



■ Due to high technology automation systems getting increasingly faster in all areas of production and applications, industrial customers are demanding innovative products from the cable industry. Together with our customers, SAB BRÖCKSKES is constantly developing and improving our cable track cables to keep this product range up to date. Cable track cables are produced especially for applications with highly flexible bending stress. One of our top products within this product range is our type S 980 CP. With UL recognition and CSA approval, this cable reflects the high quality standard of our cable track cables.

■ Our highly flexible cables are suitable for constant use with extremely high bending stress during multiple-shift operation. You can use our advanced cable technology in order to enhance the efficiency of your machines and appliances and, therefore, always be one step ahead of your competitors.

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■ Application of PVC cable track cables

SAB PVC cable track cables are intended for flexible use, e.g. control or data cables in cable tracks installed on machine tools and robot devices, wherever energy supply and signals are transmitted to machines and appliances that are in permanent movement.

Exemplary applications:

SD 86/ S 86 SD 86 C/ S 86 C SD 86 C TP	Wood working and packaging machines, assembly lines, automation plants
S 900 SD 960/ S 960/ S 960 red SD 960 CY/ S 960 CY/ S 960 CY red SD 960 CY TP	Wood working and packaging machines, assembly lines, automation plants, also for the American market

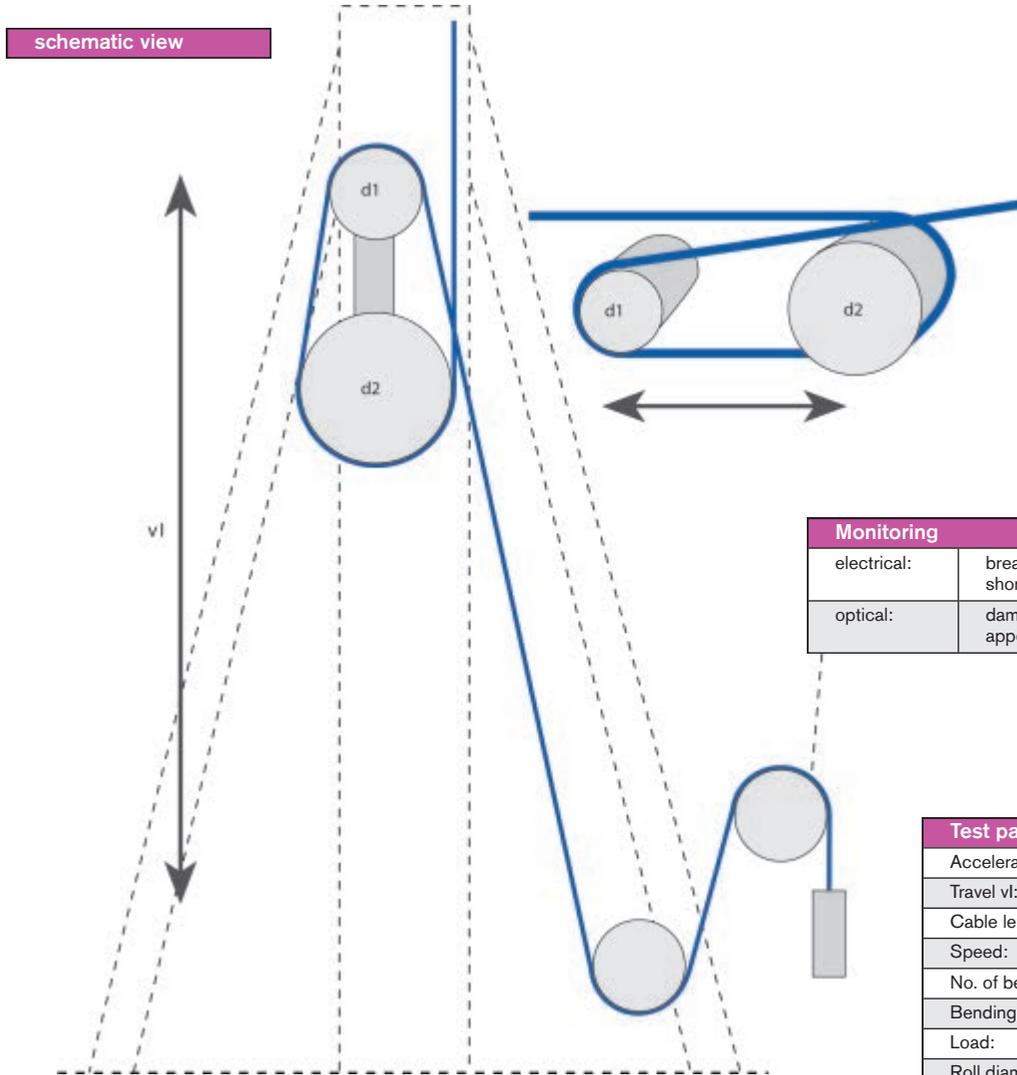
■ Applications of PUR/TPE cable track cables

