

ICON[®] Instrumentation Cable Zero Halogen, Flame Retardant

EN 50288-7
90 °C / 300 V

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

RE-2X(St)HSAWH TIMF

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 / red, continuously numbered on white core (1, 2..) for multitruples
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
TIMF	triple 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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Geometrical data

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	1.0	9.7	0.90	1.4	14.3	363	8112E481
4	0.35	1.0	11.1	0.90	1.4	15.7	456	8112E484
5	0.35	1.1	12.4	0.90	1.5	17.2	516	8112E487
6	0.35	1.1	14.0	0.90	1.5	18.8	611	8112E490
8	0.35	1.1	14.9	0.90	1.5	19.7	766	8112E493
10	0.35	1.2	17.0	1.25	1.6	22.7	950	8112E496
12	0.35	1.2	17.6	1.25	1.6	23.3	975	8112E499
16	0.35	1.3	20.1	1.25	1.7	26.0	1169	8112E502
20	0.35	1.4	22.3	1.25	1.7	28.2	1356	8112E505
24	0.35	1.5	24.4	1.25	1.8	30.5	1604	8112E508
0.75 mm²/7								
2	0.38	1.0	10.6	0.90	1.4	15.2	408	8112E511
4	0.38	1.1	12.4	0.90	1.5	17.2	521	8112E514
5	0.38	1.1	13.7	0.90	1.5	18.5	590	8112E517
6	0.38	1.1	15.4	0.90	1.5	20.2	819	8112E520
8	0.38	1.2	16.7	0.90	1.6	21.7	941	8112E523
10	0.38	1.3	19.0	1.25	1.6	24.7	1103	8112E526
12	0.38	1.3	19.7	1.25	1.7	25.6	1176	8112E529
16	0.38	1.4	22.5	1.25	1.7	28.4	1439	8112E532
20	0.38	1.5	24.9	1.25	1.8	31.0	1804	8112E535
24	0.38	1.6	27.2	1.25	1.9	33.5	2164	8112E538
1 mm²/7								
2	0.4	1.0	11.5	0.90	1.4	16.1	447	8112E541
4	0.4	1.1	13.4	0.90	1.5	18.2	579	8112E544
5	0.4	1.1	14.8	0.90	1.5	19.6	688	8112E547
6	0.4	1.2	16.9	0.90	1.5	21.7	913	8112E550
8	0.4	1.2	18.1	1.25	1.6	23.8	1033	8112E553
10	0.4	1.3	20.7	1.25	1.7	26.6	1277	8112E556
12	0.4	1.3	21.4	1.25	1.7	27.3	1380	8112E559
16	0.4	1.4	24.4	1.25	1.7	30.3	1686	8112E562
20	0.4	1.5	27.1	1.25	1.8	33.2	2200	8112E565
24	0.4	1.6	29.6	1.60	1.9	36.6	2504	8112E568

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Geometrical data

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
1.3 mm²/7								
2	0.45	1.1	12.8	0.90	1.5	17.6	532	8112E571
4	0.45	1.1	14.7	0.90	1.5	19.5	684	8112E574
5	0.45	1.2	16.5	0.90	1.6	21.5	924	8112E577
6	0.45	1.3	18.8	1.25	1.6	24.5	1089	8112E580
8	0.45	1.3	20.1	1.25	1.7	26.0	1249	8112E583
10	0.45	1.4	23.0	1.25	1.8	29.1	1482	8112E586
12	0.45	1.5	24.0	1.25	1.8	30.1	1592	8112E589
16	0.45	1.6	27.4	1.25	1.9	33.7	2222	8112E592
20	0.45	1.7	30.4	1.60	2.0	37.6	2592	8112E595
24	0.45	1.8	33.1	1.60	2.0	40.3	2957	8112E598
1.5 mm²/7								
2	0.45	1.1	13.2	0.90	1.5	18.0	531	8112E601
4	0.45	1.2	15.4	0.90	1.5	20.2	817	8112E604
5	0.45	1.2	17.1	1.25	1.6	22.8	998	8112E607
6	0.45	1.3	19.5	1.25	1.6	25.2	1162	8112E610
8	0.45	1.4	21.1	1.25	1.7	27.0	1304	8112E613
10	0.45	1.5	24.1	1.25	1.8	30.2	1541	8112E616
12	0.45	1.5	24.9	1.25	1.8	31.0	1952	8112E619
16	0.45	1.6	28.4	1.60	1.9	35.4	2384	8112E622
20	0.45	1.7	31.6	1.60	2.0	38.8	2795	8112E625
24	0.45	1.8	34.4	1.60	2.1	41.8	3093	8112E628

RT = Radial Thickness