

# 400 Hz

## GROUND POWER CABLES

# CABLES

## FOR AIRPORT EQUIPMENT



[www.sab-cable.com](http://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 <sup>2</sup> 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



# Ground Power Support / Airport Equipment

## 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:

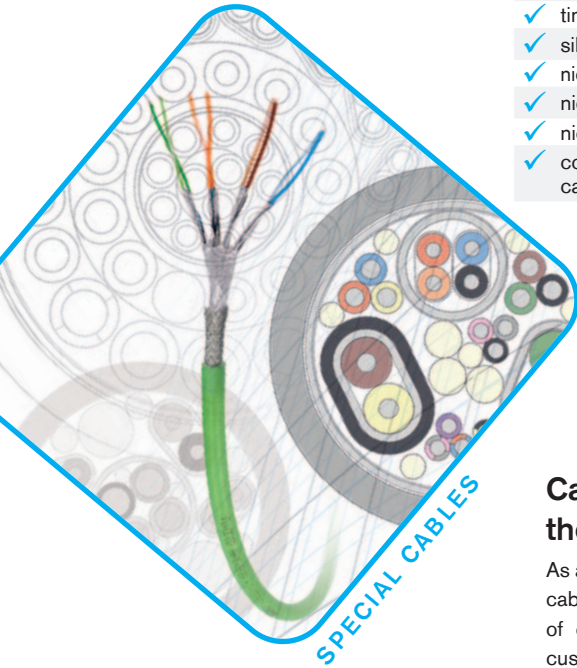
- ✓ PVC
- ✓ Polyethylene
- ✓ Polypropylene
- ✓ Polyurethane
- ✓ TPE
- ✓ SABIX® (zero halogen)
- ✓ Besilen® - Silicone
- ✓ FEP, ETFE, PFA, PTFE
- ✓ PI foil
- ✓ Fibreglass

#### 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:

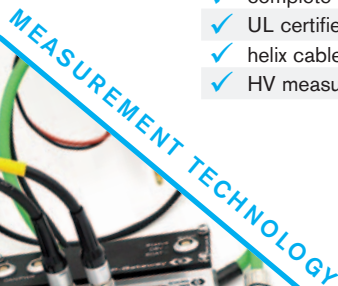
- ✓ cross sections 0,055 - 300 mm<sup>2</sup>
- ✓ unshielded and shielded over 100 conductors



### 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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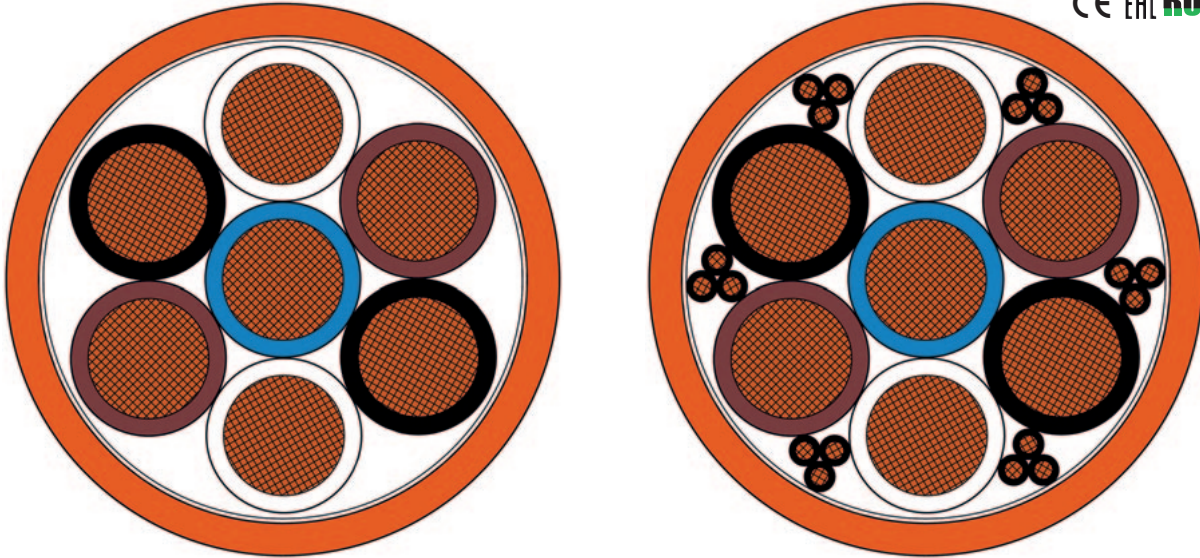


# 400 Hz Ground Power

## 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:

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

### Technical Data:

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

### Outstanding features:

- reduced outer diameter

Item. no.	no. of cores x cross section n x mm <sup>2</sup>	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 <sup>2</sup> : 0,554	35,0 mm <sup>2</sup> : 1,108
34007213	7 x 35,0 + 6 x 3 x 1,0	37,0	2524,8	3125	35,0 mm <sup>2</sup> : 0,554 1,0 mm <sup>2</sup> : 19,5	35,0 mm <sup>2</sup> : 1,108 1,0 mm <sup>2</sup> : 39,0

Other dimensions and colours are possible on request.



Also available  
with 24 control cores!

