

ICON® Instrumentation Control Cable

Zero Halogen, Flame Retardant

EN 50288-7
90 °C / 500 V

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

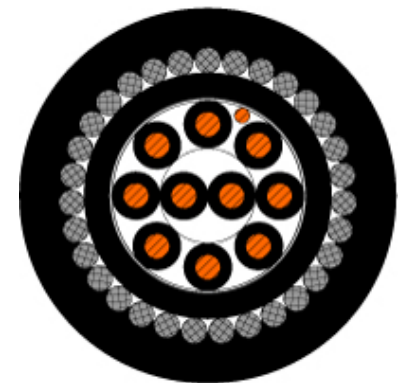
RE-2X(St)HSAWAH

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.....	cross-linked polyethylene XLPE
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 90 °C (during operation) -5 °C up to 50 °C (during installation)
Min. bending radius:	10 x cable-Ø

Abbreviations

RE-	Instrumentation Control Cable
2X	insulation of XLPE
(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 ²	0.5	0.75	1	1.3	1.5	2.5
Conductor								
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					

*(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	0.55	0.9	6.2	0.90	1.3	10.6	210	8112C001
3	0.55	0.9	6.5	0.90	1.3	10.9	230	8112C004
4	0.55	0.9	7.0	0.90	1.3	11.4	253	8112C007
5	0.55	0.9	7.6	0.90	1.3	12.0	283	8112C010
8	0.55	1.0	9.1	0.90	1.4	13.7	344	8112C016
10	0.55	1.0	10.4	0.90	1.4	15.0	399	8112C019
12	0.55	1.0	10.7	0.90	1.4	15.3	442	8112C022
14	0.55	1.0	11.3	0.90	1.4	15.9	474	8112C025
16	0.55	1.0	11.8	0.90	1.4	16.4	505	8112C028
20	0.55	1.1	13.3	0.90	1.5	18.1	569	8112C034
24	0.55	1.1	14.7	0.90	1.5	19.5	642	8112C037
27	0.55	1.1	15.0	0.90	1.5	19.8	808	8112C040
30	0.55	1.2	15.7	0.90	1.5	20.5	848	8112C043
37	0.55	1.2	16.9	0.90	1.6	21.9	963	8112C046
40	0.55	1.2	17.6	1.25	1.6	23.3	1014	8112C049
0.75 mm²/7								
2	0.55	0.9	6.5	0.90	1.3	10.9	230	8112C052
3	0.55	0.9	6.9	0.90	1.3	11.3	247	8112C055
4	0.55	0.9	7.4	0.90	1.3	11.8	278	8112C058
5	0.55	0.9	8.1	0.90	1.4	12.7	322	8112C061
8	0.55	1.0	9.7	0.90	1.4	14.3	383	8112C067
10	0.55	1.0	11.1	0.90	1.4	15.7	461	8112C070
12	0.55	1.0	11.5	0.90	1.4	16.1	477	8112C073
14	0.55	1.1	12.2	0.90	1.5	17.0	527	8112C076
16	0.55	1.1	12.9	0.90	1.5	17.7	572	8112C079
20	0.55	1.1	14.3	0.90	1.5	19.1	669	8112C085
24	0.55	1.2	16.0	0.90	1.5	20.8	877	8112C088
27	0.55	1.2	16.3	0.90	1.6	21.3	929	8112C091
30	0.55	1.2	16.9	0.90	1.6	21.9	986	8112C094
37	0.55	1.2	18.2	1.25	1.6	23.9	1102	8112C097
40	0.55	1.3	19.1	1.25	1.6	24.8	1181	8112C100

