

Bus Cables



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You will find other halogen-free cables for maritime use in chapter A		
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Applications

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

Interbus has been developed for the sensor/actuator communication in the automation technique. This technically matured system has been standardised in the meantime acc. to IEC 61158 and 61784. For the main application fields different cable types are defined: remote bus cable, installation remote bus cable, S-line and loop.

n 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.

n Applications of CAN-Bus cables

Cables for a **C**ontroller **A**rea **N**etwork have been standardised for different application fields. The largest spreading has got the high speed type acc. to ISO 11898-2. The bus is optimised for a band efficient digital information exchange on the controller level.

n Applications of DeviceNet™ cables

Based on CAN structures DeviceNet was developed for the industrial process automation on the North American continent. This system is divided into Trunk and Drop cable.

n Applications of Profibus cables

PROFIBUS systems are especially made for process automation (PA). PROFIBUS is standardised acc. to IEC 61158 that means best interoperability of components from different manufactures. The modular peripheral construction (DP: decentralised periphery) of the bus system simplifies installation and maintenance. The PROFIBUS type A is generally used in current systems, cables of PROFIBUS type B are only used for replacement purpose in already existing systems.

Fast Connect cable construction

These cables mostly have a radial symmetric construction. This enables the use of special stripping tools that make possible a quicker and easier harnessing and installation.

n Applications of SafetyBUS p cables

SafetyBUS is an open bus system that has been especially optimised for the transmission of data with regard to machine safety: the consistency of data with regard to time and contents have highest priority. SafetyBUS fulfils a variety of highest standards to guarantee the protection of humans and goods during production.

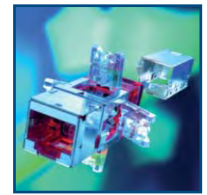
n Applications of Hybrid field bus cables

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.

Applications

n Applications of USB 2.0 and USB 3.0 cables

The SAB robot cable USB 2.0 and USB 3.0 was developed for high frequency data transmission in industry. In the 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 and USB 3.0 was especially developed for this application. It guarantees excellent transmission characteristics as it is demanded for intelligent image processing under extreme industrial application conditions. The use of PC compatible components make possible the recourse to established standards and simplifies further treatment in electronic data processing systems.



n Applications of Industrial ETHERNET cables

Industrial Ethernet is a 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, CAT 6 and CAT 7 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.

n Applications harnessed Profinet cables

For the field bus wiring of Profinet field bus systems in industrial sectors. This cable type is used for example in cable chain applications for automation and machine and plant construction with rough environments. The PUR outer sheath is resistant against rough environmental conditions.

n Applications harnessed Profibus cables

For the field bus wiring in automation technique. These bus cables transfer Profibus signals with different cable and plug combinations. The PUR cable for cable chain applications is resistant against rough environmental conditions in industrial applications.

n You will find further information about the safe application of cables on pages N/31-40

Selection table

		Cable type	IBS 612	IBS 617	IBS 614	S IBS 616	S IBS 618	SABIX® IBS 610	SABIX® IBS 610 FRNC	SABIX® IBL 600 FRNC	IBL 600	SABIX® IBL 600	S IBL 605	S CB 626	S CB 625	SABIX® CB 620	SABIX® CB 620 FRNC	SABIX® CB 624 FRNC C1	CB 627	S CB 628	
Basic construction	Screened																				
	Inner sheath																				
	Optical waveguide POF																				
Temperature range fixed laying*	+ 180 °C																				
	+ 90 °C																				
	+ 85 °C																				
	+ 80 °C																				
	+ 75 °C																				
	+ 70 °C																				
	- 30 °C																				
	- 40 °C																				
	- 50 °C																				
	- 90 °C																				
Voltage	Nominal voltage 300/500 V																				
	Peak operating voltage max. 90 V																				
	Peak operating voltage max. 350 V																				
	Voltage UL 30 V																				
	Voltage UL resp. CSA 300 V																				
	Voltage UL resp. CSA 600 V																				
	Testing voltage 600 V																				
	Testing voltage 1000 V																				
	Testing voltage 1500 V																				
	Testing voltage 2000 V																				
Testing voltage 3000 V																					
Standards and approvals	Halogen-free acc. to DIN VDE + IEC																				
	Halogen-free acc. to DIN EN for rail types																				
	Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2																				
	Fire performance: no flame propagation acc. to IEC 60332-3 + EN 60332-3 Cat. C resp. D																				
	Fire performance: UL Horizontal Flame Test FT2																				
	Fire performance: acc. to NF C 32-070 C1																				
	Fire performance: no flame propagation acc. to DIN EN 60332-3-25 + DIN EN 50305 section 9.1.1 + 9.1.2. Flame retardant and self-extinguishing acc. to DIN EN 60332-1-2																				
	Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases																				
	Smoke density acc. to IEC 61034 + EN 61034																				
	Toxicity acc. to DIN EN 50305																				
	UL recognized																				
	CSA approved																				
Rail type acc. to DIN EN 45545-2																					
Characteristics	Oil resistance acc. to internal standard																				
	Oil resistance acc. to DIN VDE																				
	Oil resistance acc. to EN																				
	Chemical resistance												B								B
	Weather resistance		C	C	C	A	A	B	B	B	C	B	A	A	A	B	B	B	B	C	A
	Suitable for cable tracks																				
	Torsion angle																				
	Flexibility		B	B	B	A	A	A	B	B		A	A	A	A	A	B	B	B	B	A
Direct burial																					



A = very good
B = good
C = medium

1 = up to ± 360°/m
2 = up to ± 180°/m

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

BUS CABLES

Selection table

		Cable type	DN 650	DN 651	DN 656	DN 657	DN 658	DN 659	DN 658 robot cable/Drop	SABIX® PB 630	SABIX® PB 630 FRNC	PB 630	PB 631	PB 636	PB 637	PB 639	PB 635	S PB 634	PB 633	PB 632	PB 640	PB 640 UL	S PB 640	S PB 640 UL
Basic construction	Screened																							
	Inner sheath																							
	Optical waveguide POF																							
Temperature range fixed laying*	+ 180 °C																							
	+ 90 °C																							
	+ 85 °C																							
	+ 80 °C																							
	+ 75 °C																							
	+ 70 °C																							
	- 30 °C																							
	- 40 °C																							
	- 50 °C																							
	- 90 °C																							
Voltage	Nominal voltage 300/500 V																							
	Peak operating voltage max. 90 V																							
	Peak operating voltage max. 350 V																							
	Voltage UL 30 V																							
	Voltage UL resp. CSA 300 V																							
	Voltage UL resp. CSA 600 V																							
	Testing voltage 600 V																							
	Testing voltage 1000 V																							
	Testing voltage 1500 V																							
	Testing voltage 2000 V																							
Testing voltage 3000 V																								
Standards and approvals	Halogen-free acc. to DIN VDE + IEC																							
	Halogen-free acc. to DIN EN for rail types																							
	Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2																							
	Fire performance: no flame propagation acc. to IEC 60332-3 + EN 60332-3 Cat. C resp. D																							
	Fire performance: UL Horizontal Flame Test FT2																							
	Fire performance: acc. to NF C 32-070 C1																							
	Fire performance: no flame propagation acc. to DIN EN 60332-3-25 + DIN EN 50305 section 9.1.1 + 9.1.2. Flame retardant and self-extinguishing acc. to DIN EN 60332-1-2																							
	Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases																							
	Smoke density acc. to IEC 61034 + EN 61034																							
	Toxicity acc. to DIN EN 50305																							
Characteristics	UL recognized																							
	CSA approved																							
	Rail type acc. to DIN EN 45545-2																							
	Oil resistance acc. to internal standard																							
	Oil resistance acc. to DIN VDE																							
	Oil resistance acc. to EN																							
	Chemical resistance																							
	Weather resistance																							
	Suitable for cable tracks																							
	Torsion angle									2														
Flexibility																								
Direct burial																								



