

# Torsion Cables

## RT 113

PVC torsion cable, torsion angle up to  $\pm 270^\circ$  over 0.5 m



16 90°C 600V Oil 60°C CSA AWM I/II A/B 90°C F 600V FT1 FT2 CE



Marking for RT 113 07971815:

SAB BRÖCKSKES · D-VIERSEN · 07971815 18x1,5mm<sup>2</sup> RT 113 16 AWG/18c 07961618

AWM Style 21216 90°C 600V Oil 60°C CSA AWM I/II A/B 90°C F 600V FT1 FT2 CE

### Construction:

**Conductor**  
0,14 mm<sup>2</sup> - 0,34 mm<sup>2</sup>: bare copper strands, extra fine wires

**Conductor**  
from 0,50 mm<sup>2</sup>: bare copper strands  
acc. to IEC 60228, VDE 0295, class 6

**Insulation:** PVC, TI2  
acc. to EN 50363-3 + VDE 0207-363-3

**Colour code**  
0,14 mm<sup>2</sup> - 0,34 mm<sup>2</sup>: acc. to colour code US 2,  
see chapter N „Technical data“

**Colour code**  
from 0,50 mm<sup>2</sup>: black cores with consecutive numbers  
acc. to EN 50334 + VDE 0293-334,  
green-yellow earth wire from 3 cores

**Stranding:** specially adjusted layering with netting  
tape over each layer and one additional  
non-woven tape over the outer layer

**Sheath material:** PVC, TM5 acc. to  
EN 50363-4-1 + VDE 0207-363-4-1

**Sheath colour:** black (RAL 9005)

### Outstanding features:

- » rugged and reliable
- » torsion angle up to  $\pm 270^\circ$  over 0.5 m
- » UL recognized, CSA approval

### Technical data:

**Peak operating voltage**  
0,14 mm<sup>2</sup> - 0,34 mm<sup>2</sup>: max. 350 V

**Nominal voltage**  
from 0,50 mm<sup>2</sup>: U<sub>0</sub>/U 300/500 V

**Voltage UL/CSA**  
0,14 mm<sup>2</sup> - 0,34 mm<sup>2</sup>: 300 V

**Voltage UL/CSA**  
from 0,50 mm<sup>2</sup>: 600 V

**Testing voltage**  
0,14 mm<sup>2</sup> - 0,34 mm<sup>2</sup>: core/core 1500 V

**Testing voltage**  
from 0,50 mm<sup>2</sup>: core/core 2000 V

**Torsion angle:** up to  $\pm 270^\circ$ /0.5 m

**Min. bending radius**  
continuously flexible:  
from 34 cores: 12 x d  
20 x d

**Temperature range**  
from 0,50 mm<sup>2</sup>: DIN VDE UL: up to +80 °C  
fixed laying: -40/+70 °C  
flexible application: +5/+70 °C

**Temperature range**  
from 0,50 mm<sup>2</sup>: DIN VDE UL/CSA: up to +80 °C  
fixed laying: -40/+70 °C  
flexible application: +5/+70 °C

**Fire performance**  
0,14 mm<sup>2</sup> - 0,34 mm<sup>2</sup>: acc. to IEC 60332-1-2 + VDE 0482-332-1-2,  
UL VW-1

**Fire performance**  
from 0,50 mm<sup>2</sup>: acc. to IEC 60332-1-2 + VDE 0482-332-1-2,  
UL VW-1, CSA FT1, FT2

**Oil resistance:** very good - TM5 acc. to EN 50363-4-1 +  
VDE 0207-363-4-1, oilrating 60 °C acc. to UL 758,  
Fuel-Oil acc. to CSA C22.2 No. 210.2-M90

**Continuous flexibility:** very good

**Absence of harmful substances:** acc. to RoHS directive of the European Union,  
see chapter N „Technical data“

### UL

item no.	no. of cores x cross section n x mm <sup>2</sup>	largest single wire ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
07970301	3 x 0,14	0,11	5,2	4,0	31
07970401	4 x 0,14	0,11	5,6	5,4	36
07970302	3 x 0,25	0,11	5,4	7,2	37
07970402	4 x 0,25	0,11	5,9	9,6	43
07970702	7 x 0,25	0,11	7,3	16,8	67
07972502	25 x 0,25	0,11	11,2	60,0	173
07970203	2 x 0,34	0,11	5,3	6,5	36

### UL / CSA

item no.	no. of cores x cross section n x mm <sup>2</sup>	largest single wire ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
07972505	25 x 0,50	0,16	14,8	120,0	332
07970407	4 x 0,75	0,16	7,4	28,8	75
07970707	7 x 0,75	0,16	9,6	67,2	134
07971407	14 x 0,75	0,16	12,5	100,8	225
07970210	2 x 1,00	0,16	6,8	19,2	59
07970310	3 x 1,00	0,16	6,9	28,8	71
07970410	4 x 1,00	0,16	7,8	38,4	90
07971210	12 x 1,00	0,16	12,4	115,2	234
07971810	18 x 1,00	0,16	14,4	172,8	334
07972510	25 x 1,00	0,16	16,9	240,0	468
07971815	18 x 1,50	0,16	16,5	259,2	456
07972515	25 x 1,50	0,16	18,7	360,0	630
07970325	3 x 2,50	0,16	9,8	72,0	146
07970425	4 x 2,50	0,16	10,6	96,0	184
07970340	3 x 4,00	0,16	12,1	115,2	225
07970361	3 x 10,00	0,21	16,8	288,0	502
07970362	3 x 16,00	0,21	19,7	460,8	731
07970363	3 x 25,00	0,21	23,8	720,0	1080
07970364	3 x 35,00	0,21	27,2	1008,0	1470

Also suitable  
for applications on robots!

Other dimensions and colours are possible on request.