

ICON[®] Instrumentation Cable Fire Resistant (CI), Flame Retardant

EN 50288-7
90 °C / 500 V

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

RE-2X(St)HSWAH CI PIMF

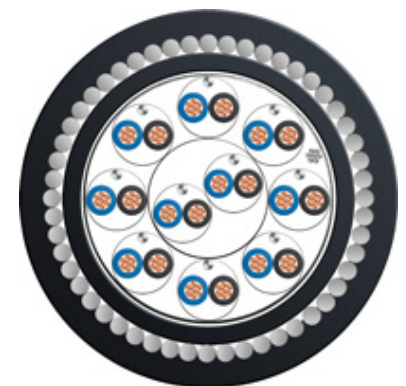
Application

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 ² , 0.75 mm ² , 1 mm ² , 1.3 mm ² , 1.5 mm ²
Insulation.....	cross-linked polyethylene XLPE over the MICA-tape wrapped conductor
Colour code.....	black / blue, continuously numbered on blue core (1, 2..) for multipair
Individual screen.....	24 µm aluminium PETP tape over stranded tinned copper drain wire, 0.3 mm ² , 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 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 CABLE CI 500 V LSZH GEN. TO 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)
Circuit Integrity	IEC 60331-21
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 Cable
2X	insulation of XLPE
(St)	collective screen
H	inner sheath of LSZH
SWA	steel wire armour
H	LSZH Sheath
CI	circuit integrity
PIMF	pair in metal foil
PLC	Production Lot Code
LM	Length Marking

Electrical data at 20 °C

	nom.	mm ²	0.5	0.75	1	1.3	1.5
Conductor	nom.	mm ²	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	100				
Inductance	max.	mH/km	1				
L/R (ratio)	max.	µH/Ω	25	25	25	40	40
Test voltage U _{rms} (core : core)		V	2000				
Test voltage U _{rms} (core : screen)		V	2000				
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.	Ø core approx. 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	2.63	1.1	12.6	0.90	1.5	17.4	454	8114F166
4	2.63	1.2	15.2	1.25	1.6	20.9	598	8114F169
5	2.63	1.3	16.9	1.25	1.6	22.6	786	8114F172
6	2.63	1.3	18.3	1.25	1.7	24.2	907	8114F175
8	2.63	1.4	19.7	1.25	1.7	25.6	1022	8114F178
10	2.63	1.5	22.6	1.25	1.8	28.7	1182	8114F181
12	2.63	1.5	23.7	1.25	1.8	29.8	1298	8114F184
16	2.63	1.7	27.2	1.60	2.0	34.4	1806	8114F187
20	2.63	1.8	30.1	1.60	2.0	37.3	1980	8114F190
24	2.63	1.9	32.8	1.60	2.1	40.2	2250	8114F193
0.75 mm²/7								
2	2.81	1.1	13.2	0.90	1.5	18.0	485	8114F196
4	2.81	1.2	15.9	1.25	1.6	21.6	766	8114F199
5	2.81	1.3	17.7	1.25	1.7	23.6	857	8114F202
6	2.81	1.4	19.5	1.25	1.7	25.4	999	8114F205
8	2.81	1.4	20.7	1.25	1.7	26.6	1102	8114F208
10	2.81	1.5	23.8	1.25	1.8	29.9	1293	8114F211
12	2.81	1.6	25.1	1.60	1.9	32.1	1455	8114F214
16	2.81	1.7	28.6	1.60	2.0	35.8	1982	8114F217
20	2.81	1.8	31.7	1.60	2.1	39.1	2191	8114F220
24	2.81	1.9	34.5	1.60	2.2	42.1	2493	8114F223
1 mm²/7								
2	2.99	1.2	14.0	0.90	1.5	18.8	527	8114F226
4	2.99	1.3	16.9	1.25	1.6	22.6	826	8114F229
5	2.99	1.3	18.5	1.25	1.7	24.4	917	8114F232
6	2.99	1.4	20.4	1.25	1.7	26.3	1064	8114F235
8	2.99	1.5	21.9	1.25	1.8	28.0	1205	8114F238
10	2.99	1.6	25.1	1.60	1.9	32.1	1423	8114F241
12	2.99	1.6	26.3	1.60	1.9	33.3	1710	8114F244
16	2.99	1.8	30.2	1.60	2.0	37.4	2066	8114F247
20	2.99	1.9	33.4	1.60	2.1	40.8	2408	8114F250
24	2.99	2.0	36.4	2.00	2.2	44.8	3202	8114F253

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1.3 mm²/7								
2	3.17	1.2	14.6	0.90	1.6	19.6	568	8114F256
4	3.17	1.3	17.6	1.25	1.7	23.5	846	8114F259
5	3.17	1.4	19.5	1.25	1.7	25.4	994	8114F262
6	3.17	1.4	21.3	1.25	1.8	27.4	1161	8114F265
8	3.17	1.5	22.9	1.25	1.8	29.0	1307	8114F268
10	3.17	1.6	26.3	1.60	1.9	33.3	1715	8114F271
12	3.17	1.7	27.7	1.60	2.0	34.9	1948	8114F274
16	3.17	1.8	31.6	1.60	2.1	39.0	2360	8114F277
20	3.17	1.9	35.0	1.60	2.2	42.6	2651	8114F280
24	3.17	2.1	38.3	2.00	2.3	46.9	3479	8114F283
1.5 mm²/7								
2	3.29	1.2	15.0	0.90	1.6	20.0	578	8114F286
4	3.29	1.3	18.1	1.25	1.7	24.0	905	8114F289
5	3.29	1.4	20.1	1.25	1.7	26.0	1045	8114F292
6	3.29	1.5	22.1	1.25	1.8	28.2	1176	8114F295
8	3.29	1.5	23.6	1.25	1.8	29.7	1349	8114F298
10	3.29	1.7	27.2	1.60	2.0	34.4	1801	8114F301
12	3.29	1.7	28.5	1.60	2.0	35.7	2056	8114F304
16	3.29	1.9	32.7	1.60	2.1	40.1	2500	8114F307
20	3.29	2.0	36.3	2.00	2.2	44.7	2706	8114F310
24	3.29	2.1	39.5	2.00	2.3	48.1	3695	8114F313

RT = Radial Thickness