

CABLES & ACCESSORIES FOR WIND TURBINES



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SPECIAL
CABLES
SAB
North America



SAB North America

About Us



SAB North America is a focused supplier for the automation, aerospace, food and beverage, 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:

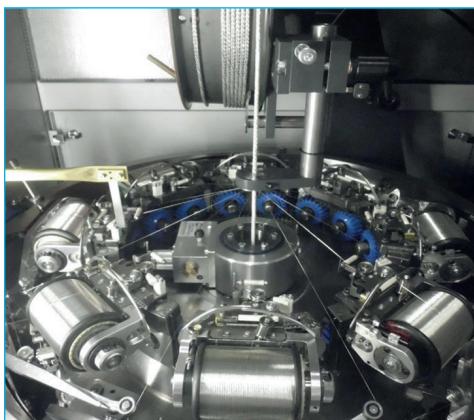
- Hybrid designs for multiple functions
- Harsh environments
- Difficult applications
- Industry-specific requirements



SAB industrial flexible, continuous flex, and torsion cables are designed to withstand a variety of harsh environmental factors, including abrasion, humidity, vibration, extreme temperatures, oil exposure, and electromagnetic interference. SAB's TR 600 is a WTTC rated, Oil Res I & II rated cable for use in the drip loop in the tower and nacelle of wind turbines. CC 600 is a flexible UL/CSA rated oil resistant control cable which can be used between the Yaw drives, cabinet, gear box, and generator in the nacelle. Liquid tight, impact resistant cord grips can be used to secure and shield the cable connections. SAB can design a custom/hybrid cable to meet exact project requirements.

Whether you're a valued distribution partner, an automation house, an integrator, or a contractor, rest assured that our cables are reliable to maximize production efficiencies. SAB brings world class performance & 75 years of ingenuity to the table.

SAB's level of speed and service as a supplier is unmatched.



SAB Advantage...We make it Easy

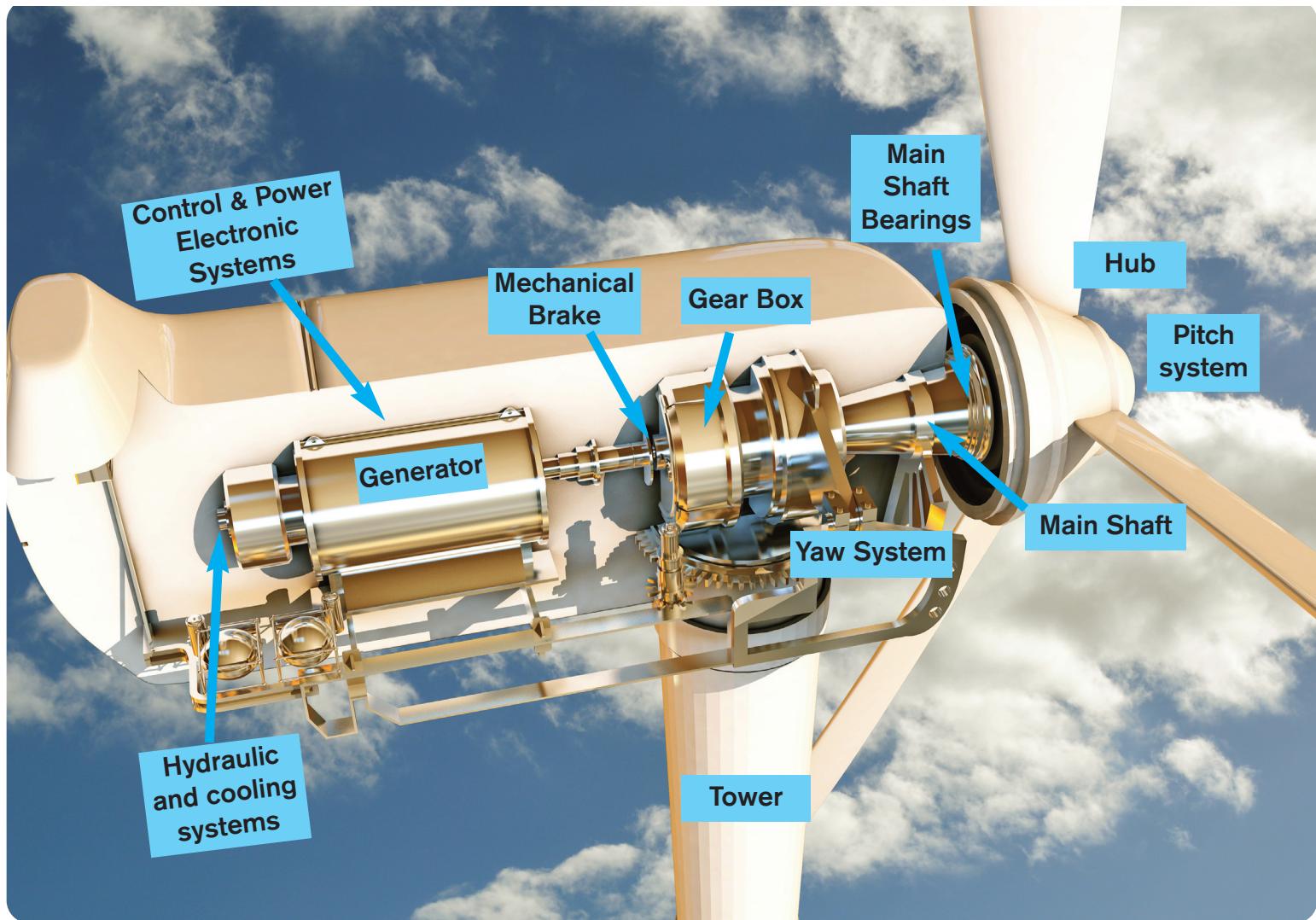
- Engineering & technical assistance
- Cut to length with no cut charges
- Prepaid freight within US for orders over \$2,500
- Specialty cable designs (1500 ft minimum)
- No minimum on orders from stock
- Free drop shipments (no surcharges)
- 24-hour shipments from stock
- Cord Grips for securing and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

Cables & Accessories for Wind Turbines

	page	
■ Production Possibilities	6	
SAB Control		
Control Cables for Nacelle		
■ CC 600	Oil Resistant 90°C flexible control cable	7
■ CC 600 CY	Oil Resistant 90°C flexible shielded control cable	8
■ CC 600 P	Oil resistant, tear resistant, flexible polyurethane control cable	9
■ CC 600 CP	Oil resistant, tear resistant, shielded flexible polyurethane control cable	10
■ SABIX® A 147 FRNC	Wiring cable 600 V	11
■ SABIX® A 157 FRNC	Wiring cable 1000 V	12
■ SABIX® CC 625 FRNC M	Control cable with numbered conductors	13
■ SABIX® CC 625 S FRNC M	Control cable with numbered conductors and overall tinned copper shield	14
SAB Data		
Data & Sensors Cables for Pitch & Blades		
■ DC 105	Semi-rigid PVC data cable, Type PLTC, ITC, and CMG	16
■ DC 105 C	Shielded semi-rigid PVC data cable, Type PLTC, ITC, and CMG	17
■ DC 105 C TP	Shielded, semi-rigid, twisted pair, PVC data cable, Type PLTC, ITC, and CMG	18
■ DC 300 DC	Multi-conductor double shielded PVC signal and control cable, Type AWM	19
■ DC 300 DS TP	Multi-pair double shielded PVC signal and control cable, Type AWM	20
■ SD 960	Continuous flex data cable for small bending radius	21
■ SD 960 CY	Continuous flex data cable for small bending radius	22
■ SD 200 C TP	Continuous flex halogen-free twisted pairs shielded polyurethane data cable with extreme temperature range	23
■ SRY D 321 C	Semi rigid PVC data cable with overall copper shield	24
■ SRY D 351 C (B) TP	Semi rigid PVC data cable, twisted pairs with overall copper shield	25
■ Data/POF	POF-LWL and hybrid cables for data transmission	26
■ Sensor Cable	Continuously flexible TPE/PUR data cable with colored conductors	28
SAB CATLine		
Ethernet Cables for Nacelle		
■ CATLine CAT 6S/6A S	Gigabit Ethernet cable suitable for cable tracks, suitable for robots	30
■ CATLine CAT 7A S	Gigabit Ethernet cable suitable for cable tracks	31
SAB Servo		
Servo Cables for Pitch Drive Systems		
■ SL 839 C	Composite PUR transmission cable with overall tinned copper shield	32
■ SL 841 C	TPE motor connection cable with 1 or 2 pairs and overall tinned copper shield	33
■ Generator Connection Cable	Silicone impregnated fiber-glass braiding	34
Shielding Cord Grips for Wind Turbine		
■ CG EMC-4	Nickel plated brass EMC cable gland, vibration proof, Metric, PG or NPT threads	35
Tower & Drip Loop Cables		
■ TR 600 S	UV and oil resistant 90°C flexible tray cable Type TC-ER, MTW, WTTC, and CSA approved	36
■ TR 600 S CY	UV and oil resistant 90°C shielded flexible tray cable Type TC-ER, MTW, WTTC, and CSA approved	37
■ H07RN-F	HAR Heavy duty neoprene jacketed harmonized cordage 450/750 V	38
■ Cord Grip Overview	39

Cables & Accessories for Wind Turbines

SAB industrial flexible, continuous flex, and torsion cables are designed to withstand a variety of harsh environmental factors, including abrasion, humidity, vibration, extreme temperatures, oil exposure, and electromagnetic interference.



Control Cables:

CC 600 is a flexible UL/CSA rated oil resistant control cable which can be used between the Yaw drives, cabinet, gear box, and generator in the nacelle.

Data & Sensor Cables:

Highly flexible sensor and data cables for the transmission of measured values to control of the yaw mechanism and blade pitch to maximize wind energy. The highly flexible construction makes the cable resistant against the existing vibration of the rotor system.

Motor Cables

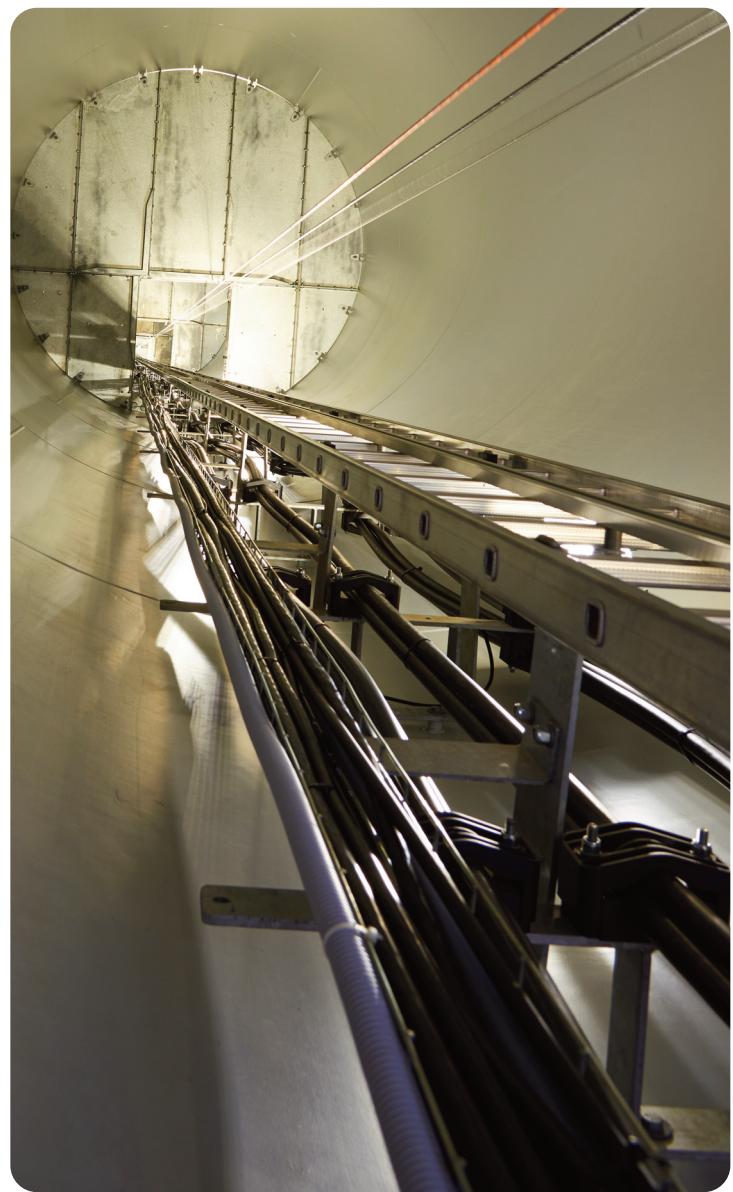
Motor connection for pitch drive systems which adjust the angle of wind turbine blades

Tray Cables

TR 600 is a WTTC rated, Oil Res I & II rated cable for use in the drip loop in the tower and nacelle of wind turbines.



Cables & Accessories for Wind Turbines



Cables & Accessories for Wind Turbines

Production possibilities

Flexible cables and wires "Made in Germany"

As a leading manufacturer we develop and produce cables for industrial purposes.

Our wide range of materials offer a lot of possibilities for your individual product requirement.

