

Applications

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

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

■ Applications of Interbus-Loop cables

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

■ Applications of CAN-bus cables

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

■ Applications of DeviceNet™ cables

DeviceNet is based on the proved CAN-bus technology for fast data exchange. Trunk cable and drop cable configurations. DeviceNet is a connection-mode network. Applications may require high flex bus cables for cable tracks.

■ Applications of Profibus-DP cables

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

■ Applications of Profibus cables

Profibus PA acc. to IEC 61158-2

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

Profibus type B acc. to EN 50170

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

Profibus with „Fast Connect“ construction

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

■ Applications of SafetyBUS p cables

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

Applications

■ Applications of Hybrid field bus cables

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

■ Application of Industrial ETHERNET cables

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


SHARED ETHERNET	=	10 Mbit/s
FAST ETHERNET	=	100 Mbit/s (CAT 5 requirements)
GIGABIT ETHERNET	=	1000 Mbit/s (1 Gbit/s)

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

BUS CABLES

Selection index

		Cable type																		
		IBS 612	IBS 617	IBS 614	S IBS 616	S IBS 618	SABIX® IBS 610	SABIX® IBS 610 FRNC	IBS 612	IBS 617	IBS 614	S IBS 616	S IBS 618	SABIX® IBS 610	SABIX® IBS 610 FRNC	SABIX® IBL 600 FRNC	IBL 600	SABIX® IBL 600	S IBL 605	
Application	Remote bus cable	x	x	x	x	x	x	x												
	Remote installation bus cable								x	x	x	x	x	x	x					
	Interbus-Loop cable															x	x	x	x	
	CAN-bus cable																			
	DeviceNet cable																			
	Profibus-DP cable																			
	Profibus cable																			
	SafetyBus p cable																			
	Hybrid field bus cable																			
	Industrial Ethernet Cables CAT 5																			
	Inner jacket																			
	Optical waveguide POF																			
Temperature range static*	Screened	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
	+ 90 °C																			
	+ 85 °C																			
	+ 80 °C																			
	+ 75 °C																			
	+ 70 °C																			
	- 30 °C																			
- 40 °C																				
- 50 °C																				
Voltage	Voltage acc. to UL 30 V																			
	Voltage acc. to UL 50 V																			
	Voltage acc. to UL 300 V																			
	Voltage acc. to UL/CSA 600 V																			
	Peak operating voltage max. 350 V	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
	Nominal voltage Uo/U: 300/500 V																			
	Testing voltage: 1000 V																x	x	x	x
	Testing voltage: 1500 V	x	x	x	x	x	x	x	x	x	x	x	x	x	x					
Testing voltage: 3000 V																				
Standards and approvals	Zero halogen acc. to DIN VDE and IEC					x	x	x	x				x	x	x	x		x	x	
	Burning characteristics: no flame propagation acc. to IEC 60332-3 + EN 50266-2 Cat. C resp. D															x	x			
	Burning characteristics: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	x	x	x			x		x	x	x						x			
	Corrosivity: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases					x	x	x	x				x	x	x	x			x	x
	UL approval		x				x				x			x						
CSA approval																				
Characteristics	Oil resistant acc. to internal standard	x								x										
	Oil resistant acc. to DIN VDE		x			x	x	x			x						x	x	x	
	Good chemical resistance																		x	
	Weather resistance					x	x	x	x				x	x	x	x			x	x
	Application in cable tracks					x	x						x	x						x
	Flexibility	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x				x
	Continuously flexible application																			x
Direct burial	x																			

Temperature range:
 from
to

*The temperature range for flexing is mentioned on the particular catalog page

BUS CABLES

Selection index

		Cable type											
		S CB 626	S CB 625	SABIX® CB 620	SABIX® CB 620 FRNC	CB 627	S CB 628	DN 650	DN 651	DN 656	DN 657	DN 658	DN 659
Application	Remote bus cable												
	Remote installation bus cable												
	Interbus-Loop cable												
	CAN-bus cable	x	x	x	x	x	x						
	DeviceNet cable							x	x	x	x	x	x
	Profibus-DP cable												
	Profibus cable												
	SafetyBus p cable												
	Hybrid field bus cable												
	Industrial Ethernet Cables CAT 5												
	Inner jacket						x						
	Optical waveguide POF												
	Temperature range static*	Screened	x	x	x	x	x	x	x	x	x	x	x
+ 90 °C													
+ 85 °C													
+ 80 °C													
+ 75 °C													
+ 70 °C													
- 30 °C													
Voltage	- 40 °C												
	- 50 °C												
	Voltage acc. to UL 30 V											x	x
	Voltage acc. to UL 50 V							x	x				
	Voltage acc. to UL 300 V					x	x			x			
	Voltage acc. to UL/CSA 600 V												
	Peak operating voltage max. 350 V	x	x	x	x	x	x	x	x	x	x	x	x
	Nominal voltage Uo/U: 300/500 V												
Testing voltage: 1000 V													
Testing voltage: 1500 V	x	x	x	x	x	x	x	x	x	x	x	x	
Testing voltage: 3000 V													
Standards and approvals	Zero halogen acc. to DIN VDE and IEC		x	x	x		x			x	x		
	Burning characteristics: no flame propagation acc. to IEC 60332-3 + EN 50266-2 Cat. C resp. D												
	Burning characteristics: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2				x	x	x						
	Corrosivity: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases		x	x	x								
	UL approval					x	x	x	x	x		x	x
	CSA approval												
Characteristics	Oil resistant acc. to internal standard												
	Oil resistant acc. to DIN VDE	x	x	x		x	x						
	Good chemical resistance	x	x				x						
	Weather resistance	x	x	x	x		x						
	Application in cable tracks	x	x				x						
	Flexibility	x	x	x	x	x	x						
	Continuously flexible application												
	Direct burial												

