








# TORSION CABLES

# F





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**Also suitable  
for applications on robots!**



## Applications

### ■ Applications torsion able data cables

Torsion able data cables are designed for applications as connection cables in various industrial areas, e.g. construction of industrial robots or plants as well as machine tool construction. These cables are suitable for medium mechanical stress, particularly abrasive and scrubbing stress, for continuously flexible torsion stress with, at the same time, continuously flexible bending stress at free movement without any tensile load. The cables can be used wherever due to the construction the application of cable tracks is impossible, also applicable in dry, wet and damp rooms and with appropriate protection class in ex-proofed areas as well as at low temperatures.

### ■ Applications torsion able control cables

Torsion able control cables are designed for applications as connection cables in various industrial areas, e.g. construction of industrial robots or plants as well as machine tool construction. These cables are suitable for medium mechanical stress, particularly abrasive and scrubbing stress, for continuously flexible torsion stress with, at the same time, continuously flexible bending stress at free movement without any tensile load. The cables can be used wherever due to the construction the application of cable tracks is impossible, also applicable in dry, wet and damp rooms and with appropriate protection class in ex-proofed areas as well as at low temperatures.

#### Exemplary applications:

|          |  |
|----------|--|
| RT 123   | Packaging, wood working, textile, welding and cutting machine construction, car manufacturing industry, industrial robot construction, electrical drive, control, and measurement technology, construction of industrial plants and machine tooling construction |
| RT 123 D |  |
| RT 113   |  |
| RT 113 D |  |

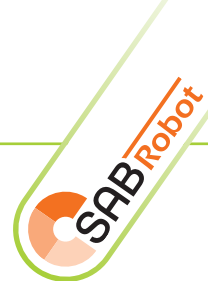
■ You will find further information about the safe application of cables in chapter N

|                                       |   | Cable type | RT 123 | RT 123 D | RT 113 | RT 113 D |
|---------------------------------------|---|------------|--------|----------|--------|----------|
| Applica-<br>tion                      | screened  |            |        | ●        |        | ●        |
|                                       | Torsion angle 450°/0.5 m  |            | ●      | ●        |        |          |
|                                       | Torsion angle 270°/0.5 m  |            |        |          | ●      | ●        |
| Temperature<br>range<br>fixed laying* | +90 °C  |            |        |          |        |          |
|                                       | +70 °C  |            |        |          |        |          |
|                                       | -40 °C  |            |        |          |        |          |
|                                       | -50 °C  |            |        |          |        |          |
| Voltage                               | 0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :<br>Peak operating voltage max. 350 V  |            | ●      | ●        | ●      | ●        |
|                                       | from 0,50 mm <sup>2</sup> :<br>Nominal voltage U <sub>0</sub> /U 300/500 V          |            | ●      | ●        | ●      |          |
|                                       | 0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :<br>Voltage UL/CSA 300 V               |            | ●      | ●        | ●      | ●        |
|                                       | from 0,50 mm <sup>2</sup> :<br>Voltage UL/CSA 600 V                                 |            | ●      | ●        | ●      |          |
|                                       | 0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :<br>Testing voltage core/core 1500 V   |            | ●      | ●        | ●      | ●        |
|                                       | 0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :<br>Testing voltage core/screen 1200 V |            |        | ●        |        | ●        |
|                                       | from 0,50 mm <sup>2</sup> :<br>Testing voltage core/core 2000 V                     |            |        |          | ●      |          |
|                                       | from 0,50 mm <sup>2</sup> :<br>Testing voltage core/core 3000 V                     |            | ●      | ●        |        |          |
|                                       | from 0,50 mm <sup>2</sup> :<br>Testing voltage core/screen 2000 V                   |            |        | ●        |        |          |
| Standard                              | Halogen-free acc. to<br>IEC 60754-1 + VDE 0482-754-1                                |            | ●      | ●        |        |          |
|                                       | Fire performance acc. to<br>IEC 60332-1-2 + VDE 0482-332-1-2                        |            | ●      | ●        | ●      | ●        |
|                                       | Fire performance acc. to UL VW-1  |            | ●      | ●        | ●      | ●        |
|                                       | Fire performance acc. to CSA FT1, FT2   |            | ●      | ●        | ●      | ●        |
|                                       | UL recognized   |            | ●      | ●        | ●      | ●        |
| CSA approval                          |   | ●          | ●      | ●        |        |          |
| Characteristic                        | very good oil resistance acc. to<br>EN 50363-10-2 + VDE 0207-363-10-2               |            | ●      | ●        |        |          |
|                                       | very good oil resistance acc. to<br>EN 50363-4-1 + VDE 0207-363-4-1                 |            |        |          | ●      | ●        |
|                                       | oilrating 60 °C acc. to UL 758,<br>Fuel-Oil acc. to CSA C22.2 No. 210.2-M90         |            |        |          | ●      |          |
|                                       | good chemical resistance  |            | ●      | ●        |        |          |
| very good continuous flexibility      |   | ●          | ●      | ●        | ●      |          |



