

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

EN 50288-7
90 °C / 500 V

Single & Multi-Triple, XLPE-Insulation, Collective Screen, Armour, LSZH-Sheath

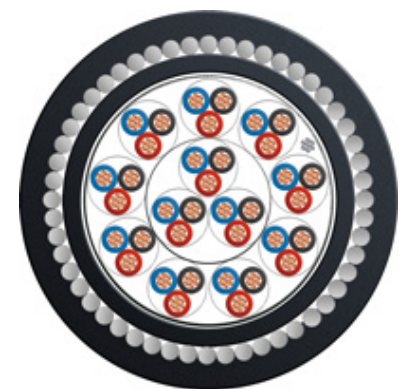
RE-2X(St)HSAWH CI

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 / red, continuously numbered on blue core (1, 2..) for multitruples
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
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					
single triple:			100	100	100	100	100
up to 4 triples:			78	78	78	90	90
above 4 triples:			65	65	65	75	75
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	Part. No. Colour black
0.5 mm²/7							
1	2.93	1.0	8.6	0.90	1.4	13.2	8114F316
2	2.93	1.2	14.0	0.90	1.5	18.8	8114F319
4	2.93	1.3	16.4	1.25	1.6	22.1	8114F322
5	2.93	1.3	18.1	1.25	1.7	24.0	8114F325
6	2.93	1.4	20.7	1.25	1.8	26.8	8114F328
8	2.93	1.5	22.3	1.25	1.8	28.4	8114F331
10	2.93	1.6	25.5	1.60	1.9	32.5	8114F334
12	2.93	1.6	26.3	1.60	1.9	33.3	8114F337
16	2.93	1.8	30.3	1.60	2.0	37.5	8114F340
20	2.93	1.9	33.6	1.60	2.1	41.0	8114F343
24	2.93	2.0	36.6	2.00	2.2	45.0	8114F346
0.75 mm²/7							
1	3.11	1.0	9.0	0.90	1.4	13.6	8114F349
2	3.11	1.2	14.7	0.90	1.6	19.7	8114F352
4	3.11	1.3	17.2	1.25	1.7	23.1	8114F355
5	3.11	1.4	19.3	1.25	1.7	25.2	8114F358
6	3.11	1.5	22.0	1.25	1.8	28.1	8114F361
8	3.11	1.5	23.5	1.25	1.8	29.6	8114F364
10	3.11	1.6	26.8	1.60	1.9	33.8	8114F367
12	3.11	1.7	27.9	1.60	2.0	35.1	8114F370
16	3.11	1.8	31.9	1.60	2.1	39.3	8114F373
20	3.11	2.0	35.6	2.00	2.2	44.0	8114F376
24	3.11	2.1	38.8	2.00	2.3	47.4	8114F379
1 mm²/7							
1	3.29	1.0	9.4	0.90	1.4	14.0	8114F382
2	3.29	1.2	15.4	1.25	1.6	21.1	8114F385
4	3.29	1.3	18.0	1.25	1.7	23.9	8114F388
5	3.29	1.4	20.2	1.25	1.7	26.1	8114F391
6	3.29	1.5	23.0	1.25	1.8	29.1	8114F394
8	3.29	1.6	24.9	1.25	1.9	31.2	8114F397
10	3.29	1.7	28.4	1.60	2.0	35.6	8114F400
12	3.29	1.7	29.3	1.60	2.0	36.5	8114F403
16	3.29	1.9	33.7	1.60	2.1	41.1	8114F406
20	3.29	2.0	37.4	2.00	2.3	46.0	8114F409
24	3.29	2.2	41.0	2.00	2.4	49.8	8114F412

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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	Part. No. Colour black
1.3 mm²/7							
1	3.47	1.0	9.8	0.90	1.4	14.4	8114F415
2	3.47	1.3	16.3	1.25	1.6	22.0	8114F418
4	3.47	1.4	19.1	1.25	1.7	25.0	8114F421
5	3.47	1.4	21.1	1.25	1.8	27.2	8114F424
6	3.47	1.5	24.1	1.25	1.8	30.2	8114F427
8	3.47	1.6	26.1	1.60	1.9	33.1	8114F430
10	3.47	1.8	29.9	1.60	2.0	37.1	8114F433
12	3.47	1.8	30.9	1.60	2.1	38.3	8114F436
16	3.47	2.0	35.5	2.00	2.2	43.9	8114F439
20	3.47	2.1	39.4	2.00	2.3	48.0	8114F442
24	3.47	2.2	42.9	2.00	2.4	51.7	8114F445
1.5 mm²/7							
1	3.59	1.0	10.0	0.90	1.4	14.6	8114F448
2	3.59	1.3	16.8	1.25	1.6	22.5	8114F451
4	3.59	1.4	19.6	1.25	1.7	25.5	8114F454
5	3.59	1.5	22.0	1.25	1.8	28.1	8114F457
6	3.59	1.6	25.0	1.25	1.9	31.3	8114F460
8	3.59	1.6	26.8	1.60	1.9	33.8	8114F463
10	3.59	1.8	30.8	1.60	2.1	38.2	8114F466
12	3.59	1.8	31.9	1.60	2.1	39.3	8114F469
16	3.59	2.0	36.6	2.00	2.2	45.0	8114F472
20	3.59	2.2	40.8	2.00	2.4	49.6	8114F475
24	3.59	2.3	44.5	2.00	2.5	53.5	8114F478

RT = Radial Thickness