

ICON[®] Instrumentation Control Cable

Zero Halogen, Flame Retardant

EN 50288-7
70 °C / 500 V

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

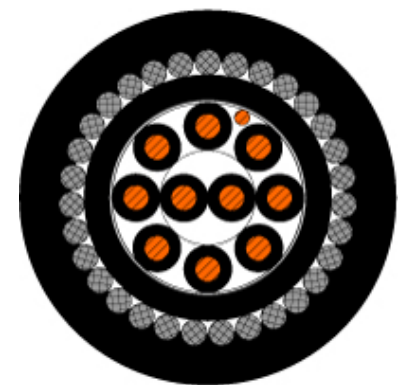
RE-2Y(St)HSAWH

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; 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 , 2.5 mm ²
Insulation.....	polyethylene PE
Colour code.....	black, 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 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 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:
10 x cable-Ø

Abbreviations

RE-	Instrumentation Control 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

		mm ²	0.5	0.75	1	1.3	1.5	2.5
Conductor	nom.							
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 _{rms} (core : core)		V	2000	2000	2000	2000	2000	0
Test voltage U _{rms} (core : screen)		V	2000	2000	2000	2000	2000	0
Operating voltage		V	500					

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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	0.55	0.9	6.2	0.90	1.3	10.6	217	8013C001
3	0.55	0.9	6.5	0.90	1.3	10.9	230	8013C004
4	0.55	0.9	7.0	0.90	1.3	11.4	253	8013C007
5	0.55	0.9	7.6	0.90	1.3	12.0	283	8013C010
8	0.55	1.0	9.1	0.90	1.4	13.7	0	8013C016
10	0.55	1.0	10.4	0.90	1.4	15.0	399	8013C019
12	0.55	1.0	10.7	0.90	1.4	15.3	442	8013C022
14	0.55	1.0	11.3	0.90	1.4	15.9	474	8013C025
16	0.55	1.0	11.8	0.90	1.4	16.4	505	8013C028
20	0.55	1.1	13.3	0.90	1.5	18.1	569	8013C034
24	0.55	1.1	14.7	0.90	1.5	19.5	659	8013C037
27	0.55	1.1	15.0	0.90	1.5	19.8	808	8013C040
30	0.55	1.2	15.7	0.90	1.5	20.5	848	8013C043
37	0.55	1.2	16.9	0.90	1.6	21.9	963	8013C046
40	0.55	1.2	17.6	1.25	1.6	23.3	1014	8013C049
0.75 mm²/7								
2	0.55	0.9	6.5	0.90	1.3	10.9	345	8013C052
3	0.55	0.9	6.9	0.90	1.3	11.3	420	8013C055
4	0.55	0.9	7.4	0.90	1.3	11.8	507	8013C058
5	0.55	0.9	8.1	0.90	1.4	12.7	609	8013C061
8	0.55	1.0	9.7	0.90	1.4	14.3	0	8013C067
10	0.55	1.0	11.1	0.90	1.4	15.7	1035	8013C070
12	0.55	1.0	11.5	0.90	1.4	16.1	1183	8013C073
14	0.55	1.1	12.2	0.90	1.5	17.0	1334	8013C076
16	0.55	1.1	12.9	0.90	1.5	17.7	1495	8013C079
20	0.55	1.1	14.3	0.90	1.5	19.1	1823	8013C085
24	0.55	1.2	16.0	0.90	1.5	20.8	2258	8013C088
27	0.55	1.2	16.3	0.90	1.6	21.3	2482	8013C091
30	0.55	1.2	16.9	0.90	1.6	21.9	2713	8013C094
37	0.55	1.2	18.2	1.25	1.6	23.9	3231	8013C097
40	0.55	1.3	19.1	1.25	1.6	24.8	3483	8013C100

