

## ICON<sup>®</sup> Instrumentation Cable Fire Resistant (CI), Flame Retardant

**EN 50288-7**  
**90 °C / 500 V**

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

### RE-2X(St)HSWAH CI TIMF

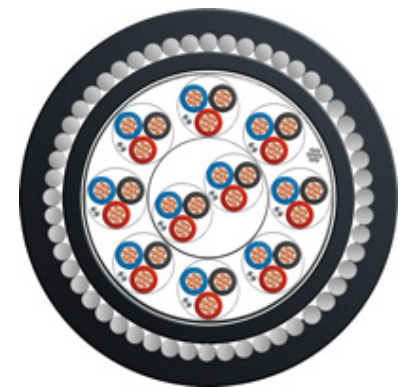
#### Application

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 <sup>2</sup> , 0.75 mm <sup>2</sup> , 1 mm <sup>2</sup> , 1.3 mm <sup>2</sup> , 1.5 mm <sup>2</sup>
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
Individual screen.....	24 µm aluminium PETP tape over solid tinned copper drain wire, 0.6 mm Ø, plastic tape under and above screen with numbered tape under separator tape of the individual 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 <sup>2</sup>
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
TIMF	triple in metal foil
PLC	Production Lot Code
LM	Length Marking

#### Electrical data at 20 °C

Conductor	nom.	mm <sup>2</sup>	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 <sub>rms</sub> (core : core)		V	2000				
Test voltage U <sub>rms</sub> (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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### RE-2X(St)HSWAH CI TiMF

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
<b>0.5 mm<sup>2</sup>/7</b>							
2	2.93	1.2	15.3	1.25	1.6	21.0	8114F481
4	2.93	1.3	17.9	1.25	1.7	23.8	8114F484
5	2.93	1.4	20.0	1.25	1.7	25.9	8114F487
6	2.93	1.5	22.8	1.25	1.8	28.9	8114F490
8	2.93	1.6	24.7	1.25	1.9	31.0	8114F493
10	2.93	1.7	28.1	1.60	2.0	35.3	8114F496
12	2.93	1.7	29.1	1.60	2.0	36.3	8114F499
16	2.93	1.9	33.4	1.60	2.1	40.8	8114F502
20	2.93	2.0	37.1	2.00	2.3	45.7	8114F505
24	2.93	2.2	40.6	2.00	2.4	49.4	8114F508
<b>0.75 mm<sup>2</sup>/7</b>							
2	3.11	1.2	16.0	1.25	1.6	21.7	8114F511
4	3.11	1.3	18.7	1.25	1.7	24.6	8114F514
5	3.11	1.4	21.0	1.25	1.8	27.1	8114F517
6	3.11	1.5	23.9	1.25	1.8	30.0	8114F520
8	3.11	1.6	25.8	1.60	1.9	32.8	8114F523
10	3.11	1.7	29.5	1.60	2.0	36.7	8114F526
12	3.11	1.8	30.7	1.60	2.1	38.1	8114F529
16	3.11	2.0	35.2	2.00	2.2	43.6	8114F532
20	3.11	2.1	39.1	2.00	2.3	47.7	8114F535
24	3.11	2.2	42.6	2.00	2.4	51.4	8114F538
<b>1 mm<sup>2</sup>/7</b>							
2	3.29	1.3	16.9	1.25	1.6	22.6	8114F541
4	3.29	1.4	19.7	1.25	1.7	25.6	8114F544
5	3.29	1.5	22.1	1.25	1.8	28.2	8114F547
6	3.29	1.6	25.2	1.60	1.9	32.2	8114F550
8	3.29	1.7	27.2	1.60	2.0	34.4	8114F553
10	3.29	1.8	31.0	1.60	2.1	38.4	8114F556
12	3.29	1.8	32.1	1.60	2.1	39.5	8114F559
16	3.29	2.0	36.9	2.00	2.3	45.5	8114F562
20	3.29	2.2	41.1	2.00	2.4	49.9	8114F565
24	3.29	2.3	44.8	2.00	2.5	53.8	8114F568

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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
<b>1.3 mm<sup>2</sup>/7</b>							
2	3.47	1.3	17.6	1.25	1.7	23.5	8114F571
4	3.47	1.4	20.6	1.25	1.8	26.7	8114F574
5	3.47	1.5	23.1	1.25	1.8	29.2	8114F577
6	3.47	1.6	26.3	1.60	1.9	33.3	8114F580
8	3.47	1.7	28.4	1.60	2.0	35.6	8114F583
10	3.47	1.9	32.6	1.60	2.1	40.0	8114F586
12	3.47	1.9	33.7	1.60	2.1	41.1	8114F589
16	3.47	2.1	38.7	2.00	2.3	47.3	8114F592
20	3.47	2.2	42.9	2.00	2.4	51.7	8114F595
24	3.47	2.4	47.0	2.50	2.6	57.2	8114F598
<b>1.5 mm<sup>2</sup>/7</b>							
2	3.59	1.3	18.1	1.25	1.7	24.0	8114F601
4	3.59	1.4	21.1	1.25	1.8	27.2	8114F604
5	3.59	1.5	23.7	1.25	1.8	29.8	8114F607
6	3.59	1.7	27.2	1.60	2.0	34.4	8114F610
8	3.59	1.7	29.2	1.60	2.0	36.4	8114F613
10	3.59	1.9	33.5	1.60	2.1	40.9	8114F616
12	3.59	1.9	34.6	1.60	2.2	42.2	8114F619
16	3.59	2.1	39.8	2.00	2.3	48.4	8114F622
20	3.59	2.3	44.3	2.00	2.5	53.3	8114F625
24	3.59	2.4	48.3	2.50	2.6	58.5	8114F628

RT = Radial Thickness