INSTRUMENTATION CABLES AS PER BS EN 50288-7 (CU/MICA/XLPE/IS/OS/LSZH)

APPLICATION

Suitable for Industrial & Commercial settings for process controls, operation of critical systems during fire emergencies, transmission of analogue / digital signals in instrument & control systems, maintaining functionality even under extreme conditions. Ideal for use in conduits, trunking, and in locations protected from physical damage. For installation where fire, smoke emission and toxic fumes create a potential threat to life and equipment.

CONSTRUCTION

Conductor: Stranded (Class 2) Annealed Plain Copper Conductor to BS EN 60228

Insulation: MICA + Cross linked polyethylene (XLPE)

Insulation Color: Multi Pair: Black & White with number printed on each cores.
Multi Triad: Black, White & Red with number printed on each cores.
Other colors are available upon request or as per BS EN 50288-7.

Pair / Triad: Uniformly twisted insulated conductors with suitable twists per meter.

Individual Screen & Drain Wire: Aluminum backed Mylar tape (25µm) (AL-PET Foil) is applied over each pair / triad with 100% coverage and an overlap of 25% with metal side, in contact with a stranded tinned copper drain wire of size 0.5 mm2 (Class 2). All pair shields are electrically isolated from each other.

Assembly: The required number of screened pairs / triads are assembled together with non-hygroscopic fillers (if required) and wrapped with a binder tape.

Overall Screen & Drain Wire: Aluminum backed Mylar tape (25µm) (AL-PET-Foil) is applied over assembly with 100% coverage and an overlap of 25% with metal side in contact with a stranded tinned copper drain wire of size 0.5 mm2 (class 2).

Outer Sheath: Extruded Low Smoke Zero Halogen (LSZH) in Black colour. Other colors are available upon request.

Printing Text on the Outer Sheath: INSTRUMENTATION CABLE CU/MICA/XLPE/IS/OS/LSZH NO OF PAIRS / TRIADS X 2 / 3 X…MM2 500 V BS EN 50288-7 IEC 60331 IEC 60332-1-2 TEKAB YEAR MADE IN UAE LENGTH METER MARKING

TECHNICAL DATA

Operating Temperature: During Normal Operation - 90°C
During Short Circuit Condition - 250°C

Voltage Rating: 500V

Voltage Withstand: 2000 V a.c. r.m.s. for 1 minutes

Insulation Resistance MΩ/km: ≥ 1000

Mutual Capacitance nf/km: < 150

Inductance to resistance ratio (L/R) µH/Ω
< 25 (up to 1mm²)
< 40 (1.5 mm2)
< 60 (2.5 mm2)

Fire Resistant: IEC 60331

Flame Retardant Test: IEC 60332-3-24 (CAT C), IEC 60332-1-2

Halogen Acid Gas Emission: IEC 60332-3-24 (CAT C), IEC 60332-1-2

Smoke Emission 60% (BS EN 61034-2)

* Solid (Class-1) / Flexible (Class-5), Tinned / Thermocouple conductor can be provided upon request.

** Flame Retardant Cross linked polyethylene (FR-XLPE) can be provided upon request.

*** Screening: - Copper Tape / CU-PET tape / Braiding & any other drain wire size can be provided upon request.

**** Other special sheath materials are also available with Flame Retardant: - IEC 60332-3-22 (CAT A), UV / Sunlight Resistant, Oil Resistant, Anti-Termite, Anti-Rodent.

- Construction in core formation also can be provided upon request.
- 300V or any customized voltage grade rated cables up to 600/1000V can be provided upon request.

SERIAL NO.	TEKAB CODE	NO. OF PAIRS (P) / TRIADS (T) X CONDUCTOR SIZE (No. x sq.mm)	NO. OF STRANDS	MINIMUM INSULATION THICKNESS (mm)	APPROX. OVERALL DIAMETER (mm)	APPROX. WEIGHT (kg/km)
1	MXA8A7Z1	2P X 0.5	7	0.44	15.5	200
2	MXA8A7Z1	5P X 0.5	7	0.44	20	375
3	MXA8A7Z1	10P X 0.5	7	0.44	25.5	600
4	MXA8A7Z1	12P X 0.5	7	0.44	27.5	700
5	MXA8A7Z1	16P X 0.5	7	0.44	31	900
6	MXA8A7Z1	20P X 0.5	7	0.44	35	1100
7	MXA8A7Z1	2P X 0.75	7	0.44	37	225
8	MXA8A7Z1	5P X 0.75	7	0.44	21	400
9	MXA8A7Z1	10P X 0.75	7	0.44	27	700
10	MXA8A7Z1	12P X 0.75	7	0.44	29	825
11	MXA8A7Z1	16P X 0.75	7	0.44	33.5	1075
12	MXA8A7Z1	20P X 0.75	7	0.44	37	1300

