

Applications

SIMBAL 'ROBOTFLEX 'T' cables are suitable for use in cable chains and continually moving machines as well as robots. The use of a special semocore insulation material results in a very small cable outer diameter, without reducing the cable's ability to withstand high mechanical stresses. The cable is abrasion proof, microbe proof, halogen free & flame resistant

Design

1. **Conductor** :- Flexible plain copper, Class 6 to DIN VDE 0295
2. **Insulation** :- Semocore
3. **Wrapping** :- Fleece
4. **Outer Sheath** :- PUR, adhesion proof, colour Grey RAL 7001

Marking

Semoflex Roboschlepp, core x cross section

Core Identification

Up to 0.34mm² - acc to DIN 47100

From 0.5mm² - white cores with black numbers

From 3 cores - with green / yellow earth conductor

Standards

DIN VDE 0250



Mechanical Properties

Bending Radii (Dynamic) 5 x cable thickness

Chemical Properties

Lead & Silicon Free & Oil resistant

For Indoor & Outdoor applications

Flame retardant in accordance with VDE 0472 part 804, test type A, IEC 332-2

Electrical & Thermal Properties

Nominal Voltage	0.14 - 0.34mm ²	U _o / U	350 V
	From 0.5mm ²	U _o / U	300 / 500V

Test Voltage	up to 1.5mm ²	2000 V
	2.5 - 4.0mm ²	2500 V
	From 6.0mm ²	3000 V

Current Rating See facing page

Max surface temperature	- fixed installation	- 50 deg C up to + 90 deg C
	- mobile installation	- 40 deg C up to + 90 deg C

Max conductor temperature + 90 deg C

Cable Specification

Number of cores & nominal cross section	Gland	Current rating at 30 deg C	Outer diameter Approx	Weight Approx
2c x 0.14mm ²	PG 7.0		3.3 mm	0.011 kg/m
3c x 0.14mm ²	PG 7.0		3.5 mm	0.014 kg/m
4c x 0.14mm ²	PG 7.0		3.7 mm	0.017 kg/m
5c x 0.14mm ²	PG 7.0		4.0 mm	0.020 kg/m
8c x 0.14mm ²	PG 7.0		5.0 mm	0.031 kg/m
12c x 0.14mm ²	PG 7.0		5.7 mm	0.043 kg/m
18c x 0.14mm ²	PG 7.0		6.4 mm	0.058 kg/m
25c x 0.14mm ²	PG 9.0		7.9 mm	0.084 kg/m

Number of cores & nominal cross section	Gland PG/ISO	Current rating at 30 deg C	Outer diameter Approx	Weight Approx	Stock Item
2c x 0.25mm ²	PG 7 / M20-16		3.8 mm	0.015 kg/m	
3c x 0.25mm ²	PG 7 / M20-16		4.0 mm	0.020 kg/m	
4c x 0.25mm ²	PG 7 / M20-16		4.3 mm	0.024 kg/m	
5c x 0.25mm ²	PG 7 / M20-16		4.6 mm	0.029 kg/m	
8c x 0.25mm ²	PG 7 / M20-16		6.1 mm	0.048 kg/m	
12c x 0.25mm ²	PG 9 / M20-16		6.9 mm	0.065 kg/m	
18c x 0.25mm ²	PG 11 / M20-16		8.1 mm	0.094 kg/m	
25c x 0.25mm ²	PG 11 / M20S		9.4 mm	0.125 kg/m	
2c x 0.34mm ²	PG 7 / M20-16		4.0 mm	0.018 kg/m	
3c x 0.34mm ²	PG 7 / M20-16		4.2 mm	0.023 kg/m	
4c x 0.34mm ²	PG 7 / M20-16		4.5 mm	0.028 kg/m	
5c x 0.34mm ²	PG 7 / M20-16		5.1 mm	0.036 kg/m	
8c x 0.34mm ²	PG 9 / M20-16		6.9 mm	0.062 kg/m	
12c x 0.34mm ²	PG 9 / M20-16		7.3 mm	0.078 kg/m	
18c x 0.34mm ²	PG 11 / M20S		8.6 mm	0.114 kg/m	
25c x 0.34mm ²	PG 13.5 / M20S		10.0 mm	0.150 kg/m	
2c x 0.50mm ²	PG 7 / M20-16	6 Amps	4.5 mm	0.024 kg/m	Yes
3c x 0.50mm ²	PG 7 / M20-16	6 Amps	4.7 mm	0.024 kg/m	
4c x 0.50mm ²	PG 7 / M20-16	6 Amps	5.3 mm	0.038 kg/m	
5c x 0.50mm ²	PG 7 / M20-16	6 Amps	5.9 mm	0.049 kg/m	
7c x 0.50mm ²	PG 9 / M20-16	6 Amps	6.9 mm	0.065 kg/m	
12c x 0.50mm ²	PG 11 / M20S	6 Amps	8.5 mm	0.102 kg/m	
18c x 0.50mm ²	PG 11 / M20S	6 Amps	9.8 mm	0.154 kg/m	
25c x 0.50mm ²	PG 13.5 / M20	6 Amps	11.5 mm	0.202 kg/m	
30c x 0.50mm ²	PG 13.5 / M20	6 Amps	11.9 mm	0.236 kg/m	
36c x 0.50mm ²	PG16 / M25	6 Amps	14.0 mm	0.274 kg/m	
2c x 0.75mm ²	PG 7 / M20-16	13 Amps	5.3 mm	0.030 kg/m	
3c x 0.75mm ²	PG 7 / M20-16	13 Amps	5.5 mm	0.038 kg/m	
4c x 0.75mm ²	PG 7 / M20-16	13 Amps	6.0 mm	0.048 kg/m	Yes
5c x 0.75mm ²	PG 9 / M20-16	13 Amps	6.5 mm	0.063 kg/m	
7c x 0.75mm ²	PG 9 / M20-16	13 Amps	7.6 mm	0.091 kg/m	
12c x 0.75mm ²	PG 11 / M20S	13 Amps	9.3 mm	0.140 kg/m	
18c x 0.75mm ²	PG 13.5 / M20S	13 Amps	10.8 mm	0.199 kg/m	
25c x 0.75mm ²	PG 16 / M20	13 Amps	12.7 mm	0.275 kg/m	
30c x 0.75mm ²	PG 16 / M20	13 Amps	13.1 mm	0.318 kg/m	
36c x 0.75mm ²	PG 21 / M25	13 Amps	14.6 mm	0.396 kg/m	

