

Applications

SIMBAL ‘LSHF’ flat cables can be used on Festoon systems on cranes and handling equipment in special applications where halogen free & low smoke materials are required. Eg Nucleas power plants & underground installations.

Design

1. **Conductor :-** Flexible plain copper, Class 5 - IEC 60228
2. **Insulation :-** Halogen Free compound
3. **Outer Sheath :-** Polyolefin Halogen free compound
 Colour :- Black



Marking

LSHF, number of cores - cross section - voltage - year & week of manufacture.

Core Identification

In accordance with HD308 S2

- 4 core:- Black, Grey, Green / Yellow, Brown
- 5 core :- Black, Grey, Green / Yellow, Brown, Blue
- > 5 cores :- Black with white printed numbers (with or without Green / yellow earth).

Standards

Manufacturers standard specification

Mechanical Properties

Tensile strength of the conductor	Static	15 N/mm ²
	Dynamic	30 N/mm ²
Bending Radii	10 x Cable diameter in dynamic applications	
Max travelling speed of festoon system	120 m/min	

Chemical Properties

Moisture, UV & Ozone resistant
 For Indoor & Outdoor applications
 Flame & Fire retardant
 Low Smoke (IEC 61034), Low Toxicity (IEC60754), Low Corrosivity (IEC60754)

Electrical & Thermal Properties

Nominal Voltage	U _o / U	0.6 / 1 kV
Maximum Operating Voltage in AC systems	U _m	1.2 kV

Test Voltage	3.5 k V - 50Hz in AC
Current Rating	See facing page

Maximum temperature at the conductor	
- in service	+ 90 deg C
- in short circuit	+ 250 deg C
Max surface temperature	
- fixed installation	- 40 deg C up to + 60 deg C
- mobile installation	- 25 deg C up to + 60 deg C

Cable Specification

CONTROL CABLES

Number of cores & nominal cross section	Gland PG (Metric)	Current rating at 30 deg C	Outer dimensions Approx	Weight Approx
8c x 1.5mm ²	2930 (M32/29)	19 Amps	29 x 5mm	0.220 kg/m
8c x 2.5mm ²	2930 (M32/29)	25 Amps	35 x 5mm	0.330 kg/m
12c x 1.5mm ²	3640 (M40/36)	19 Amps	41 x 5mm	0.320 kg/m
12c x 2.5mm ²	4250 (M50/42)	25 Amps	51 x 5.7mm	0.490 kg/m

POWER CABLES

4c x 1.5mm ²	2121 (M25/21)	19 Amps	16 x 5mm	0.110 kg/m
4c x 2.5mm ²	2121 (M25/21)	25 Amps	19 x 5.7mm	0.170 kg/m
4c x 4mm ²	2121 (M25/21)	34 Amps	21x 6.5mm	0.250 kg/m
4c x 6mm ²	2930 (M32/29)	43 Amps	25.5 x 7mm	0.330 kg/m
4c x 10mm ²	2930 (M32/29)	60 Amps	29 x 9mm	0.550 kg/m
4c x 16mm ²	3640 (M40/36)	80 Amps	35 x 10.4mm	0.800 kg/m
4c x 25mm ²	4245 (M50/42)	101 Amps	45.5 x 13.5mm	1.350 kg/m
4c x 35mm ²	8107 Plate Gland	126 Amps	50.5 x 14.8mm	1.800 kg/m
4c x 50mm ²	8107 Plate Gland	153 Amps	56 x 16.5mm	2.400 kg/m
4c x 70mm ²	8108 Plate Gland	196 Amps	63 x 18mm	3.250 kg/m