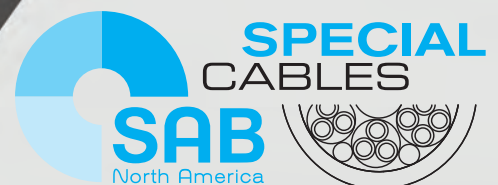


HIGH-VOLTAGE (HV) CABLES

FOR TEST BENCHES AND
AUTONOMOUS & SPECIALTY E-VEHICLES



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866-722-2974 ■ info@sabcable.com



About Us



SAB North America is a focused supplier for the automation, aerospace, medical, high temperature, and robotics industries, providing cable and thermocouple solutions that meet, exceed, and set new standards in the flexible cable market. In addition to flexible cable products, we offer an extensive inventory of high-quality cable accessories, including cord grips, grounding glands and other accessories that complement our flexible control and automation cables.

Whatever the need may be, look to SAB North America for Special Cables that can, for example, help minimize maintenance costs and increase productivity, reduce downtime, and solve specific problems. Here is a small sample of some of the challenges that Special Cables from SAB North America can help address:

- Hybrid designs for multiple functions
- Harsh environments
- Difficult applications
- Industry-specific requirements



For more than 10 years, SAB Bröckskes has been meeting the challenges of developing and optimizing high-voltage cables as well as high-voltage measurement technology for components in electromobility. Many electric vehicles (EV) in agricultural, construction and other specialized applications are using sophisticated, high-voltage electronics to provide greater functionality. The cables at the heart of these systems must be up to the task. They must be able to support higher voltages, withstand harsh conditions, and endure rigorous testing to meet various regulatory requirements. With the HV 1000 C series, SAB has developed new highly robust single-conductor (SC) and multi-conductor (MC) cables for high-voltage wiring in construction, agricultural, and special vehicles.

Cables and connectors used to measure conditions in electric vehicles (EV) and e-mobility systems must be able to handle high voltages while keeping vehicle test personnel and operators safe. The HV measuring cables (DC) and (AC) allow for scoop-proof testing up to 1800 V DC on test benches and test vehicles. Additional cables include B 107 HV cable which is flexible at low temperatures and halogen-free. The B 110 C and B 110 C Sense are halogen-free, silicone-shielded cables with excellent flexibility, flame retardance, good EMC protection and weather resistance.

Additionally, SAB has designed an HV measurement system with HV measuring modules from our partner CSM, which is ideally suited for mobile and stationary use in the field of electromobility (electric vehicles and hybrid vehicles).

SAB's level of speed and service as a supplier is unmatched. SAB lives up to its name in not only flexible cable but also flexible manufacturing.



SAB Advantage...We make it Easy

- Engineering & technical assistance
- Cut to length with no cut charges
- Prepaid freight within US for orders over \$2,500
- Specialty cable designs (1500 ft minimum)
- No minimum on orders from stock
- Free drop shipments (no surcharges)
- 24-hour shipments from stock
- Cord Grips for securing and grounding cables



HV Cables for Agriculture/Construction/Specialty & Autonomous E-Vehicles

Cabin heating, electric compressors and the high-voltage heat pump in electric and hybrid vehicles



High-Voltage Cables

■	HV 1000 C-SC	Flexible high-voltage single conductor cable with overall copper shield	4
■	HV 1000 C-MC	Flexible high-voltage multi-conductor cable with overall copper shield	5

Grounding Cables

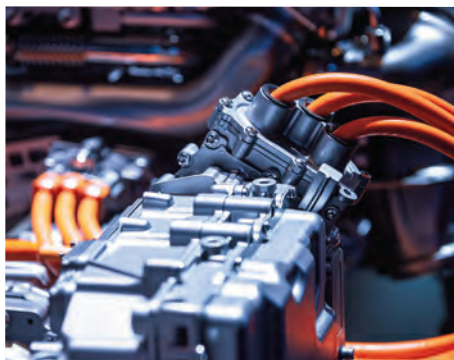
■	S 910 P	Continuous flex TPE/PUR single conductor cable for grounding	6
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Resolver Cables

■	Resolver Cable- 16 AWG/10c	Flexible and robust data cable with colored conductors	7
■	Resolver Cable- 16 AWG/12c	Flexible and robust data cable with black conductors	7

HV Cables for E-Vehicle Test Benches and Test Vehicles

High voltage measuring cable for battery testing of electric vehicles



High-Voltage Cables

■	HV measuring cable (DC)	for DC voltage measurement	8
■	HV measuring cable (AC)	for AC voltage measurement	9
■	B 110 C	Silicone insulated shielded copper rope with overall copper shield	10
■	B 110 C Sense	Halogen-free, high temperature and voltage shielded silicone cable	11
■	B 107 HV	Highly flexible silicone HV single conductor, unshielded	12