\*The temperature range for flexible application is mentioned on the corresponding catalogue page

# Torsion Cables



## RT 123

PUR torsion cable, torsion angle up to  $\pm 450^\circ$  over 0.5 m

Style 21060 80°C 600V CSA AWM I/II A/B 80°C 600V FT1 FT2 CE



Marking for RT 123 07951815:

SAB BRÖCKSKES · D-VIERSEN · 07951815 18 x 1.5 mm<sup>2</sup> RT 123 16 AWG/18 c 07951618

AWM Style 21060 80°C 600V CSA AWM I/II A/B 80°C 600V FT1 FT2 CE

### Construction:

|   |   |
|---|---|
| <b>Conductor</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :   | bare copper strands, extra fine wires   |
| <b>Conductor</b><br>from 0,50 mm <sup>2</sup> :                     | bare copper strands<br>acc. to IEC 60228, VDE 0295, class 6   |
| <b>Insulation:</b>  | TPE   |
| <b>Colour code</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> : | acc. to colour code US 2,<br>see chapter N „Technical data“   |
| <b>Colour code</b><br>from 0,50 mm <sup>2</sup> :                   | black cores with consecutive numbers<br>acc. to EN 50334 + VDE 0293-334,<br>green-yellow earth wire from 3 cores              |
| <b>Stranding:</b>   | specially adjusted layering<br>with netting tape over each layer<br>and one additional non-woven tape<br>over the outer layer |
| <b>Sheath material:</b>   | PUR, TPU acc. to<br>EN 50363-10-2 + VDE 0207-363-10-2   |
| <b>Sheath colour:</b>   | black (RAL 9005)  |

### Technical data:

|  |   |
|--|---|
| <b>Peak operating voltage</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :       | max. 350 V  |
| <b>Nominal voltage</b><br>from 0,50 mm <sup>2</sup> :                                | U <sub>0</sub> /U 300/500 V   |
| <b>Voltage UL/CSA</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :               | 300 V   |
| <b>Voltage UL/CSA</b><br>from 0,50 mm <sup>2</sup> :                                 | 600 V   |
| <b>Testing voltage</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :              | core/core 1500 V  |
| <b>Testing voltage</b><br>from 0,50 mm <sup>2</sup> :                                | core/core 3000 V  |
| <b>Torsion angle:</b>  | up to $\pm 450^\circ/0.5$ m   |
| <b>Min. bending radius</b><br><i>continuously flexible:</i><br><i>from 34 cores:</i> | 12 x d<br>20 x d  |
| <b>Radiation resistance:</b>   | 5 x 10 <sup>7</sup> cJ/kg   |
| <b>Temperature range</b><br><i>fixed laying:</i><br><i>flexible application:</i>     | <b>DIN VDE</b><br>-50/+90 °C<br><b>UL/CSA:</b> up to +80 °C<br>-40/+90 °C       |
| <b>Halogen-free:</b>   | acc. to IEC 60754-1 + VDE 0482-754-1  |
| <b>Fire performance:</b>   | acc. to IEC 60332-1-2 + VDE 0482-332-1-2,<br>UL VW-1, CSA FT1, FT2              |
| <b>Oil resistance:</b>   | very good - TPU<br>acc. to EN 50363-10-2 + VDE 0207-363-10-2                    |
| <b>Chem. resistance:</b>   | good against acids, alkalines, solvents,<br>hydraulic liquids etc.              |
| <b>Continuous flexibility:</b>   | very good   |
| <b>Absence of harmful substances:</b>  | acc. to RoHS directive of the European Union,<br>see chapter N „Technical data“ |

