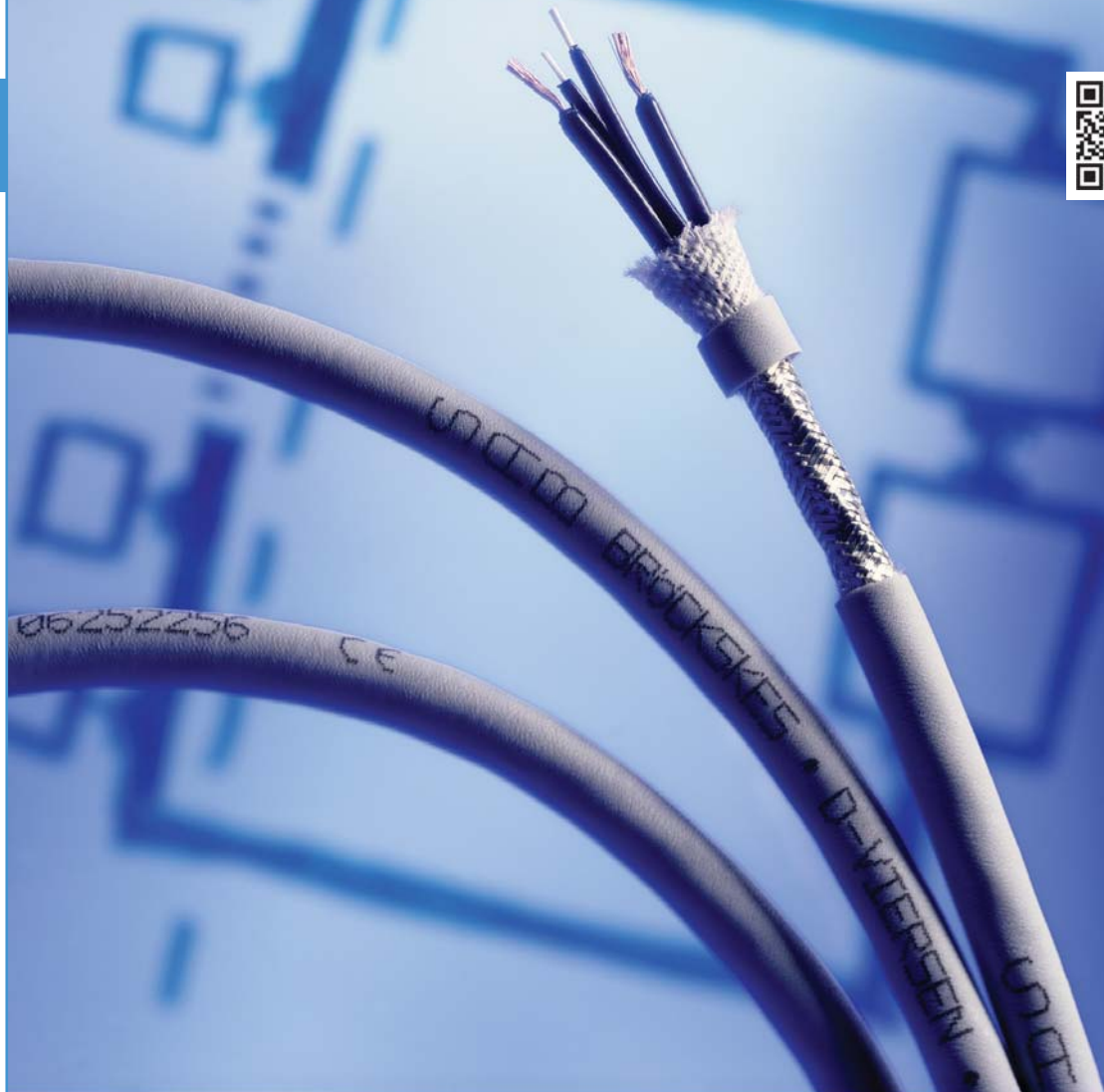


Bus Cables



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➤ GE 691	CAT 6 Gigabit Ethernet cable, for flexible applications	E/32	NEW
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Special Industrial Gigabit Ethernet Cables CAT 6

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➤ RT GE 694 Hybrid	CAT 6 Gigabit Ethernet cable, suitable for robots	E/33	NEW

Industrial Ethernet Cables CAT 5e and Gigabit Ethernet Cables CAT 6 especially for use in rail vehicles acc. to DIN 5510-2

➤ SABIX® R 660 FRNC CAT 5e	 Rail CAT 5e	E/34	NEW
➤ SABIX® R 691 FRNC CAT 6 C1	Rail CAT 6	E/34	NEW

You will find other halogen-free cables for use in rail vehicles acc. to DIN EN 45545-2 on pages A/47-55



: especially for use in rail vehicles

Applications

■ Applications of INTERBUS-S cables · remote bus cables · installation remote bus cables

INTERBUS-S is an open sensor/actuator bus, which is mostly used for communication on the field level (e.g. sensors, actuators, controllers), but also for the information transmission between the field level and the above-lying control level (e.g. SPS). Therefore, the INTERBUS-S belongs to the category of the so-called field busses and particularly characterised as a fast sensor/actuator. It is mainly applied in production engineering, materials processing, transportation and storage technique, particularly in car manufacturing and automation industries.

■ Applications of CAN-bus cables

CAN-bus acc. to ISO 11898. CAN-bus cables are used for the exchange of digital information. Controller Area Network (CAN) for fast data transmission / exchange. Recommended as highly flexible data cables in cable tracks.

■ Applications of DeviceNet™ cables

DeviceNet is based on the proved CAN-bus technology for fast data exchange. Trunk cable and drop cable configurations. DeviceNet is a connection-mode network. DeviceNet cables are used as highly flexible bus cables.

■ Applications of Interbus-Loop cables

The two-conductor Interbus-Loop cable is to be applied as a data transmission cable as well as for the supply of sensors. The three-conductor Interbus-Loop cables is applied for supply of actuators. These cables are also suitable for Interbus-Loop 2.

■ Applications of Profibus-DP cables

This Profibus modification, optimized with respect to velocity and low installation cost, was especially developed for the communication between automation systems and decentralized peripheral units. Profibus DP is used as a replacement for conventional parallel data transmission with 24 V or 0 - 20 mA. The specifications for Profibus-DP type A acc. to EN 50170 are met. Profibus-DP and Profibus-FMS apply the same transmission technology and a uniform bus access log. Therefore, both types can be used simultaneously on one cable.

■ Applications of Profibus cables

Profibus PA acc. to IEC 61158-2

Transmission technology acc. to IEC 61158-2 fulfils the requests by chemical and petrochemical industries and also allows inherent safety and bus supply of field units. It is a bit synchronous data log with D.C. free transmission, often marked as H1. IEC 61158-2 technology is applied at Profibus-PA.

Profibus type B acc. to EN 50170

Application especially developed for the communication between automation systems and decentralized peripheral units in the field level.

Profibus with „Fast Connect“ construction

The shape of this bus cables is radially symmetric and allows an insulation stripping tool to be used. This means that bus connectors can be assembled quickly and easily.

■ Applications of SafetyBUS p cables

SafetyBUS p is an open bus system for the serial transmission of safety directed data. The basic argument for SafetyBUS p is the safety by which it distinguishes itself from other bus systems in automation technique. Above all the users in many fields of machine and plant construction, automobile industry, and process engineering profit from this technique. SafetyBUS p accomplishes all demands for safety.

Applications

■ Applications of Hybrid field bus cables

S 670 and S 671 are flexible UL recognized, CSA approval hybrid field bus control cables, suitable for cable continuous flexing with optical fibre and copper conductors. The cable S 670 with its polyurethane outer jacket has a very good resistance against acids, alkalines, solvents hydraulic liquids and oil.

■ Application of USB 2.0 Cables

The robot cable USB 2.0 was developed for high frequency data transmission in industry. In the automobile industry intelligent image processing systems are very important. They are the key to more efficiency, precision and productivity with the installation and treatment by robots for the most different applications. Whether for the identification of parts and components, for visual inspection, welded seam control or for the collection of bar codes or type tests; wherever a quick and reliable collection and transmission of data from the camera to the industrial PC are absolutely important. Our highly flexible robot cable USB 2.0 was especially developed for this application. It guarantees excellent transmission characteristics as it is demanded for intelligent image processing with a transmission distance of up to 10 m without amplifier under extreme industrial application conditions.

■ Application of Industrial ETHERNET cables

Industrial Ethernet is a young and quickly developing network technology. Ethernet with the worldwide accepted **TCP/IP** (Transmission Control Protocol/Internet Protocol) will be the future connection to the well established field bus or sensor / actuator level. Generally, the following transmission rates are divided into:

SHARED ETHERNET = 10 Mbit/s

FAST ETHERNET = 100 Mbit/s (CAT 5 requirements)

GIGABIT ETHERNET = 1000 Mbit/s (1 Gbit/s)

SAB Bröckskes developed a variety of cable solutions due to the strong innovative force of automation industry. Depending on the application, we are able to offer today CAT 5 and CAT 6 cable solutions for flexible and continuous flexible use, for chemical and thermal stress as well as special cable constructions for reeling purpose and robot operation.

■ You will find further information about the safe application of cables on pages N/28-38

REMOTE BUS CABLES

IBS 612 PVC Interbus-S cable for indoor and outdoor installation

IBS 614 PVC Interbus-S cable

IBS 617 PVC Interbus-S cable with UL recognition

S IBS 616 PUR Interbus-S cable for cable tracks



Marking for S IBS 616 06163251:
SAB BRÖCKSKES · D-VIERSEN · S IBS 616 3 x 2 x 0,25 mm² CE

General construction:

Conductor:	bare copper strands with reference to DIN VDE 0812
Core insulation:	PE, 2Y11 acc. to DIN VDE 0207 part 2
Colour code:	acc. to DIN VDE 47100
Stranding:	twisted to pairs
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	7,5 x d
Characteristic impedance at 0.064 MHz:	120 Ω ± 20%
Characteristic impedance at > 1 MHz:	100 Ω ± 15 Ω
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	IBS 612	IBS 617	IBS 614	S IBS 616*
► Wrapping:	PETP foil	PETP foil	PETP foil	non-woven tape
► Outer sheath:	PVC acc. to DIN VDE 0281 part 1 colour: black (RAL 9005)	PVC, YÖ acc. to DIN VDE 0281 part 1 colour: redililac (RAL 4001)	PVC, TM1 acc. to DIN VDE 0281 part 1 colour: redililac (RAL 4001)	PUR, TMPU acc. to DIN VDE 0282 part 10 with rough surface colour: redililac (RAL 4001)
► Voltage acc. to UL:	–	300 V	–	–
► Radiation resistance:	8 x 10 ⁷ cJ/kg	8 x 10 ⁷ cJ/kg	8 x 10 ⁷ cJ/kg	5 x 10 ⁷ cJ/kg
► Temperature range: <i>fixed laying:</i> <i>flexible application:</i>	-30/+70°C -5/+70°C	<u>UL: up to +80°C</u> -30/+70°C -5/+70°C	-30/+70°C -5/+70°C	-40/+70°C -40/+70°C
► Halogen-free:	–	–	–	acc. to DIN VDE 0472 part 815 + IEC 60754-1
► Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	X	X	X	–
► Oil resistance:	acc. to internal standard see page N/13	very good - acc. to DIN VDE 0207 part 5	acc. to internal standard see page N/13	very good - TMPU acc. to DIN VDE 0282 part 10
► Flexibility:	good	good	good	very good
► Application in cable tracks:	not recommended	not recommended	not recommended	recommended
► Weather resistance:	medium	medium	medium	very good
► Bending characteristics: number of bendings acc. to DIN VDE 0472 part 603 test methode H	–	–	–	min. 1.000.000 single bendings
► Direct burial:	X	–	–	–
► UL Style:	–	2464-80°C	–	–

* Interbus-S remote bus cables 3 x 2 x 0.22 mm² or 3 x 2 x 0.25 mm² are used for the sensor/actuator level of industrial communication

item no.	type	no. of pairs x cross section mm²	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06123228	IBS 612	3 x 2 x 0,22	9,0	31,2	95
06173221	IBS 617	3 x 2 x 0,22	7,0	31,2	60
06143221	IBS 614	3 x 2 x 0,22	6,9	31,2	56
06163251	S IBS 616	3 x 2 x 0,25	8,0	35,9	64

Other dimensions and colours are possible on request.