HV Measurement Systems

■	CSM Measuring Sensors & Modules	13
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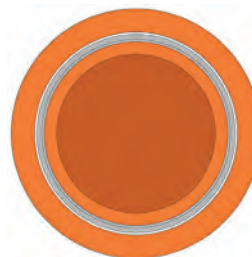
HV 1000 C - SC

Flexible high-voltage single conductor cable with overall copper shield

SKES · D-VIERSEN · HV 1000 C - SC 1x25mm² 39100163 CE

Marking for HV 1000 C SC 39100163:

SAB BRÖCKSKES · D-VIERSEN · HV 1000 C - SC 1x25mm² 39100163 CE



Application: These high-voltage cables can be used in high-voltage applications e.g. in the fields of agricultural vehicles, construction vehicles and special vehicles. The HV 1000 C - SC is used e.g. between inverters and electric motors.

Construction:

Conductor:	bare copper strands, extra fine wires
Insulation:	TPFP
Color code:	orange
Shielding:	alu. foil and tinned copper braiding
Wrapping:	non-woven tape
Jacket material:	TPE-U
Jacket color:	orange (RAL 2003)

Outstanding features:

- extremely high mechanical strength
- high protection against environmental influences
- 100% oil resistance acc. to standard
- application range from -50° to +125°C

Technical data:

Nominal voltage:	Uo/U max. 0.6/1 kV AC/DC
Testing voltage:	conductor/shielding: 5000 V
Min. bending radius:	
fixed installation:	5 x O.D.
free movement:	10 x O.D.
Temperature range:	
static:	-50/+90°C
flexible:	-40/+90°C
short-term use:	+125°C (2,000 h)
Low temperature resistance:	-50°C acc. to DIN EN 60811-506
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
MUD resistance:	very good - acc. to IEC 60992-360, IEC 61892-4 NEK TS 606
Sunlight resistance:	acc. to HD 605
Ozone resistance:	acc. to EN 50396
Salt water resistance:	acc. to UL 1309
Mechanical characteristics:	the main mechanical characteristics accomplished by the TPE-U outer jacket are: - high tensile strength - high tear strength - high abrasion resistance - high notch resistance - high transverse strength
Approvals:	CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	AWG/c	outer-ø		cable weight ≈lbs/mft	ohmic resistance at 20°C max. Ω/km
		max inch	max mm		
▶ 39100140	12 AWG / 1c	0.228	5.8	50	4.950
▶ 39100160	10 AWG / 1c	0.256	6.5	67	3.300
▶ 39100161	8 AWG / 1c	0.346	8.8	116	1.910
▶ 39100162	6 AWG / 1c	0.402	10.2	165	1.210
▶ 39100163	4 AWG / 1c	0.480	12.2	244	0.780
▶ 39100164	2 AWG / 1c	0.567	14.4	340	0.554
▶ 39100165	1 AWG / 1c	0.622	15.8	451	0.386
▶ 39100166	2/0 AWG / 1c	0.717	18.2	605	0.227
▶ 39100167	3/0 AWG / 1c	0.823	20.9	814	0.206

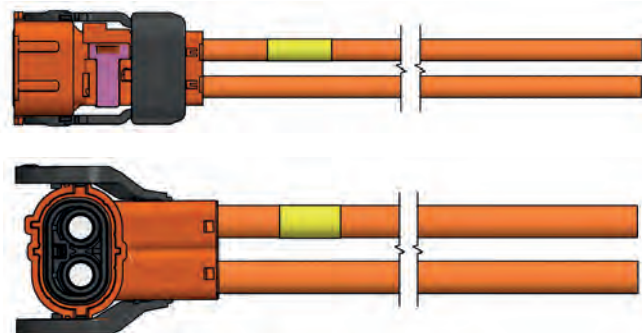
Other dimensions and colors are available on request

Construction, materials and tests with reference to:

- DIN EN 60228
- DIN EN 50525
- DIN EN 50290-2-30
- DIN EN 50620
- DIN EN 60811

In individual cases, the specific application must be agreed with SAB Bröckskes.

Assemblies available:



HV 1000 C - MC

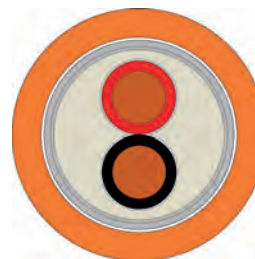
Flexible high-voltage multi-conductor cable with overall copper shield



VIERSEN · HV 1000 C - MC 2x4.0mm² 39100240 CE

Marking for HV 1000 C MC 39100240:

SAB BRÖCKSKES · D-VIERSEN · HV 1000 C - MC 2x4.0mm² 39100240 CE



Application: These high-voltage cables can be used in high-voltage applications e.g. in the fields of agricultural vehicles, construction vehicles and special vehicles. The HV 1000 C - MC is used as a connection cable e.g. for cabin heating, the electric compressor, the high-voltage heat pump in electric and hybrid vehicles.

