

400 Hz Cables

Ground Power Cables

for Airport Equipment



www.sab-cable.com



Family business in the third generation

75 years of experience in cable and wire manufacturing as well as in temperature measurement technology turned a one-man business into a company with more than 550 employees. We prove our strength every year with more than 1500 special products according to customers' requirements. Each product is a new challenge for our creative technical team. We at **SAB** see ourselves as a manufacturer and a service provider – in the sense of true partnership and the greatest possible customer orientation.

Today, the quality of our products is known and appreciated in more than 100 countries around the world. In all product ranges, we are certified according to DIN EN ISO 9001. Furthermore, we have implemented an environmental management system for our company according to DIN EN ISO 14001, an occupational health and safety management system according to NLF/ILO-OSH and DIN ISO 45001, and an energy management system according to DIN EN ISO 50001.

And also for the future, our slogan is: **"WE GO FORWARD!"**

| | |
|-----------------------------|---|
| FOUNDED: | 1947 by Peter Bröckskes sen. an independent, medium-sized company. |
| CEO: | Peter Bröckskes and Sabine Bröckskes-Wetten |
| PLANT/LOCATION: | In Viersen (Lower Rhine) 110.000 m ² company site. Own manufacturing from copper conductor to outer sheath. VDE approved burnchamber and laboratory within the company. |
| EMPLOYEES/WORKERS: | approx. 430 at the plant in Viersen, 550 worldwide |
| YEARLY SALES: | over 134 Mio. € worldwide |
| PRODUCTS: | Special Cables Measurement Technology Cable Harnessing |
| CERTIFICATES AND APPROVALS: | Quality management system acc. to DIN EN ISO 9001 for every manufacturing field Environmental management system acc. to DIN EN ISO 14001 Occupational health and safety management acc. to NLF/ILO-OSH and DIN ISO 45001 Energy management system acc. to DIN EN ISO 50001 |



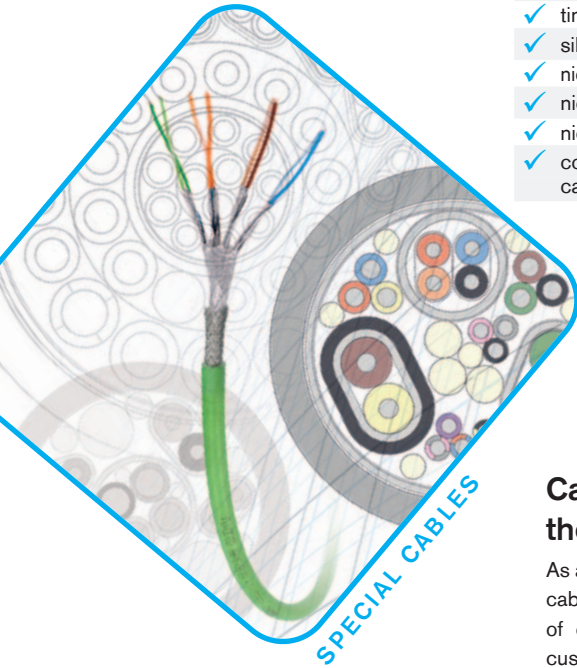
Production possibilities

Flexible cables and wires “Made in Germany”

As a leading manufacturer we develop and produce cables for industrial purposes.

Our wide range of materials offers a lot of possibilities for your individual product requirement.

The following survey shows an extract of our production possibilities:



Conductor Materials:

- ✓ bare copper
- ✓ tinned copper
- ✓ silver plated copper
- ✓ nickel plated copper
- ✓ nickel
- ✓ nickel pure
- ✓ compensating cable alloys

Insulation and Jacketing Materials:

- ✓ PVC
- ✓ Polyethylene
- ✓ Polypropylene
- ✓ Polyurethane
- ✓ TPE
- ✓ SABIX® (zero halogen)
- ✓ Besilen® - Silicone
- ✓ FEP, ETFE, PFA, PTFE
- ✓ PI foil
- ✓ Fibreglass

Temperature Ranges:

- Thermoplastic Elastomers
- ✓ -50°C up to +145°C
- SABIX®
- ✓ -50°C up to +220°C
- Besilen® - Silicone
- ✓ -40°C up to +220°C
- FEP, ETFE, PFA
- ✓ -90°C up to +260°C
- Fibreglass
- ✓ up to +600°C

Conductors:

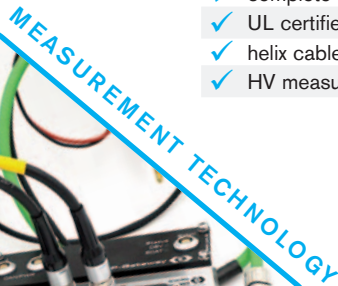
- ✓ cross sections 0,055 - 300 mm²
- ✓ unshielded and shielded over 100 conductors

Cable harnessing directly from the manufacturer SAB:

As a full service partner we are able to offer besides cable design and production the manufacturing of cable harnessing products according to customer's request. Please trust on our experience for decades in the treatment of cables and connectors.



- ✓ cable harness according to customer's demands
- ✓ complete cable harness
- ✓ UL certified assemblies
- ✓ helix cables
- ✓ HV measuring harness



Measuring technology for industrial applications

Manufacturer of temperature sensors for industrial applications with 75 years of experience!

- ✓ mineral insulated thermocouples
- ✓ mineral insulated resistance thermometers
- ✓ temperature sensors
- ✓ mobile high voltage measuring technology
- ✓ temperature sensors for vehicle testing

400 Hz Ground Power














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Cables for Airport Equipment

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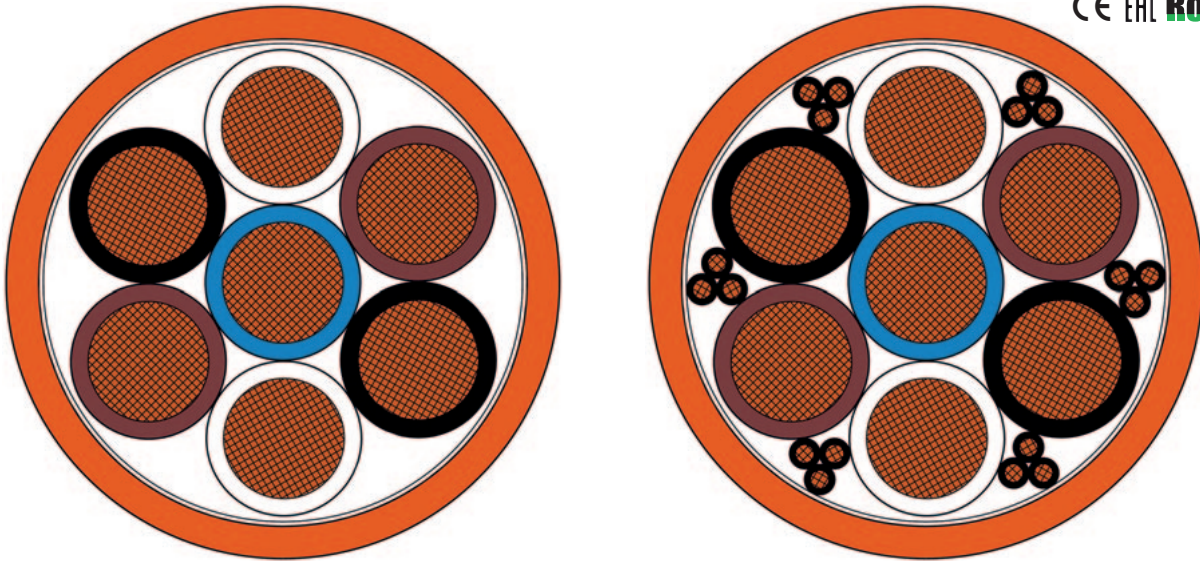


400 Hz Ground Power

GP 400 Sy

400 Hz Ground Power supply cable - Symmetrical

for fixed installation



Application: For use as fixed installation cable in 400 Hz systems, e.g. between 400 Hz generator and cable dispenser.

Construction:

| | |
|-------------------------|---|
| Conductor: | bare copper strands |
| Insulation | 35,0mm ² : PVC 1,0mm ² : SABIX®C |
| Colour code: | control cores: black with numbers 1-18 neutral core: blue phase core: white, brown, black (two conductors of the same colour form the phase) |
| Stranding: | phase conductor concentrically around the neutral conductor, control conductors as triple in the fillers |
| Sheath material: | PVC |
| Sheath colour: | orange |
| Marking: | SAB BRÖCKSKES · D-VIERSEN · GP 400 Sy 7x35,0mm ² +6x3x1,0mm ² 3400-7213 CE and continuous meter marking |

Technical Data:

| | |
|---------------------------------------|--|
| Nominal voltage: | U ₀ /U 0,6/1 kV |
| Testing voltage: | core/core 4000 V AC |
| Min. bending radius | |
| fixed laying: | 4 x d |
| flexible application: | 8 x d |
| Temperature range | |
| fixed laying: | -40/+70 °C |
| flexible application: | +5/+70 °C |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

Outstanding features:



- reduced outer diameter

| Item. no. | no. of cores x cross section n x mm ² | outer-Ø approx. mm | copper figure kg/km | cable weight ≈ kg/km | DC resistance at 20°C max. Ω/km | voltage drop [mV/(A*m)] |
|-----------|--|-----------------------|---------------------------|----------------------------|--|--|
| 34007210 | 7 x 35,0 | 37,0 | 2352,0 | 3003 | 35,0 mm ² : 0,554 | 35,0 mm ² : 1,108 |
| 34007213 | 7 x 35,0 + 6 x 3 x 1,0 | 37,0 | 2524,8 | 3125 | 35,0 mm ² : 0,554 1,0 mm ² : 19,5 | 35,0 mm ² : 1,108 1,0 mm ² : 39,0 |

Other dimensions and colours are possible on request.



Also available
with 24 control cores!

