

## Applications

SIMBAL 'ROBOTFLEX T-CY' 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. The copper screen covers 85 - 90%.

## Design

1. **Conductor** :- Flexible plain copper, Class 6 to DIN VDE 0295
2. **Insulation** :- Semocore
3. **Wrapping** :- Fleece
4. **Screening** :- Tinned special braid covering 85 - 90%
5. **Outer Sheath** :- PUR , adhesion proof, colour Grey RAL 7001

## Marking

Semoflex Roboschlepp-C, core x cross section

## Core Identification

Up to 0.34mm<sup>2</sup> - acc to DIN 47100

From 0.5mm<sup>2</sup> - 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 <sup>2</sup>	U <sub>o</sub> / U	350 V
	From 0.5mm <sup>2</sup>	U <sub>o</sub> / U	300 / 500V

Test Voltage	up to 1.5mm <sup>2</sup>	2000 V
	2.5 - 4.0mm <sup>2</sup>	2500 V
	From 6.0mm <sup>2</sup>	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 in operation + 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 <sup>2</sup>	PG 7.0		3.8 mm	0.019 kg/m
3c x 0.14mm <sup>2</sup>	PG 7.0		3.9 mm	0.021 kg/m
4c x 0.14mm <sup>2</sup>	PG 7.0		4.2 mm	0.025 kg/m
5c x 0.14mm <sup>2</sup>	PG 7.0		4.9 mm	0.033 kg/m
8c x 0.14mm <sup>2</sup>	PG 7.0		6.1 mm	0.050 kg/m
12c x 0.14mm <sup>2</sup>	PG 9.0		6.6 mm	0.061 kg/m
18c x 0.14mm <sup>2</sup>	PG 9.0		7.3 mm	0.080 kg/m
25c x 0.14mm <sup>2</sup>	PG 11.0		8.6 mm	0.106 kg/m

