

## ICON<sup>®</sup> Instrumentation Cable

### Zero Halogen, Flame Retardant

**EN 50288-7**  
**70 °C / 300 V**

Single & Multi-pair, PE-Insulation, Collective Screen, Armour, LSZH-Sheath

### RE-2Y(St)HSAWAH

#### 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 <sup>2</sup> , 0.75 mm <sup>2</sup> , 1 mm <sup>2</sup> , 1.3 mm <sup>2</sup> , 1.5 mm <sup>2</sup>
Insulation.....	polyethylene PE
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 <sup>2</sup>
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
PLC	Production Lot Code
LM	Length Marking

#### Electrical data at 20 °C

	nom.	mm <sup>2</sup>	0.5	0.75	1	1.3	1.5
Conductor	nom.	mm <sup>2</sup>	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					
single pair:			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 <sub>rms</sub> (core : core)		V	1500				
Test voltage U <sub>rms</sub> (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
<b>0.5 mm<sup>2</sup>/7</b>								
1	0.35	0.8	5.2	0.90	1.3	9.6	177	8013E001
2	0.35	0.9	7.6	0.90	1.3	12.0	262	8013E004
4	0.35	0.9	8.8	0.90	1.4	13.4	325	8013E007
5	0.35	1.0	9.8	0.90	1.4	14.4	375	8013E151
6	0.35	1.0	10.6	0.90	1.4	15.2	411	8013E010
8	0.35	1.0	11.3	0.90	1.4	15.9	473	8013E013
10	0.35	1.1	12.9	0.90	1.5	17.7	537	8013E016
12	0.35	1.1	13.5	0.90	1.5	18.3	576	8013E019
16	0.35	1.1	15.2	0.90	1.5	20.0	824	8013E022
20	0.35	1.2	16.9	0.90	1.6	21.9	949	8013E025
24	0.35	1.2	18.3	1.25	1.6	24.0	1030	8013E028
<b>0.75 mm<sup>2</sup>/7</b>								
1	0.38	0.8	5.6	0.90	1.3	10.0	199	8013E031
2	0.38	0.9	8.5	0.90	1.4	13.1	308	8013E034
4	0.38	1.0	10.0	0.90	1.4	14.6	383	8013E037
5	0.38	1.0	10.9	0.90	1.4	15.5	448	8013E154
6	0.38	1.0	11.8	0.90	1.4	16.4	482	8013E040
8	0.38	1.1	12.8	0.90	1.5	17.6	534	8013E043
10	0.38	1.1	14.5	0.90	1.5	19.3	654	8013E046
12	0.38	1.1	15.1	0.90	1.5	19.9	826	8013E049
16	0.38	1.2	17.3	0.90	1.6	22.3	967	8013E052
20	0.38	1.3	19.2	1.25	1.6	24.9	1118	8013E055
24	0.38	1.3	20.8	1.25	1.7	26.7	1294	8013E058
<b>1 mm<sup>2</sup>/7</b>								
1	0.4	0.9	6.3	0.90	1.3	10.7	219	8013E061
2	0.4	0.9	9.2	0.90	1.4	13.8	357	8013E064
4	0.4	1.0	10.9	0.90	1.4	15.5	450	8013E067
5	0.4	1.0	11.9	0.90	1.4	16.5	509	8013E157
6	0.4	1.0	13.0	0.90	1.4	17.6	565	8013E070
8	0.4	1.1	14.0	0.90	1.5	18.8	651	8013E073
10	0.4	1.1	15.9	0.90	1.5	20.7	886	8013E076
12	0.4	1.2	16.8	0.90	1.5	21.6	946	8013E079
16	0.4	1.2	19.0	1.25	1.6	24.7	1173	8013E082
20	0.4	1.3	21.1	1.25	1.7	27.0	1318	8013E085
24	0.4	1.4	23.1	1.25	1.7	29.0	1488	8013E088

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<b>1.3 mm<sup>2</sup>/7</b>								
1	0.45	0.9	6.8	0.90	1.3	11.2	241	8013E091
2	0.45	1.0	10.4	0.90	1.4	15.0	405	8013E094
4	0.45	1.0	12.0	0.90	1.4	16.6	511	8013E097
5	0.45	1.1	13.4	0.90	1.5	18.2	595	8013E160
6	0.45	1.1	14.6	0.90	1.5	19.4	673	8013E100
8	0.45	1.2	15.7	0.90	1.5	20.5	870	8013E103
10	0.45	1.2	17.9	1.25	1.6	23.6	1012	8013E106
12	0.45	1.3	18.9	1.25	1.6	24.6	1143	8013E109
16	0.45	1.3	21.4	1.25	1.7	27.3	1407	8013E112
20	0.45	1.4	23.8	1.25	1.8	29.9	1601	8013E115
24	0.45	1.5	25.9	1.25	1.8	32.0	2048	8013E118
<b>1.5 mm<sup>2</sup>/7</b>								
1	0.45	0.9	7.1	0.90	1.3	11.5	255	8013E121
2	0.45	1.0	10.8	0.90	1.4	15.4	448	8013E124
4	0.45	1.1	12.7	0.90	1.5	17.5	530	8013E127
5	0.45	1.1	14.0	0.90	1.5	18.8	628	8013E163
6	0.45	1.1	15.2	0.90	1.5	20.0	835	8013E130
8	0.45	1.2	16.4	0.90	1.6	21.4	944	8013E133
10	0.45	1.3	18.8	1.25	1.6	24.5	1097	8013E136
12	0.45	1.3	19.7	1.25	1.7	25.6	1230	8013E139
16	0.45	1.4	22.5	1.25	1.7	28.4	1471	8013E142
20	0.45	1.5	25.0	1.25	1.8	31.1	1971	8013E145
24	0.45	1.5	27.1	1.25	1.8	33.2	2251	8013E148

RT = Radial Thickness