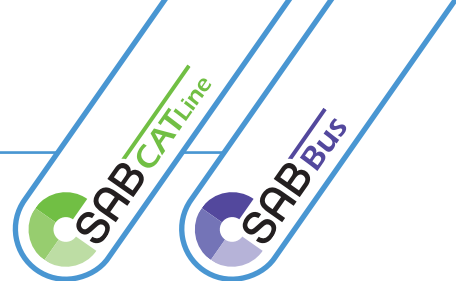


Industrial Ethernet & Fieldbus Cables



	page
Applications	E/5-7
Selection tables	E/8-11
Industrial Gigabit Ethernet cables	
CATLine CAT 6 S	CAT 6 Gigabit Ethernet cable, suitable for cable tracks with UL recognition, CSA approval E/12
CATLine CAT 6A S	CAT 6A Gigabit Ethernet cable, suitable for cable tracks with UL recognition, CSA approval E/12
CATLine CAT 6 RT	CAT 6 Gigabit Ethernet cable, suitable for cable tracks and robots with UL recognition, CSA approval E/12
CATLine CAT 6A RT	CAT 6A Gigabit Ethernet cable, suitable for cable tracks and robots with UL recognition, CSA approval E/12
CATLine CAT 6A HT	high temperature resistant FEP insulated CAT 6A Gigabit Ethernet cable with UL recognition E/13
CATLine CAT 6A HT	high temperature resistant PFA insulated CAT 6A Gigabit Ethernet cable E/13
CATLine CAT 7A S	CAT 7A Gigabit Ethernet cable, suitable for cable tracks with UL recognition, CSA approval E/14
CATLine CAT 7A RT	CAT 7A Gigabit Ethernet cable, suitable for robots with UL recognition, CSA approval E/14
CATLine CAT 5e DR	reeling CAT 5e Industrial Ethernet cable E/15
CATLine CAT 6A DR	reeling CAT 6A Gigabit Ethernet cable E/15
CATLine CAT 7A DR	reeling CAT 7A Gigabit Ethernet cable E/15
CATLine CAT 6A ExLD	CAT 6A Gigabit Ethernet cable for potentially explosive areas with UL recognition E/16
Industrial Ethernet cables especially for use in rail vehicles acc. to EN 45545-2	
CATLine CAT 5e R	halogen-free CAT 5e Industrial Ethernet cable E/17
CATLine CAT 6A R	halogen-free CAT 6A Gigabit Ethernet cable E/17
CATLine CAT 7A R	halogen-free CAT 7A Gigabit Ethernet cable E/17
CATLine CAT 5e R flex	halogen-free CAT 5e Industrial Ethernet cable, continuously flexible E/18
CATLine CAT 6A R flex	halogen-free CAT 6A Gigabit Ethernet cable, continuously flexible E/18
CATLine CAT 7A R flex	halogen-free CAT 7A Gigabit Ethernet cable, continuously flexible E/18
You will find other halogen-free cables for use in rail vehicles acc. to EN 45545-2 in chapter A	
Industrial Ethernet cables especially for maritime use	
CATLine CAT 5e BL	halogen-free CAT 5e Industrial Ethernet cable with ABS Type Approval and UL recognition E/19
CATLine CAT 6A BL	halogen-free CAT 6A Gigabit Ethernet cable with ABS Type Approval and UL recognition E/19
CATLine CAT 7A BL	halogen-free CAT 7A Gigabit Ethernet cable with ABS Type Approval and UL recognition E/19
You will find other halogen-free cables for maritime use in chapter A	
Industrial Ethernet cables Profinet	
PN 662	PVC Profinet cable type B for flexible applications E/20
PN 663	PVC Profinet cable type B for flexible applications with UL recognition E/20
S PN 668	PUR Profinet cable type C, continuously flexible, suitable for cable tracks E/20
S PN 669	PUR Profinet cable type C, continuously flexible, suitable for cable tracks with UL recognition E/20
PN 654	PVC Profinet cable type A for fixed installation E/21
PN 654 UL	PVC Profinet cable type A for fixed installation with UL recognition E/21
PN 660	halogen-free Profinet cable type B for flexible applications E/21
PN 661	halogen-free Profinet cable type B for flexible applications with UL recognition E/21
S PN 667	Profinet cable type C, continuously flexible with UL recognition, CSA approval E/22



	page
Industrial Ethernet cables CAT 5	
DR PN 689 P Highflex reeling PUR Profinet cable / CAT 5 cable	E/23
RT PN 668 PUR Profinet cable, suitable for robots	E/24
PN 668 PUR Profinet cable type R, suitable for robots with UL recognition	E/24
Industrial Gigabit Ethernet cables - Single Pair Ethernet cables	
CATLine SPE C-Track Single Pair Ethernet cable, suitable for cable tracks with UL recognition	E/25
CATLine SPE Robot Single Pair Ethernet cable, suitable for robots with UL recognition	E/25
CATLine SPE HT Single Pair Ethernet cable, high temperature resistant	E/26
CATLine SPE Rugged Single Pair Ethernet cable for robust indoor and outdoor use	E/27
CATLine SPE C-Track Hybrid Single Pair Ethernet cable, suitable for cable tracks with power supply and UL recognition	E/28
USB 3.0 cables	
USB 3.0 S USB 3.0 cable with UL recognition, continuously flexible, suitable for cable tracks	E/29
USB 3.0 RT USB 3.0 cable with UL recognition, continuously flexible, suitable for robots	E/29
USB 3.0 cables especially for the application in medical technology	
USB 3.0 M flexible USB 3.0 cable	E/30
USB 2.0 cables	
USB 2.0 flexible USB 2.0 cable	E/31
USB 2.0 UL flexible USB 2.0 cable with UL recognition	E/31
USB 2.0 FRNC halogen-free flexible USB 2.0 cable	E/31
USB 2.0 S USB 2.0 cable, continuously flexible, suitable for cable tracks	E/32
USB 2.0 S UL/CSA USB 2.0 cable with UL recognition, CSA approval, continuously flexible, suitable for cable tracks	E/32
USB 2.0 RT UL/CSA USB 2.0 cable with UL recognition, CSA approval, continuously flexible, suitable for robots	E/32
SABIX® USB 2.0 R flex halogen-free continuously flexible SABIX® USB 2.0 Rail cable acc. to EN 45545-2	E/33
Profibus-DP cables/Profibus-FMS cables acc. to IEC 61158-2	
SABIX® PB 630 FRNC halogen-free, flame retardant Profibus-DP cable	E/34
S PB 634 PUR Profibus-DP cable for cable tracks	E/34
PB 632 flexible PVC Profibus-DP cable	E/34
Profibus-DP cables/Profibus-FMS cables with „Fast Connect“ construction	
PB 640 flexible PVC Profibus-DP cable	E/35
PB 640 UL flexible PVC Profibus-DP cable with UL recognition	E/35
S PB 640 highly flexible PUR Profibus-DP cable	E/35
S PB 640 UL highly flexible PUR Profibus-DP cable with UL recognition, CSA approval	E/35
Profibus-PA cables acc. to IEC 61158-2	
PB 642 PVC Profibus cable	E/36
S PB 644 PUR Profibus cable for cable tracks	E/36
CAN-Bus cables acc. to ISO 11898	
SABIX® CB 624 FRNC C1 halogen-free, flame retardant CAN-Bus cable acc. to NF C 32-070 C1	E/37
CB 627 CAN-Bus cable with UL recognition	E/38
S CB 628 halogen-free CAN-Bus cable for cable tracks with UL recognition	E/38
DR CB 689 P Highflex reeling PUR CAN-Bus cable	E/39



	page
DeviceNet™ cables	
DN 650	PVC DeviceNet™ cable with overall copper screen and UL recognition E/40
DN 657	halogen-free, flexible DeviceNet™ cable with overall copper screen E/40
DN 658	highly flexible DeviceNet™ cable with overall copper screen and UL recognition E/41
DN 658 robot cable/Drop	highly flexible DeviceNet™ cable, suitable for robots with overall copper screen and UL recognition E/41
Interbus-S cables · remote bus cables	
S IBS 616	PUR Interbus-S cable for cable tracks E/42
S IBS 618	PUR Interbus-S cable for cable tracks with UL recognition E/42
Interbus-S cables · installation remote bus cables	
S IBS 616	PUR Interbus-S cable for cable tracks E/43
S IBS 618	PUR Interbus-S cable for cable tracks with UL recognition E/43
SafetyBUS p cables	
SBP 680	SafetyBUS p cable for fixed installation E/44
S SBP 684 Move	SafetyBUS p cable for flexible applications E/44
Harnessed cables	
CATLine CAT 6A S IE connection cable	Industrial Ethernet cable, suitable for cable tracks, with moulded M12 male connector assembly at both sides E/45
S PN 667 PN connection cable	Profinet cable, suitable for cable tracks type C, with moulded M12 connector at both sides E/46



Applications of Industrial Ethernet cables

Industrial Ethernet is the use of Ethernet technology in industrial environments for the networking of machines, control units and other devices. It offers high reliability, speed and real-time communication that is decisive for automation processes. Compared to standard data network it is robust in order to withstand extreme environmental conditions as for example dust, humidity, vibration and temperature fluctuations. Industrial protocols as Profinet enlarge the Ethernet technology in order to guarantee real-time capability.

Industrial Ethernet supports small local networks as well as big geographically spread facilities. In general Industrial Ethernet forms the basis for modern, connected and intelligent production systems.

Industrial Ethernet cables are different from standard network cables due to their robustness and their special construction for industrial environments. They are more robust against mechanical stress as for example bending, traction, vibration and abrasion. Furthermore, they are often resistant against extreme temperatures, humidity, oil and chemicals. The screen is reinforced in order to minimize electromagnetic interferences that may arise in industrial plants by machines and motors.

Industrial Ethernet cables have a longer service life and can be used for flexible applications as cable chains or robots. The cable sheath is often made of halogen free or flame retardant materials in order to meet higher safety requirements. Furthermore, they accomplish more stringent standards and certifications with regard to flame protection or environmental resistance. In total industrial Ethernet cables have been developed especially for the requirements of industrial and automation environments.

Industrial Ethernet supports different transfer rates that vary depending on protocol, application or used hardware. The most current transfer rates are:

100 Mbit/s (Fast Ethernet - 100BaseTX)

CATLine CAT 5 / Profinet

1 Gbit/s (Gigabit Ethernet - 1000BaseT)

CATLine CAT 5e / CAT 6

Standard in modern industrial Ethernet networks, offer a higher bandwidth for data intensive applications.

10 Gbit/s (High-Speed Ethernet - 10GBaseT)

CATLine Cat 6A / Cat 7A

Increasingly in High-End-Applications as industry 4.0, image processing and big data networks.



Applications of Profinet cables

Profinet is mainly used in industrial automation where a reliable, quick and often real time communication between machines, control units (SPS), sensor and actuator is necessary. As industrial Ethernet protocol Profinet uses in general 2 pairs of cores and reaches 100 Mbit/s (Fast Ethernet).

For the industrial application optimised Profinet cables offer a better screening, a higher resistance against oils and chemicals as well as a higher mechanical resistance compared with standard Ethernet cables.

Applicationen of Single-Pair Ethernet (SPE)

Single Pair Ethernet (SPE) plays a major role with regard to efficient network of devices in the field. It enables the direct connection of sensors and actuators to industrial networks. In this way additional gateways become redundant. SPE supports the communication of numerous IoT devices which are an integral part of smart factories. In control and automation systems SPE is the connection between subordinated end devices and superior networks.

A special advantage of SPE is the support of Power over Data Line (PoDL). Herewith, devices can be supplied with data and current via one single pair. This technology reduces not only the installation efforts and costs but also makes possible a robust and future oriented network for industrial applications.

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.

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 manufacturers. 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.

Applications

Anwendungen CAN-Bus Leitungen

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

Applications of DeviceNet™ cables

Based on CAN structures DeviceNet was developed for the industrial process automation on the North American conti-

nent. This system is divided into Trunk and Drop cable.

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.

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.

