

Flexible Speciality Cables



E-mail: info@sabcable.com



Web site: www.sabcable.com

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Item	Description	Page
CRX 600	Oil resistant 105°C flexible control cable, UL, cUL, CE	D 5
CRX 600 C	Oil resistant 105°C flexible shielded control cable, UL, cUL, CE	D 6
SAB ^{solar}	Halogen-free solar cable with improved fire and temperature performance, VDE, TÜV, CE	D 7 NEW
DR 717 P Highflex	Reeling cable, CE	D 8 NEW
DR 721 P	Reeling cable, CE	D 9 NEW
DR 720 P Highflex	Reeling cable, CE	D 10 NEW
753 C	ETFE connection cable with overall copper screen for application on marine engines, CE	D 11-13

Application

■ Technical problems often arise that can not be solved properly by standard cables. At North America, we believe the customer deserves the best possible solution and we are proud to be your source for special cable requirements. If we must modify one of our existing standard products or completely design a new construction, we will work together with you to meet all of your cable requirements. Whether you choose one of our standard cables from stock or require a completely new design you will find that our variety of cable styles and our flexibility as a specialty cable manufacturer are among our company's strengths.

We produce nearly every type of specialty cable, with minimums as low as 1500 feet - and in some cases even lower - to your exact construction specifications. Please provide us with the following details:

- conductor material
- number of conductors
- cross sections
- colours
- outer diameter
- flexibility
- low and high temperature resistance
- materials
- types of screening
- combined cables
- technical specifications
- optical waveguide
- number of fibres
- POF (polymeric optical fibres)


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■ Of course we can also meet other requirements not listed above. Your special cable requests are always a priority and our highly motivated team will meet and exceed all of your special needs. By applying our comprehensive know-how, you will surely be able to improve the efficiency of your machines.

FLEXIBLE SPECIALITY CABLES

Selection index

		Cable type						
		CRX 600	CRX 600 C	SAB ^{spl} lar	DR 717 P Highflex	DR 721 P	DR 720 P Highflex	753 C
Application	Single conductors			x				
	Coloured conductors				x	x	x	
	Numbered conductors	x	x		x	x	x	x
	Copper screen		x					x
	Inner jacket				x	x	x	x
Temperature range flexing*	+ 125 °C							
	+ 105 °C							
	+ 100 °C							
	+ 90 °C							
	+ 70 °C							
	- 30 °C							
	- 40 °C							
	- 50 °C							
Voltage	Voltage UL 600V / cUL 1000 V	x	x					
	Nominal voltage U ₀ /U: 300/500 V	x	x		x			x
	Nominal voltage U ₀ /U: 0.6/1 kV			x		x	x	
	Testing voltage U: 2000 V	x	x		x			
	Testing voltage U: 3000 V							x
	Testing voltage U: 3500 V			x				
	Testing voltage U: 4000 V					x	x	
Characteristics, standards and approvals	Halogen-free acc. to DIN VDE and IEC	x	x	x			x	
	No flame propagation acc. to IEC / EN			x				x
	Flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2	x	x	x	x	x	x	x
	Flame retardant and self-extinguishing acc. to UL VW-1, cUL FT1 FT2	x	x					
	UL approval	x	x					
	cUL approval	x	x					
Characteristics	Tensile strength acc. to DIN VDE				x	x	x	
	Oil resistant 60°C	x	x					
	Oil resistant acc. to DIN VDE				x	x	x	x
	Good chemical resistance				x	x	x	
	Weather resistance			x		x	x	
	Hydrolysis resistance			x				
	UV resistance			x	x	x	x	
	Ozone resistance			x				

Temperature range:
 from
to

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

FLEXIBLE SPECIALITY CABLES

CRX 600 Oil resistant 105°C flexible control cable



BRÖCKSKES · D-VIERSEN · CRX 600 AWM Style 21237 105°C 600V c AWM I/II A/B 105°C Oil 60°C 1000V FT1 FT2

Marking for CRX 600 32041603:

CRX 600 is a multi-conductor, 600 V, 105°C, UL approved, chemical resistant and oil resistant flexible control cable. The reduced outer diameter permits easy handling and installation in confined areas. Recommended applications for use in industrial painting machinery, water treatment facilities, chemical processing, harsh environments and areas utilizing various cleaning solvents. Control and Power supply cable with Extra Chemical Resistance, such as MEK, Acetone, Xylene, Turpentine.

Construction:

Conductor:	bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	TPE 355
Color code:	black conductors with consecutive numbers acc. to EN 50334; green-yellow earth wire from 3 conductors
Stranding:	in layers
Jacket material:	TPE 355
Jacket color:	gray

Outstanding features:

- General purpose flexing applications requiring UL and cUL approvals

Technical data:

Voltage:	UL: 600 V	cUL: 1000 V
Nominal voltage:	DIN VDE: Uo/U 300/500 V	
Testing voltage U:	conductor/conductor 2000 V	
Min. bending radius		
<i>fixed installation:</i>	< 12 mm = 3 x O.D. > 12 mm = 4 x O.D.	
<i>free movement:</i>	< 12 mm = 5 x O.D. > 12 mm = 6 x O.D.	
Temperature range	DIN VDE:	UL + cUL: up to +105°C
<i>static:</i>	-30/+80°C	
<i>flexing:</i>	-20/+80°C	
Zero halogen:	acc. to DIN VDE 0472 part 815 and IEC 60754-1	
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2, UL VW-1, cUL FT1 FT2	
Oil resistance:	Oil 60 °C	

