

### Applications

SIMBAL ‘FLATFLEX ‘N’ Neoprene flat cables are typically used on festoon systems on cranes & handling equipment, in applications with high mechanical stress & frequent bending in one plane. Copper screens are efficient against electro magnetic disturbances caused by power cables

### Design

1. **Conductor** :-  $\leq 25\text{mm}^2$ —Extra Flexible plain copper, Class 6  
 $\geq 35\text{mm}^2$  - Flexible stranded copper, Class 5 to IEC 60228 / DIN VDE 0295
2. **Insulation** :- EPR Rubber compound 3GI3 to VDE 0207 pt 20
3. **Screen** :- Tinned copper braid, coverage  $>80\%$
4. **Outer Sheath** :- PCP Rubber compound 5GM3, to VDE 0207 pt 21 Colour - Black



### Marking

NGFLCGOEU-J, Number of cores - Cross section, 300/500 V, Year of manufacture

### Core Identification

In accordance with HD 308 S2

4 cores :- Black, Grey, Green/Yellow, Brown

5 cores :- Black, Grey, Green/Yellow, Brown, Blue

$> 5$  cores :- Black with white printed numbers (with or without green/yellow earth).

### Mechanical Properties

Tensile Strength of the conductor	Static	15 N / mm <sup>2</sup>
	Dynamic	30 N / mm <sup>2</sup>
Bending Radii	In accordance with DIN VDE 298	
Max travelling speed of festoon	180 m / min	

### Chemical Properties

Oil resistant  
 For Indoor & Outdoor applications, Moisture, UV and Ozone resistant  
 Flame retardant in accordance with IEC 60 332 part 1

### Electrical & Thermal Properties

Nominal Voltage	$U_o / U$	300 / 500 V
MaMaximum Operating Voltage in AC systems	$U_m$	500 V
Maximum Operating Voltage in DC systems	$V_m$	750 V
Test Voltage	2.0 k V - 50Hz in AC	
Current Rating	See facing page (Acc. To DIN VDE 0298 part 4)	
Max surface temperature		
- fixed installation	- 50 deg C up to + 80 deg C	
- mobile installation	- 35 deg C up to + 80 deg C	
Maximum temperature at the conductor		
- in service	+ 90 deg C	
- in short circuit	+ 250 deg C	

**Cable Specification**

Number of cores & nominal cross section	Gland PG (Metric)	Current rating at 30 deg C	Outer dimensions Approx	Weight Approx
4c x 1.5mm <sup>2</sup>	2121(M25/21)	22 Amps	18.5 x 6.5mm	0.220 kg/m
4c x 2.5mm <sup>2</sup>	2930(M32/29)	30 Amps	22.5 x 7.5mm	0.320 kg/m
4c x 4mm <sup>2</sup>	2930(M32/29)	40 Amps	29 x 10.5mm	0.505 kg/m
4c x 6mm <sup>2</sup>	3640(M40/36)	52 Amps	31 x 10.5mm	0.605 kg/m
4c x 10mm <sup>2</sup>	3640(M40/36)	71 Amps	36 x 11.5mm	0.840 kg/m
4c x 16mm <sup>2</sup>	4245(M50/42)	96 Amps	41.5 x 13.5mm	1.180 kg/m
4c x 25mm <sup>2</sup>	8107 Plate Gland	127 Amps	47 x 15mm	1.605 kg/m
4c x 35mm <sup>2</sup>	8107 Plate Gland	157 Amps	55 x 17mm	2.520 kg/m
4c x 50mm <sup>2</sup>	8108 Plate Gland	190 Amps	66 x 20.5mm	3.000 kg/m
8c x 1.5mm <sup>2</sup>	3640(M40/36)	22 Amps	36 x 7.5mm	0.470 kg/m
12c x 1.5mm <sup>2</sup>	8107 Plate Gland	22 Amps	54.5 x 8.5mm	0.745 kg/m
12c x 2.5mm <sup>2</sup>	8108 Plate Gland	30 Amps	69.5 x 9.5mm	1.180 kg/m