The following survey shows an extract of our production possibilities:

Conductor Materials: Insulation and Jacketing Materials: Temperature Ranges:

- ✓ bare copper
- ✓ tinned copper
- ✓ silver plated copper
- ✓ nickel plated copper
- ✓ nickel
- ✓ nickel pure
- ✓ compensating cable alloys

Insulation and Jacketing Materials:

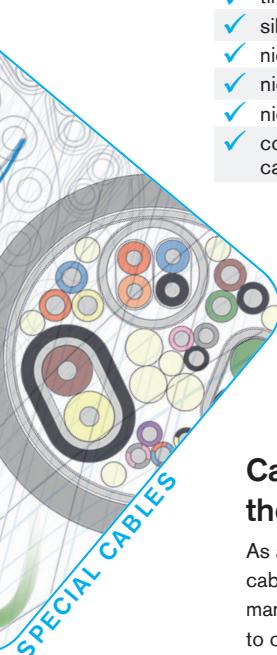
- ✓ PVC
- ✓ Polyethylene
- ✓ Polypropylene
- ✓ Polyurethane
- ✓ TPE
- ✓ SABIX® (zero halogen)
- ✓ Besilen® - Silicone
- ✓ FEP, ETFE, PFA, PTFE
- ✓ PI foil
- ✓ Fiberglass

Temperature Ranges:

- Thermoplastic Elastomers
- ✓ -50°C up to +145°C
- SABIX®
- ✓ -50°C up to +220°C
- Besilen® - Silicone
- ✓ -40°C up to +220°C
- FEP, ETFE, PFA
- ✓ -90°C up to +260°C
- Fiberglass
- ✓ up to +600°C

Conductors:

- ✓ cross sections 0.055 - 300 mm²
- ✓ unshielded and shielded over 100 conductors



Cable assemblies directly from the manufacturer SAB:

As a full service partner, we are able to offer cable design and production as well as the manufacturing of cable assemblies according to customer's request. Please trust on our experience for decades in the treatment of cables and connectors.

- ✓ cable assemblies according to customer's demands
- ✓ complete cable assemblies
- ✓ UL certified assemblies
- ✓ helix cables
- ✓ HV measuring assemblies



Measuring technology for industrial applications

Manufacturer of temperature sensors for industrial applications with 75 years of experience!

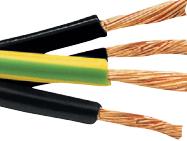
Control Cables for Nacelle

CC 600

Oil Resistant 90°C flexible control cable with black conductors



90°C Oil 60°C 600V CSA AWM I/II A/B 90°C F 600V FT1 FT2 CE



Marking for CC 600 2041604:

SAB BRÖCKSKES · D-VIERSEN · <VDE-REG 7000> 4x1.5mm² CC 600 16 AWG/4c 2041604 UL AWM Style 21216 90°C Oil 60°C 600V CSA AWM I/II A/B 90°C F 600V FT1 FT2 CE

Construction:

Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	special PVC acc. to VDE and UL/CSA
Color code:	black conductors with consecutive numbers acc. to EN 50334 + VDE 0293-334, green/yellow ground from 3 conductors
Stranding:	in layers
Jacket material:	special oil resistant PVC acc. to VDE and UL/CSA
Jacket color:	gray (RAL 7000)

Outstanding features:

- UL recognized, CSA approved
- high mechanical loading capacity
- oil resistant
- acc. to VDE-Reg. no. 7000

Technical data:

Nominal voltage:	Uo/U 300/500 V
Voltage UL/CSA:	600 V
Testing voltage:	conductor/conductor: 3000 V
Min. bending radius:	
fixed installation:	4 x O.D.
free movement:	6 x O.D.
Radiation resistance:	8 x 10 ⁷ cJ/kg
Temperature range:	DIN VDE static: -40/+70°C flexible: +5/+70°C
UL/CSA: up to +90°C	
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL VW-1, CSA FT1, FT2
Oil resistance:	very good - TM5 acc. to EN 50363-4-1 + VDE 0207-363-4-1, Oil 60°C acc. to UL 758, Fuel Oil acc. to CSA-C 22.2 No. 210
Chemical resistance:	see page O/11
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.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
▶ 20 AWG (≈ 16/32) • 0.50 mm²				
2042002	2	0.209	5.3	28
2042003	3	0.220	5.6	32
2042004	4	0.236	6.0	38
2042005	5	0.264	6.7	47
2042007	7	0.283	7.2	58
2042008	8	0.335	8.5	73
2042009	9	0.362	9.2	84
2042010	10	0.370	9.4	85
2042012	12	0.382	9.7	96
2042014	14	0.398	10.1	108
2042016	16	0.429	10.9	125
2042018	18	0.449	11.4	138
2042025	25	0.547	13.9	189
2042034	34	0.614	15.6	249
2042041	41	0.665	16.9	287
2042061	61	0.780	19.8	422
▶ 18 AWG (≈ 30/32) • 1.00 mm²				
2041802	2	0.236	6.0	37
2041803	3	0.252	6.4	46
2041804	4	0.276	7.0	55
2041805	5	0.307	7.8	69
2041807	7	0.335	8.5	86
2041809	9	0.425	10.8	122
2041810	10	0.433	11.0	125
2041812	12	0.445	11.3	142
2041814	14	0.476	12.1	165
2041815	15	0.500	12.7	180
2041818	18	0.535	13.6	209
2041825	25	0.646	16.4	285
2041834	34	0.728	18.5	376
2041841	41	0.783	19.9	434
2041850	50	0.882	22.4	533
2041861	61	0.933	23.7	649

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
▶ 16 AWG (≈ 27-29/30) • 1.50 mm²				
2041602	2	0.264	6.7	48
2041603	3	0.280	7.1	58
2041604	4	0.311	7.9	73
2041605	5	0.339	8.6	88
2041607	7	0.378	9.6	115
2041608	8	0.441	11.2	140
2041609	9	0.480	12.2	162
2041610	10	0.488	12.4	165
2041612	12	0.504	12.8	189
2041615	15	0.563	14.3	229
2041618	18	0.602	15.3	277
2041625	25	0.728	18.5	382
2041630	30	0.760	19.3	448
2041634	34	0.827	21.0	511
2041641	41	0.902	22.9	597
2041650	50	0.980	24.9	714
2041661	61	1.051	26.7	880
▶ 14 AWG (≈ 46/30) • 2.50 mm²				
2041402	2	0.319	8.1	73
2041403	3	0.339	8.6	89
2041404	4	0.374	9.5	112
2041405	5	0.417	10.6	140
2041407	7	0.457	11.6	177
2041409	9	0.587	14.9	267
2041412	12	0.618	15.7	296
2041418	18	0.736	18.7	432
2041425	25	0.909	23.1	607

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
▶ 12 AWG (≈ 52/28) • 4.00 mm²				
2041203	3	0.402	10.2	132
2041204	4	0.445	11.3	165
2041205	5	0.496	12.6	204
2041207	7	0.547	13.9	267
2041212	12	0.740	18.8	447
▶ 10 AWG (≈ 78/28) • 6.00 mm²				
2041003	3	0.476	12.1	191
2041004	4	0.520	13.2	236
2041005	5	0.587	14.9	296
2041007	7	0.669	17.0	403
▶ 8 AWG (≈ 69/26)				
2040803	3	0.618	15.7	333
2040804	4	0.689	17.5	411
2040805	5	0.768	19.5	503
▶ 6 AWG (≈ 110/26)				
2040604	4	0.839	21.3	632
2040605	5	0.945	24.0	799
▶ 4 AWG (≈ 175/26)				
2040404	4	1.043	26.5	985
▶ 2 AWG (≈ 272/26)				
2040204	4	1.197	30.4	1349
▶ 1 AWG (≈ 342/26)				
2040104	4	1.374	34.9	1902

Other dimensions and colors are available on request

Control Cables for Nacelle

CC 600 CY

Oil Resistant 90°C flexible shielded control cable



Marking for CC 600 CY 2591804:

SAB BRÖCKSKES · D-VIERSEN · <VDE-REG 7000> 4x1.0mm² CC 600 CY 18 AWG/4c 2591804 AWM Style 21216 90°C 600V Oil 60°C CSA AWM I/II A/B 90°C F 600V FT1 FT2



Construction:

Conductor:	bare copper strands
AWG 20 - 10:	acc. to IEC 60228, VDE 0295, class 5
AWG 8 - 1:	bare copper strands acc. to UL/CSA
Insulation:	special PVC acc. to VDE and UL/CSA
Color code:	black conductors with consecutive numbers acc. to EN 50334 + VDE 0293-334, green/yellow ground from 3 conductors
Stranding:	in layers
Inner Jacket:	special PVC acc. to VDE and UL/CSA
Shielding:	tinned copper braiding
Jacket material:	special oil resistant PVC acc. to VDE and UL/CSA
Jacket color:	gray (RAL 7000)

Outstanding features:

- UL recognized, CSA approved
- high mechanical loading capacity
- oil resistant
- AWG 20 - AWG 10:
built acc. to VDE-Reg. no. 7000

Technical data:

Nominal voltage:	Uo/U 300/500 V
Voltage UL/CSA:	600 V
Testing voltage:	conductor/conductor: 3000 V conductor/shielding: 2000 V
Min. bending radius:	5 x O.D. 10 x O.D.
Radiation resistance:	5 x 10 ⁷ cJ/kg
Temperature range:	DIN VDE UL/CSA: up to +90°C static: -40/+70°C flexible: +5/+70°C
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL VW-1, CSA FT1, FT2
Oil resistance:	very good - TM5 acc. to DIN VDE 0281 part 1 + HD 21.1, Oil 60°C acc. to UL 758, Fuel Oil acc. to CSA-C 22.2 No. 210
Chemical resistance:	see page O/11
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.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 20 AWG (≈ 16/32) • 0.50 mm²				
2592002	2	0.291	7.4	55
2592003	3	0.311	7.9	64
2592004	4	0.331	8.4	73
2592005	5	0.358	9.1	85
2592007	7	0.378	9.6	98
2592010	10	0.469	11.9	148
2592012	12	0.492	12.5	163
2592025	25	0.657	16.7	288
► 18 AWG (≈ 30/32) • 1.0 mm²				
2591802	2	0.327	8.3	71
2591803	3	0.339	8.6	79
2591804	4	0.370	9.4	95
2591805	5	0.402	10.2	117
2591807	7	0.437	11.1	140
2591809	9	0.535	13.6	195
2591812	12	0.555	14.1	218
2591818	18	0.642	16.3	310
2591825	25	0.772	19.6	411

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 16 AWG (≈ 27-29/30) • 1.50 mm²				
2591602	2	0.358	9.1	87
2591603	3	0.374	9.5	98
2591604	4	0.406	10.3	122
2591605	5	0.433	11.0	144
2591607	7	0.480	12.2	176
2591612	12	0.614	15.6	274
2591618	18	0.724	18.4	394
2591625	25	0.878	22.3	548
► 14 AWG (≈ 46/30) • 2.50 mm²				
2591403	3	0.441	11.2	144
2591404	4	0.476	12.1	172
2591405	5	0.520	13.2	206
2591407	7	0.567	14.4	256
2591412	12	0.744	18.9	418
2591418	18	0.874	22.2	585
2591425	25	1.028	26.1	773

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 12 AWG (≈ 52/28) • 4.00 mm²				
2591203	3	0.512	13.0	201
2591204	4	0.555	14.1	243
2591205	5	0.602	15.3	285
2591207	7	0.665	16.9	372
► 10 AWG (≈ 78/28) • 6.00 mm²				
2591003	3	0.587	14.9	273
2591004	4	0.630	16.0	323
2591005	5	0.705	17.9	406
2591007	7	0.772	19.6	511
► 8 AWG (≈ 69/26)				
2590804	4	0.807	20.5	531
► 6 AWG (≈ 110/26)				
2590604	4	0.957	24.3	746
► 4 AWG (≈ 175/26)				
2590404	4	1.157	29.4	1144
► 2 AWG (≈ 272/26)				
2590204	4	1.346	34.2	1564
► 1 AWG (≈ 342/26)				
2590104	4	1.441	36.6	1882

Other dimensions and colors are available on request

also available with blue, red or orange conductors and black or orange jacket



Control Cables for Nacelle

CC 600 P

Oil resistant, tear resistant, flexible polyurethane control cable with black conductors



21060 80°C 600V CSA AWM I/II A/B 80°C 600V FT1 FT2 CE



Marking for CC 600 P 2611604:

SAB BRÖCKSKES · D-VIERSEN · 2610415 4x1.5mm² CC 600 P 16 AWG/4c 2611604 AWM Style 21060 80°C 600V CSA AWM I/II A/B 80°C 600V FT1 FT2 CE

Construction:

Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	PVC, TI2 acc. to EN 50363-3 + VDE 0207-363-3
Color code:	black conductors with consecutive numbers acc. to EN 50334 + VDE 0293-334, green/yellow ground from 3 conductors
Stranding:	in layers
Inner jacket:	from 12 AWG: PVC, TM2 acc. to EN 50363-3 + VDE 0207-363-3
Jacket material:	PU acc. to UL 758
Jacket color:	gray (RAL 7000)

Outstanding features:

- UL recognized, CSA approved
- oil resistant
- abrasion resistant
- notch resistant
- good chemical resistance

Technical data:

Nominal voltage:	Uo/U 300/500 V
Voltage UL/CSA:	600 V
Testing voltage:	conductor/conductor: 2000 V
Min. bending radius: <i>fixed installation:</i>	4 x O.D.
<i>free movement:</i>	6 x O.D.
Radiation resistance:	5 x 10 ⁷ cJ/kg
Temperature range: <i>static:</i>	DIN VDE -40/+70°C
<i>flexible:</i>	UL/CSA: up to +80°C +5/+70°C
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL VW-1, CSA FT1, FT2
Oil resistance:	very good - oil rating 60°C acc to UL 1581
Chemical resistance:	good against acids, alkalines, solvents, hydraulic liquids etc.
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.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 20 AWG (≈ 16/32) • 0.50 mm²				
2612002	2	0.244	6.2	32
2612003	3	0.252	6.4	38
2612004	4	0.268	6.8	44
2612005	5	0.291	7.4	53
2612007	7	0.311	7.9	65
2612012	12	0.398	10.1	97
2612018	18	0.457	11.6	136
2612025	25	0.539	13.7	178
2612034	34	0.598	15.2	233
2612050	50	0.709	18.0	331
► 18 AWG (≈ 30/32) • 1.00 mm²				
2611802	2	0.272	6.9	43
2611803	3	0.280	7.1	51
2611804	4	0.303	7.7	61
2611805	5	0.327	8.3	74
2611807	7	0.378	9.6	99
2611812	12	0.453	11.5	139
2611818	18	0.528	13.4	200
2611825	25	0.630	16.0	267
2611830	30	0.657	16.7	312
2611834	34	0.709	18.0	355
2611842	42	0.756	19.2	431
2611850	50	0.886	22.5	542

Item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 16 AWG (≈ 27-29/30) • 1.50 mm²				
2611602	2	0.295	7.5	53
2611603	3	0.307	7.8	65
2611604	4	0.331	8.4	78
2611605	5	0.358	9.1	94
2611607	7	0.417	10.6	128
2611612	12	0.504	12.8	182
2611618	18	0.587	14.9	263
2611625	25	0.709	18.0	360
2611630	30	0.732	18.6	420
2611634	34	0.791	20.1	528
2611642	42	0.902	22.9	629
2611650	50	0.984	25.0	726
► 14 AWG (≈ 46/30) • 2.50 mm²				
2611402	2	0.343	8.7	75
2611403	3	0.358	9.1	94
2611404	4	0.386	9.8	114
2611405	5	0.421	10.7	140
2611407	7	0.496	12.6	194
2611412	12	0.602	15.3	277
2611418	18	0.717	18.2	412
2611425	25	0.913	23.2	595

Item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 12 AWG (≈ 52/28) • 4.00 mm²				
2611203	3	0.469	11.9	157
2611204	4	0.512	13.0	194
2611205	5	0.547	13.9	230
► 10 AWG (≈ 78/28) • 6.00 mm²				
2611004	4	0.579	14.7	264
2611005	5	0.634	16.1	324
► 8 AWG (≈ 69/26) • 10.00 mm²				
2610804	4	0.728	18.5	433

Other dimensions and colors are available on request

also available with blue
or red conductors and black
or orange jacket



Control Cables for Nacelle

CC 600 CP

Oil resistant, tear resistant, shielded flexible polyurethane control cable with black conductors



Marking for CC 600 CP 2811604:

SAB BRÖCKSKES · D-VIERSEN · 2810415 4x1.5mm² CC 600 CP 16 AWG/4c 2811604 AWM Style 21060 80°C 600V CSA AWM I/II A/B 80°C 600V FT1 FT2



Construction:

Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	PVC, TI2 acc. to EN 50363-3 + VDE 0207-363-3
Color code:	black conductors with consecutive numbers acc. to EN 50334 + VDE 0293-334, green/yellow ground from 3 conductors
Stranding:	in layers
Wrapping:	PETP foil
Shielding:	tinned copper braiding
Wrapping:	non-woven tape
Jacket materials:	PU acc. to UL 758
Jacket color:	gray (RAL 7000)

Outstanding features:



- UL recognized, CSA approved
- oil resistant
- abrasion resistant
- notch resistant
- good chemical resistance

Technical data:

Nominal voltage:	Uo/U 300/500 V
Voltage UL/CSA:	600 V
Testing voltage:	conductor/conductor: 2000 V conductor/shielding: 2000 V
Min. bending radius: <i>fixed installation:</i>	5 x O.D.
<i>free movement:</i>	10 x O.D.
Radiation resistance:	5 x 10 ⁷ cJ/kg
Temperature range: <i>static:</i>	DIN VDE -40/+70°C
<i>flexible:</i>	UL/CSA: up to +80°C +5/+70°C
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 UL VW-1, CSA FT1, FT2
Oil resistance:	very good - oil rating 60° C acc to UL 1581
Chemical resistance:	good against acids, alkalines, solvents, hydraulic liquids etc.
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.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 20 AWG (≈ 16/32) • 0.50 mm²				
2812002	2	0.264	6.7	42
2812003	3	0.276	7.0	47
2812004	4	0.291	7.4	54
2812005	5	0.315	8.0	64
2812007	7	0.335	8.5	75
2812012	12	0.417	10.6	112
2812018	18	0.488	12.4	165
2812025	25	0.567	14.4	211
► 19 AWG (≈ 23/32) • 0.75 mm²				
2811902	2	0.283	7.2	48
2811903	3	0.295	7.5	55
2811904	4	0.315	8.0	64
2811905	5	0.339	8.6	75
2811907	7	0.390	9.9	99
2811912	12	0.465	11.8	147
2811918	18	0.531	13.5	200
2811925	25	0.646	16.4	278

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 18 AWG (≈ 30/32) • 1.00 mm²				
2811802	2	0.291	7.4	53
2811803	3	0.303	7.7	61
2811804	4	0.327	8.3	72
2811805	5	0.350	8.9	85
2811807	7	0.402	10.2	113
2811809	9	0.457	11.6	135
2811812	12	0.480	12.2	167
2811818	18	0.555	14.1	233
2811825	25	0.669	17.0	324
2811850	50	0.917	23.3	595
► 16 AWG (≈ 27-29/30) • 1.50 mm²				
2811603	3	0.331	8.4	75
2811604	4	0.354	9.0	89
2811605	5	0.382	9.7	107
2811607	7	0.449	11.4	151
2811612	12	0.531	13.5	212
2811618	18	0.634	16.1	319
2811625	25	0.744	18.9	421

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 14 AWG (≈ 46/30) • 2.50 mm²				
2811403	3	0.382	9.7	106
2811404	4	0.409	10.4	127
2811405	5	0.453	11.5	161
2811407	7	0.528	13.4	219
2811409	9	0.614	15.6	265
2811412	12	0.650	16.5	333
2811418	18	0.752	19.1	473
2811425	25	0.949	24.1	667
► 12 AWG (≈ 52/28) • 4.00 mm²				
2811203	3	0.445	11.3	156
2811204	4	0.480	12.2	189
2811205	5	0.524	13.3	228
► 10 AWG (≈ 78/28) • 6.00 mm²				
2811003	3	0.516	13.1	217
2811004	4	0.559	14.2	265
2811005	5	0.618	15.7	335
► 8 AWG (≈ 69/26) • 9.00 mm²				
2810804	4	0.748	19.0	465

Other dimensions and colors are available on request

Drain wire available upon request.
Also available with blue or red
conductors and black or
orange jacket



Control Cables for Nacelle

SABIX® A 147 FRNC SABIX® A 157 FRNC

Wiring cable 600 V

Wiring cable 1000 V



A 147 FRNC 300/500V 0.5 mm² 20 AWG AWM Style 10528 75°C 600V CE



Marking for SABIX® A 147 FRNC 61470150:

SAB BRÖCKSKES · D-VIERSEN · SABIX® A 147 FRNC 300/500V 0.5 mm² 20 AWG AWM Style 10528 75°C 600V CE

Construction:

Conductor: tinned copper strands acc. to IEC 60228, VDE 0295, class 5

Insulation: SABIX®

Color code: colored, see table below

Outstanding features:

- low smoke halogen-free (LSHF)
- no flame propagation
- flame retardant and self-extinguishing
- UL recognition

Technical data:

Nominal voltage:	SABIX® A 147 FRNC: 20 - 18 AWG Uo/U 300/500 V	SABIX® A 157 FRNC: 16 AWG - 550 MCM Uo/U 450/750 V
Voltage UL:	SABIX® A 147 FRNC: 20 - 18 AWG 600 V	SABIX® A 157 FRNC: 16 AWG - 550 MCM 1000 V
Testing voltage:	SABIX® A 147 FRNC: 2000 V	SABIX® A 157 FRNC: 2500 V
Min. bending radius: For one single bend:	7.5 x O.D. 5 x O.D.	
Temperature range: static: flexible:	DIN/VDE: -40/+90°C -30/+90°C	UL: up to +75°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1	
Burning characteristics:	No flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 and EN 50305 + VDE 0260-305 section 9.1.2. Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2	
Corrosivity:	in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases	
Smoke density:	acc. to IEC 61034 + VDE 0482-1034	
Flexibility:	good	
Approvals:	UR AWM, CE, RoHS	
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30	

SABIX® A 147 FRNC (Uo/U 300/500 V)

item no.	mm ²	AWG	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 6147 .. 50	0.50	20	(≈ 16/32)	0.098	2.5
► 6147 .. 75	0.75	19	(≈ 23/32)	0.110	2.8
► 6147 .. 80	1.00	18	(≈ 30/32)	0.114	2.9

Other dimensions and colors are available on request

Color code for single conductors:

01 = black	07 = violet
02 = blue	08 = white
03 = brown	09 = orange
04 = gray	11 = red
05 = yellow	16 = gentian blue
06 = green	27 = green/yellow

SABIX® A 157 FRNC (Uo/U 450/750 V)

item no.	mm ²	AWG MCM	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 6157 .. 82	1.50	16 (≈ 27-29/30)	0.126	3.2	15
► 6157 .. 84	2.50	14 (≈ 46/30)	0.142	3.6	22
► 6157 .. 86	4.00	12 (≈ 52/28)	0.169	4.3	31
► 6157 .. 87	6.00	10 (≈ 78/28)	0.217	5.5	50
► 6157 .. 88	10.00	8 (≈ 77/26)	0.264	6.7	79
► 6157 .. 89	16.00	6 (≈ 122/26)	0.346	8.8	129
► 6157 .. 90	25.00	4 (≈ 190/26)	0.402	10.2	189
► 6157 .. 91	35.00	2 (≈ 272/26)	0.500	12.7	278
► 6157 .. 92	50.00	1 (≈ 400/26)	0.547	13.9	385
► 6157 .. 93	70.00	2/0 (≈ 543/26)	0.642	16.3	521
► 6157 .. 94	95.00	3/0 (≈ 484/24)	0.724	18.4	678
► 6157 .. 95	120.00	4/0 (≈ 589/24)	0.823	20.9	839
► 6157 .. 96	150.00	250 (≈ 740/24)	0.882	22.4	1029
► 6157 .. 97	185.00	350 (≈ 902/24)	0.984	25.0	1269
► 6157 .. 98	240.00	450 (≈ 1220/24)	1.114	28.3	1662
► 6157 .. 99	300.00	550 (≈ 1525/24)	1.220	31.0	2058

Other dimensions and colors are available on request

Control Cables for Nacelle

SABIX® CC 625 FRNC M

Control cable with numbered conductors



Marking for SABIX® CC 625 FRNC M 62521612:

SAB BRÖCKSKES · D-VIERSEN · 62521612 12 x 1.5 mm² SABIX® CC 625 FRNC M 16 AWG/12c 62521215 UL AWM Style 21089 75°C 600V CSA AWM I/II A/B 80°C 600V FT1 CE

Construction:

Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	SABIX®
Color code:	black conductors with consecutive numbers acc. to EN 50334 + VDE 0293-334, green/yellow ground from 3 conductors
Stranding:	in layers
Jacket material:	SABIX®
Jacket color:	gray (RAL 7000)

Outstanding features:

- low smoke halogen-free (LSHF)
- UL recognized, CSA approved
- no flame propagation
- flame retardant and self-extinguishing
- flexible

Technical data:

Nominal voltage:	Uo/U 300/500 V
Voltage UL/CSA:	600 V
Testing voltage:	conductor/conductor: 3000 V
Min. bending radius:	
fixed installation:	4 x O.D.
free movement:	6 x O.D.
Temperature range:	UL: up to +75°C CSA: up to +80°C
static	DIN VDE: -40/+90°C
flexible:	-30/+90°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Burning characteristics:	no flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 cat. C resp. D Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosivity:	in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + VDE 0482-1034
Flexibility:	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.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 20 AWG (≈ 16/32) • 0.50 mm²				
62522002	2	0.205	5.2	27
62522003	3	0.217	5.5	32
62522004	4	0.232	5.9	38
62522005	5	0.252	6.4	44
62522007	7	0.276	7.0	56
62522008	8	0.323	8.2	70
62522009	9	0.350	8.9	79
62522010	10	0.358	9.1	81
62522012	12	0.366	9.3	91
62522014	14	0.386	9.8	103
62522016	16	0.413	10.5	119
62522018	18	0.437	11.1	132
62522025	25	0.531	13.5	181
62522030	30	0.547	13.9	208
62522034	34	0.598	15.2	239
62522040	40	0.650	16.5	283
62522041	41	0.650	16.5	288
62522061	61	0.760	19.3	409

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 19 AWG (≈ 23/32) • 0.75 mm²				
62521902	2	0.224	5.7	32
62521903	3	0.236	6.0	38
62521904	4	0.256	6.5	46
62521905	5	0.280	7.1	54
62521907	7	0.311	7.9	71
62521908	8	0.366	9.3	89
62521909	9	0.390	9.9	97
62521910	10	0.398	10.1	100
62521912	12	0.417	10.6	118
62521914	14	0.437	11.1	132
62521916	16	0.469	11.9	152
62521918	18	0.492	12.5	168
62521925	25	0.598	15.2	231
62521930	30	0.618	15.7	267
62521934	34	0.673	17.1	304
62521940	40	0.732	18.6	359
62521941	41	0.732	18.6	366
62521961	61	0.866	22.0	528