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item no.	no. of conductors incl. ground	nominal outer-ø inch	nominal outer-ø mm	cable weight ≈ lbs/mft
▶ 20 AWG (17/32) • 0.50 mm²				
32042002	2	0.209	5.3	24
32042003	3	0.220	5.6	28
32042004	4	0.236	6.0	34
32042007	7	0.280	7.1	51
32042012	12	0.370	9.4	83
32042015	15	0.417	10.6	106
32042025	25	0.547	13.9	144
▶ 18 AWG (30/32) • 1.00 mm²				
32041802	2	0.236	6.0	33
32041803	3	0.248	6.3	40
32041804	4	0.268	6.8	48
32041805	5	0.299	7.6	60
32041807	7	0.323	8.2	75
32041809	9	0.413	10.5	108
32041812	12	0.437	11.1	126
32041815	15	0.492	12.5	159
32041818	18	0.524	13.3	187
32041825	25	0.638	16.2	256
32041850	50	0.850	21.6	485

item no.	no. of conductors incl. ground	nominal outer-ø inch	nominal outer-ø mm	cable weight ≈ lbs/mft
▶ 16 AWG (27-29/30) • 1.50 mm²				
32041602	2	0.260	6.6	45
32041603	3	0.272	6.9	54
32041604	4	0.303	7.7	68
32041605	5	0.331	8.4	78
32041607	7	0.366	9.3	102
32041612	12	0.492	12.5	170
32041615	15	0.555	14.1	213
32041618	18	0.591	15.0	222
32041625	25	0.717	18.2	251
32041650	50	0.965	24.5	347
▶ 14 AWG (46/30) • 2.50 mm²				
32041403	3	0.327	8.3	77
32041404	4	0.335	8.5	97
32041405	5	0.398	10.1	120
32041407	7	0.441	11.2	157
32041412	12	0.602	15.3	266
32041418	18	0.717	18.2	391
32041425	25	0.878	22.3	540

item no.	no. of conductors incl. ground	nominal outer-ø inch	nominal outer-ø mm	cable weight ≈ lbs/mft
▶ 12 AWG (52/28) • 4.00 mm²				
32041203	3	0.382	9.7	115
32041204	4	0.425	10.8	146
32041205	5	0.476	12.1	181
32041207	7	0.528	13.4	226
▶ 10 AWG (78/28) • 6.00 mm²				
32041003	3	0.449	11.4	166
32041004	4	0.500	12.7	211
32041005	5	0.559	14.2	261
▶ 8 AWG (77/26) • 10.00 mm²				
32040804	4	0.760	19.3	406
▶ 6 AWG (119/26) • 16.00 mm²				
32040604	4	0.835	21.2	576
▶ 4 AWG (196/26) • 25.00 mm²				
32040404	4	1.043	26.5	930
▶ 2 AWG (280/26) • 35.00 mm²				
32040204	4	1.189	30.7	1271
▶ 1 AWG (400/26) • 50.00 mm²				
32040104	4	1.378	35.0	1736

Other dimensions and colors are possible on request.

FLEXIBLE SPECIALITY CABLES

CRX 600 C Oil resistant 105°C flexible shielded control cable



Marking e.g. for CRX 600 C 32141603:

BRÖCKSKES · D-VIERSEN · CRX 600 C AWM Style 21237 105°C 600V c AWM I/II A/B 105°C Oil 60°C 1000V FT1 FT2

CRX 600 C is a multi-conductor, 600 V, 105°C, UL approved, chemical resistant and oil resistant flexible shielded control cable. The reduced outer diameter permits easy handling and installation in confined areas. An overall tinned copper braid is recommended whenever electrical interference distorts signal transmission, or when EMI emissions need to be suppressed. Recommended applications for use in industrial painting machinery, water treatment facilities, chemical processing, harsh environments and areas utilizing various cleaning solvents. Shielded Control and Power supply cable with Extra Chemical Resistance, such as MEK, Acetone, Xylene, Turpentine.

Construction:

Conductor:	bare copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	TPE 355
Color code:	black conductors with consecutive numbers acc. to EN 50334; green-yellow earth wire from 3 conductors
Stranding:	in layers
Wrapping:	non-woven tape
Screen:	tinned copper braiding
Jacket material:	TPE 355
Jacket color:	gray

Outstanding features:

- General purpose flexing applications requiring UL and cUL approvals

Technical data:

Voltage:	UL: 600 V	cUL: 1000 V
Nominal voltage:	DIN VDE: U _o /U 300/500 V	
Testing voltage U:	conductor/conductor 2000 V	conductor/screen 1000 V
Min. bending radius		
<i>fixed installation:</i>	< 12 mm = 3 x O.D.	> 12 mm = 4 x O.D.
<i>free movement:</i>	< 12 mm = 5 x O.D.	> 12 mm = 6 x O.D.
Temperature range	DIN VDE:	UL + cUL: up to +105°C
<i>static:</i>	-30/+80°C	
<i>flexing:</i>	-20/+80°C	
Zero halogen:	acc. to DIN VDE 0472 part 815 and IEC 60754-1	
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2, UL VW-1, cUL FT1 FT2	
Oil resistance:	Oil 60 °C	

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item no.	no. of conductors incl. ground	nominal inch	outer-ø mm	cable weight ≈ lbs/mft
► 20 AWG (17/32) • 0.50 mm ²				
32142002	2	0.232	5.9	28
32142003	3	0.244	6.2	34
32142004	4	0.260	6.6	40
32142007	7	0.307	7.8	60
32142012	12	0.394	10.0	95
32142015	15	0.453	11.5	128
32142025	25	0.579	14.7	205
► 18 AWG (30/32) • 1.00 mm ²				
32141802	2	0.260	6.6	36
32141803	3	0.276	7.0	46
32141804	4	0.295	7.5	56
32141805	5	0.323	8.2	68
32141807	7	0.354	9.0	87
32141809	9	0.445	11.3	126
32141812	12	0.476	12.1	151
32141815	15	0.531	13.5	186
32141818	18	0.563	14.3	223
32141825	25	0.677	17.2	303
32141850	50	0.898	22.8	550