400 Hz Ground Power

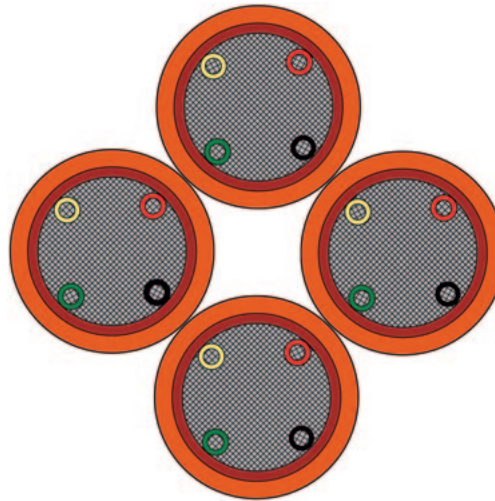
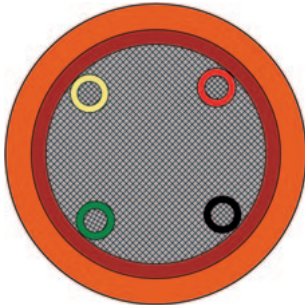
GP 400 SC

400 Hz Ground Power supply cable - SingleCore

GP 400 QF

400 Hz Ground Power supply cable - QuadFlex

for flexible application



Application: For use in flexible applications, e.g. mobile generators, cable dispensers in the ground or on the passenger bridge.

Construction:

| | |
|---------------------------|---|
| Conductor: | tinned copper strands |
| Insulation: | SABIX® |
| Colour code: | control cores: red, black, green, yellow power supply core: red |
| Stranding: | control cores within the power supply core |
| Sheath material: | PUR |
| Sheath colour: | orange |
| Stranding: | GP 400 QF: openly stranded |
| Marking GP 400 SC: | SAB BRÖCKSKES · D-VIERSEN · GP 400 SC (50,0mm ² +4x1,0mm ²) 3400-1321 CE and continuous meter marking |
| Marking GP 400 QF: | SAB BRÖCKSKES · D-VIERSEN · GP 400 QF 4x(50,0mm ² +4x1,0mm ²) 3400-4321 L1 resp. L2 resp. L3 resp. N CE and continuous meter marking |

Technical Data:

| | |
|---|---|
| Nominal voltage: | U ₀ /U 115/200 V |
| Max. permissible operating voltage*: | U ₀ /U 0,6/1 kV |
| Testing voltage: | core/core 4000 V AC |
| Min. bending radius | |
| fixed laying: | 4 x d |
| flexible application: | 6 x d |
| Temperature range | |
| fixed laying: | -50/+90 °C |
| flexible application: | -40/+90 °C |
| GP 400 QF: | |
| limited time of use: | +110 °C (7500 h) |
| Halogen-free: | acc. to IEC 60754-1 + VDE 0482-754-1 |
| Oil resistance: | very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 |
| Weather resistance: | very good |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

Outstanding features:



- low capacity insulation
- abrasion-resistant PUR sheath
- control cores symmetrically arranged
- cold flexible
- halogen-free
- oil resistant
- weather resistant

* using all wires on one potential

| Item. no. | no. of cores x cross section n x mm ² | outer-Ø approx. mm | copper figure kg/km | cable weight ≈ kg/km | DC resistance at 20°C max. Ω/km | voltage drop [mV/(A*m)] |
|------------------|--|-----------------------|---------------------------|----------------------------|--|--|
| GP 400 SC | | | | | | |
| 34001321 | 1 x (50,0 + 4 x 1,0) | 15,6 | 524,0 | 587 | 50,0 mm ² : 0,393 1,0 mm ² : 20,0 | 50,0 mm ² : 0,786 1,0 mm ² : 40,0 |
| 34001421 | 1 x (70,0 mm ² + 4 x 1,0 mm ²) | 17,7 | 739,2 | 800 | 70,0 mm ² : 0,277 1,0 mm ² : 20,0 | 70,0 mm ² : 0,554 1,0 mm ² : 40,0 |
| 34001521 | 1 x (95,0 mm ² + 4 x 1,0 mm ²) | 19,6 | 940,8 | 1032 | 95,0 mm ² : 0,210 1,0 mm ² : 20,0 | 95,0 mm ² : 0,420 1,0 mm ² : 40,0 |
| GP 400 QF | | | | | | |
| 34004321 | 4 x (50,0 mm ² + 4 x 1,0 mm ²) | 37,5 | 2096,0 | 2436 | 50,0 mm ² : 0,393 1,0 mm ² : 20,0 | 50,0 mm ² : 0,786 1,0 mm ² : 40,0 |
| 34004421 | 4 x (70,0 mm ² + 4 x 1,0 mm ²) | 42,5 | 2956,8 | 3167 | 70,0 mm ² : 0,277 1,0 mm ² : 20,0 | 70,0 mm ² : 0,554 1,0 mm ² : 40,0 |

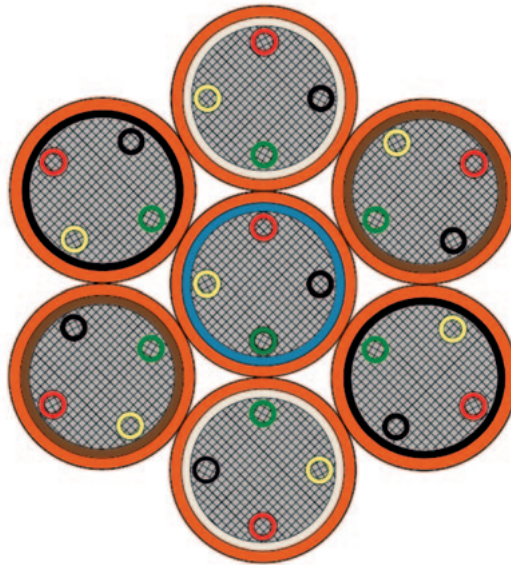
Other dimensions and colours are possible on request.

400 Hz Ground Power

GP 400 7F

400 Hz Ground Power supply cable - SevenFlex

for flexible application



Application: Symmetrical construction with high flexibility. Minimum bending radius (easy to coil even in tight spaces) and high quality electrical performance (low voltage drop and low voltage unbalance). Can be used over longer distances.

Construction:

| | |
|-------------------------|---|
| Conductor: | tinned copper strands |
| Isolierhülle: | SABIX® |
| Colour code: | control cores: red, black, green, yellow power supply core: red |
| Stranding: | control cores within the power supply core |
| Sheath material: | PUR |
| Sheath colour: | orange |
| Stranding: | openly stranded |
| Marking: | SAB BRÖCKSKES · D-VIERSEN · Special GP 400 35,0mm ² +4x1,0mm ² 3400-9006 CE and continuous meter marking |

Technical Data:

| | |
|---------------------------------------|--|
| Nominal voltage: | U ₀ /U 0,6/1 kV |
| Testing voltage: | core/core 4000 V AC |
| Min. bending radius | |
| fixed laying: | 4 x d |
| flexible application: | 6 x d |
| Temperature range | |
| fixed laying: | -50/+90 °C |
| flexible application: | -40/+90 °C |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

Outstanding features:



- low capacity insulation
- abrasion-resistant PUR sheath
- control cores symmetrically arranged
- cold flexible
- halogen-free
- oil resistant
- weather resistant

| Item. no. | no. of cores x cross section n x mm ² | outer-Ø approx. mm | copper figure kg/km | cable weight ≈ kg/km | DC resistance at 20°C max. Ω/km | voltage drop [mV/(A*m)] |
|-----------|--|-----------------------|---------------------------|----------------------------|--|--|
| 34009006 | 7 x (35,0 mm ² + 4 x 1,0 mm ²) | 40,2 | 2654,4 | 2969,2 | 35,0 mm ² : 0,554 1,0 mm ² : 19,5 | 35,0 mm ² : 1,108 1,0 mm ² : 39,0 |

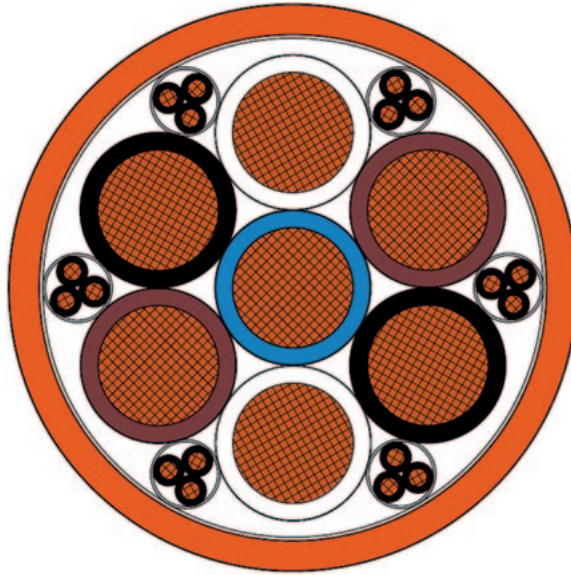
Other dimensions and colours are possible on request.

400 Hz Ground Power

GP 400 SF

400 Hz Ground Power supply cable - SymmetricalFlex

for flexible application



Application: For the application as fixed supply cable easy to install or for flexible use without elevated mechanical stress for hand-held applications for example mobile GPUs. Optimised flexibility due to smooth core and sheath materials that allows easy installation and handling.