A = very good
B = good
C = medium

1 = up to ± 360°/m
2 = up to ± 180°/m

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

BUS CABLES

Selection table

		Cable type	PB 642	S PB 644	SBP 680	S SBP 684 Move	S 670	S 671	USB 2.0	USB 2.0 UL	USB 2.0 FRNC	USB 2.0 S	USB 2.0 S UL/CSA	USB 2.0 RT UL/CSA	USB 3.0 S	USB 3.0 RT	USB 3.0	PN 662	PN 663	S PN 668	S PN 669	PN 654	PN 655	PN 660	PN 661	S PN 667			
Basic construction	Screened																												
	Inner sheath																												
	Optical waveguide POF																												
Temperature range fixed laying*	+ 180 °C																												
	+ 90 °C																												
	+ 85 °C																												
	+ 80 °C																												
	+ 75 °C																												
	+ 70 °C																												
	+ 30 °C																												
	- 30 °C																												
	- 40 °C																												
	- 50 °C																												
- 90 °C																													
Voltage	Nominal voltage 300/500 V																												
	Peak operating voltage max. 90 V																												
	Peak operating voltage max. 350 V																												
	Voltage UL 30 V																												
	Voltage UL resp. CSA 300 V																												
	Voltage UL resp. CSA 600 V																												
	Testing voltage 600 V																												
	Testing voltage 1000 V																												
	Testing voltage 1500 V																												
	Testing voltage 2000 V																												
Testing voltage 3000 V																													
Standards and approvals	Halogen-free acc. to DIN VDE + IEC																												
	Halogen-free acc. to DIN EN for rail types																												
	Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2																												
	Fire performance: no flame propagation acc. to IEC 60332-3 + EN 60332-3 Cat. C resp. D																												
	Fire performance: UL Horizontal Flame Test FT2																												
	Fire performance: acc. to NF C 32-070 C1																												
	Fire performance: no flame propagation acc. to DIN EN 60332-3-25 + DIN EN 50305 section 9.1.1 + 9.1.2. Flame retardant and self-extinguishing acc. to DIN EN 60332-1-2																												
	Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases																												
	Smoke density acc. to IEC 61034 + EN 61034																												
	Toxicity acc. to DIN EN 50305																												
	UL recognized																												
	CSA approved																												
	Rail type acc. to DIN EN 45545-2																												
Characteristics	Oil resistance acc. to internal standard																												
	Oil resistance acc. to DIN VDE																												
	Oil resistance acc. to EN																												
	Chemical resistance																												
	Weather resistance		C	A																									
	Suitable for cable tracks																												
	Torsion angle																												
	Flexibility																												
Direct burial																													



A = very good 1 = up to ± 360°/m
 B = good 2 = up to ± 180°/m
 C = medium

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

BUS CABLES

Selection table

		Cable type	PN 678	PN 679	S PN 681	DR PN 689 P Highflex	DR CB 689 P Highflex	S PN 668 Hybrid	RT PN 668	CATLine CAT 6 S	CATLine CAT 6A S	CATLine CAT 6 RT	CATLine CAT 6A RT	CATLine CAT 6A HT	CATLine CAT 7A S	CATLine CAT 7A RT	CATLine CAT 6A DR	CATLine CAT 7A DR	CATLine CAT 5e R	CATLine CAT 6A R	CATLine CAT 7A R	CATLine CAT 5e BL	CATLine CAT 6A BL	CATLine CAT 7A BL	
Basic construction	Screened																								
	Inner sheath																								
	Optical waveguide POF																								
Temperature range fixed laying*	+ 180 °C																								
	+ 90 °C																								
	+ 85 °C																								
	+ 80 °C																								
	+ 75 °C																								
	+ 70 °C																								
	- 30 °C																								
	- 40 °C																								
	- 50 °C																								
	- 90 °C																								
Voltage	Nominal voltage 300/500 V																								
	Peak operating voltage max. 90 V																								
	Peak operating voltage max. 350 V																								
	Voltage UL 30 V																								
	Voltage UL resp. CSA 300 V																								
	Voltage UL resp. CSA 600 V																								
	Testing voltage 600 V																								
	Testing voltage 1000 V																								
	Testing voltage 1500 V																								
	Testing voltage 2000 V																								
Testing voltage 3000 V																									
Standards and approvals	Halogen-free acc. to DIN VDE + IEC																								
	Halogen-free acc. to DIN EN for rail types																								
	Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2																								
	Fire performance: no flame propagation acc. to IEC 60332-3 + EN 60332-3 Cat. C resp. D																								
	Fire performance: UL Horizontal Flame Test FT2																								
	Fire performance: acc. to NF C 32-070 C1																								
	Fire performance: no flame propagation acc. to DIN EN 60332-3-25 + DIN EN 50305 section 9.1.1 + 9.1.2. Flame retardant and self-extinguishing acc. to DIN EN 60332-1-2																								
	Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases																								
	Smoke density acc. to IEC 61034 + EN 61034																								
	Toxicity acc. to DIN EN 50305																								
UL recognized																									
CSA approved																									
Rail type acc. to DIN EN 45545-2																									
Characteristics	Oil resistance acc. to internal standard																								
	Oil resistance acc. to DIN VDE																								
	Oil resistance acc. to EN																								
	Chemical resistance													A											
	Weather resistance																	A	A						
	Suitable for cable tracks																								
	Torsion angle								2																
	Flexibility										A	A	A	A		A	A			B	B	B	B	B	
Direct burial																									



A = very good
B = good
C = medium

1 = up to ± 360°/m
2 = up to ± 180°/m

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

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

RoHS



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
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/17

	IBS 612	IBS 617	IBS 614	S IBS 616*
Wrapping:	PETP foil	PETP foil	PETP foil	non-woven tape
Sheath material:	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: <i>fixed laying:</i> <i>flexible application:</i>	-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 + IEC 60754-1
Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2	X	X	X	–
Oil resistance:	acc. to internal standard see page N/15	very good - acc. to DIN VDE 0207 part 5	acc. to internal standard see page N/15	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 mm ²	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



RoHS

Marking for S IBS 618 06183251:

SAB BRÖCKSKES · D-VIERSEN · S 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 + 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/17

	S IBS 618*	SABIX® IBS 610	SABIX® IBS 610 FRNC
% Insulation:	PE, 2Y11 acc. to DIN VDE 0207 part 2	SABIX®	SABIX®
% Wrapping:	non-woven tape	PETP foil	PETP foil
% Sheath material, redlilac (RAL 4001):	PUR,TMPU 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/19)	-	-	X
% Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2	X	-	X
% Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + 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 - TMPU 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 mm ²	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