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 18 AWG (≈ 30/32) • 1.00 mm²				
62521802	2	0.232	5.9	36
62521803	3	0.248	6.3	44
62521804	4	0.268	6.8	54
62521805	5	0.295	7.5	65
62521807	7	0.323	8.2	83
62521808	8	0.378	9.6	102
62521809	9	0.413	10.5	116
62521810	10	0.421	10.7	120
62521812	12	0.433	11.0	137
62521814	14	0.453	11.5	155
62521818	18	0.512	13.0	198
62521825	25	0.622	15.8	271
62521830	30	0.654	16.6	320
62521834	34	0.709	18.0	365
62521840	40	0.768	19.5	429
62521841	41	0.768	19.5	454
62521861	61	0.902	22.9	626

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Control Cables for Nacelle

SABIX® CC 625 FRNC M

Control cable with numbered conductors



Style 21089 75°C 600V CSA AWM I/II A/B 80°C 600V FT1 CE



Marking for SABIX® CC 625 FRNC M 62521612:

SAB BRÖCKSKES · D-VIERSEN · 62521612 12 x 1.5 mm² SABIX® CC 625 FRNC M 16 AWG/12c 62521215 UL AWM Style 21089 75°C 600V CSA AWM I/II A/B 80°C 600V FT1 CE

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 16 AWG (≈ 27-29/30) • 1.50 mm²				
62521602	2	0.256	6.5	46
62521603	3	0.272	6.9	57
62521604	4	0.299	7.6	71
62521605	5	0.327	8.3	87
62521607	7	0.366	9.3	112
62521608	8	0.429	10.9	136
62521609	9	0.465	11.8	153
62521610	10	0.476	12.1	161
62521612	12	0.488	12.4	184
62521614	14	0.512	13.0	209
62521618	18	0.587	14.9	271
62521625	25	0.713	18.1	375
62521630	30	0.736	18.7	435
62521634	34	0.807	20.5	502
62521640	40	0.874	22.2	587
62521641	41	0.874	22.2	593
62521661	61	1.024	26.0	861

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 14 AWG (≈ 46/30) • 2.50 mm²				
62521402	2	0.307	7.8	70
62521403	3	0.327	8.3	86
62521404	4	0.362	9.2	108
62521405	5	0.398	10.1	131
62521407	7	0.441	11.2	173
62521408	8	0.528	13.4	212
62521409	9	0.563	14.3	234
62521410	10	0.583	14.8	252
62521412	12	0.602	15.3	290
62521418	18	0.717	18.2	425
62521425	25	0.878	22.3	585
62521207	7	0.528	13.4	261

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 10 AWG (≈ 78/28) • 6.00 mm²				
62521003	3	0.449	11.4	182
62521004	4	0.500	12.7	230
62521005	5	0.559	14.2	286
► 8 AWG (≈ 77/26) • 10.00 mm²				
62520804	4	0.677	17.2	409
62520805	5	0.760	19.3	508
► 6 AWG (≈ 122/26) • 16.00 mm²				
62520604	4	0.831	21.1	611
► 4 AWG (≈ 190/26) • 25.00 mm²				
62520404	4	1.043	26.5	991
► 2 AWG (≈ 272/26) • 35.00 mm²				
62520204	4	1.189	30.2	1346

Other dimensions and colors are available on request



Control Cables for Nacelle

SABIX® CC 625 S FRNC M

Control cable with numbered conductors and overall tinned copper shield



Marking for SABIX® CC 625 S FRNC M 62341612:

SAB BRÖCKSKES · D-VIERSEN · 62341612 12 x 1.5 mm² SABIX® CC 625 S FRNC M 16 AWG/12c 62341215 AWM Style 21089 75°C 600V CSA AWM I/II A/B 80°C 600V FT1 CE

Construction:

Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 5
Insulation:	SABIX®
Color code:	black conductors with consecutive numbers acc. to EN 50334 + VDE 0293-334, green/yellow ground from 3 conductors
Stranding:	in layers
Wrapping:	foil
Shielding:	tinned copper braiding
Jacket material:	SABIX®
Jacket color:	gray (RAL 7000)

Outstanding features:

- low smoke halogen-free (LSHF)
- UL recognized, CSA approved
- no flame propagation
- good EMC characteristics*
- flame retardant and self-extinguishing
- flexible

*copper braiding should be connected circularly to optimize the EMC characteristics

Technical data:

Nominal voltage:	Uo/U 300/500 V
Voltage UL/CSA:	600 V
Testing voltage:	conductor/conductor: 3000 V conductor/shielding: 2000 V
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>	UL: up to +75°C CSA: up to +80°C DIN VDE: -40/+90°C -30/+90°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Burning characteristics:	no flame propagation acc. to IEC 60332-3-24 + VDE 0482-332-3-24 resp. IEC 60332-3-25 + VDE 0482-332-3-25 cat. C resp. D Flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2
Corrosivity:	in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Smoke density:	acc. to IEC 61034 + VDE 0482-1034
Flexibility:	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.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 20 AWG (≈ 16/32) • 0.50 mm²				
62342002	2	0.224	5.7	30
62342003	3	0.236	6.0	36
62342004	4	0.252	6.4	43
62342005	5	0.276	7.0	51
62342007	7	0.299	7.6	65
62342008	8	0.350	8.9	81
62342009	9	0.370	9.4	88
62342010	10	0.378	9.6	91
62342012	12	0.386	9.8	102
62342014	14	0.421	10.7	126
62342016	16	0.441	11.2	138
62342018	18	0.472	12.0	157
62342025	25	0.543	13.8	206
62342030	30	0.591	15.0	243
62342034	34	0.642	16.3	288
62342040	40	0.693	17.6	338
62342041	41	0.693	17.6	345
62342061	61	0.795	20.2	466

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 19 AWG (≈ 23/32) • 0.75 mm²				
62341902	2	0.244	6.2	35
62341903	3	0.256	6.5	43
62341904	4	0.276	7.0	52
62341905	5	0.307	7.8	63
62341907	7	0.331	8.4	79
62341908	8	0.386	9.8	97
62341909	9	0.425	10.8	122
62341910	10	0.433	11.0	122
62341912	12	0.445	11.3	139
62341914	14	0.472	12.0	158
62341916	16	0.496	12.6	174
62341918	18	0.520	13.2	192
62341925	25	0.642	16.3	280
62341930	30	0.661	16.8	314
62341934	34	0.717	18.2	359
62341940	40	0.776	19.7	420
62341941	41	0.776	19.7	427
62341961	61	0.902	22.9	591

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 18 AWG (≈ 30/32) • 1.00 mm²				
62341802	2	0.252	6.4	39
62341803	3	0.268	6.8	49
62341804	4	0.287	7.3	58
62341805	5	0.315	8.0	72
62341807	7	0.350	8.9	93
62341808	8	0.398	10.1	111
62341809	9	0.441	11.2	134
62341810	10	0.449	11.4	141
62341812	12	0.469	11.9	162
62341814	14	0.488	12.4	180
62341818	18	0.547	13.9	228
62341825	25	0.665	16.9	325
62341830	30	0.697	17.7	374
62341834	34	0.752	19.1	423
62341840	40	0.811	20.6	490
62341841	41	0.811	20.6	499
62341861	61	0.945	24.0	700

Continued on next page

also available with
inner jacket



Control Cables for Nacelle

SABIX® CC 625 S FRNC M

Control cable with numbered conductors and overall tinned copper shield



le 21089 75°C 600V CSA AWM I/II A/B 80°C 600V FT1 CE



Marking for SABIX® CC 625 S FRNC M 62341612:

SAB BRÖCKSKES · D-VIERSEN · 62341612 12 x 1.5 mm² SABIX® CC 625 S FRNC M 16 AWG/12c 62341215 UL AWM Style 21089 75°C 600V CSA AWM I/II A/B 80°C 600V FT1 CE

item no.	no. of conductors incl. ground	outer-ø ±10% inch	cable weight ±10% mm	mm ²
► 16 AWG (≈ 27-29/30) • 1.50 mm²				
62341602	2	0.276	7.0	48
62341603	3	0.295	7.5	62
62341604	4	0.319	8.1	76
62341605	5	0.354	9.0	93
62341607	7	0.386	9.8	120
62341608	8	0.465	11.8	159
62341609	9	0.492	12.5	174
62341610	10	0.504	12.8	183
62341612	12	0.524	13.3	210
62341614	14	0.547	13.9	238
62341618	18	0.622	15.8	312
62341625	25	0.756	19.2	433
62341630	30	0.780	19.8	493
62341634	34	0.843	21.4	561
62341640	40	0.909	23.1	647
62341641	41	0.909	23.1	653
62341661	61	1.067	27.1	943

item no.	no. of conductors incl. ground	outer-ø ±10% inch	cable weight ±10% mm	mm ²
► 14 AWG (≈ 46/30) • 2.50 mm²				
62341402	2	0.327	8.3	68
62341403	3	0.354	9.0	91
62341404	4	0.382	9.7	113
62341405	5	0.433	11.0	148
62341407	7	0.476	12.1	192
62341408	8	0.555	14.1	232
62341409	9	0.598	15.2	259
62341410	10	0.618	15.7	288
62341412	12	0.646	16.4	331
62341418	18	0.760	19.3	478
62341425	25	0.921	23.4	648
► 12 AWG (≈ 52/28) • 4.00 mm²				
62341203	3	0.417	10.6	138
62341204	4	0.453	11.5	172
62341205	5	0.504	12.8	212
62341207	7	0.555	14.1	277

item no.	no. of conductors incl. ground	outer-ø ±10% inch	cable weight ±10% mm	mm ²
► 10 AWG (≈ 78/28) • 6.00 mm²				
62341003	3	0.484	12.3	191
62341004	4	0.535	13.6	243
62341005	5	0.594	15.1	302
► 8 AWG (≈ 77/26) • 10.00 mm²				
62340804	4	0.720	18.3	427
62340805	5	0.795	20.2	526
► 6 AWG (≈ 122/26) • 16.00 mm²				
62340604	4	0.874	22.2	623
► 4 AWG (≈ 190/26) • 25.00 mm²				
62340404	4	1.079	27.4	974
► 2 AWG (≈ 272/26) • 35.00 mm²				
62340204	4	1.232	31.3	1316

Other dimensions and colors are available on request



Data & Sensor Cables for Pitch & Blades

DC 105 C

Shielded semi-rigid PVC data cable, Type PLTC, ITC, and CMG



CMG OR AWM I/II A/B 105°C 300V FT4 RoHS CE



Marking for DC 105 C DC3332204S:

SAB North America P/N DC3332204S 22AWG/4c (UL) TYPE PLTC OR ITC OR CMG SHIELDED 105°C (DC 105 C) CSA TYPE CMG OR AWM I/II A/B 105°C 300V FT4 RoHS CE

Construction:

Conductor:	tinned copper strands
Insulation:	semi-rigid PVC
26 - 20 AWG:	PVC/nylon
18 - 16 AWG:	
Color code:	
26 - 24 AWG:	color code, chart 2, see below
22 AWG:	color code, chart 4, see below
20 - 16 AWG:	color code chart 6, see below
Stranding:	twisted together in layers with non-wicking fillers
Shielding:	double shielding, alu-foil, tinned copper braiding and tinned drain wire
Jacket material:	PVC
Jacket color:	grayish tan (RAL 7032)

Color Code Chart 2:

no.	Conductor color	no.	Conductor color
1	black	14	green/white
2	white	15	blue/white
3	red	16	black/red
4	green	17	white/red
5	orange	18	orange/red
6	blue	19	blue/red
7	white/black	20	red/green
8	red/black	21	orange/green
9	green/black	22	black/white/red
10	orange/black	23	white/black/red
11	blue/black	24	red/black/white
12	black/white	25	green/black/white
13	red/white		

Color Code Chart 4:

no.	Conductor color	no.	Conductor color
1	black	14	white/orange
2	brown	15	white/yellow
3	red	16	white/green
4	orange	17	white/blue
5	yellow	18	white/violet
6	green	19	white/gray
7	blue	20	white/black/brown
8	violet	21	white/black/red
9	gray	22	white/black/orange
10	white	23	white/black/yellow
11	white/black	24	white/black/green
12	white/brown	25	white/black/blue
13	white/red		

Color Code Chart 6:

no.	Conductor color	no.	Conductor color
1	black	14	red/yellow
2	red	15	red/black
3	white	16	white/black
4	green	17	white/red
5	orange	18	white/green
6	blue	19	white/yellow
7	brown	20	white/blue
8	yellow	21	white/brown
9	violet	22	white/orange
10	gray	23	white/gray
11	pink	24	white/violet
12	tan	25	white/black/red
13	red/green		

Technical data:

Nominal voltage:	300 V
Testing voltage:	2000 V
Min. bending radius: <i>fixed installation:</i>	6 x O.D.
Temperature range:	-25/+105°C
Approvals:	UL: CMG (26 - 16 AWG) PLTC & ITC (22 - 20 AWG) PLTC-ER & ITC-ER (18 - 16 AWG) CSA: CMG/FT4 AWM I/II A/B CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	no. of conductors	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 26 AWG (7/34)				
DC3222602S	2	0.180	4.6	27
DC3222603S	3	0.186	4.7	30
DC3222604S	4	0.196	5.0	32
DC3222605S	5	0.207	5.3	34
DC3222606S	6	0.219	5.6	37
DC3222607S	7	0.221	5.6	39
DC3222608S	8	0.231	5.9	43
DC3222610S	10	0.258	6.6	51
DC3222615S	15	0.289	7.3	66
DC3222618S	18	0.307	7.8	70
DC3222625S	25	0.343	8.7	88
► 24 AWG (7/32)				
DC3222403S	3	0.197	5.0	35
DC3222404S	4	0.209	5.3	36
DC3222405S	5	0.221	5.6	39
DC3222406S	6	0.234	5.9	45
DC3222407S	7	0.236	6.0	46
DC3222408S	8	0.248	6.3	51
DC3222409S	9	0.261	6.6	56
DC3222410S	10	0.288	7.3	62
DC3222412S	12	0.288	7.3	67
DC3222415S	15	0.312	7.9	80
DC3222418S	18	0.332	8.4	86
DC3222420S	20	0.340	8.6	92
DC3222425S	25	0.372	9.4	111

item no.	no. of conductors	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 22 AWG (7/30)				
DC3332203S	3	0.210	5.3	40
DC3332204S	4	0.224	5.7	43
DC3332205S	5	0.237	6.0	49
DC3332206S	6	0.252	6.4	54
DC3332207S	7	0.260	6.6	57
DC3332208S	8	0.267	6.8	61
DC3332210S	10	0.312	7.9	77
DC3332212S	12	0.320	8.1	86
DC3332215S	15	0.339	8.6	99
DC3332218S	18	0.362	9.2	110
DC3332220S	20	0.371	9.4	118
DC3332225S	25	0.433	11	150
► 20 AWG (≈ 19/32)				
DC3332002S	2	0.220	5.6	42
DC3332003S	3	0.229	5.8	51
DC3332004S	4	0.244	6.2	59
DC3332006S	6	0.289	7.3	73
DC3332008S	8	0.307	7.8	85
DC3332010S	10	0.348	8.8	102
DC3332015S	15	0.380	9.7	135
DC3332020S	20	0.437	11.1	169
DC3332025S	25	0.481	12.2	213
► 18 AWG (19/30)				
DC331803S	3	0.314	8.0	79
DC331804S	4	0.337	8.6	92
DC331806S	6	0.390	9.9	116
► 16 AWG (26/30)				
DC331603S	3	0.336	8.5	93
DC331604S	4	0.361	9.2	111
DC331606S	6	0.420	10.7	139

Other dimensions and colors are available on request

Data & Sensor Cables for Pitch & Blades

DC 105 C TP

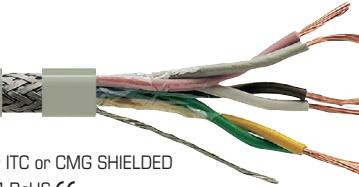
Shielded, semi-rigid, twisted pair, PVC data cable, Type PLTC, ITC, and CMG



AWM I/II A/B 105°C 300V FT4 RoHS €

Marking for DC 105 C TP DC3332203TP:

SAB North America P/N DC3332203TP 22AWG/3pr (UL) TYPE PLTC or ITC or CMG SHIELDED 105°C (DC 105 CTP) CSA TYPE CMG or AWM I/II A/B 105°C 300V FT4 RoHS €



Construction:

Conductor:	tinned copper strands
Insulation:	semi-rigid PVC
24 - 20 AWG:	PVC/nylon
18 - 16 AWG:	
Color code:	color code, chart 3, see below
Stranding:	paired and twisted together in layers with non-wicking fillers
Shielding:	double shielding, alu-foil tinned copper braiding and tinned drain wire
Jacket material:	PVC
Jacket color:	grayish tan (RAL 7032)

Technical data:

Nominal voltage:	300 V
Testing voltage:	2000 V
Min. bending radius: <i>fixed installation:</i>	6 x O.D.
Temperature range:	-25/+105°C
Approvals:	UL: CMG (24 - 16 AWG) PLTC & ITC (22 - 20 AWG) PLTC-ER & ITC-ER (18 - 16 AWG) CSA: CMG/FT4 AWM I/II A/B CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

Color Code Chart 3:

Pair no.	color combination
1	black paired with red
2	black paired with white
3	black paired with green
4	black paired with blue
5	black paired with yellow
6	black paired with brown
7	black paired with orange
8	red paired with white
9	red paired with green
10	red paired with blue
11	red paired with yellow
12	red paired with brown
13	red paired with orange
14	green paired with white
15	green paired with blue
16	green paired with yellow
17	green paired with brown
18	green paired with orange
19	white paired with blue
20	white paired with yellow
21	white paired with brown
22	white paired with orange
23	blue paired with yellow
24	blue paired with brown
25	blue paired with orange

item no.	no. of pairs	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 24 AWG (7/32)				
DC3222401TP*	1	0.190	4.8	31
DC3222402TP	2	0.246	6.2	44
DC3222403TP	3	0.258	6.6	51
DC3222404TP	4	0.292	7.4	57
DC3222405TP	5	0.307	7.8	65
DC3222406TP	6	0.328	8.3	73
DC3222408TP	8	0.351	8.9	85
DC3222409TP	9	0.373	9.5	97
DC3222415TP	15	0.460	11.7	151
► 22 AWG (7/30)				
DC3332201TP*	1	0.203	5.2	32
DC3332202TP	2	0.266	6.8	50
DC3332203TP	3	0.289	7.3	63
DC3332204TP	4	0.323	8.2	71
DC3332205TP	5	0.333	8.5	80
DC3332206TP	6	0.358	9.1	90
DC3332208TP	8	0.383	9.7	107
DC3332209TP	9	0.429	10.9	128
DC3332211TP	11	0.460	11.7	154
DC3332215TP	15	0.505	12.8	188
DC3332225TP	25	0.644	16.4	262

*DC3222401TP & DC3332201TP: black paired with white color code

item no.	no. of pairs	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 20 AWG (≈ 19/32)				
DC3332001TP	1	0.220	5.6	42
DC3332002TP	2	0.305	7.7	67
DC3332003TP	3	0.321	8.2	80
DC3332004TP	4	0.345	8.8	95
DC3332006TP	6	0.422	10.7	129
DC3332009TP	9	0.482	12.2	180
DC3332015TP	15	0.572	14.5	254
► 18 AWG (19/30)				
DC3331801TP	1	0.300	7.6	68
DC3331802TP	2	0.415	10.5	106
DC3331803TP	3	0.439	11.2	128
DC3331804TP	4	0.476	12.1	162
DC3331806TP	6	0.595	15.1	231
DC3331809TP	9	0.686	17.4	312
DC3331815TP	15	0.823	20.9	461
► 16 AWG (26/30)				
DC3331601TP	1	0.320	8.1	78
DC3331602TP	2	0.448	11.4	124
DC3331603TP	3	0.474	12.0	162
DC3331604TP	4	0.515	13.1	192

Data & Sensor Cables for Pitch & Blades

DC 300 DS

Multi-conductor double shielded PVC signal and control cable, Type AWM

very good
EMC

SAB Data



Marking for DC 300 DS 3242225:

SAB BRÖCKSKES - D-VIERSEN · 3242522 DC 300 DS 22 AWG/25c 3242225 UL AWM Style 2464 80°C 300V CSA AWM I/II A/B 80°C 300V FT1 FT2 CE

Construction:

Conductor:	tinned copper strands acc. to ASTM B 286
Insulation:	semi-rigid PVC
Color code:	color code US 2, see below
Stranding:	in layers
Shielding:	double shielding, Alu-foil, tinned copper braiding with tinned drain wire (0.22 mm ²)
Jacket material:	PVC
Jacket color:	grayish tan (RAL 7032)

Outstanding features:

- very good EMC characteristics
- small outer diameter
- small bending radius

Technical data:

Peak operating voltage:	max. 350 V
Voltage UL/CSA:	300 V
Testing voltage:	conductor/conductor: 2000 V conductor/shielding: 2000 V
Min. bending radius:	
fixed installation:	5 x O.D.
free movement:	10 x O.D.
Radiation resistance:	8 x 10 ⁷ cJ/kg
Temperature range:	DIN VDE static: -30/+70°C flexible: -5/+70°C
UL/CSA:	up to +80°C
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL VW-1, CSA FT1, FT2
Oil resistance:	acc. to internal standard, see page O/29
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.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
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► AWG 28/7

3242802	2	0.169	4.3	14
3242803	3	0.173	4.4	16
3242804	4	0.181	4.6	17
3242805	5	0.193	4.9	20
3242807	7	0.201	5.1	23
3242810	10	0.236	6.0	29
3242812	12	0.244	6.2	32
3242814	14	0.252	6.4	34
3242818	18	0.272	6.9	41
3242825	25	0.311	7.9	50

► AWG 26/7

3242602	2	0.177	4.5	16
3242603	3	0.181	4.6	17
3242604	4	0.193	4.9	20
3242605	5	0.201	5.1	24
3242607	7	0.213	5.4	26
3242610	10	0.252	6.4	34
3242612	12	0.260	6.6	38
3242614	14	0.268	6.8	41
3242618	18	0.291	7.4	50
3242625	25	0.335	8.5	63

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
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► AWG 24/7

3242402	2	0.185	4.7	18
3242403	3	0.193	4.9	20
3242404	4	0.201	5.1	24
3242405	5	0.217	5.5	28
3242407	7	0.228	5.8	32
3242410	10	0.272	6.9	42
3242412	12	0.280	7.1	47
3242414	14	0.287	7.3	52
3242418	18	0.315	8.0	64
3242425	25	0.366	9.3	82

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
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► AWG 22/7

3242202	2	0.197	5.0	21
3242203	3	0.205	5.2	25
3242204	4	0.217	5.5	28
3242205	5	0.232	5.9	34
3242207	7	0.248	6.3	40
3242210	10	0.295	7.5	54
3242212	12	0.303	7.7	60
3242214	14	0.315	8.0	67
3242218	18	0.346	8.8	83
3242225	25	0.406	10.3	110

Other dimensions and colors are available on request

US 2 color code:

#1- black, #2- white, #3- red, #4- green, #5- orange, #6- blue, #7- white-black, #8- red-black, #9- green-black, #10- orange-black, #11- blue-black, #12- black-white, #13- red-white, #14- green-white, #15- blue-white, #16- black-red, #17- white-red, #18- orange-red, #19- blue-red, #20- red-green, #21- orange-green, #22- black-white-red, #23- white-black-red, #24- red-black-white, #25- green-black-white

Data & Sensor Cables for Pitch & Blades

DC 300 DS TP

Multi-pair double shielded PVC signal and control cable, Type AWM



300V CSA AWM I/II A/B 80°C 300V FT1 FT2 CE

Marking for DC 300 DS TP 3842203:

SAB BRÖCKSKES · D-VIERSEN · 3840322 DC 300 DS TP 22 AWG/3pr 3842203 AWM Style 2464 80°C 300V CSA AWM I/II A/B 80°C 300V FT1 FT2 CE



Construction:

Conductor:	tinned copper strands acc. to ASTM B 286
Insulation:	semi-rigid PVC
Color code:	color code US 3, see below
Stranding:	conductors twisted to pairs, pairs twisted in layers
Shielding:	double shielding, alu-foil, tinned copper braiding with tinned drain wire (0.22 mm ²)
Jacket material:	PVC
Jacket color:	grayish tan (RAL 7032)

Outstanding features:



- very good EMC characteristics
- small outer diameter
- small bending radius

Technical data:

Peak operating voltage:	max. 350 V
Voltage UL/CSA:	300 V
Testing voltage:	conductor/conductor: 2000 V conductor/shielding: 2000 V
Min. bending radius:	
fixed installation:	5 x O.D.
free movement:	10 x O.D.
Radiation resistance:	8 x 10 ⁷ cJ/kg
Temperature range:	DIN VDE
static:	-30/+70°C
flexible:	-5/+70°C
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL VW-1, CSA FT1, FT2
Oil resistance:	acc. to internal standard, see page O/29
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.	no. of pairs	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
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► AWG 28/7

3842802	2	0.201	5.1	19
3842803	3	0.217	5.5	23
3842804	4	0.240	6.1	27
3842805	5	0.256	6.5	31
3842807	7	0.272	6.9	36
3842810	10	0.311	7.9	45
3842814	14	0.354	9.0	57
3842818	18	0.378	9.6	70
3842825	25	0.425	10.8	87

► AWG 26/7

3842602	2	0.213	5.4	22
3842603	3	0.232	5.9	27
3842604	4	0.260	6.6	32
3842605	5	0.276	7.0	38
3842607	7	0.287	7.3	42
3842610	10	0.335	8.5	56
3842614	14	0.386	9.8	73
3842618	18	0.413	10.5	89
3842625	25	0.465	11.8	112

item no.	no. of pairs	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
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► AWG 24/7

3842402	2	0.228	5.8	26
3842403	3	0.248	6.3	32
3842404	4	0.280	7.1	39
3842405	5	0.299	7.6	46
3842407	7	0.311	7.9	54
3842410	10	0.362	9.2	71
3842414	14	0.421	10.7	94
3842418	18	0.453	11.5	116
3842425	25	0.508	12.9	148

item no.	no. of pairs	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
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► AWG 22/7

3842202	2	0.248	6.3	32
3842203	3	0.268	6.8	40
3842204	4	0.303	7.7	48
3842205	5	0.327	8.3	58
3842207	7	0.343	8.7	70
3842210	10	0.402	10.2	95
3842214	14	0.465	11.8	124
3842218	18	0.500	12.7	156
3842225	25	0.579	14.7	207

Other dimensions and colors are available on request

US 3 color code:

#1- black paired with red, #2- black paired with white, #3- black paired with green, #4- black paired with blue, #5- black paired with yellow, #6- black paired with brown, #7- black paired with orange, #8- red paired with white, #9- red paired with green, #10- red paired with blue, #11- red paired with yellow, #12- red paired with brown, #13- red paired with orange, #14- green paired with white, #15- green paired with blue, #16- green paired with yellow, #17- green paired with brown, #18- green paired with orange, #19- white paired with blue, #20- white paired with yellow, #21- white paired with brown, #22- white paired with orange, #23- blue paired with yellow, #24- blue paired with brown, #25- blue paired with orange

Data & Sensor Cables for Pitch & Blades

SD 960

Continuous flex data cable for small bending radius



37102625 AWM Style 21083 80°C 300V €



Marking for SD 960 37102625:

SAB BRÖCKSKES · D-VIERSEN · 37102625 25 x 0.14 mm² SD 960 26 AWG/25c 37102625 AWM Style 21083 80°C 300V €

Construction:

Conductor:	bare copper strands, extra fine wires
Insulation:	PVC, TI2 acc. to EN 50363-3 + VDE 0207-363-3
Color code:	acc. to color code US 2, see below
Stranding:	specially adjusted layering with non-woven tape over each layer
Jacket material:	PVC, TM2 acc. to EN 50363-3 + VDE 0207-363-3
Jacket color:	grayish tan (RAL 7032)

Outstanding features:



- very good flexibility
- small bending radius
- reinforced outer jacket

Technical data:

Peak operating voltage:	max. 350 V
Voltage UL:	300 V
Testing voltage:	conductor/conductor: 1500 V
Min. bending radius: <i>continuously flexing:</i>	7.5 x O.D.
Radiation resistance:	8×10^7 cJ/kg
Temperature range: <i>static:</i>	DIN VDE
	UL/CSA: up to +80°C
<i>flexing:</i>	-30/+70°C
	-5/+70°C
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL VW-1
Oil resistance:	acc. to our internal standard, see page O/29
Approvals:	UR AWM, CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	no. of conductors incl. ground	outer-ø ±10% inch	cable weight ≈lbs/mft	
► 26 AWG (≈ 18/38) • 0.14 mm²				
37102602	2	0.154	3.9	11
37102603	3	0.161	4.1	14
37102604	4	0.177	4.5	16
37102605	5	0.193	4.9	20
37102607	7	0.224	5.7	28
37102610	10	0.264	6.7	33
37102614	14	0.283	7.2	42
37102618	18	0.323	8.2	56
37102625	25	0.398	10.1	78

item no.	no. of conductors incl. ground	outer-ø ±10% inch	cable weight ≈lbs/mft	
► 24 AWG (≈ 32/38) • 0.25 mm²				
37102402	2	0.165	4.2	15
37102403	3	0.177	4.5	17
37102404	4	0.189	4.8	21
37102405	5	0.209	5.3	26
37102407	7	0.248	6.3	36
37102410	10	0.287	7.3	44
37102414	14	0.319	8.1	58
37102418	18	0.354	9.0	74
37102425	25	0.433	11.0	102

item no.	no. of conductors incl. ground	outer-ø ±10% inch	cable weight ≈lbs/mft	
► 22 AWG (≈ 42/38) • 0.34 mm²				
37102202	2	0.173	4.4	17
37102203	3	0.185	4.7	20
37102204	4	0.201	5.1	24
37102205	5	0.217	5.5	30
37102207	7	0.260	6.6	41
37102210	10	0.311	7.9	53
37102214	14	0.335	8.5	69
37102218	18	0.374	9.5	87
37102225	25	0.461	11.7	120

Other dimensions and colors are available on request

US 2 color code:

#1- black, #2- white, #3- red, #4- green, #5- orange, #6- blue, #7- white-black, #8- red-black, #9- green-black, #10- orange-black, #11- blue-black, #12- black-white, #13- red-white, #14- green-white, #15- blue-white, #16- black-red, #17- white-red, #18- orange-red, #19- blue-red, #20- red-green, #21- orange-green, #22- black-white-red, #23- white-black-red, #24- red-black-white, #25- green-black-white

Data & Sensor Cables for Pitch & Blades

SD 960 CY

Shielded continuous flex data cable for small bending radius



P2425 AWM Style 21083 80°C 300V CE



Marking for SD 960 CY 7852425:

SAB BRÖCKSKES · D-VIERSEN · 7852502 25 x 0.25 mm² SD 960 CY 24 AWG/25c 7852425 AWM Style 21083 80°C 300V CE

Construction:

Conductor:	bare copper strands, extra fine wires
Insulation:	PVC, TI2 acc. to EN 50363-3 + VDE 0207-363-3
Color code:	acc. to color code US 2, see below
Stranding:	specially adjusted layering with non-woven tape over each layer
Wrapping:	non-woven tape
Shielding:	tinned copper braiding
Wrapping:	non-woven tape
Jacket material:	PVC, TM2 acc. to EN 50363-3 + VDE 0207-363-3
Jacket color:	black (RAL 9005)

Outstanding features:



- good EMC characteristics
- very good flexibility
- small bending radius
- UV resistant jacket

Technical data:

Peak operating voltage:	max. 350 V
Voltage UL:	300 V
Testing voltage:	conductor/conductor: 1500 V conductor/shielding: 1200 V
Min. bending radius: <i>continuously flexing:</i>	7.5 x O.D.
Radiation resistance:	8 x 10 ⁷ cJ/kg
Temperature range: <i>static:</i>	DIN VDE -30/+70°C
<i>flexing:</i>	UL/CSA: up to +80°C +5/+70°C
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, UL VW-1
Oil resistance:	acc. to our internal standard, see page O/29
Approvals:	UR AWM, CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 26 AWG (≈ 18/38) • 0.14 mm²				
7852602	2	0.177	4.5	17
7852603	3	0.185	4.7	20
7852604	4	0.205	5.2	24
7852605	5	0.220	5.6	28
7852607	7	0.252	6.4	38
7852610	10	0.295	7.5	45
7852614	14	0.335	8.5	60
7852618	18	0.366	9.3	73
7852625	25	0.433	11.0	100

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 24 AWG (≈ 32/38) • 0.25 mm²				
7852402	2	0.193	4.9	20
7852403	3	0.205	5.2	24
7852404	4	0.217	5.5	28
7852405	5	0.244	6.2	36
7852407	7	0.280	7.1	43
7852410	10	0.335	8.5	60
7852414	14	0.362	9.2	75
7852418	18	0.398	10.1	92
7852425	25	0.492	12.5	134

item no.	no. of conductors incl. ground	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 22 AWG (≈ 42/38) • 0.34 mm²				
7852202	2	0.201	5.1	22
7852203	3	0.213	5.4	26
7852204	4	0.228	5.8	31
7852205	5	0.252	6.4	40
7852207	7	0.291	7.4	49
7852210	10	0.346	8.8	69
7852214	14	0.378	9.6	86
7852218	18	0.425	10.8	114
7852225	25	0.512	13.0	153

Other dimensions and colors available on request

US 2 color code:

#1- black, #2- white, #3- red, #4- green, #5- orange, #6- blue, #7- white-black, #8- red-black, #9- green-black, #10- orange-black, #11- blue-black, #12- black-white, #13- red-white, #14- green-white, #15- blue-white, #16- black-red, #17- white-red, #18- orange-red, #19- blue-red, #20- red-green, #21- orange-green, #22- black-white-red, #23- white-black-red, #24- red-black-white, #25- green-black-white



Possible on request:

- 20 AWG & 19 AWG
- with gray jacket and colored conductors with reference to DIN 47100

Data & Sensor Cables for Pitch & Blades

SD 200 C TP

Continuous flex halogen-free twisted pairs shielded PUR data cable
with extreme temperature range



VIERSEN · SD 200 C TP 3 x 2 x 0.5 mm² CE

Marking for SD 200 C TP 7890350:

SAB BRÖCKSKES · D-VIERSEN · SD 200 C TP 3 x 2 x 0.5 mm² CE



Construction:

Conductor:	bare copper strands, extra fine wires
Insulation:	TPE
Color code:	DIN 47100, see below
Stranding:	conductors twisted to pairs, pairs twisted in specially adjusted layering with non-woven tape over each layer
Wrapping:	non-woven tape
Shielding:	tinned copper braiding
Wrapping:	non-woven tape
Jacket material:	PUR, TMPU acc. to EN50363-10-2 + VDE 0207-363-10-2 with matte surface
Jacket color:	grayish tan (RAL 7032)

Outstanding features:



- free from paint wetting impairment substances (PWIS-free)
- flexible at low temperatures
- halogen-free
- travel>10 m is possible
- good EMC characteristics
- high abrasion resistance

Technical data:

Peak operating voltage:	max. 350 V acc. to VDE 0812
Testing voltage:	conductor/conductor: 1500 V conductor/shielding: 1200 V
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 -50/+90°C -40/+90°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Chemical resistance:	good against acids, alkalines, solvents, hydraulic liquids, etc.
Continuous flexibility	very good
Weather resistance:	very good
Approvals:	CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	no. of pairs	outer-Ø ±10% inch	cable weight ±10% mm ≈lbs/mft	
► 26 AWG (≈ 18/38) • 0.14 mm²				
7890214	2	0.173	4.4	19
7890314	3	0.193	4.9	20
7890414	4	0.220	5.6	27
7890514	5	0.236	6.0	29
7890614	6	0.252	6.4	35
7890714	7	0.264	6.7	40
7891014	10	0.311	7.9	48
7891414	14	0.354	9.0	65
7891814	18	0.394	10.0	85
7892514	25	0.461	11.7	112
► 24 AWG (≈ 32/38) • 0.25 mm²				
7890225	2	0.193	4.9	22
7890325	3	0.217	5.5	28
7890425	4	0.252	6.4	34
7890525	5	0.272	6.9	40
7890625	6	0.280	7.1	46
7890725	7	0.291	7.4	54
7891025	10	0.350	8.9	67
7891425	14	0.429	10.9	101
7891825	18	0.457	11.6	124
7892525	25	0.543	13.8	174

item no.	no. of pairs	outer-Ø ±10% inch	cable weight ±10% mm ≈lbs/mft
► 22 AWG (≈ 42/38) • 0.34 mm²			
7890234	2	0.205	5.2
7890334	3	0.228	5.8
7890434	4	0.272	6.9
7890534	5	0.291	7.4
7890734	7	0.315	8.0
7891034	10	0.378	9.6
7891434	14	0.457	11.6
7891834	18	0.492	12.5
7892534	25	0.579	14.7
► 20 AWG (≈ 28/34) • 0.50 mm²			
7890250	2	0.248	6.3
7890350	3	0.272	6.9
7890450	4	0.311	7.9
7890550	5	0.346	8.8
7890750	7	0.370	9.4
7891050	10	0.445	11.3
7891450	14	0.531	13.5
7891850	18	0.579	14.7
7892550	25	0.669	17.0

item no.	no. of pairs	outer-Ø ±10% inch	cable weight ±10% mm ≈lbs/mft
► 19 AWG (≈ 42/34) • 0.75 mm²			
7890275	2	0.283	7.2
7890375	3	0.311	7.9
7890475	4	0.350	8.9
7890575	5	0.409	10.4
7890775	7	0.457	11.6
7891075	10	0.531	13.5
7891475	14	0.634	16.1
7891875	18	0.681	17.3
7892575	25	0.791	20.1

Other dimensions and colors are available on request

DIN 47100 color code:

#1- white/brown, #2- green/yellow, #3- gray/pink, #4- blue/red, #5- black/purple, #6- gray-pink/red-blue, #7- white-green/brown-green, #8- white-yellow/yellow-brown, #9- white-gray/gray-brown, #10- white-pink/pink-brown, #11- white-blue/brown-blue, #12- white-red/brown-red, #13- white-black/brown-black, #14- gray-green/yellow-gray, #15- pink-green/yellow-pink, #16- green-blue/yellow-blue, #17- green-red/yellow-red, #18- green-black/yellow-black, #19- gray-blue/pink-blue, #20- gray-red/pink-red, #21- gray-black/pink-black, #22- blue-black, red-black, #23- white/brown, #24- green/yellow, #25- gray/pink

Data & Sensor Cables for Pitch & Blades

SRY D 321 C

Semi rigid PVC data cable with overall copper shield



Marking for SRY D 321 C 03210520:

SAB BRÖCKSKES · D-VIERSEN · 03210520 SRY D 321 C 20 AWG/5c 03210505
A W M Style 2464 80°C 300V CSA AWM I/I A/B 80°C 300V FT1 FT2 CE

Construction:

Conductor:	bare copper strands acc. to ASTM B 286
Insulation:	semi-rigid PVC
Color code:	acc. to color code US 2, see below
Stranding:	in layers
Wrapping:	PETP foil
Shield:	tinned copper braiding
Jacket material:	PVC
Jacket color:	gray (RAL 7032)

Outstanding features:



- good EMC characteristic
- flexible
- small outer diameter
- small bending radius

Technical data:

Voltage UL/CSA:	300 V	
Testing voltage:	conductor/conductor	2000 V
	conductor/shield	2000 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>	DIN VDE -30/+70°C	UL/CSA: up to +80°C
<i>flexible :</i>	-5/+70°C	
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, CSA FT1, FT2	
Oil resistance:	acc. to internal standard	
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30	

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 26 AWG • 0.14 mm²				
3210226	2	0.161	4.1	22
3210326	3	0.169	4.3	24
3210426	4	0.177	4.5	26
3210526	5	0.189	4.8	31
3210726	7	0.201	5.1	36
3210826	8	0.224	5.7	44
3211226	12	0.244	6.2	52
3211626	16	0.268	6.8	64
3211826	18	0.280	7.1	71
3212526	25	0.323	8.2	91
► 24 AWG • 0.25 mm²				
3210224	2	0.173	4.4	25
3210324	3	0.181	4.6	28
3210424	4	0.193	4.9	33
3210524	5	0.205	5.2	38
3210724	7	0.217	5.5	46
3210824	8	0.244	6.2	55
3211024	10	0.260	6.6	60
3211224	12	0.268	6.8	67
3211624	16	0.291	7.4	84
3211824	18	0.307	7.8	92
3212524	25	0.362	9.2	123