# 400 Hz Ground Power

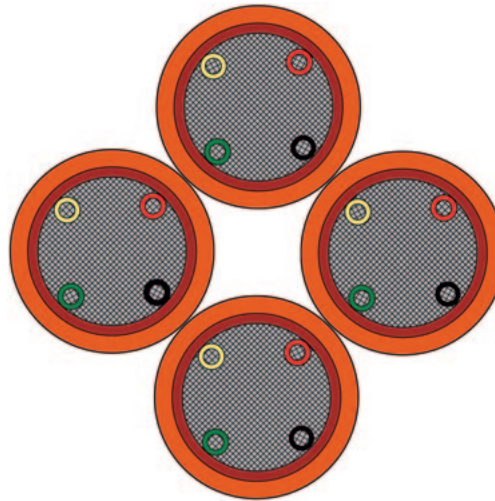
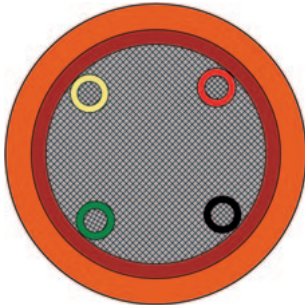
## GP 400 SC

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:

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

### Technical Data:

<b>Nominal voltage:</b>	U <sub>0</sub> /U 115/200 V
<b>Max. permissible operating voltage*:</b>	U <sub>0</sub> /U 0,6/1 kV
<b>Testing voltage:</b>	core/core 4000 V AC
<b>Min. bending radius</b>	
fixed laying:	4 x d
flexible application:	6 x d
<b>Temperature range</b>	
fixed laying:	-50/+90 °C
flexible application:	-40/+90 °C
<b>Halogen-free:</b>	acc. to IEC 60754-1 + VDE 0482-754-1
<b>Oil resistance:</b>	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
<b>Weather resistance:</b>	very good
<b>Absence of harmful substances:</b>	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 <sup>2</sup>	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)]
<b>GP 400 SC</b>						
34001321	1 x (50,0 + 4 x 1,0)	15,6	524,0	587	50,0 mm <sup>2</sup> : 0,393 1,0 mm <sup>2</sup> : 20,0	50,0 mm <sup>2</sup> : 0,786 1,0 mm <sup>2</sup> : 40,0
34001421	1 x (70,0 mm <sup>2</sup> + 4 x 1,0 mm <sup>2</sup> )	17,7	739,2	800	70,0 mm <sup>2</sup> : 0,277 1,0 mm <sup>2</sup> : 20,0	70,0 mm <sup>2</sup> : 0,554 1,0 mm <sup>2</sup> : 40,0
34001521	1 x (95,0 mm <sup>2</sup> + 4 x 1,0 mm <sup>2</sup> )	19,6	940,8	1032	95,0 mm <sup>2</sup> : 0,210 1,0 mm <sup>2</sup> : 20,0	95,0 mm <sup>2</sup> : 0,420 1,0 mm <sup>2</sup> : 40,0
<b>GP 400 QF</b>						
34004321	4 x (50,0 mm <sup>2</sup> + 4 x 1,0 mm <sup>2</sup> )	37,5	2096,0	2401	50,0 mm <sup>2</sup> : 0,393 1,0 mm <sup>2</sup> : 20,0	50,0 mm <sup>2</sup> : 0,786 1,0 mm <sup>2</sup> : 40,0
34004421	4 x (70,0 mm <sup>2</sup> + 4 x 1,0 mm <sup>2</sup> )	42,5	2956,8	3264	70,0 mm <sup>2</sup> : 0,277 1,0 mm <sup>2</sup> : 20,0	70,0 mm <sup>2</sup> : 0,554 1,0 mm <sup>2</sup> : 40,0

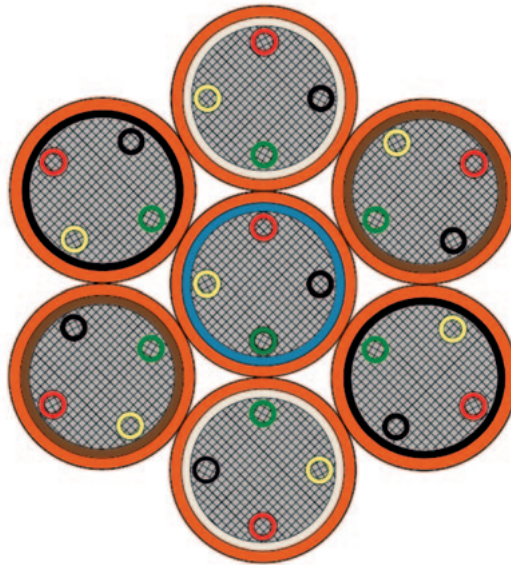
Other dimensions and colours are possible on request.

# 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:

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

### Technical Data:

<b>Nominal voltage:</b>	U <sub>0</sub> /U 0,6/1 kV
<b>Testing voltage:</b>	core/core 4000 V AC
<b>Min. bending radius</b>	
fixed laying:	4 x d
flexible application:	6 x d
<b>Temperature range</b>	
fixed laying:	-50/+90 °C
flexible application:	-40/+90 °C
<b>Absence of harmful substances:</b>	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 <sup>2</sup>	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 <sup>2</sup> + 4 x 1,0 mm <sup>2</sup> )	40,2	2654,4	2969,2	35,0 mm <sup>2</sup> : 0,554 1,0 mm <sup>2</sup> : 19,5	35,0 mm <sup>2</sup> : 1,108 1,0 mm <sup>2</sup> : 39,0

Other dimensions and colours are possible on request.