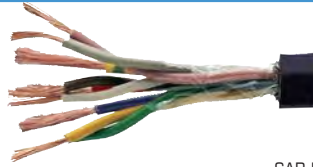
IBS 612 PVC Interbus-S cable for indoor and outdoor installation

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

RoHS



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

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:

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/17

	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
% Sheath material:	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 + EN 60332-1-2	X	X	X	–
% Oil resistance:	acc. to internal standard see page N/15	very good - acc. to DIN VDE 0207 part 5	acc. to internal standard see page N/15	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 + 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/17

	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
%% Insulation:	PE, 2Y11 acc. to DIN VDE 0207 part 2	SABIX®	SABIX®
%% Wrapping:	non-woven tape	PETP foil	PETP foil
%% Sheath material, 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 ⁶ cJ/kg	5 x 10 ⁶ cJ/kg	–
%% Temperature range: <i>fixed laying:</i> <i>flexible application:</i>	<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 + EN 60332-3 Cat. C resp. D (see page N/19)	–	–	X
%% Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2	X	–	X
%% Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + 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 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

RoHS



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/17

	SABIX® IBL 600 FRNC	IBL 600	SABIX® IBL 600	S IBL 605
Insulation:	SABIX®	PVC, TI2 acc. to DIN VDE 0281 part 1	SABIX®	TPE-E
Stranding:	in layers	in layers	in layers	specialy adjusted layering with netting tape and one additional non-woven tape over the outer layer
Sheath material, redilac (RAL 4001):	SABIX®	PVC, YÖ acc. to DIN VDE 0281 part 1	SABIX®	PUR, TMPU 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/19)	X	–	–	–
Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2	–	X	–	–
Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + 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 - TMPU 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

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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/17

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	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
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	-	-	-
Sheath material, rediliac (RAL 4001):	PUR, TMPU acc. to DIN VDE 0282 part 10 with rough surface	PUR, TMPU 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/19)	-	-	-	X	X
Fire performance: NF C 32-070 C1	-	-	-	-	X
Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + 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 - TMPU acc. to DIN VDE 0282 part 10	very good - TMPU acc. to DIN VDE 0282 part 10	very good - TMPU 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 mm ²	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 recognition

RoHS



Marking for S CB 628 06282251:



SAB BRÜCKSKES · 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
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/17

	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®
% Sheath material, redilac (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: <i>fixed laying:</i> <i>flexible application:</i>	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 + EN 60332-1-2	X	X
% Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + 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

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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	6,1	19,0	44
06272341	CB 627	2 x 0,34	6,4	21,8	48
06272501	CB 627	2 x 0,50	7,7	28,4	67
06272751	CB 627	2 x 0,75	9,6	39,6	91
06282251	S CB 628	2 x 0,25	7,9	20,2	77
06282341	S CB 628	2 x 0,34	8,3	22,9	84
06282501	S CB 628	2 x 0,50	8,7	29,0	81
06274251	CB 627	2 x 2 x 0,25	7,3	27,4	61
06274341	CB 627	2 x 2 x 0,34	7,7	33,5	67
06274501	CB 627	2 x 2 x 0,50	9,8	44,4	104
06274751	CB 627	2 x 2 x 0,75	13,5	80,8	179
06284251	S CB 628	2 x 2 x 0,25	9,1	27,9	98
06284341	S CB 628	2 x 2 x 0,34	9,6	32,7	105
06284501	S CB 628	2 x 2 x 0,50	10,6	44,9	115

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



Marking for DN 650 06502241: SAB BRÖCKSKES · 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
Sheath material:	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:
<i>fixed laying:</i>	-30/+70 °C	up to +60 °C
<i>flexible application:</i>	- 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/17	

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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
% Insulation:	0,24 mm ² : acc. to DINVDE 0819 part 103 (02Y11) 0,38 mm ² : PVC, TI2 acc. to DIN VDE 0281 part1	0,96 mm ² : acc. to DINVDE 0819 part 103 (02Y11) 1,53 mm ² : PVC, TI2 acc. to DIN VDE 0281 part1	0,24 mm ² : acc. to DINVDE 0819 part 103 (02Y11) 0,38 mm ² : PVC, TI2 acc. to DIN VDE 0281 part 1	0,96 mm ² : acc. to DINVDE 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

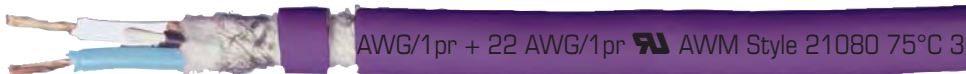
Other dimensions and colours are possible on request.

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

RoHS



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 CE

General construction:

Wrapping:	each pair wrapped with alu foil
Wrapping:	non-woven tape
Sheath material:	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/17



	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 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	– –
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 0,38 mm ² : supply pair black and red	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	– –
Stranding:	cores 0,24 mm ² twisted to pair and cores 0,38 mm ² twisted to pair	X X	– –	– –
Stranding:	cores 0,96 mm ² twisted to pair and cores 1,53 mm ² twisted to pair	– –	X X	– –
Total stranding:	pairs twisted together with tinned copper drain wire	AWG 22/19	AWG 18/19	AWG 22/19
Screen:	Alu foil	Alu foil	tinned copper braiding	tinned copper braiding
Voltage UL:	300 V	300 V	–	–
Temperature range:	UL: up to +75°C fixed laying: flexible application:	UL: up to +75°C -40/+70°C -30/+70°C	UL: up to +75°C -40/+70°C -30/+70°C	-40/+70°C -30/+70°C

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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
Sheath material:	PUR, TMPU 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
<i>fixed laying:</i>	-30/+70 °C
<i>flexible application:</i>	-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/17

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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
% Insulation:	0,24 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 0,38 mm ² : PVC, T12 acc. to DIN VDE 0281 part 1	0,96 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 1,53 mm ² : PVC, T12 acc. to DIN VDE 0281 part 1	0,24 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 0,38 mm ² : PVC, T12 acc. to DIN VDE 0281 part 1	0,96 mm ² : acc. to DIN VDE 0819 part 103 (02Y11) 1,53 mm ² : PVC, T12 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

RoHS



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
Sheath material:	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/17

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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



Marking for SABIX PB 630 FRNC 66302341:
 SAB BRÖCKSKES · D-VIERSEN · SABIX PB 630 FRNC 2 x 0,34 mm² CE

General construction:

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/17

	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
Sheath material, redilac (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: fixed laying: flexible application:	-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/19)	-	X	-	-
Fire performance: flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2	-	X	X	-
Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + 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/15	-
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 mm ²	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 639 PVC Profibus-DP cable applicable in ground

PB 637 PVC Profibus-DP cable with UL recognition

PB 635 PVC Profibus-DP cable for outdoor installation

RoHS



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

General construction:

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/17

	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
% Sheath material, redlilac (RAL 4001):	PVC, TM2 acc. to DIN VDE 0281 part 1	PVC, YOE 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	<u>UL: up to +60°C</u> -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/15	very good - acc. to DIN VDE 0207 part 5	acc. to internal standard see page N/15	acc. to internal standard see page N/15
% 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 mm ²	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/17