### Outstanding features:



- rugged and reliable
- torsion angle up to  $\pm 450^\circ$  over 0.5 m
- UL recognized, CSA approval

| item no. | no. of cores<br>x cross section<br>n x mm <sup>2</sup> | largest<br>single wire<br>ø mm | outer-ø<br>± 5%<br>mm | copper<br>figure<br>kg/km | cable<br>weight<br>≈ kg/km |
|----------|--|--------------------------------|-----------------------|---------------------------|----------------------------|
| 07950301 | 3 x 0,14   | 0,11                           | 5,5                   | 4,0                       | 31                         |
| 07950401 | 4 x 0,14   | 0,11                           | 4,7                   | 5,4                       | 26                         |
| 07950302 | 3 x 0,25   | 0,11                           | 4,6                   | 7,2                       | 25                         |
| 07950402 | 4 x 0,25   | 0,11                           | 4,8                   | 9,6                       | 28                         |
| 07950702 | 7 x 0,25   | 0,11                           | 5,4                   | 16,8                      | 39                         |
| 07952502 | 25 x 0,25  | 0,11                           | 9,1                   | 60,0                      | 117                        |
| 07950203 | 2 x 0,34   | 0,11                           | 4,8                   | 6,6                       | 27                         |

| item no. | no. of cores<br>x cross section<br>n x mm <sup>2</sup> | largest<br>single wire<br>ø mm | outer-ø<br>± 5%<br>mm | copper<br>figure<br>kg/km | cable<br>weight<br>≈ kg/km |
|----------|--|--------------------------------|-----------------------|---------------------------|----------------------------|
| 07951805 | 18 x 0,50  | 0,16                           | 12,5                  | 95,0                      | 216                        |
| 07952505 | 25 x 0,50  | 0,16                           | 14,6                  | 132,0                     | 303                        |
| 07950407 | 4 x 0,75   | 0,16                           | 7,8                   | 28,8                      | 78                         |
| 07951407 | 14 x 0,75  | 0,16                           | 12,6                  | 100,8                     | 207                        |
| 07950210 | 2 x 1,00   | 0,16                           | 7,3                   | 19,2                      | 64                         |
| 07950310 | 3 x 1,00   | 0,16                           | 7,6                   | 28,8                      | 75                         |
| 07950410 | 4 x 1,00   | 0,16                           | 8,1                   | 38,4                      | 91                         |
| 07950610 | 6 x 1,00   | 0,16                           | 9,4                   | 57,6                      | 127                        |
| 07950710 | 7 x 1,00   | 0,16                           | 10,0                  | 67,2                      | 147                        |
| 07951210 | 12 x 1,00  | 0,16                           | 12,2                  | 115,2                     | 214                        |
| 07951810 | 18 x 1,00  | 0,16                           | 14,7                  | 172,8                     | 316                        |
| 07952510 | 25 x 1,00  | 0,16                           | 16,6                  | 240,0                     | 428                        |
| 07953410 | 34 x 1,00  | 0,16                           | 19,7                  | 326,4                     | 559                        |
| 07954010 | 40 x 1,00  | 0,16                           | 20,9                  | 384,0                     | 659                        |
| 07954110 | 41 x 1,00  | 0,16                           | 20,9                  | 393,6                     | 670                        |
| 07950715 | 7 x 1,50   | 0,16                           | 11,3                  | 100,8                     | 197                        |
| 07951215 | 12 x 1,50  | 0,16                           | 14,3                  | 172,8                     | 303                        |
| 07951815 | 18 x 1,50  | 0,16                           | 16,6                  | 259,2                     | 435                        |
| 07952515 | 25 x 1,50  | 0,16                           | 19,1                  | 360,0                     | 609                        |
| 07950325 | 3 x 2,50   | 0,16                           | 9,9                   | 72,0                      | 136                        |
| 07950425 | 4 x 2,50   | 0,16                           | 10,3                  | 96,0                      | 166                        |
| 07950525 | 5 x 2,50   | 0,16                           | 11,8                  | 120,0                     | 210                        |
| 07950340 | 3 x 4,00   | 0,16                           | 11,5                  | 115,2                     | 211                        |
| 07950361 | 3 x 10,00  | 0,21                           | 16,5                  | 288,0                     | 471                        |
| 07950362 | 3 x 16,00  | 0,21                           | 19,4                  | 460,8                     | 682                        |
| 07950363 | 3 x 25,00  | 0,21                           | 24,0                  | 720,0                     | 1035                       |
| 07950364 | 3 x 35,00  | 0,21                           | 27,2                  | 1008,0                    | 1389                       |

Other dimensions and colours are possible on request.

