

ICON[®] Instrumentation Cable

Zero Halogen, Flame Retardant

EN 50288-7
70 °C / 300 V

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

RE-2Y(St)HSAWAH

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.....	polyethylene PE
Colour code.....	black / white / red, continuously numbered on white 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 300 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 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

	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:			115	115	115	115	115
up to 4 triples:			90	90	90	102	102
above 4 triples:			75	75	75	85	85
Inductance	max.	mH/km	1				
L/R (ratio)	max.	µH/Ω	25	25	25	40	40
Test voltage U _{rms} (core : core)		V	1500				
Test voltage U _{rms} (core : screen)		V	1500				
Operating voltage		V	300				

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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								
1	0.35	0.8	5.4	0.90	1.3	9.8	200	8013E316
2	0.35	0.9	8.4	0.90	1.4	13.0	326	8013E319
4	0.35	1.0	9.8	0.90	1.4	14.4	386	8013E322
5	0.35	1.0	10.8	0.90	1.4	15.4	454	8013E325
6	0.35	1.0	12.1	0.90	1.4	16.7	513	8013E328
8	0.35	1.1	13.1	0.90	1.5	17.9	571	8013E331
10	0.35	1.1	14.7	0.90	1.5	19.5	677	8013E334
12	0.35	1.1	15.2	0.90	1.5	20.0	845	8013E337
16	0.35	1.2	17.4	0.90	1.6	22.4	1031	8013E340
20	0.35	1.2	19.1	1.25	1.6	24.8	1179	8013E343
24	0.35	1.3	20.9	1.25	1.7	26.8	1330	8013E346
0.75 mm²/7								
1	0.38	0.9	6.1	0.90	1.3	10.5	220	8013E349
2	0.38	0.9	9.3	0.90	1.4	13.9	370	8013E352
4	0.38	1.0	10.9	0.90	1.4	15.5	462	8013E355
5	0.38	1.0	12.0	0.90	1.4	16.6	526	8013E358
6	0.38	1.1	13.7	0.90	1.5	18.5	615	8013E361
8	0.38	1.1	14.7	0.90	1.5	19.5	698	8013E364
10	0.38	1.2	16.7	0.90	1.5	21.5	947	8013E367
12	0.38	1.2	17.3	0.90	1.6	22.3	1029	8013E370
16	0.38	1.3	19.7	1.25	1.6	25.4	1240	8013E373
20	0.38	1.3	21.7	1.25	1.7	27.6	1446	8013E376
24	0.38	1.4	23.7	1.25	1.7	29.6	1632	8013E379
1 mm²/7								
1	0.4	0.9	6.6	0.90	1.3	11.0	244	8013E382
2	0.4	1.0	10.4	0.90	1.4	15.0	412	8013E385
4	0.4	1.0	11.9	0.90	1.4	16.5	529	8013E388
5	0.4	1.0	13.2	0.90	1.5	18.0	620	8013E391
6	0.4	1.1	15.0	0.90	1.5	19.8	830	8013E394
8	0.4	1.1	16.1	0.90	1.5	20.9	946	8013E397
10	0.4	1.2	18.4	1.25	1.6	24.1	1105	8013E400
12	0.4	1.2	19.0	1.25	1.6	24.7	1215	8013E403
16	0.4	1.3	21.7	1.25	1.7	27.6	1482	8013E406
20	0.4	1.4	24.1	1.25	1.7	30.0	1740	8013E409
24	0.4	1.4	26.1	1.25	1.8	32.2	2202	8013E412

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1.3 mm²/7								
1	0.45	0.9	7.2	0.90	1.3	11.6	268	8013E415
2	0.45	1.0	11.5	0.90	1.4	16.1	463	8013E418
4	0.45	1.1	13.4	0.90	1.5	18.2	621	8013E421
5	0.45	1.1	14.8	0.90	1.5	19.6	721	8013E424
6	0.45	1.2	16.9	0.90	1.5	21.7	979	8013E427
8	0.45	1.2	18.1	1.25	1.6	23.8	1105	8013E430
10	0.45	1.3	20.7	1.25	1.7	26.6	1322	8013E433
12	0.45	1.3	21.4	1.25	1.7	27.3	1456	8013E436
16	0.45	1.4	24.4	1.25	1.8	30.5	1788	8013E439
20	0.45	1.5	27.1	1.25	1.8	33.2	2327	8013E442
24	0.45	1.6	29.6	1.60	1.9	36.6	2637	8013E445
1.5 mm²/7								
1	0.45	0.9	7.5	0.90	1.3	11.9	277	8013E448
2	0.45	1.0	11.9	0.90	1.4	16.5	518	8013E451
4	0.45	1.1	14.0	0.90	1.5	18.8	674	8013E454
5	0.45	1.1	15.4	0.90	1.5	20.2	869	8013E457
6	0.45	1.2	17.6	0.90	1.6	22.6	1049	8013E460
8	0.45	1.3	19.1	1.25	1.6	24.8	1210	8013E463
10	0.45	1.3	21.6	1.25	1.7	27.5	1435	8013E466
12	0.45	1.4	22.5	1.25	1.7	28.4	1569	8013E469
16	0.45	1.5	25.7	1.25	1.8	31.8	2162	8013E472
20	0.45	1.6	28.6	1.25	1.9	34.9	2515	8013E475
24	0.45	1.7	31.1	1.60	2.0	38.3	2879	8013E478

RT = Radial Thickness