REMOTE BUS CABLES

S IBS 618 PUR Interbus-S cable for cable tracks with UL approval

SABIX® IBS 610 halogen-free Interbus-S cable

SABIX® IBS 610 FRNC halogen-free, flame retardant Interbus-S cable



S IBS 618 3 x 2 x 0,25 mm² AWM Style 20235 80°C CE

Marking for S IBS 618 06183251:

SAB BRÖCKSKES · D-VIERSEN · IBS 618 3 x 2 x 0,25 mm² AWM Style 20235 80°C CE

General construction:

Conductor:	bare copper strands with reference to DIN VDE 0812
Colour code:	acc. to DIN VDE 47100
Stranding:	twisted to pairs
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	7,5 x d
Halogen-free:	acc. to DIN VDE 0472 part 815 and IEC 60754-1
Characteristic impedance at 0.064 MHz:	120 Ω ± 20%
Characteristic impedance at > 1 MHz:	100 Ω ± 15 Ω
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	S IBS 618*	SABIX® IBS 610	SABIX® IBS 610 FRNC
► Core insulation:	PE, 2Y11 acc. to DIN VDE 0207 part 2	SABIX®	SABIX®
► Wrapping:	non-woven tape	PETP foil	PETP foil
► Outer sheath, red lilac (RAL 4001):	PUR, TPU acc. to DIN VDE 0282 part 10, with rough surface	SABIX®	SABIX®
► Voltage acc. to UL:	300 V	–	–
► Radiation resistance:	5 x 10 ⁷ cJ/kg	5 x 10 ⁶ cJ/kg	–
► Temperature range: <i>fixed laying:</i> <i>flexible application:</i>	UL: up to +80°C -40/+70°C -40/+70°C	-50/+90°C -40/+90°C	-40/+85°C -30/+85°C
► Fire performance: no flame propagation acc. to IEC 60332-3 + EN 60332-3 Cat.C resp.D (see page N/20)	–	–	X
► Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	X	–	X
► Corrosiveness of conflagration gases: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	–	X	X
► Smoke density:	–	–	acc. to IEC 61034 and EN 61034
► Oil resistance:	very good - TPU acc. to DIN VDE 0282 part 10	very good - TM5 acc. to DIN VDE 0281 part 1	–
► Flexibility:	very good	very good	good
► Application in cable tracks:	recommended	not recommended	not recommended
► Weather resistance:	very good	good	good
► Bending characteristics: number of bendings acc. to DIN VDE 0472 part 603 test methode H	min. 1.000.000 single bendings	–	–
► UL Style:	20235-80°C	–	–

* Interbus-S remote bus cables 3 x 2 x 0.22 mm² or 3 x 2 x 0.25 mm² are used for the sensor/actuator level of industrial communication

item no.	type	no. of pairs x cross section mm²	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06183251	S IBS 618	3 x 2 x 0,25	8,5	35,9	82
56103221	SABIX® IBS 610	3 x 2 x 0,22	7,0	31,3	53
66103221	SABIX® IBS 610 FRNC	3 x 2 x 0,22	7,0	31,3	62

Other dimensions and colours are possible on request.



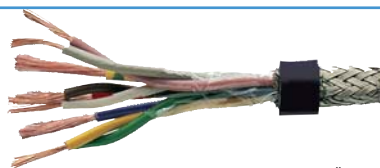
INSTALLATION REMOTE BUS CABLES

IBS 612 PVC Interbus-S cable for indoor and outdoor installation

IBS 614 PVC Interbus-S cable

IBS 617 PVC Interbus-S cable with UL recognition

S IBS 616 PUR Interbus-S cable for cable tracks



BRÖCKSKES · D-VIERSEN · IBS 612 3 x 2 x 0,22 mm² + 3 x 1,0 mm²

Marking for IBS 612 06126228:

SAB BRÖCKSKES · D-VIERSEN · IBS 612 3 x 2 x 0,22 mm² + 3 x 1,0 mm² CE

General construction:

Core insulation:	PE, 2Y11 acc. to DIN VDE 0207 part 2
Colour code:	acc. to DIN VDE 47100 (pairs), 1,0 mm ² : red, blue and green-yellow earth wire
Stranding:	twisted to pairs (≤ 0,25 mm ²)
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	7,5 x d
Characteristic impedance at 0.064 MHz:	120 Ω ± 20%
Characteristic impedance at > 1 MHz:	100 Ω ± 15 Ω
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	IBS 612	IBS 617	IBS 614	S IBS 616*
► Conductor:	0.22 mm ² : bare copper strands with reference to DIN VDE 0812 + 1.00 mm ² : bare copper strands acc. to IEC 60228, EN 60228 VDE 0295, class 5	0.22 mm ² : bare copper strands with reference to DIN VDE 0812 + 1.00 mm ² : bare copper strands acc. to IEC 60228, EN 60228 VDE 0295, class 5	0.22 mm ² : bare copper strands with reference to DIN VDE 0812 + 1.00 mm ² : bare copper strands acc. to IEC 60228, EN 60228 VDE 0295, class 5	0.25 mm ² : bare copper strands with reference to DIN VDE 0812 + 1.00 mm ² : bare copper strands acc. to IEC 60228, EN 60228 VDE 0295, class 6
► Wrapping:	PETP foil	PETP foil	PETP foil	non-woven tape
► Outer sheath:	PVC acc. to DIN VDE 0281 part 1 colour: black (RAL 9005)	PVC, YÖ acc. to DIN VDE 0281 part 1 colour: redlilac (RAL 4001)	PVC, TM1 acc. to DIN VDE 0281 part 1 colour: redlilac (RAL 4001)	PUR, TMPU acc. to DIN VDE 0282 part 10 with rough surface colour: redlilac (RAL 4001)
► Voltage acc. to UL:	–	300 V	–	–
► Radiation resistance:	8 x 10 ⁷ cJ/kg	8 x 10 ⁷ cJ/kg	8 x 10 ⁷ cJ/kg	5 x 10 ⁷ cJ/kg
► Temperature range: fixed laying: flexible application:	-30/+70°C -5/+70°C	UL: up to +80°C -30/+70°C -5/+70°C	-30/+70°C -5/+70°C	-40/+70°C -40/+70°C
► Halogen-free:	–	–	–	acc. to DIN VDE 0472 part 815 + IEC60754-1
► Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	X	X	X	–
► Oil resistance:	acc. to internal standard see page N/13	very good - acc. to DIN VDE 0207 part 5	acc. to internal standard see page N/13	very good - TMPU acc. to DIN VDE 0282 part 10
► Flexibility:	good	good	good	very good
► Application in cable tracks:	not recommended	not recommended	not recommended	recommended
► Weather resistance:	medium	medium	medium	very good
► Bending characteristics: number of bendings acc. to DIN VDE 0472 part 603 test methode H	–	–	–	min. 1.000.000 single bendings
► Direct burial:	X	–	–	–
► UL Style:	–	2464-80°C	–	–

* Interbus-S installation remote bus cables 3 x 2 x 0.22 mm² + 3 x 1,0 mm² or 3 x 2 x 0.25 mm² + 3 x 1,0 mm² are used for the sensor/actuator level of industrial communication

item no.	type	no. of pairs/cores x cross section mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06126228	IBS 612	3 x 2 x 0,22 + 3 x 1,00	10,0	62,0	132
06176221	IBS 617	3 x 2 x 0,22 + 3 x 1,00	9,0	64,5	106
06146221	IBS 614	3 x 2 x 0,22 + 3 x 1,00	7,9	62,0	90
06166251	S IBS 616	3 x 2 x 0,25 + 3 x 1,00	8,0	70,8	101

Other dimensions and colours are possible on request.

INSTALLATION REMOTE BUS CABLES

S IBS 618 PUR Interbus-S cable for cable tracks with UL approval

SABIX® IBS 610 halogen-free Interbus-S cable

SABIX® IBS 610 FRNC halogen-free, flame retardant Interbus-S cable



0,25 mm² + 3 x 1,0 mm² AWM Style 20235 80°C CE

Marking for S IBS 618 06186251:

SAB BRÖCKSKES · D-VIERSEN · S IBS 618 3 x 2 x 0,25 mm² + 3 x 1,0 mm² AWM Style 20235 80°C CE

General construction:

Colour code:	acc. to DIN VDE 47100 (pairs), 1,0 mm ² : red, blue and green-yellow earth wire
Stranding:	twisted to pairs (≤ 0,25 mm ²)
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	7,5 x d
Halogen-free:	acc. to DIN VDE 0472 part 815 and IEC 60754-1
Characteristic impedance at 0.064 MHz:	120 Ω ± 20%
Characteristic impedance at > 1 MHz:	100 Ω ± 15 Ω
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

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10

	S IBS 618*	SABIX® IBS 610	SABIX® IBS 610 FRNC
► Conductor:	0.25 mm ² : bare copper strands with reference to DIN VDE 0812 + 1.00 mm ² : bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 6	0.22 mm ² : bare copper strands with reference to DIN VDE 0812 + 1.00 mm ² : bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 6	0.22 mm ² : bare copper strands with reference to DIN VDE 0812 + 1.00 mm ² : bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 6
► Core insulation:	PE, 2Y11 acc. to DIN VDE 0207 part 2	SABIX®	SABIX®
► Wrapping:	non-woven tape	PETP foil	PETP foil
► Outer sheath, redlilac (RAL 4001):	PUR, TPU acc. to DIN VDE 0282 part 10, with rough surface	SABIX®	SABIX®
► Voltage acc. to UL:	300 V	—	—
► Radiation resistance:	5 x 10 ⁷ cJ/kg	5 x 10 ⁶ cJ/kg	—
► Temperature range: fixed laying: flexible application:	<u>UL: up to +80°C</u> -40/+70°C -40/+70°C	-50/+90°C -40/+90°C	-40/+85°C -30/+85°C
► Fire performance: no flame propagation acc. to IEC 60332-3 and EN 60332-3 Cat. C resp. D (see page N/20)	—	—	X
► Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	X	—	X
► Corrosiveness of conflagration gases: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	—	X	X
► Smoke density:	—	—	acc. to IEC 61034 and EN 61034
► Oil resistance:	very good - TPU acc. to DIN VDE 0282 part 10	very good - TM5 acc. to DIN VDE 0281 part 1	—
► Flexibility:	very good	very good	good
► Application in cable tracks:	recommended	not recommended	not recommended
► Weather resistance:	very good	good	good
► Bending characteristics: number of bendings acc. to DIN VDE 0472 part 603 test method H	min. 1.000.000 single bendings		
► UL Style:	20235-80°C	—	—

* Interbus-S installation remote bus cables 3 x 2 x 0.22 mm² + 3 x 1,0 mm² or 3 x 2 x 0.25 mm² + 3 x 1,0 mm² are used for the sensor/actuator level of industrial communication

item no.	type	no. of pairs/cores x cross section mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06186251	S IBS 618	3 x 2 x 0,25 + 3 x 1,00	9,2	71,0	121
56106221	SABIX® IBS 610	3 x 2 x 0,22 + 3 x 1,00	7,9*	62,0	84
66106221	SABIX® IBS 610 FRNC	3 x 2 x 0,22 + 3 x 1,00	7,9*	62,0	94

Other dimensions and colours are possible on request.