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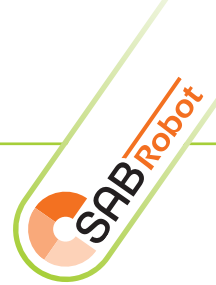


Also suitable  
for applications on robots!

# Torsion Cables

## RT 123 D

PUR torsion cable with overall copper screen, torsion angle up to  $\pm 450^\circ$  over 0.5 m



Marking for RT 123 D 07961815:

SAB BRÖCKSKES · D-VIERSEN · 07961815 18 x 1.5 mm<sup>2</sup> RT 123 D 16 AWG/18c 07961818

AWM Style 21060 80°C 600V CSA AWM I/II A/B 80°C 600V FT1 FT2 CE

### Construction:

|   |   |
|---|---|
| <b>Conductor</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :   | bare copper strands, extra fine wires   |
| <b>Conductor</b><br>from 0,50 mm <sup>2</sup> :                     | bare copper strands<br>acc. to IEC 60228, VDE 0295, class 6   |
| <b>Insulation:</b>  | TPE   |
| <b>Colour code</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> : | acc. to colour code US 2,<br>see chapter N „Technical Data“   |
| <b>Colour code</b><br>from 0,50 mm <sup>2</sup> :                   | black cores with consecutive numbers<br>acc. to EN 50334 + VDE 0293-334,<br>green-yellow earth wire from 3 cores              |
| <b>Stranding:</b>   | specially adjusted layering<br>with netting tape over each layer<br>and one additional non-woven tape<br>over the outer layer |
| <b>Screen:</b>  | wrapped with bare copper wires  |
| <b>Wrapping:</b>  | non-woven tape  |
| <b>Sheath material:</b>   | PUR, TMPU acc. to<br>EN 50363-10-2 + VDE 0207-363-10-2  |
| <b>Sheath colour:</b>   | black (RAL 9005)  |

### Technical data:

|   |   |                                    |
|---|---|------------------------------------|
| <b>Peak operating voltage</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :        | max. 350 V  |                                    |
| <b>Nominal voltage</b><br>from 0,50 mm <sup>2</sup> :                                 | U <sub>0</sub> /U 300/500 V   |                                    |
| <b>Voltage UL/CSA:</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :               | 300 V   |                                    |
| <b>Voltage UL/CSA:</b><br>from 0,50 mm <sup>2</sup> :                                 | 600 V   |                                    |
| <b>Testing voltage</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :               | core/core 1500 V  | core/screen 1200 V                 |
| <b>Testing voltage</b><br>from 0,50 mm <sup>2</sup> :                                 | core/core 3000 V  | core/screen 2000 V                 |
| <b>Torsion angle:</b>   | up to $\pm 450^\circ/0.5$ m   |                                    |
| <b>Min. bending radius</b><br><i>continuously flexible:</i><br><i>from 3/4 cores:</i> | 12 x d  | 20 x d                             |
| <b>Radiation resistance:</b>  | 5 x 10 <sup>7</sup> cJ/kg   |                                    |
| <b>Temperature range</b><br><i>fixed laying:</i><br><i>flexible application:</i>      | DIN VDE<br>-50/+90 °C   | UL/CSA: up to +80 °C<br>-40/+90 °C |
| <b>Halogen-free:</b>  | acc. to IEC 60754-1 + VDE 0482-754-1  |                                    |
| <b>Fire performance:</b>  | acc. to IEC 60332-1-2 + VDE 0482-332-1-2,<br>UL VW-1, CSA FT1, FT2              |                                    |
| <b>Oil resistance:</b>  | very good - TMPU<br>acc. to EN 50363-10-2 + VDE 0207-363-10-2                   |                                    |
| <b>Chem. resistance:</b>  | good against acids, alkalines, solvents,<br>hydraulic liquids etc.              |                                    |
| <b>Continuous flexibility:</b>  | very good   |                                    |
| <b>Absence of harmful substances:</b>   | acc. to RoHS directive of the European Union,<br>see chapter N „Technical Data“ |                                    |