Construction:

Conductor:	bare copper strands, extra fine wires acc. to IEC 60228, VDE 0295, class 5
Insulation:	TPFP
Color code:	from 2 conductors: red, black from 3 conductors: HD 308 or acc. to customer request
Stranding:	in layers
Inner jacket:	Besilen®
Shielding:	alu. foil and tinned copper braiding
Wrapping:	non-woven tape
Jacket material:	TPE-U
Jacket color:	orange (RAL 2003)

Outstanding features:

- extremely high mechanical strength
- high protection against environmental influences
- 100% oil resistance acc. to standard
- application range from -50° to +125°C

Construction, materials and tests with reference to:

- DIN EN 60228
- DIN EN 50525
- DIN EN 50290-2-30
- DIN EN 50620
- DIN EN 60811

In individual cases, the specific application must be agreed with SAB Bröckskes.

item no.	no. of conductors	outer-ø max inch	outer-ø max mm	cable weight ≈lbs/mft	ohmic resistance at 20°C max. Ω/km
▶ 14 AWG ▪ 2.50 mm ²					
39100225	2	0.390	9.9	99	7.98
39100325	3	0.409	10.4	122	7.98
▶ 12 AWG ▪ 4.0 mm ²					
39100240	2	0.445	11.3	138	4.95
39100340	3	0.476	12.1	169	4.95
▶ 10 AWG ▪ 6.00 mm ²					
39100260	2	0.504	12.8	179	3.10
39100360	3	0.555	14.1	246	3.10
39100460	4	0.594	15.1	291	3.10
39100560	5	0.642	16.3	346	3.10

Other dimensions and colors are available on request

HD 308 Color code:

3c: green/yellow, blue, brown

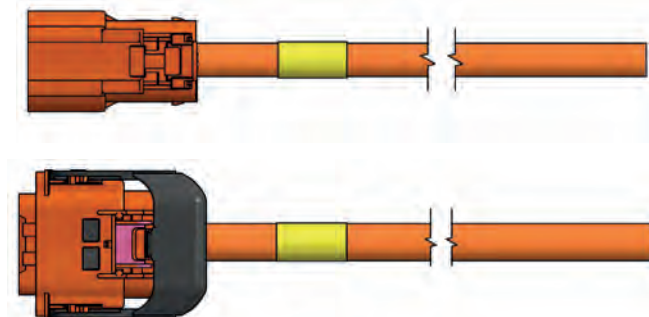
4c: green/yellow, brown, black, gray

5c: green/yellow, blue, brown, black, gray

Technical data:

Nominal voltage:	Uo/U max. 0.6/1 kV AC/DC
Testing voltage:	conductor/conductor: 5000 V conductor/shielding: 5000 V
Min. bending radius:	fixed installation: 5 x O.D. free movement: 10 x O.D.
Temperature range:	static: -50/+90°C flexible: -40/+90°C short-term use: +125°C (2,000 h)
Low temperature resistance:	-50°C acc. to DIN EN 60811-506
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
MUD resistance:	very good - acc. to IEC 60992-360, IEC 61892-4 NEK TS 606
Sunlight resistance:	acc. to HD 605
Ozone resistance:	acc. to EN 50396
Salt water resistance:	acc. to UL 1309
Mechanical characteristics:	the main mechanical characteristics accomplished by the TPE-U outer jacket are: - high tensile strength - high tear strength - high abrasion resistance - high notch resistance - high transverse strength
Approvals:	CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

Assemblies available:



S 910 P

Continuous flex TPE/PUR single conductor cable for grounding



6 80°C 600V CSA AWM I/II A/B 80°C 1000V FT1 FT2 CE

Marking for S 910 P 37681362:

SAB BRÖCKSKES · D-VIERSEN · 37680601 16.0 mm² S 910 P 6 AWG 37681362 AWM Style 10456 80°C 600V CSA AWM I/II A/B 80°C 1000V FT1 FT2 CE

6 80°C 600V CSA AWM I/II A/B 80°C 1000V FT1 FT2 CE

Marking for S 910 P 37681162:

SAB BRÖCKSKES · D-VIERSEN · 37680601 16.0 mm² S 910 P 6 AWG 37681162 AWM Style 10456 80°C 600V CSA AWM I/II A/B 80°C 1000V FT1 FT2 CE

Application: TPE/PUR single conductor with very good flexibility for use in hybrid and battery vehicles for grounding. Grounding helps prevent electrical shocks and damage to equipment between metal components.