* max. 8.0 mm



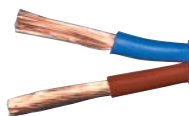
INTERBUS-LOOP CABLES

SABIX® IBL 600 FRNC Halogen-free, flame retardant Interbus-Loop cable

IBL 600 PVC Interbus-Loop cable

SABIX® IBL 600 Halogen-free Interbus-Loop cable

S IBL 605 PUR Interbus-Loop cable for cable tracks



BRÖCKSKES · D-VIERSEN · IBL 600 2 x 1,5 mm² 001 m CE

Marking for IBL 600 06002853:

SAB BRÖCKSKES · D-VIERSEN · IBL 600 2 x 1,5 mm² and current meter marking CE

General construction:

Conductor:	bare copper strands with reference to IEC 60228, EN 60228, VDE 0295, class 5, S IBL 605 = class 6
Colour code:	coloured acc. to HD 308 (VDE 0293 part 308); green-yellow earth wire from 3 cores

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1000 V
Min. bending radius:	15 x d
Characteristic impedance at 0,25 MHz - 10 MHz:	for two-core cables 75 Ω ± 15%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

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	SABIX® IBL 600 FRNC	IBL 600	SABIX® IBL 600	S IBL 605
► Core insulation:	SABIX®	PVC, TI2 acc. to DIN VDE 0281 part 1	SABIX®	TPE-E
► Stranding:	in layers	in layers	in layers	specialty adjusted layering with netting tape and one additional non-woven tape over the outer layer
► Outer sheath, red lilac (RAL 4001):	SABIX®	PVC, YÖ acc. to DIN VDE 0281 part 1	SABIX®	PUR, TPU acc. to DIN VDE 0282 part 10 with rough surface
► Radiation resistance:	–	8 x 10 ⁷ cJ/kg	5 x 10 ⁶ cJ/kg	5 x 10 ⁷ cJ/kg
► Temperature range: <i>fixed laying:</i> <i>flexible application:</i>	-40/+85°C -30/+85°C	-40/+70°C +5/+70°C	-50/+90°C -40/+90°C	-50/+90°C -40/+90°C
► Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1	–	acc. to DIN VDE 0472 part 815 + IEC 60754-1	acc. to DIN VDE 0472 part 815 + IEC 60754-1
► Fire performance: no flame propagation acc. to IEC 60332-3 + EN 60332-3 Cat. C resp. D (see page N/20)	X	–	–	–
► Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	–	X	–	–
► Corrosiveness of conflagration gases: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	X	–	X	X
► Smoke density:	acc. to IEC 61034 + EN 61034	–	–	–
► Oil resistance:	–	very good - acc. to DIN VDE 0207 part 5	very good - TM5 acc. to DIN VDE 0281 part 1	very good - TPU acc. to DIN VDE 0282 part 10
► Flexibility:	good	–	very good	very good
► Chemical resistance: good against acids, alkalines, solvents, hydraulic liquids etc.	–	–	–	X
► Application in cable tracks:	not recommended	not recommended	not recommended	recommended
► Weather resistance:	good	medium	good	very good
► Continuously flexible application:	–	–	–	very good

item no.	type	no. of cores x cross section mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
66012853	SABIX® IBL 600 FRNC	2 x 1,50	6,9	28,8	78
66013853	SABIX® IBL 600 FRNC	3 x 1,50	7,5	43,2	94
06002853	IBL 600	2 x 1,50	6,9	28,8	75
06003853	IBL 600	3 x 1,50	7,5	43,2	94
56002853	SABIX® IBL 600	2 x 1,50	6,9	28,8	59
56003853	SABIX® IBL 600	3 x 1,50	7,5	43,2	75
06052853	S IBL 605	2 x 1,50	7,7	28,8	75
06053853	S IBL 605	3 x 1,50	8,1	43,2	90

Other dimensions and colours are possible on request.



S CB 626 CAN-Bus cable for cable tracks**S CB 625** Halogen-free CAN-Bus cable for cable tracks**SABIX® CB 620** Halogen-free CAN-Bus cable**SABIX® CB 620 FRNC** Halogen-free, flame retardant CAN-Bus cable**SABIX® CB 624 FRNC C1** Halogen-free, flame retardant CAN-Bus cable acc. to NF C 32-070 C1

BRÖCKSKES · D-VIERSEN · SABIX CB 620 2 x 0,25 mm² CE



Marking for SABIX CB 620 56202251:

SAB BRÖCKSKES · D-VIERSEN · SABIX CB 620 2 x 0,25 mm² CE

General construction:

Colour code:	acc. to DIN VDE 47100
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	7,5 x d
Characteristic impedance at 1 MHz:	120 Ω (95 - 140 Ω)
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	S CB 626	S CB 625	SABIX® CB 620	SABIX® CB 620 FRNC	SABIX® CB 624 FRNC C1
► Conductor:	bare copper strands extra fine wires	bare copper strands extra fine wires	bare copper strands acc. to DIN VDE 0812	bare copper strands acc. to DIN VDE 0812	bare copper strands acc. to DIN VDE 0812
► Core insulation:	FEP	TPE-E	SABIX®	SABIX®	SABIX®
► Wrapping:	non-woven tape	non-woven tape	PETP foil	PETP foil	non-woven tape
► Wrapping:	non-woven tape	non-woven tape	–	–	–
► Outer sheath, red lilac (RAL 4001):	PUR, TPU acc. to DIN VDE 0282 part 10 with rough surface	PUR, TPU acc. to DIN VDE 0282 part 10 with rough surface	SABIX®	SABIX®	SABIX®
► Radiation resistance:	5 x 10 ⁷ cJ/kg	5 x 10 ⁷ cJ/kg	5 x 10 ⁶ cJ/kg	–	–
► Temperature range: <i>fixed laying:</i> <i>flexible application:</i>	-50/+90°C -40/+90°C	-50/+90°C -40/+90°C	-50/+90°C -40/+90°C	-40/+85°C -30/+85°C	-30/+90°C -20/+90°C
► Halogen-free:	–	acc. to DIN VDE 0472 part 815 + IEC 60754-1	acc. to DIN VDE 0472 part 815 + IEC 60754-1	acc. to DIN VDE 0472 part 815 + IEC 60754-1	acc. to DIN VDE 0472 part 815 + IEC 60754-1
► Fire performance: no flame propagation acc. to IEC 60332-3 + EN 60332-3 Cat. C resp. D (see page N/20)	–	–	–	X	X
► Fire performance: NF C 32-070 C1	–	–	–	–	X
► Corrosiveness of conflagration gases: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	–	–	X	X	X
► Smoke density:	–	–	low	acc. to IEC 61034 + EN 61034	acc. to IEC 61034 + EN 61034
► Oil resistance:	very good - TPU acc. to DIN VDE 0282 part 10	very good - TPU acc. to DIN VDE 0282 part 10	very good - TPU acc. to DIN VDE 0281 part 1	–	–
► Flexibility:	very good	very good	very good	good	good
► Application in cable tracks:	recommended	recommended	not recommended	not recommended	not recommended
► Chemical resistance: good against acids, alkalines, solvents, hydraulic liquids etc.	X	X	–	–	–
► Weather resistance:	very good	very good	good	good	good
► Bending characteristics: number of bendings acc. to DIN VDE 0472 part 603 test methode H	min. 250.000 single bendings	min. 500.000 single bendings	min. 60.000 single bendings	–	–

item no.	type	no. of pairs x cross section mm²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06262251	S CB 626	2 x 0,25	6,3	20,8	55
06252251	S CB 625	2 x 0,25	8,1	25,3	75
56202251	SABIX® CB 620	2 x 0,25	5,7	19,0	35
66202251	SABIX® CB 620 FRNC	2 x 0,25	5,7	19,0	41
66242251	SABIX® CB 624 FRNC C1	2 x 2 x 0,25	9,0	42,7	101
66242341	SABIX® CB 624 FRNC C1	1 x 2 x 0,34	7,7	31,0	77
66244501	SABIX® CB 624 FRNC C1	2 x 2 x 0,50	11,4	82,6	160

Other dimensions and colours are possible on request.

CB 627 CAN-Bus cable with UL recognition**S CB 628** Halogen-free CAN-Bus cable for cable tracks with UL recognition628 2 x 0.25 mm² AWM Style 20235 80°C 300 V C

Marking for S CB 628 06282251:

SAB BRÖCKSKES · D-VIERSEN · S CB 628 2 x 0.25 mm² AWM Style 20235 80°C 300 V CE**General construction:**

Colour code:	acc. to DIN VDE 47100
Core insulation:	PE 2Y11 acc. to DIN VDE 0207 part 2
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Voltage:	UL: 300 V
Testing voltage:	1500 V
Min. bending radius:	7,5 x d
Characteristic impedance at 1 MHz:	120 Ω (95 - 140 Ω)
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	CB 627	S CB 628
➤ Conductor:	bare copper strands acc. to DIN VDE 0812	bare copper strands, extra fine wires
➤ Wrapping:	PETP foil	non-woven tape
➤ Inner sheath (nature):	–	SABIX®
➤ Outer sheath, redlilac (RAL 4001):	PVC, YÖ acc. to DIN VDE 0281 part 1	TMPU acc. to DIN VDE 0281 part 10 with rough surface
➤ Radiation resistance:	8 x 10 ⁷ cJ/kg	5 x 10 ⁷ cJ/kg
➤ Temperature range: fixed laying: flexible application:	UL: up to +80°C -30/+70°C -5/+70°C	UL: up to +80°C -40/+70°C -40/+70°C
➤ Halogen-free:	–	acc. to DIN VDE 0472 part 815 + IEC 60754-1
➤ Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	X	X
➤ Corrosiveness of conflagration gases: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	–	–
➤ Oil resistance:	very good - acc. to DIN VDE 0207 part 5	very good - TMPU acc. to DIN VDE 0282 part 10
➤ Flexibility:	good	very good
➤ Application in cable tracks:	not recommended	recommended
➤ Chemical resistance: good against acids, alkalines, solvents, hydraulic liquids etc.	–	X
➤ Weather resistance:	medium	very good

item no.	type	no. of pairs/cores x cross section mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06272251	CB 627	2 x 0,25	6,0	19,0	44
06272341	CB 627	2 x 0,34	6,4	21,8	47
06272501	CB 627	2 x 0,50	7,6	28,4	63
06272751	CB 627	2 x 0,75	9,6	39,6	93
06282251	S CB 628	2 x 0,25	7,9	20,2	71
06282341	S CB 628	2 x 0,34	8,3	22,9	77
06282501	S CB 628	2 x 0,50	8,7	29,0	74
06274251	CB 627	2 x 2 x 0,25	7,1	27,4	57
06274341	CB 627	2 x 2 x 0,34	7,7	33,5	66
06274501	CB 627	2 x 2 x 0,50	9,5	44,3	98
06274751	CB 627	2 x 2 x 0,75	13,5	80,8	174
06284251	S CB 628	2 x 2 x 0,25	9,1	27,9	90
06284341	S CB 628	2 x 2 x 0,34	9,6	32,7	97
06284501	S CB 628	2 x 2 x 0,50	10,6	44,9	94

Other dimensions and colours are possible on request.