item no.	no. of conductors incl. ground	nominal inch	outer-ø mm	cable weight ≈ lbs/mft
► 16 AWG (27-29/30) • 1.50 mm ²				
32141602	2	0.283	7.2	45
32141603	3	0.299	7.6	58
32141604	4	0.327	8.3	71
32141605	5	0.362	9.2	88
32141607	7	0.390	9.9	111
32141612	12	0.531	13.5	196
32141615	15	0.602	15.3	257
32141618	18	0.638	16.2	295
32141625	25	0.764	19.4	404
32141650	50	1.012	25.7	745
► 14 AWG (46/30) • 2.50 mm ²				
32141403	3	0.358	9.1	87
32141404	4	0.386	9.8	105
32141405	5	0.437	11.1	138
32141407	7	0.480	12.2	179
32141412	12	0.650	16.5	308
32141418	18	0.764	19.4	444
32141425	25	0.925	23.5	601

item no.	no. of conductors incl. ground	nominal inch	outer-ø mm	cable weight ≈ lbs/mft
► 12 AWG (52/28) • 4.00 mm ²				
32141203	3	0.421	10.7	128
32141204	4	0.465	11.8	164
32141205	5	0.508	12.9	198
32141207	7	0.567	14.4	268
► 10 AWG (78/28) • 6.00 mm ²				
32141003	3	0.488	12.4	178
32141004	4	0.539	13.7	226
32141005	5	0.606	15.4	294
► 8 AWG (77/26) • 10.00 mm ²				
32140804	4	0.807	20.5	450
► 6 AWG (119/26) • 16.00 mm ²				
32140604	4	0.882	22.4	609
► 4 AWG (196/26) • 25.00 mm ²				
32140404	4	1.083	27.5	944
► 2 AWG (280/26) • 35.00 mm ²				
32140204	4	1.236	31.4	1278
► 1 AWG (400/26) • 50.00 mm ²				
32140104	4	1.413	35.9	1754

Other dimensions and colors are possible on request.

FLEXIBLE SPECIALITY CABLES

VDE-REG.-Nr.
8081



SAB^{solar} halogen-free solar cable with improved fire and temperature performance



VDE-REG.-Nr. 8081 · TÜVSüd-Bauart geprüft B 070161971001

Zertifikat Nr.:
B 070161971001

Marking for SAB^{solar} 71913386:

BRÖCKSKES · D-VIERSEN · SAB^{solar} 4,0 mm² · VDE-REG.-Nr. 8081 · TÜVSüd-Bauart geprüft B 070161971001

The SAB^{solar} cable with improved fire performance and temperature resistance is particularly used as connection cable in photo-voltaik systems. The cable is suitable for various climatic conditions such as outdoor use as well as for fixed laying in dry, damp and wet rooms. Our solar cable is approved by the VDE and TÜV SÜD for a temperature range up to +110°C and suitable as electrical equipment of protection class II. The cable is available with black, red or blue outer sheath depending on the requirements of the customer.

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Primary insulation:	285
Color code primary insulation:	see table below
Secondary insulation:	285
Color code secondary insulation:	see table below

Outstanding features:

- halogen-free
- no flame propagation
- flame retardant and self-extinguishing
- up to +125 °C
- weather resistant
- sunlight resistance
- improved fire performance

Technical data:

Nominal voltage U_o/U:	0.6/1 KV (AC)
Testing voltage U:	3500 V
Min. bending radius:	3 x d
∅ ≤ 12 mm	3 x d
∅ > 12 mm	4 x d
Temperature range:	VDE-REG.-Nr. 8081 up to +110 °C TÜV SÜD Type tested B 070161971001: up to +110 °C
for installation:	-30/+125 °C
fixed laying:	-40/+125 °C
shortcircuit:	+250 °C
Zero halogen:	acc. to DIN VDE 0472 part 815 + IEC 60754-1
Burning characteristics	no flame propagation cable outer-∅ ≤ 6 mm acc. to EN 50305 section 9.1.2; cable outer-∅ < 6 mm acc. to IEC 60332-3-25 + EN 50255-2-5; cable outer-∅ > 12 mm acc. to IEC 60332-3-24 + EN 50255-2-4; flame retardant and self-extinguishing acc. to IEC 60332-1 + EN 50265-2-1
Corrossiveness of conflagration gases:	in compliance with IEC 60754-2 + EN 50257-2-2 + VDE 0402 part 257-2-2 no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + EN 61034
Weather resistance:	very good acc. to EN ISO 4892-2
Hydrolysis resistance:	acc. to DIN VDE 0282-10
Ozone resistance:	acc. to DIN VDE 0282-2
Absence of harmful substances:	acc. to RoHS-guideline 2002/95/EG as well as GefStoffV appendix IV-no. 24, see page M/25

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item no.	nominal cross section mm ²	AWG	max. outer-∅ inch	max. outer-∅ mm	cable weight ≈ lbs/mft
➤ 7191 .. 82*	1.50	18	0.209	14.4	25
➤ 7191 .. 84*	2.50	14	0.224	24.0	32
➤ 7191 .. 86*	4.00	12	0.252	38.4	44
➤ 7191 .. 87*	6.00	10	0.281	57.6	63
➤ 7191 .. 88*	10.0	8	0.374	96.0	105
➤ 7191 .. 89*	16.0	6	0.429	153.6	151
➤ 7191 .. 90*	25.0	4	0.520	240.0	235

Other dimensions and colors are possible on request.

Marking for primary and secondary insulation

Primary insulation / secondary insulation		
33 black / black	38 black / red	32 black / blue
83 red / black	88 red / red	22 blue / blue
23 blue / black		

suitable for
protecting class II

E-mail: info@sabcable.com



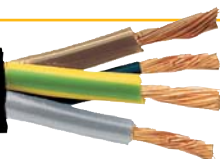
Web site: www.sabcable.com

FLEXIBLE SPECIALITY CABLES

DR 717 P Highflex Reeling cable



BRÖCKSKES · D-VIERSEN · DR 717 P Highflex 4 G 2,5 mm²



Marking for DR 717 P Highflex 07170425:
BRÖCKSKES · D-VIERSEN · DR 717 P Highflex 4 G 2,5 mm²

The DR 717 P Highflex is used for spring cables reels on stages and theaters.