Number of cores & nominal cross section	Gland PG/ISO	Current rating at 30 deg C	Outer diameter Approx	Weight Approx
2c x 0.25mm <sup>2</sup>	PG7 / M20-16		4.3 mm	0.024 kg/m
3c x 0.25mm <sup>2</sup>	PG7 / M20-16		4.5 mm	0.029 kg/m
4c x 0.25mm <sup>2</sup>	PG7 / M20-16		5.2 mm	0.038 kg/m
5c x 0.25mm <sup>2</sup>	PG7 / M20-16		5.9 mm	0.049 kg/m
8c x 0.25mm <sup>2</sup>	PG9 / M20-16		7.0 mm	0.069 kg/m
12c x 0.25mm <sup>2</sup>	PG9 / M20-16		7.6 mm	0.085 kg/m
18c x 0.25mm <sup>2</sup>	PG11 / M20S		8.8 mm	0.118 kg/m
25c x 0.25mm <sup>2</sup>	PG13.5 / M20S		10.5 mm	0.168 kg/m
2c x 0.34mm <sup>2</sup>	PG7 / M20-16		4.5 mm	0.027 kg/m
3c x 0.34mm <sup>2</sup>	PG7 / M20-16		5.1 mm	0.037 kg/m
4c x 0.34mm <sup>2</sup>	PG7 / M20-16		5.8 mm	0.048 kg/m
5c x 0.34mm <sup>2</sup>	PG7 / M20-16		6.2 mm	0.056 kg/m
8c x 0.34mm <sup>2</sup>	PG9 / M20-16		7.6 mm	0.082 kg/m
12c x 0.34mm <sup>2</sup>	PG11 / M20-16		8.2 mm	0.103 kg/m
18c x 0.34mm <sup>2</sup>	PG11 / M20S		9.5 mm	0.149 kg/m
25c x 0.34mm <sup>2</sup>	PG13.5 / M20S		11.1 mm	0.198 kg/m
2c x 0.50mm <sup>2</sup>	PG7 / M20-16	6 Amps	5.8 mm	0.053 kg/m
3c x 0.50mm <sup>2</sup>	PG7 / M20-16	6 Amps	6.0 mm	0.055 kg/m
4c x 0.50mm <sup>2</sup>	PG7 / M20-16	6 Amps	6.4 mm	0.059 kg/m
5c x 0.50mm <sup>2</sup>	PG9 / M20-16	6 Amps	6.8 mm	0.069 kg/m
7c x 0.50mm <sup>2</sup>	PG11 / M20S	6 Amps	8.0 mm	0.094 kg/m
12c x 0.50mm <sup>2</sup>	PG11 / M20S	6 Amps	9.6 mm	0.145 kg/m
18c x 0.50mm <sup>2</sup>	PG13.5 / M20S	6 Amps	10.9 mm	0.196 kg/m
25c x 0.50mm <sup>2</sup>	PG16 / M20	6 Amps	12.8 mm	0.263 kg/m
30c x 0.50mm <sup>2</sup>	PG16 / M20	6 Amps	13.4 mm	0.302 kg/m
36c x 0.50mm <sup>2</sup>	PG21 / M25	6 Amps	14.3 mm	0.350 kg/m
2c x 0.75mm <sup>2</sup>	PG7 / M20-16	13 Amps	6.2 mm	0.050 kg/m
3c x 0.75mm <sup>2</sup>	PG7 / M20-16	13 Amps	6.4 mm	0.060 kg/m
4c x 0.75mm <sup>2</sup>	PG9 / M20-16	13 Amps	6.9 mm	0.075 kg/m
5c x 0.75mm <sup>2</sup>	PG9 / M20-16	13 Amps	7.4 mm	0.089 kg/m
7c x 0.75mm <sup>2</sup>	PG11 / M20S	13 Amps	8.7 mm	0.118 kg/m
12c x 0.75mm <sup>2</sup>	PG13.5 / M20S	13 Amps	10.4 mm	0.183 kg/m
18c x 0.75mm <sup>2</sup>	PG16 / M20	13 Amps	12.1 mm	0.258 kg/m
25c x 0.75mm <sup>2</sup>	PG21 / M25	13 Amps	14.2 mm	0.347 kg/m
30c x 0.75mm <sup>2</sup>	PG21 / M25	13 Amps	14.6 mm	0.390 kg/m
36c x 0.75mm <sup>2</sup>	PG21 / M25	13 Amps	15.9 mm	0.460 kg/m
2c x 1.0mm <sup>2</sup>	PG9 / M20-16	16 Amps	6.6 mm	0.058 kg/m
3c x 1.0mm <sup>2</sup>	PG9 / M20-16	16 Amps	6.9 mm	0.072 kg/m
4c x 1.0mm <sup>2</sup>	PG9 / M20-16	16 Amps	7.4 mm	0.087 kg/m
5c x 1.0mm <sup>2</sup>	PG9 / M20-16	16 Amps	8.1 mm	0.107 kg/m
7c x 1.0mm <sup>2</sup>	PG11 / M20S	16 Amps	9.6 mm	0.157 kg/m
12c x 1.0mm <sup>2</sup>	PG13.5 / M20	16 Amps	11.3 mm	0.225 kg/m
18c x 1.0mm <sup>2</sup>	PG16 / M20	16 Amps	13.1 mm	0.300 kg/m
25c x 1.0mm <sup>2</sup>	PG21 / M25	16 Amps	15.7 mm	0.436 kg/m
30c x 1.0mm <sup>2</sup>	PG21 / M25	16 Amps	16.1 mm	0.492 kg/m
36c x 1.0mm <sup>2</sup>	PG21 / M25	16 Amps	17.5 mm	0.585 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
2c x 1.5mm <sup>2</sup>	PG9 / M20-16	20 Amps	7.0 mm	0.071 kg/m
3c x 1.5mm <sup>2</sup>	PG9 / M20-16	20 Amps	7.3mm.	0.089kg/m
4c x 1.5mm <sup>2</sup>	PG11 / M20-16	20 Amps	8.0mm.	0.112 kg/m
5c x 1.5mm <sup>2</sup>	PG11 / M20S	20 Amps	8.7mm	0.135 kg/m
7c x 1.5mm <sup>2</sup>	PG13.5 / M20S	20 Amps	10.5 mm	0.197 kg/m
12c x 1.5mm <sup>2</sup>	PG16 / M20	20 Amps	12.3 mm	0.294 kg/m
18c x 1.5mm <sup>2</sup>	PG21 / M25	20 Amps	14.3 mm	0.417kg/m
25c x 1.5mm <sup>2</sup>	PG21 / M25	20 Amps	16.9 mm	0.567 kg/m
30c x 1.5mm <sup>2</sup>	PG21 / M25	20 Amps	17.6 mm	0.656 kg/m
36c x 1.5mm <sup>2</sup>	PG29 / M32	20 Amps	19.1 mm	0.780 kg/m
3c x 2.5mm <sup>2</sup>	PG11 / M20S	30 Amps	9.2 mm	0.148kg/
4c x 2.5mm <sup>2</sup>	PG13.5 / M20S	30 Amps	10.1mm	0.186kg/m
5c x 2.5mm <sup>2</sup>	PG13.5 / M20S	30 Amps	11.0mm	0.240kg/m
7c x 2.5mm <sup>2</sup>	PG16 / M20	30 Amps	13.0mm	0.307kg/m
12c x 2.5mm <sup>2</sup>	PG21 / M25	30 Amps	15.6mm	0.475kg/m
18c x 2.5mm <sup>2</sup>	PG29 / M25	30 Amps	18.2mm	0.680kg/m
25c x 2.5mm <sup>2</sup>	PG29 / M32	30 Amps	21.8mm	0.930kg/m
4c x 4.0mm <sup>2</sup>	PG16 / M20	40 Amps	12.0mm	0.270kg/m
5c x 4.0mm <sup>2</sup>	PG16 / M20	40 Amps	13.0mm	0.326kg/m
7c x 4.0mm <sup>2</sup>	PG21 / M25	40 Amps	15.8mm	0.458kg/m
4c x 6.0mm <sup>2</sup>	PG21 / M25	50 Amps	14.4mm	0.390kg/m
5c x 6.0mm <sup>2</sup>	PG21 / M25	50 Amps	15.8mm	0.478kg/m
7c x 6.0mm <sup>2</sup>	PG29 / M25	50 Amps	19.2mm	0.668kg/m
4c x 10.0mm <sup>2</sup>	PG29 / M25	70 Amps	18.6mm	0.640kg/m
5c x 10.0mm <sup>2</sup>	PG29 / M32	70 Amps	20.8mm	0.784kg/m
4c x 16.0mm <sup>2</sup>	PG29 / M32	95 Amps	22.1mm	0.946kg/m
4c x 25.0mm <sup>2</sup>	PG36 / M40	125 Amps	26.4mm	1.440kg/m
4c x 35.0mm <sup>2</sup>	PG29 / M32	170 Amps	29.7mm	1.920kgm