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1 mm²/7								
2	0.55	0.9	6.9	0.90	1.3	11.3	247	8112C103
3	0.55	0.9	7.3	0.90	1.3	11.7	270	8112C106
4	0.55	0.9	7.9	0.90	1.4	12.5	299	8112C109
5	0.55	0.9	8.6	0.90	1.4	13.2	342	8112C112
8	0.55	1.0	10.3	0.90	1.4	14.9	424	8112C118
10	0.55	1.0	11.9	0.90	1.4	16.5	514	8112C121
12	0.55	1.0	12.2	0.90	1.5	17.0	548	8112C124
14	0.55	1.1	13.0	0.90	1.5	17.8	590	8112C127
16	0.55	1.1	13.7	0.90	1.5	18.5	649	8112C130
20	0.55	1.1	15.2	0.90	1.5	20.0	864	8112C136
24	0.55	1.2	17.0	0.90	1.6	22.0	1005	8112C139
27	0.55	1.2	17.4	1.25	1.6	23.1	1058	8112C142
30	0.55	1.2	18.0	1.25	1.6	23.7	1113	8112C145
37	0.55	1.3	19.6	1.25	1.6	25.3	1271	8112C148
40	0.55	1.3	20.4	1.25	1.7	26.3	1351	8112C151
1.3 mm²/7								
2	0.6	0.9	7.4	0.90	1.3	11.8	275	8112C154
3	0.6	0.9	7.9	0.90	1.3	12.3	0	8112C157
4	0.6	0.9	8.5	0.90	1.4	13.1	340	8112C160
5	0.6	1.0	9.5	0.90	1.4	14.1	383	8112C163
8	0.6	1.0	11.2	0.90	1.4	15.8	483	8112C169
10	0.6	1.1	13.2	0.90	1.5	18.0	578	8112C172
12	0.6	1.1	13.6	0.90	1.5	18.4	633	8112C175
14	0.6	1.1	14.3	0.90	1.5	19.1	698	8112C178
16	0.6	1.1	15.0	0.90	1.5	19.8	870	8112C181
20	0.6	1.2	16.9	0.90	1.6	21.9	1014	8112C187
24	0.6	1.2	18.7	1.25	1.6	24.4	1163	8112C190
27	0.6	1.3	19.3	1.25	1.6	25.0	1227	8112C193
30	0.6	1.3	20.0	1.25	1.6	25.7	1305	8112C196
37	0.6	1.3	21.6	1.25	1.7	27.5	1504	8112C199
40	0.6	1.4	22.7	1.25	1.7	28.6	1584	8112C202

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1.5 mm²/7								
2	0.6	0.9	7.7	0.90	1.3	12.1	279	8112C205
3	0.6	0.9	8.1	0.90	1.4	12.7	322	8112C208
4	0.6	0.9	8.8	0.90	1.4	13.4	347	8112C211
5	0.6	1.0	9.8	0.90	1.4	14.4	392	8112C214
8	0.6	1.0	11.6	0.90	1.4	16.2	518	8112C220
10	0.6	1.1	13.7	0.90	1.5	18.5	614	8112C223
12	0.6	1.1	14.1	0.90	1.5	18.9	670	8112C226
14	0.6	1.1	14.8	0.90	1.5	19.6	742	8112C229
16	0.6	1.1	15.6	0.90	1.5	20.4	925	8112C232
20	0.6	1.2	17.6	1.25	1.6	23.3	1062	8112C238
24	0.6	1.3	19.6	1.25	1.6	25.3	1218	8112C241
27	0.6	1.3	20.1	1.25	1.6	25.8	1289	8112C244
30	0.6	1.3	20.8	1.25	1.7	26.7	1418	8112C247
37	0.6	1.4	22.6	1.25	1.7	28.5	1586	8112C250
40	0.6	1.4	23.6	1.25	1.7	29.5	1687	8112C253
2.5 mm²/7								
2	0.7	0.9	8.9	0.90	1.4	13.5	364	8112C256
3	0.7	1.0	9.7	0.90	1.4	14.3	389	8112C259
4	0.7	1.0	10.5	0.90	1.4	15.1	430	8112C262
5	0.7	1.0	11.9	0.90	1.4	16.5	547	8112C265
8	0.7	1.1	13.9	0.90	1.5	18.7	684	8112C271
10	0.7	1.2	16.3	0.90	1.6	21.3	952	8112C274
12	0.7	1.2	16.9	0.90	1.6	21.9	1012	8112C277
14	0.7	1.2	17.7	1.25	1.6	23.4	1126	8112C280
16	0.7	1.3	18.9	1.25	1.6	24.6	1252	8112C283
20	0.7	1.3	21.1	1.25	1.7	27.0	1456	8112C289
24	0.7	1.4	23.6	1.25	1.7	29.5	1644	8112C292
27	0.7	1.4	24.1	1.25	1.8	30.2	1811	8112C295
30	0.7	1.5	25.2	1.25	1.8	31.3	2154	8112C298
37	0.7	1.5	27.2	1.25	1.8	33.3	2477	8112C301
40	0.7	1.6	28.5	1.25	1.9	34.8	2614	8112C304

RT = Radial Thickness