Construction:

Conductor:	bare copper strands acc. to IEC 60228 EN 60228, VDE 0295, class 5
Insulation:	special polymer
Colour code:	coloured acc. to HD 308 (VDE 0293 part 308); from 6 conductors black conductors with consecutive numbers acc. to EN 50334; green-yellow earth wire from 3 conductors <i>DMX-bus:</i> white/brown, green/yellow <i>IE Cat 5:</i> white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Stranding:	specially adjusted layering partially with non-woven tape over the outer layer
Inner jacket:	PUR
Supporting screen:	high-tech yarn
Outer sheath:	PUR
Sheath colour:	black (RAL 9005)

Outstanding features:

- reeling length up to 60 m
- high winding and unwinding strength
- corresponds to low voltage guideline 73/23/EWG CE
- strain relief via outer sheath

Technical data:

Nominal voltage:	U _o /U 300/500 V (supply conductors)		
Peak operating voltage:	<i>item no. 07179001:</i> max. 500 V (DMX-bus) <i>item no. 07179002:</i> max. 125 V (IE Cat 5)		
Testing voltage:	conductor/conductor 2000 V		
Current-carrying capacity:	acc. to DIN VDE 0298-4, see page M/16 + 17		
Min. bending radius:	≤ 12 mm 3 x d / >12 mm 4 x d		
<i>for laying and installation (fixed laying):</i>			
<i>for repeated winding action (flexible):</i>	6 x d		
<i>guided on deflection pulleys (flexible):</i>	7,5 x d		
Temperature range	<i>item no. 07179001</i>	<i>item no. 07179002</i>	
<i>with installation:</i>		0/+50 °C	
<i>fixed laying:</i>	-50/+90 °C	-40/+70 °C	-20/+60 °C
<i>flexible application:</i>	-40/+90 °C	-40/+70 °C	-20/+60 °C
Zero halogen:	acc. to DIN VDE 0472 part 815 and IEC 60754-1		
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2		
Oil resistance:	very good - TMPU acc. to DIN VDE 0282 part 10 + HD 22.10		
Chemical resistance:	good against acids, alkalines, solvents, hydraulic liquids, etc.		
UV-resistance:	very good - enhanced due to black sheath colour		
Tensile strength:	with reference to DIN VDE 0298-300 section 5.4.1		
Mechanical characteristics:	the main mechanical characteristics accomplished by the PUR outer sheath are: - high tensile strength - high tear strength - high abrasion resistance - high notch resistance		
Absence of harmful substances:	acc. to RoHS-guideline 2002/95/EG as well as GefStoffV appendix IV-no. 24, see page M/25		

Item no.	dimensions	max. outer-ø ± 5%		cable weight ≈ lbs/mft	tensile strength max. N
		inch	mm		
➤ 07170425	16 AWG / 4c	0.386	9.8	99	150
➤ 07170440	14 AWG / 4c	0.465	11.8	151	240
➤ 07171440	14 AWG / 14c	0.819	20.8	469	840
➤ 07172040	14 AWG / 20c	0.921	23.4	653	1200
➤ 07170460	10 AWG / 4c	0.531	13.5	211	360
➤ 07171360	10 AWG / 13c	0.953	24.2	638	1170
➤ 07170470	8 AWG / 4c	0.673	17.1	363	600
➤ 07170480	6 AWG / 4c	0.827	21.0	544	960
➤ 07179001	12 AWG / 14c + 24 AWG / 2pr	0.882	22.4	513	840
➤ 07179002	6 AWG / 5c + 26 AWG / 4pr	1.039	26.4	715	1200

Other dimensions and colors are possible on request.

E-mail: info@sabcable.com



Web site: www.sabcable.com

FLEXIBLE SPECIALITY CABLES



DR 721 P Reeling cable



Marking for DR 721 P 07211215:
BRÖCKSKES · D-VIERSEN · DR 721 P 12 G 1,5 mm²

The DR 721 P is used for spring cable and motor cable reels, hoists, transport systems and farm vehicles with medium mechanical stress.

Construction:

Conductor:	bare copper strands acc. to IEC 60228 EN 60228, VDE 0295, class 5
Insulation:	special polymer
Colour code:	coloured acc. to HD 308 (VDE 0293 part 308); from 6 conductors black conductors with consecutive numbers acc. to EN 50334; green-yellow earth wire from 3 conductors
Stranding:	specially adjusted layering
Inner jacket:	special PVC
Supporting screen:	high-tech yarn
Jacket material:	PUR
Jacket colour:	black

Outstanding features:

- good winding and unwinding strength
- small outer diameter
- small cable weight
- corresponds to low voltage guideline 73/23/EWG CE

Technical data:

Nominal voltage:	0,6/1 kV
Testing voltage:	conductor/conductor 4000 V
Current-carrying capacity:	acc. to DIN VDE 0298-4, see page M/16 + 17
Min. bending radius:	
<i>for laying and installation (fixed laying):</i>	6 x d
<i>for repeated winding action (flexible):</i>	10 x d
<i>guided on deflection pulleys: (flexible):</i>	12 x d
Temperature range:	
<i>fixed laying:</i>	-30/+70 °C
<i>flexible:</i>	-30/+70 °C
Temperature resistance of primary insulation:	up to +90 °C
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 und EN 60332-1-2
Oil resistance:	very good - TMPU acc. mto DIN VDE 0282 part 10 + HD 22.10
Chemical resistance:	very good against acids, alkaline solutions, solvents and hydraulic liquids, etc.
Weather resistance:	very good
UV-resistance:	very good - enhanced due to black sheath colour
Tensile strength:	acc. to DIN VDE 0298-300
Mechanical characteristics:	the main mechanical characteristics accomplished by the PUR outer sheath are: - high tensile strength - high tear strength - high abrasion resistance - high notch resistance
Absence of harmful substances:	acc. to RoHS-guideline 2002/95/EG as well as GefStoffV appendix IV-no. 24, see page M/25