Construction:

Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 6
Insulation:	TPE, green-yellow
Wrapping:	non-woven tape
Jacket material:	PUR, TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 with matte surface
Jacket color:	black (RAL 9005)

Outstanding features:

- highly flexible single conductor for use in cable tracks
- good chemical resistance
- high abrasion resistance
- halogen-free

Technical data:

Nominal voltage:	Uo/U 0.6/1 kV
Voltage:	UL: 600 V CSA: 1000V
Min. bending radius: <i>continuously flexing:</i>	7.5 x O.D.
Radiation resistance:	1 x 10 ⁷ cJ/kg
Temperature range: <i>static:</i> <i>flexing:</i>	DIN VDE UL/CSA: up to +80°C -50/+90°C -40/+90°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL VW-1, CSA FT 1, FT 2
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Chemical resistance:	good against acids, alkalines, solvents, hydraulic liquids, etc.
Continuous flexibility:	very good
Approvals:	UR AWM, CSA AWM, CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no. black insulation	item no. green/yellow insulation	no. of conductors n x mm ²	AWG/MCM	outer-ø ±10% inch	outer-ø ±10% mm	cable weight ≈lbs/mft
▶ 37681340	37681140	1 x 4.00	12 (≈ 224/34)	0.260	6.6	46
▶ 37681360	37681160	1 x 6.00	10 (≈ 186/32)	0.295	7.5	63
▶ 37681361	37681161	1 x 10.0	8 (≈ 320/32)	0.331	8.4	93
▶ 37681362	37681162	1 x 16.0	6 (≈ 512/32)	0.390	9.9	138
▶ 37681363	37681163	1 x 25.0	4 (≈ 798/32)	0.437	11.1	199
▶ 37681364	37681164	1 x 35.0	2 (≈ 1083/32)	0.496	12.6	262
▶ 37681365	37681165	1 x 50.0	1 (≈ 703/28)	0.579	14.7	372
▶ 37681366	37681166	1 x 70.0	2/0 (≈ 988/28)	0.669	17.0	518
▶ 37681367	37681167	1 x 95.0	3/0 (≈ 1340/28)	0.803	20.4	688
▶ 37681368	37681168	1 x 120.0	4/0 (≈ 1680/28)	0.906	23.0	886
▶ 37681369	37681169	1 x 150.0	250 MCM (≈ 2122/28)	1.012	25.7	1108
▶ 37681370	37681170	1 x 185.0	350 MCM (≈ 1472/26)	1.087	27.6	1357

Other dimensions and colors are possible on request.

Resolver Cables

Flexible and robust data cable for use on resolver



Marking for 3909696:
SAB BRÖCKSKES · D-VIERSEN · Special Cable
5x2x0.50mm² 3909696 CE



Marking for 3909721:
SAB BRÖCKSKES · D-VIERSEN · Special Cable
6x2x0.50mm² 3909721 CE

Construction:

Conductor:	bare copper strands, extra fine wires, class 6 acc. to IEC 60228
Insulation:	SABIX®
Color code:	3909696: DIN 47100 1 – 10 3909721: black conductors with consecutive numbers 1 - 12
Stranding:	conductors twisted to pairs + optimized twisting of pairs in layers, filler in center
Shielding:	laminated alu. foil with overlap wrapping, tinned copper braiding, optical coverage ≥ 85%
Wrapping:	overlapping non-woven tape
Jacket material:	PUR
Jacket color:	black (similar RAL 9005)

Technical data:

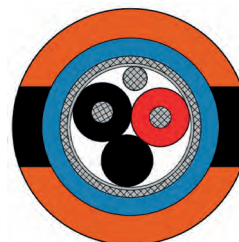
Peak operating voltage:	max. 350 V
Testing voltage:	conductor/conductor: 1500 V conductor/shielding: 1200 V
Min. bending radius:	<i>fixed installation:</i> 5 x O.D. <i>free movement:</i> 10 x O.D.
Temperature range:	<i>static:</i> -50/+90°C <i>flexible:</i> -40/+90°C <i>short-term use:</i> +125°C (2,000 h)
Low temperature resistance:	-50°C acc. to DIN EN 60811-506
Halogen-free:	acc. to IEC 60754-1
Burning characteristics:	acc. to IEC 60332-1-2
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
MUD resistance:	very good - acc. to IEC 60092-360, IEC 61892-4, NEK TS 606
Sunlight resistance:	acc. to HD 605 S1
Ozone resistance:	acc. to DIN EN 50396
Salt water resistance:	acc. to UL 1309
Mechanical characteristics:	the main mechanical characteristics accomplished by the PUR outer jacket are: - high tensile strength - high tear strength - high abrasion resistance - high notch resistance - high transverse strength
Approvals:	CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	AWG/c	conductor-ø		outer-ø		cable weight ≈ lbs/mft	ohmic resistance at 20°C max. Ω/km
		±10% inch	±10% mm	±10% inch	±10% mm		
▶ 3909696	16 AWG/5pr	0.040	1.00	0.256	9.5	70	39.0
▶ 3909721	16 AWG/6pr	0.040	1.00	0.264	9.5	79	39.0