Construction:

| | |
|-------------------------|---|
| Conductor: | bare copper strands |
| Insulation: | SABIX® |
| Colour code: | control cores: black with numbers 1-18 neutral core: blue phase core: white, brown, black (two cores of the same colour form the phase) |
| Stranding: | Phase conductors concentrically around neutral core, control cores as tripple in the interstices, triple wrapped with non-woven tape, all elements twisted in specially adjusted layers, non-woven tape overlapping wrapped |
| Sheath material: | special compound |
| Sheath colour: | orange |
| Marking: | SAB BRÖCKSKES · D-VIERSEN · GP 400 SF 7x35,0mm ² +6x3x1,0mm ² 3400-7223 CE and continuous meter marking |

Technical Data:

| | |
|---------------------------------------|--|
| Nominal voltage: | U ₀ /U 0,6/1 kV |
| Testing voltage: | core/core 4000 V AC |
| Current carrying capacity: | with reference to LV112-3 and an application based current time profile as well as the following application conditions - ambient temperature up to max. 52°C - two phases of the same colour interconnected to one core - further cores (25 mm ² blue and 1mm ² / 34007123) resp. (35 mm ² blue and 1mm ² / 34007223) without charge - single laying at or on surfaces |
| 34007123 | 231 A for max. 10 min. 262,5 A for max. 5 min. 294 A for max. 10 sec. 420 A for max. 2 sec. |
| 34007223 | 286 A for max. 10 min. 325 A for max. 5 min. 364 A for max. 10 sec. 520 A for max. 2 sec. |
| Min. bending radius | |
| <i>fixed laying:</i> | 4 x d |
| <i>flexible application:</i> | 6 x d |
| Temperature range | |
| <i>fixed laying:</i> | -40/+70 °C |
| <i>flexible application:</i> | -20/+70 °C |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

Outstanding features:



- low capacity insulation
- very flexible and smooth handling
- also usable as a supply cable directly on the aircraft
- very good installation in narrowest spaces
- good resistance and low wear

| Item. no. | no. of cores x cross section n x mm ² | outer-Ø approx. mm | copper figure kg/km | cable weight ≈ kg/km | DC resistance at 20°C max. Ω/km | voltage drop [mV/(A*m)] |
|-----------|--|--------------------|---------------------|----------------------|--|--|
| 34007123 | 7 x 25,0 mm ² + 6 x 3 x 1,0 mm ² | 37,5 | 1852,8 | 2437,5 | 25,0 mm ² : 0,780 1,0 mm ² : 19,5 | 25,0 mm ² : 1,560 1,0 mm ² : 39,0 |
| 34007223 | 7 x 35,0 mm ² + 6 x 3 x 1,0 mm ² | 42,2 | 2524,8 | 2934,5 | 35,0 mm ² : 0,554 1,0 mm ² : 19,5 | 35,0 mm ² : 1,108 1,0 mm ² : 39,0 |

Other dimensions and colours are possible on request.



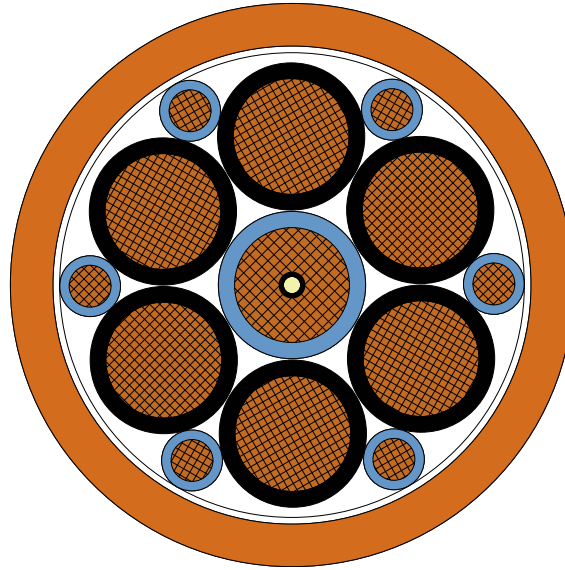
Also available with 24 control cores!

400 Hz Ground Power

GP 400 SF S

400 Hz Ground Power supply cable

for flexible application



Application: For the application as cable chain cables in energy supply chains or as Festoon cable on passenger boarding bridges.

Construction:

| | |
|-------------------------|---|
| Conductor: | tinned copper strands, fine wires |
| Insulation: | SABIX® |
| Colour code: | 6,0 mm ² : blue 35,0 mm ² : black with numbers, 2 x 1-3 blue |
| Stranding: | 35,0 mm ² : neutral core with strain relief in the core, wrapped with non-woven tape |
| Wrapping: | non-woven tape |
| Sheath material: | PUR |
| Sheath colour: | orange |
| Marking: | SAB BRÖCKSKES · D-VIERSEN · GP 400 SF S 7x35,0mm ² +6x6,0mm ² 3400-6230 CE and continuous meter marking |

Technical Data:

| | |
|---|--|
| Nominal voltage: | U ₀ /U 0,6/1 kV |
| Testing voltage: | core/core 4000 V AC |
| Min. bending radius continuously flexible: | 7,5 x d |
| Temperature range fixed laying: | -50/+90 °C |
| flexible application: | -40/+90 °C |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

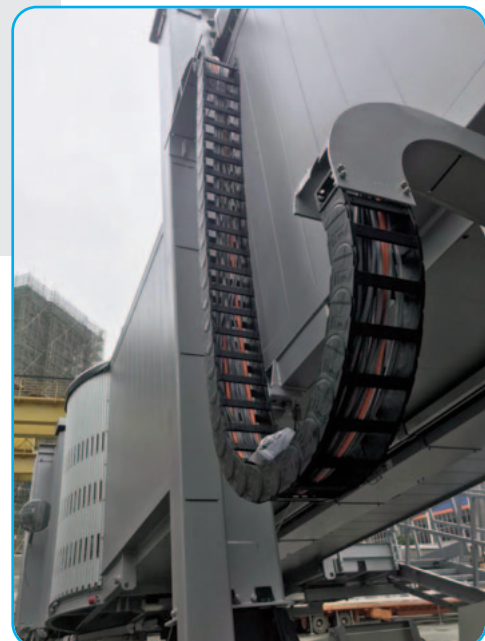
Outstanding features:



- low capacity insulation
- abrasion-resistant PUR sheath
- cold flexible
- halogen-free
- oil resistant
- weather resistant

| Item. no. | no. of cores x cross section n x mm ² | outer-Ø approx. mm | copper figure kg/km | cable weight ≈ kg/km | DC resistance at 20°C max. Ω/km |
|-----------|--|-----------------------|---------------------------|----------------------------|--|
| 34006230 | 7 x 35,0 mm ² + 6 x 6,0 mm ² | 38,7 | 2707,2 | 3174 | 35,0 mm ² : 0,565 6,0 mm ² : 3,39 |

Other dimensions and colours are possible on request.

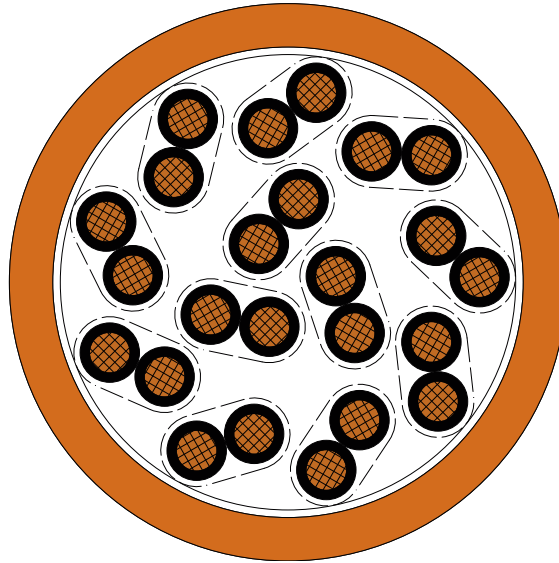


400 Hz Ground Power

GP 400 SF S

400 Hz Ground Power control cable

for flexible application



Application: For the application as cable chain cables in energy supply chains or as Festoon cable on passenger boarding bridges.

Construction:

| | |
|-------------------------|---|
| Conductor: | bare copper strands, fine wires |
| Insulation: | SABIX® |
| Colour code: | black with numbers 1 - 24 |
| Stranding: | cores twisted to pairs, optimized twisting of pairs in layers |
| Sheath material: | PUR |
| Sheath colour: | orange |
| Marking: | SAB BRÖCKSKES · D-VIERSEN · GP 400 SF S 12x2x1,5mm ² 3400-9028 CE and continuous meter marking |

Technical Data:

| | |
|---|--|
| Nominal voltage: | 300/500 V |
| Testing voltage: | core/core 4000 V AC |
| Min. bending radius continuously flexible: | 7,5 x d |
| Temperature range fixed laying: | -50/+90 °C |
| flexible application: | -40/+90 °C |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

Outstanding features:



- low capacity insulation
- abrasion-resistant PUR sheath
- cold flexible
- halogen-free
- oil resistant
- weather resistant

| Item. no. | no. of cores x cross section n x mm ² | outer-Ø approx. mm | copper figure kg/km | cable weight ≈ kg/km | DC resistance at 20°C max. Ω/km |
|-----------|--|-----------------------|---------------------------|----------------------------|---------------------------------------|
| 34009028 | 12 x 2 x 1,5 mm ² | 23,0 | 345,6 | 480 | 12,0 mm ² : 13,7 |

Other dimensions and colours are possible on request.

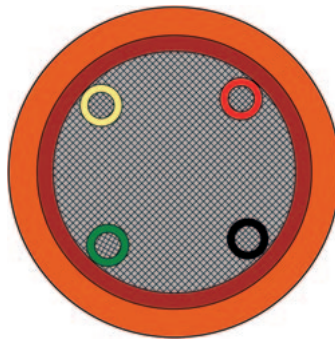


400 Hz Ground Power

GP 400 SC DC

Ground Power supply cable 28 V DC - SingleCore Direct Current

for flexible application



Application: For use in flexible applications, e.g. on mobile generators, in cable dispensers in the ground or on the passenger bridge at 28 V DC.