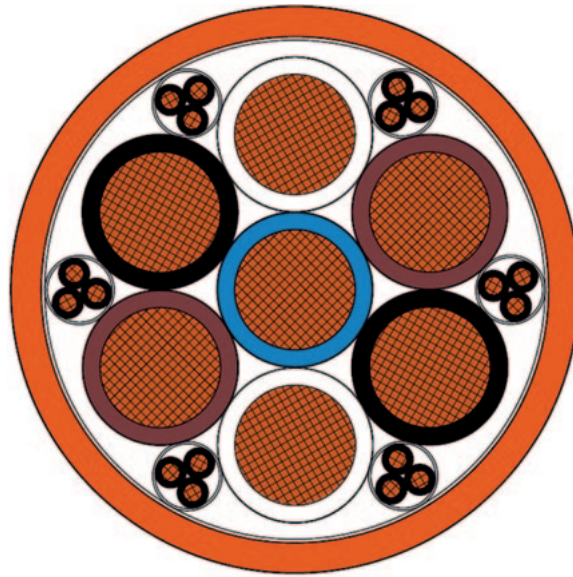


# 400 Hz Ground Power

## 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:

<b>Conductor:</b>	bare copper strands
<b>Insulation:</b>	SABIX®
<b>Colour code:</b>	control cores: black with numbers 1-18 neutral core: blue phase core: white, brown, black (two cores of the same colour form the phase)
<b>Stranding:</b>	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
<b>Sheath material:</b>	special compound
<b>Sheath colour:</b>	orange
<b>Marking:</b>	SAB BRÖCKSKES · D-VIERSEN · GP 400 SF 7x35,0mm <sup>2</sup> +6x3x1,0mm <sup>2</sup> 3400-7223  and continuous meter marking

### Technical Data:

<b>Nominal voltage:</b>	U <sub>0</sub> /U 0,6/1 kV
<b>Testing voltage:</b>	core/core 4000 V AC
<b>Current carrying capacity:</b>	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 <sup>2</sup> blue and 1mm <sup>2</sup> / 34007123) resp. (35 mm <sup>2</sup> blue and 1mm <sup>2</sup> / 34007223) without charge - single laying at or on surfaces
<b>34007123</b>	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.
<b>34007223</b>	286 A for max. 10 min. 325 A for max. 5 min. 364 A for max. 10 sec. 520 A for max. 2 sec.
<b>Min. bending radius</b>	
<i>fixed laying:</i>	4 x d
<i>flexible application:</i>	6 x d
<b>Temperature range</b>	
<i>fixed laying:</i>	-40/+70 °C
<i>flexible application:</i>	-20/+70 °C
<b>Absence of harmful substances:</b>	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 <sup>2</sup>	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 <sup>2</sup> + 6 x 3 x 1,0 mm <sup>2</sup>	32,4	1852,8	2245,5	25,0 mm <sup>2</sup> : 0,780 1,0 mm <sup>2</sup> : 19,5	25,0 mm <sup>2</sup> : 1,560 1,0 mm <sup>2</sup> : 39,0
34007223	7 x 35,0 mm <sup>2</sup> + 6 x 3 x 1,0 mm <sup>2</sup>	42,2	2524,8	2934,5	35,0 mm <sup>2</sup> : 0,554 1,0 mm <sup>2</sup> : 19,5	35,0 mm <sup>2</sup> : 1,108 1,0 mm <sup>2</sup> : 39,0

Other dimensions and colours are possible on request.



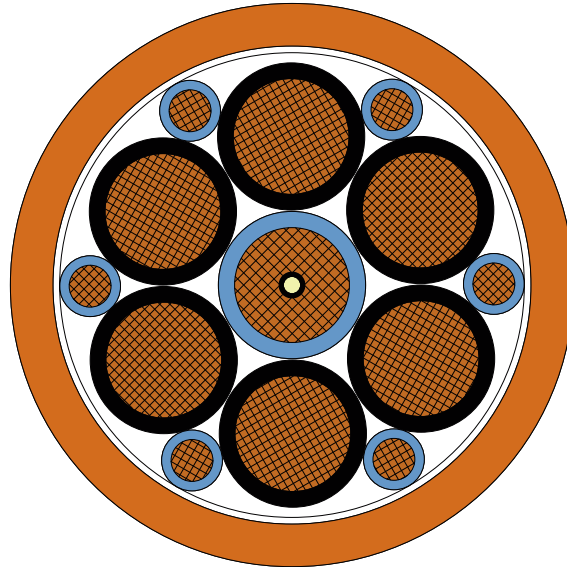
Also available  
with 24  
control cores!

# 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:

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

### Technical Data:

<b>Nominal voltage:</b>	U <sub>0</sub> /U 0,6/1 kV
<b>Testing voltage:</b>	core/core 4000 V AC
<b>Min. bending radius continuously flexible:</b>	7,5 x d
<b>Temperature range fixed laying:</b>	-50/+90 °C
<b>flexible application:</b>	-40/+90 °C
<b>Absence of harmful substances:</b>	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 <sup>2</sup>	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 <sup>2</sup> + 6 x 6,0 mm <sup>2</sup>	38,7	2707,2	3174	35,0 mm <sup>2</sup> : 0,565 6,0 mm <sup>2</sup> : 3,39

Other dimensions and colours are possible on request.