SERIAL NO.	TEKAB CODE	NO. OF PAIRS (P) / TRIADS (T) X CONDUCTOR SIZE (No. x sq.mm)	NO. OF STRANDS	MINIMUM INSULATION THICKNESS (mm)	APPROX. OVERALL DIAMETER (mm)	APPROX. WEIGHT (kg/km)
13	MXA8A7Z1	2P X 1.0	7	0.44	17	250
14	MXA8A7Z1	5P X 1.0	7	0.44	21.5	450
15	MXA8A7Z1	10P X 1.0	7	0.44	28	775
16	MXA8A7Z1	12P X 1.0	7	0.44	30.5	900
17	MXA8A7Z1	16P X 1.0	7	0.44	35	1200
18	MXA8A7Z1	20P X 1.0	7	0.44	39	1475
19	MXA8A7Z1	2P X 1.5	7	0.44	18	300
20	MXA8A7Z1	5P X 1.5	7	0.44	23	525
21	MXA8A7Z1	10P X 1.5	7	0.44	30	900
22	MXA8A7Z1	12P X 1.5	7	0.44	32	1075
23	MXA8A7Z1	16P X 1.5	7	0.44	37	1375
24	MXA8A7Z1	20P X 1.5	7	0.44	41	1725
25	MXA8A7Z1	2P X 2.5	7	0.53	20	350
26	MXA8A7Z1	5P X 2.5	7	0.53	26	675
27	MXA8A7Z1	10P X 2.5	7	0.53	34	1200
28	MXA8A7Z1	12P X 2.5	7	0.53	37	1425
29	MXA8A7Z1	16P X 2.5	7	0.53	42.5	1875
30	MXA8A7Z1	20P X 2.5	7	0.53	47	2300
31	MXA8A7Z1	2T X 0.5	7	0.44	16	250
32	MXA8A7Z1	5T X 0.5	7	0.44	21	450
33	MXA8A7Z1	10T X 0.5	7	0.44	27	775
34	MXA8A7Z1	12T X 0.5	7	0.44	29	900
35	MXA8A7Z1	16T X 0.5	7	0.44	33.5	1175
36	MXA8A7Z1	20T X 0.5	7	0.44	37	1400
37	MXA8A7Z1	2T X 0.75	7	0.44	17	275
38	MXA8A7Z1	5T X 0.75	7	0.44	22	525
39	MXA8A7Z1	10T X 0.75	7	0.44	29	900
40	MXA8A7Z1	12T X 0.75	7	0.44	31	1050
41	MXA8A7Z1	16T X 0.75	7	0.44	35.5	1375
42	MXA8A7Z1	20T X 0.75	7	0.44	40	1725
43	MXA8A7Z1	2T X 1.0	7	0.44	18	300
44	MXA8A7Z1	5T X 1.0	7	0.44	23	575
45	MXA8A7Z1	10T X 1.0	7	0.44	30	1000
46	MXA8A7Z1	12T X 1.0	7	0.44	32.5	1175

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47	MXA8A7Z1	16T X 1.0	7	0.44	34	1550
48	MXA8A7Z1	20T X 1.0	7	0.44	41.5	1925
49	MXA8A7Z1	2T X 1.5	7	0.44	19	350
50	MXA8A7Z1	5T X 1.5	7	0.44	25	675
51	MXA8A7Z1	10T X 1.5	7	0.44	32	1200
52	MXA8A7Z1	12T X 1.5	7	0.44	34.5	1400
53	MXA8A7Z1	16T X 1.5	7	0.44	40	1875
54	MXA8A7Z1	20T X 1.5	7	0.44	44	2300
55	MXA8A7Z1	2T X 2.5	7	0.53	21	450
56	MXA8A7Z1	5T X 2.5	7	0.53	28	900
57	MXA8A7Z1	10T X 2.5	7	0.53	36	1600
58	MXA8A7Z1	12T X 2.5	7	0.53	40	1950
59	MXA8A7Z1	16T X 2.5	7	0.53	45.5	2525
60	MXA8A7Z1	20T X 2.5	7	0.53	51	3150