

ICON[®] Instrumentation Cable Zero Halogen, Flame Retardant

EN 50288-7
70 °C / 300 V

Single & Multi-pair, PE-Insulation, Collective Screen, LSZH-Sheath

RE-2Y(St)H

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; not 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, continuously numbered on white core (1, 2..) for multipair
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
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:
7.5 x cable-Ø

Abbreviations

RE-	Instrumentation Cable
2Y	insulation of PE
(St)	collective screen
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 single pair:	max.	nF/km	115	115	115	115	115
up to 4 pairs:			90	90	90	102	102
above 4 pairs:			75	75	75	85	85
Capacitance unbalance		pF/500 m	500				
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				

*(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 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	5.2	38	7645E001
2	0.35	0.9	7.6	66	7645E004
4	0.35	0.9	8.8	98	7645E007
5	0.35	1.0	9.8	118	7645E151
6	0.35	1.0	10.6	138	7645E010
8	0.35	1.0	11.3	160	7645E013
10	0.35	1.1	12.9	201	7645E016
12	0.35	1.1	13.5	236	7645E019
16	0.35	1.1	15.2	300	7645E022
20	0.35	1.2	16.9	367	7645E025
24	0.35	1.2	18.3	419	7645E028
0.75 mm²/7					
1	0.38	0.8	5.6	49	7645E031
2	0.38	0.9	8.5	87	7645E034
4	0.38	1.0	10.0	123	7645E037
5	0.38	1.0	10.9	150	7645E154
6	0.38	1.0	11.8	175	7645E040
8	0.38	1.1	12.8	220	7645E043
10	0.38	1.1	14.5	267	7645E046
12	0.38	1.1	15.1	298	7645E049
16	0.38	1.2	17.3	409	7645E052
20	0.38	1.3	19.2	480	7645E055
24	0.38	1.3	20.8	561	7645E058
1 mm²/7					
1	0.4	0.9	6.3	56	7645E061
2	0.4	0.9	9.2	102	7645E064
4	0.4	1.0	10.9	156	7645E067
5	0.4	1.0	11.9	183	7645E157
6	0.4	1.0	13.0	224	7645E070
8	0.4	1.1	14.0	273	7645E073
10	0.4	1.1	15.9	324	7645E076
12	0.4	1.2	16.8	383	7645E079
16	0.4	1.2	19.0	513	7645E082
20	0.4	1.3	21.1	619	7645E085
24	0.4	1.4	23.1	738	7645E088

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No. of elem.	RT of insulation nom. mm	RT of outer sheath nom. mm	Overall diameter approx. mm	Cable weight approx. kg/km	Part. No. Colour black
1.3 mm²/7					
1	0.45	0.9	6.8	65	7645E091
2	0.45	1.0	10.4	122	7645E094
4	0.45	1.0	12.0	190	7645E097
5	0.45	1.1	13.4	233	7645E160
6	0.45	1.1	14.6	273	7645E100
8	0.45	1.2	15.7	330	7645E103
10	0.45	1.2	17.9	422	7645E106
12	0.45	1.3	18.9	487	7645E109
16	0.45	1.3	21.4	648	7645E112
20	0.45	1.4	23.8	790	7645E115
24	0.45	1.5	25.9	921	7645E118
1.5 mm²/7					
1	0.45	0.9	7.1	74	7645E121
2	0.45	1.0	10.8	139	7645E124
4	0.45	1.1	12.7	212	7645E127
5	0.45	1.1	14.0	259	7645E163
6	0.45	1.1	15.2	312	7645E130
8	0.45	1.2	16.4	378	7645E133
10	0.45	1.3	18.8	473	7645E136
12	0.45	1.3	19.7	548	7645E139
16	0.45	1.4	22.5	727	7645E142
20	0.45	1.5	25.0	903	7645E145
24	0.45	1.5	27.1	1051	7645E148

RT = Radial Thickness