

INSTRUMENTATION CABLES AS PER BS EN 50288-7 (CU/MICA/LSZH/IS/OS/LSZH/SWA/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 + Halogen free flame retardant compound (HFFR=LSZH)
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 & 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 mm ² (class 2).
Inner Sheath:	Extruded Low Smoke Zero Halogen (LSZH) in Black colour. Other colors are available upon request.
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/LSZH/IS/OS/LSZH/ SWA/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:	≥ 10
Mutual Capacitance nf/km:	< 250
Inductance to resistance ratio (L/R) μH/Ω	< 25 (up to 1mm ²) < 40 (1.5 mm ²) < 60 (2.5 mm ²)
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.

*** 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	MZ1A8A7Z1Z2Z1	2P X 0.5	7	0.44	21	750
2	MZ1A8A7Z1Z2Z1	5P X 0.5	7	0.44	25.5	1200
3	MZ1A8A7Z1Z2Z1	10P X 0.5	7	0.44	31.5	1700
4	MZ1A8A7Z1Z2Z1	12P X 0.5	7	0.44	34.5	2125
5	MZ1A8A7Z1Z2Z1	16P X 0.5	7	0.44	39	2550
6	MZ1A8A7Z1Z2Z1	20P X 0.5	7	0.44	42	2975
7	MZ1A8A7Z1Z2Z1	2P X 0.75	7	0.44	22	950
8	MZ1A8A7Z1Z2Z1	5P X 0.75	7	0.44	27	1300
9	MZ1A8A7Z1Z2Z1	10P X 0.75	7	0.44	34	2075
10	MZ1A8A7Z1Z2Z1	12P X 0.75	7	0.44	37	2400
11	MZ1A8A7Z1Z2Z1	16P X 0.75	7	0.44	41	2850
12	MZ1A8A7Z1Z2Z1	20P X 0.75	7	0.44	46	3725
13	MZ1A8A7Z1Z2Z1	2P X 1.0	7	0.44	23	975
14	MZ1A8A7Z1Z2Z1	5P X 1.0	7	0.44	28	1400

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15	MZ1A8A7Z1Z2Z1	10P X 1.0	7	0.44	35.5	2275
16	MZ1A8A7Z1Z2Z1	12P X 1.0	7	0.44	38	2525
17	MZ1A8A7Z1Z2Z1	16P X 1.0	7	0.44	42.5	3050
18	MZ1A8A7Z1Z2Z1	20P X 1.0	7	0.44	48	4025
19	MZ1A8A7Z1Z2Z1	2P X 1.5	7	0.44	24	1050
20	MZ1A8A7Z1Z2Z1	5P X 1.5	7	0.44	29	1500
21	MZ1A8A7Z1Z2Z1	10P X 1.5	7	0.44	37	2500
22	MZ1A8A7Z1Z2Z1	12P X 1.5	7	0.44	40	2775
23	MZ1A8A7Z1Z2Z1	16P X 1.5	7	0.44	46	3800
24	MZ1A8A7Z1Z2Z1	20P X 1.5	7	0.44	50	4425
25	MZ1A8A7Z1Z2Z1	2P X 2.5	7	0.53	26	1200
26	MZ1A8A7Z1Z2Z1	5P X 2.5	7	0.53	33	2000
27	MZ1A8A7Z1Z2Z1	10P X 2.5	7	0.53	42	3025
28	MZ1A8A7Z1Z2Z1	12P X 2.5	7	0.53	46	3850
29	MZ1A8A7Z1Z2Z1	16P X 2.5	7	0.53	52	4732
30	MZ1A8A7Z1Z2Z1	20P X 2.5	7	0.53	56.5	5450
31	MZ1A8A7Z1Z2Z1	2T X 0.5	7	0.44	22	1300
32	MZ1A8A7Z1Z2Z1	5T X 0.5	7	0.44	27	2200
33	MZ1A8A7Z1Z2Z1	10T X 0.5	7	0.44	34	2125
34	MZ1A8A7Z1Z2Z1	12T X 0.5	7	0.44	37	2450
35	MZ1A8A7Z1Z2Z1	16T X 0.5	7	0.44	41	2950
36	MZ1A8A7Z1Z2Z1	20T X 0.5	7	0.44	46	3825
37	MZ1A8A7Z1Z2Z1	2T X 0.75	7	0.44	23	1025
38	MZ1A8A7Z1Z2Z1	5T X 0.75	7	0.44	28	1475
39	MZ1A8A7Z1Z2Z1	10T X 0.75	7	0.44	36	2425
40	MZ1A8A7Z1Z2Z1	12T X 0.75	7	0.44	38.5	2700
41	MZ1A8A7Z1Z2Z1	16T X 0.75	7	0.44	43	3275
42	MZ1A8A7Z1Z2Z1	20T X 0.75	7	0.44	49	4325
43	MZ1A8A7Z1Z2Z1	2T X 1.0	7	0.44	24	1075
44	MZ1A8A7Z1Z2Z1	5T X 1.0	7	0.44	29	1575
45	MZ1A8A7Z1Z2Z1	10T X 1.0	7	0.44	37.5	2600
46	MZ1A8A7Z1Z2Z1	12T X 1.0	7	0.44	40	2900
47	MZ1A8A7Z1Z2Z1	16T X 1.0	7	0.44	46	3975
48	MZ1A8A7Z1Z2Z1	20T X 1.0	7	0.44	50.5	4625

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49	MZ1A8A7Z1Z2Z1	2T X 1.5	7	0.44	25	1550
50	MZ1A8A7Z1Z2Z1	5T X 1.5	7	0.44	31	1725
51	MZ1A8A7Z1Z2Z1	10T X 1.5	7	0.44	40	2875
52	MZ1A8A7Z1Z2Z1	12T X 1.5	7	0.44	42	3250
53	MZ1A8A7Z1Z2Z1	16T X 1.5	7	0.44	49	4475
54	MZ1A8A7Z1Z2Z1	20T X 1.5	7	0.44	54	5225
55	MZ1A8A7Z1Z2Z1	2T X 2.5	7	0.53	27	1350
56	MZ1A8A7Z1Z2Z1	5T X 2.5	7	0.53	35	2325
57	MZ1A8A7Z1Z2Z1	10T X 2.5	7	0.53	45.5	4000
58	MZ1A8A7Z1Z2Z1	12T X 2.5	7	0.53	49	4550
59	MZ1A8A7Z1Z2Z1	16T X 2.5	7	0.53	55	5575
60	MZ1A8A7Z1Z2Z1	20T X 2.5	7	0.53	60	6525

