

INSTRUMENTATION CABLES AS PER BS EN 50288-7 (CU/MICA/XLPE/IS/AL/HDPE/PA/SWA/LSZH)

APPLICATION

Suitable for Industrial & Commercial settings for process controls, operation of critical systems during fire emergencies, outdoor and underground installations, petrochemical and oil & gas industries, refineries, chemical plants, and power stations, providing robust mechanical protection and durability, moisture resistance, maintaining functionality even under extreme conditions. 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 mm ² (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 & Multi- Layer Sheath:	An Aluminum (AL) Foil (0.20mm) coated on up side with a protective plastic coating (0.05mm) is applied longitudinally over the core assembly with a minimum overlap of 3 mm. A stranded tinned copper drain wire of 0.5mm ² (class 2) runs longitudinally in contact with the Aluminum side of the Aluminum tape. A black extruded bedding of Flame-Retardant High-Density Polyethylene compound meeting the requirement of ASTM 1248 Type 3 shall be applied over the Aluminum Foil and shall be bonded to the Aluminum Foil. Over the High-Density Polyethylene bedding a protective sheath 0.3 mm of Polyamide shall be extruded.
Armoring:	A serving of single layer of round galvanized steel wires is applied as per BS EN 10257-1.
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/AL/HDPE/PA/
SWA/LSZH NO OF PAIRS / TRIADS X 2 / 3 X...MM2 500 V
BS EN 50288-7 IEC 60331 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)

Halogen Acid Gas Emission: 0.5% (BS EN 60754-1)

Smoke Emission: 60% (BS EN 61034-2)

Fire Resistant: IEC 60331

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

* 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.

*** 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	MXA8(L)2YQ4Z2Z1	2P X 0.5	7	0.44	24	1050
2	MXA8(L)2YQ4Z2Z1	5P X 0.5	7	0.44	28	1400
3	MXA8(L)2YQ4Z2Z1	10P X 0.5	7	0.44	35	2150
4	MXA8(L)2YQ4Z2Z1	12P X 0.5	7	0.44	38	2450
5	MXA8(L)2YQ4Z2Z1	16P X 0.5	7	0.44	41.5	2900
6	MXA8(L)2YQ4Z2Z1	20P X 0.5	7	0.44	46.5	3750
7	MXA8(L)2YQ4Z2Z1	2P X 0.75	7	0.44	25	1100
8	MXA8(L)2YQ4Z2Z1	5P X 0.75	7	0.44	29	1525
9	MXA8(L)2YQ4Z2Z1	10P X 0.75	7	0.44	37	2400
10	MXA8(L)2YQ4Z2Z1	12P X 0.75	7	0.44	39.5	2675

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11	MXA8(L)2YQ4Z2Z1	16P X 0.75	7	0.44	45	3600
12	MXA8(L)2YQ4Z2Z1	20P X 0.75	7	0.44	49	4150
13	MXA8(L)2YQ4Z2Z1	2P X 1.0	7	0.44	25	1150
14	MXA8(L)2YQ4Z2Z1	5P X 1.0	7	0.44	30	1600
15	MXA8(L)2YQ4Z2Z1	10P X 1.0	7	0.44	38	2575
16	MXA8(L)2YQ4Z2Z1	12P X 1.0	7	0.44	41	2875
17	MXA8(L)2YQ4Z2Z1	16P X 1.0	7	0.44	47	3825
18	MXA8(L)2YQ4Z2Z1	20P X 1.0	7	0.44	52	4525
19	MXA8(L)2YQ4Z2Z1	2P X 1.5	7	0.44	26	1250
20	MXA8(L)2YQ4Z2Z1	5P X 1.5	7	0.44	31.5	1725
21	MXA8(L)2YQ4Z2Z1	10P X 1.5	7	0.44	40.5	2825
22	MXA8(L)2YQ4Z2Z1	12P X 1.5	7	0.44	42.5	3125
23	MXA8(L)2YQ4Z2Z1	16P X 1.5	7	0.44	49	4225
24	MXA8(L)2YQ4Z2Z1	2P X 2.5	7	0.53	27	1425
25	MXA8(L)2YQ4Z2Z1	5P X 2.5	7	0.53	36	2300
26	MXA8(L)2YQ4Z2Z1	10P X 2.5	7	0.53	46	3800
27	MXA8(L)2YQ4Z2Z1	12P X 2.5	7	0.53	49	4250
28	MXA8(L)2YQ4Z2Z1	2T X 0.5	7	0.44	25	1125
29	MXA8(L)2YQ4Z2Z1	5T X 0.5	7	0.44	29.5	1550
30	MXA8(L)2YQ4Z2Z1	10T X 0.5	7	0.44	37	2450
31	MXA8(L)2YQ4Z2Z1	12T X 0.5	7	0.44	39.5	2750
32	MXA8(L)2YQ4Z2Z1	16T X 0.5	7	0.44	45	3700
33	MXA8(L)2YQ4Z2Z1	20T X 0.5	7	0.44	49	4250
34	MXA8(L)2YQ4Z2Z1	2T X 0.75	7	0.44	25	1150
35	MXA8(L)2YQ4Z2Z1	5T X 0.75	7	0.44	29.5	1600
36	MXA8(L)2YQ4Z2Z1	10T X 0.75	7	0.44	36.5	2525
37	MXA8(L)2YQ4Z2Z1	12T X 0.75	7	0.44	39.5	2850
38	MXA8(L)2YQ4Z2Z1	16T X 0.75	7	0.44	45	3850
39	MXA8(L)2YQ4Z2Z1	20T X 0.75	7	0.44	53	4850
40	MXA8(L)2YQ4Z2Z1	2T X 1.0	7	0.44	26	1250
41	MXA8(L)2YQ4Z2Z1	5T X 1.0	7	0.44	31.5	1775
42	MXA8(L)2YQ4Z2Z1	10T X 1.0	7	0.44	41	2950
43	MXA8(L)2YQ4Z2Z1	12T X 1.0	7	0.44	43	3250
44	MXA8(L)2YQ4Z2Z1	16T X 1.0	7	0.44	49	4400
45	MXA8(L)2YQ4Z2Z1	2T X 1.5	7	0.44	27	1350
46	MXA8(L)2YQ4Z2Z1	5T X 1.5	7	0.44	34	2150

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47	MXA8(L)2YQ4Z2Z1	10T X 1.5	7	0.44	42	3225
48	MXA8(L)2YQ4Z2Z1	12T X 1.5	7	0.44	46.5	4050
49	MXA8(L)2YQ4Z2Z1	16T X 1.5	7	0.44	53	5000
50	MXA8(L)2YQ4Z2Z1	2T X 2.5	7	0.53	30	1575
51	MXA8(L)2YQ4Z2Z1	5T X 2.5	7	0.53	38	2650
52	MXA8(L)2YQ4Z2Z1	10T X 2.5	7	0.53	48.5	4400
53	MXA8(L)2YQ4Z2Z1	12T X 2.5	7	0.53	53	5050