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

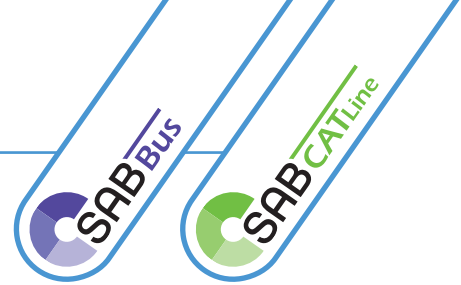


		Cable type											
		CATLine CAT 6 S	CATLine CAT 6A S	CATLine CAT 6 RT	CATLine CAT 6A RT	CATLine CAT 6A HT / FEP	CATLine CAT 6A HT / PFA	CATLine CAT 7A S	CATLine CAT 7A RT	CATLine CAT 5e DR	CATLine CAT 6A DR	CATLine CAT 7A DR	CATLine CAT T 6A ExLD
Basic construction	Screened	•	•	•	•	•	•	•	•	•	•	•	•
	Inner sheath	•	•	•	•	•	•	•	•	•	•	•	•
Temperature range fixed laying*	+ 250 °C												
	+ 180 °C												
	+ 90 °C												
	+ 80 °C												
	+ 75 °C												
	+ 70 °C												
	- 30 °C												
	- 40 °C												
	- 50 °C												
	- 60 °C												
	- 90 °C												
Voltage	Peak operating voltage max. 30 V												
	Peak operating voltage max. 50 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 750 V												
	Testing voltage 1000 V												
	Testing voltage 1500 V												
	Testing voltage 2000 V	•	•	•									
	Testing voltage 3000 V												
Standards and approvals	Fire performance	Halogen-free acc. to IEC 60754-1 + VDE 0482-754-1	•	•				•	•	•	•	•	•
		Halogen-free for rail types											
		Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2	•	•	•	•	•	•	•	•	•	•	•
		No flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D											
		No flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2											
		No flame propagation acc. to IEC 60332-3-22 + VDE 0482-332-3-22 Cat. A											
		Flame retardant acc. to ISO 6722 (UN/ECE R118)											
		UL Horizontal Flame Test FT2	•	•				•	•				
	Other approvals	UL VW1			•								
		acc. to NF C 32-070 C1											
		Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases											
		Smoke density acc. to IEC 61034 + VDE 0482-1034											
		Toxicity acc. to EN 50305 + VDE 0260-305											
		UL recognized	•	•	•			•	•				
		CSA approved	•	•				•	•				
		ABS approved											
		Rail type acc. to EN 45545-2											
Characteristics		Oil resistance acc. to internal standard	•	•				•	•	•	•	•	•
		Oil resistance acc. to VDE	•	•				•	•	•	•	•	•
		Oil resistance acc. to EN						•	•	•	•	•	•
		Chemical resistance				A	A						
		Weather resistance								A	A		
		Suitable for cable tracks	•					•					
		Torsion angle		2				2					
		Flexibility	A	A				A	A			B	B

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

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

Selection table




		Cable type																	
Basic construction	Screened	PN 662	S PN 668	PN 663	S PN 669	PN 654	PN 654 UL	PN 660	PN 661	S PN 667	DR PN 689 P Highflex	RT PN 668	PN 668	CATLine SPE C-Track	CATLine SPE Robot	CATLine SPE HT	CATLine SPE Rugged	CATLine SPE C-Track Hybrid	
	Inner sheath																		
Temperature range fixed laying*	+ 250 °C																		
	+ 180 °C																		
	+ 90 °C																		
	+ 80 °C																		
	+ 75 °C																		
	+ 70 °C																		
	- 30 °C																		
	- 40 °C																		
	- 50 °C																		
	- 60 °C																		
	- 90 °C																		
Voltage	Peak operating voltage max. 30 V																		
	Peak operating voltage max. 50 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 750 V																		
	Testing voltage 1000 V																		
	Testing voltage 1500 V																		
	Testing voltage 2000 V																		
	Testing voltage 3000 V																		
Standards and approvals	Fire performance	Halogen-free acc. to IEC 60754-1 + VDE 0482-754-1																	
		Halogen-free for rail types																	
		Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2																	
		No flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D																	
		No flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2																	
		No flame propagation acc. to IEC 60332-3-22 + VDE 0482-332-3-22 Cat. A																	
		Flame retardant acc. to ISO 6722 (UN/ECE R118)																	
		UL Horizontal Flame Test FT2																	
		UL VW1																	
		acc. to NF C 32-070 C1																	
	Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases																		
	Smoke density acc. to IEC 61034 + VDE 0482-1034																		
	Toxicity acc. to EN 50305 + VDE 0260-305																		
	UL recognized																		
	CSA approved																		
	ABS approved																		
	Rail type acc. to EN 45545-2																		
Characteristics	Oil resistance acc. to internal standard																		
	Oil resistance acc. to VDE																		
	Oil resistance acc. to EN																		
	Chemical resistance																		
	Weather resistance																		
	Suitable for cable tracks																		
	Torsion angle																		
Flexibility																			



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

		Cable type																			
		USB 3.0 S	USB 3.0 RT	USB 3.0 M	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	SABIX® USB 2.0 R flex	SABIX® PB 630 FRNC	S PB 634	PB 632	PB 640	PB 640 UL	S PB 640	S PB 640 UL	PB 642	S PB 644	
Basic construction	Screened	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Inner sheath															●	●	●	●		
Temperature range fixed laying*	+ 250 °C																				
	+ 180 °C																				
	+ 90 °C	●	●	●																	
	+ 80 °C	●	●	●																	
	+ 75 °C	●	●	●																	
	+ 70 °C	●	●	●																	
	- 30 °C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	- 40 °C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	- 50 °C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	- 60 °C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	- 90 °C	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Voltage	Peak operating voltage max. 30 V			●							●	●									
	Peak operating voltage max. 50 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 750 V																●				
	Testing voltage 1000 V																				
	Testing voltage 1500 V						●						●	●	●	●		●		●	
	Testing voltage 2000 V	●	●			●			●	●							●		●		
	Testing voltage 3000 V																				
Standards and approvals	Fire performance	Halogen-free acc. to IEC 60754-1 + VDE 0482-754-1					●	●	●			●	●	●				●			
		Halogen-free for rail types										●									
		Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2	●	●				●				●	●		●	●	●	●	●		
		No flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D											●								
		No flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2										●									
		No flame propagation acc. to IEC 60332-3-22 + VDE 0482-332-3-22 Cat. A							●												
		Flame retardant acc. to ISO 6722 (UN/ECE R118)										●									
		UL Horizontal Flame Test FT2			●	●				●											
		UL VW1	●																		
		acc. to NF C 32-070 C1																			
		Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases											●								
		Smoke density acc. to IEC 61034 + VDE 0482-1034											●								
		Toxicity acc. to EN 50305 + VDE 0260-305											●								
		UL recognized	●	●			●			●	●							●		●	
		CSA approved								●	●									●	
		ABS approved									●										
Rail type acc. to EN 45545-2											●										
Characteristics	Oil resistance acc. to internal standard				●	●								●	●	●			●		
	Oil resistance acc. to VDE	●	●					●	●	●	●		●				●	●			
	Oil resistance acc. to EN							●	●	●	●		●				●	●			
	Chemical resistance		A																		
	Weather resistance											B	A	C					C		
	Suitable for cable tracks	●						●	●				●				●	●			
	Torsion angle		2								2	1	1		2						
Flexibility				A	A		B	B	B												

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

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

		Cable type												
Basic construction	Screened													
	Inner sheath													
Temperature range fixed laying*	+ 250 °C													
	+ 180 °C													
	+ 90 °C													
	+ 80 °C													
	+ 75 °C													
	+ 70 °C													
	- 30 °C													
	- 40 °C													
	- 50 °C													
	- 60 °C													
- 90 °C														
Voltage	Peak operating voltage max. 30 V													
	Peak operating voltage max. 50 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 750 V													
	Testing voltage 1000 V													
	Testing voltage 1500 V													
	Testing voltage 2000 V													
	Testing voltage 3000 V													
Standards and approvals	Fire performance	Halogen-free acc. to IEC 60754-1 + VDE 0482-754-1												
		Halogen-free for rail types												
		Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2												
		No flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D												
		No flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2												
		No flame propagation acc. to IEC 60332-3-22 + VDE 0482-332-3-22 Cat. A												
		Flame retardant acc. to ISO 6722 (UN/ECE R118)												
		UL Horizontal Flame Test FT2												
		UL VW1												
		acc. to NF C 32-070 C1												
		Corrosiveness of conflagration gases: in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases												
		Smoke density acc. to IEC 61034 + VDE 0482-1034												
		Toxicity acc. to EN 50305 + VDE 0260-305												
		UL recognized												
		CSA approved												
		ABS approved												
		Rail type acc. to EN 45545-2												
Characteristics	Oil resistance acc. to internal standard													
	Oil resistance acc. to VDE													
	Oil resistance acc. to EN													
	Chemical resistance													
	Weather resistance													
	Suitable for cable tracks													
	Torsion angle								2					
	Flexibility													



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

Industrial Ethernet cables



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

CATLine CAT 6 RT / CAT 6A RT CAT 6 Gigabit Ethernet cable, suitable for cable tracks and robots with UL recognition, CSA approval

30°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE



marking example:

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

Construction:	CATLine CAT 6 S suitable for cable tracks	CATLine CAT 6A S suitable for cable tracks	CATLine CAT 6 RT suitable for cable tracks/ suitable for robots	CATLine CAT 6A RT suitable for cable tracks/ suitable for robots
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 and tinned copper braiding			
Wrapping:	non-woven tape			
Sheath material:	PUR			
Sheath colour:	green (similar RAL 6018)			

Technical data:	CATLine CAT 6 S suitable for cable tracks	CATLine CAT 6A S suitable for cable tracks	CATLine CAT 6 RT suitable for cable tracks/ suitable for robots	CATLine CAT 6A RT suitable for cable tracks/ suitable for robots
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: core/screen:	2000 V 2000 V			
Min. bending radius fixed laying: flexible application: continuously flexible:	5 x d 10 x d 15 x d			
Torsion angle:	— up to ± 180°/m			
Temperature range VDE fixed laying: flexible application:	UL/CSA: up to +80 °C -40/+70 °C -40/+70 °C			
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1			
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 UL Horizontal Flame Test FT2			
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2			
Characteristic impedance (100 MHz):	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-5-2 / CAT 6	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-5-2 / CAT 6	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A
Flexibility:	very good			
UL Style:	20549			
Application:	suitable for EtherCAT- and EtherNET/IP-applications			
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

item no.	type	dimension	max. core-ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
16774630	CATLine CAT 6 S	4 x 2 x 26 AWG	1,05	7,1	32,0	57
16774631	CATLine CAT 6A S	4 x 2 x 26 AWG	1,05	7,1	32,0	57
16874630	CATLine CAT 6 RT	4 x 2 x 26 AWG	1,05	7,1	32,0	57
16874631	CATLine CAT 6A RT	4 x 2 x 26 AWG	1,05	7,1	32,0	57

Other dimensions and colours are possible on request.

**+90°C
on request!**

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



Industrial Ethernet cables



CATLine CAT 6A HT

high temperature resistant FEP insulated CAT 6A Gigabit Ethernet cable with UL recognition
high temperature resistant PFA insulated CAT 6A Gigabit Ethernet cable

26AWG 1631-4631 U AWM Style 21618 150°C 600V CE



marking example:

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

Construction:

Conductor:	FEP: bare copper strands, fine wires PFA: silver plated copper, fine wires
Insulation:	FEP or PFA
Colour code:	white/blue, white/orange, white/green, white/brown
Stranding:	twisted to pairs
Wrapping:	PTFE-foil
Screen:	FEP: alu foil and tinned copper braiding PFA: alu foil and silver plated copper braiding
Sheath material:	FEP or PFA
Sheath colour:	green (similar RAL 6018)

Outstanding features:

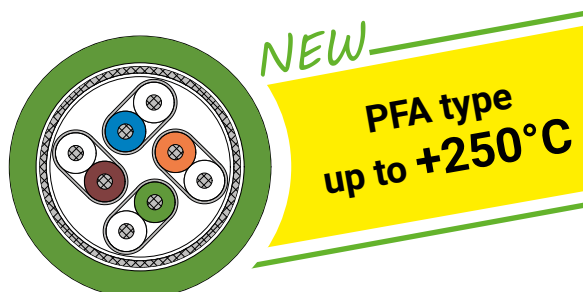
- » high temperature resistant
- » low temperature resistant
- » flame retardant and self-extinguishing
- » oil- and chemical resistant
- » FEP: UL recognized

Technical data:

Peak operating voltage:	max. 90 V
Voltage UL:	FEP: 600 V
Testing voltage:	FEP: core/core 2000 V core/screen 2000 V PFA: core/core 750 V core/screen 750 V
Min. bending radius	
fixed laying:	5 x d
flexible application:	10 x d
Temperature range	FEP: UL: up to +150 °C -90/+180 °C flexible application: -55/+180 °C PFA: -90/+250 °C -55/+250 °C
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, FEP: UL VW1
Oil resistance:	very good
Chemical resistance:	very good against acids, halogens, bases, chlorinated solvents as well as organic and inorganic compounds
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 (CAT 6A)
UL Style:	FEP: 21618
Application:	suitable for EtherCAT- and EtherNET/IP-applications
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

item no.	type	material	dimension	max. core-Ø mm	outer-Ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
16314631	CATLine CAT 6A HT	FEP	4 x 2 x 26 AWG	1,05	5,8	29,7	54
16324631	CATLine CAT 6A HT	PFA	4 x 2 x 26 AWG	1,05	5,5	27,3	49

Other dimensions and colours are possible on request.



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



Industrial Ethernet cables



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

CATLine CAT 7A RT CAT 7A Gigabit Ethernet cable, suitable for robots with UL recognition, CSA approval



marking example:

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

Construction:	CATLine CAT 7A S suitable for cable tracks	CATLine CAT 7A RT suitable for robots
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 and tinned copper braiding	
Wrapping:	non-woven tape	
Sheath material:	PUR	
Sheath colour:	green (similar RAL 6018)	

Technical data:	CATLine CAT 7A S suitable for cable tracks	CATLine CAT 7A RT suitable for robots
Item number:	1777-4631, 1777-4431	1787-4631, 1787-4431
Peak operating voltage:	max. 90 V	
Voltage UL/CSA:	300 V	
Testing voltage	2000 V	
core/core:	2000 V	
core/screen:	2000 V	
Min. bending radius	5 x d	
fixed laying:	10 x d	
flexible application:	15 x d	
continuously flexible:	up to ± 180°/m	
Torsion angle:	—	
Temperature range VDE	UL/CSA: up to +80 °C	
fixed laying:	-40/+70 °C	
flexible application:	-40/+70 °C	
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1	
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 UL Horizontal Flame Test FT2	
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2	
Characteristic impedance (100 MHz):	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 + VDE 0819-9-2 / CAT 7A	
Flexibility:	very good	
UL Style:	20549	
Application:	suitable for EtherCAT and EtherNET/IP applications	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“	

item no.	type	dimension	max. core-ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
17774631	CATLine CAT 7A S	4 x 2 x 26 AWG	1,50	8,5	38,5	81
17774431	CATLine CAT 7A S	4 x 2 x 26 AWG	1,60	10,4	46,6	101
17874631	CATLine CAT 7A RT	4 x 2 x 26 AWG	1,50	8,9	38,5	83
17874431	CATLine CAT 7A RT	4 x 2 x 26 AWG	1,60	9,3	44,0	98

Other dimensions and colours are possible on request.