Other dimensions and colors are available on request

HV measuring cable (DC)

High-voltage multi-conductor shielded cable for DC Voltage Measurement, scoop-proof



Marking for HV measuring cable 38339800:

SAB BRÖCKSKES · D-VIERSEN · HV-Messleitung (2x0.25mm²) CE

Application: This high voltage measuring cable is used in the development of electric vehicles where scoop-proof testing & measuring of up to 1800 V DC operating voltage and application in the high voltage environment of electromobility takes place. Examples of applications are HV power electronics, HV batteries, electric motors, inverters, etc. High voltage measuring cables are used on the test benches and in test vehicles.

Construction:

Conductor:	tinned copper strands, extra fine wire
Insulation:	FEP
Color code:	red and black
Stranding:	in layers with tinned copper drain wire, 24 AWG
Shielding:	alu. foil and tinned copper braiding
Inner jacket:	FEP - blue acc. to RAL 5024
Jacket material:	PUR
Jacket color:	orange with black vertical stripes

Outstanding features:

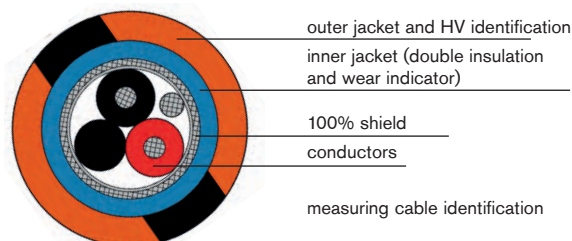
- temperature resistance up to +150°C (up to 3,000 hours)
- high flexibility
- high abrasion resistance
- easy harnessing

Technical data:

Scoop-proof testing voltage:	1000 V DC over the blue inner jacket 5000 V AC over the blue inner jacket
Operating voltage:	U _o 1000 V DC U 1800 V DC
Testing voltage:	conductor/conductor: 5000 V AC conductor/shielding: 5000 V AC
Min. bending radius:	
fixed installation:	5 x O.D.
free movement:	10 x O.D.
Temperature range:	
static:	-50/+125°C
flexible:	-40/+125°C
short-term use:	+150°C (3,000 h)
Approvals:	CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	AWG/c	outer-ø inch	outer-ø mm	cable weight ≈lbs/mft	ohmic resistance at 20°C max. Ω/km
▶ 38339800	24 AWG/2c	0.256	6.5	39	80.0
▶ 38339819	22 AWG/2c	0.264	6.7	42	58.8
▶ 38339801	20 AWG/2c	0.280	7.1	47	40.1
▶ 38339802	18 AWG/2c	0.307	7.8	60	20.0
▶ 38339803	16 AWG/2c	0.331	8.4	763	13.7

Other dimensions and colors are available on request



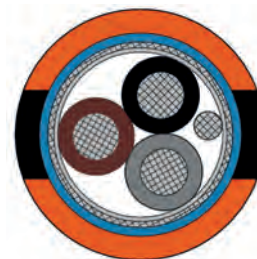
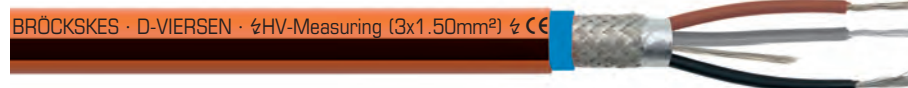
Possible on request:

As harnessed measuring cable with connected lab plugs to collect the voltage at HV components



HV measuring cable (AC)

High-voltage multi-conductor shielded cable for AC voltage measurement, scoop-proof



Marking for HV connecting cable 38339813:

SAB BRÖCKSKES · D-VIERSEN · HV-Messleitung (3x1.50mm²) CE

Application: The high voltage measuring cable is used in the development of electric vehicles where scoop-proof testing and measuring of up to 1800 V DC operating voltage and application in the HV environment of electromobility take place. Examples of applications are HV power electronics, HV batteries, electric motors, inverters, etc. High voltage measuring cables are used on the test benches and in test vehicles.

