90°C (During Operation)

Voltage Rating

500 Volts

Conductor Resistance- Ω /Km at 20°C

$\leq 12.1 : 12.3$ (single pair/triad : multi pair/triad- for 1.5mm²)
 $7.41 : 7.56$ (single pair/triad : multi pair/triad- for 2.5mm²)
 Ω /Km at 20°C

Mutual Capacitance (at 1KHz)

≤ 100 nF/Km

Capacitance Unbalance (at 1kHz)

≤ 500 pF/500m (Not applicable for single pair/triad)

L/R Ratio

≤ 40 (1.5mm²) μ H/ Ω , 60 (2.5mm²) μ H/ Ω

Insulation Resistance

≥ 5000 M Ω - Km at 20°C (500 V DC 1 minute)

Dielectric Strength Test (Core to core & core to screen)

2000 Vac / 3000 Vdc. for 1 minute.

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Flame Behavior Characteristics:

Flame retardant	IEC 60332-3 CAT-A
Halogen acid gas (outer sheath)	MAX. 17% (IEC 60754-1)
Limiting Oxygen index (outer sheath)	≥ 30% (ASTM D2863)
Light Transmission	≥ 30% (IEC 61034)
UV /Sunlight resistance (outer sheath)	Passes after 720 hrs
Oil Resistance (outer sheath)	Passes (ICEA S-73-532)
Min. Bending Radius	12X Cable Overall Diameter

DIMENSIONAL DATA

SERIAL NO.	MES C CODE	OUTER SHEATH COLOR	PAIR/TRIAD	SIZE mm ²	STRAND X DIA N x mm	INSULATION THICKNESS (mm)	INNER SHEATH THICKNESS (mm)	DIA. OVER INNER SHEATH (mm)	ARMOR WIRE DIA. (mm)	DIA. OVER ARMOR (mm)	OUTER SHEATH THICKNESS (mm)	APPROX. OVERALL DIA. (mm)	APPROX. CABLE WEIGHT (kg/km)
1	0214-01P00150-W0BK8-E5	Black	1P	1.5	7X0.53	0.5	0.9	8.1	0.9	9.9	1.4	12.7	309
2	0214-01P00150-W0BL8-E5	Blue	1P	1.5	7X0.53	0.5	0.9	8.1	0.9	9.9	1.4	12.7	309
3	0214-01P00250-W0BK8-E5	Black	1P	2.5	7X0.67	0.6	0.9	9.3	0.9	11.1	1.4	13.9	366
4	0214-01T00150-W0BK8-E5	Black	1T	1.5	7X0.53	0.5	0.9	8.5	0.9	10.3	1.4	13.1	343

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