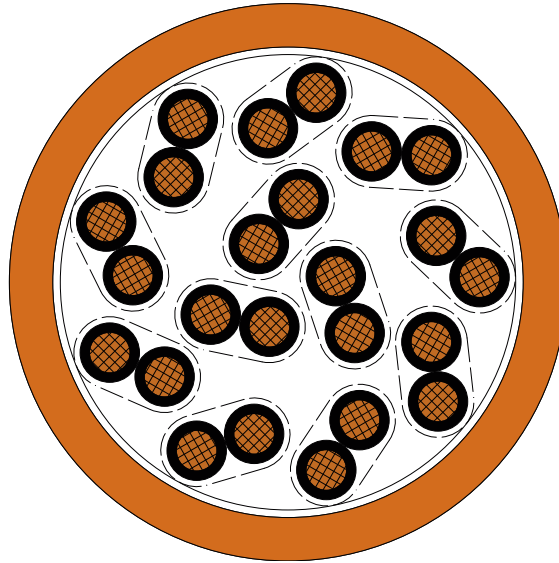


# 400 Hz Ground Power

## 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:

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

### Technical Data:

<b>Nominal voltage:</b>	300/500 V
<b>Testing voltage:</b>	core/core 4000 V AC
<b>Min. bending radius continuously flexible:</b>	7,5 x d
<b>Temperature range fixed laying:</b>	-50/+90 °C
<b>flexible application:</b>	-40/+90 °C
<b>Absence of harmful substances:</b>	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 <sup>2</sup>	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 <sup>2</sup>	23,0	345,6	480	12,0 mm <sup>2</sup> : 13,7

Other dimensions and colours are possible on request.

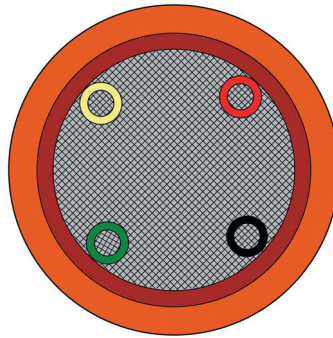


# 400 Hz Ground Power

## 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:

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

### Technical Data:

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

### Outstanding features:

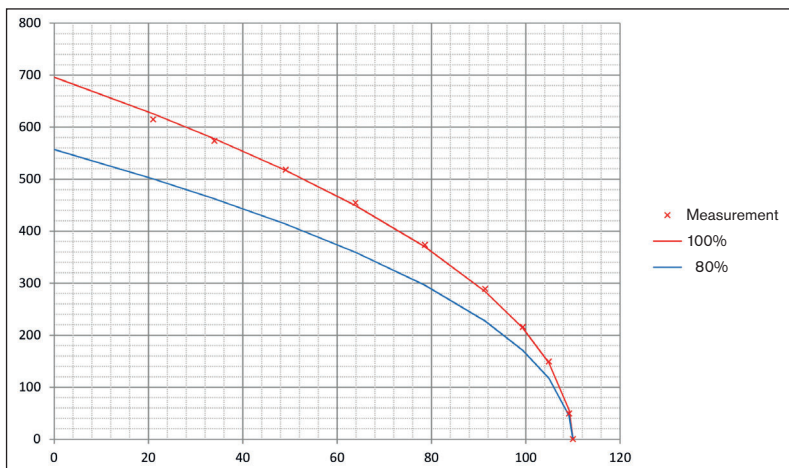


- low capacity insulation
- abrasion-resistant PUR sheath
- control cores symmetrically arranged
- cold flexible
- halogen-free
- oil resistant
- weather resistant

Item. no.	no. of cores x cross section n x mm <sup>2</sup>	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 <sup>2</sup> + 4 x 1,0 mm <sup>2</sup> )	22,2	1296,0	1339	120 mm <sup>2</sup> : 0,164 1,0 mm <sup>2</sup> : 20,0	120 mm <sup>2</sup> : 0,328 1,0 mm <sup>2</sup> : 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**

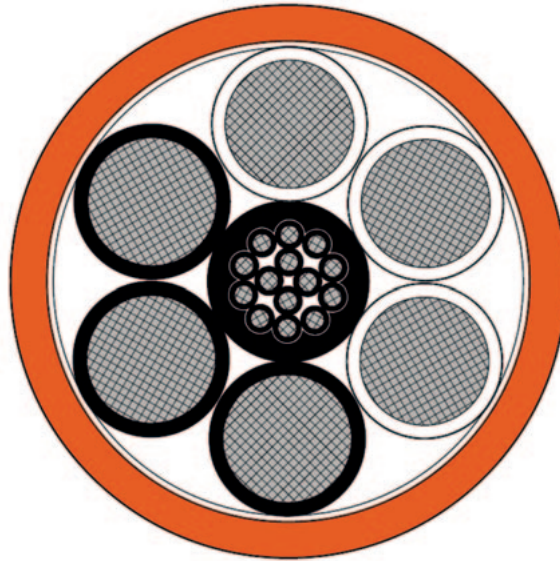
precondition:  
laying separately free in air