DEVICENET™ CABLES

DN 650 PVC DeviceNet™ cable with overall copper screen and UL recognition

DN 651 Flexible PVC DeviceNet™ cable with a static screen and UL recognition



Low Voltage Computer Cable AWM Style 2560 60°C 30V CE



Marking for DN 650 06502241: SAB BRÜCKSKES · D-VIERSEN · DN 650 2x0,24mm² + 2x0,38mm² 06502241
24 AWG/1pr + 22 AWG/1pr Low Voltage Computer Cable AWM Style 2560 60°C 30V CE

General construction:

Wrapping:	each pair wrapped with alu foil
Wrapping:	non-woven tape
Outer sheath:	PVC, TM1 acc. to DIN VDE 0281 part 1
Sheath colour:	redlilac (RAL 4001)

Technical data:

Voltage UL:	30 V
Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius	fixed laying: 7,5 x d flexible application: 15 x d
Temperature range	DIN/VDE: UL: fixed laying: -30/+70 °C up to +60 °C flexible application: - 5/+70 °C
Characteristic impedance at 1 MHz:	120 Ω ± 10%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

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	DN 650 Drop Cable 2 x 0,24 mm ² + 2 x 0,38 mm ²	DN 650 Trunk Cable 2 x 0,96 mm ² + 2 x 1,53 mm ²	DN 651 Drop Cable 2 x 0,24 mm ² + 2 x 0,38 mm ²	DN 651 Trunk Cable 2 x 0,96 mm ² + 2 x 1,53 mm ²
➤ Conductor: 0,24 mm ² tinned copper strands 0,38 mm ² tinned copper strands	AWG 24/19 AWG 22/19	— —	AWG 24/19 AWG 22/19	— —
➤ Conductor: 0,96 mm ² tinned copper strands 1,53 mm ² tinned copper strands	— —	AWG 18/19 AWG 15/19	— —	AWG 18/19 AWG 15/19
➤ Core insulation:	0,24 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 0,38 mm ² : PVC, TI2 acc. to DIN VDE 0281 part 1	0,96 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 1,53 mm ² : PVC, TI2 acc. to DIN VDE 0281 part 1	0,24 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 0,38 mm ² : PVC, TI2 acc. to DIN VDE 0281 part 1	0,96 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 1,53 mm ² : PVC, TI2 acc. to DIN VDE 0281 part 1
➤ Colour code: 0,24 mm ² : data pair white and light blue 0,38 mm ² : supply pair black and red	X X	— —	X X	— —
➤ Colour code: 0,96 mm ² : data pair white and light blue 1,53 mm ² : supply pair black and red	— —	X X	— —	X X
➤ Stranding: cores 0,24 mm ² twisted to pair and cores 0,38 mm ² twisted to pair	X X	— —	X X	— —
➤ Stranding: cores 0,96 mm ² twisted to pair and cores 1,53 mm ² twisted to pair	— —	X X	— —	X X
➤ Total stranding: pairs twisted together with tinned copper drain wire	AWG 22/19	AWG 18/19	AWG 22/19	AWG 18/19
➤ Screen:	tinned copper braiding	tinned copper braiding	Alu foil	Alu foil

item no.	type	no. of pairs x cross section mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06502241	DN 650 (Drop Cable)	2 x 0,24 + 2 x 0,38	6,1 - 7,1	41,2	74
06502781	DN 650 (Trunk Cable)	2 x 0,96 + 2 x 1,53	10,4 - 12,4	98,7	166
06512241	DN 651 (Drop Cable)	2 x 0,24 + 2 x 0,38	6,1 - 7,1	16,4	57
06512781	DN 651 (Trunk Cable)	2 x 0,96 + 2 x 1,53	10,4 - 12,4	58,4	116

Other dimensions and colours are possible on request.

DEVICENET™ CABLES

DN 656 Halogen-free, flexible DeviceNet™ cable with a static screen and UL recognition

DN 657 Halogen-free, flexible DeviceNet™ cable with overall copper screen



AWG/1pr + 22 AWG/1pr AWM Style 21080 75°C 3

Marking for DN 656 06562241:

SAB BRÖCKSKES · D-VIERSEN · DN 656 2x0,24mm² + 2x0,38mm² 06562241 24 AWG/1pr + 22 AWG/1pr AWM Style 21080 75°C 300V

General construction:

Wrapping:	each pair wrapped with alu foil
Wrapping:	non-woven tape
Outer sheath:	SABIX®
Sheath colour:	redlilac (RAL 4001)

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius	fixed laying: 7,5 x d flexible application: 15 x d
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC60754-1
Characteristic impedance at 1 MHz:	120 Ω ± 10%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	DN 656 Drop Cable 2 x 0,24 mm ² + 2 x 0,38 mm ²	DN 656 Trunk Cable 2 x 0,96 mm ² + 2 x 1,53 mm ²	DN 657 Drop Cable 2 x 0,24 mm ² + 2 x 0,38 mm ²	DN 657 Trunk Cable 2 x 0,96 mm ² + 2 x 1,53 mm ²
► Conductor: 0,24 mm ² tinned copper strands	AWG 24/19	—	AWG 24/19	—
0,38 mm ² tinned copper strands	AWG 22/19	—	AWG 22/19	—
► Conductor: 0,96 mm ² tinned copper strands	—	AWG 18/19	—	AWG 18/19
1,53 mm ² tinned copper strands	—	AWG 15/19	—	AWG 15/19
► Core insulation:	0,24 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 0,38 mm ² : SABIX®	0,96 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 1,53 mm ² : SABIX®	0,24 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 0,38 mm ² : SABIX®	0,96 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 1,53 mm ² : SABIX®
► Colour code: 0,24 mm ² : data pair white and light blue	X	—	X	—
0,38 mm ² : supply pair black and red	X	—	X	—
► Colour code: 0,96 mm ² : data pair white and light blue	—	X	—	X
1,53 mm ² : supply pair black and red	—	X	—	X
► Stranding: cores 0,24 mm ² twisted to pair and	X	—	X	—
cores 0,38 mm ² twisted to pair	X	—	X	—
► Stranding: cores 0,96 mm ² twisted to pair and	—	X	—	X
cores 1,53 mm ² twisted to pair	—	X	—	X
► Total stranding: pairs twisted together with	AWG 22/19	AWG 18/19	AWG 22/19	AWG 18/19
tinned copper drain wire				
► Screen:	Alu foil	Alu foil	tinned copper braiding	tinned copper braiding
► Voltage UL:	300 V	300 V	—	—
► Temperature range:	UL: up to +75°C	UL: up to +75°C	—	—
fixed laying:	-40/+70°C	-40/+70°C	-40/+70°C	-40/+70°C
flexible application:	-30/+70°C	-30/+70°C	-30/+70°C	-30/+70°C

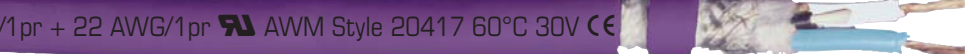
item no.	type	no. of pairs x cross section mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06562241	DN 656 (Drop Cable)	2 x 0,24 + 2 x 0,38	6,1 - 7,1	16,4	56
06562781	DN 656 (Trunk Cable)	2 x 0,96 + 2 x 1,53	10,4 - 12,4	58,4	120
06572241	DN 657 (Drop Cable)	2 x 0,24 + 2 x 0,38	6,1 - 7,1	41,2	74
06572781	DN 657 (Trunk Cable)	2 x 0,96 + 2 x 1,53	10,4 - 12,4	98,7	183

Other dimensions and colours are possible on request.

DEVICENET™ CABLES

DN 658 Highly flexible DeviceNet™ cable with overall copper screen and UL recognition

DN 659 Highly flexible DeviceNet™ cable with a static screen and UL recognition



Marking for DN 659 06592241:

SAB BRÖCKSKES · D-VIERSEN · DN 659 2x0,24mm² + 2x0,38mm² 06592241 24 AWG/1pr + 22 AWG/1pr AWM Style 20417 60°C 30V CE

General construction:

Wrapping:	each pair wrapped with alu foil
Wrapping:	non-woven tape
Outer sheath:	PUR, TPU acc. to DIN VDE 0281 part 10 with rough surface
Sheath colour:	redlilac (RAL 4001)

Technical data:

Voltage UL:	30 V
Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius	fixed laying: 7,5 x d flexible application: 15 x d
Temperature range	UL: up to +60 °C
fixed laying:	-30/+70 °C
flexible application:	-5/+70 °C
Characteristic impedance at 1 MHz:	120 Ω ± 10%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

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	 DN 658 Drop Cable 2 x 0,24 mm ² + 2 x 0,38 mm ²	 DN 658 Trunk Cable 2 x 0,96 mm ² + 2 x 1,53 mm ²	 DN 659 Drop Cable 2 x 0,24 mm ² + 2 x 0,38 mm ²	 DN 659 Trunk Cable 2 x 0,96 mm ² + 2 x 1,53 mm ²
► Conductor: 0,24 mm ² tinned copper strands 0,38 mm ² tinned copper strands	fine wires fine wires	— —	fine wires fine wires	— —
► Conductor: 0,96 mm ² tinned copper strands 1,53 mm ² tinned copper strands	— —	fine wires fine wires	— —	fine wires fine wires
► Core insulation:	0,24 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 0,38 mm ² : PVC, TI2 acc. to DIN VDE 0281 part1	0,96 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 1,53 mm ² : PVC, TI2 acc. to DIN VDE 0281 part1	0,24 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 0,38 mm ² : PVC, TI2 acc. to DIN VDE 0281 part 1	0,96 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 1,53 mm ² : PVC, TI2 acc. to DIN VDE 0281 part 1
► Colour code: 0,24 mm ² : data pair white and light blue 0,38 mm ² : supply pair black and red	X X	— —	X X	— —
► Colour code: 0,96 mm ² : data pair white and light blue 1,53 mm ² : supply pair black and red	— —	X X	— —	X X
► Stranding: cores 0,24 mm ² twisted to pair and cores 0,38 mm ² twisted to pair	X X	— —	X X	— —
► Stranding: cores 0,96 mm ² twisted to pair and cores 1,53 mm ² twisted to pair	— —	X X	— —	X X
► Total stranding: pairs twisted together with tinned copper drain wire	AWG 22/19	AWG 18/19	AWG 22/19	AWG 18/19
► Screen:	tinned copper braiding	tinned copper braiding	Alu foil	Alu foil

item no.	type	no. of pairs x cross section mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06582241	DN 658 (Drop Cable)	2 x 0,24 + 2 x 0,38	6,1 - 7,1	41,2	74
06582781	DN 658 (Trunk Cable)	2 x 0,96 + 2 x 1,53	10,4 - 12,4	98,7	183
06592241	DN 659 (Drop Cable)	2 x 0,24 + 2 x 0,38	6,1 - 7,1	16,4	56
06592781	DN 659 (Trunk Cable)	2 x 0,96 + 2 x 1,53	10,4 - 12,4	58,4	115

Other dimensions and colours are possible on request.

DN 658 robot cable/Drop

Highly flexible DeviceNet™ cable, suitable for robots with overall copper screen and UL recognition



22AWG/1pr  AWM Style 21198 80°C 300V 06589007

Marking for DN 658 06589007:

SAB BRÖCKSKES · D-VIERSEN · DN 658 robot cable/Drop 2x0,24mm²+2x0,38mm² 24AWG/1pr+22AWG/1pr  AWM Style 21198 80°C 300V 06589007 

Construction:

Conductor:	tinned copper strands, fine wires
Insulation:	0,24 mm ² : Foam-Skin 0,38 mm ² : SABIX®
Colour code:	0,24 mm ² : white, blue 0,38 mm ² : black, red
Wrapping:	each pair wrapped with alu foil
Stranding:	pairs in a specially adjusted layering, tinned copper drain wire in the core
Screen:	tinned copper braiding
Wrapping:	non-woven tape
Outer sheath:	PUR, TMPU acc. to EN 50363-10-2
Sheath colour:	redlilac (RAL 4001)

Technical data:

Voltage UL:	300 V
Peak operating voltage:	max. 350 V
Testing voltage U:	core/core 1500 V core/screen 1200 V
Min. bending radius	fixed laying: 7,5 x d flexible application: 15 x d
Temperature range	UL: up to +80 °C <i>fixed laying:</i> -40/+80 °C <i>flexible application:</i> -30/+80 °C
Torsion angle:	up to ± 180°/m
Characteristic impedance at 1 MHz:	120 Ω ± 10%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

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item no.	no. of conductors	nominal cross-section mm ²	outer-ø mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C max.Ω/km
06589007	2	0,24	min. 6,1	32,9	64	83,3
	2	0,38	max. 7,1			52,6

Other dimensions and colours are possible on request.