SAB PUR/TPE cable track cables are intended for continuously flexing use, e.g. in cable tracks, control or data cables installed on industrial robots, automation plants, robot devices, automation systems, mostly where very high flexibility, abrasion resistance, notch resistance, oil and chemical resistance are requested. The cables are suitable for permanent use with millions of bending cycles during multiple-shift operation. The cut resistant and low-adhesion PUR/TPE jacket guarantees higher service life and high efficiency.

Exemplary applications:

SD 200/ S 200 SD 200 C/ S 200 C SD 200 C TP	Pick-n-place, material handling and automation technologies, wood working and packaging machines, industrial robot construction, car manufacturing industry, high rack construction
S 900 P/ S 910 P/ S 910 CP SD 960 P/ S 960 P SD 960 CP/ S 960 CP SD 960 CP TP	Pick-n-place, material handling and automation technologies, wood working and packaging machines, car manufacturing industry, press manufacturing
SD 980 P/ S 980 P SD 980 CP/ S 980 CP SD 980 CP TP	Pick-n-place, material handling and automation technologies, wood working and packaging machines, industrial robot construction, car manufacturing industry, high rack construction

■ Cycle life testing machine for continuous flex cables



Monitoring	
electrical:	break of a single conductor, short-circuit
optical:	damage of jacket, appearance of kinks

Test parameter	
Acceleration:	55 m/s ²
Travel v1:	1400 mm
Cable length in motion:	2800 mm
Speed:	0.8 m/s
No. of bendings:	12 pro min
Bending radius:	variable
Load:	variable
Roll diameter d1:	variable
Roll diameter d2:	variable

Test findings	S 200 (12 x 1.0 mm ²)	S 90 (12 x 1.0 mm ²)	S 86 (12 x 1.0 mm ²)
Bending radius during test:	4.3 x d	3.6 x d	3.5 x d
Travel:	1.9 m	1.9 m	1.9 m
Acceleration:	40 m/s ²	40 m/s ²	40 m/s ²
Temperature during test:	+10°C up to +22°C	+10°C up to +22°C	+10°C up to +22°C
Speed:	1.4 m/s	1.4 m/s	1.4 m/s
Dimension:	10.4 mm	12.5 mm	12.9 mm
Roll diameter d1:	90 mm	90 mm	90 mm
Roll diameter d2:	125 mm	125 mm	125 mm
No. of bendings:	17,438,485	2,929,730	2,508,904