	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	-	-
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, Tl2 acc. to DIN VDE 0281 part 1
Sheath material, redlilac (RAL 4001):	PUR, TMPU 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 + EN 60332-1-2	-	-	X
Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	-	X	-
Oil resistance:	very good - TMPU acc. to DIN VDE 0282 part 10	-	acc. to internal standard see page N/15
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
Insulation:	acc. to DIN VDE 0819 part1 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/17

Outstanding features:

%	short assembling time
%	avoidance of connection errors
%	EAC approval

	PB 640	PB 640 UL	S PB 640	S PB 640 UL
% Inner sheath, nature:	PVC	PVC	SABIX®	SABIX®
% Sheath material, rediliac (RAL 4001):	PVC, TM2 acc. to DIN VDE 0281 part 1	PVC, TM2 acc. to DIN VDE 0281 part 1	PUR, TMPU acc. to DIN VDE 0282 part 10 with matt surface	PUR, TMPU 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/15	acc. to internal standard see page N/15	very good - TMPU acc. to DIN VDE 0282 part 10	very good - TMPU 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:

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/17

	PB 642	S PB 644
Conductor:	bare copper strands with reference to DIN VDE 0812	bare copper strands, extra fine wires
Sheath material:	PVC, TM1 acc. to DIN VDE 0281 part 1	PUR, TMPU acc. to DIN VDE 0282 part 10 with rough surface
Temperature range: <i>fixed laying:</i> <i>flexible application:</i>	-30/+70°C -5/+70°C	-40/+70°C -40/+70°C
Oil resistance:	acc. to internal standard see page N/15	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 mm ²	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈kg/km
06422221	PB 642, redlilac (RAL 4001)	2 x 0,22	4,4	14,7	26
06424221	PB 642, redlilac (RAL 4001)	2 x 2 x 0,22	6,2	22,4	45
06422251	PB 642, redlilac (RAL 4001)	2 x 0,25	4,9	15,4	30
06424251	PB 642, redlilac (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, redlilac (RAL 4001)	2 x 0,25	5,2	15,9	33
06444251	S PB 644, redlilac (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

RoHS



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 SBP 680 06803754:



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

Marking for S SBP 684 Move 06843754:

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
Sheath material:	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/17

	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 <i>fixed laying:</i> <i>flexible application:</i> <i>continuously flexible:</i>	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.

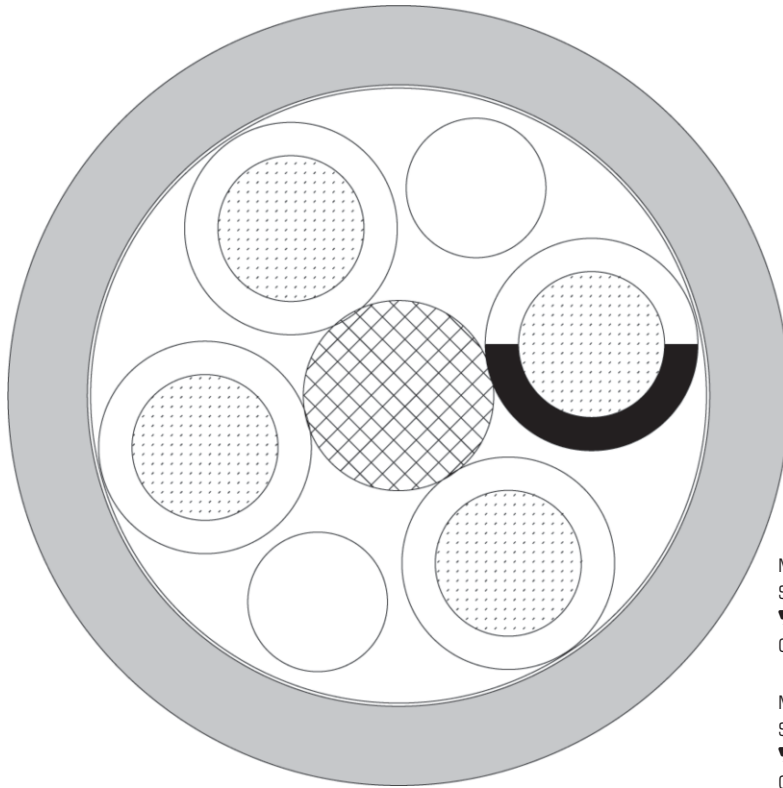


S 670 PUR hybrid field bus control cable, suitable for cable tracks

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



RoHS



**optical
waveguide
+
copper
conductors**

Marking for S 670 06701604:

SAB BRÜCKSKES · 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 BRÜCKSKES · 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, Tl2 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		
<i>fixed laying:</i>	4 x d	
<i>flexible application:</i>	7,5 x d	
<i>continuously flexible:</i>	10 x d	
Temperature range	S 670	S 671
<i>fixed laying:</i>	-40/+70 °C	-40/+70 °C
<i>flexible application:</i>	+5/+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 + EN 60332-1-2	
Oil resistance:	PVC - acc. to internal standard, see page N/15 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/17	

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



D-VIERSEN · USB 2.0 (2x0,22mm²) ST + 2x0,5mm² 0

Marking for USB 2.0 06010122:

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



Construction:	USB 2.0 <i>flexible</i>	USB 2.0 UL <i>flexible</i>	USB 2.0 FRNC <i>flexible</i>
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)		
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		
Sheath material:	PVC		SABIX®
Sheath colour:	black (RAL 9005)		

Technical data:	USB 2.0 <i>flexible</i>	USB 2.0 UL <i>flexible</i>	USB 2.0 FRNC <i>flexible</i>
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/15		---
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17		

item no.	type	dimension mm ²	outer-ø approx. mm	copper figure kg/km	cable weight ≈kg/km
06010122	USB 2.0	(2x0,22) ST + 2x0,50	6,8	34,0	60
06010222	USB 2.0 UL	(2x0,22) ST + 2x0,50	7,0	34,0	63
06019001	USB 2.0 FRNC	(2x0,22) ST + 2x0,50	6,8	34,0	62

Other dimensions and colours are possible on request.

USB 2.0 Cables continuously flexible



Marking for USB 2.0 06010122:

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



Construction:	USB 2.0 S <i>suitable for cable tracks</i>	USB 2.0 S UL/CSA <i>suitable for cable tracks</i>	USB 2.0 RT UL/CSA <i>suitable for robots</i>
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)		
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		
Sheath material:	PUR		
Sheath colour:	black (RAL 9005)		

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Technical data:	USB 2.0 S <i>suitable for cable tracks</i>	USB 2.0 S UL/CSA <i>suitable for cable tracks</i>	USB 2.0 RT UL/CSA <i>suitable for robots</i>
Item number:	0601-1022	0601-1122	0601-2022
Peak operating voltage VDE:	max. 350 V		
Voltage UL/CSA:	---	300 V	
Testing voltage:	core/core 2000 V - core/screen 2000 V		
Temperature range VDE	UL/CSA: 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/17		

item no.	type	dimension mm ²	outer-ø approx. mm	copper figure kg/km	cable weight ≈kg/km
06011022	USB 2.0 S	(2x0,22) ST + 2x0,50	7,0	34,1	59
06011122	USB 2.0 S UL/CSA	(2x0,22) ST + 2x0,50	7,2	34,1	66
06012022	USB 2.0 RT UL/CSA	(2x0,22) ST + 2x0,50	7,0	34,3	64

Other dimensions and colours are possible on request.