# 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:

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

### Technical Data:

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

### Outstanding features:

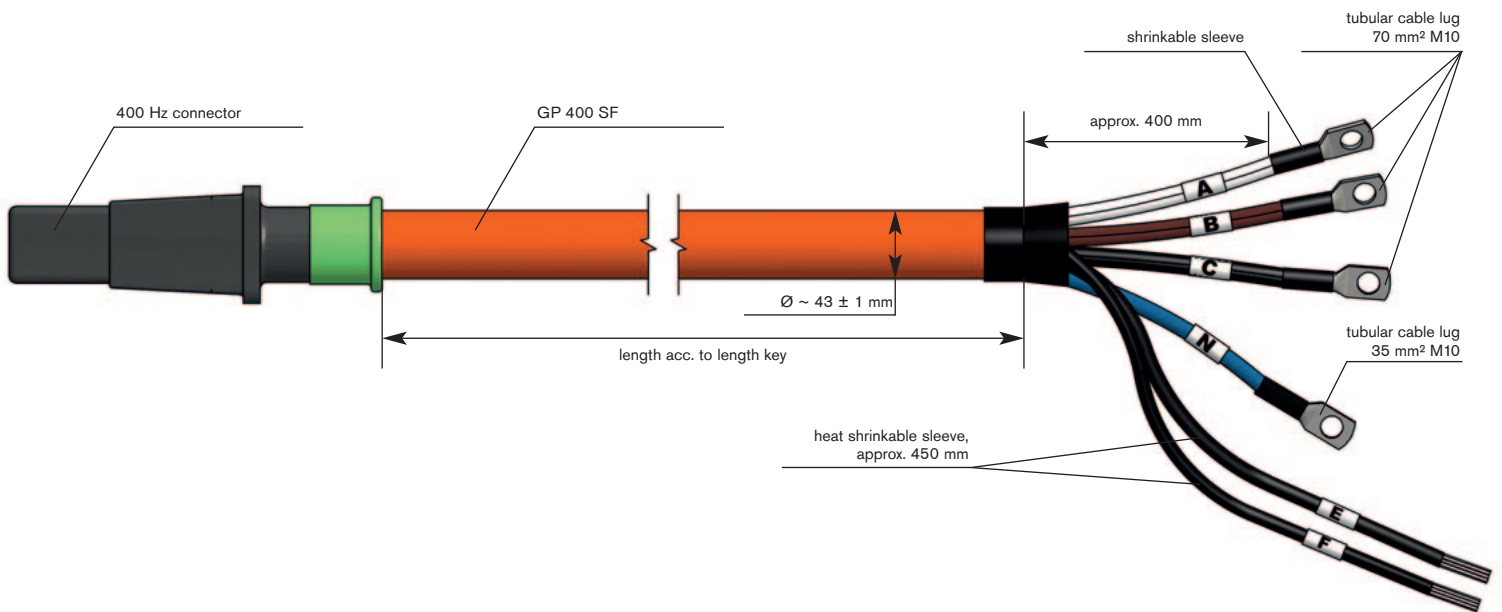
- low capacity insulation
- extremely flexible and smooth handling
- also usable as supply cable at the aircraft itself
- very good installation in narrowest spaces
- good resistance characteristics also against wear and tear

Item. no.	no. of cores x cross section n x mm <sup>2</sup>	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 <sup>2</sup> : 0,500 1,0 mm <sup>2</sup> : 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 <sup>2</sup> )	tubular cable lug 70 mm <sup>2</sup> , M10
pin B	2 x bn (35 mm <sup>2</sup> )	tubular cable lug 70 mm <sup>2</sup> , M10
pin C	2 x bk (35 mm <sup>2</sup> )	tubular cable lug 70 mm <sup>2</sup> , M10
pin N	1 x bu (35 mm <sup>2</sup> )	tubular cable lug 35 mm <sup>2</sup> , M10
pin E	cores 1-9 (1 mm <sup>2</sup> )	cores pulled into shrinkable sleeves, core ends untreated
pin F	cores 10-18 (1 mm <sup>2</sup> )	

