

ICON[®] Instrumentation Cable Zero Halogen, Flame Retardant

EN 50288-7
70 °C / 300 V

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

RE-2Y(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.....	polyethylene PE
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 70 °C (during operation)
-5 °C up to 50 °C (during installation)
Min. bending radius:
10 x cable-Ø

Abbreviations

RE-	Instrumentation Cable
2Y	insulation of PE
(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	8013E481
4	0.35	1.0	11.1	0.90	1.4	15.7	456	8013E484
5	0.35	1.1	12.4	0.90	1.5	17.2	517	8013E487
6	0.35	1.1	14.0	0.90	1.5	18.8	612	8013E490
8	0.35	1.1	14.9	0.90	1.5	19.7	800	8013E493
10	0.35	1.2	17.0	1.25	1.6	22.7	951	8013E496
12	0.35	1.2	17.6	1.25	1.6	23.3	978	8013E499
16	0.35	1.3	20.1	1.25	1.7	26.0	1201	8013E502
20	0.35	1.4	22.3	1.25	1.7	28.2	1394	8013E505
24	0.35	1.5	24.4	1.25	1.8	30.5	1607	8013E508
0.75 mm²/7								
2	0.38	1.0	10.6	0.90	1.4	15.2	418	8013E511
4	0.38	1.1	12.4	0.90	1.5	17.2	521	8013E514
5	0.38	1.1	13.7	0.90	1.5	18.5	608	8013E517
6	0.38	1.1	15.4	0.90	1.5	20.2	820	8013E520
8	0.38	1.2	16.7	0.90	1.6	21.7	942	8013E523
10	0.38	1.3	19.0	1.25	1.6	24.7	1104	8013E526
12	0.38	1.3	19.7	1.25	1.7	25.6	1178	8013E529
16	0.38	1.4	22.5	1.25	1.7	28.4	1441	8013E532
20	0.38	1.5	24.9	1.25	1.8	31.0	1888	8013E535
24	0.38	1.6	27.2	1.25	1.9	33.5	2168	8013E538
1 mm²/7								
2	0.4	1.0	11.5	0.90	1.4	16.1	472	8013E541
4	0.4	1.1	13.4	0.90	1.5	18.2	597	8013E544
5	0.4	1.1	14.8	0.90	1.5	19.6	689	8013E547
6	0.4	1.2	16.9	0.90	1.5	21.7	940	8013E550
8	0.4	1.2	18.1	1.25	1.6	23.8	1035	8013E553
10	0.4	1.3	20.7	1.25	1.7	26.6	1279	8013E556
12	0.4	1.3	21.4	1.25	1.7	27.3	1383	8013E559
16	0.4	1.4	24.4	1.25	1.7	30.3	1689	8013E562
20	0.4	1.5	27.1	1.25	1.8	33.2	2204	8013E565
24	0.4	1.6	29.6	1.60	1.9	36.6	2509	8013E568

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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	8013E571
4	0.45	1.1	14.7	0.90	1.5	19.5	685	8013E574
5	0.45	1.2	16.5	0.90	1.6	21.5	925	8013E577
6	0.45	1.3	18.8	1.25	1.6	24.5	1090	8013E580
8	0.45	1.3	20.1	1.25	1.7	26.0	1250	8013E583
10	0.45	1.4	23.0	1.25	1.8	29.1	1484	8013E586
12	0.45	1.5	24.0	1.25	1.8	30.1	1595	8013E589
16	0.45	1.6	27.4	1.25	1.9	33.7	2225	8013E592
20	0.45	1.7	30.4	1.60	2.0	37.6	2596	8013E595
24	0.45	1.8	33.1	1.60	2.0	40.3	2962	8013E598
1.5 mm²/7								
2	0.45	1.1	13.2	0.90	1.5	18.0	561	8013E601
4	0.45	1.2	15.4	0.90	1.5	20.2	818	8013E604
5	0.45	1.2	17.1	1.25	1.6	22.8	999	8013E607
6	0.45	1.3	19.5	1.25	1.6	25.2	1164	8013E610
8	0.45	1.4	21.1	1.25	1.7	27.0	1354	8013E613
10	0.45	1.5	24.1	1.25	1.8	30.2	1596	8013E616
12	0.45	1.5	24.9	1.25	1.8	31.0	1953	8013E619
16	0.45	1.6	28.4	1.60	1.9	35.4	2388	8013E622
20	0.45	1.7	31.6	1.60	2.0	38.8	2800	8013E625
24	0.45	1.8	34.4	1.60	2.1	41.8	3100	8013E628

RT = Radial Thickness