USB 3.0 Cables

RoHS



Marking for USB 3.0 S 06042098:
SAB BRÖCKSKES · D-VIERSEN · USB 3.0 S 3x(2x28AWG)ST+2x26AWG 0604-2098 RJ AWM Style 20549 300V 80° CE



Construction:	USB 3.0 S <i>suitable for cable tracks</i>	USB 3.0 RT <i>suitable for robots</i>	USB 3.0 <i>flexible</i>
Dimension:	3 x (2 x 28 AWG)ST + 2 x 26 AWG		2 x (2 x 28 AWG)ST + 2 x 28 AWG + 2 x 26 AWG
Conductor:	silver-plated strands (AWG 28) · tinned copper strands (AWG 26)		
Insulation:	special polymer		
Colour code:	yellow, blue + orange, violet (USB 3.0), green, white (USB 2.0), red, black (power supply)		
Stranding:	pairs AWG28 twisted to pairs and screened, all elements together		USB 3.0 twisted and screened pairs, USB 2.0 twisted pairs, all elements together
Wrapping:	non-woven tape	netting tape + non-woven tape	non-woven tape
Screen:	tinned copper braiding		
Wrapping:	non-woven tape		
Sheath material:	PUR		PVC
Sheath colour:	black (similar RAL 9005)		

Technical data:	USB 3.0 S <i>suitable for cable tracks</i>	USB 3.0 RT <i>suitable for robots</i>	USB 3.0 <i>flexible</i>
Item number:	0604-2098	0604-3098	0603-0078
Peak operating voltage:	max. 350 V		
Voltage UL:	300 V		
Testing voltage:	core/core 2000 V - core/screen 2000 V		
Temperature range VDE fixed laying: flexible application:	UL: up to +80 °C -50 °C / +90 °C -40 °C / +90 °C		UL: up to +80 °C -30 °C / +70 °C -5° C / +70 °C
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d 10 x d 12 x d	5 x d 10 x d 15 x d	5 x d 10 x d
Torsion angle:	---	up to ± 360°/m	---
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2		
Oil resistance:	very good, TMPU acc. to EN 50363-10-2		very good - TM5 acc. to DIN VDE 0281 part 1 + HD 22.1
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17		

item no.	type	dimension mm ²	outer-ø approx. mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C max.Ω/km 28 AWG 26 AWG
06042098	USB 3.0 S	3 x (2 x 28 AWG)ST + 2 x 26 AWG	6,1	26,5	45	223 140
06043098	USB 3.0 RT	3 x (2 x 28 AWG)ST + 2 x 26 AWG	6,4	28,1	50	223 140
06030078	USB 3.0	2 x (2 x 28 AWG)ST + 2 x 28 AWG + 2 x 26 AWG	6,1	25,5	48	223 140

Other dimensions and colours are possible on request.

For transmission lengths more than 3 m, please contact us!

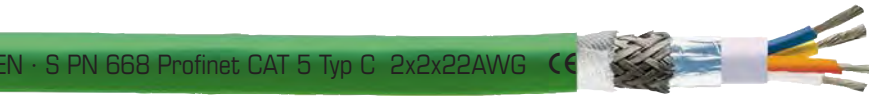
INDUSTRIAL ETHERNET CABLES PROFINET

PN 662 Profinet type B, for flexible applications

S PN 668 Profinet type C, continuously flexible

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

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



Marking for S PN 668:

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



Construction:	PN 662 Profinet type B <i>flexible</i>	S PN 668 Profinet type C <i>continuously flexible</i>	PN 663 Profinet type B <i>flexible</i>	S PN 669 Profinet type C <i>continuously flexible</i>
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
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
Sheath material:	PVC	PUR	PVC	PUR
Sheath colour:	green (similar RAL 6018)			

Technical data:	PN 662 Profinet type B <i>flexible</i>	S PN 668 Profinet type C <i>continuously flexible</i>	PN 663 Profinet type B <i>flexible</i>	S PN 669 Profinet type C <i>continuously flexible</i>
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/15	TMPU acc. to DIN VDE 0282 part 10 + HD 22.10	acc. to internal standard see page N/15	acc. to internal standard see page N/15
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17			

item no.	type	no. of cores	cross section AWG	core-ø max. 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 PROFINET

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

RoHS



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

Marking for PN 660:
 SAB BRÖCKSKES · D-VIERSEN · PN 660 Profinet CAT 5 Typ B · 2x2x22AWG



Construction:	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>
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
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
Sheath material:	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	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/15	---	acc. to internal standard see page N/15	---
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17			

item no.	type	no. of cores	cross section AWG	core-ø max. 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 PROFINET



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



RoHS

Marking for S PN 667:

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

Construction:

Conductor:	tinned copper strands, 7 wires
Insulation:	special polymer
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
Sheath material:	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
Temperature range	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/17

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item no.	type	no. of cores	cross section AWG	core-ø max. 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.

For extreme bending stress - conductor construction 19 wires:

item no.	type	no. of cores	cross section AWG	core-ø max. mm	outer-ø mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km
06679001	S PN 667	4	22	1,55	6,5 ± 0,2	33,8	58	58,8

Other dimensions and colours are possible on request.



short
assembling time by
„Fast Connect“
construction
(7 wires)

INDUSTRIAL ETHERNET CABLES CAT 5

PN 678 Ethernet cable type A, for fixed installation

S PN 681 Ethernet cable type C, continuously flexible

PN 679 Ethernet cable type B, for flexible applications

RoHS



Marking for PN 679:
SAB BRÖCKSKES · D-VIERSEN · PN 679 CAT 5 Typ B 4x2x26AWG CE

Construction:	PN 678 Ethernet cable type A <i>fixed laying</i>	PN 679 Ethernet cable type B <i>flexible</i>	S PN 681 Ethernet cable 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
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	
Sheath material:	PVC	PUR	
Sheath colour:	green (similar RAL 6018)		

Technical data:	PN 678 Ethernet cable type A <i>fixed laying</i>	PN 679 Ethernet cable type B <i>flexible</i>	S PN 681 Ethernet cable 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	
Oil resistance:	acc. to internal standard see page N/15	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/17		

item no.	type	no. of pairs	cross section AWG	core-ø max. 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

DR PN 689 P Highflex reeling Profinet cable / CAT 5 cable

DR CB 689 P Highflex reeling CAN-Bus cable

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



ROHS

Marking for DR PN 689 P Highflex:

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

Construction:	DR PN 689 P Highflex reeling Profinet cable	DR PN 689 P Highflex reeling CAT 5 cable	DR CB 689 P Highflex reeling CAN-Bus cable
Dimension:	2 x 2 x 22 AWG	4 x 2 x 26 AWG	2 x 2 x 0,50 mm ²
Conductor:	tinned copper strands, fine wires		
Core insulation:	SABIX®		PE
Colour code:	blue, yellow, white, orange	blue, orange, green, brown + 4 white cores with consecutive numbers	acc. to DIN 47100
Stranding:	in layers	in pairs	
Wrapping:	PETP foli		non-woven tape
Inner sheath:	SABIX®		---
Wrapping:	alu foil		---
Screen:	tinned copper braiding		
Wrapping:	non-woven tape		---
Outer sheath:	PUR / supporting braid / PUR		
Sheath colour:	green (similar RAL 6018)	black (similar RAL 9005)	