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item no.	dimensions	max. outer-ø ± 5%		cable weight ≈ lbs/mft
		inch	mm	
➤ 07210415	16 AWG / 4c	0.346	8.8	79
➤ 07210515	16 AWG / 5c	0.378	9.6	95
➤ 07210715	16 AWG / 7c	0.461	11.7	130
➤ 07211215	16 AWG / 12c	0.646	16.4	230
➤ 07211815	16 AWG / 18c	0.642	16.3	284
➤ 07212415	16 AWG / 24c	0.772	19.6	380
➤ 07213615	16 AWG / 36c	0.870	22.1	534
➤ 07210425	14 AWG / 4c	0.402	10.2	114
➤ 07210525	14 AWG / 5c	0.441	11.2	137
➤ 07210725	14 AWG / 7c	0.535	13.6	189
➤ 07211225	14 AWG / 12c	0.764	19.4	343
➤ 07211825	14 AWG / 18c	0.764	19.4	422

item no.	dimensions	max. outer-ø ± 5%		cable weight ≈ lbs/mft
		inch	mm	
➤ 07212425	14 AWG / 24c	0.929	23.6	579
➤ 07213625	14 AWG / 36c	1.039	26.4	801
➤ 07210440	12 AWG / 4c	0.488	12.4	173
➤ 07210460	10 AWG / 4c	0.567	14.4	249
➤ 07210560	10 AWG / 5c	0.614	15.6	292
➤ 07210470	8 AWG / 4c	0.705	17.9	397
➤ 07210480	6 AWG / 4c	0.882	22.4	605
➤ 07210580	6 AWG / 5c	0.984	25.0	743
➤ 07210390	4 AWG / 3c + 10 AWG / 3c	0.969	24.6	814
➤ 07210395	2 AWG / 3c + 10 AWG / 3c	1.102	28.0	1085
➤ 07210396	1 AWG / 3c + 8 AWG / 3c	1.252	31.8	1535

Other dimensions and colors are possible on request.

E-mail: info@sabcable.com



Web site: www.sabcable.com

FLEXIBLE SPECIALITY CABLES

DR 720 P Highflex Reeling cable



Marking for DR 720 P Highflex 07201215:

BRÖCKSKES · D-VIERSEN · DR 720 P Highflex 12 G 1,5 mm²

The DR 720 P Highflex is used for heavy appliances as for example motor cable reels hoists, transport systems, movable motors and farm vehicles with high mechanical stress.

Construction:

Conductor:	bare copper strands acc. to IEC 60228 EN 60228, VDE 0295, class 5
Insulation:	special polymer
Colour code:	coloured acc. to HD 308 (VDE 0293 part 308); from 6 conductors black conductors with consecutive numbers acc. to EN 50334; green-yellow earth wire from 3 conductors
Stranding:	specially adjusted layering around central suspension unit partially with non-woven tape over the outer layer
Inner jacket:	PUR
Supporting screen:	high-tech yarn
Jacket material:	PUR
Jacket colour:	black

Outstanding features:

- path feed rate up to 120 m/min.
- high winding and unwinding strength
- small outer diameter
- small cable weight
- corresponds to low voltage guideline 73/23/EWG CE

Technical data:

Nominal voltage:	0,6/1 kV
Testing voltage:	conductor/conductor 4000 V
Current-carrying capacity:	acc. to DIN VDE 0298-4, see page M/16 + 17
Min. bending radius:	
for laying and installation (fixed laying):	≤ 12 mm 3 x d / >12 mm 4 x d
for repeated winding action (flexible):	6 x d
guided on deflection pulleys (flexible):	7,5 x d
Temperature range	
fixed laying:	-50/+90 °C
flexible application:	-40/+90 °C
Zero halogen:	acc. to DIN VDE 0472 part 815 and IEC 60754-1
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2
Oil resistance:	very good - TMPU acc. to DIN VDE 0282 part 10 + HD 22.10
Chemical resistance:	good against acids, alkalines, solvents, hydraulic liquids, etc.
Weather resistance:	very good
UV-resistance:	very good - enhanced due to black sheath colour
Tensile strength:	DIN VDE 0298-300
Mechanical characteristics:	the main mechanical characteristics accomplished by the PUR outer sheath are: - high tensile strength - high tear strength - high abrasion resistance - high notch resistance
Absence of harmful substances:	acc. to RoHS-guideline 2002/95/EG as well as GefStoffV appendix IV-no. 24, see page M/25

item no.	dimensions	max. outer-ø ± 5%		cable weight ≈ lbs/mft	tensile strength max. N
		inch	mm		
➤ 07200415	16 AWG / 4c	0.358	9.1	75	1340
➤ 07200515	16 AWG / 5c	0.390	9.9	89	1690
➤ 07200715	16 AWG / 7c	0.469	11.9	130	2150
➤ 07201215	16 AWG / 12c	0.657	16.7	229	2600
➤ 07201815	16 AWG / 18c	0.650	16.5	276	2600
➤ 07200425	14 AWG / 4c	0.413	10.5	110	1345
➤ 07200525	14 AWG / 5c	0.461	11.7	134	2100
➤ 07201225	14 AWG / 12c	0.776	19.7	340	2900
➤ 07201825	14 AWG / 18c	0.772	19.6	411	3450
➤ 07202425	14 AWG / 24c	0.941	23.9	566	2700
➤ 07203025	14 AWG / 30c	1.051	26.7	710	4200

item no.	dimensions	max. outer-ø ± 5%		cable weight ≈ lbs/mft	tensile strength max. N
		inch	mm		
➤ 07205025	14 AWG / 50c	1.280	32.5	1134	6750
➤ 07200440	12 AWG / 4c	0.492	12.5	161	1690
➤ 07200460	10 AWG / 4c	0.575	14.6	231	1860
➤ 07200470	8 AWG / 4c	0.713	18.1	386	2300
➤ 07200480	6 AWG / 4c	0.882	22.4	587	2800
➤ 07200390	4 AWG / 3c + 10 AWG / 3c	0.957	24.3	794	3300
➤ 07200490	4 AWG / 4c	1.047	26.6	901	3300
➤ 07200395	2 AWG / 3c + 10 AWG / 3c	1.106	28.1	1054	3300
➤ 07200495	2 AWG / 4c	1.228	31.2	1263	3300
➤ 07200396	1 AWG / 3c + 8 AWG / 3c	1.256	31.9	1491	3800

Other dimensions and colors are possible on request.