Construction:

| | |
|-------------------------|---|
| Conductor: | tinned copper strands |
| Insulation: | SABIX® |
| Colour code: | control cores: red, black, green, yellow power supply core: red |
| Stranding: | control cores within the power supply core |
| Sheath material: | PUR |
| Sheath colour: | orange |
| Marking: | SAB BRÖCKSKES · D-VIERSEN · GP 400 SC DC (120,0mm ² +4x1,0mm ²) 3400-1621 and continuous meter marking |

Technical Data:

| | |
|---------------------------------------|---|
| Voltage: | 28 V DC |
| Testing voltage: | core/core 600 V AC |
| Min. bending radius | |
| fixed laying: | 4 x d |
| flexible application: | 6 x d |
| Temperature range | |
| fixed laying: | -50/+90 °C |
| flexible application: | -40/+90 °C |
| limited time of use: | +110 °C (7500 h) |
| Halogen-free: | acc. to IEC 60754-1 + VDE 0482-754-1 |
| Oil resistance: | very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 |
| Weather resistance: | very good |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

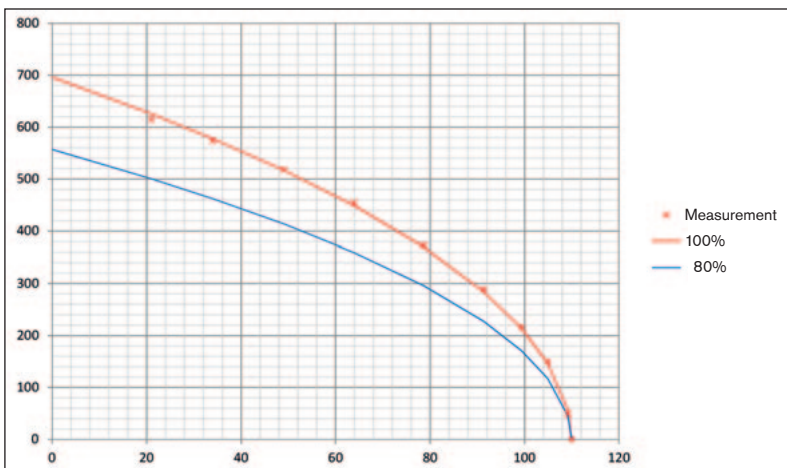
Outstanding features:

- low capacity insulation
- abrasion-resistant PUR sheath
- control cores symmetrically arranged
- cold flexible
- halogen-free
- oil resistant
- weather resistant

| Item. no. | no. of cores x cross section n x mm ² | outer-Ø approx. mm | copper figure kg/km | cable weight ≈ kg/km | DC resistance at 20°C max. Ω/km | voltage drop [mV/(A*m)] |
|-----------|---|-----------------------|---------------------------|----------------------------|---|---|
| 34001621 | 1 x (120,0 mm ² + 4 x 1,0 mm ²) | 22,2 | 1296,0 | 1339 | 120 mm ² : 0,164 1,0 mm ² : 20,0 | 120 mm ² : 0,328 1,0 mm ² : 40,0 |

Other dimensions and colours are possible on request.

Determination of the derating curve with reference to LV112-3 based on item no. 3400-1621



Reference values of current carrying capacity from derating curve

for 20°C ambient temperature, taken from 80% curve: **500 A**

for 20°C ambient temperature, taken from 100 % curve: **600 A**

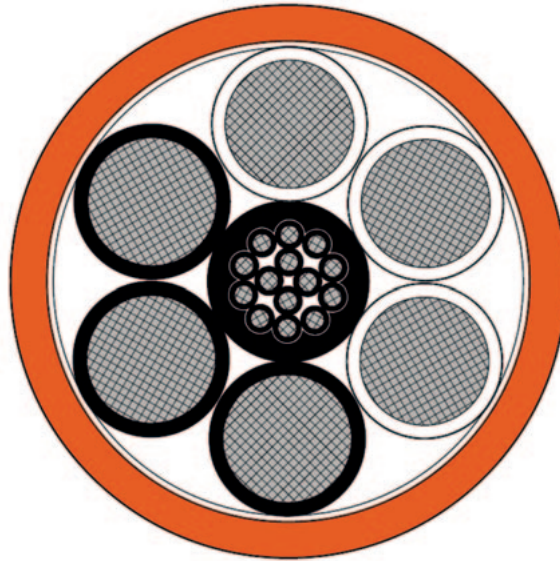
precondition:
laying separately free in air

400 Hz Ground Power

GP 400 SF 28V DC

400 Hz Ground Power supply cable 28 V DC

for flexible application



Application: For the application as fixed supply cable with optimised installation or for a flexible hand-held application without elevated mechanical stress for example mobile GPUs. Excellent flexibility due to smooth core and sheath materials make possible an easy laying and handling.

Construction:

| | |
|-------------------------|--|
| Conductor: | tinned copper strands, fine wires |
| Insulation: | SABIX® |
| Colour code: | 1,0 mm ² : black cores with consecutive numbers 1 - 14 40,0 mm ² : white cores with consecutive numbers 1 - 3, black cores with consecutive numbers 1 - 3 |
| Stranding: | in layers |
| Sheath material: | PVC |
| Sheath colour: | orange |
| Marking: | SAB BRÖCKSKES · D-VIERSEN · GP 400 SF 28V DC 6x40,0mm ² +14x1,0mm ² 3400-9020 CE and continuous meter marking |

Technical Data:

| | |
|---------------------------------------|--|
| Voltage: | 28 V DC |
| Testing voltage: | core/core 600 V |
| Min. bending radius | |
| fixed laying: | 4 x d |
| flexible application: | 6 x d |
| Temperature range | |
| fixed laying: | -40/+70 °C |
| flexible application: | -20/+70 °C |
| Oil resistance: | acc. to internal standard |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

Outstanding features:

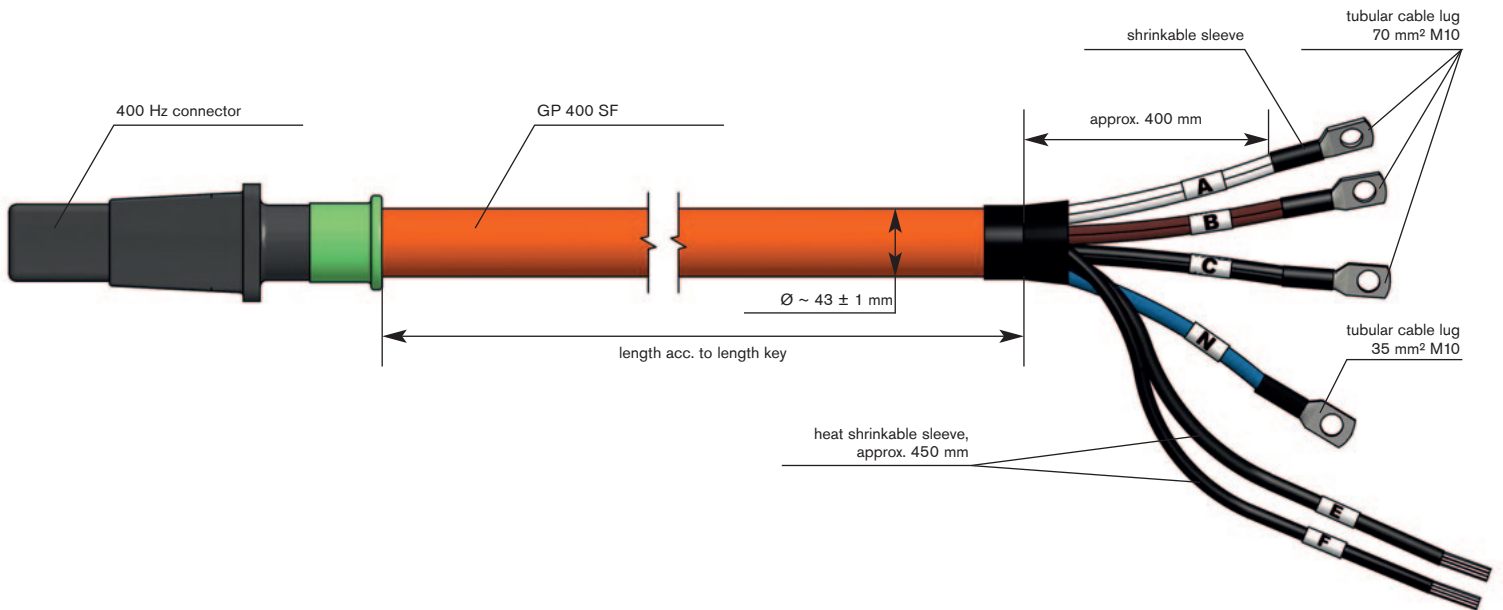
- low capacity insulation
- extremely flexible and smooth handling
- also usable as supply cable at the aircraft itself
- very good installation in narrowest spaces
- good resistance characteristics also against wear and tear

| Item. no. | no. of cores x cross section n x mm ² | outer-Ø mm | copper figure kg/km | cable weight ≈ kg/km | DC resistance at 20°C max. Ω/km |
|-----------|--|-------------------------|---------------------------|----------------------------|--|
| 34009020 | 6 x 40,0 + 14 x 1,0 | min. 36,0 max. 37,99 | 2438,4 | 2910 | 40,0 mm ² : 0,500 1,0 mm ² : 20,0 |

Other dimensions and colours are possible on request.

400 Hz Ground Power

SAB 400 Hz cable for mobile GPUs with connectors



Pin assignment:

| 400 Hz connector | cable | connection piece |
|------------------|----------------------------------|---|
| pin A | 2 x wh (35 mm ²) | tubular cable lug 70 mm ² , M10 |
| pin B | 2 x bn (35 mm ²) | tubular cable lug 70 mm ² , M10 |
| pin C | 2 x bk (35 mm ²) | tubular cable lug 70 mm ² , M10 |
| pin N | 1 x bu (35 mm ²) | tubular cable lug 35 mm ² , M10 |
| pin E | cores 1-9 (1 mm ²) | cores pulled into shrinkable sleeves, core ends untreated |
| pin F | cores 10-18 (1 mm ²) | |

Weight:

| connector and tubular cable lugs | cable |
|----------------------------------|------------------|
| approx. 3 kg | approx. 3,2 kg/m |

Configuration examples:

| item no. | length „L“ in cm |
|------------------|------------------|
| S3400-3003-01000 | 100 |
| S3400-3003-02000 | 200 |

