

### LI-05SOZ1 FE180 (PH30) (CU/SR/OSCR/LSZH 300/500V Class 5)



### APPLICATION

The 300/500V Braid-Screened Flexible Equipment Cables are designed for indoor instrumentation and control cabling, electrically noisy environments and fire alarm systems in office buildings.

### STANDARDS

Basic design to VDE 0812/EN 50290-2-27

### FIRE PERFORMANCE

<b>CIRCUIT INTEGRITY</b>	IEC 60331-21; BS 6387 CWZ; DIN VDE 0472-814(FE180); BS 8434-1 (30mins); BS 5839-1 Clause 26 2d; CEI 20-36/2-1; SS229-1; NBN C 30-004 (cat. F3); NF C32-070-2.3(CR1)
<b>CIRCUIT INTEGRITY WITH MECHANICAL SHOCK</b>	EN 50200(PH30); CEI 20-36/4-0
<b>CIRCUIT INTEGRITY WITH MECHANICAL SHOCK &amp; WATER SPRAY</b>	EN 50200 annex E
<b>SYSTEM CIRCUIT INTEGRITY</b>	DIN 4102-12, E30 depending on lay system
<b>FLAME RETARDANCE (SINGLE VERTICAL WIRE TEST)</b>	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
<b>REDUCED FIRE PROPAGATION (VERTICALLY-MOUNTED BUNDLED WIRES &amp; CABLE TEST)</b>	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
<b>HALOGEN FREE</b>	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
<b>NO CORROSIVE GAS EMISSION</b>	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
<b>MINIMUM SMOKE EMISSION</b>	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
<b>NO TOXIC GASES</b>	NES 02-713; NF C 20-454

Note: Asterisk \* denotes superseded standard.

### VOLTAGE RATING

300/500 V

### CABLE CONSTRUCTION

Conductor: Plain annealed copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Fire resistant silicone rubber compound type EI2 as per BS 7655-1.1.

**Cabling:** The insulated cores are cabled in concentric layers with suitable non-hygroscopic fillers.

**Fire Barrier:** Polyester tape + fiber glass tape

**Overall screen:** Aluminum/polyester tape with tinned copper braid (min. 85% Coverage)

**Outer Sheath:** Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.)

### COLOUR CODE

Insulation Colour: Per VDE 0812

Sheath Colour: Orange (other colours on request)

### TYPE CODE

LI Equipment cable with fine stranded conductor

H Halogen free ceramic polymer compound

C Copper Wire Braid

FE180 Insulation integrity (950°C 180 minutes)

PH 90 Fire Test for 90 mins at 830°C

### Physical AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -30°C – +90°C

Temperature range during installation (mobile state): -20°C – +50°C

Minimum bending radius: 7.5 x Overall Diameter

### Electrical PROPERTIES

<b>DIELECTRIC TEST:</b>	2000 V r.m.s. x 5' (core/core)
<b>INSULATION RESISTANCE</b>	≥300 MΩ x km (at 20°C);
<b>SHORT CIRCUIT TEMPERATURE</b>	350°C

### CONSTRUCTION PARAMETERS

CABLE CODE	NO. OF CORE X CROSS SECTION	NOMINAL INSULATION THICKNESS	NOMINAL SHEATH THICKNESS	NOMINAL OVERALL DIAMETER	APPROX. WEIGHT
	MM <sup>2</sup>	MM	MM	MM	KG/KM
2 cores					
LI-HCH FE180 (PH30)	2x0.75	0.6	0.8	6.3	55
LI-HCH FE180 (PH30)	2x1.0	0.6	0.9	6.9	62
LI-HCH FE180 (PH30)	2x1.5	0.7	0.9	7.3	79
3 cores					
LI-HCH FE180	3x0.75	0.6	0.8	6.6	67

(PH30)					
LI-HCH FE180 (PH30)	3x1.0	0.6	0.9	7.2	77
LI-HCH FE180 (PH30)	3x1.5	0.7	0.9	7.6	101
4 cores					
LI-HCH FE180 (PH30)	4x0.75	0.6	0.9	7.2	85
LI-HCH FE180 (PH30)	4x1.0	0.6	1.0	7.7	98
LI-HCH FE180 (PH30)	4x1.5	0.7	1.0	8.2	112
5 cores					
LI-HCH FE180 (PH30)	5x0.75	0.6	0.9	7.9	105
LI-HCH FE180 (PH30)	5x1.0	0.6	1.0	7.9	117
LI-HCH FE180 (PH30)	5x1.5	0.7	1.0	9.0	127
6 cores					
LI-HCH FE180 (PH30)	6x0.75	0.6	0.9	8.6	121
LI-HCH FE180 (PH30)	6x1.0	0.6	1.0	9.1	138
LI-HCH FE180 (PH30)	6x1.5	0.7	1.0	10.0	161
7 cores					

LI-HCH FE180 (PH30)	7x0.75	0.6	0.9	8.6	131
LI-HCH FE180 (PH30)	7x1.0	0.6	1.0	9.1	152
LI-HCH FE180 (PH30)	7x1.5	0.7	1.1	10.0	193

Note : Other conductor sizes & core configurations are available upon request.