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 22 AWG • 0.34 mm²				
3210222	2	0.185	4.7	28
3210322	3	0.193	4.9	34
3210422	4	0.205	5.2	40
3210522	5	0.220	5.6	47
3210722	7	0.236	6.0	57
3210822	8	0.264	6.7	68
3211022	10	0.283	7.2	78
3211222	12	0.291	7.4	87
3211622	16	0.319	8.1	110
3211822	18	0.343	8.7	124
3212522	25	0.398	10.1	136
► 20 AWG • 0.50 mm²				
3210220	2	0.205	5.2	37
3210320	3	0.213	5.4	44
3210420	4	0.228	5.8	54
3210520	5	0.244	6.2	63
3210620	6	0.264	6.7	74
3210720	7	0.264	6.7	80
3211020	10	0.323	8.2	109
3211220	12	0.335	8.5	127
3211820	18	0.390	9.9	179
3212520	25	0.457	11.6	238

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 18 AWG • 1.00 mm²				
3210218	2	0.220	5.6	47
3210318	3	0.232	5.9	57
3210418	4	0.248	6.3	71
3210518	5	0.272	6.9	86
3210718	7	0.291	7.4	108
3210818	8	0.339	8.6	131
3211118	12	0.378	9.6	176
3211818	18	0.437	11.1	251
3212518	25	0.528	13.4	346

► 16 AWG • 1.50 mm²

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
3210216	2	0.236	6.0	54
3210316	3	0.244	6.2	67
3210416	4	0.264	6.7	83
3210516	5	0.287	7.3	101
3210716	7	0.311	7.9	130
3210816	8	0.358	9.1	157
3211216	12	0.402	10.2	212

Other dimensions and colors are available on request

US 2 color code:

#1- black, #2- white, #3- red, #4- green, #5- orange, #6- blue, #7- white-black, #8- red-black, #9- green-black, #10- orange-black, #11- blue-black, #12- black-white, #13- red-white, #14- green-white, #15- blue-white, #16- black-red, #17- white-red, #18- orange-red, #19- blue-red, #20- red-green, #21- orange-green, #22- black-white-red, #23- white-black-red, #24- red-black-white, #25- green-black-white



On request with color code
DIN 47100

Data & Sensor Cables for Pitch & Blades

SRY D 351 C (B) TP

Semi rigid PVC data cable, twisted pairs with overall copper shield



A AWM I/I A/B 80°C 300V FT1 FT2 CE



Marking for SRY D 351 C (B) TP 03510320:

SAB BRÖCKSKES · D-VIERSEN · 03510320 SRY D 351 C (B) TP 20 AWG/3pr 03512003

■ AWM Style 2464 80°C 300V CSA AWM I/I A/B 80°C 300V FT1 FT2 CE

Construction:

Conductor:	bare copper strands acc. to ASTM B 286
Insulation:	semi-rigid PVC
Color code:	acc. to color code US 3, see below
Stranding:	conductors twisted to pairs, pairs twisted in layers
Wrapping:	PETP foil
Shield:	tinned copper braiding with a tinned copper drain wire (0.22 mm ²)
Jacket material:	PVC
Jacket color:	gray (RAL 7032)

Outstanding features:

- good EMC characteristic
- flexible
- small outer diameter
- small bending radius

Technical data:

Voltage UL/CSA:	300 V
Testing voltage:	conductor/conductor: 2000 V conductor/shield: 2000 V
Min. bending radius fixed installation: free movement:	5 x O.D. 10 x O.D.
Temperature range static: flexible:	DIN VDE -30/+70 °C -5/+70 °C
Fire performance:	UL/CSA: up to +80°C flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2, CSA FT1, FT2
Oil resistance:	acc. to internal standard
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

On request with color code
DIN 47100

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 26 AWG • 0.14 mm²				
3510226	2	0.217	5.5	34
3510326	3	0.240	6.1	43
3510426	4	0.268	6.8	49
3510526	5	0.287	7.3	56
3510726	7	0.299	7.6	66
3510826	8	0.319	8.1	72
3511026	10	0.354	9.0	89
3511226	12	0.386	9.8	102
3511626	16	0.417	10.6	125
3511826	18	0.429	10.9	136
3512526	25	0.500	12.7	182
3512626	26	0.496	12.6	185
► 24 AWG • 0.25 mm²				
3510224	2	0.232	5.9	42
3510324	3	0.260	6.6	51
3510424	4	0.291	7.4	59
3510524	5	0.311	7.9	69
3510724	7	0.335	8.5	87
3510824	8	0.354	9.0	95
3511024	10	0.386	9.8	113
3511224	12	0.421	10.7	130
3511624	16	0.457	11.6	161
3511824	18	0.488	12.4	189
3512524	25	0.551	14.0	239
3512624	26	0.563	14.3	247

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 22 AWG • 0.34 mm²				
3510222	2	0.252	6.4	50
3510322	3	0.280	7.1	62
3510422	4	0.315	8.0	74
3510522	5	0.346	8.8	91
3510722	7	0.366	9.3	110
3511222	12	0.465	11.8	170
3511822	18	0.539	13.7	246
3512522	25	0.622	15.8	332
► 20 AWG • 0.50 mm²				
3510220	2	0.276	7.0	64
3510320	3	0.299	7.6	80
3510420	4	0.362	9.2	104
3510520	5	0.390	9.9	124
3510720	7	0.409	10.4	155
3511220	12	0.547	13.9	255
3511820	18	0.630	16.0	368
3512520	25	0.713	18.1	484

item no.	no. of conductors	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 18 AWG • 1.00 mm²				
3510218	2	0.307	7.8	81
3510318	3	0.354	9.0	114
3510418	4	0.402	10.2	138
3510518	5	0.437	11.1	166
3510718	7	0.461	11.7	211
3511218	12	0.630	16.0	365
3511818	18	0.709	18.0	511
3512518	25	0.811	20.6	692
► 16 AWG • 1.50 mm²				
3510216	2	0.323	8.2	96
3510316	3	0.378	9.6	133
3510416	4	0.429	10.9	164
3510516	5	0.465	11.8	198
3510716	7	0.508	12.9	264
3510816	8	0.543	13.8	297

Other dimensions and colors are available on request

US 3 color code:

#1- black paired with red, #2- black paired with white, #3- black paired with green, #4- black paired with blue, #5- black paired with yellow, #6- black paired with brown, #7- black paired with orange, #8- red paired with white, #9- red paired with green, #10- red paired with blue, #11- red paired with yellow, #12- red paired with brown, #13- red paired with orange, #14- green paired with white, #15- green paired with blue, #16- green paired with yellow, #17- green paired with brown, #18- green paired with orange, #19- white paired with blue, #20- white paired with yellow, #21- white paired with brown, #22- white paired with orange, #23- blue paired with yellow, #24- blue paired with brown, #25- blue paired with orange

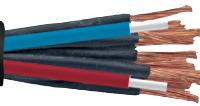
Data & Sensor Cables for Pitch & Blades

Data / POF cables

POF-LWL and hybrid cables for data transmission



D-VIERSEN · Sonder-Kombi-Datenleitung 10 x 0.5 mm² + 2 x POF



Construction:	2 x POF + 10 x 0.50 mm ²	4 x POF + 19 x 1.00 mm ²	6 x POF black	6 x POF colored	8 x POF
Conductor:	bare copper strands, fine wires acc. to IEC 60228, VDE 0295			—	
POF: polymer optical fiber	blue, red	black conductors with consecutive numbers in white 1-4	black conductors with consecutive numbers in white 1-6	black, blue, red, white, green, orange	black conductors with consecutive numbers in white 1-8
Insulation copper conductors:	YA, thermoplastic material, TI2 acc. to EN 50363-3 + VDE 0207-363-3			—	
Color code copper conductors:	0.50 mm ² : black conductors with consecutive numbers in white 1-10 without green-yellow earth wire	1.00 mm ² : black conductors with consecutive numbers in white 1-18 without green-yellow earth wire		—	
Stranding:	POF and conductors in layers		POF in layers with non-woven tape wrapping		
Wrapping:	—	non-woven tape		—	
Jacket material:	YM, thermoplastic material, TM2 acc. to EN 50363-4-1 + VDE 0207-363-4-1			thermoplastic material	
Jacket color:			black (RAL 9005)		

Technical data:	2 x POF + 10 x 0.50 mm ²	4 x POF + 19 x 1.00 mm ²	6 x POF black	6 x POF colored	8 x POF
Peak operating voltage:	max. 350 V			—	
Testing voltage:	conductor/conductor 1500 V			—	
Min. bending radius:		7.5 x O.D.			
Temperature range fixed laying: flexible application:		-30/+70°C -5/+70°C			
Burning characteristics:	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2				
Oil resistance:		acc. to internal standard			
Absence of harmful substances:		acc. to RoHS directive of the European Union, see page O/30			

item no.	no. of conductors	no. of POF	nominal cross-section mm ²	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
on request	10	2	0.50	0.374	9.5	81	39.0
	19	4	1.00	0.586	14.9	197	19.5
		6		0.343	8.7	47	
		6		0.343	8.7	47	
	8		0.397	10.1	62		

Other dimensions and colors are possible on request.

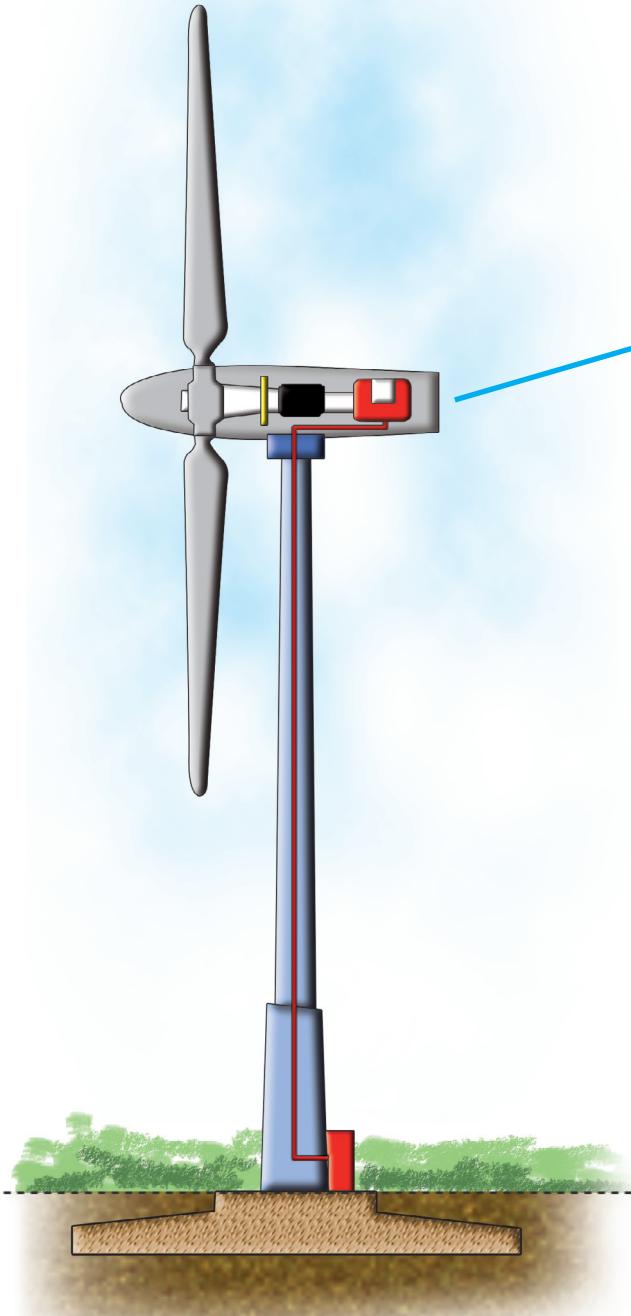
Data & Sensor Cables for Pitch & Blades

Data / POF cables

POF-LWL and hybrid cables for data transmission



Application: Good electromagnetic characteristics signal transmission for installation in switch boxes and wind energy plants. The copper cable is used for the transmission of the temperature signals that are used for the control of the operating temperature with the help of a resistance thermometer.



Data & Sensor Cables for Pitch & Blades

Sensor cable

Continuously flexible TPE/PUR data cable with colored conductors,
3 x (1 x 0.14 mm²)D + 12 x 0.14 mm²



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

Marking for sensor cable:

SAB BRÖCKSKES · D-VIERSEN · Special Cable AWM Style 21198 80°C 300V CSA AWM I A/B 80°C 300V FT2 CE

Construction:

Conductor:	bare copper strands, extra fine wires
Insulation:	TPE
Color code:	with reference to DIN 47100
Stranding:	specially adjusted layering with non-woven tape over each layer
Shield:	wrapped with tinned copper
Wrapping:	non-woven tape
Jacket material:	PUR
Jacket color:	black (RAL 9005)

Technical Data:

Peak operating voltage:	max. 150 V
Voltage UL/CSA:	300 V
Testing voltage:	conductor/conductor: 2000 V conductor/shield: 2000 V
Min. bending radius	
fixed installation:	5 x O.D.
free movement:	10 x O.D.
individual bending:	90° for a length of 7 cm
Temperature range	DIN VDE
static:	-40/+80°C
flexible:	-30/+70°C
high temperature:	up to +90°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Resistance:	very good against water, glycol and frost
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	no. of conductors x cross-section n x mm ²	outer-ø inch	mm	cable weight ≈ lbs/mft	ohmic resistance at 20°C acc. to VDE 0812 max. Ω/km
on request	3 x (1 x 0.14 mm ²)D + 12 x 0.14 mm ²	0.283	7.2	50	139.3

Other dimensions and colors are possible on request.