Technical data:	DR PN 689 P Highflex reeling Profinet cable	DR PN 689 P Highflex reeling CAT 5 cable	DR CB 689 P Highflex reeling CAN-Bus cable
Item number:	0689-2202	0689-9001	0689-9005
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 / + 90°C - 30°C / + 90°C		- 40°C / + 70°C - 40°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		for laying and installation (fixed laying): 5 x d for repeated winding action (flexible): 7,5 x d guided on deflection pulleys (flexible): 10 x d
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)		120Ω (95 - 140Ω) at 1 MHz
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1		
Oil resistance:	TMPU acc. to EN 50363-10-2		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17		

item no.	type	dimension	outer-ø approx. mm	copper figure kg/km	cable weight ≈kg/km	ohmic resistance at 20°C acc. to VDE 0812 max.Ω/km	tensile strength max. N	characteristic impedance
06892202	DR PN 689 P Highflex	2 x 2 x 22 AWG	7,8	36,2	78	58,8	200	100Ω
06899001	DR PN 689 P Highflex	4 x 2 x 26 AWG	8,7	34,3	85	139	200	100Ω
06899005	DR CB 689 P Highflex	2 x 2 x 0,50 mm ²	13,0	48,8	175	39,0	200	120Ω

Other dimensions and colours are possible on request.

INDUSTRIAL ETHERNET CABLES CAT 5

S PN 668 Hybrid Hybrid cable with UL recognition

RT PN 668 Profinet cable suitable for robots

RoHS



Marking for RT PN 668:

SAB BRÖCKSKES · D-VIERSEN · RT PN 668 Profinet 2x2x22AWG · Robot Cable · CE



Construction:	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 + 4 x 1,5 mm ²	2 x 2 x 22 AWG
Conductor:	22 AWG: tinned copper strands, extra fine wires 1,5 mm ² : bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 6	tinned copper strands, extra fine wires
Insulation:	22 AWG: SABIX® 1,5 mm ² : TPE	PE
Colour code:	22 AWG: blue, yellow, white, orange. 1,5 mm ² : black cores with consecutive numbers acc. to EN 50334	blue, yellow, white, orange
Stranding:	22 AWG: in layers together in layers	in layers
Wrapping:	22 AWG: PETP foli	netting tape, alu foil
Inner sheath:	22 AWG: SABIX®	---
Wrapping:	22 AWG: alu foil	---
Screen:	22 AWG: tinned copper braiding	---
Wrapping:	22 AWG: non-woven tape	---
Screen:	---	tinned copper braiding
Wrapping:	non-woven tape	
Sheath material:	PUR	
Sheath colour:	green (similar RAL 6018)	

Technical data:	S PN 668 Hybrid <i>Hybrid cable type C continuously flexible</i>	RT PN 668 <i>Profinet cable suitable for robots</i>
Item number:	0668-9010	0668-9001
Peak operating voltage:	max. 350 V	
Voltage: UL:	300 V	---
Testing voltage:	core/core 1500 V, core/screen 1200 V	
Temperature range VDE fixed laying: flexible application:	UL: up to + 80°C - 40°C / + 90°C - 30°C / + 90°C	- 40°C / + 70°C - 30°C / + 70°C
Min. bending radius	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)	100Ω ± 5Ω, 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:	PUR, TPU 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/17	

item no.	type	no. of cores	cross section AWG	core-ø approx. 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
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

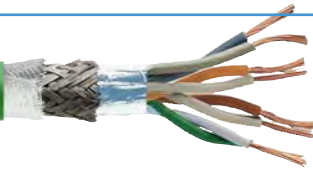
Other dimensions and colours are possible on request.

E
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CATLine CAT 6 + CAT 6A suitable for cable tracks / suitable for robots

9 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE



RoHS

Marking for CATLine CAT 6 S:

SAB BRÖCKSKES · D-VIERSEN · CATLine Cat.6 S 4x2x26AWG 1677-4630 AWM Style 20549 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE

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

Technical data:	CATLine CAT 6 S <i>suitable for cable tracks</i>	CATLine CAT 6A S <i>suitable for cable tracks</i>	CATLine CAT 6 RT <i>suitable for cable tracks/ suitable for robots</i>	CATLine CAT 6A RT <i>suitable for cable tracks/ suitable for robots</i>
Item number:	1677-4630	1677-4631	1687-4630	1687-4631
Peak operating voltage:	max. 90 V			
Voltage UL/CSA:	300 V			
Testing voltage:	core/core 1500 V - core/screen 1200 V			
Temperature range VDE fixed laying: flexible application:	UL: up to + 80°C - 40°C / + 70 °C - 40°C / + 70 °C			
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d 10 x d 15 x d			
Torsion angle:	---		up to ± 180°/m	
Characteristic impedance (100 MHz):	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-5-2 / CAT 6	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-5-2 / CAT 6	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A
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 UL Horizontal Flame Test FT2			
Oil resistance:	TMPU acc. to EN 50363-10-2			
Flexibility:	very good			
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17			

item no.	type	no. of cores	cross section AWG	core-ø max. mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km
16774630	CATLine CAT 6 S	8	26	1,05	7,1	32,0	57
16774631	CATLine CAT 6A S	8	26	1,05	7,1	32,0	57
16874630	CATLine CAT 6 RT	8	26	1,05	7,1	32,0	57
16874631	CATLine CAT 6A RT	8	26	1,05	7,1	32,0	57

Other dimensions and colours are possible on request.



**+90°C
on request!**



CATLine CAT 6A HT Gigabit Ethernet cable – high temperature resistant

RoHS



SAB BRÜCKSKES · D-VIERSEN · CATLine Cat.6A HT 4x2x26AWG 1631-4631 AWM Style 21618 150°C 600V CE

Marking for CATLine CAT 6A HT:

Construction:

Conductor:	bare copper strands, fine wires
Core insulation:	FEP
Colour code:	white/blue, white/orange, white/green, white/brown
Stranding:	twisted to pairs
Wrapping:	non-woven tape
Screen:	alu foil
Screen:	tinned copper braiding
Outer sheath:	FEP
Sheath colour:	green (similar RAL 6018)

Outstanding features:

- ▶ high temperature resistant
- ▶ low temperature resistant
- ▶ flame retardant and self-extinguishing
- ▶ oil- and chemical resistant
- ▶ UL recognized
- ▶ EAC approval

Technical data:

Peak operating voltage:	max. 90 V
Voltage UL:	600 V
Testing voltage:	core/core 1500 V core/screen 1200 V
Min. bending radius	
<i>fixed laying:</i>	5 x d
<i>flexible application:</i>	10 x d
Temperature range	UL: up to +150 °C
<i>fixed laying:</i>	-90/+180 °C
<i>flexible application:</i>	-55/+180 °C
Characteristic impedance:	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency acc. to EN 50288-10-2 (CAT 6A)
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1 + EN 60332-1-2, UL VW1
Oil resistance:	very good
Chemical resistance:	very good against acids, halogens, bases, chlorinated solvents as well as organic and inorganic compounds
Absence of harmful substances:	acc. to RoHS directive of the European Union see page N/17

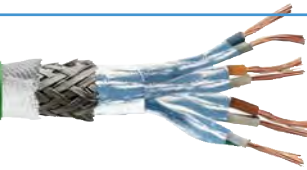
item no.	type	no. of cores	cross section AWG	core-ø max. mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km
16314631	CATLine CAT 6A HT	4 x 2	26	max. 1,05	5,7	30,0	52

Other dimensions and colours are possible on request.