Cable Specification (continued)
300 / 500 V

Number of cores & nominal cross section	Gland PG/ISO	Current rating at 30 deg C	Outer diameter Approx	Weight Approx	Stock Item
2c x 1.0mm ²	PG7 / M20-16	16 Amps	5.3 mm	0.040 kg/m	
3c x 1.0mm ²	PG7 / M20-16	16 Amps	5.5 mm	0.052 kg/m	
4c x 1.0mm ²	PG7 / M20-16	16 Amps	6.0 mm	0.065 kg/m	
5c x 1.0mm ²	PG9 / M20-16	16 Amps	6.5 mm	0.079 kg/m	
7c x 1.0mm ²	PG9 / M20-16	16 Amps	7.6 mm	0.108 kg/m	
8c x 1.0mm ²	PG11 / M20S	16 Amps	9.3 mm	0.132 kg/m	
12c x 1.0mm ²	PG13.5 / M20S	16 Amps	10.8 mm	0.178 kg/m	
18c x 1.0mm ²	PG16 / M20	16 Amps	12.7 mm	0.254 kg/m	
25c x 1.0mm ²	PG16 / M20	16 Amps	13.1 mm	0.343 kg/m	
30c x 1.0mm ²	PG21 / M25	16 Amps	14.6 mm	0.409 kg/m	
36c x 1.0mm ²	PG21 / M25	16 Amps	16.0 mm	0.512 kg/m	
2c x 1.5mm ²	PG7 / M20-16	20 Amps	6.1 mm	0.051 kg/m	Yes
3c x 1.5mm ²	PG7 / M20-16	20 Amps	6.4 mm	0.068 kg/m	
4c x 1.5mm ²	PG9 / M20-16	20 Amps	7.0 mm	0.088 kg/m	Yes
5c x 1.5mm ²	PG9 / M20-16	20 Amps	7.6 mm	0.107 kg/m	
7c x 1.5mm ²	PG11 / M20S	20 Amps	9.4 mm	0.171 kg/m	
12c x 1.5mm ²	PG13.5 / M20	20 Amps	11.0 mm	0.239 kg/m	Yes
18c x 1.5mm ²	PG16 / M20	20 Amps	12.8 mm	0.356 kg/m	
25c x 1.5mm ²	PG21 / M25	20 Amps	15.2 mm	0.475 kg/m	Yes
30c x 1.5mm ²	PG21 / M25	20 Amps	16.1 mm	0.560 kg/m	
36c x 1.5mm ²	PG21 / M25	20 Amps	17.7 mm	0.700 kg/m	
3c x 2.5mm ²	PG11 / M20-16	30 Amps	8.3 mm	0.120 kg/m	
4c x 2.5mm ²	PG11 / M20S	30 Amps	9.1 mm	0.148 kg/m	
5c x 2.5mm ²	PG11 / M20S	30 Amps	9.9 mm	0.177 kg/m	
7c x 2.5mm ²	PG13.5 / M20	30 Amps	11.7 mm	0.247 kg/m	
12c x 2.5mm ²	PG16 / M25	30 Amps	13.9 mm	0.382 kg/m	
18c x 2.5mm ²	PG21 / M25	30 Amps	16.7 mm	0.585 kg/m	
25c x 2.5mm ²	PG29 / M32	30 Amps	20.5 mm	0.827 kg/m	
4c x 4.0mm ²	PG13.5 / M20	40 Amps	11.5 mm	0.232 kg/m	
5c x 4.0mm ²	PG16 / M20	40 Amps	12.6 mm	0.285 kg/m	
7c x 4.0mm ²	PG21 / M25	40 Amps	15.0 mm	0.385 kg/m	
4c x 6.0mm ²	PG21 / M25	50 Amps	14.7 mm	0.370 kg/m	
5c x 6.0mm ²	PG21 / M25	50 Amps	15.2 mm	0.418 kg/m	
7c x 6.0mm ²	PG29 / M32	50 Amps	19.1 mm	0.598 kg/m	
4c x 10.0mm ²	PG29 / M25	70 Amps	18.1 mm	0.566 kg/m	
5c x 10.0mm ²	PG29 / M32	70 Amps	19.9 mm	0.718 kg/m	
4c x 16.0mm ²	PG29 / M32	95 Amps	21.9 mm	0.885 kg/m	
4c x 25.0mm ²	PG36 / M40	125 Amps	25.8 mm	1.295 kg/m	

Other cable sections available on request