

ICON[®] Instrumentation Cable

Zero Halogen, Flame Retardant

EN 50288-7
90 °C / 300 V

Single & Multi-pair, XLPE-Insulation, Collective Screen, LSZH-Sheath

RE-2X(St)H

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; not 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
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
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:
7.5 x cable-Ø

Abbreviations

RE-	Instrumentation Cable
2X	insulation of XLPE
(St)	collective screen
H	LSZH Sheath
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 single pair:	max.	nF/km	115	115	115	115	115
up to 4 pairs:			90	90	90	102	102
above 4 pairs:			75	75	75	85	85
Capacitance unbalance		pF/500 m	500				
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				

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Geometrical data

No. of elem.	RT of insulation 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					
1	0.35	0.8	5.2	38	7076E001
2	0.35	0.9	7.6	66	7076E004
4	0.35	0.9	8.8	98	7076E007
5	0.35	1.0	9.8	112	7076E151
6	0.35	1.0	10.6	133	7076E010
8	0.35	1.0	11.3	161	7076E013
10	0.35	1.1	12.9	200	7076E016
12	0.35	1.1	13.5	242	7076E019
16	0.35	1.1	15.2	288	7076E022
20	0.35	1.2	16.9	376	7076E025
24	0.35	1.2	18.3	426	7076E028
0.75 mm²/7					
1	0.38	0.8	5.6	49	7076E031
2	0.38	0.9	8.5	87	7076E034
4	0.38	1.0	10.0	122	7076E037
5	0.38	1.0	10.9	154	7076E154
6	0.38	1.0	11.8	174	7076E040
8	0.38	1.1	12.8	213	7076E043
10	0.38	1.1	14.5	266	7076E046
12	0.38	1.1	15.1	304	7076E049
16	0.38	1.2	17.3	398	7076E052
20	0.38	1.3	19.2	478	7076E055
24	0.38	1.3	20.8	559	7076E058
1 mm²/7					
1	0.4	0.9	6.3	56	7076E061
2	0.4	0.9	9.2	101	7076E064
4	0.4	1.0	10.9	157	7076E067
5	0.4	1.0	11.9	194	7076E157
6	0.4	1.0	13.0	223	7076E070
8	0.4	1.1	14.0	272	7076E073
10	0.4	1.1	15.9	334	7076E076
12	0.4	1.2	16.8	390	7076E079
16	0.4	1.2	19.0	511	7076E082
20	0.4	1.3	21.1	617	7076E085
24	0.4	1.4	23.1	749	7076E088

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No. of elem.	RT of insulation nom. mm	RT of outer sheath nom. mm	Overall diameter approx. mm	Cable weight approx. kg/km	Part. No. Colour black
1.3 mm²/7					
1	0.45	0.9	6.8	65	7076E091
2	0.45	1.0	10.4	124	7076E094
4	0.45	1.0	12.0	184	7076E097
5	0.45	1.1	13.4	226	7076E160
6	0.45	1.1	14.6	289	7076E100
8	0.45	1.2	15.7	337	7076E103
10	0.45	1.2	17.9	411	7076E106
12	0.45	1.3	18.9	495	7076E109
16	0.45	1.3	21.4	651	7076E112
20	0.45	1.4	23.8	772	7076E115
24	0.45	1.5	25.9	933	7076E118
1.5 mm²/7					
1	0.45	0.9	7.1	71	7076E121
2	0.45	1.0	10.8	139	7076E124
4	0.45	1.1	12.7	214	7076E127
5	0.45	1.1	14.0	259	7076E163
6	0.45	1.1	15.2	305	7076E130
8	0.45	1.2	16.4	385	7076E133
10	0.45	1.3	18.8	460	7076E136
12	0.45	1.3	19.7	558	7076E139
16	0.45	1.4	22.5	725	7076E142
20	0.45	1.5	25.0	881	7076E145
24	0.45	1.5	27.1	1047	7076E148

RT = Radial Thickness