CATLine CAT 7A suitable for cable tracks / suitable for robots

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



RoHS

Marking for CATLine CAT 7A S:

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

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

Technical data:	CATLine CAT 7A S <i>suitable for cable tracks</i>	CATLine CAT 7A RT <i>suitable for robots</i>
Item number:	1777-4631 + 1777-4431	1787-4631 + 1787-4431
Peak operating voltage:	max. 90 V	
Voltage UL/CSA:	300 V	
Testing voltage:	core/core 1500 V - core/screen 1200 V	
Temperature range VDE fixed laying: flexible application:	UL/CSA: up to + 80°C - 40°C / + 70 °C - 40°C / + 70 °C	
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d 10 x d 15 x d	5 x d 10 x d
Torsion angle:	---	up to ± 180°/m
Characteristic impedance (100 MHz):	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 / CAT 7A	
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 UL Horizontal Flame Test FT2	
Oil resistance:	TMPU acc. to EN 50363-10-2	
Flexibility:	very good	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17	

item no.	type	no. of cores	cross section AWG	core-ø approx. mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km
17774631	CATLine CAT 7A S	8	26	1,50	8,8	38,5	80
17774431	CATLine CAT 7A S	8	24	1,60	9,3	43,7	94
17874631	CATLine CAT 7A RT	8	26	1,50	8,8	38,5	80
17874431	CATLine CAT 7A RT	8	24	1,60	9,3	43,7	94

Other dimensions and colours are possible on request.

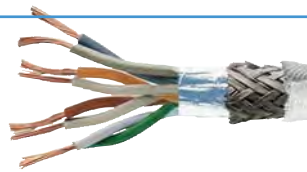


**+90°C
on request!**

INDUSTRIAL GIGABIT ETHERNET CABLES CAT 6 / CAT 6A / CAT 7A

CATLine CAT 6A DR + CAT 7A DR reeling Industrial Ethernet Cable

RoHS



VIERSEN · CATLine Cat.6A DR 4x2x26AWG 1639-4651

Marking for CATLine CAT 6A DR:
SAB BRÖCKSKES · D-VIERSEN · CATLine Cat.6A DR 4x2x26AWG 1639-4651 CE

Construction:	CATLine CAT 6A DR reeling Ethernet cable	CATLine CAT 7A DR reeling Ethernet cable
Dimension:	4 x 2 x 26 AWG	
Conductor:	bare copper strands, fine wires	
Insulation:	special polymer	
Colour code:	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	
Stranding:	cores twisted to pairs, pairs together	cores twisted to pairs, pairs screened with foil, pairs together
Wrapping:	non-woven tape	---
Screen:	alu foil	aluminized non-woven tape
Screen:	tinned copper braiding	
Wrapping:	non-woven tape	
Sheath material:	PUR / supporting braid / PUR	
Sheath colour:	black (RAL 9005)	

Technical data:	CATLine CAT 6A DR reeling Ethernet cable	CATLine CAT 7A DR reeling Ethernet cable
Item number:	1639-4651	1739-4651
Peak operating voltage:	max. 90 V	
Testing voltage:	750 V	
Temperature range VDE fixed laying: flexible application:	- 50°C / + 90 °C - 40°C / + 90 °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	
Characteristic impedance (100 MHz):	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 / CAT 7A
Halogen-free:	acc. to DIN VDE 0472 part 815 + IEC 60754-1	
Weather resistance:	very good	
Oil resistance:	TMPU acc. to EN 50363-10-2	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17	

item no.	type	no. of cores	cross section AWG	core-ø max. mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km	tensile strength max. N
16394651	CATLine CAT 6A DR	8	26	1,05	8,7	32,0	81	200
17394651	CATLine CAT 7A DR	8	26	1,60	10,5	38,5	117	200

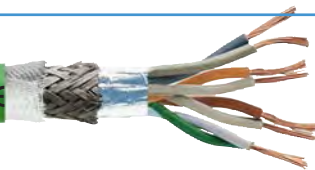
Other dimensions and colours are possible on request.

INDUSTRIAL ETHERNET CABLES FOR RAILWAY TECHNOLOGY

DIN EN 45545-2
edition 2013

CATLine CAT 5e R
CAT 6A R halogen-free Industrial Ethernet Cables for Railway Technology
CAT 7A R

VIERSEN · CATLine Cat. 5e R 4x2x24AWG 1567-4421 CE



Marking for CATLine CAT 5e R 15674421:

SAB BRÜCKSKES · D-VIERSEN · CATLine Cat. 5e R 4x2x24AWG 1567-4421 CE

Construction:	CATLine CAT 5e R <i>flexible</i>		CATLine CAT 6A R <i>flexible</i>	CATLine CAT 7A R <i>flexible</i>
Dimension:	2 x 2 x 24 AWG 2 x 2 x 22 AWG	4 x 2 x 24 AWG	4 x 2 x 26 AWG	
Conductor:	bare copper strands, fine wires			
Insulation:	PE			
Colour code:	blue, yellow, white, orange	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown		
Stranding:	star quad	twisted to pairs		twisted to pairs with alu foil
Wrapping:	foil			
Screen:	alu foil and tinned copper braiding			
Sheath material:	special SABIX®			
Sheath colour:	green (similar RAL 6018)			

Technical data:	CATLine CAT 5e R <i>flexible</i>		CATLine CAT 6A R <i>flexible</i>	CATLine CAT 7A R <i>flexible</i>
Item number:	1567-9002 1567-9004	1567-4421	1667-4621	1767-4621
Peak operating voltage:	max. 90 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			
Characteristic impedance:	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 / CAT 7A
Halogen-free:	acc. to DIN EN 50306-1 + DIN EN 50264-1. Development of HCl is ≤ 0,5% acc. to DIN EN 50267-2-1. pH-value is ≥ 4,3 acc. to DIN EN 50267-2-2. Conductivity is ≤ 10,0 μS/mm acc. to DIN EN 50267-2-2. Fluoric content ≤ 0,1% acc. to DIN EN 60684-2			
Fire performance:	No flame propagation acc. to DIN EN 60332-3-25 + DIN EN 50305 section 9.1.1 + 9.1.2. Flame retardant and self-extinguishing acc. to DIN EN 60332-1-2			
Smoke density:	acc. to DIN EN 61034			
Toxicity:	acc. to DIN EN 50305			
Flexibility:	good			
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17			

item no.	type	no. of cores	cross section AWG	core-ø max. mm	outer-ø mm	copper figure kg/km	cable weight ≈kg/km
15679002	CATLine CAT 5e R	4	24	max. 1,30	5,2 ± 5%	22,7	41
15679004	CATLine CAT 5e R	4	22	max. 1,60	5,9 ± 5%	29,1	52
15674421	CATLine CAT 5e R	8	24	max. 1,30	8,0 ± 10%	41,2	70
16674621	CATLine CAT 6A R	8	26	max. 1,05	6,8 ± 10%	31,9	55
17674621	CATLine CAT 7A R	8	26	max. 1,60	7,8 ± 10%	38,5	75

Other dimensions and colours are possible on request.