E-mail: info@sabcable.com

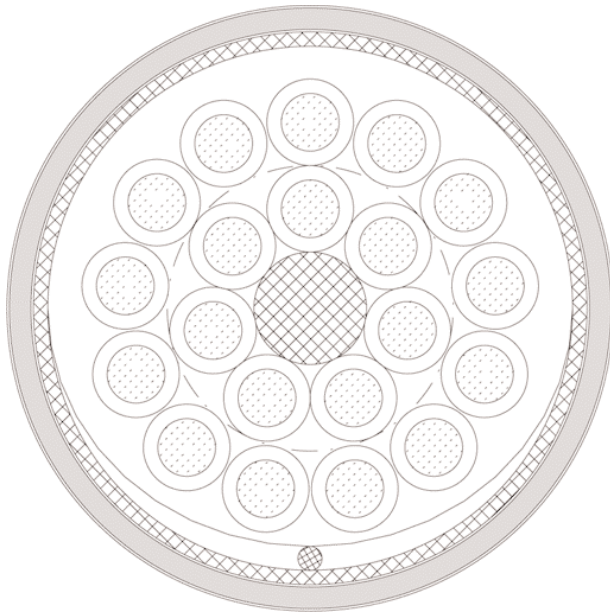


Web site: www.sabcable.com

FLEXIBLE SPECIALITY CABLES



753 C ETFE connection cable with overall copper screen for application on marine engines



Connection cable with overall copper screen

item no. 07532007

cross sections 20 x 0.75 mm² +
with drain wire 0.25 mm²

Marking e.g. for 753 C 07532007:
300V FFCS BRÖCKSKES · 07532007 ·
20 x 0,75 mm² · 2005 ·

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753C is a ETFE connection cable which is designed especially for use in marine engines. The overall tinned copper braid, is recommended whenever electrical interference distorts signal transmission, or when EMI emissions need to be suppressed. The special insulated outer jacket is for temperatures up to 100 °C for flexing use. Fire resistance in acc. to IEC 60.332-3 Category A and C

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, EN 60228, VDE 0295, class 5
Insulation:	TPE
Color code:	black conductors with consecutive numbers acc. to EN 50334; green-yellow earth wire from 3 conductors
Stranding:	in layers
Inner jacket:	thermoplastic material
Screen:	tinned copper braid with drain wire (22 AWG)
Jacket material:	special flame retardant synthetic material
Jacket color:	black

Outstanding features:

- using in marine engines
- ABS, BV, GL, DNV, LR, RINA, KR, NK approved

Technical data:

Nominal voltage:	U ₀ /U 300/500 V
Testing voltage:	conductor/conductor 2000 V (AC) conductor/screen 1000 V (AC) conductor/conductor 3000 V (DC) conductor/screen 1500 V (DC)
Min. bending radius	
<i>fixed installation:</i>	5 x O.D.
<i>free movement:</i>	7.5 x O.D.
Radiation resistance:	2 x 10 ⁸ cJ/kg
Temperature range	
<i>static:</i>	-30/+100 °C
<i>flexing:</i>	-5/+100 °C
Burning characteristics:	no flame propagation acc. to IEC 60332 category A and C also flame retardant and self-extinguishing acc. to IEC 60332-1-2 and EN 60332-1-2
Oil resistance:	the outer jacket is oil and diesel resistant
Certificate:	ABS, BV, GL, DNV, LR, RINA, KR, NK
Absence of harmful substances:	acc. to RoHS-guideline 2002/95/EG as well as GefStoffV appendix IV-no. 24, see page M/25

item no.	no. of conductors incl. ground	nominal outer-ø inch	mm	cable weight ≈ lbs/mft
▶ 19 AWG (23/32) • 0.75 mm ²				
07530207	2	0.236 ± 0.012	6.0 ± 0.3	41
07530307	3	0.248 ± 0.012	6.3 ± 0.3	48
07530507	5	0.291 ± 0.012	7.4 ± 0.3	67
07530707	7	0.311 ± 0.016	7.9 ± 0.4	79
07531207	12	0.409 ± 0.020	10.4 ± 0.5	130
07531607	16	0.457 ± 0.020	11.6 ± 0.5	164

item no.	no. of conductors incl. ground	nominal outer-ø inch	mm	cable weight ≈ lbs/mft
▶ 16 AWG (27-29/30) • 1.50 mm ²				
07530215	2	0.272 ± 0.012	6.9 ± 0.3	57
07530315	3	0.283 ± 0.016	7.2 ± 0.4	67
07530515	5	0.343 ± 0.016	8.7 ± 0.4	97
07530715	7	0.374 ± 0.020	9.5 ± 0.5	121

Other dimensions and colors are possible on request.

