

## ICON® Instrumentation Control Cable

### Zero Halogen, Flame Retardant

**EN 50288-7**  
**70 °C / 500 V**

Multi-Core, PE-Insulation, Collective Screen, LSZH-Sheath

#### RE-2Y(St)H

#### Application

For control purposes, e.g. controlling of valves or engines; 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 <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> , 2.5 mm <sup>2</sup>
Insulation.....	polyethylene PE
Colour code.....	black / yellow, continuously numbered
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>
Outer sheath.....	zero halogen flame retardant compound LSZH, black; blue for intrinsically safe systems
Cable marking.....	LEONI KERPEN ICON INSTRUMENTATION CONTROL CABLE 500 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:**  
7.5 x cable-Ø

#### Abbreviations

RE-	Instrumentation Control Cable
2Y	insulation of PE
(St)	collective screen
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	2.5
Conductor	nom.	mm <sup>2</sup>	0.5	0.75	1	1.3	1.5	2.5
Conductor resistance	max.	Ω/km	36.0	24.5	18.1	13.9	12.1	0.0
Insulation resistance	min.	MΩ x km	5000	5000	5000	5000	5000	2000
Mutual capacitance	max.	nF/km	115	115	115	115	115	2000
Capacitance unbalance		pF/500 m	0	0	0	0	0	500
Inductance	max.	mH/km	1	1	1	1	1	0
L/R (ratio)	max.	µH/Ω	25	25	25	40	40	1
Test voltage U <sub>rms</sub> (core : core)		V	2000	2000	2000	2000	2000	0
Test voltage U <sub>rms</sub> (core : screen)		V	2000	2000	2000	2000	2000	0
Operating voltage		V	500					

\*(Test temperature + 60 °C; duration 4 h. Retention: min. 60 % of tensile strength/min. 60 % of elongation)

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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
<b>0.5 mm<sup>2</sup>/7</b>					
2	0.55	0.9	6.2	45	7645C001
3	0.55	0.9	6.5	53	7645C004
4	0.55	0.9	7.0	60	7645C007
5	0.55	0.9	7.6	71	7645C010
8	0.55	1.0	9.1	0	7645C016
10	0.55	1.0	10.4	122	7645C019
12	0.55	1.0	10.7	145	7645C022
14	0.55	1.0	11.3	162	7645C025
16	0.55	1.0	11.8	180	7645C028
20	0.55	1.1	13.3	214	7645C034
24	0.55	1.1	14.7	258	7645C037
27	0.55	1.1	15.0	282	7645C040
30	0.55	1.2	15.7	308	7645C043
37	0.55	1.2	16.9	372	7645C046
40	0.55	1.2	17.6	398	7645C049
<b>0.75 mm<sup>2</sup>/7</b>					
2	0.55	0.9	6.5	165	7645C052
3	0.55	0.9	6.9	232	7645C055
4	0.55	0.9	7.4	300	7645C058
5	0.55	0.9	8.1	382	7645C061
8	0.55	1.0	9.7	0	7645C067
10	0.55	1.0	11.1	730	7645C070
12	0.55	1.0	11.5	870	7645C073
14	0.55	1.1	12.2	1007	7645C076
16	0.55	1.1	12.9	1148	7645C079
20	0.55	1.1	14.3	1431	7645C085
24	0.55	1.2	16.0	1705	7645C088
27	0.55	1.2	16.3	1916	7645C091
30	0.55	1.2	16.9	2122	7645C094
37	0.55	1.2	18.2	2601	7645C097
40	0.55	1.3	19.1	2816	7645C100

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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
<b>1 mm<sup>2</sup>/7</b>					
2	0.55	0.9	6.9	58	7645C103
3	0.55	0.9	7.3	70	7645C106
4	0.55	0.9	7.9	85	7645C109
5	0.55	0.9	8.6	0	7645C112
8	0.55	1.0	10.3	0	7645C118
10	0.55	1.0	11.9	194	7645C121
12	0.55	1.0	12.2	214	7645C124
14	0.55	1.1	13.0	243	7645C127
16	0.55	1.1	13.7	280	7645C130
20	0.55	1.1	15.2	336	7645C136
24	0.55	1.2	17.0	404	7645C139
27	0.55	1.2	17.4	443	7645C142
30	0.55	1.2	18.0	484	7645C145
37	0.55	1.3	19.6	590	7645C148
40	0.55	1.3	20.4	632	7645C151
<b>1.3 mm<sup>2</sup>/7</b>					
2	0.6	0.9	7.4	72	7645C154
3	0.6	0.9	7.9	86	7645C157
4	0.6	0.9	8.5	105	7645C160
5	0.6	1.0	9.5	135	7645C163
8	0.6	1.0	11.2	0	7645C169
10	0.6	1.1	13.2	228	7645C172
12	0.6	1.1	13.6	269	7645C175
14	0.6	1.1	14.3	305	7645C178
16	0.6	1.1	15.0	351	7645C181
20	0.6	1.2	16.9	423	7645C187
24	0.6	1.2	18.7	507	7645C190
27	0.6	1.3	19.3	558	7645C193
30	0.6	1.3	20.0	611	7645C196
37	0.6	1.3	21.6	743	7645C199
40	0.6	1.4	22.7	796	7645C202

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<b>1.5 mm<sup>2</sup>/7</b>					
2	0.6	0.9	7.7	78	7645C205
3	0.6	0.9	8.1	94	7645C208
4	0.6	0.9	8.8	116	7645C211
5	0.6	1.0	9.8	149	7645C214
8	0.6	1.0	11.6	0	7645C220
10	0.6	1.1	13.7	261	7645C223
12	0.6	1.1	14.1	300	7645C226
14	0.6	1.1	14.8	340	7645C229
16	0.6	1.1	15.6	392	7645C232
20	0.6	1.2	17.6	474	7645C238
24	0.6	1.3	19.6	567	7645C241
27	0.6	1.3	20.1	625	7645C244
30	0.6	1.3	20.8	685	7645C247
37	0.6	1.4	22.6	834	7645C250
40	0.6	1.4	23.6	898	7645C253
<b>2.5 mm<sup>2</sup>/7</b>					
2	0.7	0.9	8.9	113	7645C256
3	0.7	1.0	9.7	0	7645C259
4	0.7	1.0	10.5	0	7645C262
5	0.7	1.0	11.9	0	7645C265
8	0.7	1.1	13.9	0	7645C271
10	0.7	1.2	16.3	426	7645C274
12	0.7	1.2	16.9	0	7645C277
14	0.7	1.2	17.7	0	7645C280
16	0.7	1.3	18.9	0	7645C283
20	0.7	1.3	21.1	0	7645C289
24	0.7	1.4	23.6	930	7645C292
27	0.7	1.4	24.1	1040	7645C295
30	0.7	1.5	25.2	1142	7645C298
37	0.7	1.5	27.2	1392	7645C301
40	0.7	1.6	28.5	1494	7645C304

RT = Radial Thickness