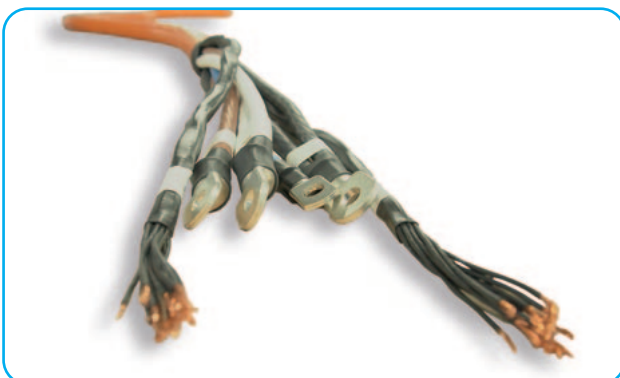
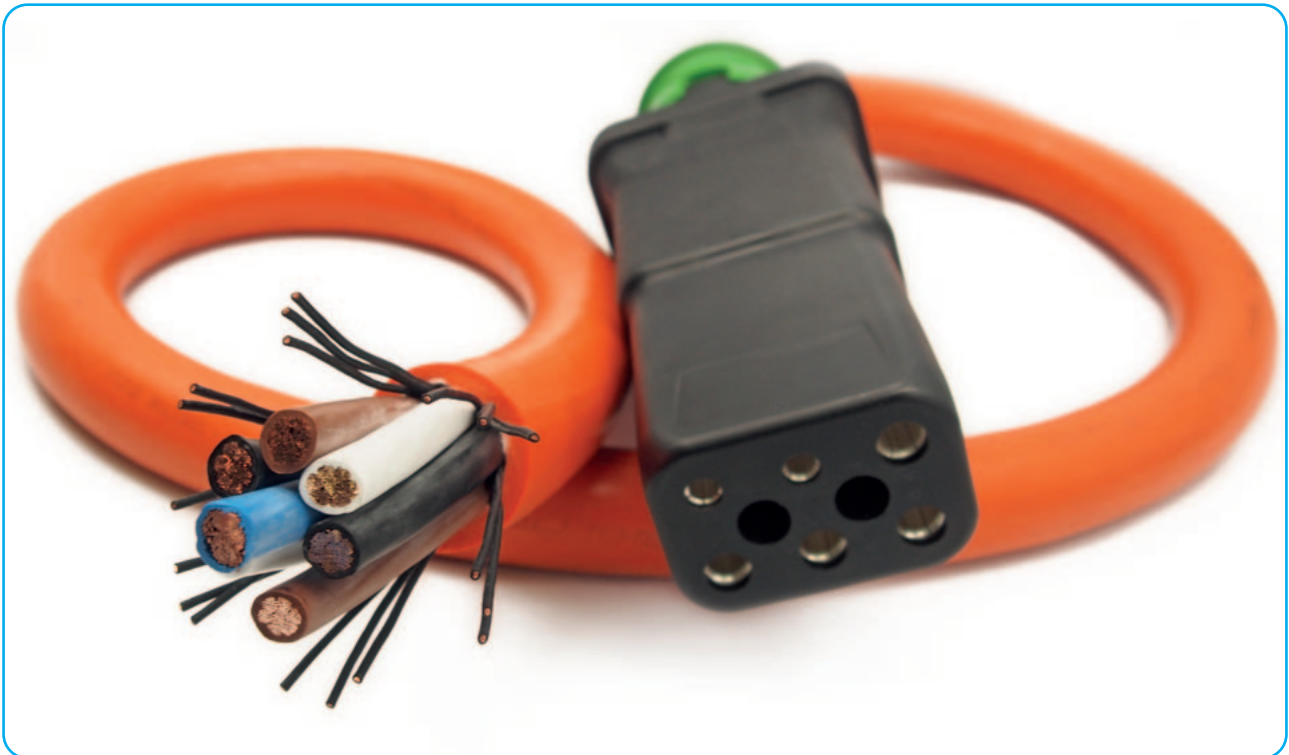
400 Hz Ground Power

Plug'n'Play - ready harnessed with connector

Ready-to-connect ground power cables with connectors



- SAB Bröckskes** also supplies 400 Hz cables ready for installation. Various 400 Hz connectors available.
- on request also with tubular cable lugs.
 - each cable harness is safely and individually packed.
 - each product is tested for function.
 - on request with test report for 100% documentation.

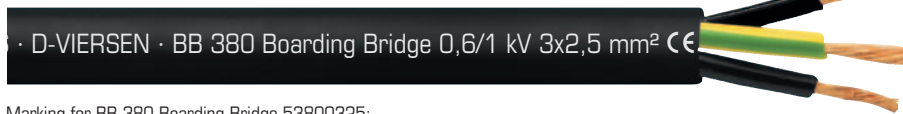


Cables for Airport Equipment

BB 380 Boarding Bridge

cable for the flexible application in passenger bridges

screened version
on request!



Marking for BB 380 Boarding Bridge 53800325:

SAB BRÖCKSKES · D-VIERSEN · BB 380 Boarding Bridge 0,6/1 kV 3x2,5 mm² CE

Application: For installation in passenger bridges.

Construction:

| | |
|-------------------------|---|
| Conductor: | bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5 |
| Insulation: | special SABIX® |
| Colour code: | black cores with consecutive numbers acc. to EN 50334, green-yellow earth wire from 3 cores |
| Stranding: | in layers |
| Wrapping: | non-woven tape |
| Sheath material: | PUR |
| Sheath colour: | black (RAL 9005) |

Technical data:

| | |
|---------------------------------------|--|
| Nominal voltage: | up to 1,00 mm²: U ₀ /U 300/500 V from 1,50 mm²: U ₀ /U 0,6/1 kV |
| Testing voltage: | 300/500 V: 3000 V 0,6/1 kV: 4000 V |
| Min. bending radius | |
| <i>fixed laying:</i> | 4 x d |
| <i>flexible:</i> | 7,5 x d |
| Radiation resistance: | 5 x 10 ⁷ cJ/kg |
| Temperature range | |
| <i>fixed laying:</i> | -40/+90 °C |
| <i>flexible application:</i> | -30/+90 °C |
| Halogen-free: | acc. to IEC 60754-1 + VDE 0482-754-1 |
| Fire performance: | flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 |
| Oil resistance: | very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 |
| Chem. resistance: | good against acids, alkalines, solvents, hydraulic liquids etc. |
| Flexibility: | very good |
| Weather resistance: | good |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

Outstanding features:



- halogen-free
- oil resistant
- weather resistant
- sunlight resistant

| item no. | no. of cores x cross section n x mm² | largest single wire ø mm | outer-ø ± 5% mm | copper figure kg/km | cable weight ≈ kg/km |
|----------|--|--------------------------------|-----------------------|---------------------------|----------------------------|
| 53800325 | 3 x 2,50 | 0,26 | 10,0 | 72,0 | 146 |
| 53800525 | 5 x 2,50 | 0,26 | 12,2 | 120,0 | 224 |
| 53800560 | 5 x 6,00 | 0,31 | 15,6 | 288,0 | 426 |

Other dimensions and colours are possible on request.



Also possible
as hybrid construction!

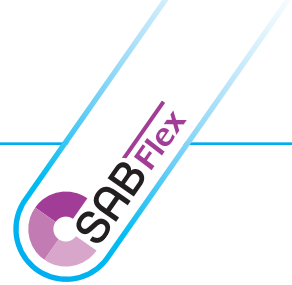
(4x2x26AWG)Cat.6A+(3x0,25mm²)CB+10G1,0mm²



Cable Track Cables

S 200

extremely flexible TPE/PUR control cable with numbered cores for continuous movement



Marking for S 200 07741215:

SAB BRÖCKSKES · D-VIERSEN · S 200 12 x 1,5 mm² CE

Construction:

| | |
|--------------------------------------|--|
| Conductor: | bare copper strands acc. to IEC 60228, VDE 0295, class 6 |
| Insulation: | TPE |
| Colour code from 2 conductors | black cores with consecutive numbers acc. to EN 50334 + VDE 0293-334, green-yellow earth wire from 3 cores |
| Stranding: | specially adjusted layering with non-woven tape over each layer |
| Wrapping: | non-woven tape |
| Sheath material: | PUR, TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 with mat surface |
| Sheath colour: | grey (RAL 7000) |

Outstanding features:



- **PWIS uncritical**
(PWIS = paint-wetting impairment substances)
- **flexible at low temperatures**
- **halogen-free**
- **travel > 10 m is possible**
- **high abrasion resistance**
- **small bending radius**
- **small outer diameter**

Technical Data:

| | |
|--|--|
| Nominal voltage: | U ₀ /U 300/500 V |
| Testing voltage: | core/core 2000 V |
| Min. bending radius <i>continuously flexible:</i> | 7,5 x d |
| Radiation resistance: | 1 x 10 ⁷ cJ/kg |
| Temperature range <i>fixed laying:</i> <i>flexible application:</i> | -50/+90 °C -40/+90 °C |
| Halogen-free: | acc. to IEC 60754-1 + VDE 0482-754-1 |
| Oil resistance: | very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 |
| Chem. resistance: | good against acids, alkalines, solvents, hydraulic liquids etc. |
| Continuous flexibility: | very good |
| Weather resistance: | very good |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

further continuously flexible TPE/PUR data and control cables:

SD 200

Item groupe
0774

extremely flexible TPE/PUR data cable
with coloured cores for continuous movement



S 200 C

Item groupe
0784

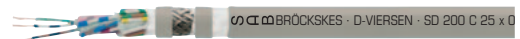
continuously flexible TPE/PUR control cable
with numbered cores and overall copper screen



SD 200 C

Item groupe
0784

continuously flexible TPE/PUR data cable
with coloured cores and overall copper screen



SD 200 C TP

Item groupe
0789

continuously flexible TPE/PUR paired data cable
with coloured cores and overall copper screen