SABIX® PB 630 Halogen-free Profibus-DP cable
PB 630 PVC Profibus-DP cable for fixed installation

SABIX® PB 630 FRNC Halogen-free, flame retardant Profibus-DP cable
PB 631 Halogen-free PE Profibus-DP cable for fixed installation



SKES · D-VIERSEN · SABIX PB 630 FRNC 2 x 0,34 mm² CE



Marking for SABIX PB 630 FRNC 66302341:

SAB BRÖCKSKES · D-VIERSEN · SABIX PB 630 FRNC 2 x 0,34 mm² CE

General construction:

Core insulation:	acc. to DIN VDE 0819 part 103 (02Y11)
Colour code:	red, green
Stranding:	in layers
Wrapping:	Alu foil
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	12 x d
Characteristic impedance 3 - 20 MHz:	150 Ω ± 10%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	SABIX® PB 630	SABIX® PB 630 FRNC	PB 630	PB 631
► Conductor:	bare copper strands acc. to DIN VDE 0812	bare copper strands acc. to DIN VDE 0812	bare copper wire AWG 22, single wire	bare copper wire AWG 22, single wire
► Outer sheath, redlilac (RAL 4001):	SABIX®	SABIX®	PVC, TM1 acc. to DIN VDE 0281 part 1	PE, 2YM1 acc. to DIN VDE 0207 part 3
► Radiation resistance:	5 x 10 ⁶ cJ/kg	–	8 x 10 ⁷ cJ/kg	7 x 10 ⁶ cJ/kg
► Temperature range: <i>fixed laying:</i> <i>flexible application:</i>	-40/+80°C -40/+80°C	-40/+80°C -30/+80°C	-30/+70°C -5/+70°C	-40/+70°C -40/+70°C
► Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC60754-1	acc. to DIN VDE 0472 part 815 + IEC60754-1	–	acc. to DIN VDE 0472 part 815 + IEC60754-1
► Fire performance: no flame propagation acc. to IEC 60332-3 + EN 60332-3 Cat. C resp. D (see page N/20)	–	X	–	–
► Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	–	X	X	–
► Corrosiveness of conflagration gases: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	X	X	–	X
► Smoke density:	–	very low	–	low
► Oil resistance:	very good - TM5 acc. to DIN VDE 0281 part 1	–	acc. to internal standard see page N/13	–
► For fixed installation:	X	X	X	X
► For flexible application:	X	–	–	–
► Weather resistance:	good	good	medium	good
► Outdoor installation:	–	–	–	–
► Direct burial:	–	–	–	–
► UL Style:	–	–	–	–

Profibus-DP and Profibus-FMS apply the same transmission technology and a uniform bus access log. Therefore, both types can be used simultaneously on one cable.

item no.	type	no. of cores x cross section mm²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
56302341	SABIX® PB 630	2 x 0,34	7,5	30,4	50
66302341	SABIX® PB 630 FRNC	2 x 0,34	7,5	30,4	62
06302331	PB 630	2 x AWG 22	7,1	23,8	49
06312331	PB 631	2 x AWG 22	7,1	23,8	44

Other dimensions and colours are possible on request.

PB 636 Flexible PVC Profibus-DP cable for outdoor installation

PB 637 PVC Profibus-DP cable with UL recognition

PB 639 PVC Profibus-DP cable applicable in ground

PB 635 PVC Profibus-DP cable for outdoor installation



Marking for PB 636 06362348:
SAB BRÖCKSKES · D-VIERSEN · PB 636 2 x 0,34 mm² **CE**

General construction:

Core insulation:	acc. to DIN VDE 0819 part 103 (02Y11)
Colour code:	red, green
Stranding:	in layers
Wrapping:	Alu foil
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	12 x d
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2
Characteristic impedance 3 - 20 MHz:	150 Ω ± 10%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	PB 636	PB 637	PB 639	PB 635
➤ Conductor:	bare copper strands acc. to DIN VDE 0812	bare copper wire AWG 22, single wire	bare copper wire AWG 22, single wire	bare copper wire AWG 22, single wire
➤ Outer sheath, redlilac (RAL 4001):	PVC, TM2 acc. to DIN VDE 0281 part 1	PVC, YO acc. to DIN VDE 0281 part 1	PVC acc. to DIN VDE 0281 part 1	PVC, TM2 acc. to DIN VDE 0281 part 1
➤ Voltage acc. to UL:	–	30 V	–	–
➤ Temperature range: fixed laying: flexible application:	-30/+70°C -5/+70°C	UL: up to +60°C -30/+70°C -5/+70°C	-30/+70°C -5/+70°C	-30/+70°C -5/+70°C
➤ Oil resistance:	acc. to internal standard see page N/13	very good - acc. to DIN VDE 0207 part 5	acc. to internal standard see page N/13	acc. to internal standard see page N/13
➤ For fixed installation:	X	X	X	X
➤ For flexible application:	X	–	–	–
➤ Weather resistance:	good	medium	very good	good
➤ Outdoor installation:	X	–	X	X
➤ Direct burial:	–	–	X	–
➤ UL Style:	–	2560 • 60°C	–	–

Profibus-DP and Profibus-FMS apply the same transmission technology and a uniform bus access log. Therefore, both types can be used simultaneously on one cable.

item no.	type	no. of cores x cross section mm²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06362348	PB 636	2 x 0,34	8,8	23,8	81
06372331	PB 637	2 x AWG 22	7,5	23,8	57
06392338	PB 639	2 x AWG 22	9,2	23,8	94
06352338	PB 635	2 x AWG 22	8,4	23,8	81

Other dimensions and colours are possible on request.

S PB 634 PUR Profibus-DP cable for cable tracks

PB 633 Halogen-free, flexible PE Profibus-DP cable

PB 632 Flexible PVC Profibus-DP cable



Marking for PB 632 06322341:

SAB BRÖCKSKES · D-VIERSEN · PB 632 2 x 0,34 mm² CE

General construction:

Colour code:	red, green (0,34 mm ²); brown, light blue and green-yellow earth wire (1,0 mm ²)
Pairwise screening:	tinned copper braiding
Stranding:	in layers

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	12 x d
Characteristic impedance 3 - 20 MHz:	150 Ω ± 10%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	S PB 634	PB 633	PB 632
➤ Conductor:	0,34 mm ² : bare copper strands acc. to DIN VDE 0812 1,00 mm ² : bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 6	0,34 mm ² : bare copper strands acc. to DIN VDE 0812 1,00 mm ² : bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5	0,34 mm ² : bare copper strands acc. to DIN VDE 0812 1,00 mm ² : bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
➤ Pairwise wrapping:	non-woven tape/Alu foil, non-woven tape	Alu foil, PETP foil	Alu foil, PETP foil
➤ Pairwise sheathing:	TPE	–	–
➤ Core insulation:	0,34 mm ² : DIN VDE 0819 part 103 (02Y11) 1,00 mm ² : TPE	0,34 mm ² : DIN VDE 0819 part 103 (02Y11) 1,00 mm ² : PE, 2Y11 acc. to DIN VDE 0207 part 2	0,34 mm ² : DIN VDE 0819 part 103 (02Y11) 1,00 mm ² : PVC, TI2 acc. to DIN VDE 0281 part 1
➤ Outer sheath, redilac (RAL 4001):	PUR, TPU acc. to DIN VDE 0282 part 10 with rough surface	PE, 2YM1 acc. to DIN VDE 0207 part 3	PVC, TM1 acc. to DIN VDE 0281 part 1
➤ Temperature range: <i>fixed laying:</i> <i>flexible application:</i>	-40/+80°C -40/+80°C	-40/+70°C -40/+70°C	-30/+70°C -5/+70°C
➤ Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	–	–	X
➤ Corrosiveness of conflagration gases: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	–	X	–
➤ Oil resistance:	very good - TPU acc. to DIN VDE 0282 part 10	–	acc. to internal standard see page N/13
➤ For fixed installation:	X	X	X
➤ For flexible application:	X	X	X
➤ Suitable for cable tracks:	X	–	–
➤ Weather resistance:	very good	good	medium

Profibus-DP and Profibus-FMS apply the same transmission technology and a uniform bus access log. Therefore, both types can be used simultaneously on one cable.

item no.	type	no. of cores x cross section mm ²	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km
06342341	S PB 634	2 x 0,34	7,6	30,9	58
06344341	S PB 634	2 x 0,34 + 3 x 1,00	10,2	58,8	108
06332341	PB 633	2 x 0,34	7,5	25,8	50
06334341	PB 633	2 x 0,34 + 3 x 1,00	10,1	58,8	101
06322341	PB 632	2 x 0,34	7,5	25,8	56
06324341	PB 632	2 x 0,34 + 3 x 1,00	10,1	58,8	122

Other dimensions and colours are possible on request.

PB 640 flexible PVC Profibus-DP cable

S PB 640 UL highly flexible PUR Profibus-DP cable with UL recognition

PB 640 UL flexible PVC Profibus-DP cable with UL recognition

S PB 640 highly flexible PUR Profibus-DP cable



BRÖCKSKES · D-VIERSEN · S PB 640 · 24 AWG/2c 06402601 CE

Marking for S PB 640 06402601:

SAB BRÖCKSKES · D-VIERSEN · S PB 640 · 24 AWG/2c 06402601 CE

General construction:

Conductor:	bare copper strands AWG 24
Core insulation:	acc. to DIN VDE 0819 part 1 103 (02Y11)
Colour code:	red, green
Stranding:	in layers
Wrapping:	alu foil and tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	12 x d
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2
Characteristic impedance 3 - 20 MHz:	150 Ω ± 10%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

Outstanding features:

- short assembling time
- avoidance of connection errors

	PB 640	PB 640 UL	S PB 640	S PB 640 UL
➤ Inner sheath, nature:	PVC	PVC	SABIX®	SABIX®
➤ Outer sheath, redliac (RAL 4001):	PVC, TM2 acc. to DIN VDE 0281 part 1	PVC, TM2 acc. to DIN VDE 0281 part 1	PUR, TPU acc. to DIN VDE 0282 part 10 with matt surface	PUR, TPU acc. to DIN VDE 0282 part 10 with matt surface
➤ Voltage acc. to UL:	-	300 V	-	300 V
➤ Temperature range: fixed laying: flexible application:	-30/+70°C -5/+70°C	UL: up to +80°C -30/+70°C -5/+70°C	-40/+80°C -30/+80°C	UL: up to +80°C -40/+80°C -30/+80°C
➤ Halogen-free:	-	-	acc. to DIN VDE 0472 part 815 + IEC 60754-1	acc. to DIN VDE 0472 part 815 + IEC 60754-1
➤ Oil resistance:	acc. to internal standard see page N/13	acc. to internal standard see page N/13	very good - TPU acc. to DIN VDE 0282 part 10	very good - TPU acc. to DIN VDE 0282 part 10
➤ For fixed installation:	X	X	X	X
➤ For flexible application:	X	X	X	X
➤ Suitable for cable tracks:	-	-	X	X
➤ UL Style:	-	X	-	X

Profibus-DP and Profibus-FMS apply the same transmission technology and a uniform bus access log. Therefore, both types can be used simultaneously on one cable.

item no.	type	no. of cores x AWG	outer-ø ± mm	copper figure kg/km	cable weight ≈ kg/km
06402421	PB 640	2 x AWG 24	8,0 ± 0,4	31,2	63
06402631	PB 640 UL	2 x AWG 24	8,0 ± 0,4	31,2	62
06402601	S PB 640	2 x AWG 24	8,0 ± 0,4	31,2	57
06402611	S PB 640 UL	2 x AWG 24	8,0 ± 0,4	31,2	62

Other dimensions and colours are possible on request.