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1 mm²/7								
2	0.55	0.9	6.9	0.90	1.3	11.3	247	8013C103
3	0.55	0.9	7.3	0.90	1.3	11.7	270	8013C106
4	0.55	0.9	7.9	0.90	1.4	12.5	299	8013C109
5	0.55	0.9	8.6	0.90	1.4	13.2	342	8013C112
8	0.55	1.0	10.3	0.90	1.4	14.9	0	8013C118
10	0.55	1.0	11.9	0.90	1.4	16.5	514	8013C121
12	0.55	1.0	12.2	0.90	1.5	17.0	548	8013C124
14	0.55	1.1	13.0	0.90	1.5	17.8	590	8013C127
16	0.55	1.1	13.7	0.90	1.5	18.5	649	8013C130
20	0.55	1.1	15.2	0.90	1.5	20.0	864	8013C136
24	0.55	1.2	17.0	0.90	1.6	22.0	1005	8013C139
27	0.55	1.2	17.4	1.25	1.6	23.1	1058	8013C142
30	0.55	1.2	18.0	1.25	1.6	23.7	1113	8013C145
37	0.55	1.3	19.6	1.25	1.6	25.3	1271	8013C148
40	0.55	1.3	20.4	1.25	1.7	26.3	1351	8013C151
1.3 mm²/7								
2	0.6	0.9	7.4	0.90	1.3	11.8	275	8013C154
3	0.6	0.9	7.9	0.90	1.3	12.3	0	8013C157
4	0.6	0.9	8.5	0.90	1.4	13.1	340	8013C160
5	0.6	1.0	9.5	0.90	1.4	14.1	383	8013C163
8	0.6	1.0	11.2	0.90	1.4	15.8	0	8013C169
10	0.6	1.1	13.2	0.90	1.5	18.0	578	8013C172
12	0.6	1.1	13.6	0.90	1.5	18.4	633	8013C175
14	0.6	1.1	14.3	0.90	1.5	19.1	698	8013C178
16	0.6	1.1	15.0	0.90	1.5	19.8	870	8013C181
20	0.6	1.2	16.9	0.90	1.6	21.9	1014	8013C187
24	0.6	1.2	18.7	1.25	1.6	24.4	1163	8013C190
27	0.6	1.3	19.3	1.25	1.6	25.0	1227	8013C193
30	0.6	1.3	20.0	1.25	1.6	25.7	1305	8013C196
37	0.6	1.3	21.6	1.25	1.7	27.5	1504	8013C199
40	0.6	1.4	22.7	1.25	1.7	28.6	1584	8013C202

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1.5 mm²/7								
2	0.6	0.9	7.7	0.90	1.3	12.1	279	8013C205
3	0.6	0.9	8.1	0.90	1.4	12.7	312	8013C208
4	0.6	0.9	8.8	0.90	1.4	13.4	358	8013C211
5	0.6	1.0	9.8	0.90	1.4	14.4	403	8013C214
8	0.6	1.0	11.6	0.90	1.4	16.2	0	8013C220
10	0.6	1.1	13.7	0.90	1.5	18.5	630	8013C223
12	0.6	1.1	14.1	0.90	1.5	18.9	669	8013C226
14	0.6	1.1	14.8	0.90	1.5	19.6	742	8013C229
16	0.6	1.1	15.6	0.90	1.5	20.4	925	8013C232
20	0.6	1.2	17.6	1.25	1.6	23.3	1090	8013C238
24	0.6	1.3	19.6	1.25	1.6	25.3	1218	8013C241
27	0.6	1.3	20.1	1.25	1.6	25.8	1320	8013C244
30	0.6	1.3	20.8	1.25	1.7	26.7	1385	8013C247
37	0.6	1.4	22.6	1.25	1.7	28.5	1586	8013C250
40	0.6	1.4	23.6	1.25	1.7	29.5	1723	8013C253
2.5 mm²/7								
2	0.7	0.9	8.9	0.90	1.4	13.5	370	8013C256
3	0.7	1.0	9.7	0.90	1.4	14.3	387	8013C259
4	0.7	1.0	10.5	0.90	1.4	15.1	442	8013C262
5	0.7	1.0	11.9	0.90	1.4	16.5	0	8013C265
8	0.7	1.1	13.9	0.90	1.5	18.7	0	8013C271
10	0.7	1.2	16.3	0.90	1.6	21.3	957	8013C274
12	0.7	1.2	16.9	0.90	1.6	21.9	1049	8013C277
14	0.7	1.2	17.7	1.25	1.6	23.4	0	8013C280
16	0.7	1.3	18.9	1.25	1.6	24.6	1302	8013C283
20	0.7	1.3	21.1	1.25	1.7	27.0	1485	8013C289
24	0.7	1.4	23.6	1.25	1.7	29.5	1718	8013C292
27	0.7	1.4	24.1	1.25	1.8	30.2	1895	8013C295
30	0.7	1.5	25.2	1.25	1.8	31.3	2166	8013C298
37	0.7	1.5	27.2	1.25	1.8	33.3	2505	8013C301
40	0.7	1.6	28.5	1.25	1.9	34.8	2738	8013C304

RT = Radial Thickness