E-mail: info@sabcable.com



Web site: www.sabcable.com

FLEXIBLE SPECIALITY CABLES

International Certificates for

753 C

ABS
TYPE APPROVAL PROGRAM

CERTIFICATE OF Type Approval
This is to Certify **SAB Brückes GmbH & Co. KG**

00-ES 20669-X 07 June 2005
41749 Viersen, Germany
Electric Connection Cable, screened
07 June 2005

1. Attachment To Certificate No. 00-ES 20669-X

Port of Essen, Germany

Date: 7 June 2005

Name of Equipment's Manufacturer: SAB Brückes GmbH & Co. KG
Greifrather Str. 204-212b
41749 Viersen

Equipment: Electric Connection Cable, screened

Model: 753C

Description: TPE-E(TPE530) Insulation,ETFE(7YM1) Outer Sheath
Tinned copper braided screen

Refuses: Flame retardant according to IEC 60332-3, Cat. C,
300/500 V, 100°C maximum conductor temperature
Max. transfer impedance < 250 mΩ/m at
30 MHz (acc. to HD 21.2, Sect. 2.7)

Intended Services: Electric Equipment Connection Cable for installation
on Diesel engines, turbines, boilers

Comment: Ampacity values are to be, as per ABS Rules 4-8-3,
Table 0 or IE 60092-353.

Standards: 2000 ABS Rules 4-8-3/9.1/9.3/9.5/9.17
4-8-4/21.15
IEC 60332-3C, IEC 60228, IEC 60811, EN 50265-2-1
Manufacturers standard W10TK330 and W10TK910

for 922.02 N. Röß - Süßweg

America

BUREAU VERITAS

Certificate N°: 10285/A0 BV
The official website forms part of the certificate
File Number: ACEI-015701
Product Code: 2501H

MARINE DIVISION
17 Rue des Saussaies - La Défense 2
92400 Courbevoie - France
Tel. 33 1 42 91 33 48
Fax 33 1 42 91 28 54

BUREAU VERITAS

CERTIFICATE OF TYPE APPROVAL

This is to certify that the product identified below was found to be in compliance with the relevant hereunder stated Regulations & standards

INSTRUMENTATION AND COMMUNICATION CABLES
Type : 753C

MANUFACTURED BY: **SAB Brückes GmbH & Co. KG**
Viersen - GERMANY

SPECIFIED REGULATIONS & STANDARDS:
BV Rules and Regulations for the Classification of Ships,
IEC60228, IEC60332-1, IEC60332-3C, IEC60811, EN50265-2-1

The Approval is valid until : 11.08.2005

BUREAU VERITAS HAMBURG At Paris la Défense, on : 11.08.2000

J.BENOIT
For the Secretary

France

DNV

DET NORSKE VERITAS
TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. E-7156
This Certificate consists of 3 pages

This is to certify that the **Low Voltage Cable** with type designation(s) **753 C 300 V**

Manufactured by **SAB Brückes GmbH & Co. KG**
Viersen, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships and Mobile Offshore Units
IEC 60332-3 cat. A
IEC 60332-3 cat. C

Application
Use of this special cable is to be considered in each case.
General power and lighting.
Voltage class (V) 300
Temp. class (°C) 95

Place and date
Havik, 2004-12-02
for DET NORSKE VERITAS AS
Gro E. Paulrud
Eiro Elisabeth Paulrud
Head of Section

This Certificate is valid until 2008-12-31

Local Office DNV Essen
Erik Hoffmann
Surveyor

Notes: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

DET NORSKE VERITAS AS VERTASVERVEN 1, 1322 HENVIK, NORWAY TEL: (+47) 67 87 90 00 FAX: (+47) 67 87 90 11
Form No: 20 00a Issue: January 98 Page 1 of 3

Norway

CERTIFICATO DI OMOLOGAZIONE DI TIPO
N. ELEMBRCS

Si certifica che il seguente prodotto soddisfa alle prescrizioni delle norme RNA per l'omologazione di tipo.

Descrizione: CAVI ELETTRICI
Type: TYPE 753 C
Esecuzione: SAB BRÜCKES SPEZIALKABEL THERMOTECNIK KONFEKTION
D-41749 Viersen - Greifrather Str. 204-212 B (D)
GERMANY
Fabricazione: SAB BRÜCKES SPEZIALKABEL THERMOTECNIK KONFEKTION
D-41749 Viersen - Greifrather Str. 204-212 B (D)
GERMANY
Norme di riferimento: IEC 60092-358

CERTIFICATO DI OMOLOGAZIONE DI TIPO
N. ELEMBRCS
Allegato - Pagina 1/1
TYPE 753 C

Componenti: cavi elettrici per strumentazione, non propaganti fiamma, per impiego a bordo di navi ed offshore.

Tensione nominale: 300/500 V
Temperatura massima di esercizio: 102°C
Tipo: TYPE 753 C
Materie costituenti: TYPE 753 C - 300/500 V - IEC 60332-3A

Costruzione:
Costruzione: cavi di rame allegati IEC 60228 classe B
Isolante: TPE-E (TPE530)
Schedatura: schermatura collettiva con treccia e fili di drenaggio in rame allegati IEC 60332-3 (TPE530)

Numero conduttori:
da 2 a 25 cond. sezione da 0,75 a 1,5 mm²
da 2 a 20 cond. sezione da 2 a 2,5 mm²

Specifiche tecniche di riferimento: SAB W10TK330 in data 05/05/2000, SAB W10TK910 in data 05/05/2000

Normative di riferimento: IEC 60228, IEC 60092-355, IEC 60332-1, IEC 60332-3 cat.A.

Il presente certificato annulla e sostituisce il precedente N.ELE/28100051 datato 21.05.2000.

Genova 3 Aprile 2002

Italy

E-mail: info@sabcable.com



Web site: www.sabcable.com

FLEXIBLE SPECIALITY CABLES

International Certificates for

753 C



NIPPON KAJI KYOKAI

Certificate No.
TA05123M

*Certificate
of
Type Test*

MANUFACTURER: Sab Bröckkes GmbH & Co. KG, Germany
 PRODUCT: Thermoplastic insulated and sheathed connection cable with screen
 TYPE NO.: 753C
 TYPE TEST NO.: 00T816

PARTICULARS:

Conductor	Plain annealed copper
Rated voltage	300/500V
Maximum operating temperature	100°C
Insulation	TPE-E (TPE 530)
Screen/Armour	Tinned copper wire braiding
Outer sheath	ETPE (TYM1)
Standard	IEC60228, IEC60332-1, IEC60332-2-1 Category A, IEC60332-2-2 Category C, IEC60811, EN50265-2-1
Number of cores	Cross-sectional area
2 to 25	0.75mm ² to 1.5mm ²
2 to 20	2.0mm ² to 2.5mm ²

THIS IS TO CERTIFY that the above mentioned product has been approved by the NIPPON KAJI KYOKAI in accordance with the Society's type test requirements for electrical equipment and cables.

