

ICON[®] Instrumentation Cable Zero Halogen, Flame Retardant

EN 50288-7
90 °C / 300 V

Multi-Pair, XLPE-Insulation, Individual & Collective Screen, Armour, LSZH-Sheath

RE-2X(St)HSWAH PiMF

Application

For transmission of analogue and digital signals in instrument and control systems; allowed for use in zone 1 and zone 2 group II classified areas (IEC 60079-14); not allowed for direct connection to low impedance source, e.g. the public mains electricity supply.

Recommended for indoor and outdoor installation, on racks, trays, in conduits, in dry and wet locations; for direct burial. Recommended for use as fire protection measure for people and important material assets.

Construction

Conductor.....	plain annealed copper, 7 stranded, size, 0.5 mm ² , 0.75 mm ² , 1 mm ² , 1.3 mm ² , 1.5 mm ²
Insulation.....	cross-linked polyethylene XLPE
Colour code.....	black / white, continuously numbered on white core (1, 2..) for multipair
Individual screen.....	24 µm aluminium PETP tape over solid tinned copper drain wire, 0.6 mm Ø, plastic tape under and above screen
Wrapping.....	at least 1 layer of plastic tape
Collective screen.....	24 µm aluminium PETP tape over 7-stranded tinned copper drain wire, 0.5 mm ²
Inner sheath.....	zero halogen flame retardant compound LSZH, black
Armour.....	galvanised round steel wires
Outer sheath.....	zero halogen flame retardant compound LSZH, black; blue for intrinsically safe systems
Cable marking.....	LEONI KERPEN ICON INSTRUMENTATION CABLE 300 V LSZH EN 50288-7 CE PLC LM



Technical data

Flame propagation	
Test on single cable	IEC 60332-1-2
Test on bunched cables	IEC 60332-3-24 (Cat. C)
Amount of halogen acid gas	IEC 60754-1 (0%)
Degree of acidity of gases	IEC 60754-2 (pH > 4.3, C < 10µS/mm)
Smoke density	IEC 61034-2 (L.T. > 60%)
Sunlight resistance	UL 1581 section 1200
Oil resistance	ICEA S-73-532*

Temperature range:
-30 °C up to 90 °C (during operation)
-5 °C up to 50 °C (during installation)
Min. bending radius:
10 x cable-Ø

Abbreviations

RE-	Instrumentation Cable
2X	insulation of XLPE
(St)	collective screen
H	inner sheath of LSZH
SWA	steel wire armour
H	LSZH Sheath
PiMF	pair in metal foil
PLC	Production Lot Code
LM	Length Marking

Electrical data at 20 °C

	nom.	mm ²	0.5	0.75	1	1.3	1.5
Conductor	nom.	mm ²	0.5	0.75	1	1.3	1.5
Conductor resistance	max.	Ω/km	36.7	25.0	18.5	14.2	12.3
Insulation resistance	min.	MΩ x km	5000				
Mutual capacitance	max.	nF/km	115				
Inductance	max.	mH/km	1				
L/R (ratio)	max.	µH/Ω	25	25	25	40	40
Test voltage U _{rms} (core : core)		V	1500				
Test voltage U _{rms} (core : screen)		V	1500				
Operating voltage		V	300				

*(Test temperature + 60 °C; duration 4 h. Retention: min. 60 % of tensile strength/min. 60 % of elongation)