+90°C
on request!

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



Industrial Ethernet cables

CATLine CAT 5e DR reeling CAT 5e
Industrial Ethernet cable
CATLine CAT 6A DR reeling CAT 6A
Gigabit Ethernet cable

CATLine CAT 7A DR
reeling CAT 7A Gigabit Ethernet cable



SEN · CATLine Cat. 7A DR 4x2x26AWG 1739-4651 CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · CATLine Cat. 7A DR 4x2x26AWG 1739-4651 CE

Construction:	CATLine CAT 5e DR reeling Ethernet cable	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 and tinned copper braiding		aluminized non-woven tape and tinned copper braiding
Wrapping:	non-woven tape		
Sheath material:	PUR / supporting braid / PUR		
Sheath colour:	black (RAL 9005)		

Technical data:	CATLine CAT 5e DR reeling Ethernet cable	CATLine CAT 6A DR reeling Ethernet cable	CATLine CAT 7A DR reeling Ethernet cable
Item number:	1539-4651	1639-4651	1739-4651
Peak operating voltage:	max. 90 V		
Testing voltage	750 V		
core/core:	750 V		
core/screen:	750 V		
Min. bending radius:	for laying and installation (fixed laying): 5 x d for repeated winding action (flexible application): 10 x d guided on pulleys (flexible application): 12 x d		
Temperature range	-50/+90 °C		
fixed laying:	-40/+90 °C		
flexible application:	acc. to IEC 60754-1 + VDE 0482-754-1		
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1		
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2		
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 / CAT 7A
Weather resistance:	very good		
Application:	suitable for EtherCAT and EtherNET/IP applications		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“		

item no.	type	dimension	max. core-ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km	tensile strength max. N
15394651	CATLine CAT 5e DR	4 x 2 x 26 AWG	1,05	8,5	32,0	79	200
16394651	CATLine CAT 6A DR	4 x 2 x 26 AWG	1,05	8,5	32,0	81	200
17394651	CATLine CAT 7A DR	4 x 2 x 26 AWG	1,05	10,5	38,5	117	200

Other dimensions and colours are possible on request.

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



Industrial Ethernet cables

CATLine CAT 6A ExLD

CAT 6A Gigabit Ethernet cable for potentially explosive areas with UL recognition

acc. to
IEC EN 60079-14



G 1639-9015 U AWM Style 20549 80°C 300V CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · CATLine Cat.6A ExLD 4x2x23/1AWG 1639-9015 U AWM Style 20549 80°C 300V CE

Application: A decisive characteristic of this cable is an excellent longitudinal tightness. It avoids ignition discharges as well as dangerous zone entrainment of flammable gases to areas that are not exposed to explosion hazards. The cable corresponds to the requirements according to standard IEC EN 60079-14 and is appropriate for the application in potentially explosive areas in order to avoid zone entrainment according to IEC EN 60079-14 chapter 9.3 appendix E.

Construction:

Conductor:	bare copper strands, single wire
Insulation:	SABIX®
Colour code:	EIA/TIA T568 + IEC 708-1
Stranding:	twisted to pairs
Screen:	alu foil and tinned copper braiding optical coverage ≥ 85%
Wrapping:	non-woven tape
Sheath material:	PUR
Sheath colour:	green (similar RAL 6018)

Outstanding features:

- » low temperature resistant
- » flame retardant and self-extinguishing
- » oil- and chemical resistant
- » Gigabit Ethernet 10GBase-T
- » suitable for PoE
- » excellent longitudinal tightness
- » zone entrainment is avoided
- » PFAS free

Technical data:

Peak operating voltage:	max. 90 V
Voltage UL:	300 V
Testing voltage:	core/core 2000 V core/screen 2000 V
Min. bending radius after installation:	4 x d
during installation:	8 x d
Temperature range fixed laying:	UL: up to +80 °C -60/+80 °C
flexible application:	-30/+80 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2, IRM 902, 168 h, 100 °C
MUD resistance:	very good - acc. to IEC 60092-360, IEC 61892-4, NEK TS 606
Sunlight and weather resistance:	very good - acc. to HD 605 (VDE 0276-605)
Insulation resistance:	min. 5GΩ x km at + 20 °C
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 (CAT 6A)
Application:	acc. to IEC 60079-14 chapter 9.3 and appendix E to avoid zone entrainment
Construction products regulation:	Euroclass Eca acc. to EN 50575 is fulfilled
UL Style:	20549
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

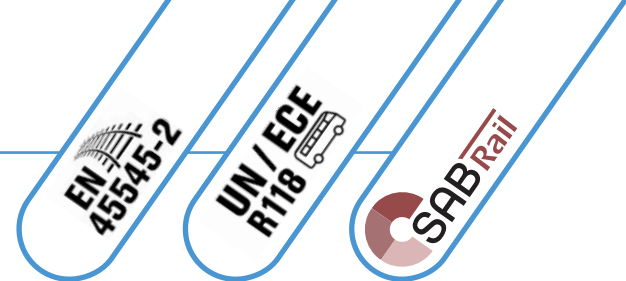
item no.	type	dimension	outer-ø ± 0,3 mm mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
16399015	CATLine CAT 6A ExLD	4 x 2 x 23/1 AWG	8,9	48,1	94	64,6

Other dimensions and colours are possible on request.

Industrial Ethernet cables

CATLine CAT 5e R CATLine CAT 6A R CATLine CAT 7A R

halogen-free Industrial Ethernet cables
for Railway Technology



RSN · CATLine Cat. 7A R 4x2x24AWG 1767-4621 CE



marking example:

SAB BRÖCKSKES · D-VIERSEN · CATLine Cat. 7A R 4x2x24AWG 1767-4621 CE

Fulfills fire prediction requirements
R15 (EL1A) acc. to EN 45545-2
for hazard levels HL1-3

Construction:	CATLine CAT 5e R flexible		CATLine CAT 6A R flexible	CATLine CAT 7A R flexible
Dimension:	2 x 2 x 26 AWG 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, pairs together		twisted to pairs with alu foil, pairs together
Wrapping:	foil			—
Screen:	alu foil and tinned copper braiding			tinned copper braiding
Sheath material:	special SABIX®			
Sheath colour:	green (similar RAL 6018)			

Technical data:	CATLine CAT 5e R flexible		CATLine CAT 6A R flexible	CATLine CAT 7A R flexible
Dimension:	1567-2625 1567-9002 1567-9004	1567-4421	1667-4621	1767-4621
Peak operating voltage:	max. 90 V			
Testing voltage core/core: core/screen:	750 V 750 V			
Min. bending radius fixed laying: flexible application:	5 x d 12 x d			
Temperature range VDE fixed laying: flexible application:	-40/+70 °C -30/+70 °C			
Halogen-free:	acc. to EN 50306-1 + EN 50264-1. Development of HCl is ≤ 0,5% acc. to IEC 60754-1. pH-value is ≥ 4,3 acc. to IEC 60754-2. Conductivity is ≤ 10,0 µS/mm acc. to IEC 60754-2. Fluoric content ≤ 0,1% acc. to IEC 60684-2			
Fire performance:	no flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2. Flame retardant acc. to ISO 6722 (UN/ECE R118)			
Smoke density:	acc. to IEC 61034 + VDE 0482-1034			
Toxicity:	acc. to EN 50305 + VDE 0260-305			
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 / CAT 7A	
Flexibility:	good			
Application:	suitable for EtherCAT and EtherNET/IP applications			
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

item no.	type	dimension	max. core-ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
15672625	CATLine CAT 5e R	2 x 2 x 26 AWG	1,05	4,0	16,4	25
15679002	CATLine CAT 5e R	2 x 2 x 24 AWG	1,30	5,2	22,7	41
15679004	CATLine CAT 5e R	2 x 2 x 22 AWG	1,60	5,9	29,1	52
15674421	CATLine CAT 5e R	4 x 2 x 24 AWG	1,30	8,0	41,2	70
16674621	CATLine CAT 6A R	4 x 2 x 26 AWG	1,05	6,8	31,9	55
17674621	CATLine CAT 7A R	4 x 2 x 26 AWG	1,60	7,8	38,5	75

Other dimensions and colours are possible on request.

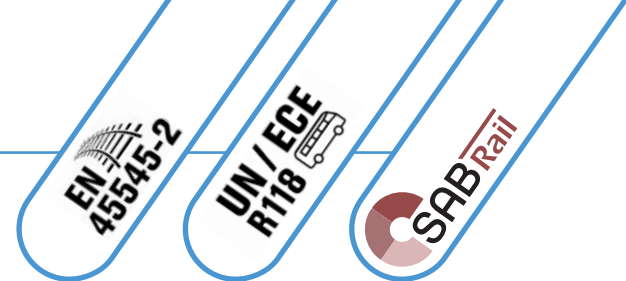


Also possible
as harnessed cable
with M12 or RJ 45 plug!

Industrial Ethernet cables

CATLine CAT 5e R flex CATLine CAT 6A R flex CATLine CAT 7A R flex

continuously flexible halogen-free
Industrial Ethernet cables
for Railway Technology



· CATLine Cat.7A R flex 4x2x24AWG 1769-4431



marking example:

SAB BRÜCKSKES · D-VIERSEN · CATLine Cat.7A R flex 4x2x24AWG 1769-4431

Fulfills fire prediction requirements
R15 (EL1A) and R16 (EL1B)
acc. to EN 45545-2
for hazard levels HL1-3

Application: Suitable for flexible and protected installation in the interior for door control or in protecting tubes for outdoor laying at the bogie. Appropriate for light and medium mechanical stress.

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

Technical data:	CATLine CAT 5e R flex continuously flexible		CATLine CAT 6A R flex continuously flexible	CATLine CAT 7A R flex continuously flexible
Dimension:	1569-2435 1569-2235	1569-4431 1569-4631	1669-4431 1669-4631	1769-4431 1769-4631
Peak operating voltage:	max. 90 V			
Testing voltage core/core:	750 V			
core/screen:	750 V			
Min. bending radius fixed laying:	5 x d			
flexible application:	12 x d			
continuously flexible:	15 x d			
Temperature range VDE fixed laying:	-50/+90 °C			
flexible application:	-40/+90 °C			
Halogen-free:	acc. to EN 50306-1 + EN 50264-1. Development of HCl is ≤ 0,5% acc. to IEC 60754-1. pH-Wert ist ≥ 4,3 acc. to IEC 60754-2. Conductivity is ≤ 10,0 µS/mm acc. to IEC 60754-2. Fluoric content ≤ 0,1% acc. to IEC 60684-2			
Fire performance:	no flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2. Flame retardant acc. to ISO 6722 (UN/ECE R118)			
Smoke density:	acc. to IEC 61034 + VDE 0482-1034			
Toxicity:	acc. to EN 50305 + VDE 0260-305			
Oil and fuel resistance:	acc. to EN 50264-1 + VDE 0260-264-1			
Characteristic impedance:	100Ω ± 5Ω with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω with reference to EN 50288-9-2 / CAT 7A
Flexibility:	good			
Application:	suitable for EtherCAT and EtherNET/IP applications			
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

item no.	type	dimension	max. core- mm	outer- ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
15692435	CATLine CAT 5e R flex	2 x 2 x 24 AWG	1,25	5,1	22,8	40
15692235	CATLine CAT 5e R flex	2 x 2 x 22 AWG	1,55	5,8	29,2	53
15694431	CATLine CAT 5e R flex	4 x 2 x 24 AWG	1,29	7,8	42,3	81
15694631	CATLine CAT 5e R flex	4 x 2 x 26 AWG	0,99	6,5	29,7	55
16694431	CATLine CAT 6A R flex	4 x 2 x 24 AWG	1,29	7,9	42,2	80
16694631	CATLine CAT 6A R flex	4 x 2 x 26 AWG	0,99	6,5	29,7	56
17694431	CATLine CAT 7A R flex	4 x 2 x 24 AWG	1,71	9,7	46,6	109
17694631	CATLine CAT 7A R flex	4 x 2 x 26 AWG	1,45	8,6	35,8	92

Other dimensions and colours are possible on request.



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

Industrial Ethernet cables

CATLine CAT 5e BL CATLine CAT 6A BL CATLine CAT 7A BL

halogen-free Ethernet cables for maritime use
with ABS typee Approval and UL recognition



4x2x26/7AWG 1747-4621 U AWM Style 21080 75°C 300V CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · CATLine Cat. 7A BL 4x2x26/7AWG 1747-4621 U AWM Style 21080 75°C 300V CE

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
Screen:	alu foil and tinned copper braiding		tinned copper braiding
Sheath material:	special SABIX®		
Sheath colour:	black		

Technical data:	CATLine CAT 5e BL	CATLine CAT 6A BL	CATLine CAT 7A BL
Dimension:	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:	2000 V		
core/screen:	2000 V		
Min. bending radius fixed laying:	5 x d		
flexible application:	10 x d		
Temperature range VDE fixed laying:	UL/CSA: up to +75 °C -40/+70 °C		
flexible application:	-30/+70 °C		
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1		
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, no flame propagation acc. to IEC 60332-3-22 + VDE 0482-332-3-22 Cat. A, UL Horizontal Flame Test FT2, UL AWM Style 21080		
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases		
Smoke density:	acc. to IEC 61034 + VDE 0482-1034		
Toxicity:	acc. to EN 50305 + VDE 0260-305		
Oil and fuel resistance::	acc. to EN 50264-1 + VDE 0260-264-1		
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 / CAT 5	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 / CAT 7A
Flexibility:	good		
Application:	suitable for EtherCAT and EtherNET/IP applications		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“		

item no.	type	dimension	core-ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
15479001	CATLine CAT 5e BL	2 x 2 x 24/7 AWG	approx. 1,25	5,7	22,7	48
15479002	CATLine CAT 5e BL	2 x 2 x 22/7 AWG	max. 1,60	6,4	29,7	61
15474621	CATLine CAT 5e BL	4 x 2 x 26/7 AWG	max. 1,05	7,3	31,9	64
16474621	CATLine CAT 6A BL	4 x 2 x 26/7 AWG	max. 1,05	7,3	31,9	64
16474421	CATLine CAT 6A BL	4 x 2 x 24/7 AWG	approx. 1,33	8,3	41,1	81
17474621	CATLine CAT 7A BL	4 x 2 x 26/7 AWG	max. 1,60	8,9	38,5	85
17474421	CATLine CAT 7A BL	4 x 2 x 24/7 AWG	approx. 1,60	10,5	65,0	116

Other dimensions and colours are possible on request.