This certificate is valid until the 19th day of June, 2008.
 Issued at Tokyo on the 5th day of March, 2005.

S. Ogawa
 General Manager
 Machinery Department

Japan



Type Approval Certificate Extension

This is to certify that Certificate No. 00/2004 (E1) for the undernoted products is extended and renumbered as shown.

This certificate is issued by:

PRODUCER: SAB BRÖCKKES GmbH & Co. KG
 PLACE OF PRODUCTION: Grafmayer Strasse 204 - 212 b, 41749 Viersen, Germany
 DESCRIPTION: Thermoplastic insulated and sheathed connection cable with screen
 TYPE: 753C
 STANDARDS: IEC: 60228 - 2001, IEC: 60332-1 - 2004, EN 50265-1 - 1999, EN 50265-2-1 - 1999 - IEC 60332-1-2 - 2004, IEC 60332-2 Cat. C - 2000, IEC 60332-2-2 Cat. A - 2000, EN 60811 - 1995

APPLICATION: Fixed installation on ships and offshore units for the connection of measuring equipment and sensors in areas with higher ambient temperatures and increased EMC requirements.

"This Certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid certificate."
 The attached Design Approval Document No. ETS 15766 06 and its supplementary Type Approval Terms and Conditions form part of this Certificate.

All other details remain as the previous Certificate No. 00/2004 (E1) to which this extension should be attached.

Certificate No. 00/2004 (E2)
 Issue Date 10 October 2006
 Expiry Date 29 June 2010
 Sheet 1 of 1

Jörg Brüggen
 Hamburg Design Support Centre
 Lloyd's Register EMEA

Lloyd's Register EMEA
 71 Fenchurch Street, London EC3M 4BS

"Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the 'Lloyd's Register Group'. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or for any loss, damage or expense caused by the person for whom it is provided, unless that person has agreed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in this case any responsibility or liability is exclusively on the terms and conditions set out in that contract."

Great Britain

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TYPE APPROVAL CERTIFICATE

형식 승인 증명서

Certificate No. KR19TH0508010001 Date of Approval - 26 August, 2006
 Product: Electric Cable
 Manufacturer: SAB Bröckkes GmbH & Co. KG,
 Leinweber Str. 204-212b, D-41749 Viersen, Germany.

Product Description: Thermoplastic Insulated and Sheathed Connection Cable with Screen
 Type: TPE-E
 Rated Voltage: 300/500V
 Max. Operating Temperature: 100°C
 Number of Core/Outer Diameter: 2 to 25 cores / 0.75 to 2.5mm
 Intended for: Electric Connection Cable for Measuring Transducer and Sensor with Screen
 * Approved by IEC 60228, IEC 60332-1, IEC 60332-2-1, EN 50265-2-1, IEC 60332-2-2 Cat. C

Approval Conditions: Product used as specified.

THIS IS TO CERTIFY that the above mentioned product has been approved in accordance with the minimum requirements of our Society's Rules and/or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approval Certificates".
 In G. Ch. 1, Sec. 1 of the Rules for Classification, Steel Ships.

This Certificate is valid until 26 August, 2010,
 issued at Daejeon, Korea on 19th October, 2005.

Jang Eun
 General Manager
 Classification and Inspection Dept.

Note: 1. This approval will be automatically withdrawn if the Certificate holder fails to comply with the requirements of the Certificate.
 2. Any modification or change of product and/or manufacturer requires the manufacturer's approval.
 3. The manufacturer is responsible for any loss or damage caused by the use of this certificate.

KR 19TH0508010001

Korea

Type Approval Certificate

Germanischer Lloyd

This is to certify that the undernoted product has/have been tested in accordance with the minimum requirements of the UL Type Approval System.

Certificate No. 15 051 - 06 081
 Company: SAB BRÖCKKES GmbH & Co. KG,
 Grafmayer Strasse 204-212 b,
 D-41749 Viersen

Product Description: Thermoplastic insulated and sheathed connection cable with screen
 Type: 753 C

Environmental Category: None
 Technical Data: Rated voltage: 300/500 V
 Maximum operating conductor temperature: 100°C
 Range of Application: Conductor: Platinized or unalloyed strand copper (class 5)
 Insulation: 19µm to 19µm-530
 Screen/Armour: Insulated copper wire braiding
 Outer sheath: ETPE (TYM1)

Application category: 4
 (As direct exposure to fire, heat, and other elements with higher temperatures and increased EMC requirements)

Number of cores: 2 to 25
 2 to 20
 Cross-sectional area: 0.75 mm² to 1.5 mm²
 2.0 mm² and 2.5 mm²

Test Standard: IEC 60228-2004, IEC 60332-1-2-2004, IEC 60332-2-2004 (Cat. A and C); IEC 60332-2-2 Cat. C; EN 50265-1-1999

Document: Test reports: SAB 15TH050801 dated 09.08.2006
 SAB 15TH050801 dated 09.08.2006
 SAB 15TH050801 dated 09.08.2006

Report: None
 Valid until: 2011-04-01
 Page: 1 of 1
 File No.: 14.01
 Hamburg, 2006-04-04

Jörg Brüggen
 Hamburg Design Support Centre
 Lloyd's Register EMEA

This certificate is issued under the terms of the Conditions of Type Approval, Part 1, Paragraph 1.

Germany