PB 642 PVC Profibus cable

S PB 644 PUR Profibus cable for cable tracks



Marking for S PB 644 06442251:

SAB BRÖCKSKES · D-VIERSEN · S PB 644 2 x 0,25 mm² CE

General construction:

Core insulation:	PE, 2Y11 acc. to DIN VDE 0207 part 2
Colour code:	red, green (PA) DIN 47100 (Typ B)
Stranding:	in layers
Wrapping:	PETP foil
Screen:	tinned copper braiding

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Min. bending radius:	7,5 x d 12 x d continuously flexible (S PB 644)
Characteristic impedance:	Typ B: at > 100 kHz 100 Ω - 130 Ω PA: at 31.25 kHz 100 Ω ± 20%
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

	PB 642	S PB 644
► Conductor:	bare copper strands with reference to DIN VDE 0812	bare copper strands, extra fine wires
► Outer sheath:	PVC, TM1 acc. to DIN VDE 0281 part 1	PUR, TMPU acc. to DIN VDE 0282 part 10 with rough surface
► Temperature range: fixed laying: flexible application:	-30/+70°C -5/+70°C	-40/+70°C -40/+70°C
► Oil resistance:	acc. to internal standard see page N/13	very good - TMPU acc. to DIN VDE 0282 part 10
► For fixed installation:	X	X
► For flexible application:	X	X
► Suitable for cable tracks:	–	X
► Weather resistance:	medium	very good

item no.	type	no. of cores x cross section mm²	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06422221	PB 642, redilac (RAL 4001)	2 x 0,22	4,4	14,7	26
06424221	PB 642, redilac (RAL 4001)	2 x 2 x 0,22	6,2	22,4	45
06422251	PB 642, redilac (RAL 4001)	2 x 0,25	4,9	15,4	30
06424251	PB 642, redilac (RAL 4001)	2 x 2 x 0,25	6,7	26,5	52
06422767	PB 642, blue (RAL 5015)	2 x 0,82	7,3	38,1	68
06422768	PB 642, black (RAL 9005)	2 x 0,82	7,3	38,1	68
06442251	S PB 644, redilac (RAL 4001)	2 x 0,25	5,2	15,9	33
06444251	S PB 644, redilac (RAL 4001)	2 x 2 x 0,25	6,8	26,4	57

Other dimensions and colours are possible on request.

SAFETYBUS P CABLES

SBP 680 SafetyBUS p cable for fixed installation

S SBP 684 Move SafetyBUS p cable for flexible applications



Marking for SBP 680 06803754:
SAB BRÖCKSKES · D-VIERSEN · SafetyBUS p SBP 680 3 x 0,75 mm² CE and current meter marking from 1 m up to 999 m



Marking for S SBP 684 Move 06843754:
SAB BRÖCKSKES · D-VIERSEN · SafetyBUS p MOVE S SBP 684 3 x 0,75 mm² CE and current meter marking from 1 m up to 999 m

General construction:

Insulation:	acc. to DIN VDE 0819 part 103 (02Y11)
Colour code:	acc. to DIN VDE 47100
Wrapping:	non-woven tape
Screen:	tinned copper braiding
Wrapping:	non-woven tape
Outer sheath:	PUR, signal yellow (RAL 1003)

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	1500 V
Temperature range:	-40/+80 °C
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Oil resistance:	very good - TMPU acc. to DIN VDE 0282 part 10
Characteristic impedance at 1 MHz:	100 - 120 Ω
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

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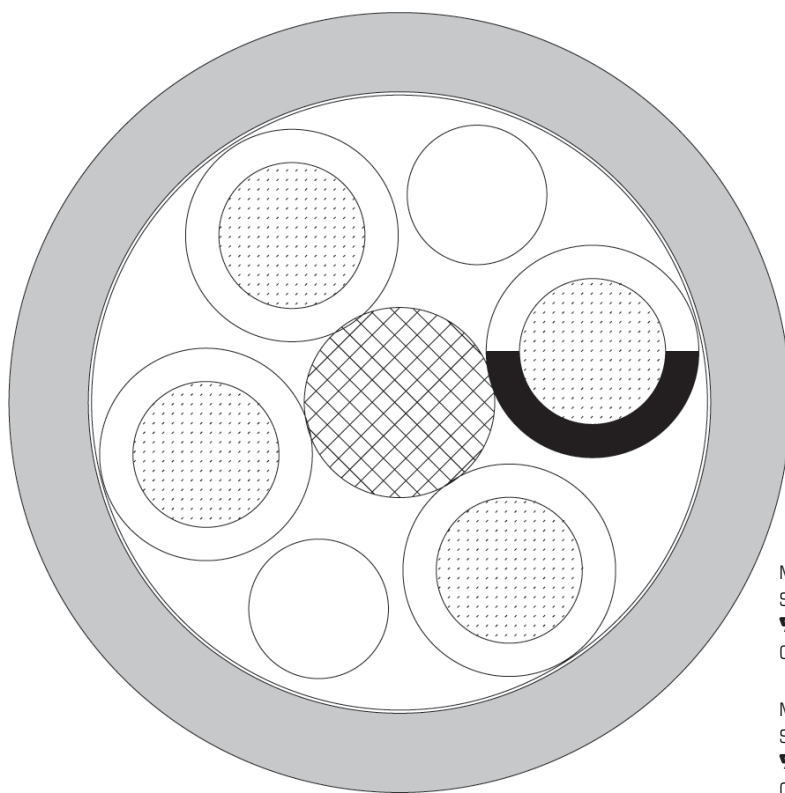
	SBP 680	S SBP 684 Move
► Conductor:	bare copper strands acc. to DIN VDE class 5	bare copper strands acc. to DIN VDE class 6
► Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d 10 x d –	5 x d 10 x d 12 x d
► Application in cable tracks:	not recommended	recommended
► Continuously flexible application:	–	very good

Item no.	Type	No. of pairs/cores x mm ² , each conductor	Outer ø mm	Copper figure kg/km	Cable weight ≈ kg/km
06803754	SBP 680	3 x 0,75	7,8 ± 0,4	43,2	74
06843754	S SBP 684	3 x 0,75	7,8 ± 0,4	43,2	74

Other dimensions and colours are possible on request.

S 670 PUR hybrid field bus control cable, suitable for cable tracks

S 671 PVC hybrid field bus control cable, suitable for cable tracks



**optical
waveguide
+
copper
conductors**

Marking for S 670 06701604:

SAB BRÖCKSKES · D-VIERSEN · S 670 4 x 1,5 mm² + 2 POF

 AWM Style 21060 80 °C 600V

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

Marking for S 671 06711802:

SAB BRÖCKSKES · D-VIERSEN · S 671 2 x 1,0 mm² + 2 POF

 AWM Style 21047 75 °C 600V

CSA AWM I/II A/B 75 °C 600V FT1 FT2 CE

Construction:

Conductor:	bare copper stands, extra fine wires
Insulation:	PVC, TI2 acc. to DIN VDE 0281 part 1
Colour code:	black cores with consecutive numbers acc. to EN 50334; green-yellow earth wire from 3 cores
Optical waveguide:	POF (polymeric optical fibres)
Colour code POF:	black
Stranding:	cores and POF in specially adjusted layering
Wrapping:	non-woven tape
Sheath material:	S 670: PUR, TPU acc. to DIN VDE 0282 part 10 with mat surface S 671: PVC, TM2 acc. to DIN VDE 0281 part 1, reinforced wall-thickness
Sheath colour:	acc. to customers' specifications

Technical data:

Nominal voltage DIN VDE:	U ₀ /U 300/500 V
Voltage UL/CSA:	600 V
Testing voltage:	3000 V
Min. bending radius	
fixed laying:	4 x d
flexible application:	7,5 x d
continuously flexible:	10 x d
Temperature range	
fixed laying:	S 670 -40/+70 °C
flexible application:	S 671 -40/+70 °C +5/+70 °C
	UL/CSA: up to +80 °C UL/CSA: up to +75 °C
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2
Oil resistance:	PVC - acc. to internal standard, see page N/13 PUR - very good
Attenuation POF measured at 650 nm:	max. 10 dBm / 20 m
Diameter:	PMMA: 1,0 mm · POF: 2,2 mm
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

PUR sheath

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
4 x 1,50	0,16	9,9	57,6	138
5 x 1,50	0,16	10,6	72,0	165
4 x 2,50	0,16	12,3	96,0	207
5 x 2,50	0,16	13,2	120,0	249

each + 2 x POF (polymeric optical fibres)

Other dimensions are possible on request.

PVC sheath

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
2 x 1,00	0,16	7,2	19,2	66
3 x 1,00	0,16	8,0	28,8	79
2 x 1,50	0,16	7,7	28,8	80
5 x 1,50	0,16	10,4	72,0	163

each + 2 x POF (polymeric optical fibres)

Other dimensions are possible on request.

USB 2.0 Cables flexible



USB 2.0 Leitung (2x0,22mm²)ST+ 2x0,5mm² 0601-0

Marking for USB 2.0 cable 06010122:

SAB BRÖCKSKES · D-VIERSEN · USB 2.0 Leitung (2x0,22mm²) ST + 2x0,5mm² 0601-0122 CE



Construction:	USB 2.0 flexible	USB 2.0 with UL flexible	USB 2.0 FRNC flexible
Dimension:	(2 x 0,22 mm ²) ST + 2 x 0,5 mm ²		
Conductor:	bare copper strands (0,50 mm ²), silver-plated strands (0,22 mm ²)		
Core insulation:	SABIX®		
Colour code:	black, red (0,50 mm ²), white, green (0,22 mm ²)		
Stranding:	2 x 0,22 mm ² wrapped with alu foil, together with 0,5 mm ²		
Wrapping:	non-woven tape		
Screen:	tinned copper braiding		
Outer sheath:	PVC		SABIX®
Sheath colour:	black (RAL 9005)		

Technical data:	USB 2.0 flexible	USB 2.0 with UL flexible	USB 2.0 FRNC flexible
Item number:	0601-0122	0601-0222	0601-9001
Peak operating voltage VDE:	max. 350 V		
Voltage: UL:	---	300 V	---
Testing voltage:	core/core 1500 V core/screen 1200 V	core/core 2000 V core/screen 2000 V	core/core 1500 V core/screen 1200 V
Temperature range VDE fixed laying: flexible application:	- 30°C / + 70°C - 5°C / + 70°C	UL: up to + 80°C - 30°C / + 70 °C - 5°C / + 70 °C	- 50°C / + 90 °C - 40°C / + 90 °C
Min. bending radius fixed laying: flexible application:	5 x d 10 x d		
Halogen-free:	---		acc. to DIN VDE 0472 part 815 + IEC 60754-1
Fire performance:	---		flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2
Oil resistance:	acc. to internal standard see page N/13		---
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14		

item no.	type	dimension mm ²	outer-ø approx. mm	copper figure kg/km	cable weight ≈ kg/km
06010122	PVC	(2x0,22) ST + 2x0,50	6,8	34,0	60
06010222	PVC with UL	(2x0,22) ST + 2x0,50	7,0	34,0	63
06019001	SABIX®	(2x0,22) ST + 2x0,50	6,8	34,0	62

Other dimensions and colours are possible on request.

USB 2.0 Cables continuously flexible



Leitung (2x0,22mm²) ST + 2x0,5mm² 0601-0122 CE



Marking for USB 2.0 cable 06010122:

SAB BRÖCKSKES · D-VIERSEN · USB 2.0 Leitung (2x0,22mm²) ST + 2x0,5mm² 0601-0122 CE



Construction:	USB 2.0 suitable for cable tracks	USB 2.0 with UL/CSA suitable for cable tracks	USB 2.0 with UL/CSA suitable for robots
Dimension:	(2 x 0,22 mm ²) ST + 2 x 0,5 mm ²		
Conductor:	bare copper strands (0,50 mm ²), silver-plated strands (0,22 mm ²)		
Core insulation:	SABIX®		
Colour code:	black, red (0,50 mm ²), white, green (0,22 mm ²)		
Stranding:	2 x 0,22 mm ² wrapped with alu foil, together with 0,5 mm ²		
Wrapping:	non-woven tape		PTFE foil
Screen:	tinned copper braiding		wrapping with tinned copper round wires
Wrapping:	non-woven tape		
Outer sheath:	PUR		
Sheath colour:	black (RAL 9005)		

Technical data:	USB 2.0 <i>suitable for cable tracks</i>	USB 2.0 with UL/CSA <i>suitable for cable tracks</i>	USB 2.0 with UL/CSA <i>suitable for robots</i>
Item number:	0601-1022	0601-1122	0601-2022
Peak operating voltage VDE:	max. 350 V		
Voltage: UL:	---	300 V	
Testing voltage:	core/core 2000 V - core/screen 2000 V		
Temperature range VDE	UL: up to + 80°C		
fixed laying:	- 50°C / + 90 °C	- 50°C / + 90 °C	
flexible application:	- 40°C / + 90 °C	- 40°C / + 90 °C	
Min. bending radius			
fixed laying:	5 x d		5 x d
flexible application:	6 x d		7,5 x d
continuously flexible:	7,5 x d		10 x d
torsion angle:			up to +/- 180°/m
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1		---
Oil resistance:	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14		

item no.	type	dimension mm ²	outer-ø approx. mm	copper figure kg/km	cable weight ≈ kg/km
06011022	PUR	(2x0,22) ST + 2x0,50	7,0	34,1	59
06011122	PUR with UL/CSA	(2x0,22) ST + 2x0,50	7,2	34,1	66
06012022	robot cable with UL/CSA	(2x0,22) ST + 2x0,50	7,0	34,3	64

Other dimensions and colours are possible on request.