**Robotflex T-CY paired stranded total screening**

8 x 2 x 0.14mm <sup>2</sup>	PG11 / M20-16	12.5 Amps	8.3mm	0.103kg/m
2 x 2 x 0.25mm <sup>2</sup>	PG9 / M20-16	20 Amps	6.6mm	0.044kg/m
3 x 2 x 0.25mm <sup>2</sup>	PG9 / M20-16	20 Amps	7.1mm	0.061kg/m
4 x 2 x 0.25mm <sup>2</sup>	PG9 / M20-16	20 Amps	7.8mm	0.071kg/m
5 x 2 x 0.25mm <sup>2</sup>	PG11 / M20S	20 Amps	8.4mm	0.085kg/m
6 x 2 x 0.25mm <sup>2</sup>	PG11 / M20S	20 Amps	9.1mm	0.105kg/m
8 x 2 x 0.25mm <sup>2</sup>	PG13.5 / M20S	20 Amps	10.3mm	0.125kg/m
10 x 2 x 0.25mm <sup>2</sup>	PG13.5 / M20S	20 Amps	10.8mm	0.148kg/m
14 x 2 x 0.25mm <sup>2</sup>	PG13.5 / M20S	20 Amps	11.4mm	0.173kg/m
2 x 2 x 0.50mm <sup>2</sup>	PG9 / M20-16	20 Amps	7.8mm	0.065kg/m
3 x 2 x 0.50mm <sup>2</sup>	PG11 / M20S	20 Amps	8.4mm	0.094kg/m
4 x 2 x 0.50mm <sup>2</sup>	PG13.5 / M20S	20 Amps	8.9mm	0.110kg/m
5 x 2 x 0.50mm <sup>2</sup>	PG16 / M20	20 Amps	10.2mm	0.136kg/m
8 x 2 x 0.50mm <sup>2</sup>	PG21 / M20	20 Amps	12.4mm	0.206kg/m
10 x 2 x 0.50mm <sup>2</sup>	PG21 / M20	20 Amps	12.9mm	0.240kg/m
12 x 2 x 0.50mm <sup>2</sup>	PG21 / M25	20 Amps	13.7mm	0.279kg/m