

## ICON<sup>®</sup> Instrumentation Cable Zero Halogen, Flame Retardant

**EN 50288-7**  
**70 °C / 300 V**

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

### RE-2Y(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 <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
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 <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
PiMF	pair in metal foil
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	115				
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>								
2	0.35	0.9	8.7	0.90	1.4	13.3	311	8013E166
4	0.35	1.0	10.2	0.90	1.4	14.8	374	8013E169
5	0.35	1.0	11.2	0.90	1.4	15.8	451	8013E172
6	0.35	1.0	12.1	0.90	1.5	16.9	484	8013E175
8	0.35	1.1	13.1	0.90	1.5	17.9	563	8013E178
10	0.35	1.2	15.1	0.90	1.5	19.9	782	8013E181
12	0.35	1.2	15.7	0.90	1.5	20.5	804	8013E184
16	0.35	1.2	17.8	1.25	1.6	23.5	970	8013E187
20	0.35	1.3	19.7	1.25	1.7	25.6	1145	8013E190
24	0.35	1.4	21.5	1.25	1.7	27.4	1272	8013E193
<b>0.75 mm<sup>2</sup>/7</b>								
2	0.38	1.0	9.7	0.90	1.4	14.3	342	8013E196
4	0.38	1.0	11.2	0.90	1.4	15.8	439	8013E199
5	0.38	1.1	12.5	0.90	1.5	17.3	498	8013E202
6	0.38	1.1	13.6	0.90	1.5	18.4	565	8013E205
8	0.38	1.1	14.4	0.90	1.5	19.2	639	8013E208
10	0.38	1.2	16.6	1.25	1.6	22.3	878	8013E211
12	0.38	1.2	17.4	1.25	1.6	23.1	944	8013E214
16	0.38	1.3	19.8	1.25	1.7	25.7	1132	8013E217
20	0.38	1.4	22.0	1.25	1.7	27.9	1329	8013E220
24	0.38	1.5	24.0	1.25	1.8	30.1	1488	8013E223
<b>1 mm<sup>2</sup>/7</b>								
2	0.4	1.0	10.4	0.90	1.4	15.0	377	8013E226
4	0.4	1.0	12.1	0.90	1.4	16.7	502	8013E229
5	0.4	1.1	13.5	0.90	1.5	18.3	567	8013E232
6	0.4	1.1	14.7	0.90	1.5	19.5	658	8013E235
8	0.4	1.2	15.8	0.90	1.5	20.6	865	8013E238
10	0.4	1.2	18.0	1.25	1.6	23.7	994	8013E241
12	0.4	1.3	19.0	1.25	1.6	24.7	1112	8013E244
16	0.4	1.3	21.5	1.25	1.7	27.4	1363	8013E247
20	0.4	1.4	23.9	1.25	1.7	29.8	1512	8013E250
24	0.4	1.5	26.1	1.25	1.8	32.2	1996	8013E253

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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
<b>1.3 mm<sup>2</sup>/7</b>								
2	0.45	1.0	11.4	0.90	1.4	16.0	452	8013E256
4	0.45	1.1	13.4	0.90	1.5	18.2	577	8013E259
5	0.45	1.1	14.8	0.90	1.5	19.6	647	8013E262
6	0.45	1.2	16.3	0.90	1.6	21.3	858	8013E265
8	0.45	1.3	17.6	1.25	1.6	23.3	982	8013E268
10	0.45	1.3	20.0	1.25	1.7	25.9	1153	8013E271
12	0.45	1.4	21.1	1.25	1.7	27.0	1287	8013E274
16	0.45	1.5	24.1	1.25	1.8	30.2	1564	8013E277
20	0.45	1.6	26.8	1.25	1.9	33.1	1960	8013E280
24	0.45	1.7	29.2	1.60	2.0	36.4	2356	8013E283
<b>1.5 mm<sup>2</sup>/7</b>								
2	0.45	1.0	11.8	0.90	1.5	16.6	475	8013E286
4	0.45	1.1	13.9	0.90	1.5	18.7	616	8013E289
5	0.45	1.2	15.5	0.90	1.5	20.3	819	8013E292
6	0.45	1.2	16.9	1.25	1.6	22.6	941	8013E295
8	0.45	1.3	18.2	1.25	1.7	24.1	1039	8013E298
10	0.45	1.4	21.0	1.25	1.7	26.9	1242	8013E301
12	0.45	1.4	21.9	1.25	1.7	27.8	1387	8013E304
16	0.45	1.5	25.1	1.25	1.8	31.2	1935	8013E307
20	0.45	1.6	27.8	1.60	1.9	34.8	2227	8013E310
24	0.45	1.7	30.4	1.60	2.0	37.6	2545	8013E313

RT = Radial Thickness