INSTRUMENTATION CABLES
AS PER BS EN 50288-7 (CU/MICA/XLPE/OS/PVC/LC/PVC/SWA/PVC)

APPLICATION

Lead sheath instrumentation cables provide robust mechanical protection and durability, ideal for industrial and commercial applications. These cables ensure reliable transmission of analogue signals in harsh environments, including chemical, petrochemical, oil & gas, power plants, and marine settings. They offer enhanced protection against chemical exposure, vibration, moisture, and extreme temperatures, making them suitable for process control, automated systems, maintaining functionality even under extreme conditions and hazardous areas. The lead sheath also shields against electromagnetic interference, ensuring consistent performance and signal integrity.

CONSTRUCTION

Conductor:	Stranded (Class 2) Annealed Plain Copper Conductor to BS EN 60228
Insulation:	MICA + Cross linked polyethylene (XLPE)
Insulation Color:	Single Pair: Black & White Single Triad: Black, White & Red 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.
Assembly:	The required number of unscreened 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).
Inner Sheath:	Extruded Polyvinyl Chloride (PVC) in Black colour. Other colors are available upon request.
Lead Covering:	Extruded Lead Alloy Sheath as per BS EN 50307
Bedding:	Extruded Polyvinyl Chloride (PVC) 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 Polyvinyl Chloride (PVC) in Black colour. Other colors are available upon request.
Printing Text on the Outer Sheath:	INSTRUMENTATION CABLE CU/MICA/XLPE/OS/PVC/LC/PVC/ SWA/PVC 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)
Fire Resistant:	IEC 60331
Flame Retardant Test:	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.

*** 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), IEC 60332-3-24 (CAT C), Low Smoke, UV / Sunlight Resistant, Oil Resistant, Anti-Termite, And 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	MXA7VLVZ2V	1P X 0.5	7	0.44	18	1100
2	MXA7VLVZ2V	2P X 0.5	7	0.44	24	1725
3	MXA7VLVZ2V	5P X 0.5	7	0.44	28	2275
4	MXA7VLVZ2V	10P X 0.5	7	0.44	34.5	3200
5	MXA7VLVZ2V	12P X 0.5	7	0.44	37	3600
6	MXA7VLVZ2V	16P X 0.5	7	0.44	40.5	4275
7	MXA7VLVZ2V	20P X 0.5	7	0.44	45.5	5400
8	MXA7VLVZ2V	1P X 0.75	7	0.44	19	1150
9	MXA7VLVZ2V	2P X 0.75	7	0.44	25	1875
10	MXA7VLVZ2V	5P X 0.75	7	0.44	29.5	2450
11	MXA7VLVZ2V	10P X 0.75	7	0.44	36.5	3575
12	MXA7VLVZ2V	12P X 0.75	7	0.44	38.5	3950
13	MXA7VLVZ2V	16P X 0.75	7	0.44	43	4800
14	MXA7VLVZ2V	20P X 0.75	7	0.44	48	6050

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)
15	MXA7VLVZ2V	1P X 1.0	7	0.44	19	1175
16	MXA7VLVZ2V	2P X 1.0	7	0.44	26	1950
17	MXA7VLVZ2V	5P X 1.0	7	0.44	30	2525
18	MXA7VLVZ2V	10P X 1.0	7	0.44	37.5	3800
19	MXA7VLVZ2V	12P X 1.0	7	0.44	39.5	4200
20	MXA7VLVZ2V	16P X 1.0	7	0.44	46	5575
21	MXA7VLVZ2V	20P X 1.0	7	0.44	50	6450
22	MXA7VLVZ2V	1P X 1.5	7	0.44	20	1275
23	MXA7VLVZ2V	2P X 1.5	7	0.44	26.5	2075
24	MXA7VLVZ2V	5P X 1.5	7	0.44	31	2700
25	MXA7VLVZ2V	10P X 1.5	7	0.44	39	4150
26	MXA7VLVZ2V	12P X 1.5	7	0.44	14	4750
27	MXA7VLVZ2V	16P X 1.5	7	0.44	48	6200
28	MXA7VLVZ2V	20P X 1.5	7	0.44	52.5	7200
29	MXA7VLVZ2V	1P X 2.5	7	0.53	22	1550
30	MXA7VLVZ2V	2P X 2.5	7	0.53	29	2350
31	MXA7VLVZ2V	5P X 2.5	7	0.53	36	3525
32	MXA7VLVZ2V	10P X 2.5	7	0.53	45	5600
33	MXA7VLVZ2V	12P X 2.5	7	0.53	48.5	6325
34	MXA7VLVZ2V	16P X 2.5	7	0.53	54	7650
35	MXA7VLVZ2V	20P X 2.5	7	0.53	60	9000
36	MXA7VLVZ2V	1T X 0.5	7	0.44	19	1150
37	MXA7VLVZ2V	2T X 0.5	7	0.44	25	1900
38	MXA7VLVZ2V	5T X 0.5	7	0.44	29.5	2450
39	MXA7VLVZ2V	10T X 0.5	7	0.44	36.5	3650
40	MXA7VLVZ2V	12T X 0.5	7	0.44	38.5	4025
41	MXA7VLVZ2V	16T X 0.5	7	0.44	43	4925
42	MXA7VLVZ2V	20T X 0.5	7	0.44	48	6175
43	MXA7VLVZ2V	1T X 0.75	7	0.44	19.5	1225
44	MXA7VLVZ2V	2T X 0.75	7	0.44	26	2000
45	MXA7VLVZ2V	5T X 0.75	7	0.44	30.5	2675
46	MXA7VLVZ2V	10T X 0.75	7	0.44	38	4000
47	MXA7VLVZ2V	12T X 0.75	7	0.44	41	4600
48	MXA7VLVZ2V	16T X 0.75	7	0.44	46.5	5925

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49	MXA7VLVZ2V	20T X 0.75	7	0.44	51	6950
50	MXA7VLVZ2V	1T X 1.0	7	0.44	20	1300
51	MXA7VLVZ2V	2T X 1.0	7	0.44	27	2100
52	MXA7VLVZ2V	5T X 1.0	7	0.44	31.5	2775
53	MXA7VLVZ2V	10T X 1.0	7	0.44	39	4275
54	MXA7VLVZ2V	12T X 1.0	7	0.44	42.5	4900
55	MXA7VLVZ2V	16T X 1.0	7	0.44	48.5	6400
56	MXA7VLVZ2V	20T X 1.0	7	0.44	53	7425
57	MXA7VLVZ2V	1T X 1.5	7	0.44	21	1375
58	MXA7VLVZ2V	2T X 1.5	7	0.44	28	2250
59	MXA7VLVZ2V	5T X 1.5	7	0.44	33.5	3225
60	MXA7VLVZ2V	10T X 1.5	7	0.44	42	4850
61	MXA7VLVZ2V	12T X 1.5	7	0.44	46	5850
62	MXA7VLVZ2V	16T X 1.5	7	0.44	51.5	7150
63	MXA7VLVZ2V	20T X 1.5	7	0.44	56	8375
64	MXA7VLVZ2V	1T X 2.5	7	0.53	23	1675
65	MXA7VLVZ2V	2T X 2.5	7	0.53	30	2550
66	MXA7VLVZ2V	5T X 2.5	7	0.53	37.5	3975
67	MXA7VLVZ2V	10T X 2.5	7	0.53	48	6475
68	MXA7VLVZ2V	12T X 2.5	7	0.53	51.5	7325
69	MXA7VLVZ2V	16T X 2.5	7	0.53	57	8950