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



Industrial Ethernet cables Profinet



PN 662 PVC Profinet cable type B for flexible applications

S PN 668 PUR Profinet cable type C, continuously flexible, suitable for cable tracks

PN 663 PVC Profinet cable type B for flexible applications with UL recognition

S PN 669 PUR Profinet cable type C, continuously flexible, suitable for cable tracks with UL recognition

BS 617 24AWG/3pr U AWM Style 2464 80°C 300V CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · S PN 669 Profinet CAT 5 type C 2x2x22AWG U AWM Style 21198 80° 300V CE

Construction:	PN 662 Profinet type B flexible	S PN 668 Profinet type C continuously flexible	PN 663 Profinet type B flexible	S PN 669 Profinet type C continuously flexible
Dimension:	2 x 2 x 22 AWG			
Conductor:	tinned copper strands, fine wires with reference to VDE 0812	tinned copper strands, fine wires	tinned copper strands, fine wires with reference to VDE 0812	tinned copper strands, fine wires
Insulation:	PE, L/MD acc. to EN 50290-2-23	PE	PE, L/MD acc. to EN 50290-2-23	PE
Colour code:	blue, yellow, white, orange			
Stranding:	in layers			
Wrapping:	PETP-foil			
Inner sheath:	thermoplastic material			
Screen:	alu foil and 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 flexible	S PN 668 Profinet type C continuously flexible	PN 663 Profinet type B flexible	S PN 669 Profinet type C continuously flexible
Item number:	0662-2202	0668-2202	0663-2202	0669-2202
Peak operating voltage:	max. 350 V			
Voltage UL:	—		300 V	
Testing voltage core/core: core/screen:	1500 V 1200 V		2000 V 2000 V	
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
Temperature range fixed laying: flexible application:	-30/+70 °C -5/+70 °C	-40/+70 °C -30/+70 °C	UL: up to +80 °C -30/+70 °C -5/+70 °C	UL: up to +80 °C -30/+70 °C -20/+70 °C
Halogen-free:	—	acc. to IEC 60754-1 + VDE 0482-754-1	—	acc. to IEC 60754-1 + VDE 0482-754-1
Oil resistance:	acc. to internal standard, see chapter N „Technical data“	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2	acc. to internal standard, see chapter N „Technical data“	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Characteristic impedance:	100Ω ± 5Ω, fulfils the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 + VDE 0819-2-2 (CAT 5 acc. to EN 50173-1)			
UL Style:	—		20601	21198
Application:	suitable for EtherCAT and EtherNET/IP applications			
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

item no.	type	dimension	max. core-ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
06622202	PN 662	2 x 2 x 22 AWG	1,55	6,1	33,9	57	58,0
06682202	S PN 668	2 x 2 x 22 AWG	1,55	6,4	36,7	58	58,0
06632202	PN 663	2 x 2 x 22 AWG	1,55	6,5	36,2	66	58,0
06692202	S PN 669	2 x 2 x 22 AWG	1,55	6,5	36,7	69	58,0

Other dimensions and colours are possible on request.

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



Industrial Ethernet cables Profinet



PN 654 PVC Profinet cable type A for fixed installation

PN 660 halogen-free Profinet cable type B for flexible applications

PN 654 UL PVC Profinet cable type A for fixed installation with UL recognition

PN 661 halogen-free Profinet cable type B for flexible applications with UL recognition



type B 2x2x22AWG U AWM Style 21080 75° 300V CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · PN 661 Profinet CAT 5 type B 2x2x22AWG U AWM Style 21080 75° 300V CE

with „Fast Connect“
construction

Construction:	PN 654 Profinet type A fixed laying	PN 654 UL Profinet type A fixed laying	 PN 660 Profinet type B flexible	PN 661 Profinet type B flexible	
Dimension:	2 x 2 x 22 AWG				
Conductor:	bare copper wire		PE, L/MD acc. to EN 50290-2-23		
Insulation:	PE, L/MD acc. to EN 50290-2-23	SABIX®		fine wires	
Colour code:	blue, yellow, white, orange				
Stranding:	star quad				
Wrapping:	PETP-foil				
Inner sheath:	—	PVC	thermoplastic material		
Screen:	tinned copper braiding	—		alu foil and tinned copper braiding	
Wrapping:	—		non-woven tape		
Sheath material:	PVC		SABIX®		
Sheath colour:	green (similar RAL 6018)				

Technical data:	PN 654 Profinet type A fixed laying	PN 654 UL Profinet type A fixed laying	PN 660 Profinet type B flexible	PN 661 Profinet type B flexible
Item number:	0654-2202	0654-9002	0660-2202	0661-2202
Peak operating voltage:	max. 350 V			
Voltage UL:	—	300 V	—	300 V
Testing voltage				
core/core:	1500 V	2000 V	1500 V	2000 V
core/screen:	1200 V	2000 V	1200 V	2000 V
Min. bending radius				
fixed laying:	5 x d		5 x d	
flexible application:			12 x d	
Temperature range	UL: up to +80 °C		UL: up to +75 °C	
fixed laying:	-30/+70 °C	-30/+70 °C	-30/+70 °C	-40/+70 °C
flexible application:	-5/+70 °C	-5/+70 °C	-20/+70 °C	-30/+70 °C
Halogen-free:	—		acc. to IEC 60754-1 + VDE 0482-754-1	
Oil resistance:	acc. to internal standard, see chapter N „Technical data“		—	
Characteristic impedance:	100Ω ± 5Ω, fulfils the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 + VDE 0819-2-2 (CAT 5 acc. to EN 50173-1)			
UL Style:	—	2464	—	21080
Application:	suitable for EtherCAT and EtherNET/IP applications			
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

item no.	type	dimension	max. core-ø mm	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
06542202	PN 654	2 x 2 x 22 AWG	1,55	5,3	28,0	43	54,1
06549002	PN 654 UL	2 x 2 x 22 AWG	1,55	6,5	32,2	66	54,1
06602202	PN 660	2 x 2 x 22 AWG	1,55	6,6	36,2	67	55,4
06612202	PN 661	2 x 2 x 22 AWG	1,55	6,6	36,2	70	55,4

Other dimensions and colours are possible on request.

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



Industrial Ethernet cables Profinet

S PN 667

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

with „Fast Connect“
construction



21198 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE



marking example:

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

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
Screen:	alu foil and tinned copper braiding
Wrapping:	non-woven tape
Sheath material:	PUR
Sheath colour:	green (similar RAL 6018)

Technical data:

Peak operating voltage:	max. 350 V
Voltage UL/CSA:	300 V
Testing voltage:	core/core 2000 V core/screen 2000 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 IEC 60754-1 + VDE 0482-754-1
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Characteristic impedance:	100Ω ± 5Ω, fulfils the electrical and transmission requirements with high frequency acc. to EN 50288-2-2 + VDE 0819-2-2 (CAT 5 acc. to EN 50173)
UL Style:	21198
Application:	suitable for EtherCAT and EtherNET/IP applications
Absence of harmful substances:	acc. to RoHS directive of the European Union see chapter N „Technical data“

item no.	type	dimension	max. core-ø mm	outer-ø ± 10% 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	2 x 2 x 22 AWG	1,55	6,5	33,8	60	58,8

Other dimensions and colours are possible on request.

For extreme bending stress - conductor construction 19 wires:

item no.	type	dimension	max. core-ø mm	outer-ø ± 10% 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	2 x 2 x 22 AWG	1,55	6,5	33,8	58	58,8

Other dimensions and colours are possible on request.

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

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



Industrial Ethernet cables CAT 5

DR PN 689 P Highflex

reeling PUR Profinet cable / CAT 5 cable



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



marking example:

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
Dimension:	2 x 2 x 22 AWG	4 x 2 x 26 AWG
Conductor:	tinned copper strands, fine wires	
Insulation:	SABIX®	
Colour code:	blue, yellow, white, orange	blue, orange, green, brown + 4 white cores with consecutive numbers twisted to pairs and pairs together
Stranding:	in layers	
Wrapping:	PETP-foil	
Inner sheath:	SABIX®	
Screen:	alu foil and tinned copper braiding	
Wrapping:	non-woven tape	
Sheath material:	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
Item number:	0689-2202	0689-9001
Peak operating voltage:	max. 350 V	
Testing voltage	1500 V	
core/core:	1200 V	
core/screen:		
Min. bending radius:	for laying and installation (fixed laying):	5 x d
	for repeated winding action (flexible application):	10 x d
	guided on pulleys (flexible application):	12 x d
Temperature range		
fixed laying:	-40/+90 °C	
flexible application:	-30/+90 °C	
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1	
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2	
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 + VDE 0819-2-2 (CAT 5 acc. to EN 50173-1)	
Application:	suitable for EtherCAT and EtherNET/IP applications	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“	

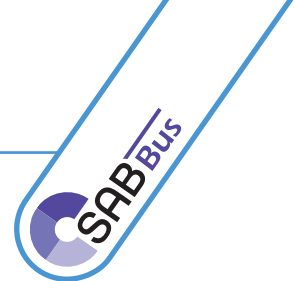
item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km	tensile strength max. N	characteristic impedance
06892202	DR PN 689 P Highflex	2 x 2 x 22 AWG	8,2	36,2	83	58,8	200	100Ω
06899001	DR PN 689 P Highflex	4 x 2 x 26 AWG	8,7	34,3	85	139	200	100Ω

Other dimensions and colours are possible on request.

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



Industrial Ethernet cables CAT 5



RT PN 668 PUR Profinet cable, suitable for robots


PN 668 PUR Profinet cable type R, suitable for robots with UL recognition

2x2x22AWG 0668-9039 U AWM Style 21198 80° 300V



marking example:

SAB BRÜCKSKES · D-VIERSEN · PN 668 type R 2x2x22AWG 0668-9039 U AWM Style 21198 80° 300V

Construction:	RT PN 668 Profinet suitable for robots	PN 668 Profinet type R suitable for robots	
Dimension:	2 x 2 x 22 AWG		
Conductor:	tinned copper strands, fine wires		
Insulation:	special polymer		
Colour code:	blue, yellow, white, orange		
Stranding:	star quad	twisted to pairs and pairs together	
Wrapping:	tape	non-woven tape	
Screen:	alu foil and tinned copper braiding	tinned copper braiding	
Wrapping:	non-woven tape	special-non-woven tape	
Sheath material:	PUR		
Sheath colour:	green (similar RAL 6018)		

Technical data:	RT PN 668 Profinet suitable for robots	PN 668 Profinet type R suitable for robots	UL
Item number:	0668-9001	0668-9039	
Peak operating voltage:	max. 350 V	max. 30 V	
Voltage UL:	—	300 V	
Testing voltage core/core:	1500 V	2000 V	
core/screen:	1200 V	2000 V	
Min. bending radius fixed laying:	10 x d	3 x d	
flexible application:		10 x d	
Temperature range fixed laying:	-40/+70 °C	UL: up to +80 °C	
flexible application:	-30/+70 °C	-40/+70 °C	
Torsion angle:	up to ±360°/m		
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1		
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2		
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to EN 50288-2-2 + VDE 0819-2-2 (CAT 5 acc. to EN 50173-1)		
UL Style:	—	21198	
Application:	suitable for EtherCAT and EtherNET/IP applications		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“		

item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
06689001	RT PN 668	2 x 2 x 22 AWG	7,0	36,3	62	58,8
06689039	PN 668	2 x 2 x 22 AWG	7,8	36,7	68	58,8

Other dimensions and colours are possible on request.



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

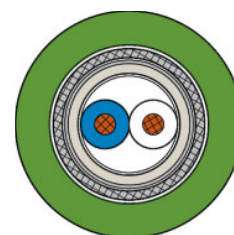


Industrial Ethernet cables



CATLine SPE C-Track Single Pair Ethernet cable, suitable for cable tracks with UL recognition

CATLine SPE Robot Single Pair Ethernet cable, suitable for robots with UL recognition



marking example:

SAB BRÖCKSKES · D-VIERSEN · CATLine SPE C-Track 2xAWG26/7 1777-1630 U AWM Style 20549 80°C 300V CE

Construction:	CATLine SPE C-Track suitable for cable tracks	CATLine SPE Robot suitable for robots
Dimension:	2 x 26/7 AWG, 2 x 22/19 AWG	
Conductor:	bare copper strands	
Insulation:	special polymer	
Colour code:	white, blue	
Stranding:	twisted to pairs	
Inner sheath:	SABIX®	
Screen:	alu foil and tinned copper braiding	
Wrapping:	non-woven tape	
Sheath material:	PUR	
Sheath colour:	green (similar RAL 6018)	

Construction:	CATLine SPE C-Track suitable for cable tracks	CATLine SPE Robot suitable for robots
Item number:	1777-1630, 1777-1230	1787-1630, 1787-1230
Peak operating voltage:	max. 90 V	
Voltage UL:	300 V	
Testing voltage	2000 V	
core/core:	2000 V	
core/screen:	2000 V	
Min. bending radius		
fixed laying:	5 x d	
flexible application:	10 x d	
continuously flexible:	15 x d	
Torsion angle:	—	up to ± 180°/m
Temperature range	UL: up to +80 °C	
fixed laying:	-40/+70 °C	
flexible application:	-40/+70 °C	
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1	
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2	
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to IEC 61156-12. Bandwidth 1 - 600 MHz.	
Data transfer:	1 Gbit up to 40 m	
UL Style:	20549	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“	

Outstanding features:

- » UL recognized
- » suitable for Power over Dataline (PoDL)
from up to approx. 50 W at 48 V DC
- » low cabling effort
- » short latency periods
- » small outer diameter
- » PFAS free
- » PWIS uncritical
(PWIS = paint-wetting impairment substances)

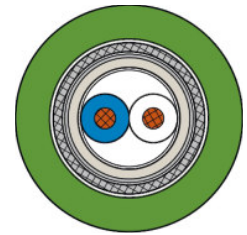
item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
17771630	CATLine SPE C-Track	2 x 26/7 AWG	4,6	16,9	29
17771230	CATLine SPE C-Track	2 x 22/19 AWG	5,7	22,7	40
17871630	CATLine SPE Robot	2 x 26/7 AWG	4,6	16,9	29
17871230	CATLine SPE Robot	2 x 22/19 AWG	5,7	22,7	40

Other dimensions and colours are possible on request.