Construction:

Conductor:	tinned copper strands, extra fine wire
Insulation:	FEP
Color code:	brown, black, gray
Stranding:	in layers with tinned copper drain wire, 24 AWG
Shielding:	alu. foil and tinned copper braiding
Inner jacket:	FEP - blue acc. to RAL 5024
Jacket material:	PUR
Jacket color:	orange with black vertical stripes

Outstanding features:

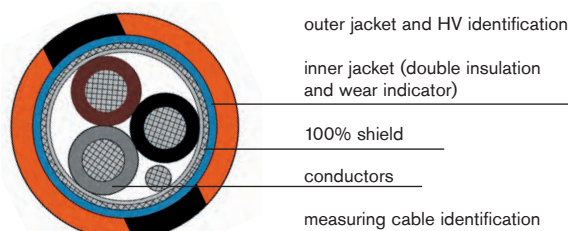
- temperature resistance up to +150°C (up to 3,000 hours)
- high flexibility
- high abrasion resistance
- easy harnessing

Technical data:

Scoop-proof testing voltage:	1000 V DC over the blue inner jacket 5000 V AC over the blue inner jacket
Operating voltage:	conductor/conductor: 1800 V DC conductor/conductor: 1000 V AC
Testing voltage:	conductor/conductor: 5000 V AC conductor/shielding: 5000 V AC
Min. bending radius: <i>fixed installation:</i> <i>free movement:</i>	5 x O.D. 10 x O.D.
Temperature range: <i>static:</i> <i>flexible:</i> <i>short-term use:</i>	-50/+125°C -40/+125°C +150°C (3,000 h)
Temperature range of conductors:	up to +180°C (short-term use up to + 205°C)
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Approvals:	CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	AWG/c	outer-ø inch	outer-ø mm	cable weight ≈lbs/mft	ohmic resistance at 20°C max. Ω/km
▶ 38339820	24 AWG/3c	0.268	6.8	44	80.0
▶ 38339816	22 AWG/3c	0.276	7.0	48	58.8
▶ 38339815	20 AWG/3c	0.291	7.4	54	40.1
▶ 38339814	18 AWG/3c	0.319	8.1	71	20.0
▶ 38339813	16 AWG/3c	0.346	8.8	87	13.7

Other dimensions and colors are available on request



Possible on request:

As harnessed measuring cable with connected lab plugs to collect the voltage at HV components



B 110 C

Silicone insulated shielded copper rope with overall copper shield



style 30123 AWM I/II A/B 150°C 3000V FT1 FT2



Marking for B 110 C 1109507:

SAB BRÜCKSKES · D-VIERSEN · B 110 C Uo/U 1.8/3.0 kV 95.0mm² cULus AWM Style 30123 AWM I/II A/B 150°C 3000V FT1 FT2

Application: The connection cable is for example appropriate to connect converters to electric-mobility test benches. Due to the high voltage rating, the cable can be used for various components and power electronics. The extremely flexible cable design enables an easy laying.

Construction:

Conductor:	bare copper strands, extra fine wires
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1, orange
Shielding:	alu. foil and tinned copper braiding
Jacket material:	Besilen® EM9 acc. to EN 50363-2-1 + VDE 0207-363-2-1
Jacket color:	orange (similar RAL 2004)

Outstanding features:

- extremely flexible
- halogen-free
- good EMC characteristics
- flexible at low temperatures
- heat resistant
- flame retardant and self-extinguishing
- weather resistant
- cULus recognized

Technical data:

Nominal voltage:	Uo/U 1.8/3.0 kV AC Uo/U 2.7/5.4 kV DC
Voltage cULus:	3000 V
Testing voltage:	6500 V
Current carrying capacity:	acc. to VDE 0298-4, see page O20 & O21
Min. bending radius:	
fixed installation:	3 x O.D.
free movement:	6 x O.D.
Temperature range:	DIN VDE: cULus: up to +150°C static: -40/+180°C flexible: -25/+180°C short-term use: +250°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 cULus FT1, FT2
Corrosivity:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Approvals:	cULus AWM, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	mm ²	AWG	ø over inner jacket approx.		outer-ø		cable weight ≈ lbs/mft
			inch	mm	±10% inch	±10% mm	
▶ 1100107	1.00	18	0.169	4.3	0.299	7.6	47
▶ 1100157	1.50	16	0.185	4.7	0.315	8.0	54
▶ 1100257	2.50	14	0.205	5.2	0.335	8.5	65
▶ 1100407	4.00	12 (≈ 224/34)	0.232	5.9	0.358	9.1	66
▶ 1100607	6.00	10 (≈ 186/32)	0.248	6.3	0.378	9.6	96
▶ 1101007	10	8 (≈ 320/32)	0.323	8.2	0.461	11.7	149
▶ 1101607	16	6 (≈ 504/32)	0.335	8.5	0.472	12.0	183
▶ 1102507	25	4 (≈ 760/32)	0.441	11.2	0.579	14.7	280
▶ 1103507	35	2 (≈ 1083/32)	0.496	12.6	0.642	16.3	368
▶ 1105007	50	1 (≈ 703/28)	0.571	14.5	0.717	18.2	487
▶ 1107007	70	2/0 (≈ 988/28)	0.650	16.5	0.803	20.4	641
▶ 1109507	95	3/0 (≈ 1340/28)	0.724	18.4	0.878	22.3	836
▶ 1101207	120	4/0 (≈ 1680/28)	0.791	20.1	0.953	24.2	1017
▶ 1101507	150	250 MCM (≈ 2122/28)	0.917	23.3	1.079	27.4	1258
▶ 1101857	185	350 MCM (≈ 1472/26)	0.980	24.9	1.150	29.2	1499
▶ 1102407	240	450 MCM	1.083	27.5	1.260	32.0	1909
▶ 1103007	300	550 MCM	1.181	30.0	1.366	34.7	2254

Other dimensions and colors are available on request



B 110 C Sense Cable

Halogen-free, high temperature and voltage shielded silicone cable



cULus AWM Style 4659 AWM I/II A/B 150°C 3000V FT1 FT2

Marking for B 110 C Sense Cable 1109001:

SAB BRÖCKSKES · D-VIERSEN · B 110 C Sense Cable 2x1.0mm² 1109001 cULus AWM Style 4659 AWM I/II A/B 150°C 3000V FT1 FT2

Application: Sensor cable is required to check and monitor the transferred power of the B 110 C on test benches.

Construction:

Conductor:	bare copper strands, extra fine wires
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Color code:	black and red
Stranding:	conductor twisted with tinned copper drain wire, AWG 26
Shield:	alu. foil and tinned copper braiding
Jacket material:	Besilen® EM9 acc. to EN 50363-2-1 + VDE 0207-363-2-1
Jacket color:	orange (similar RAL 2004)

Outstanding features:

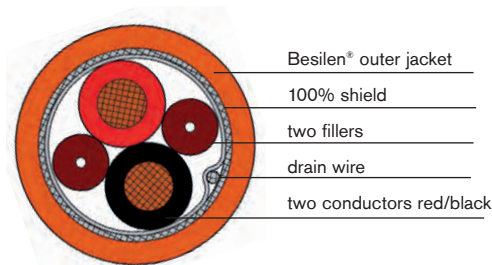
- extremely flexible
- good EMC characteristics
- halogen-free
- heat resistant
- flexible at low temperatures
- flame retardant and self-extinguishing
- weather resistant
- cULus recognized

Technical data:

Nominal voltage:	U _o /U 1.8/3.0 kV AC U _o /U 2.7/5.4 kV DC
Voltage cULus:	3000 V
Testing voltage:	4000 V
Current carrying capacity:	acc. to VDE 0298-4, see page O20 & O21
Min. bending radius:	
fixed installation:	6 x O.D.
free movement:	10 x O.D.
Temperature range:	DIN VDE: cULus: up to +150°C static: -40/+180°C flexible: -25/+180°C short-term use: +250°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 cULus FT1, FT2
Corrosivity:	IEC 60754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Approvals:	cULus AWM, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	mm ²	AWG	outer-ø		cable weight ≈ lbs/mft	ohmic resistance at 20 °C max. Ω/km
			approx inch	max mm		
▶ 1109006	0.25	24 AWG/2c	0.402	10.2	75	80.0
▶ 1109007	0.34	22 AWG/2c	0.417	10.6	87	58.8
▶ 1109008	0.50	20 AWG/2c	0.437	11.1	95	39.0
▶ 1109001	1.00	18 AWG/2c	0.476	12.1	114	20.0
▶ 1109002	1.50	16 AWG/2c	0.508	12.9	133	13.3
▶ 1109003	2.50	14 AWG/2c	0.547	13.9	160	7.98
▶ 1109004	4.00	12 AWG/2c	0.602	15.3	200	4.95
▶ 1109005	6.00	10 AWG/2c	0.642	16.3	245	3.30

Other dimensions and colors are available on request



Possible on request:
As harnessed measuring cable
with connected lab plugs
to collect the voltage at HV components

B 107 HV

Highly flexible silicone HV single conductor, unshielded, cULus recognized



mm² cULus AWM Style 30122 AWM I A/B 150°C 3000V FT2



Marking for B 107 HV 1079507:

SAB BRÖCKSKES · D-VIERSEN · B 107 Uo/U 1.8/3.0 kV 95.0mm² cULus AWM Style 30122 AWM I A/B 150°C 3000V FT2

Application: The highly flexible single core is particularly appropriate for the application on electric test benches. Due to the fine stranding and the resulting flexibility, the cable can be installed easily. The high voltage single core is designed for a voltage range up to 1.8/3 kV. In this way it fulfills the increasing demands within the voltage class.