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No. of elem.	RT of insulation nom. mm	RT of inner sheath nom. mm	Ø over inner sheath approx. mm	Ø of armour wire nom. mm	RT of outer sheath nom. mm	Overall diameter approx. mm	Cable weight approx. kg/km	Part. No. Colour black
0.5 mm²/7								
2	0.35	0.9	8.7	0.90	1.4	13.3	311	8112E166
4	0.35	1.0	10.2	0.90	1.4	14.8	373	8112E169
5	0.35	1.0	11.2	0.90	1.4	15.8	451	8112E172
6	0.35	1.0	12.1	0.90	1.5	16.9	483	8112E175
8	0.35	1.1	13.1	0.90	1.5	17.9	537	8112E178
10	0.35	1.2	15.1	0.90	1.5	19.9	781	8112E181
12	0.35	1.2	15.7	0.90	1.5	20.5	804	8112E184
16	0.35	1.2	17.8	1.25	1.6	23.5	968	8112E187
20	0.35	1.3	19.7	1.25	1.7	25.6	1143	8112E190
24	0.35	1.4	21.5	1.25	1.7	27.4	1264	8112E193
0.75 mm²/7								
2	0.38	1.0	9.7	0.90	1.4	14.3	342	8112E196
4	0.38	1.0	11.2	0.90	1.4	15.8	439	8112E199
5	0.38	1.1	12.5	0.90	1.5	17.3	496	8112E202
6	0.38	1.1	13.6	0.90	1.5	18.4	578	8112E205
8	0.38	1.1	14.4	0.90	1.5	19.2	664	8112E208
10	0.38	1.2	16.6	1.25	1.6	22.3	876	8112E211
12	0.38	1.2	17.4	1.25	1.6	23.1	942	8112E214
16	0.38	1.3	19.8	1.25	1.7	25.7	1130	8112E217
20	0.38	1.4	22.0	1.25	1.7	27.9	1325	8112E220
24	0.38	1.5	24.0	1.25	1.8	30.1	1490	8112E223
1 mm²/7								
2	0.4	1.0	10.4	0.90	1.4	15.0	382	8112E226
4	0.4	1.0	12.1	0.90	1.4	16.7	487	8112E229
5	0.4	1.1	13.5	0.90	1.5	18.3	566	8112E232
6	0.4	1.1	14.7	0.90	1.5	19.5	641	8112E235
8	0.4	1.2	15.8	0.90	1.5	20.6	718	8112E238
10	0.4	1.2	18.0	1.25	1.6	23.7	994	8112E241
12	0.4	1.3	19.0	1.25	1.6	24.7	1083	8112E244
16	0.4	1.3	21.5	1.25	1.7	27.4	1361	8112E247
20	0.4	1.4	23.9	1.25	1.7	29.8	1510	8112E250
24	0.4	1.5	26.1	1.25	1.8	32.2	1902	8112E253

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1.3 mm²/7								
2	0.45	1.0	11.4	0.90	1.4	16.0	452	8112E256
4	0.45	1.1	13.4	0.90	1.5	18.2	576	8112E259
5	0.45	1.1	14.8	0.90	1.5	19.6	647	8112E262
6	0.45	1.2	16.3	0.90	1.6	21.3	857	8112E265
8	0.45	1.3	17.6	1.25	1.6	23.3	980	8112E268
10	0.45	1.3	20.0	1.25	1.7	25.9	1195	8112E271
12	0.45	1.4	21.1	1.25	1.7	27.0	1256	8112E274
16	0.45	1.5	24.1	1.25	1.8	30.2	1562	8112E277
20	0.45	1.6	26.8	1.25	1.9	33.1	1958	8112E280
24	0.45	1.7	29.2	1.60	2.0	36.4	2251	8112E283
1.5 mm²/7								
2	0.45	1.0	11.8	0.90	1.5	16.6	475	8112E286
4	0.45	1.1	13.9	0.90	1.5	18.7	599	8112E289
5	0.45	1.2	15.5	0.90	1.5	20.3	818	8112E292
6	0.45	1.2	16.9	1.25	1.6	22.6	940	8112E295
8	0.45	1.3	18.2	1.25	1.7	24.1	1037	8112E298
10	0.45	1.4	21.0	1.25	1.7	26.9	1273	8112E301
12	0.45	1.4	21.9	1.25	1.7	27.8	1353	8112E304
16	0.45	1.5	25.1	1.25	1.8	31.2	1932	8112E307
20	0.45	1.6	27.8	1.60	1.9	34.8	2224	8112E310
24	0.45	1.7	30.4	1.60	2.0	37.6	2541	8112E313

RT = Radial Thickness