Industrial Ethernet cables

CATLine SPE HT

Single Pair Ethernet cable, high temperature resistant



marking example:

SAB BRÜCKSKES · D-VIERSEN · CATLine SPE HT 2xAWG26/7 1721-1620 CE

Construction:

Conductor:	bare copper strands
Insulation:	TPFP
Colour code:	white/blue
Stranding:	twisted to pairs
Inner sheath:	TPFP
Screen:	alu foil and tinned copper braiding
Sheath material:	Besilen®
Sheath colour:	green

Outstanding features:

- » high temperature resistant
- » flame retardant and self-extinguishing
- » very easy installation

Technical data:

Peak operating voltage:	max. 90 V
Testing voltage:	core/core 2000 V core/screen 2000 V
Min. bending radius	
fixed laying:	5 x d
flexible application:	10 x d
Temperature range	
fixed laying:	-40/+180 °C
flexible application:	-25/+180 °C
Temperature range conductor:	up to +180 °C
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to IEC 61156-12. Bandwidth 1 - 600 MHz.
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

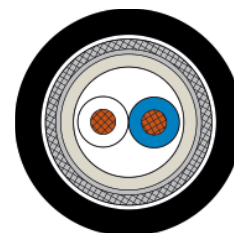
item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
17211620	CATLine SPE HT	2 x 26/7 AWG	4,4	14,3	34
17211220	CATLine SPE HT	2 x 22/7 AWG	5,3	22,6	45

Other dimensions and colours are possible on request.

Industrial Ethernet cables

CATLine SPE Rugged

Single Pair Ethernet cable for robust indoor and outdoor use



marking example:

SAB BRÖCKSKES · D-VIERSEN · CATLine SPE Rugged 2xAWG26/7 1719-1620 CE

Construction:

Conductor:	bare copper strands, 7 wires
Insulation:	TPFP
Colour code:	white/blue
Stranding:	twisted to pairs
Inner sheath:	SABIX®
Screen:	alu foil and tinned copper braiding
Wrapping:	non-woven tape
Sheath material:	PUR 420 with mat surface
Sheath colour:	black (RAL 9005)

Outstanding features:

- » flexible up to -40 °C
- » absolutely weather resistant
- » very easy installation
- » small bending radius

Technical data:

Peak operating voltage:	max. 90 V
Testing voltage:	core/core 750 V core/screen 750 V
Min. bending radius	
fixed laying:	5 x d
flexible application:	12 x d
Temperature range	
fixed laying:	-50/+90 °C / +125 °C/2500 h
flexible application:	-40/+90 °C / +125 °C/2500 h
Temperature range conductor:	up to +180 °C
Oil resistance:	very good - TMPU acc. to EN 50363-10-2
Chemical resistance:	very good against acids, halogens, bases, chlorinated solvents as well as organic and inorganic compounds
Fuel resistance:	good
Battery acid resistance:	good
UV resistance:	acc. to HD 605
Ozone resistance:	acc. to EN 50396
Salt water resistance:	acc. to UL 1309
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to IEC 61156-12. Bandwidth 1 - 600 MHz.
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

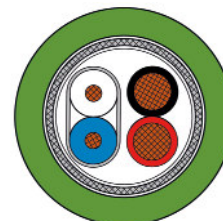
item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
17191620	CATLine SPE Rugged	2 x 26/7 AWG	4,5	16,9	29
17191220	CATLine SPE Rugged	2 x 22/7 AWG	5,7	22,7	39

Other dimensions and colours are possible on request.

Industrial Ethernet cables

CATLine SPE C-Track Hybrid

Single Pair Ethernet cable, suitable for cable tracks with power supply and UL recognition



marking example:

SAB BRÖCKSKES · D-VIERSEN · CATLine SPE C-Track Hybrid 2xAWG26/7+2xAWG18 1707-4267 U AWM Style 2023 80°C 300V CE

Construction:

Conductor:	bare copper strands
Insulation:	SPE-element: special polymer energy supply: special polymer
Colour code:	SPE-element: white, blue energy supply: red, black
Stranding:	in pairs
Screen:	alu foil white, blue
Stranding:	together
Screen:	tinned copper braiding
Wrapping:	non-woven tape
Sheath material:	PUR
Sheath colour:	green (similar RAL 6018)

Outstanding features:

- » UL recognized
- » appropriate for direct current supply from approx. 200 W with 24 V resp. 400 W with 48 V
- » SPE plus energy supply
- » short latency periods
- » PFAS free
- » PWIS uncritical
(PWIS = paint-wetting impairment substances)

Technical data:

Peak operating voltage:	max. 90 V
Voltage UL:	300 V
Testing voltage:	core/core 2000 V core/screen 2000 V
Min. bending radius	
fixed laying:	5 x d
flexible application:	10 x d
continuously flexible:	15 x d
Temperature range	DIN VDE UL/CSA: up to +80 °C
fixed laying:	-40/+70 °C
flexible application:	-40/+70 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Characteristic impedance:	100Ω ± 10Ω, fulfils the electrical and transmission requirements with high frequency with reference to IEC 61156-12. Bandwidth 1 - 600 MHz.
Data transfer:	1 Gbit up to zu 40 m
UL Style:	20549
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
17074267	CATLine SPE C-Track Hybrid	2 x 26/7 AWG + 2 x AWG 18	6,2	38,2	66
17076267	CATLine SPE C-Track Hybrid	2 x 22/7 AWG + 2 x AWG 18	7,5	43,5	77

Other dimensions and colours are possible on request.

USB 3.0 cables

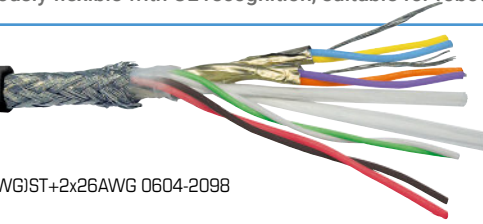
USB 3.0 S USB 3.0 cable, continuously flexible with UL recognition suitable for cable tracks

USB 3.0 RT USB 3.0 cable, continuously flexible with UL recognition, suitable for robots

transmission
length
up to 3 m



98 U AWM Style 20549 80° 300V CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · USB 3.0 S 3x(2x28AWG)ST+2x26AWG 0604-2098

U AWM Style 20549 80° 300V CE

Construction:	USB 3.0 S suitable for cable tracks	USB 3.0 RT suitable for robots
Dimension:	3 x (2 x 28 AWG)ST + 2 x 26 AWG	3 x (2 x 28 AWG)ST + 2 x 26 AWG 3 x (2 x 26 AWG)ST + 2 x 24 AWG
Conductor:	silver plated and tinned copper strands	
Insulation:	special polymer	
Colour code:	yellow, blue + orange, violet (USB 3.0), green, white (USB 2.0), red, black (power supply)	
Stranding:	twisted pairs and datapairs screened, all elements together	
Wrapping:	non-woven tape	netting tape + non-woven tape
Screen:	tinned copper braiding	
Wrapping:	non-woven tape	
Sheath material:	PUR	
Sheath colour:	black (RAL 9005)	

Construction:	USB 3.0 S suitable for cable tracks	USB 3.0 RT suitable for robots
Item number:	0604-2098	0604-3098, 0604-3096
Peak operating voltage:	max. 350 V	
Voltage UL:	300 V	
Testing voltage	2000 V	
core/core:	2000 V	
core/screen:	2000 V	
Min. bending radius		
fixed laying:	5 x d	5 x d
flexible application:	10 x d	10 x d
continuously flexible:	12 x d	15 x d
Torsion angle:	—	up to ± 180°/m
Temperature range	UL: up to +80 °C	
fixed laying:	-50/+90 °C	
flexible application:	-40/+90 °C	
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	
UL Style:	20549	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“	

item no.	type	dimension	outer-Ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C max.Ω/km		
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	—
06043096	USB 3.0 RT	3 x (2 x 26 AWG)ST + 2 x 24 AWG	8,0	38,9	73	—	130	83,3

Other dimensions and colours are possible on request.

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

Also possible
as harnessed cable
with USB type A and
USB type B plug!



USB 3.0 cables

USB 3.0 M

flexible USB 3.0 cable for the application in medical technology

transmission
length
up to 3 m

SAB MEDLine



marking example:

SAB BRÜCKSKES · D-VIERSEN · USB 3.0 M 2x(2x28AWG)ST+2x28AWG+2x26AWG 0606-1018 CE

Construction:

Conductor:	28 AWG: silver plated copper, fine wires 26 AWG: tinned copper strands, fine wires
Insulation:	FEP
Colour code:	28 AWG: yellow, blue + orange, violet (USB 3.0), green, white (USB 2.0), 26 AWG: red, black (power supply)
Stranding:	USB 3.0 twisted and screened pairs, USB 2.0 twisted pairs, all elements together
Drain wire:	bare copper strands, fine wires
Screen:	alu foil
Stranding:	all USB 3.0 elements twisted together
Wrapping:	foil
Screen:	tinned copper braiding
Sheath material:	SABmed S
Sheath colour:	grey (RAL 7000)

Technical data:

Peak operating voltage:	max. 50 V
Testing voltage:	core/core 600 V core/screen 600 V
Min. bending radius	
fixed laying:	5 x d
flexible application:	10 x d
Temperature range	
fixed laying:	-40/+180 °C
flexible application:	-25/+180 °C
Impedance of data pairs:	nom. 90Ω
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

Outstanding features:

- » biocompatible sheath material
- » biological harmlessness acc. to EN ISO 10993-1,
cytotoxicity acc. to EN ISO 10993-5
- » high temperature resistant
- » high notch and tear resistance
- » very good flexibility
- » non-adhesive surface

item no.	type	dimension	outer-Ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C max.Ω/km 28 AWG 26 AWG
06061018	USB 3.0 M	2 x (2 x 28 AWG)ST + 2 x 28 AWG + 2 x 26 AWG	5,6	25,4	48	223 140

Other dimensions and colours are possible on request.

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

Also possible
as harnessed cable
with USB type A and
USB type B plug!



USB 2.0 cables

USB 2.0 flexible USB 2.0 cable

USB 2.0 UL flexible USB 2.0 cable with UL recognition

USB 2.0 FRNC halogen-free flexible USB 2.0 cable



x0,5mm² 0601-0222 U AWM Style 2655 80°C 300V CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · USB 2.0 Leitung · (2x0,22mm²)ST+2x0,5mm² 0601-0222 U AWM Style 2655 80°C 300V CE

Construction:	USB 2.0 flexible	USB 2.0 UL flexible	UL	USB 2.0 FRNC flexible
Dimension:	(2 x 0,22 mm ²) ST + 2 x 0,5 mm ²			
Conductor:	bare copper strands (0,50 mm ²), silver plated copper (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 flexible	USB 2.0 UL flexible	UL	USB 2.0 FRNC flexible
Item number:	0601-0122	0601-0222		0601-9001
Peak operating voltage:		max. 350 V		
Voltage UL:	—	300 V		—
Testing voltage core/core:	600 V	2000 V		1500 V
Testing voltage core/screen:	600 V	2000 V		1200 V
Min. bending radius fixed laying:	5 x d			
Min. bending radius flexible application:	10 x d			
Temperature range fixed laying:	-30/+70 °C	UL: up to +80 °C -30/+70 °C		-40/+90 °C -30/+90 °C
Temperature range flexible application:	-5/+70 °C	-5/+70 °C		
Halogen-free:	—			acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	—			flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Oil resistance:	acc. to internal standard, see chapter N „Technical data“			
UL Style:	—	2655		—
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06010122	USB 2.0	(2 x 0,22 mm ²)ST + 2 x 0,50 mm ²	6,8	34,0	60
06010222	USB 2.0 UL	(2 x 0,22 mm ²)ST + 2 x 0,50 mm ²	7,0	34,0	64
06019001	USB 2.0 FRNC	(2 x 0,22 mm ²)ST + 2 x 0,50 mm ²	6,8	34,0	62

Other dimensions and colours are possible on request.