... for more information: www.sab-cable.com

| item no. | no. of cores x cross section n x mm ² | largest single wire ø mm | outer-ø ± 5% mm | copper figure kg/km | cable weight ≈ kg/km |
|----------|--|--------------------------------|-----------------------|---------------------------|----------------------------|
| 07740205 | 2 x 0,50 | 0,16 | 4,9 | 9,6 | 28 |
| 07740305 | 3 x 0,50 | 0,16 | 5,1 | 14,4 | 34 |
| 07740405 | 4 x 0,50 | 0,16 | 5,5 | 19,2 | 41 |
| 07740505 | 5 x 0,50 | 0,16 | 6,0 | 24,0 | 51 |
| 07740705 | 7 x 0,50 | 0,16 | 6,9 | 33,6 | 69 |
| 07741205 | 12 x 0,50 | 0,16 | 8,3 | 57,6 | 99 |
| 07741805 | 18 x 0,50 | 0,16 | 9,9 | 86,4 | 143 |
| 07742505 | 25 x 0,50 | 0,16 | 11,9 | 120,0 | 197 |
| 07740207 | 2 x 0,75 | 0,16 | 5,4 | 14,4 | 36 |
| 07740307 | 3 x 0,75 | 0,16 | 5,7 | 21,6 | 44 |
| 07740407 | 4 x 0,75 | 0,16 | 6,1 | 28,8 | 54 |
| 07740507 | 5 x 0,75 | 0,16 | 6,7 | 36,0 | 67 |
| 07740707 | 7 x 0,75 | 0,16 | 7,9 | 50,4 | 93 |
| 07740210 | 2 x 1,00 | 0,16 | 5,8 | 19,2 | 45 |
| 07740310 | 3 x 1,00 | 0,16 | 6,1 | 28,8 | 54 |
| 07740410 | 4 x 1,00 | 0,16 | 6,6 | 38,4 | 67 |
| 07740510 | 5 x 1,00 | 0,16 | 7,2 | 48,0 | 82 |
| 07740115 | 1 x 1,50 | 0,16 | 4,0 | 14,4 | 25 |
| 07740215 | 2 x 1,50 | 0,16 | 6,4 | 28,8 | 57 |
| 07740315 | 3 x 1,50 | 0,16 | 6,7 | 43,2 | 70 |
| 07740415 | 4 x 1,50 | 0,16 | 7,3 | 57,6 | 89 |
| 07740125 | 1 x 2,50 | 0,16 | 4,7 | 24,0 | 39 |
| 07740425 | 4 x 2,50 | 0,16 | 9,2 | 96,0 | 142 |
| 07740140 | 1 x 4,00 | 0,16 | 5,4 | 38,4 | 56 |
| 07740440 | 4 x 4,00 | 0,16 | 10,8 | 153,6 | 217 |
| 07740160 | 1 x 6,00 | 0,21 | 6,1 | 57,6 | 76 |
| 07740161 | 1 x 10,0 | 0,21 | 7,1 | 96,0 | 120 |
| 07740461 | 4 x 10,0 | 0,21 | 15,8 | 384,0 | 507 |
| 07740162 | 1 x 16,0 | 0,21 | 8,3 | 153,6 | 177 |
| 07740462 | 4 x 16,0 | 0,21 | 19,0 | 614,4 | 782 |
| 07740163 | 1 x 25,0 | 0,21 | 9,9 | 240,0 | 263 |
| 07740463 | 4 x 25,0 | 0,21 | 22,8 | 960,0 | 1155 |
| 07740164 | 1 x 35,0 | 0,21 | 11,5 | 336,0 | 367 |
| 07740165 | 1 x 50,0 | 0,31 | 14,0 | 480,0 | 538 |
| 07740166 | 1 x 70,0 | 0,31 | 16,7 | 672,0 | 754 |
| 07740167 | 1 x 95,0 | 0,31 | 20,5 | 912,0 | 1028 |
| 07740168 | 1 x 120,0 | 0,31 | 21,5 | 1152,0 | 1260 |
| 07740169 | 1 x 150,0 | 0,31 | 24,6 | 1440,0 | 1618 |
| 07740170 | 1 x 185,0 | 0,41 | 26,7 | 1776,0 | 1942 |
| 07740171 | 1 x 240,0 | 0,41 | 30,1 | 2304,0 | 2483 |

Other dimensions and colours are possible on request.



On request also with
UL recognition,
CSA approval and
improved fire performance!

Cable Track Cables

S 910 P

continuously flexible
TPE/PUR single conductor

S 910 CP

continuously flexible TPE/PUR single
conductor with overall copper screen

on request also
with green-yellow
insulation



Marking for S 910 P 37681362:

SAB BRÜCKSKES · D-VIERSEN · 37681362 16,0 mm² S 910 P 6 AWG 37680601 AWM Style 10456 80°C 600V CSA AWM I/II A/B 80°C 1000V FT1 FT2 CE



Marking for S 910 CP 37692362:

SAB BRÜCKSKES · D-VIERSEN · 37692362 16,0 mm² S 910 CP 6 AWG 37690601 AWM Style 10456 80°C 600V CSA AWM I/II A/B 80°C 1000V FT1 FT2 CE

Construction:

| | |
|-------------------------|---|
| Conductor: | bare copper strands acc. to IEC 60228, VDE 0295, class 6 |
| Insulation: | TPE, black |
| Wrapping: | non-woven tape |
| Screen: | S 910 CP tinned copper braiding |
| Sheath material: | PUR, TPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 with mat surface |
| Sheath colour: | black (RAL 9005) |

Outstanding features:



- highly flexible single conductor
for use in cable tracks
- good chemical resistance
- high abrasion resistance
- halogen-free

Technical Data:

| | | |
|--|--|--|
| Nominal voltage: | U ₀ /U 0,6/1 kV | |
| Voltage: | UL: 600 V | CSA: 1000 V |
| Min. bending radius <i>continuously flexible:</i> | 7,5 x d | |
| Radiation resistance: | S 910 P 1 x 10 ⁷ cJ/kg | S 910 CP 5 x 10 ⁷ cJ/kg |
| Temperature range <i>fixed laying:</i> <i>flexible application:</i> | DIN VDE -50/+90 °C -40/+90 °C | UL/CSA: up to +80 °C |
| Halogen-free: | acc. to IEC 60754-1 + VDE 0482-754-1 | |
| Fire performance: | flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL/CSA FT1, FT2 | |
| Oil resistance: | very good - TPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 | |
| Chem. resistance: | good against acids, alkalines, solvents, hydraulic liquids etc. | |
| Continuous flexibility: | very good | |
| Absence of harmful substances: | acc. to RoHS directive of the European Union | |

S 910 P

| item no. | no. of cores x cross section n x mm ² | largest single wire ø mm | AWG/ MCM | outer-ø ± 5% mm | copper figure kg/km | cable weight ≈ kg/km |
|----------|--|--------------------------------|-------------------|-----------------------|---------------------------|----------------------------|
| 37681340 | 1 x 4,00 | 0,16 | 12 (224/34) | 6,6 | 38,4 | 69 |
| 37681360 | 1 x 6,00 | 0,21 | 10 (186/32) | 7,5 | 57,6 | 94 |
| 37681361 | 1 x 10,00 | 0,21 | 8 (320/32) | 8,4 | 96,0 | 138 |
| 37681362 | 1 x 16,00 | 0,21 | 6 (512/32) | 9,9 | 153,6 | 206 |
| 37681363 | 1 x 25,00 | 0,21 | 4 (798/32) | 11,1 | 240,0 | 296 |
| 37681364 | 1 x 35,00 | 0,21 | 2 (1083/32) | 12,6 | 336,0 | 390 |
| 37681365 | 1 x 50,00 | 0,31 | 1 (703/28) | 14,7 | 480,0 | 554 |
| 37681366 | 1 x 70,00 | 0,31 | 2/0 (988/28) | 17,0 | 672,0 | 771 |
| 37681367 | 1 x 95,00 | 0,31 | 3/0 (1340/28) | 20,4 | 912,0 | 1024 |
| 37681368 | 1 x 120,00 | 0,31 | 4/0 (1680/28) | 23,0 | 1152,0 | 1318 |
| 37681369 | 1 x 150,00 | 0,31 | 250 MCM (2122/28) | 25,7 | 1440,0 | 1649 |
| 37681370 | 1 x 185,00 | 0,41 | 350 MCM (1472/26) | 27,6 | 1776,0 | 2020 |

Other dimensions and colours are possible on request.

S 910 CP

| item no. | no. of cores x cross section n x mm ² | largest single wire ø mm | AWG/ MCM | outer-ø ± 5% mm | copper figure kg/km | cable weight ≈ kg/km |
|----------|--|--------------------------------|-------------------|-----------------------|---------------------------|----------------------------|
| 37692340 | 1 x 4,00 | 0,16 | 12 (224/34) | 7,1 | 54,5 | 83 |
| 37692360 | 1 x 6,00 | 0,21 | 10 (186/32) | 8,0 | 77,3 | 112 |
| 37692361 | 1 x 10,00 | 0,21 | 8 (320/32) | 8,9 | 119,7 | 157 |
| 37692362 | 1 x 16,00 | 0,21 | 6 (512/32) | 10,3 | 182,6 | 227 |
| 37692363 | 1 x 25,00 | 0,21 | 4 (798/32) | 11,7 | 293,9 | 335 |
| 37692364 | 1 x 35,00 | 0,21 | 2 (1083/32) | 13,3 | 395,7 | 434 |
| 37692365 | 1 x 50,00 | 0,31 | 1 (703/28) | 15,8 | 577,7 | 631 |
| 37692366 | 1 x 70,00 | 0,31 | 2/0 (988/28) | 17,9 | 783,2 | 840 |
| 37692367 | 1 x 95,00 | 0,31 | 3/0 (1340/28) | 22,9 | 1051,4 | 1193 |
| 37692368 | 1 x 120,00 | 0,31 | 4/0 (1680/28) | 23,9 | 1293,3 | 1421 |
| 37692369 | 1 x 150,00 | 0,31 | 250 MCM (2122/28) | 26,6 | 1611,3 | 1773 |

Other dimensions and colours are possible on request.