Temperature range:




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BUS CABLES

Selection index

		Cable type																	
		SABIX® PB 630	SABIX® PB 630 FRNC	PB 630	PB 631	PB 636	PB 637	PB 639	PB 635	S PB 634	PB 633	PB 632	PB 640	PB 640 UL	S PB 640	S PB 640 UL	PB 642	S PB 644	
Application	Remote bus cable																		
	Remote installation bus cable																		
	Interbus-Loop cable																		
	CAN-bus cable																		
	DeviceNet cable																		
	Profibus-DP cable	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			
	Profibus cable																	x	x
	SafetyBus p cable																		
	Hybrid field bus cable																		
	Industrial Ethernet Cables CAT 5																		
	Inner jacket																		
	Optical waveguide POF																		
	Screened		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Temperature range static*	+ 90 °C																	
+ 85 °C																			
+ 80 °C																			
+ 75 °C																			
+ 70 °C																			
- 30 °C																			
- 40 °C																			
- 50 °C																			
Voltage	Voltage acc. to UL 30 V																		
	Voltage acc. to UL 50 V																		
	Voltage acc. to UL 300 V																		
	Voltage acc. to UL/CSA 600 V																		
	Peak operating voltage max. 350 V	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
	Nominal voltage Uo/U: 300/500 V																		
	Testing voltage: 1000 V																		
	Testing voltage: 1500 V	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Testing voltage: 3000 V																			
Standards and approvals	Zero halogen acc. to DIN VDE and IEC	x	x		x										x	x			
	Burning characteristics: no flame propagation acc. to IEC 60332-3 + EN 50266-2 Cat. C resp. D		x																
	Burning characteristics: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2		x	x		x	x	x	x			x	x	x	x	x			
	Corrosivity: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases	x	x		x						x	x							
	UL approval														x		x		
CSA approval																			
Characteristics	Oil resistant acc. to internal standard			x		x		x	x			x	x	x			x		
	Oil resistant acc. to DIN VDE	x						x			x				x	x		x	
	Good chemical resistance																		
	Weather resistance	x	x		x	x		x	x	x	x							x	
	Application in cable tracks										x					x	x		x
	Flexibility	x				x					x	x	x				x	x	
	Continuously flexible application																		
	Direct burial								x										


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BUS CABLES

Selection index

		Cable type																	
		SBP 680	S SBP 680 Move	S 670	S 671	PN 662	PN 663	S PN 668	S PN 669	PN 654	PN 655	PN 660	PN 661	PN 678	PN 679	S PN 681	DR PN 689 P Highflex	S PN 668 Hybrid	RT PN 668
Application	Remote bus cable																		
	Remote installation bus cable																		
	Interbus-Loop cable																		
	CAN-bus cable																		
	DeviceNet cable																		
	Profibus-DP cable																		
	Profibus cable																		
	SafetyBus p cable	x	x																
	Hybrid field bus cable			x	x														
	Industrial Ethernet Cables CAT 5					x	x	x	x	x	x	x	x	x	x	x	x	x	x
	Inner jacket					x	x	x	x									x	x
	Optical waveguide POF			x	x														
	Screened		x	x			x	x	x	x	x	x	x	x	x	x	x	x	x
Temperature range static*	+ 90 °C																		
	+ 85 °C																		
	+ 80 °C																		
	+ 75 °C																		
	+ 70 °C																		
	- 30 °C																		
	- 40 °C																		
- 50 °C																			
Voltage	Voltage acc. to UL 30 V																		
	Voltage acc. to UL 50 V																		
	Voltage acc. to UL 300 V																		
	Voltage acc. to UL/CSA 600 V				x	x												x	
	Peak operating voltage max. 350 V	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
	Nominal voltage U ₀ /U: 300/500 V			x	x														
	Testing voltage: 1000 V																		
	Testing voltage: 1500 V	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
Testing voltage: 3000 V				x	x														
Standards and approvals	Zero halogen acc. to DIN VDE and IEC	x	x					x	x			x	x		x	x	x	x	
	Burning characteristics: no flame propagation acc. to IEC 60332-3 + EN 50266-2 Cat. C resp. D																		
	Burning characteristics: flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2			x	x														
	Corrosivity: in compliance with IEC 60754-2 and EN 50267-2-2 + VDE 0482 part 267-2-2 - no development of corrosive conflagration gases																		
	UL approval			x	x			x	x		x		x					x	
CSA approval			x	x															
Characteristics	Oil resistant acc. to internal standard					x	x	x	x	x	x		x						
	Oil resistant acc. to DIN VDE	x	x	x				x						x	x	x	x	x	
	Good chemical resistance																		
	Weather resistance																		
	Application in cable tracks		x					x	x							x		x	
	Flexibility					x	x					x	x		x		x	x	
	Continuously flexible application		x					x	x							x		x	
	Direct burial																		

Temperature range:
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