INDUSTRIAL ETHERNET CABLES CAT 5

PN 662 Profinet type B, for flexible applications
PN 663 Profinet type B, for flexible applications with UL recognition

S PN 668 Profinet type C, continuously flexible
S PN 669 Profinet type C, continuously flexible with UL recognition



D-VIERSEN · S PN 668 Profinet CAT 5 Typ C 2x2x22AWG

Marking for S PN 668:
 SAB BRÖCKSKES · D-VIERSEN · S PN 668 Profinet CAT 5 Typ C 2x2x22AWG CE



Construction:	PN 662 Profinet type B flexible	S PN 668 Profinet type C continuously flexible	PN 663 Profinet type B flexible	S PN 669 Profinet type C continuously flexible
Dimension:	2 x 2 x 22 AWG			
Conductor:	tinned copper strands, fine wires acc. to VDE 0812	tinned copper strands, extra fine wires	tinned copper strands, fine wires acc. to VDE 0812	tinned copper strands, extra fine wires
Core insulation:	PE, L/MD acc. to DIN VDE 0819 part 103	PE	PE, L/MD acc. to DIN VDE 0819 part 103	PE
Colour code:	blue, yellow, white, orange			
Stranding:	in layers			
Wrapping:	PETP foil			
Inner sheath:	thermoplastic material			
Wrapping:	alu foil			
Screen:	tinned copper braiding			
Wrapping:	---	non-woven tape	---	non-woven tape
Outer sheath:	PVC	PUR	PVC	PUR
Sheath colour:	green (similar RAL 6018)			

Technical data:	PN 662 Profinet type B flexible	S PN 668 Profinet type C continuously flexible	PN 663 Profinet type B flexible	S PN 669 Profinet type C continuously flexible
Item number:	0662-2202	0668-2202	0663-2202	0669-2202
Peak operating voltage VDE:	max. 350 V			
Voltage UL:	---		300 V	
Testing voltage:	core/core 1500 V - core/screen 1200 V			
Temperature range VDE fixed laying: flexible application:	- 30°C / + 70°C - 5°C / + 70°C	- 40°C / + 70°C - 30°C / + 70°C	UL: up to + 80°C - 30°C / + 70 °C - 5°C / + 70 °C	UL: up to + 80°C - 30°C / + 70 °C - 20°C / + 70 °C
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d 10 x d	5 x d 10 x d 15 x d	5 x d 10 x d	5 x d 10 x d 15 x d
Characteristic impedance:	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)			
Halogen-free:	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Oil resistance:	acc. to internal standard see page N/13	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10	acc. to internal standard see page N/13	acc. to internal standard see page N/13
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14			

item no.	type	no. of cores	cross section AWG	max. core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06622202	PN 662	4	22	1,55	6,1	33,9	57	58,0
06682202	S PN 668	4	22	1,55	6,4	36,7	58	58,0
06632202	PN 663	4	22	1,55	6,5	36,2	66	58,0
06692202	S PN 669	4	22	1,55	6,9	36,7	69	58,0

Other dimensions and colours are possible on request.

INDUSTRIAL ETHERNET CABLES CAT 5

PN 654 Profinet type A, for fixed installation
PN 655 Profinet type A, for fixed installation with UL recognition

PN 660 Profinet type B, for flexible applications
PN 661 Profinet type B, for flexible applications with UL recognition



Marking for PN 660:

SAB BRÜCKSKES · D-VIERSEN · PN 660 Profinet CAT 5 Typ B 2x2x22AWG CE



Construction:	PN 654 Profinet type A fixed laying	PN 660 Profinet type B flexible	PN 655 Profinet type A fixed laying	PN 661 Profinet type B flexible
Dimension:	2 x 2 x 22 AWG			
Conductor:	bare copper wire	bare copper strands, fine wires acc. to VDE 0812	bare copper wire	bare copper strands, fine wires acc. to VDE 0812
Core insulation:	PE, L/MD acc. to DIN VDE 0819 part 103			
Colour code:	blue, yellow, white, orange			
Stranding:	in layers			
Wrapping:	PETP foil			
Inner sheath:	---	thermoplastic material	---	thermoplastic material
Wrapping:	---	alu foil	---	alu foil
Screen:	tinned copper braiding			
Wrapping:	---	non-woven tape	---	non-woven tape
Outer sheath:	PVC	SABIX®	PVC	SABIX®
Sheath colour:	green (similar RAL 6018)			

Technical data:	PN 654 Profinet type A <i>fixed laying</i>	PN 660 Profinet type B <i>flexible</i>	PN 655 Profinet type A <i>fixed laying</i>	PN 661 Profinet type B <i>flexible</i>
Item number:	0654-2202	0660-2202	0655-2202	0661-2202
Peak operating voltage VDE:	max. 350 V			
Voltage UL:	---		300 V	
Testing voltage:	core/core 1500 V - core/screen 1200 V			
Temperature range VDE fixed laying: flexible application:	- 30°C / + 70°C - 5°C / + 70°C	- 30°C / + 70°C - 20°C / + 70°C	UL: up to + 80°C - 30°C / + 70 °C - 5°C / + 70 °C	UL: up to + 75°C - 40°C / + 70 °C - 30°C / + 70 °C
Min. bending radius fixed laying: flexible application:	5 x d 12 x d	5 x d 12 x d	5 x d	5 x d 12 x d
Characteristic impedance:	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)			
Halogen-free:	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Oil resistance:	acc. to internal standard see page N/13	---	acc. to internal standard see page N/13	---
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14			

item no.	type	no. of cores	cross section AWG	max. core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06542202	PN 654	4	22	1,55	5,3	28,0	43	58,0
06602202	PN 660	4	22	1,55	6,6	36,2	67	58,0
06552202	PN 655	4	22	1,55	5,9	30,4	51	58,0
06612202	PN 661	4	22	1,55	6,6	36,2	70	58,0

Other dimensions and colours are possible on request.

INDUSTRIAL ETHERNET CABLES CAT 5

PN 678 type A, for fixed installation

S PN 681 type C, continuously flexible

PN 679 type B, for flexible applications



Marking for PN 679:
SAB BRÖCKSKES · D-VIERSEN · PN 679 CAT 5 Typ B 4x26AWG CE

Construction:	PN 678 type A <i>fixed laying</i>	PN 679 type B <i>flexible</i>	S PN 681 type C <i>continuously flexible</i>
Dimension:	4 x 2 x 26 AWG		
Conductor:	tinned copper wire	tinned copper strands, fine wires acc. to VDE 0812	tinned copper strands, extra fine wires
Core insulation:	PE, L/MD acc. to DIN VDE 0819 part 103	PE, L/MD acc. to DIN VDE 0819 part 103	SABIX®
Colour code:	white cores with numbers 1 - 4 (+ blue, orange, green, brown)		
Stranding:	twisted pairs		
Wrapping:	alu foil	PETP foil + alu foil	non-woven tapes + alu foil
Screen:	tinned copper braiding		
Wrapping:	---	non-woven tape	non-woven tape
Outer sheath:	PVC	PUR	PUR
Sheath colour:	green (similar RAL 6018)		

Technical data:	PN 678 type A <i>fixed laying</i>	PN 679 type B <i>flexible</i>	S PN 681 type C <i>continuously flexible</i>
Item number:	0678-2604	0679-2604	0681-2604
Peak operating voltage VDE:	max. 350 V		
Testing voltage:	core/core 1500 V, core/screen 1200 V		
Temperature range VDE fixed laying: flexible application:	- 30°C / + 70°C - 5°C / + 70°C	- 40°C / + 70°C - 40°C / + 70°C	- 40°C / + 90°C - 30°C / + 90°C
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d	5 x d 10 x d	5 x d 10 x d 12 x d
Characteristic impedance:	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)		
Halogen-free:	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Oil resistance:	acc. to internal standard see page N/13	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14		

item no.	type	no. of pairs	cross section AWG	max. core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06782604	PN 678	4	26	1,10	6,2	33,0	49	150
06792604	PN 679	4	26	1,05	7,3	35,0	57	148
06812604	S PN 681	4	26	1,10	7,2	35,5	58	145

Other dimensions and colours are possible on request.

INDUSTRIAL ETHERNET CABLES CAT 5



S PN 667 Profinet type C, continuously flexible with UL recognition, CSA approval



Marking for S PN 667:

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

Construction:

Conductor:	tinned copper strands, 7 wires
Core insulation:	PE
Colour code:	blue, yellow, white, orange
Stranding:	in layers
Wrapping:	PETP foil
Inner sheath:	thermoplastic material
Wrapping:	alu foil
Screen:	tinned copper braiding
Wrapping:	non-woven tape
Outer sheath:	PUR
Sheath colour:	green (similar RAL 6018)

Technical data:

Peak operating voltage VDE:	max. 350 V
Voltage UL/CSA:	300 V
Testing voltage:	core/core 1500 V core/screen 1200 V
Min. bending radius	
fixed laying:	5 x d
flexible application:	10 x d
continuously flexible:	15 x d
Temperaturbereich	UL/CSA: up to +80 °C
fixed laying:	-40/+70 °C
flexible application:	-40/+70 °C
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Characteristic impedance:	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)
Oil resistance:	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/14

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item no.	type	no. of cores	cross section AWG	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
06672202	S PN 667	4	22	1,55	6,5 ± 0,2	33,8	60	58,8

Other dimensions and colours are possible on request.



short
assembling time by
„Fast Connect”
construction

SPECIAL INDUSTRIAL ETHERNET CABLES CAT 5

DR PN 689 P Highflex reeling Profinet cable

S PN 668 Hybrid Hybrid cable with UL recognition

RT PN 668 Profinet cable suitable for robots



D-VIERSEN · DR PN 689 P Highflex 2x2x22AWG CE

Marking for DR PN 689 P Highflex:

SAB BRÖCKSKES · D-VIERSEN · DR PN 689 P Highflex 2x2x22AWG CE



Construction:	DR PN 689 P Highflex <i>reeling Profinet cable</i>	S PN 668 Hybrid <i>Hybrid cable type C continuously flexible</i>	RT PN 668 <i>Profinet cable suitable for robots</i>
Dimension:	2 x 2 x 22 AWG	2 x 2 x 22 AWG + 4 x 1,5 mm²	2 x 2 x 22 AWG
Conductor:	tinned copper strands, fine wires with reference to VDE 0812	22 AWG: tinned copper strands, extra fine wires 1,5 mm²: bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 6	tinned copper strands, extra fine wires
Core insulation:	SABIX®	22 AWG: SABIX®. 1,5 mm²: TPE	PE
Colour code:	blue, yellow, white, orange	22 AWG: blue, yellow, white, orange. 1,5 mm²: black cores with consecutive numbers acc. to EN 50334	blue, yellow, white, orange
Stranding:	in layers	22 AWG: in layers together in layers	in layers
Wrapping:	PETP foli		netting tape, alu foil
Inner sheath:	SABIX®		---
Wrapping:	alu foil		---
Screen:	tinned copper braiding		
Wrapping:	non-woven tape		
Outer sheath:	PUR / supporting braid / PUR	PUR	
Sheath colour:	green (similar RAL 6018)		

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Technical data:	DR PN 689 P Highflex reeling Profinet cable	S PN 668 Hybrid Hybrid cable type C continuously flexible	RT PN 668 Profinet cable suitable for robots
Item number:	0689-2202	0668-9010	0668-9001
Peak operating voltage VDE:	max. 350 V		
Voltage: UL:	---	300 V	---
Testing voltage:	core/core 1500 V, core/screen 1200 V		
Temperature range VDE fixed laying: flexible application:	- 40°C / + 90°C - 30°C / + 90°C	UL: up to + 80°C - 40°C / + 90°C - 30°C / + 90°C	- 40°C / + 70°C - 30°C / + 70°C
Min. bending radius	for laying and installation (fixed laying): 5 x d for repeated winding action (flexible): 10 x d guided on deflection pulleys (flexible): 12 x d	fixed laying: 5 x d flexible application: 10 x d continuously flexible: 12 x d	fixed laying: 5 x d flexible application: 10 x d torsion angle ± 180°/m
Characteristic impedance:	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)		
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1		
Oil resistance:	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14		

item no.	type	no. of cores	cross section AWG	approx. core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
06892202	DR PN 689 P Highflex, reeling cable	4	22	1,50	7,9	36,2	82	58,0
06689010	S PN 668 Hybrid	8	22 + 16	1,50 / 2,15	10,0	94,1	158	58,0 / 13,3
06689001	RT PN 668 suitable for robots	4	22	1,50	7,0	36,3	62	58,0

Other dimensions and colours are possible on request.