Servo Motor Cables

SL 891 C

low capacity combined PUR motor connection cable with overall copper screen 0.6/1 kV



marking example:

SAB BRÖCKSKES · D-VIERSEN · 0891-1415 SL 891 C 4x1,5mm²+(2x1,5mm²) cULus AWM Style 21223 I/II A/B 80°C 1000V FT1 FT2 E172204 CE

Construction:

| | |
|-------------------------|--|
| Conductor: | bare copper strands acc. to IEC 60228, VDE 0295, class 6 |
| Insulation: | SABIX® |
| Colour code: | Bosch Rexroth supply cores: black, number coded 1-3 and a green-yellow earth wire, control cores: black, number coded 5-8 Siemens supply cores: core 1: black, (U/L1/C/L+) core 2: black, (V/L2) core 3: black, (W/L3/D/L-) and a green-yellow earth wire control cores: black BR1, white BR2 |
| Stranding: | control cores: twisted to pairs |
| Wrapping: | control cores: alu-foil |
| Screen: | control cores: wrapped with tinned copper braiding |
| Wrapping: | control cores: foil |
| Stranding: | screened control pairs and supply cores twisted together with fillers in layers |
| Wrapping: | non-woven tape |
| Screen: | tinned copper braiding |
| Wrapping: | non-woven tape |
| Sheath material: | PUR, TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 with mat surface |
| Sheath colour: | orange (RAL 2003) |

Technical data:

| | |
|---------------------------------------|---|
| Nominal voltage: | supply cores: U _o /U 0.6/1 kV |
| Peak operating voltage: | control cores: max. 350 V |
| Voltage UL/cUL: | 1000 V |
| Testing voltage: | supply cores: core/core 4000 V core/screen 4000 V control cores: core/core 2000 V core/screen 2000 V |
| Min. bending radius | 5 x d 10 x d |
| Temperature range | DIN VDE UL/cUL: up to +80 °C fixed laying: -50/+90 °C flexible application: -40/+90 °C |
| Halogen-free: | acc. to IEC 60754-1 + VDE 0482-754-1 |
| Fire performance: | flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, cUL FT1, FT2 |
| Oil resistance: | very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 |
| Chem. resistance: | good against acids, alkalines, solvents, hydraulic liquids etc. |
| Weather resistance: | very good |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

**low capacity solution
for your
servo drive system**

Outstanding features:



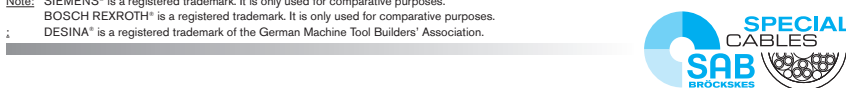
- low capacity construction
- UL/cUL recognized
- very good EMC characteristics
- long service life
- adhesion-free installation
- high flexibility
- suitable for cable tracks
- halogen-free
- very good oil resistance
- PWIS uncritical
(PWIS = paint-wetting impairment substances)
- flexible at low temperatures
- DESINA® colours

| item no. | dimension | outer-ø ± 0,80 mm | copper figure kg/km | cable weight ≈ kg/km |
|----------|-------------------------------------|----------------------|---------------------------|----------------------------|
| 08910415 | 4 x 1,50 + 2 x (2 x 0,75) | 11,4 | 166,5 | 211 |
| 08910425 | 4 x 2,50 + 2 x (2 x 1,00) | 13,1 | 225,2 | 276 |
| 08910441 | 4 x 4,00 + (2 x 1,00) + (2 x 1,50) | 15,0 | 303,2 | 373 |
| 08910461 | 4 x 6,00 + (2 x 1,00) + (2 x 1,50) | 17,1 | 422,9 | 497 |
| 08910471 | 4 x 10,00 + (2 x 1,00) + (2 x 1,50) | 19,3 | 581,3 | 692 |
| 08910485 | 4 x 16,00 + 2 x (2 x 1,50) | 22,9 | 860,1 | 1012 |
| 08910490 | 4 x 25,00 + 2 x (2 x 1,50) | 28,2 | 1240,8 | 1447 |
| 08911410 | 4 x 1,00 + (2 x 0,50) | 9,0 | 88,2 | 120 |
| 08911415 | 4 x 1,50 + (2 x 1,50) | 10,7 | 150,5 | 189 |
| 08911416 | 4 x 1,50 + (2 x 0,50) | 9,5 | 108,0 | 142 |
| 08911425 | 4 x 2,50 + (2 x 1,50) | 12,2 | 195,5 | 244 |
| 08911440 | 4 x 4,00 + (2 x 1,50) | 13,6 | 262,1 | 317 |
| 08911460 | 4 x 6,00 + (2 x 1,50) | 16,3 | 376,8 | 450 |
| 08911470 | 4 x 10,00 + (2 x 1,50) | 18,5 | 544,0 | 657 |
| 08911480 | 4 x 16,00 + (2 x 1,50) | 22,1 | 797,1 | 946 |
| 08911490 | 4 x 25,00 + (2 x 1,50) | 26,2 | 1170,6 | 1354 |

Other dimensions and colours are possible on request.

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BOSCH REXROTH® is a registered trademark. It is only used for comparative purposes.
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DESINA®
SIEMENS®



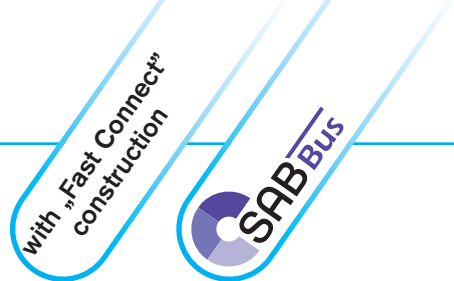
Profibus-DP Cables Industrial Ethernet Cables Profinet

S PB 640 UL

highly flexible PUR Profibus-DP cable
with UL recognition, CSA approval

S PN 667

Profinet type C, continuously flexible
with UL recognition, CSA approval



Marking for S PB 640 UL 06402611:

SAB BRÖCKSKES · D-VIERSEN · S PB 640 UL 24 AWG/2c 06402611 AWM Style 21198 80°C 300V CSA AWM I/II A/B 80°C 300V FT2



Marking for S PN 667 06672202:

SAB BRÖCKSKES · D-VIERSEN · S PN 667 Industrial Ethernet FC Cat 5 Typ C 2x2x22AWG AWM Style 21198 80°C 300V CSA AWM I/II A/B 80°C 300V FT2

| Construction: | S PB 640 UL <i>highly flexible</i> | S PN 667 <i>continuously flexible</i> |
|-------------------------|---|---|
| Dimension: | 2 x 24 AWG | 2 x 2 x 22 AWG |
| Conductor: | bare copper strands AWG 24 | tinned copper strands, 7 wires |
| Insulation: | acc. to EN 50290-2-23 + VDE 0819-103 (02Y11) | special polymer |
| Colour code: | red, green | blue, yellow, white, orange |
| Stranding: | in layers | |
| Wrapping: | --- | PETP foil |
| Inner sheath: | SABIX® | thermoplastic material |
| Wrapping: | alu foil und tinned copper braiding | |
| Wrapping: | --- | non-woven tape |
| Sheath material: | PUR, TPU acc. to EN 50363-10-2 with matt surface | PUR |
| Sheath colour: | redlilac (RAL 4001) | green (similar RAL 6018) |

| Technical data: | S PB 640 UL <i>highly flexible</i> | S PN 667 <i>continuously flexible</i> |
|--|--|---|
| Item number: | 0640-2611 | 0667-2202, 0667-9001 |
| Peak operating voltage: | max. 350 V | |
| Voltage UL/CSA: | 300 V | |
| Testing voltage core/core: core/screen: | 2000 V 2000 V | |
| Min. bending radius fixed laying: flexible application: continuously flexible: | 5 x d 10 x d 15 x d | |
| Temperature range VDE fixed laying: flexible application: | UL/CSA: up to +80 °C -40/+80 °C -30/+80 °C | UL/CSA: up to +80 °C -40/+70 °C -40/+70 °C |
| Halogen-free: | acc. to IEC 60754-1 + VDE 0482-754-1 | |
| Fire performance: | flame retardant and self-extinguishing acc. to IEC 60332 + VDE 0482-332-1-2 | --- |
| Oil resistance: | very good EN 50363-10-2 + VDE 0207-363-10-2 | TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 |
| Characteristic impedance: | 3 - 20 MHz: 150 Ω ± 10% | 100 Ω ± 5Ω, fulfils the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 + VDE 0819-2-2 (CAT 5 acc. to EN 50173) |
| UL Style: | 21198 | |
| Application: | --- | suitable for EtherCAT and EtherNET/IP applications |
| Absence of harmful substances: | acc. to RoHS directive of the European Union | |

| item no. | type | dimension | max. core-ø mm | outer-ø mm | copper figure kg/km | cable weight ≈kg/km | ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km |
|----------|-------------|----------------|----------------|------------|---------------------|---------------------|---|
| 06402611 | S PB 640 UL | 2 x 24 AWG | | 8,0 ± 0,4 | 31,2 | 62 | |
| 06672202 | S PN 667 | 2 x 2 x 22 AWG | 1,55 | 6,5 ± 0,2 | 33,8 | 60 | 58,8 |

For extreme bending stress - conductor construction 19 wires:

| | | | | | | | |
|----------|----------|----------------|------|-----------|------|----|------|
| 06679001 | S PN 667 | 2 x 2 x 22 AWG | 1,55 | 6,5 ± 0,2 | 33,8 | 58 | 58,8 |
|----------|----------|----------------|------|-----------|------|----|------|

Other dimensions and colours are possible on request.

Industrial Ethernet Cables Profinet

PN 662 AIR

Industrial Ethernet Cable CAT 5 - Profinet type B, for flexible applications



Marking for PN 662 AIR 06629015:

SAB BRÜCKSKES · D-VIERSEN · ETHERNETLEITUNG 2x2x28AWG 06629015 CE

Application: Suitable for the use as Ethernet cable referring to EN 50288-2-2 (Cat. 5 acc. EN 50173): characteristic impedance of matching cores white/blue and yellow/orange $100 \pm 10 \Omega$.

