

Applications

SIMBAL 'FLATFLEX' Screened flat cables can be used on Festoon systems on cranes and handling equipment, typical applications include overhead cranes, monorails, transfer cars etc. The copper screen is efficient against electro magnetic disturbances caused by power & control cables.

Design

1. **Conductor :-** Flexible plain copper, Class 5 - IEC 60228
2. **Insulation :-** PVC
3. **Screen :-** Plain copper spinning on phase cores (power)
Plain copper braid (control)
4. **Outer Sheath :-** PVC, Colour - Black

Marking

VCVH6-F, number of cores - cross section - voltage - year & week of manufacture.

Core Identification

Power:- Black, Grey, Green / Yellow, Brown
Control :- Black with white printed numbers (without green/ yellow earth).

Standards

Manufacturers standard



Mechanical Properties

Tensile strength of the conductor	Static	15 N/mm ²
	Dynamic	30 N/mm ²
Bending Radii	12 x Cable diameter in dynamic applications	
Max travelling speed of festoon system	120 m/min	

Chemical Properties

Oil, Acid & Alkaline resistant
For Indoor & Outdoor applications, Moisture, UV & Ozone resistant
Flame retardant in accordance with IEC 60332 part 1
Lead Free

Electrical & Thermal Properties

Control Cables

Nominal Voltage	U ₀ / U	300 / 500 V
Maximum Operating Voltage in AC systems	U _m	500 V
Capacitance between cores		170 nF/km
Capacitance between core & screen		350 nF/km

Power Cables

Nominal Voltage	U ₀ / U	0.6 / 1 kV
Maximum Operating Voltage in AC systems	U _m	1.2 kV

Test Voltage	Control cables	2.0 kV - 50Hz in AC
	Power cables	2.5 kV - 50Hz in AC
Current Rating	See facing page	

Maximum temperature at the conductor	- in service	+ 70 deg C
	- in short circuit	+ 150 deg C
Max surface temperature	- fixed installation	- 35 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
4c x 1.5mm ²	2121 (M25/21)	19 Amps	18 x 5.5mm	0.220 kg/m
8c x 1.5mm ²	3640 (M40/36)	19 Amps	34 x 5.5mm	0.430 kg/m
12c x 1.5mm ²	4250 (M63/48)	19 Amps	50 x 5.5mm	0.650 kg/m
4c x 2.5mm ²	2121 (M25/21)	25 Amps	22 x 7.5mm	0.270 kg/m

POWER CABLES

4c x 4mm ²	2121 (M25/21)	34 Amps	23 x 7mm	0.360 kg/m
4c x 6mm ²	2930 (M32/29)	43 Amps	29 x 9mm	0.580 kg/m
4c x 10mm ²	2930 (M32/29)	60 Amps	37 x 11mm	0.900 kg/m
4c x 16mm ²	2930 (M32/29)	80 Amps	46 x 14mm	1.280 kg/m
4c x 25mm ²	3640 (M42/36)	101 Amps	50 x 14.5mm	1.800 kg/m
4c x 35mm ²	4245 (M50/42)	126 Amps	55 x 16mm	2.300 kg/m

OPTIONS

Other sections available on request