### 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

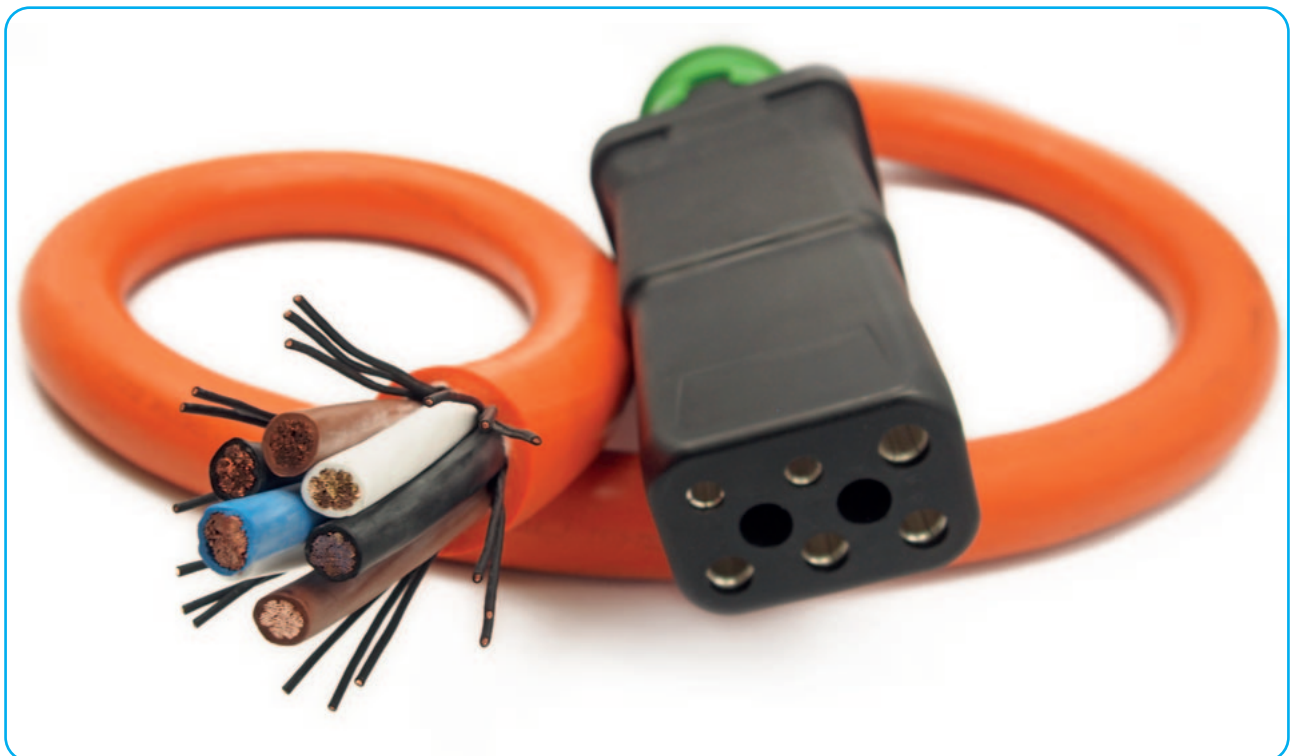
# 400 Hz Ground Power

## 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.

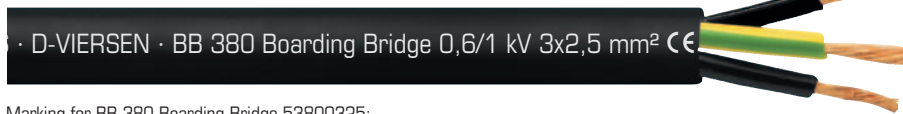


# Cables for Airport Equipment

## 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:

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

### Technical data:

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

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

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

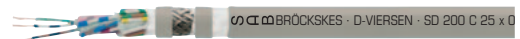
continuously flexible TPE/PUR control cable  
with numbered cores and overall copper screen



#### 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](http://www.sab-cable.com)

item no.	no. of cores x cross section n x mm <sup>2</sup>	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 mm<sup>2</sup> 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 mm<sup>2</sup> 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:

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

### Technical Data:

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

### Outstanding features:



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

## S 910 P

item no.	no. of cores x cross section n x mm <sup>2</sup>	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 <sup>2</sup>	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.

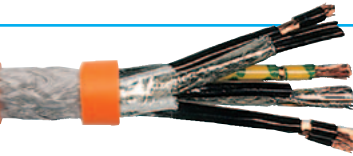
# Servo Motor Cables

## SL 841 C

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



80°C CSA AWM I/II A/B 80°C 300V FT1 FT2 CE



Marking for SL 841 C 08410407:

SAB BRÖCKSKES · D-VIERSEN · 08410407 SL 841 C 4 x 0,75 mm<sup>2</sup> (1000V) + 2 x (2 x 0,34 mm<sup>2</sup>) (300V)

DESINA AWM Style 20235 80°C CSA AWM I/II A/B 80°C 300V FT1 FT2 CE

### Construction:

<b>Conductor:</b>	bare copper strands acc. to IEC 60228, VDE 0295, class 6 < 0,50 mm <sup>2</sup> with reference to VDE 0812
<b>Insulation:</b>	TPE
<b>Colour code:</b>	black cores with consecutive numbers acc. to EN 50334 + VDE 0293-334 and a green-yellow earth wire
<b>from item no. 08411415:</b>	supply cores: * U1, V2, W3 and a green-yellow earth wire control cores: ** BR1 and BR2
<b>Stranding:</b>	control cores 0,34 mm <sup>2</sup> - 2,5 mm <sup>2</sup> twisted to pairs
<b>Screen:</b>	pairs wrapped with alu foil, tinned copper braiding
<b>Wrapping:</b>	pairs with PETP foil
<b>Stranding:</b>	screened control pairs and supply cores twisted together in layers
<b>Wrapping:</b>	two layers non-woven tape
<b>Screen:</b>	overall copper screen
<b>Wrapping:</b>	non-woven tape
<b>Sheath material:</b>	PUR, TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 with mat surface
<b>Sheath colour:</b>	orange (RAL 2003)

### Technical data:

<b>Nominal voltage:</b>	supply cores U <sub>0</sub> /U 0.6/1 kV
<b>Peak operating voltage:</b>	control cores max. 350 V
<b>Voltage UL/CSA:</b>	supply cores 1000 V control cores 300 V
<b>Testing voltage:</b>	supply cores core/core 4000 V core/screen 4000 V control cores core/core 2000 V core/screen 2000 V
<b>Min. bending radius</b>	5 x d fixed laying: flexible application: continuously flexible: 10 x d 12 x d
<b>Radiation resistance:</b>	5 x 10 <sup>7</sup> cJ/kg
<b>Temperature range</b>	DIN VDE UL/CSA: up to +80 °C fixed laying: -50/+90 °C flexible application: -40/+90 °C
<b>Fire performance:</b>	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL FT1, CSA FT1, FT2
<b>Oil resistance:</b>	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
<b>Chem. resistance:</b>	good against acids, alkalines, solvents, hydraulic liquids etc.
<b>Weather resistance:</b>	very good
<b>Absence of harmful substances:</b>	acc. to RoHS directive of the European Union