### Outstanding features:



- rugged and reliable
- torsion angle up to  $\pm 450^\circ$  over 0.5 m
- UL recognized, CSA approval

| item no. | no. of cores<br>x cross section<br>n x mm <sup>2</sup> | largest<br>single wire<br>ø mm | outer-ø<br>± 5%<br>mm | copper<br>figure<br>kg/km | cable<br>weight<br>≈ kg/km |
|----------|--|--------------------------------|-----------------------|---------------------------|----------------------------|
| 07961201 | 12 x 0,14  | 0,11                           | 6,9                   | 30,2                      | 62                         |
| 07962502 | 25 x 0,25  | 0,11                           | 10,0                  | 90,9                      | 156                        |
| 07960505 | 5 x 0,50   | 0,16                           | 8,2                   | 40,5                      | 94                         |
| 07960710 | 7 x 1,00   | 0,16                           | 10,7                  | 108,5                     | 178                        |
| 07961215 | 12 x 1,50  | 0,16                           | 14,9                  | 214,7                     | 338                        |
| 07961815 | 18 x 1,50  | 0,16                           | 17,1                  | 326,0                     | 496                        |

Other dimensions and colours are possible on request.



Also suitable  
for applications on robots!

# 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 18 x 1.5 mm<sup>2</sup> RT 113 16 AWG/18 c 07961618

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

| Construction:   |   |
|---|---|
| <b>Conductor</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :   | bare copper strands, extra fine wires   |
| <b>Conductor</b><br>from 0,50 mm <sup>2</sup> :                     | bare copper strands<br>acc. to IEC 60228, VDE 0295, class 6   |
| <b>Insulation:</b>  | PVC, TI2<br>acc. to EN 50363-3 + VDE 0207-363-3   |
| <b>Colour code</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> : | acc. to colour code US 2,<br>see chapter N „Technical Data“   |
| <b>Colour code</b><br>from 0,50 mm <sup>2</sup> :                   | black cores with consecutive numbers<br>acc. to EN 50334 + VDE 0293-334,<br>green-yellow earth wire from 3 cores              |
| <b>Stranding:</b>   | specially adjusted layering<br>with netting tape over each layer<br>and one additional non-woven tape<br>over the outer layer |
| <b>Sheath material:</b>   | PVC, TM5 acc. to<br>EN 50363-4-1 + VDE 0207-363-4-1   |
| <b>Sheath colour:</b>   | black (RAL 9005)  |

| Technical data:   |  |
|---|--|
| <b>Peak operating voltage</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :  | max. 350 V   |
| <b>Nominal voltage</b><br>from 0,50 mm <sup>2</sup> :   | U <sub>0</sub> /U 300/500 V  |
| <b>Voltage UL:</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :   | 300 V  |
| <b>Voltage UL/CSA:</b><br>from 0,50 mm <sup>2</sup> :   | 600 V  |
| <b>Testing voltage</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :   | core/core 1500 V   |
| <b>Testing voltage</b><br>from 0,50 mm <sup>2</sup> :   | core/core 2000 V   |
| <b>Torsion angle:</b>   | up to $\pm 270^\circ/0.5$ m  |
| <b>Min. bending radius</b><br><i>continuously flexible:</i><br><i>from 34 cores:</i>  | 12 x d<br>20 x d   |
| <b>Temperature range</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup><br><i>fixed laying:</i><br><i>flexible application:</i> | <b>DIN VDE</b><br>-40/+70 °C<br>+5/+70 °C<br><b>UL:</b> up to +80 °C   |
| <b>Temperature range</b><br>from 0,50 mm <sup>2</sup><br><i>fixed laying:</i><br><i>flexible application:</i>                   | <b>DIN VDE</b><br>-40/+70 °C<br>+5/+70 °C<br><b>UL/CSA:</b> up to +90 °C   |
| <b>Fire performance:</b><br>0,14 mm <sup>2</sup> - 0,34 mm <sup>2</sup> :   | acc. to IEC 60332-1-2 + VDE 0482-332-1-2,<br>UL VW-1   |
| <b>Fire performance:</b><br>from 0,50 mm <sup>2</sup> :   | acc. to IEC 60332-1-2 + VDE 0482-332-1-2,<br>UL VW-1, CSA FT1, FT2   |
| <b>Oil resistance:</b>  | very good - PVC, TM5 acc. to EN 50363-4-1 +<br>VDE 0207-363-4-1, oilrating 60 °C acc. to UL 758,<br>Fuel-Oil acc. to CSA C22.2 No. 210.2-M90 |
| <b>Continuous flexibility:</b>  | very good  |
| <b>Absence of harmful substances:</b>   | acc. to RoHS directive of the European Union,<br>see chapter N „Technical Data“  |

| Outstanding features: |   |
|-----------------------|---|
|                       | <ul style="list-style-type: none"> <li>● rugged and reliable</li> <li>● torsion angle up to <math>\pm 270^\circ</math> over 0.5 m</li> <li>● UL recognized, CSA approval</li> </ul> |