USB 2.0 cables

USB 2.0 S USB 2.0 cable, continuously flexible, suitable for cable tracks

USB 2.0 S UL/CSA USB 2.0 cable, continuously flexible with UL recognition, CSA approval, suitable for robots

USB 2.0 RT UL/CSA

USB 2.0 cable, continuously flexible with UL recognition, CSA approval, suitable for cable tracks

transmission
length
up to 10 m







21198 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · USB 2.0 Leitung · (2x0,22mm²)ST+2x0,5mm² 0601-1122 U AWM Style 21198 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE

Construction:	USB 2.0 S suitable for cable tracks	USB 2.0 S UL/CSA suitable for cable tracks	USB 2.0 RT UL/CSA suitable for robots
Dimension:	(2 x 0,22 mm²) ST + 2 x 0,5 mm²		
Conductor:	bare copper strands (0,50 mm²), silver plated copper (0,22 mm²)		
Insulation:	SABIX®		
Colour code:	black, red (0,50 mm²), white, green (0,22 mm²)		
Stranding:	2 x 0,22 mm² wrapped with alu foil, together with 0,5 mm²		
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)		

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:	max. 350 V			
Voltage UL/CSA:	—	300 V		
Testing voltage	2000 V			
core/core:	600 V	2000 V		
core/screen:	600 V	2000 V		
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
Temperature range	UL/CSA: up to +80 °C			
fixed laying:	-50/+90 °C	-50/+90 °C		
flexible application:	-40/+90 °C	-40/+90 °C		
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1			—
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2			
UL Style:	—	21198		
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06011022	USB 2.0 S	(2 x 0,22 mm²)ST + 2 x 0,50 mm²	7,0	34,1	59
06011122	USB 2.0 S UL/CSA	(2 x 0,22 mm²)ST + 2 x 0,50 mm²	7,2	34,1	66
06012022	USB 2.0 RT UL/CSA	(2 x 0,22 mm²)ST + 2 x 0,50 mm²	7,0	34,3	64

Other dimensions and colours are possible on request.

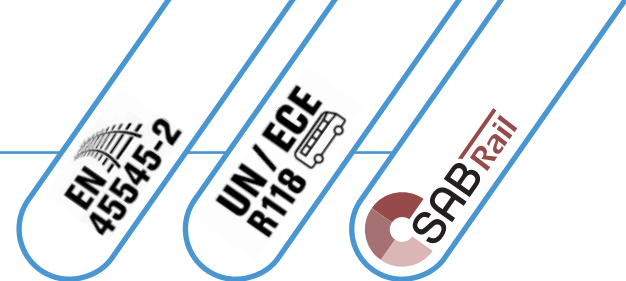
Also possible
as harnessed cable
with USB type A and
USB type B plug!



USB 2.0 cables

SABIX® USB 2.0 R flex

halogen-free continuously flexible SABIX® USB 2.0 Rail cable
acc. to EN 45545-2



VIERSEN · SABIX® USB 2.0 R flex 4x28AWG 0601-9013



marking example:

SAB BRÜCKSKES · D-VIERSEN · SABIX® USB 2.0 R flex 4x28AWG 0601-9013

Construction:

Conductor:	bare copper strands, fine wires
Insulation:	SABIX®
Colour code:	white, green, red, black
Screen:	alu foil and tinned copper braiding, Drain AWG 30 of tinned copper under the braid
Sheath material:	SABIX®
Sheath colour:	black (RAL 9005)

Outstanding features:

- » halogen-free
- » continuously flexible
- » no flame propagation
- » flame retardant and self-extinguishing
- » good oil and fuel resistance
- » fulfils fire protection requirements
R15 (EL1A) and R16 (EL1B) acc. to EN 45545-2
for hazard levels HL1-3
- » flame retardant acc. to UN/ECE R118
- » PFAS free

Technical data:

Peak operating voltage:	max. 30 V
Testing voltage:	core/core 600 V core/screen 600 V
Min. bending radius	
fixed laying:	5 x d
flexible application:	10 x d
Temperature range	
fixed laying:	-50/+90 °C
flexible application:	-40/+90 °C
Halogen-free:	acc. to EN 50306-1 + EN 50264-1 are fulfilled. Development of HCl is < 0,5% acc. to IEC 60754-1. pH-value is > 4,3 acc. to IEC 60754-2. Conductivity is < 10,0 µS/mm acc. to IEC 60754-2. Fluoric content < 0,1% acc. to IEC 60684-2.
Fire performance:	no flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2. Flame retardant acc. to ISO 6722 (UN/ECE R118)
Smoke density:	acc. to IEC 61034 + VDE 0482-1034
Toxicity:	acc. to EN 50305 + VDE 0260-305
Oil- and fuel resistance:	acc. to EN 50264-1 + VDE 0260-264-1
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

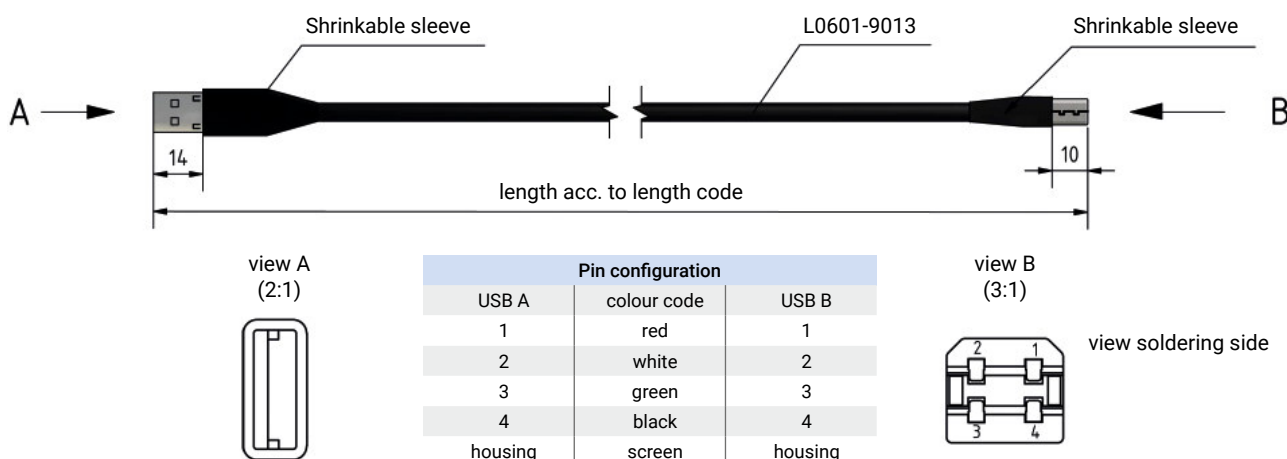
item no.	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20 °C max. Ω/km
06019013	4 x 28/7 AWG	5,2	14,3	41	223,8

Other dimensions and colours are possible on request.

Also possible
as harnessed cable
with USB type A and
USB type B plug!



USB 2.0 cable with USB type A and USB type B plug



Profibus-DP cables acc. to IEC 61158-2

SABIX® PB 630 FRNC halogen-free, flame retardant Profibus-DP cable

S PB 634 PUR Profibus-DP cable for cable tracks **PB 632** flexible PVC Profibus-DP cable



BRÖCKSKES · D-VIERSEN · S PB 634 2x0,34mm²



marking example:

SAB BRÖCKSKES · D-VIERSEN · S PB 634 2x0,34mm²

Construction:	SABIX® PB 630 FRNC	S PB 634	PB 632
Dimension:	2 x 0,34 mm²	2 x 0,34 mm², 2 x 0,34 mm² + 3 x 1,00 mm²	
Conductor:	bare copper strands acc. to VDE 0812	0,34 mm²: bare copper strands acc. to VDE 0812 1,00 mm²: bare copper strands acc. to IEC 60228, VDE 0295, class 6	0,34 mm²: bare copper strands acc. to VDE 0812 1,00 mm²: bare copper strands acc. to IEC 60228, VDE 0295, class 5
Pairwise wrapping:	—	non-woven tape/alu foil	alu foil
Pairwise sheathing:	—	TPE	—
Insulation:	acc. to EN 50290-2-23 + VDE 0819-103 (02Y11)	0,34 mm²: EN 50290-2-23 + VDE 0819-103 (02Y11) 1,00 mm²: TPE	0,34 mm²: EN 50290-2-23 + VDE 0819-103 (02Y11) 1,00 mm²: PVC T12 acc. to EN 50363-3
Colour code:	red, green	red, green (0,34 mm²), brown, light blue and a green-yellow earth wire (1,0 mm²)	—
Screen:	alu foil and tinned copper braiding	—	—
Pairwise screening:	—	tinned copper braiding	—
Stranding:	—	in layers	—
Sheath material:	SABIX®	PUR, TPU acc. to EN 50363-10-2 with rough surface redilacc (RAL 4001)	PVC, TM2 acc. to EN 50363-4-1
Sheath colour:	—	—	—

Technical data:	SABIX® PB 630 FRNC	S PB 634	PB 632
Item number:	6630-2341	0634-2341, 0634-4341	0632-2341, 0632-4341
Peak operating voltage:	—	max. 350 V	—
Testing voltage	—	1500 V	—
core/core:	—	1500 V	—
core/screen:	—	1500 V	—
Min. bending radius:	—	12 x d	—
Temperature range	—	—	—
fixed laying:	-40/+80 °C	-40/+80 °C	-30/+70 °C
flexible application:	-30/+80 °C	-40/+80 °C	-5/+70 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1	—	—
Fire performance:	no flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D, see chapter N „Technical data“. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2	—	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosiveness of conflagration gases:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases	—	—
Smoke density:	very low	—	—
Oil resistance:	—	very good acc. to EN 50363-10-2 + VDE 0207-363-10-2	acc. to internal standard, see chapter N „Technical data“
Characteristic impedance 3 - 20 MHz:	150 Ω ± 10%	—	—
For fixed installation:	—	suitable	—
For flexible application:	not suitable	—	suitable
Application in cable tracks:	not recommended	recommended	not recommended
Weather resistance:	good	very good	medium
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“		

item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
66302341	SABIX® PB 630 FRNC	2 x 0,34 mm²	7,5	30,4	50
06342341	S PB 634	2 x 0,34 mm²	7,6	30,9	58
06344341	S PB 634	2 x 0,34 mm² + 3 x 1,00 mm²	10,6	58,8	108
06322341	PB 632	2 x 0,34 mm²	7,5	25,8	56
06324341	PB 632	2 x 0,34 mm² + 3 x 1,00 mm²	10,1	58,8	122

Other dimensions and colours are possible on request.

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.

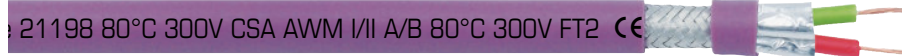
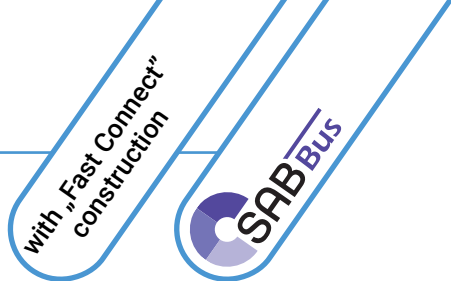
Profibus-DP cables

PB 640 flexible
PVC Profibus-DP cable

PB 640 UL flexible PVC Profibus-DP
with UL recognition

S PB 640 highly flexible
PUR Profibus-DP cable

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



marking example:

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

Construction:	PB 640	PB 640 UL	S PB 640	S PB 640 UL
Dimension:	2 x AWG 24			
Conductor:	bare copper strands AWG 24			
Insulation:	acc. to EN 50290-2-23 + VDE 0819-103 (02Y11)			
Colour code:	red, green			
Stranding:	in layers			
Inner sheath (nature):	PVC		SABIX®	
Screen:	alu foil and tinned copper braiding			
Sheath material:	PVC, TM2 acc. to EN 50363-4-1		PUR, TMPU acc. to EN 50363-10-2 with mat surface	
Sheath colour:	redilacc (RAL 4001)			

Technical data:	PB 640	PB 640 UL	S PB 640	S PB 640 UL
Item number:	0640-2421	0640-2631	0640-2601	0640-2611
Peak operating voltage:	max. 350 V			
Voltage UL:	—	300 V	—	300 V
Voltage CSA:	—	—	—	300 V
Testing voltage core/core: core/screen:	1500 V 1200 V	2000 V 2000 V	1500 V 1200 V	2000 V 2000 V
Min. bending radius fixed laying: flexible application: continuously flexible:	12 x d		5 x d 10 x d 15 x d	
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/CSA: up to +80 °C -40/+80 °C -30/+80 °C
Halogen-free:	—			
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332 + VDE 0482-332-1-2			
Oil resistance:	acc. to internal standard, see chapter N „Technical data“			
Characteristic impedance 3 - 20 MHz:	150 Ω ± 10%			
For fixed installation:	suitable			
For flexible application:	suitable			
Application in cable tracks:	not recommended		recommended	
UL Style:	—	2464	—	21198
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

Outstanding features:

- » short assembling time
- » avoidance of connection errors
- » PFAS free

item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06402421	PB 640	2 x 24 AWG	8,0	31,2	63
06402631	PB 640 UL	2 x 24 AWG	8,0	31,2	62
06402601	S PB 640	2 x 24 AWG	8,0	31,2	57
06402611	S PB 640 UL	2 x 24 AWG	8,0	31,2	62

Other dimensions and colours are possible on request.

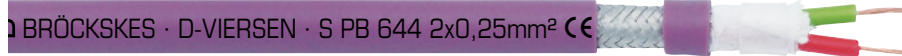
Profibus-DP and **Profibus-FMS** apply the same transmission technology and a uniform bus access log. Therefore, both types can be used simultaneously on one cable.