Continuous Flex

Selection Table



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		Cable Type																	
		B/8	B/9	B/10	B/11	B/12	B/13	B/14	B/15	B/16	B/17	B/18	B/19	B/20	B/21	B/22	B/23		
		S 900	S 900 P	S 910 P	S 910 CP	SD 960	S 960	S 960 red	SD 960 CY	S 960 CY	S 960 CY red	SD 960 CY TP	SD 960 P	S 960 P	SD 960 CP	S 960 CP	SD 960 CP TP		
Application	Data cables																		
	Control cables																		
	Shielding																		
	Twisted pair stranding																		
Temperature range fixed installation*	+ 90°C																		
	+ 70°C																		
	- 25°C																		
	- 30°C																		
	- 40°C																		
	- 50°C																		
Voltage	Peak operating voltage max. 350 V																		
	Nominal voltage 300/500 V																		
	Nominal voltage 0.6/1 kV																		
	Voltage UL 300 V																		
	Voltage (UL) 600 V																		
	Voltage CSA 300 V																		
	Voltage CSA 600 V																		
	Voltage CSA 1000 V																		
	Testing voltage: 1500 V																		
	Testing voltage: 2000 V																		
Testing voltage: 3000 V																			
Characteristics, standards and approvals	Flexible at low temperature																		
	PWIS-free (PWIS = paint wetting impairment substances)																		
	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																		
	Fire performance UL VW-1																		
	Fire performance UL FT1, FT2																		
	Fire performance CSA FT1, FT2																		
	UL recognized																		
	(UL) listed																		
	CSA approved																		
	Very good oil resistance acc. to EN 50363-10-2 + VDE 0207-363-10-2																		
	Very good oil resistance acc. to EN 50363-4-1 + VDE 0207-363-4-1																		
Oil rating 60°C acc. to UL 758																			
Oil resistance acc. to internal standard																			
Good chemical resistance																			
Application Service Life A = High, B = Medium, C = Short	At acceleration values of																		
	up to 05 m/s ²	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	up to 20 m/s ²	B	A	A	A	B	B	B	B	B	B	B	A	A	A	A	A	A	
	up to 40 m/s ²	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
	more than 40 m/s ²	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
	At path feet rates of																		
	up to 01 m/s ²	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
	up to 03 m/s ²	B	A	A	A	B	B	B	B	B	B	B	A	A	A	A	A	A	
	up to 10 m/s ²	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
	more than 10 m/s ²	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	
	For cable tracks with a length of																		
	up to 05 m	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	
up to 10 m	B	A	A	A	B	B	B	B	B	B	B	A	A	A	A	A	A		
up to 25 m	C	B	B	B	C	C	C	C	C	C	C	B	B	B	B	B	B		
up to 25 m	C	B	B	B	C	C	C	C	C	C	C	B	B	B	B	B	B		



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



		Cable Type																													
		B/24		B/25		B/26		B/27		B/28		B/29		B/30		B/31		B/32		B/33		B/34		B/35		B/37		B/38		B/40	
		TPE/PUR	TPE/PUR	TPE/PUR	TPE/PUR	TPE/PUR	TPE/PUR	PVC/PVC	PVC/PVC	PVC/PVC	PVC/PVC	PVC/PVC	TPE/PUR																		
Application	Data cables	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Control cables		•								•											•									
	Shielding				•		•	•	•	•						•									•						
	Twisted pair stranding																														
	Temperature range fixed installation*	+ 90°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	+ 70°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	- 25°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	- 30°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	- 40°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	- 50°C	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Voltage	Peak operating voltage max. 350 V	•		•																											
	Nominal voltage 300/500 V		•																												
	Nominal voltage 0.6/1 kV																														
	Voltage UL 300 V	•		•																											
	Voltage (UL) 600 V		•																												
	Voltage CSA 300 V	•		•																											
	Voltage CSA 600 V		•																												
	Voltage CSA 1000 V																														
	Testing voltage: 1500 V	•		•																											
	Testing voltage: 2000 V		•		•																										
Testing voltage: 3000 V																															
Characteristics, standards and approvals	Flexible at low temperature	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	PWIS-free (PWIS = paint wetting impairment substances)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	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	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Fire performance UL VW-1																														
	Fire performance UL FT1, FT2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Fire performance CSA FT1, FT2	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	UL recognized																														
	(UL) listed	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	CSA approved	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
	Very good oil resistance acc. to EN 50363-10-2 + VDE 0207-363-10-2																														
	Very good oil resistance acc. to EN 50363-4-1 + VDE 0207-363-4-1																														
	Oil rating 60°C acc. to UL 758																														
Oil resistance acc. to internal standard																															
Good chemical resistance	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
Application Service Life A = High, B = Medium, C = Short	At acceleration values of																														
	up to 05 m/s ²	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
	up to 20 m/s ²	A	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B		
	up to 40 m/s ²	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		
	more than 40 m/s ²	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		
	At path feet rates of																														
	up to 01 m/s ²	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
	up to m/s ²	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B		
	up to 10 m/s ²	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		
	more than 10 m/s ²	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		
	For cable tracks with a length of																														
	up to 05 m	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A		
	up to 10 m	A	A	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B		
up to 25 m	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C			
up to 25 m	A	A	A	A	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C			

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

