

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

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. Especially recommended for use in hazardous or confined spaces such as control rooms, tunnels, and public buildings where fire safety and low toxic emissions are critical. 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:	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 mm ² (class 2).
Inner Sheath:	Extruded Low Smoke Zero Halogen (LSZH) in Black colour. Other colors are available upon request.
Lead Covering:	Extruded Lead Alloy Sheath as per BS EN 50307
Bedding:	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/XLPE/OS/LSZH/LC/LSZH/ SWA/LSZH NO OF PAIRS / TRIADS X 2 / 3 X...MM2 500 V BS EN 50288-7 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 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)
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.

*** 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, 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	XA7Z1LZ1Z2Z1	1P X 0.5	7	0.44	14.5	725
2	XA7Z1LZ1Z2Z1	2P X 0.5	7	0.44	18.5	1100
3	XA7Z1LZ1Z2Z1	5P X 0.5	7	0.44	22	1525
4	XA7Z1LZ1Z2Z1	10P X 0.5	7	0.44	25.5	2000
5	XA7Z1LZ1Z2Z1	12P X 0.5	7	0.44	27	2150
6	XA7Z1LZ1Z2Z1	16P X 0.5	7	0.44	29	2425
7	XA7Z1LZ1Z2Z1	20P X 0.5	7	0.44	31	2700
8	XA7Z1LZ1Z2Z1	1P X 0.75	7	0.44	16	875
9	XA7Z1LZ1Z2Z1	2P X 0.75	7	0.44	19	1200
10	XA7Z1LZ1Z2Z1	5P X 0.75	7	0.44	23	1700
11	XA7Z1LZ1Z2Z1	10P X 0.75	7	0.44	27	2200
12	XA7Z1LZ1Z2Z1	12P X 0.75	7	0.44	28.5	2400
13	XA7Z1LZ1Z2Z1	16P X 0.75	7	0.44	31	2750
14	XA7Z1LZ1Z2Z1	20P X 0.75	7	0.44	34	3300

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15	XA7Z1LZ1Z2Z1	1P X 1.0	7	0.44	16.5	900
16	XA7Z1LZ1Z2Z1	2P X 1.0	7	0.44	20.5	1300
17	XA7Z1LZ1Z2Z1	5P X 1.0	7	0.44	24	1800
18	XA7Z1LZ1Z2Z1	10P X 1.0	7	0.44	28	2400
19	XA7Z1LZ1Z2Z1	12P X 1.0	7	0.44	30	2600
20	XA7Z1LZ1Z2Z1	16P X 1.0	7	0.44	33	3175
21	XA7Z1LZ1Z2Z1	20P X 1.0	7	0.44	36	3700
22	XA7Z1LZ1Z2Z1	1P X 1.5	7	0.44	17	975
23	XA7Z1LZ1Z2Z1	2P X 1.5	7	0.44	22	1525
24	XA7Z1LZ1Z2Z1	5P X 1.5	7	0.44	25.5	2000
25	XA7Z1LZ1Z2Z1	10P X 1.5	7	0.44	30	2650
26	XA7Z1LZ1Z2Z1	12P X 1.5	7	0.44	31.5	2875
27	XA7Z1LZ1Z2Z1	16P X 1.5	7	0.44	36	3700
28	XA7Z1LZ1Z2Z1	20P X 1.5	7	0.44	38.5	4250
29	XA7Z1LZ1Z2Z1	1P X 2.5	7	0.53	18	1100
30	XA7Z1LZ1Z2Z1	2P X 2.5	7	0.53	24	1800
31	XA7Z1LZ1Z2Z1	5P X 2.5	7	0.53	28.5	2450
32	XA7Z1LZ1Z2Z1	10P X 2.5	7	0.53	35.5	3650
33	XA7Z1LZ1Z2Z1	12P X 2.5	7	0.53	37.5	4075
34	XA7Z1LZ1Z2Z1	16P X 2.5	7	0.53	42	5000
35	XA7Z1LZ1Z2Z1	20P X 2.5	7	0.53	46.5	6200
36	XA7Z1LZ1Z2Z1	1T X 0.5	7	0.44	16	850
37	XA7Z1LZ1Z2Z1	2T X 0.5	7	0.44	19	1200
38	XA7Z1LZ1Z2Z1	5T X 0.5	7	0.44	23	1650
39	XA7Z1LZ1Z2Z1	10T X 0.5	7	0.44	25.5	2200
40	XA7Z1LZ1Z2Z1	12T X 0.5	7	0.44	28	2350
41	XA7Z1LZ1Z2Z1	16T X 0.5	7	0.44	30	2675
42	XA7Z1LZ1Z2Z1	20T X 0.5	7	0.44	33	3200
43	XA7Z1LZ1Z2Z1	1T X 0.75	7	0.44	16.5	925
44	XA7Z1LZ1Z2Z1	2T X 0.75	7	0.44	20.5	1325
45	XA7Z1LZ1Z2Z1	5T X 0.75	7	0.44	24	1825
46	XA7Z1LZ1Z2Z1	10T X 0.75	7	0.44	29	2450
47	XA7Z1LZ1Z2Z1	12T X 0.75	7	0.44	30	2675
48	XA7Z1LZ1Z2Z1	16T X 0.75	7	0.44	33	3275
49	XA7Z1LZ1Z2Z1	20T X 0.75	7	0.44	36	3850
50	XA7Z1LZ1Z2Z1	1T X 1.0	7	0.44	17	975

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51	XA7Z1LZ1Z2Z1	2T X 1.0	7	0.44	22	1500
52	XA7Z1LZ1Z2Z1	5T X 1.0	7	0.44	25	2000
53	XA7Z1LZ1Z2Z1	10T X 1.0	7	0.44	29.5	2650
54	XA7Z1LZ1Z2Z1	12T X 1.0	7	0.44	31	2900
55	XA7Z1LZ1Z2Z1	16T X 1.0	7	0.44	34	3650
56	XA7Z1LZ1Z2Z1	20T X 1.0	7	0.44	38	4250
57	XA7Z1LZ1Z2Z1	1T X 1.5	7	0.44	17	1025
58	XA7Z1LZ1Z2Z1	2T X 1.5	7	0.44	22.5	1650
59	XA7Z1LZ1Z2Z1	5T X 1.5	7	0.44	26.5	2200
60	XA7Z1LZ1Z2Z1	10T X 1.5	7	0.44	31	2975
61	XA7Z1LZ1Z2Z1	12T X 1.5	7	0.44	33.5	3500
62	XA7Z1LZ1Z2Z1	16T X 1.5	7	0.44	38	4275
63	XA7Z1LZ1Z2Z1	20T X 1.5	7	0.44	41	5050
64	XA7Z1LZ1Z2Z1	1T X 2.5	7	0.53	19	1200
65	XA7Z1LZ1Z2Z1	2T X 2.5	7	0.53	25.5	2000
66	XA7Z1LZ1Z2Z1	5T X 2.5	7	0.53	30	2725
67	XA7Z1LZ1Z2Z1	10T X 2.5	7	0.53	37	4200
68	XA7Z1LZ1Z2Z1	12T X 2.5	7	0.53	39	4700
69	XA7Z1LZ1Z2Z1	16T X 2.5	7	0.53	45.5	6250
70	XA7Z1LZ1Z2Z1	20T X 2.5	7	0.53	49	7300