### UL

| item no. | no. of cores<br>x cross section<br>n x mm <sup>2</sup> | largest<br>single wire<br>ø mm | outer-ø<br>± 5%<br>mm | copper<br>figure<br>kg/km | cable<br>weight<br>≈ 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<br>x cross section<br>n x mm <sup>2</sup> | largest<br>single wire<br>ø mm | outer-ø<br>± 5%<br>mm | copper<br>figure<br>kg/km | cable<br>weight<br>≈ 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                        |
| 07973410 | 34 x 1,00  | 0,16                           | 20,1                  | 326,4                     | 624                        |
| 07974110 | 41 x 1,00  | 0,16                           | 21,4                  | 393,6                     | 732                        |
| 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                       |

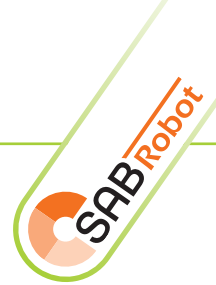
Other dimensions and colours are possible on request.

**Also suitable  
for applications on robots!**

# Torsion Cables

## RT 113 D

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



Marking for RT 113 D 07981201:

SAB BRÖCKSKES · D-VIERSEN · 07981201 12 x 0.14 mm<sup>2</sup> RT 113 D 26 AWG/12c 07982612 AWM Style 2464 80°C 300V CE

### Construction:

|                         |   |
|-------------------------|---|
| <b>Conductor:</b>       | bare copper strands, extra fine wires   |
| <b>Insulation:</b>      | PVC, Tl2<br>acc. to EN 50363-3 + VDE 0207-363-3   |
| <b>Colour code:</b>     | acc. to colour code US 2,<br>see chapter N „Technical Data“   |
| <b>Stranding:</b>       | specially adjusted layering<br>with netting tape over each layer<br>and one additional non-woven tape<br>over the outer layer |
| <b>Screen:</b>          | wrapped with bare copper wires  |
| <b>Wrapping:</b>        | non-woven tape  |
| <b>Sheath material:</b> | PVC, TM5 acc. to<br>EN 50363-4-1 + VDE 0207-363-4-1   |
| <b>Sheath colour:</b>   | black (RAL 9005)  |

### Technical data:

|  |   |                    |
|--|---|--------------------|
| <b>Peak operating voltage:</b>   | max. 350 V  |                    |
| <b>Voltage UL:</b>   | 300 V   |                    |
| <b>Testing voltage:</b>  | core/core 1500 V  | core/screen 1200 V |
| <b>Torsion angle:</b>  | up to $\pm 270^\circ/0.5$ m   |                    |
| <b>Min. bending radius</b><br><i>continuously flexible:</i><br><i>from 34 cores:</i> | 12 x d<br>20 x d  |                    |
| <b>Temperature range</b><br><i>fixed laying:</i><br><i>flexible application:</i>     | DIN VDE<br>-40/+70 °C<br>+5/+70 °C  | UL: up to +80 °C   |
| <b>Fire performance:</b>   | acc. to IEC 60332-1-2 + VDE 0482-332-1-2,<br>UL VW-1                            |                    |
| <b>Oil resistance:</b>   | very good - PVC, TM5<br>acc. to EN 50363-4-1 + VDE 0207-363-4-1                 |                    |
| <b>Continuous flexibility:</b>   | very good   |                    |
| <b>Absence of harmful substances:</b>  | acc. to RoHS directive of the European Union,<br>see chapter N „Technical Data“ |                    |

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### Outstanding features:



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

| item no. | no. of cores<br>x cross section<br>n x mm <sup>2</sup> | largest<br>single wire<br>ø mm | outer-ø<br>$\pm 5\%$<br>mm | copper<br>figure<br>kg/km | cable<br>weight<br>$\approx$ kg/km |
|----------|--|--------------------------------|----------------------------|---------------------------|------------------------------------|
| 07981201 | 12 x 0,14  | 0,11                           | 8,4                        | 32,2                      | 88                                 |
| 07982502 | 25 x 0,25  | 0,11                           | 11,6                       | 102,3                     | 201                                |

Other dimensions and colours are possible on request.



Also suitable  
for applications on robots!