Profibus-DP cables acc. to IEC 61158-2



PB 642 PVC Profibus cable

S PB 644 PUR Profibus cable for cable tracks



marking example:

SAB BRÖCKSKES · D-VIERSEN · S PB 644 2x0,25mm² CE

Construction:	PB 642	S PB 644
Dimension:	2 x 0,22 mm², 2 x 2 x 0,22 mm², 2 x 0,25 mm², 2 x 2 x 0,25 mm², 2 x 0,82 mm²	2 x 0,25 mm², 2 x 2 x 0,25 mm²
Conductor:	bare copper strands with reference to VDE 0812	bare copper strands, extra fine wires
Insulation:	PE, 2Y11 acc. to EN 50290-2-23 + VDE 0819-103	
Colour code:	red, green (PA) DIN 47100 (type B)	
Stranding:	in layers	
Wrapping:	PETP-foil, non-woven tape	
Screen:	tinned copper braiding	
Sheath material:	PVC, TM2 acc. to EN 50363-4-1	PUR, TMPU acc. to EN 50363-10-2 with rough surface
Sheath colour:	see table below	redlilac (RAL 4001)

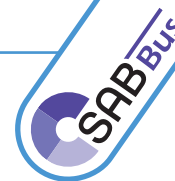
Technical data:	PB 642	S PB 644
Item number:	0642-2221, 0642-4221, 0642-2251, 0642-4251, 0642-2767, 0642-2768	0644-2251, 0644-4251
Peak operating voltage:	max. 350 V	
Testing voltage	1500 V	
core/core:	1200 V	
core/screen:		
Min. bending radius	7,5 x d	7,5 x d
continuously flexible:		12 x d
Temperature range		
fixed laying:	-30/+70 °C	-40/+70 °C
flexible application:	-5/+70 °C	-40/+70 °C
Oil resistance:	acc. to internal standard, see chapter N „Technical data“	very good acc. to EN 50363-10-2 + VDE 0207-363-10-2
Characteristic impedance	at > 100 kHz 100 Ω - 130 Ω	
type B:	100 Ω ± 20%	
PA:		
For fixed installation:	suitable	
For flexible application:	suitable	
Application in cable tracks:	not recommended	recommended
Weather resistance:	medium	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“	

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

Other dimensions and colours are possible on request.

SABIX® CB 624 FRNC C1

halogen-free, flame retardant CAN-Bus cable acc. to NF C 32-070 C1



marking example:

SAB BRÜCKSKES · D-VIERSEN · SABIX® CB 624 FRNC C1 2x2x0,50mm² CE

Construction:

Conductor:	bare copper strands acc. to VDE 0812
Insulation:	SABIX®
Colour code:	acc. to DIN 47100
Wrapping:	Non-woven tape
Screen:	tinned copper braiding
Sheath material:	SABIX®
Sheath colour:	red lilac (RAL 4001)

Outstanding features:

- » halogen-free
- » no flame propagation
- » fast data transfer
- » NF C 32-070 C1
- » PFAS free

Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	core/core 1500 V core/screen 1200 V
Min. bending radius:	7,5 x d
Temperature range	
fixed laying:	-30/+90 °C
flexible application:	-20/+90 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	no flame propagation acc. to IEC 60332-3-24 + IEC 60332-3-25 Cat. C resp. D, see chapter N „Technical data”. NF C 32-070 C1.
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + VDE 0482-1034
Characteristic impedance:	120 Ω (95 - 140 Ω)
Flexibility:	good
Application in cable tracks:	not recommended
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data”

item no.	type	dimension	outer-Ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
66242251	SABIX® CB 624 FRNC C1	2 x 2 x 0,25 mm²	9,0	42,7	94
66242341	SABIX® CB 624 FRNC C1	1 x 2 x 0,34 mm²	7,7	31,0	73
66244501	SABIX® CB 624 FRNC C1	2 x 2 x 0,50 mm²	11,4	82,6	153

Other dimensions and colours are possible on request.

CAN-Bus cables acc. to ISO 11898





CB 627 CAN-Bus cable with UL recognition



S CB 628 halogen-free CAN-Bus cable for cable tracks with UL recognition



marking example:

SAB BRÜCKSKES · D-VIERSEN · 06282251 1x2x0,25mm² S CB 628 24 AWG/1pr U AWM Style 20233 80°C 300 V CE

Construction:	CB 627 	S CB 628 
Dimension:	2 x 0,25 mm ² , 2 x 0,34 mm ² , 2 x 0,50 mm ² , 2 x 0,75 mm ² , 2 x 2 x 0,25 mm ² , 2 x 2 x 0,34 mm ² , 2 x 2 x 0,50 mm ² , 2 x 2 x 0,75 mm ²	2 x 0,25 mm ² , 2 x 0,34 mm ² , 2 x 0,50 mm ² , 2 x 2 x 0,25 mm ² , 2 x 2 x 0,34 mm ² , 2 x 2 x 0,50 mm ²
Conductor:	bare copper strands with reference to VDE 0812	bare copper strands, extra fine wires
Insulation:	PE, 2YI1 acc. to EN 50290-2-23 + VDE 0819-103	
Colour code:	acc. to DIN 47100	
Wrapping:	PETP-foil	non-woven tape
Inner sheath (nature):	—	SABIX®
Screen:	tinned copper braiding	
Sheath material:	PVC, TM5 acc. to EN 50363-4-1	PUR, TMPU acc. to EN 50363-10-2 with rough surface
Sheath colour:	redlilac (RAL 4001)	

Technical data:	CB 627 	S CB 628 
Dimension:	0627-2251, 0627-2341, 0627-2501, 0627-2751, 0627-4251, 0627-4341, 0627-4501, 0627-4751	0628-2251, 0628-2341, 0628-2501, 0628-4251, 0628-4341, 0628-4501
Peak operating voltage:	max. 350 V	
Voltage UL:	300 V	
Testing voltage core/core:	2000 V	
core/screen:	2000 V	
Min. bending radius:	7,5 x d	
Radiation resistance:	8 x 10 ⁷ cJ/kg	5 x 10 ⁷ cJ/kg
Temperature range fixed laying:	UL: up to +80 °C -30/+70 °C	UL: up to +80 °C -40/+70 °C
flexible application:	-5/+70 °C	-40/+70 °C
Halogen-free:	—	acc. to IEC 60754-1 + VDE 0482-754-1
Fire performance:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2	
Oil resistance:	very good acc. to VDE 0207-5	very good acc. to EN 50363-10-2 + VDE 0207-363-10-2
Chemical resistance:	—	good against acids, alkalines, solvents, hydraulic liquids etc.
Characteristic impedance:	120 Ω (95 - 140 Ω)	
Flexibility:	good	very good
Application in cable tracks:	not recommended	recommended
Weather resistance:	medium	very good
UL Style:	2464	20233
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“	

item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06272251	CB 627	2 x 0,25 mm ²	6,1	19,0	44
06272341	CB 627	2 x 0,34 mm ²	6,4	21,8	48
06272501	CB 627	2 x 0,50 mm ²	7,7	28,4	67
06272751	CB 627	2 x 0,75 mm ²	9,6	39,6	91
06282251	S CB 628	2 x 0,25 mm ²	7,9	20,2	77
06282341	S CB 628	2 x 0,34 mm ²	8,3	22,9	84
06282501	S CB 628	2 x 0,50 mm ²	8,7	29,0	81
06274251	CB 627	2 x 2 x 0,25 mm ²	7,3	27,4	61
06274341	CB 627	2 x 2 x 0,34 mm ²	7,7	33,5	67
06274501	CB 627	2 x 2 x 0,50 mm ²	9,8	44,4	104
06274751	CB 627	2 x 2 x 0,75 mm ²	13,5	80,8	179
06284251	S CB 628	2 x 2 x 0,25 mm ²	9,1	27,9	98
06284341	S CB 628	2 x 2 x 0,34 mm ²	9,6	32,7	105
06284501	S CB 628	2 x 2 x 0,50 mm ²	10,6	44,9	115

Other dimensions and colours are possible on request.

DR CB 689 P Highflex

reeling PUR CAN-Bus cable

DR CB 689 P Highflex 2x2x0,50mm² 0689-9005 CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · DR CB 689 P Highflex 2x2x0,50mm² 0689-9005 CE

Construction:

Conductor:	bare copper strands
Insulation:	PE
Colour code:	acc. to DIN 47100
Stranding:	twisted to pairs and pairs together
Wrapping:	non-woven tape
Screen:	tinned copper braiding
Sheath material:	PUR / supporting braid / PUR
Sheath colour:	black (similar RAL 9005)

Outstanding features:

- » halogen-free
- » very good oil resistance
- » reeling cable
- » PFAS free

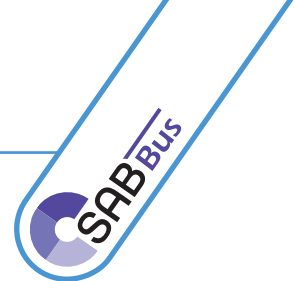
Technical data:

Peak operating voltage:	max. 350 V
Testing voltage:	core/core 1500 V core/screen 1200 V
Min. bending radius or laying and installation (fixed laying):	5 x d
for repeated winding action (flexible):	7,5 x d
guided on pulleys (flexible):	10 x d
Temperature range fixed laying:	-40/+70 °C
flexible application:	-40/+70 °C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Characteristic impedance:	120 Ω (95 - 140 Ω)
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“

item no.	type	dimension	outer-ø ± 10% 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
06899005	DR CB 689 P Highflex	2 x 2 x 0,50 mm ²	12,8	48,8	175	39,0	200

Other dimensions and colours are possible on request.

DeviceNet™ cables



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

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

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



marking example:

SAB BRÖCKSKES · D-VIERSEN · DN 650 2x0,24mm²+2x0,38mm² 06502241 24AWG/1pr+22AWG/1pr

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

Construction:	DN 650 Drop cable	DN 650 Trunk cable	DN 657 Drop cable	DN 657 Drop cable
Dimension:	2 x 0,24 mm² + 2 x 0,38 mm²	2 x 0,96 mm² + 2 x 1,53 mm²	2 x 0,24 mm² + 2 x 0,38 mm²	2 x 0,96 mm² + 2 x 1,53 mm²
Conductor: 0,24 mm² tinned copper strands 0,38 mm² tinned copper strands	AWG 24/19 AWG 22/19	— —	AWG 24/19 AWG 22/19	— —
Conductor: 0,96 mm² tinned copper strands 1,53 mm² tinned copper strands	— —	AWG 18/19 AWG 15/19	— —	AWG 18/19 AWG 15/19
Insulation:	0,24 mm²: acc. to EN 50290-2-23 (02Y11) 0,38 mm²: PVC, TI2 acc. to EN 50363-3	0,96 mm²: acc. to EN 50290-2-23 (02Y11) 1,53 mm²: PVC, TI2 acc. to EN 50363-3	0,24 mm²: acc. to EN 50290-2-23 (02Y11) 0,38 mm²: SABIX®	0,96 mm²: acc. to EN 50290-2-23 (02Y11) 1,53 mm²: SABIX®
Colour code:	0,24 mm²/0,96 mm²: data pair white and light blue 0,38 mm²/1,53 mm²: supply pair black and red			
Wrapping:	coren twisted to pairs stranded with alu foil			
Stranding:	pairs in specially adjusted layering, tinned copper drain wire in core			
Screen:	tinned copper braiding			
Wrapping:	non-woven tape			
Sheath material:	PVC, TM1 acc. to EN 50363-4-1 + VDE 0207-363-4-1		SABIX®	
Sheath colour:	redlilac (RAL 4001)			

Technical data:	DN 650 Drop cable	DN 650 Trunk cable	DN 657 Drop cable	DN 657 Trunk cable
Item number:	0650-2241	0650-2781	0657-2241	0657-2781
Peak operating voltage:	max. 350 V			
Voltage UL:	30 V		—	
Testing voltage	1500 V 1200 V			
core/core:				
core/screen:				
Min. bending radius	7,5 x d 15 x d			
fixed laying:				
flexible application:				
Temperature range	UL: up to +60 °C		-40/+70 °C -30/+70 °C	
fixed laying:	-30/+70 °C			
flexible application:	-5/+70 °C			
Halogen-free:	—		acc. to IEC 60754-1 + VDE 0482-754-1	
Characteristic impedance:	120 Ω ± 10%			
UL Style:	2560		—	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“			

item no.	type	dimension	outer-ø mm	copper figure kg/km	cable weight ≈ kg/km
06502241	DN 650 (Drop cable)	2 x 0,24 mm² + 2 x 0,38 mm²	6,1 - 7,1	41,2	61
06502781	DN 650 (Trunk cable)	2 x 0,96 mm² + 2 x 1,53 mm²	10,4 - 12,4	98,7	153
06572241	DN 657 (Drop cable)	2 x 0,24 mm² + 2 x 0,38 mm²	6,1 - 7,1	41,2	62
06572781	DN 657 (Trunk cable)	2 x 0,96 mm² + 2 x 1,53 mm²	10,4 - 12,4	98,7	148

Other dimensions and colours are possible on request.

DeviceNet™ cables



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

DN 658 robot cable/Drop highly flexible DeviceNet™ cable, suitable for robots with overall copper screen and UL recognition



marking example:

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

Construction:	DN 658 Drop cable	DN 658 Trunk cable	DN 658 robot cable/Drop
Dimension:	2 x 0,24 mm² + 2 x 0,38 mm²	2 x 0,96 mm² + 2 x 1,53 mm²	2 x 0,24 mm² + 2 x 0,38 mm²
Conductor:	fine wires fine wires	— —	fine wires fine wires
Conductor:	— —	fine wires fine wires	— —
Insulation:	0,24 mm²: acc. to EN 50290-2-23 (02Y11) 0,38 mm²: PVC, TI2 acc. to EN 50363-3	0,96 mm²: acc. to EN 50290-2-23 (02Y11) 1,53 mm²: PVC, TI2 acc. to EN 50363-3	0,24 mm²: Foam-Skin-PE 0,38 mm²: SABIX®
Colour code:	0,24 mm²/0,96 mm²: data pair white and light blue 0,38 mm²/1,53 mm²: supply pair black and red		0,24 mm²: white, blue 0,38 mm²: black, red
Wrapping:	cores twisted to pairs stranded with alu foil		
Stranding:	pairs in specially adjusted layering, tinned copper drain wire in core		
Screen:	tinned copper braiding		
Wrapping:	non-woven tape		
Sheath material:	PUR, TPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 with rough surface		
Sheath colour:	redlilac (RAL 4001)		

Technical data:	DN 658 Drop cable	DN 658 Trunk cable	DN 658 robot cable/Drop
Item number:	0658-2241	0658-2781	0658-9007
Peak operating voltage:	max. 350 V		
Voltage UL:	30 V		300 V
Testing voltage	2000 V		
core/core:	2000 V		
core/screen:	2000 V		
Min. bending radius	7,5 x d		
fixed laying:	15 x d		
flexible application:			
Temperature range	UL: up to +60 °C		UL: up to +80 °C
fixed laying:	-30/+70 °C		-40/+80 °C
flexible application:	-5/+70 °C		-30/+80 °C
Torsion angle:	—		up to zu ± 180°/m
Characteristic impedance:	120 Ω ± 10%		
UL Style:	20417		21198
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“		

item no.	type	dimension	outer-ø mm	copper figure kg/km	cable weight ≈ kg/km	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
06582241	DN 658 (Drop cable)	2 x 0,24 mm² + 2 x 0,38 mm²	6,1 - 7,1	41,2	63	—
06582781	DN 658 (Trunk cable)	2 x 0,96 mm² + 2 x 1,53 mm²	10,4 - 12,4	98,7	154	—
06589007	DN 658 robot cable/Drop	2 x 0,24 mm² + 2 x 0,38 mm²	6,1 - 7,1	32,9	56	83,3

Other dimensions and colours are possible on request.