Construction:

| | |
|-------------------------|-------------------------------|
| Conductor: | silver coated copper strands |
| Insulation: | FEP |
| Colour code: | white, yellow, blue, orange |
| Stranding: | twisted as quad |
| Wrapping: | non-woven tape |
| Wrapping: | metal coated tape |
| Screen: | silver coated copper wrapping |
| Sheath material: | FEP |
| Sheath colour: | orange (RAL 2003) |

Technical data:

| | |
|---------------------------------------|--|
| Operating voltage: | max. 150 V |
| Testing voltage: | core/core 1500 V core/screen 1200 V |
| Min. bending radius | |
| <i>fixed laying:</i> | 5 x d |
| <i>flexible:</i> | 10 x d |
| Temperature range | |
| <i>fixed laying:</i> | -90/+180 °C |
| <i>flexible application:</i> | -40/+180 °C |
| Hydraulic fluids resistance: | very good |
| Application: | suitable for EtherCAT and EtherNET/IP applications |
| Absence of harmful substances: | acc. to RoHS directive of the European Union |

| item no. | type | cross section | outer-ø approx. | copper figure | cable weight | ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km |
|----------|------------|----------------|-----------------|---------------|--------------|--|
| | | | mm | kg/km | ≈kg/km | |
| 06629015 | PN 662 AIR | 2 x 2 x AWG 28 | 2,6 | 9,8 | 15 | 222,2 |

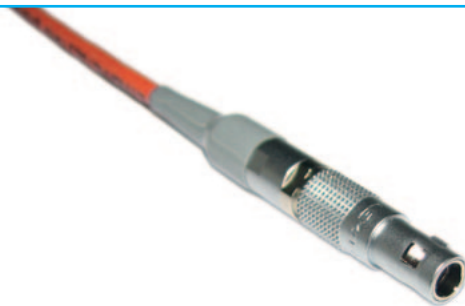
Other dimensions and colours are possible on request.

Also possible as harnessed cable with M12 or RJ 45 plug!



Cable harnessing

Ethernet cable on both side 4-pole Lemo male connector



Cable:

| | |
|------------------------|---|
| Ethernet cable: | 2 x 2 x 28 AWG (L 0662-9015) |
| Cable length: | 2,50 m (S 0662-4001) 5,00 m (S 0662-4002) 12,00 m (S 0662-4003) 25,00 m (S 0662-4004) 50,00 m (S 0662-4005) 100,00 m (S 0662-4006) |

Harnessing:

| | |
|---------------------------|---|
| Side 1 | |
| Lemo connector: | FGG.00.304.CYCD27Z 4-pole with bend relief grey |
| Pin configuration: | pin 1 = white pin 2 = blue pin 3 = yellow pin 4 = orange |
| Shield: | connected on housing |
| Connector: | Lemo Type FGG.00.304.CYCD27Z 4-pole |
| Side 2 | |
| Lemo connector: | FGG.00.304.CYCD27Z 4-pole with bend relief grey |
| Pin configuration: | pin 1 = yellow pin 2 = orange pin 3 = white pin 4 = blue |
| Shield: | connected on housing |
| Connector: | Lemo Type FGG.00.304.CYCD27Z 4-pole |

Industrial Ethernet Cables



CATLine CAT 6 S Gigabit Ethernet cable, suitable for cable tracks with UL recognition, CSA approval
CATLine CAT 6A S Gigabit Ethernet cable, suitable for cable tracks with UL recognition, CSA approval
CATLine CAT 7A S Gigabit Ethernet cable, suitable for cable tracks with UL recognition, CSA approval

20549 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE



Marking for CATLine CAT 7A S 17774631:

SAB BRÜCKSKES · D-VIERSEN · CATLine Cat. 7A S 4x2x26AWG 1777-4631 AWM Style 20549 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE

| Construction: | CATLine CAT 6 S <i>suitable for cable tracks</i> | CATLine CAT 6A S <i>suitable for cable tracks</i> | CATLine CAT 7A S <i>suitable for cable tracks</i> |
|-------------------------|--|--|--|
| Dimension: | 4 x 2 x 26 AWG | | 4 x 2 x 26 AWG, 4 x 2 x 24 AWG |
| Conductor: | bare copper strands, fine wires | | |
| Insulation: | special polymer | | |
| Colour code: | white-blue/blue, white-orange/orange, white-green/green, white-brown/brown | | |
| Stranding: | cores twisted to pairs, pairs together | | cores twisted to pairs, pairs screened with foil, pairs together |
| Wrapping: | non-woven tape | | --- |
| Screen: | alu foil and tinned copper braiding | | aluminized non-woven tape and tinned copper braiding |
| Wrapping: | non-woven tape | | |
| Sheath material: | PUR | | |
| Sheath colour: | green (similar RAL 6018) | | |

| Technical data: | CATLine CAT 6 S <i>suitable for cable tracks</i> | CATLine CAT 6A S <i>suitable for cable tracks</i> | CATLine CAT 7A S <i>suitable for cable tracks</i> |
|--|---|---|--|
| Item number: | 1677-4630 | 1677-4631 | 1777-4631, 1777-4431 |
| Peak operating voltage: | max. 90 V | | |
| Voltage UL/CSA: | 300 V | | |
| Testing voltage core/core: core/screen: | 2000 V 2000 V | | |
| Min. bending radius fixed laying: flexible application: continuously flexible: | 5 x d 10 x d 15 x d | | |
| Temperature range VDE fixed laying: flexible application: | UL/CSA: up to +80 °C -40/+70 °C -40/+70 °C | | |
| Halogen-free: | acc. to IEC 60754-1 + VDE 0482-754-1 | | |
| Fire performance: | flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 UL Horizontal Flame Test FT2 | | |
| Oil resistance: | TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 | | |
| Characteristic impedance (100 MHz): | 100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-5-2 / CAT 6 | 100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A | 100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 / CAT 7A |
| Flexibility: | very good | | |
| UL Style: | 20549 | | |
| Application: | suitable for EtherCAT and EtherNET/IP applications | | |
| Absence of harmful substances: | acc. to RoHS directive of the European Union | | |

| item no. | type | dimension | max. core-ø mm | outer-ø ± 5% mm | copper figure kg/km | cable weight ≈kg/km |
|----------|------------------|----------------|----------------|-----------------|---------------------|---------------------|
| 16774630 | CATLine CAT 6 S | 4 x 2 x 26 AWG | 1,05 | 7,1 | 32,0 | 57 |
| 16774631 | CATLine CAT 6A S | 4 x 2 x 26 AWG | 1,05 | 7,1 | 32,0 | 57 |
| 17774631 | CATLine CAT 7A S | 4 x 2 x 26 AWG | 1,50 | 8,5 | 38,5 | 81 |
| 17774431 | CATLine CAT 7A S | 4 x 2 x 24 AWG | 1,60 | 10,4 | 46,6 | 101 |

Other dimensions and colours are possible on request.

+90°C
on request!



Also possible as harnessed cable with M12 or RJ 45 plug!

CABLE ASSEMBLY POSSIBLE

USB 3.0 cable with moulded connector

USB 3.0 cable with moulded type A and Micro-B male connector resp.

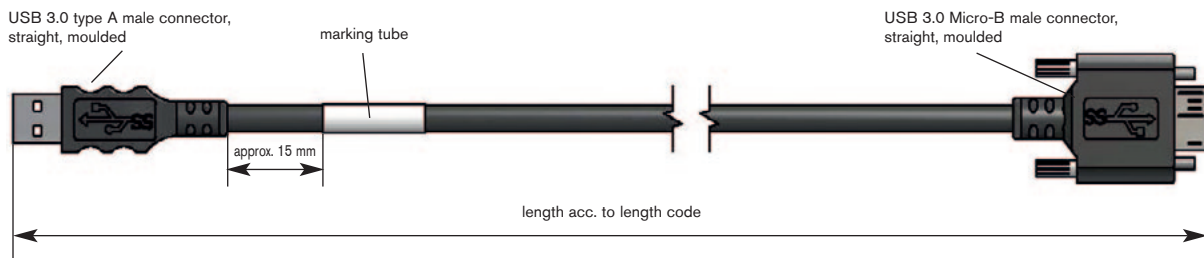
USB 3.0 cable with moulded type A male connector and type A female connector

Connector:

side 1: USB 3.0 type A male connector
side 2: USB 3.0 type Micro-B male connector

Configuration examples:

| item no. | length „L“ in cm |
|------------------|---------------------|
| S0604-4004-00100 | 100 |
| S0604-4004-00200 | 200 |
| S0604-4004-00300 | 300 |
| S0604-4004-00500 | 500 |

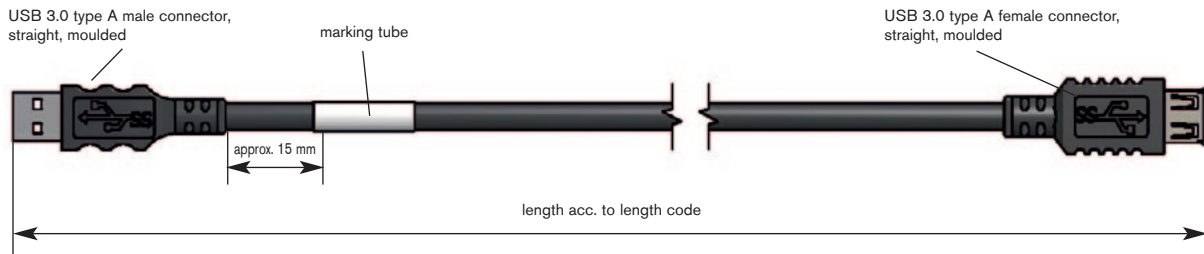


Connector:

side 1: USB 3.0 type A male connector
side 2: USB 3.0 type A female connector

Configuration examples:

| item no. | length „L“ in cm |
|------------------|---------------------|
| S0604-4005-00050 | 50 |
| S0604-4005-00100 | 100 |
| S0604-4005-00200 | 200 |
| S0604-4005-00300 | 300 |
| S0604-4005-00500 | 500 |



Application:

Connection cable PC – 3D camera
Extension cable

Cable data:

| | |
|-------------------------|-----------------------|
| Construction: | 3x(2x30AWG)ST+2x24AWG |
| Insulation: | SABIX® |
| Outer sheath: | PUR |
| Outer diameter: | approx. 6,1 mm |
| Min. bending radius: | 10 x d |
| Peak operating voltage: | max. 350 V |

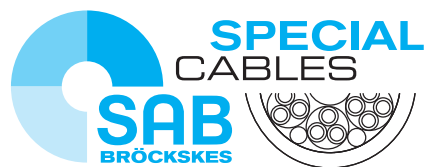
Cable characteristics:



- mechanically very rugged
- PUR cable suitable for cable tracks

SAB marking:

item number, order number, length



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