**Especially
for use in
rail vehicles**

Outstanding features:

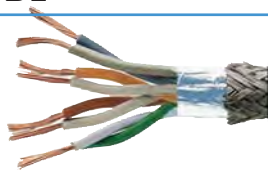
- ▶ halogen-free
- ▶ no flame propagation
- ▶ flame retardant and self-extinguishing
- ▶ fulfils fire protection requirements R15 (EL1A) acc. to DIN EN 45545-2 for hazard levels HL1-3
- ▶ EAC approval

INDUSTRIAL ETHERNET CABLES FOR MARITIME USE



CATLine CAT 5e BL
CAT 6A BL halogen-free Ethernet cable for maritime use
CAT 7A BL

RoHS



4x2x24AWG 1747-4421 **UL** AWM Style 21080 75°C 30

SAB BRÖCKSKES · D-VIERSEN **CATLine** Cat.7A BL 4x2x24AWG 1747-4421 **UL** AWM Style 21080 75°C 300V **CE**

Marking for CATLine CAT 7A BL 17474421:

Construction:	CATLine CAT 5e BL	CATLine CAT 6A BL	CATLine CAT 7A BL
Dimension:	2 x 2 x 24 AWG 2 x 2 x 22 AWG	4 x 2 x 26 AWG	4 x 2 x 24 AWG / 4 x 2 x 26 AWG
Conductor:	bare copper strands, fine wires		
Insulation:	special polymer		
Colour code:	blue, yellow, white, orange	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	
Stranding:	star quad	cores twisted to pairs, pairs together	cores twisted to pairs, pairs screened with foil, pairs together
Wrapping:	alu foil		
Screen:	tinned copper braiding		
Sheath material:	special SABIX®		
Sheath colour:	black		

Technical data:	CATLine CAT 5e BL	CATLine CAT 6A BL	CATLine CAT 7A BL
Item number:	1547-9001 1547-9002	1547-4621	1647-4621 + 1647-4421 1747-4621 + 1747-4421
Peak operating voltage:	max. 90 V		
Voltage UL:	300 V		
Testing voltage:	core/core 1500 V - core/screen 1200 V		
Temperature range VDE fixed laying: flexible application:	UL: up to + 75°C - 40°C / + 70 °C - 30°C / + 70 °C		
Min. bending radius fixed laying: flexible application (only 7 wires):	5 x d 10 x d		
Characteristic impedance (100 MHz):	100Ω ± 5Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A
Halogen-free:	acc. to IEC 60754-1		
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + EN 60332-1-2, no flame propagation acc. to IEC 60332-3-22 cat. A, UL Horizontal Flame Test FT2, UL AWM Style 21080		
Corrosiveness of conflagration gases:	IEC 60754-2 - no development of corrosive conflagration gases		
Smoke density	acc. to IEC 61034		
Flexibility:	good		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page N/17		

item no.	type	no. of cores	cross section AWG	core-ø mm	outer-ø ± 5% mm	copper figure kg/km	cable weight ≈kg/km
15479001	CATLine CAT 5e BL	4	24/7	ca. 1,25	5,7	22,7	48
15479002	CATLine CAT 5e BL	4	22/7	max. 1,60	6,4	29,7	61
15474621	CATLine CAT 5e BL	8	26/7	max. 1,05	7,3	31,9	64
16474621	CATLine CAT 6A BL	8	26/7	max. 1,05	7,3	31,9	64
16474421	CATLine CAT 6A BL	8	24/7	ca. 1,33	8,3	41,1	81
17474621	CATLine CAT 7A BL	8	26/7	max. 1,60	8,9	38,5	85
17474421	CATLine CAT 7A BL	8	24/7	ca. 1,60	10,5	65,0	116

Other dimensions and colours are possible on request.



**especially
for use in
shipbuilding
industry**

Outstanding features:

- ▶ ABS Type Approval
- ▶ TR IEC 60092-370
- ▶ halogen-free
- ▶ asbestos-free
- ▶ flame retardant and self-extinguishing
- ▶ no flame propagation
- ▶ UL recognized
- ▶ EAC approval

Profinet cable suitable for cable tracks with M12 male connectors



INNOVATIVE SOLUTIONS FOR PROFINET WIRING

For the field bus wiring of Profinet field bus systems in industrial sectors. This cable type is used for example in cable chain applications for automation and machine and plant construction with rough environments. The PUR outer sheath is resistant against rough environmental conditions.

CABLE CONSTRUCTION

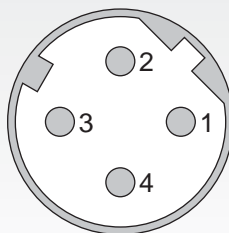
Conductor:	tinned copper strands
Core insulation:	special polymer
Screen:	alu foil and tinned copper braiding
Outer sheath:	PUR
Sheath colour:	green (RAL 6018)

TECHNICAL DATA

Min. bending radius	continuously flexible	15 x d
Temperature range	flexible application:	-20/+70°C
	fixed laying:	-30/+70°C
Special feature:	Characteristic impedance 100Ω ± 10Ω CAT 5 with reference to EN 50173-1, oil resistant, suitable for cable tracks	

Pin configuration:

Pin1:	yellow
Pin2:	white
Pin3:	orange
Pin4:	blue
Housing:	screen



Plug types:

- q M12 plug(male) 4-pole, D-coded
- q M12 socket (female) 4-pole, D-coded
straight or tilted
moulded or mounted

Profibus cable suitable for cable tracks with M12 male connectors



PROFIBUS CABLES FOR CABLE CHAIN APPLICATIONS

For the field bus wiring in automation technique. These bus cables transfer Profibus signals with different cable and plug combinations. The PUR cable for cable chain applications is resistant against rough environmental conditions in industrial applications.

CABLE CONSTRUCTION

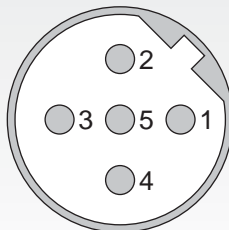
Conductor:	bare copper strands
Core insulation:	TPK
Screen:	alu foil und tinned copper braiding
Outer sheath:	PUR
Sheath colour:	red lilac (RAL 4001)

TECHNICAL DATA

Min. bending radius	continuously flexible	12 x d
Temperature range	flexible application:	-40/+80°C
	fixed laying:	-40/+80°C
Special feature:	Characteristic impedance at 3 - 20 MHz: 150Ω ± 10% with reference to EN 50170, oil resistant, suitable for cable tracks	

Pin configuration:

Pin1:	n.b.
Pin2:	green
Pin3:	n.b.
Pin4:	red
Pin5:	n.b.
Housing:	screen



Plug types:

- q M12 plug(male) 5-pole, B-coded
- q M12 socket (female) 4-pole, D-coded straight or tilted moulded or mounted