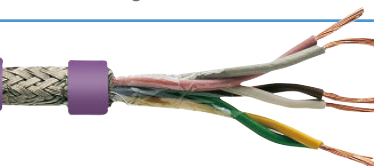
Remote Bus cables



S IBS 616 PUR Interbus-S cable for cable tracks

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

S IBS 618 24 AWG/3pr U AWM Style 20235 80°C



marking example:

SAB BRÖCKSKES · D-VIERSEN · 06183251 3x2x0,25mm² S IBS 618 24 AWG/3pr U AWM Style 20235 80°C voltage not specified

Construction:	S IBS 616*	S IBS 618*	
Dimension:	3 x 2 x 0,25 mm ²		
Conductor:	bare copper strands with reference to VDE 0812		
Insulation:	PE, 2YI1 acc. to EN 50290-2-23 + VDE 0819-103		
Colour code:	acc. to DIN 47100		
Stranding:	twisted to pairs	twisted to pairs and pairs together	
Wrapping:	non-woven tape		
Screen:	tinned copper braiding		
Sheath material:	PUR, TPU acc. to EN 50363-10-2 with rough surface	PUR	
Sheath colour:	redlilac (RAL 4001)		

Technical data:	S IBS 616*	S IBS 618*	
Item number:	0616-3251	0618-3251	
Peak operating voltage:	max. 350 V		
Voltage UL:	—	300 V	
Testing voltage			
core/core:	1000 V	2000 V	
core/screen:	1000 V	2000 V	
Min. bending radius:	7,5 x d		
Radiation resistance:	5 x 10 ⁷ cJ/kg		
Temperature range		UL: up to +80 °C	
fixed laying:	-40/+70 °C	-40/+70 °C	
flexible application:	-40/+70 °C	-40/+70 °C	
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1		
Fire performance:	—	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2	
Oil resistance:	very good acc. to EN 50363-10-2 + VDE 0207-363-10-2		
Characteristic impedance at 0.064 MHz:	120 Ω ± 20%		
Characteristic impedance at > 1 MHz:	100 Ω ± 15 Ω		
Flexibility:	very good		
Application in cable tracks:	recommended		
Weather resistance:	very good		
Bending characteristics: number of bendings acc. to VDE 0472-603 test methode H	min. 1.000.000 single bendings		
Direct burial:	not suitable	suitable	
UL Style:	—	20235	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“		

item no.	type	dimension	outer-Ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06163251	S IBS 616	3 x 2 x 0,25 mm ²	8,0	35,9	64
06183251	S IBS 618	3 x 2 x 0,25 mm ²	8,5	35,9	82

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

Other dimensions and colours are possible on request.

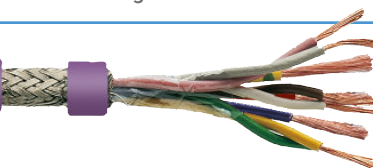
Installation Remote Bus cables



S IBS 616 PUR Interbus-S cable for cable tracks

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

/G/3pr + 18 AWG/3c U AWM Style 20235 80°C



marking example:

SAB BRÜCKSKES · D-VIERSEN · 06186251 3x2x0,25mm²+3x1,0mm² S IBS 618 24 AWG/3pr + 18 AWG/3c U AWM Style 20235 80°C voltage not specified CE

Construction:	S IBS 616*	S IBS 618*	UL
Dimension:	3 x 2 x 0,25 mm ² + 3 x 1,00mm ²		
Conductor 3 x 2 x 0,25 mm ² :	bare copper strands with reference to VDE 0812		
Conductor 3 x 1,00 mm ² :	bare copper strands acc. to IEC 60228, VDE 0295, class 6		
Insulation:	PE, 2Y11 acc. to EN 50290-2-23 + VDE 0819-103	0,25 mm ² : PE, 2Y11 1,00 mm ² : TPE	
Colour code:	acc. to DIN 47100 (pairs), 1,0 mm ² : red, blue and a green-yellow earth wire		
Stranding:	twisted to pairs (≤ 0,25 mm ²)	twisted to pairs (≤ 0,25 mm ²) pairs and cores together	
Wrapping:	non-woven tape		
Screen:	tinned copper braiding		
Sheath material:	PUR, TPU acc. to EN 50363-10-2 with rough surface	PUR with rough surface	
Sheath colour:	redlilac (RAL 4001)		

Technical data:	S IBS 616*	S IBS 618*	UL
Item number:	0616-6251	0618-6251	
Peak operating voltage:	max. 350 V		
Voltage UL:	—	300 V	
Testing voltage			
core/core:	1500 V	2000 V	
core/screen:	1200 V	2000 V	
Min. bending radius:	7,5 x d		
Radiation resistance:	5 x 10 ⁷ cJ/kg		
Temperature range			
fixed laying:	-40/+70 °C	UL: up to +80 °C	
flexible application:	-40/+70 °C	-40/+70 °C	
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1		
Fire performance:	—	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2	
Oil resistance:	very good acc. to EN 50363-10-2 + VDE 0207-363-10-2		
Characteristic impedance at 0.064 MHz:	120 Ω ± 20%		
Characteristic impedance at > 1 MHz:	100 Ω ± 15 Ω		
Flexibility:	very good		
Application in cable tracks:	recommended		
Weather resistance:	very good		
Bending characteristics: number of bendings acc. to VDE 0472-603 test methode H	min. 1.000.000 single bendings		
Direct burial:	not suitable	suitable	
UL Style:	—	20235	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“		

item no.	type	dimension	outer-ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06166251	S IBS 616	3 x 2 x 0,25 mm ² + 3 x 1,00 mm ²	8,0	70,8	101
06186251	S IBS 618	3 x 2 x 0,25 mm ² + 3 x 1,00 mm ²	9,2	71,0	121

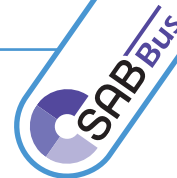
Other dimensions and colours are possible on request.

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

SafetyBUS p cables

SBP 680 SafetyBUS p cable for fixed installation

S SBP 684 Move SafetyBUS p cable for flexible applications



S · D-VIERSEN · SafetyBUS p MOVE S SBP 684 3x0,75mm² CE



marking example:

SAB BRÜCKSKES · D-VIERSEN · SafetyBUS p MOVE S SBP 684 3x0,75mm² CE and current meter marking

Construction:	SBP 680	S SBP 684 Move
Dimension:	3 x 0,75 mm²	
Conductor:	bare copper strands acc. to VDE class 5	bare copper strands acc. to VDE class 6
Insulation:	acc. to EN 50290-2-23 + VDE 0819-103 (02Y11)	
Colour code:	acc. to DIN 47100	
Wrapping:	non-woven tape	
Screen:	tinned copper braiding	
Wrapping:	non-woven tape	
Sheath material:	PUR	
Sheath colour:	signal yellow (RAL 1003)	

Technical data:	SBP 680	S SBP 684 Move
Item number:	0680-3754	0684-3754
Peak operating voltage:	max. 350 V	
Testing voltage	1500 V	
core/core:	1200 V	
core/screen:		
Min. bending radius		
fixed laying:	5 x d	5 x d
flexible application:	10 x d	10 x d
continuously flexible:		12 x d
Temperature range:	-40/+80 °C	
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1	
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2	
Characteristic impedance at 1 MHz:	100 - 120 Ω	
Application in cable tracks:	not recommended	recommended
Continuously flexible application:	—	very good
Absence of harmful substances:	acc. to RoHS directive of the European Union, see chapter N „Technical data“	

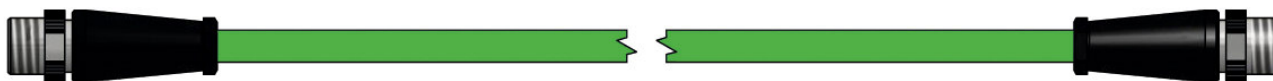
item no.	type	dimension	outer-Ø ± 10% mm	copper figure kg/km	cable weight ≈ kg/km
06803754	SBP 680	3 x 0,75 mm²	7,8	43,2	74
06843754	S SBP 684 Move	3 x 0,75 mm²	7,8	43,2	74

Other dimensions and colours are possible on request.

Harnessed cables

CATLine CAT 6A S - IE connection cable

Industrial Ethernet cable, suitable for cable tracks,
with moulded M12 male connector assembly at both sides



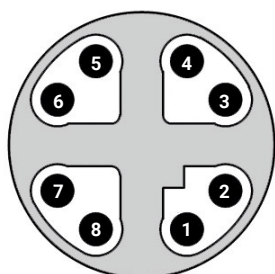
Application: IE system cable for continuously flexible application, e.g. in cable tracks in industrial environment.

Technical Data:

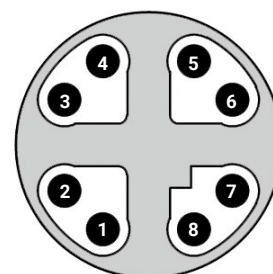
Temperature range:	-40 °C to +70 °C
Voltage:	48 V
Protection class:	IP67 in stretched condition
Connection side 1:	M12 X-coded, male connector, straight, moulded with vibration seal
Connection side 2:	M12 X-coded, male connector, straight, moulded with vibration seal
Marking:	yellow marking tube with marking: item number - order number - length - certification mark

Cable characteristics:

SAB item no.:	L1677-4631
Dimension:	4 x 2 x 26 AWG
Conductor:	bare copper strands, fine wires
Insulation:	special polymer
Screen:	alu foil and tinned copper braiding
Outer sheath:	PUR, green (similar RAL 6018)
Outer diameter:	7,1 mm ± 10%
Approvals:	UL/CSA
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Min. bending radius	
flexible application:	10 x d
continuously flexible:	15 x d



connection diagram/pin assignment		
side 1	1:1	side 2
M12 connector	core	M12 connector
pin 1	white-orange	pin 1
pin 2	orange	pin 2
pin 3	white-green	pin 3
pin 4	green	pin 4
pin 5	white-brown	pin 5
pin 6	brown	pin 6
pin 7	white-blue	pin 7
pin 8	blue	pin 8
housing	screen	housing



item no. with length code	
length	item no.: S1677-4020-_-_-_-
0,5 m	00050
1,0 m	00100
2,0 m	00200
3,0 m	00300
5,0 m	00500
7,5 m	00750
10,0 m	01000
15,0 m	01500
20,0 m	02000
25,0 m	02500

Harnessed cables

S PN 667 - PN connection cable

Profinet cable, suitable for cable tracks type C, with moulded M12 connector at both sides



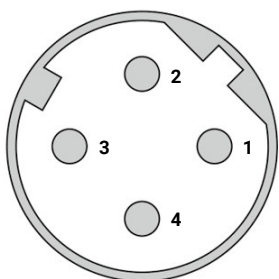
Application: PN system cable Cat.5 for continuously flexible application, e.g. in cable tracks in industrial environment.









Technical Data:

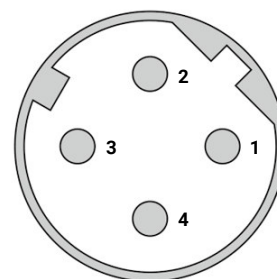
Temperature range:	-40 °C to +70 °C
Voltage:	25 V
Protection class:	IP67 in stretched condition
Connection side 1:	M12 D-coded, straight, moulded with vibration seal
Connection side 2:	M12 D-coded, straight, moulded with vibration seal
Marking:	yellow marking tube with marking: item number - order number - length - certification mark

Cable characteristics:

SAB item no.:	L0667-2202
Dimension:	2 x 2 x 22 AWG
Conductor:	bare copper strands, 7 wires
Insulation:	special polymer
Screen:	alu foil and tinned copper braiding
Outer sheath:	PUR, green (similar RAL 6018)
Outer diameter:	6,5 mm ± 10%
Approvals:	UL/CSA
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Min. bending radius	
flexible application:	5 x d
continuously flexible:	15 x d



connection diagram/pin assignment				
side 1	1:1			side 2
M12 connector	core			M12 connector
pin 1		yellow		pin 1
pin 2		white		pin 2
pin 3		orange		pin 3
pin 4		blue		pin 4
housing	screen			housing



item no. with length code	
length	item no.: S0667-4002-_____
0,5 m	00050
1,0 m	00100
2,0 m	00200
3,0 m	00300
5,0 m	00500
7,5 m	00750
10,0 m	01000
15,0 m	01500
20,0 m	02000
25,0 m	02500