### Outstanding features:



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



Also available  
as low capacity  
motor connection cable!

item no.	dimension	AWG		largest single wire ø mm	outer-ø mm	copper figure kg/km	cable weight ≈ kg/km
		supply cores	control cores (pairs)				
08410407	4 x 0,75 + 2 x (2 x 0,34)	19 / 4c	22 / 2pr	0,16/0,11	11,6 ± 0,5	117,1	168
08410410	4 x 1,00 + 2 x (2 x 0,75)	18 / 4c	19 / 2pr	0,16	11,8 ± 0,5	150,1	201
08410415	4 x 1,50 + 2 x (2 x 0,75)	16 / 4c	19 / 2pr	0,16	12,3 ± 0,5	170,1	228
08410425	4 x 2,50 + 2 x (2 x 1,00)	14 / 4c	18 / 2pr	0,16	14,5 ± 0,8	231,8	320
08410441	4 x 4,00 + (2 x 1,00) + (2 x 1,50)	12 / 4c	18 / 1pr + 16 / 1pr	0,16	17,4 ± 0,6	343,0	458
08410461	4 x 6,00 + (2 x 1,00) + (2 x 1,50)	10 / 4c	18 / 1pr + 16 / 1pr	0,21/0,16	18,9 ± 0,8	432,8	557
08410471	4 x 10,00 + (2 x 1,00) + (2 x 1,50)	8 / 4c	18 / 1pr + 16 / 1pr	0,21/0,16	20,4 ± 1,0	603,7	736
08410485	4 x 16,00 + 2 x (2 x 1,50)	6 / 4c	16 / 2pr	0,21/0,16	26,0 ± 0,8	875,7	1111
08410490	4 x 25,00 + 2 x (2 x 1,50)	4 / 4c	16 / 2pr	0,21/0,16	29,4 ± 0,8	1251,1	1517
08410495	4 x 35,00 + 2 x (2 x 1,50)	2 / 4c	16 / 2pr	0,21/0,16	31,3 ± 0,8	1644,6	1882
08410496	4 x 50,00 + 2 x (2 x 2,50)	1 / 4c	14 / 2pr	0,31/0,16	38,2 ± 0,8	2317,6	2659
08411415	4 x 1,50 + (2 x 1,50)	16 / 4c	16 / 1pr	0,16	12,5 ± 0,3	159,9	222
08411425	4 x 2,50 + (2 x 1,50)	14 / 4c	16 / 1pr	0,16	13,3 ± 0,4	204,8	285
08411440	4 x 4,00 + (2 x 1,50)	12 / 4c	16 / 1pr	0,16	15,2 ± 0,4	268,8	369
08411460	4 x 6,00 + (2 x 1,50)	10 / 4c	16 / 1pr	0,21/0,16	16,6 ± 1,1	377,5	485
08411470	4 x 10,00 + (2 x 1,50)	8 / 4c	16 / 1pr	0,21/0,16	19,5 ± 1,6	555,8	677
08411480	4 x 16,00 + (2 x 1,50)	6 / 4c	16 / 1pr	0,21/0,16	23,7 ± 1,0	814,8	1019
08411490	4 x 25,00 + (2 x 1,50)	4 / 4c	16 / 1pr	0,21/0,16	27,2 ± 0,7	1175,6	1418
08411495	4 x 35,00 + (2 x 1,50)	2 / 4c	16 / 1pr	0,21/0,16	30,1 ± 1,0	1586,4	1810
08411496	4 x 50,00 + (2 x 1,50)	1 / 4c	16 / 1pr	0,31/0,16	34,4 ± 1,0	2192,4	2463

Other dimensions and colours are possible on request.

Note: SIEMENS® is a registered trademark. It is only used for comparative purposes.  
BOSCH REXROTH® is a registered trademark. It is only used for comparative purposes.  
DESINA® is a registered trademark of the German Machine Tool Builders' Association.



# 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

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

<b>Technical data:</b>	<b>S PB 640 UL</b> <i>highly flexible</i>	<b>S PN 667</b> <i>continuously flexible</i>
<b>Item number:</b>	0640-2611	0667-2202, 0667-9001
<b>Peak operating voltage:</b>	max. 350 V	
<b>Voltage UL/CSA:</b>	300 V	
<b>Testing voltage</b> core/core: core/screen:	2000 V 2000 V	
<b>Min. bending radius</b> fixed laying: flexible application: continuously flexible:	5 x d 10 x d 15 x d	
<b>Temperaturbereich VDE</b> nicht bewegt: bewegt:	<b>UL/CSA:</b> up to +80 °C -40/+80 °C -30/+80 °C	<b>UL/CSA:</b> up to +80 °C -40/+70 °C -40/+70 °C
<b>Halogen-free:</b>	acc. to IEC 60754-1 + VDE 0482-754-1	
<b>Fire performance:</b>	flame retardant and self-extinguishing acc. to IEC 60332 + VDE 0482-332-1-2	---
<b>Oil resistance:</b>	very good EN 50363-10-2 + VDE 0207-363-10-2	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
<b>Characteristic impedance:</b>	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)
<b>UL Style:</b>	21198	
<b>Application:</b>	---	suitable for EtherCAT and EtherNET/IP applications
<b>Absence of harmful substances:</b>	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
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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:

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

### Technical data:

<b>Operating voltage:</b>	max. 150 V
<b>Testing voltage:</b>	core/core 1500 V core/screen 1200 V
<b>Min. bending radius</b>	
<i>fixed laying:</i>	5 x d
<i>flexible:</i>	10 x d
<b>Temperature range</b>	
<i>fixed laying:</i>	-90/+180 °C
<i>flexible application:</i>	-40/+180 °C
<b>Hydraulic fluids resistance:</b>	very good
<b>Application:</b>	suitable for EtherCAT and EtherNET/IP applications
<b>Absence of harmful substances:</b>	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
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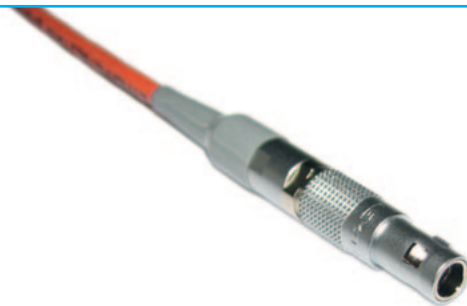
Other dimensions and colours are possible on request.

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



## Cable harnessing

Ethernet cable on both side 4-pole Lemo male connector



### Cable:

<b>Ethernet cable:</b>	2 x 2 x 28 AWG (L 0662-9015)
<b>Cable length:</b>	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:

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

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

<b>Technical data:</b>	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>
<b>Item number:</b>	1677-4630	1677-4631	1777-4631, 1777-4431
<b>Peak operating voltage:</b>	max. 90 V		
<b>Voltage UL/CSA:</b>	300 V		
<b>Testing voltage</b> core/core: core/screen:	2000 V 2000 V		
<b>Min. bending radius</b> fixed laying: flexible application: continuously flexible:	5 x d 10 x d 15 x d		
<b>Temperature range VDE</b> fixed laying: flexible application:	UL/CSA: up to +80 °C -40/+70 °C -40/+70 °C		
<b>Halogen-free:</b>	acc. to IEC 60754-1 + VDE 0482-754-1		
<b>Fire performance:</b>	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 UL Horizontal Flame Test FT2		
<b>Oil resistance:</b>	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2		
<b>Characteristic impedance (100 MHz):</b>	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
<b>Flexibility:</b>	very good		
<b>UL Style:</b>	20549		
<b>Application:</b>	suitable for EtherCAT and EtherNET/IP applications		
<b>Absence of harmful substances:</b>	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.

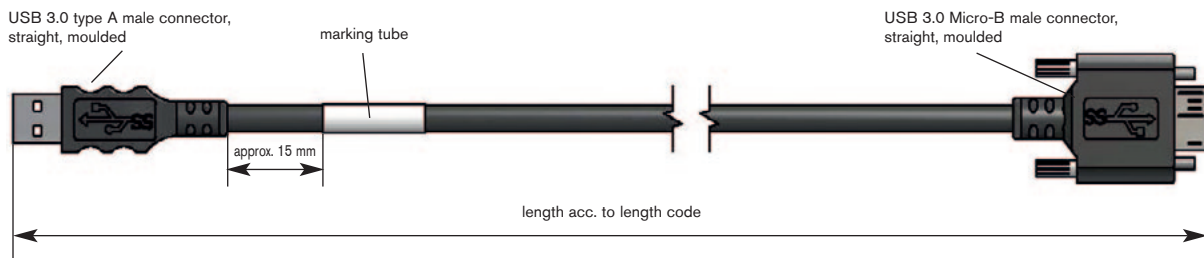
USB 3.0 cable with moulded type A male connector and type A female connector

### 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

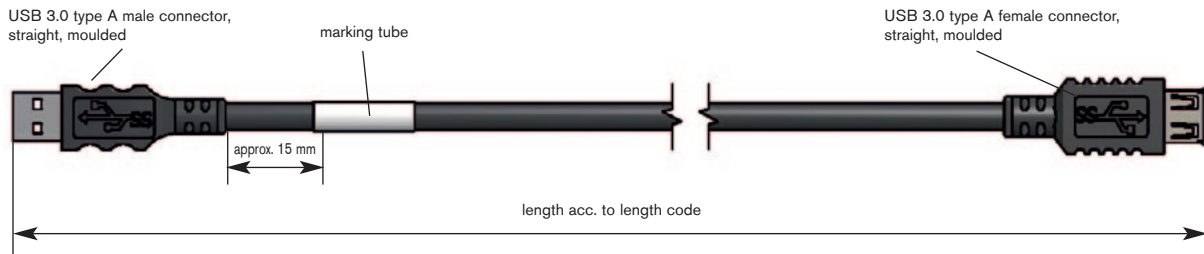


### Connector:

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

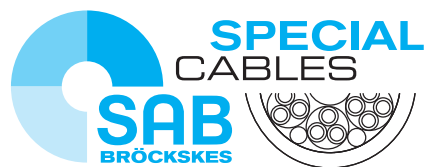
### Cable characteristics:



- mechanically very rugged
- PUR cable suitable for cable tracks

### SAB marking:

item number, order number, length



**SAB** Bröckskes GmbH & Co. KG

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