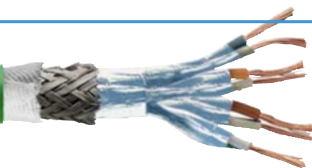
INDUSTRIAL GIGABIT ETHERNET CABLES CAT 6

GE 691 CAT 6 Gigabit Ethernet cable,
for flexible applications

S GE 696 CAT 6 Gigabit Ethernet cable,
continuously flexible

DR GE 698 P Highflex reeling CAT 6 Gigabit Ethernet cable

691 CAT6 Gigabit Ethernet Cable 4 x 2 x 26 AWG CE



Marking for GE 691 06912604:

SAB BRÜCKSKES · D-VIERSEN · GE 691 CAT6 Gigabit Ethernet Cable 4 x 2 x 26 AWG CE

Construction:

	GE 691	S GE 696	DR GE 698 P Highflex
Dimension:	4 x 2 x 26 AWG		
Conductor:	tinned copper strands, fine wires	tinned copper strands, extra fine wires	
Core insulation:	PE		SABIX®
Colour code:	white cores with consecutive numbers 1 - 4 (+ blue, orange, green, brown)		
Stranding:	twisted to pairs / pairs wrapped with PETP foil and alu foil		
Wrapping:	non-woven tape		
Screen:	alu foil + tinned copper braiding		
Wrapping:	non-woven tape		
Outer sheath:	PUR		PUR / supporting braid / PUR
Sheath colour:	green (similar RAL 6018)		black (similar RAL 9005)

Technical data:

	GE 691	S GE 696	DR GE 698 P Highflex
Item number:	0691-2604	0696-2604	0698-2604
Peak operating voltage VDE:	max. 350 V		
Testing voltage:	core/core 1500 V, core/screen 1200 V		
Temperature range VDE fixed laying: flexible application:	- 40°C / + 70°C - 30°C / + 70°C		- 40°C / + 90°C - 30°C / + 90°C
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d 10 x d	5 x d 10 x d 15 x d	for laying and installation (fixed laying): 5 x d for repeated winding action (flexible): 12 x d guided on deflection pulleys (flexible): 15 x d
Characteristic impedance (1-250 MHz):	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-5-2		
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1		
Oil resistance:	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14		

item no.	type	no. of pairs	cross section AWG	max. core-ø mm	outer-ø max. mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
0691-2604	GE 691	4	26	1,50	max. 9,0	39,8	73	145
0696-2604	S GE 696	4	26	1,50	max. 9,0	40,6	74	145
0698-2604	DR GE 698 P Highflex	4	26	1,50	ca. 9,9	40,6	105	145

Other dimensions and colours are possible on request.

SPECIAL INDUSTRIAL GIGABIT ETHERNET CABLES CAT 6

S GE 696 HT high temperature, CAT 6 Gigabit Ethernet cable
for flexible applications

RT GE 694 CAT 6 Gigabit Ethernet cable, suitable for robots
with UL recognition, CSA approval

RT GE 694 Hybrid CAT 6 Gigabit Ethernet cable, suitable for robots



S GE 696 HT CAT6 Gigabit Ethernet Cable 4 x 2 x 26 AWG

Marking for S GE 696 HT:

SAB BRÖCKSKES · D-VIERSEN · S GE 696 HT
CAT6 Gigabit Ethernet Cable 4 x 2 x 26 AWG CE



Construction:	S GE 696 HT	RT GE 694	RT GE 694 Hybrid
Dimension:	4 x 2 x 26 AWG		4 x 2 x 26 AWG + 4 x 1,0 mm ²
Conductor:	tinned copper strands, extra fine wires		bare copper strands, extra fine wires
Core insulation:	PFA	PE	26 AWG: FEP / 1,0 mm ² : TPE
Colour code:	white cores with consecutive numbers 1 - 4 (+ blue, orange, green, brown)		26 AWG: white-blue/blue, white-orange/orange, white-green/green, white-brown/brown, 1,0 mm ² : black cores with consecu- tive numbers acc. to EN 50334
Stranding:	cores twisted to pairs		
Wrapping:	twisted to pairs with alu foil		26 AWG twisted to pairs with alu foil
Wrapping:	PTFE foil	non-woven tape	---
Screen:	alu foil + tinned copper braiding		pairs 26 AWG: tinned copper braidin
Inner sheath:	---	---	26 AWG (pairs white-orange/ orange and white-brown/brown); TPE, black (similar RAL 9005)
Wrapping:	---	non-woven tape	
Outer sheath:	Special Besilen®	PUR	
Sheath colour:	green (similar RAL 6018)		black (similar RAL 9005)

Technical data:	S GE 696 HT	RT GE 694	RT GE 694 Hybrid
Item number:	3696-2604	0694-2604	0694-9001
Peak operating voltage VDE:	max. 350 V		26 AWG: max. 350 V
Nominal voltage:	---		1,0 mm²: 300/500 V
Voltage UL/CSA:	---	300 V	---
Testing voltage (VDE):	core/core 1500 V, core/screen 1200 V		core/core 26 AWG: 1500 V 1,0 mm²: 2000 V core/screen 26 AWG: 1200 V
Temperature range VDE fixed laying: flexible application: short-time use:	- 40°C / + 180°C - 25°C / + 180°C + 250°C	UL: up to +80°C - 40°C / + 70°C - 30°C / + 70°C	- 50°C / + 90°C - 40°C / + 90°C
Min. bending radius fixed laying: flexible application: continuously flexible:	7,5 x d 10 x d 15 x d	5 x d 10 x d	
UL Style:	---	21198	---
Torsion:	---	up to ± 360°/m	
Characteristic impedance (1-250 MHz):	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-5-2		26 AWG: 100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-5-2
Halogen-free:	---	acc. to DIN VDE 0472 part 815 + IEC 60754-1	---
Oil resistance:	---	TMPU acc. to DIN VDE 0207 part 363-10-2	
Flexibility:	very good		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14		

item no.	type	dimension	max. core-ø mm	outer-ø max. mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to EN 50288-5-2 max.Ω/km
3696-2604	S GE 696 HT	4 x 2 x 26 AWG	1,50	9,4	40,4	106	145
0694-2604	RT GE 694	4 x 2 x 26 AWG	1,50	8,4	40,6	78	145
0694-9001	RT GE 694 Hybrid	4 x 2 x 26 AWG + 4 x 1,0 mm ²	1,50 / 1,90	12,6	105,5	190	26 AWG: 145 1,0 mm ² : 19,5

Other dimensions and colours are possible on request.



INDUSTRIAL ETHERNET CABLES CAT 5e GIGABIT ETHERNET CABLES CAT 6

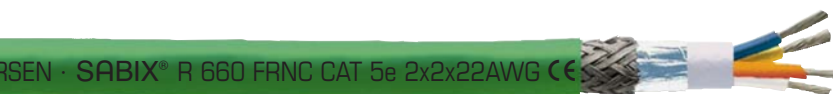
SABIX® R 660 FRNC CAT 5e

SABIX® Rail CAT 5e

SABIX® R 691 FRNC CAT 6 C1

SABIX® Rail CAT 6

externally tested
acc. to DIN 5510-2*
edition May 2009



Marking for SABIX® R 660 FRNC CAT 5e 66602202:

SAB BRÜCKSKES · D-VIERSEN · SABIX® R 660 FRNC CAT 5e 2x2x22AWG CE

Construction:	SABIX® R 660 FRNC CAT 5e <i>flexible</i>		SABIX® R 691 FRNC CAT 6 C1 <i>flexible</i>
Dimension:	2 x 2 x 24 AWG	2 x 2 x 22 AWG	4 x 2 x 26 AWG
Conductor:	tinned copper strands, fine wires		
Core insulation:	PE		
Colour code:	blue, yellow, white, orange		white cores with numbers 1 - 4 (+ blue, orange, green, brown)
Stranding:	in layers		twisted pairs wrapped with foil and alu foil
Wrapping:	foil		non-woven tape
Inner sheath:	special SABIX®		---
Screen:	alu foil and tinned copper braiding		
Outer sheath:	special SABIX®		
Sheath colour:	green (similar RAL 6018)		

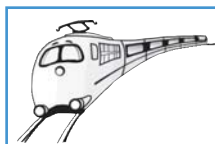
Technical data:	SABIX® R 660 FRNC CAT 5e <i>flexible</i>		SABIX® R 691 FRNC CAT 6 C1 <i>flexible</i>
Item number:	6660-2402	6660-2202	6691-2604
Peak operating voltage VDE:	max. 350 V		
Testing voltage:	core/core 1500 V - core/screen 1200 V		
Temperature range VDE fixed laying: flexible application:	- 40°C / + 70°C - 30°C / + 70°C		
Min. bending radius fixed laying: flexible application:	5 x d 12 x d		
Wellenwiderstand:	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 (CAT 5 acc. to EN 50173-1)		100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-5-2 (CAT 6 acc. to EN 50173-1)
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1		
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1 and EN 60332-1-2, no flame propagation acc. to IEC 60332-3-25, EN 60332-3-25 and EN 50266-2-5 for cable diameter > 6 mm < 12 mm		flame retardant and self-extinguishing acc. to IEC 60332-1 and EN 60332-1-2, no flame propagation acc. to IEC 60332-3-25, EN 60332-3-25 and EN 50266-2-5 for cable diameter > 6 mm < 12 mm, NF C 32-070 C1
Smoke density:	acc. to IEC 61034-1 and EN 61034-1, translucence > 60%		
Toxicity:	FED ₁₈₀ < 1 acc. to DIN EN 5510-2 appendix C 3.3		
Flexibility:	good		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/14		

item no.	type	no. of cores	cross section AWG	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
66602402	SABIX® R 660 FRNC CAT 5e	4	24	approx. 1,16	approx. 6,1	19,4	62	83,3
66602202	SABIX® R 660 FRNC CAT 5e	4	22	approx. 1,51	approx. 6,7	34,4	70	58,0
66912604	SABIX® R 691 FRNC CAT 6 C1	8	26	approx. 1,40	max. 9,0	40,6	85	145,0

Other dimensions and colours are possible on request.

Outstanding features:

- halogen-free
- no flame propagation
- flame retardant and self-extinguishing
- fulfils fire protection level 1 - 4 acc. to DIN 5510-1*
- externally tested acc. to DIN 5510-2*
- **SABIX® R 691 FRNC CAT 6 C1**
NF C 32-070 C1



**Especially
for use in
rail vehicles**



* Externally tested at the reference types SABIX® R 660 FRNC CAT 5e 2 x 2 x 22 AWG and SABIX® R 691 FRNC CAT 6 C1.