Construction:

Conductor:	bare copper strands, extra fine wires
Insulation:	Besilen® EI2 acc. to EN 50363-1 + VDE 0207-363-1
Color:	orange (similar RAL 2004)

Outstanding features:

- extremely flexible
- halogen-free
- heat resistant
- flexible at low temperatures
- flame retardant and self-extinguishing
- weather resistant
- cULus recognized

Technical data:

Nominal voltage:	Uo/U 1.8/3.0 kV AC Uo/U 2.7/5.4 kV DC
Voltage cULus:	3000 V
Testing voltage:	6500 V
Current carrying capacity:	acc. to VDE 0298-4, see page O20 & O21
Min. bending radius:	5 x O.D.
Temperature range:	DIN VDE: cULus: up to +150°C <i>static:</i> -40/+180°C <i>flexible:</i> -25/+180°C <i>short-term use:</i> up to 250°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 cULus FT1, FT2
Corrosivity:	IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Weather resistance:	very good
Approvals:	cULus AWM, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	mm ²	AWG	outer-ø		cable weight ≈ lbs/mft
			inch	mm	
▶ 1070107	1.00	18	0.169	4.3	17
▶ 1070157	1.50	16 (≈ 84/34)	0.185	4.7	21
▶ 1070257	2.50	14 (≈ 140/34)	0.205	5.2	29
▶ 1070407	4.00	12 (≈ 224/34)	0.248	6.3	40
▶ 1070607	6.00	10 (≈ 186/32)	0.248	6.3	49
▶ 1071007	10.00	8 (≈ 320/32)	0.354	9.0	97
▶ 1071607	16.00	6 (≈ 504/32)	0.366	9.3	130
▶ 1072507	25.00	4 (≈ 760/32)	0.472	12.0	212
▶ 1073507	35.00	2 (≈ 1083/32)	0.543	13.8	290
▶ 1075007	50.00	1 (≈ 703/28)	0.618	15.7	397
▶ 1077007	70.00	2/0 (≈ 988/28)	0.697	17.7	522
▶ 1079507	95.00	3/0 (≈ 1340/28)	0.740	18.8	694
▶ 1071207	120.00	4/0 (≈ 1680/28)	0.807	20.5	860
▶ 1071507	150.00	250 MCM (≈ 2122/28)	0.933	23.7	1076
▶ 1071857	185.00	350 MCM (≈ 1472/26)	0.996	25.3	1301
▶ 1072407	240.00	450 MCM	1.098	27.9	1686
▶ 1073007	300.00	550 MCM	1.213	30.8	2018

Other dimensions and colors are available on request

SAB Cable Assemblies & CSM HV Measuring Modules

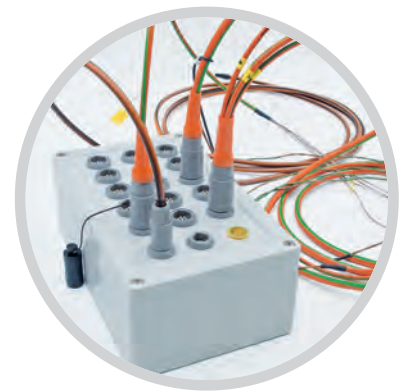


A safe and precise measurement of temperatures (thermocouples and PT sensors) and analog signals can be achieved by using CSM HV measuring modules in high-voltage environments. CSM HV measuring modules offer reliable modules tested to DIN EN 61010 ensuring the upmost safety. Due to the multi-level safety concept, a measuring chain can be set up between the sensor and data collection point by special sensor cables and HV measuring modules. In addition, standard sensors for LV environments can be used for HV applications.

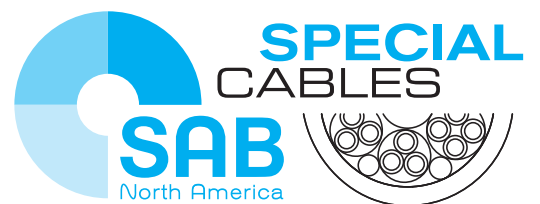
The measuring modules are appropriate for use in road tests or for test benches as 19" insert module.



For more information, please see www.csm.de



For more information, see our
E-mobility- High Voltage
Measurement Technology
Brochure



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