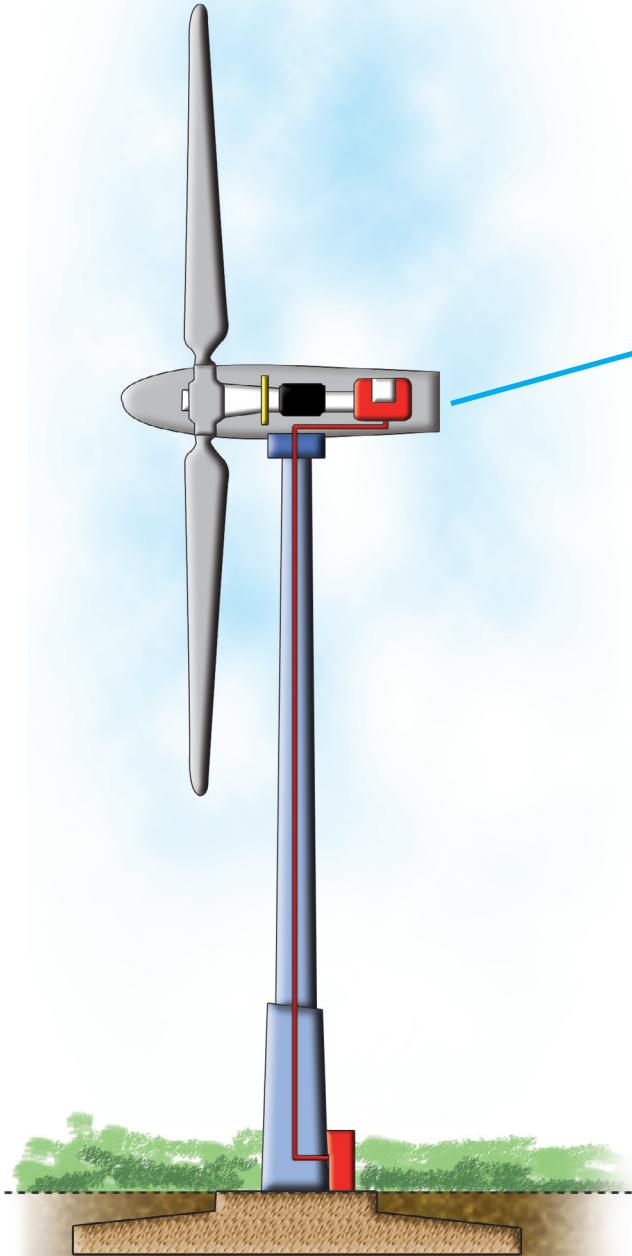
Data & Sensor Cables for Pitch & Blades

Sensor cable

Continuously flexible TPE/PUR data cable with colored conductors,
3 x (1 x 0.14 mm²)D + 12 x 0.14 mm²



Application: Highly flexible sensor cable for the transmission of measured values of a weather station for the control of the yaw mechanism in wind energy plants. The highly flexible construction makes the cable resistant against the existing vibration of the rotor system.



Ethernet Cables for Nacelle

CATLine CAT 6 S / CAT 6A S

Ethernet cable suitable for cable tracks

CATLine CAT 6 RT / CAT 6A RT

Ethernet cable suitable for cable tracks and robots



19 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE



Marking for CATLine CAT 6 S 16774630:

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

Construction:	CATLine CAT 6 S suitable for cable tracks	CATLine CAT 6A S suitable for cable tracks	CATLine CAT 6 RT suitable for cable tracks/ suitable for robots	CATLine CAT 6A RT suitable for cable tracks/ suitable for robots
Item numbers:	16774630	16774631	16874630	16874631
Dimensions:	4 x 2 x 26 AWG			
Conductor:	bare copper strands, fine wires			
Insulation:	special polymer	special polymer	special polymer	special polymer
Color code:	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Stranding:	conductors twisted to pairs, pairs together		conductors twisted to pairs, pairs together	
Wrapping:	non-woven tape	non-woven tape	non-woven tape	non-woven tape
Shielding:	alu foil	alu foil	alu foil	alu foil
Shielding:	tinned copper braiding	tinned copper braiding	tinned copper braiding	tinned copper braiding
Wrapping:	non-woven tape	non-woven tape	non-woven tape	non-woven tape
Jacket material:	PUR	PUR	PUR	PUR
Jacket color:	green (similar RAL 6018)			

Technical data:	CATLine CAT 6 S suitable for cable tracks	CATLine CAT 6A S suitable for cable tracks	CATLine CAT 6 RT suitable for cable tracks/ suitable for robots	CATLine CAT 6A RT suitable for cable tracks/ suitable for robots
Peak operating voltage:	max. 90 V	max. 90 V	max. 90 V	max. 90 V
Voltage UL/CSA:	300 V	300 V	300 V	300 V
Testing voltage: conductor/conductor: conductor/shielding:	2000 V 2000 V	2000 V 2000 V	2000 V 2000 V	2000 V 2000 V
Min. bending radius: fixed installation free movement: continuous flex:	5 x O.D. 10 x O.D. 15 x O.D.	5 x O.D. 10 x O.D. 15 x O.D.	5 x O.D. 10 x O.D. 15 x O.D.	5 x O.D. 10 x O.D. 15 x O.D.
Torsion:	—	—	up to $\pm 180^\circ/m$	up to $\pm 180^\circ/m$
Temperature range VDE: static: flexible:	UL: up to +80°C -40/+70°C -40/+70°C	UL: up to +80°C -40/+70°C -40/+70°C	UL: up to +80°C -40/+70°C -40/+70°C	UL: up to +80°C -40/+70°C -40/+70°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1	acc. to IEC 60754-1 + VDE 0482-754-1	acc. to IEC 60754-1 + VDE 0482-754-1	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 Horizontal Flame Test FT2			
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2		TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2	
Characteristic impedance (100 MHz): accomplishes the electrical and transmission requirements with high frequency	100Ω ± 10Ω, with reference to EN 50288-5-2 / CAT 6	100Ω ± 10Ω, with reference to EN 50288-10-2 / CAT 6A	100Ω ± 10Ω, with reference to EN 50288-5-2 / CAT 6	100Ω ± 10Ω, with reference to EN 50288-10-2 / CAT 6A
Flexibility:	very good	very good	very good	very good
UL Style:	20549	20549	20549	20549
Application:	suitable for EtherCAT and EtherNET/IP applications			
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page O/30			

item no.	type	dimensions AWG	max. cond.-ø mm	outer-ø $\pm 10\%$ inch	cable weight \approx lbs/mft
► 16774630	CATLine CAT 6 S	26 (\approx 7/34)/4pr	1.05	0.280	7.1 38
► 16774631	CATLine CAT 6A S	26 (\approx 7/34)/4pr	1.05	0.280	7.1 38
► 16874630	CATLine CAT 6 RT	26 (\approx 7/34)/4pr	1.05	0.280	7.1 38
► 16874631	CATLine CAT 6A RT	26 (\approx 7/34)/4pr	1.05	0.280	7.1 38

Other dimensions and colors are available on request



+90°C on request

Also possible as a
cable assembly with
M12 or RJ 45 plug



Ethernet Cables for Nacelle

CATLine CAT 7A S Gigabit Ethernet cable suitable for cable tracks

CATLine CAT 7A RT Gigabit Ethernet cable suitable for robots



549 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE



Marking for CATLine CAT 7A S 17774631:

SAB BRÖCKSKES · D-VIERSEN · CATLine Cat.7A S 4x2x26AWG 17774631 UL AWM Style 20549 80°C 300V CSA AWM I/II A/B 80°C 300V FT2 CE

Construction:	CATLine CAT 7A S suitable for cable tracks	CATLine CAT 7A RT suitable for robots
Item numbers:	17774631 / 17774431	17874631 / 17874431
Dimensions:	4 x 2 x 26 AWG / 4 x 2 x 24 AWG	4 x 2 x 26 AWG / 4 x 2 x 24 AWG
Conductors:	bare copper strands, fine wires	bare copper strands, fine wires
Insulation:	special polymer	special polymer
Color code:	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown	white-blue/blue, white-orange/orange, white-green/green, white-brown/brown
Stranding:	conductors twisted to pairs, pairs shielded with foil, pairs together	conductors twisted to pairs, pairs shielded with foil, pairs together
Shielding:	aluminized non-woven tape	aluminized non-woven tape
Shielding:	tinned copper braiding	tinned copper braiding
Wrapping:	non-woven tape	non-woven tape
Jacket material:	PUR	PUR
Jacket color:	green (similar RAL 6018)	green (similar RAL 6018)

Technical data:	CATLine CAT 7A S suitable for cable tracks	CATLine CAT 7A RT suitable for robots
Peak operating voltage:	max. 90 V	max. 90V
Voltage UL/CSA:	300 V	300 V
Testing voltage: conductor/conductor: conductor/shielding:	2000 V 2000 V	2000 V 2000 V
Min. bending radius: fixed installation: free movement: continuous flex:	5 x O.D. 10 x O.D. 15 x O.D.	5 x O.D. 10 x O.D. —
Torsion angle:	—	up to ± 180°/m
Temperature range VDE: static: flexible:	UL/CSA: up to +80°C -40/+70°C -40/+70°C	UL/CSA: up to +80°C -40/+70°C -40/+70°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1	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 Horizontal Flame Test FT2	flame retardant and self-extinguishing acc. to IEC 60332-1-2 + VDE 0482-332-1-2 UL Horizontal Flame Test FT2
Oil resistance:	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2	TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2
Characteristic impedance (100 MHz):	100Ω ± 10Ω, accomplishes the electrical and transmission requirements with high frequency with reference to EN 50288-9-2 + VDE 0819-9-2 / CAT 7A	
Flexibility:	very good	very good
UL Style:	20549	20549
Application:	suitable for EtherCAT and EtherNET/IP applications	
Absence of harmful substances:	acc. to RoHS directive of the European Union, see page O/30	

item no.	type	dimensions AWG	max. cond.-Ø mm	outer-Ø ±10% inch	outer-Ø ±10% mm	cable weight ≈lbs/mft
► 17774631	CATLine CAT 7A S	26 (≈ 7/34)/4pr	1.50	0.355	8.5	54
► 17774431	CATLine CAT 7A S	24 (≈ 7/34)/4pr	1.60	0.409	10.4	68
► 17874631	CATLine CAT 7A RT	26 (≈ 7/34)/4pr	1.50	0.350	8.9	56
► 17874431	CATLine CAT 7A RT	24 (≈ 7/34)/4pr	1.60	0.366	9.3	66

Other dimensions and colors are available on request



Also possible as a
cable assembly with
M12 or RJ 45 plug



866-722-2974 • www.sabcable.com

Servo Cables for Pitch Drive Systems

SL 839 C

Continuous flex composite polyurethane transmission cable with colored conductors and overall tinned copper shield



Marking for SL 839 C 8390122:

SAB BRÖCKSKES · D-VIERSEN · 8390122 SL 839 C 12 x 0.22 mm² DESINA AWM Style 20236 80°C 30V

Construction:

Conductor:	tinned copper strands acc. to VDE 0812
Insulation:	special polymer
Color code:	colored (see chart below)
	8390114, 8390214, & 8391050:
Shielding:	pairs shielded with tinned copper braiding
Inner jacket:	special polymer
Stranding:	conductors or pairs; twisted together in layers
Wrapping:	one non-woven tape or non-woven tape and PETP foil
Shielding:	tinned copper braiding
Wrapping:	non-woven tape
Jacket material:	PUR, TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 with matte surface or PU acc. to UL 758
Jacket color:	green (RAL 6018)

Outstanding features:

- UL recognized
- Good EMC characteristics
- Flexible and flexing installation
- Oil resistant
- Long service life
- Adhesion-free installation
- Halogen-free
- Suitable for cable tracks
- Free from paint wetting impairment substances (PWIS-free)
- DESINA® colors (see page G/3)

Technical data:

Nominal voltage:	max. 30 V
Voltage UL:	30 V
Testing voltage:	conductor/conductor: 600 V conductor/shielding: 600 V
Min. bending radius: <i>fixed installation:</i>	5 x O.D.
<i>free movement:</i>	10 x O.D.
<i>for continuous flexing:</i>	12 x O.D.
Radiation resistance:	5 x 10 ⁷ cJ/kg
Temperature range: <i>static:</i>	DIN VDE -40/+70°C
<i>flexible:</i>	UL/CSA: up to +80°C -20/+70°C
Halogen-free:	acc. to IEC 60754-1 + VDE 0482-754-1
Oil resistance:	very good - TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2; oil rating 60°C acc. to UL 758
Chemical resistance:	good - against acids, alkalines, solvents, hydraulic liquids, etc.
Weather resistance:	very good
Approvals:	UR AWM, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

suitable for resolvers
and shaft encoders and
Sinamics DRIVE CLIQ



item no.	dimensions	outer-Ø	cable weight ≈lbs/mft	color codes
Jacket material TMPU acc. to DIN VDE 0282				
► 8390114	(0.14 mm ² /3pr)D + (20 AWG/2c)D	0.362 ± 0.016	9.2 ± 0.4	71 (GN/YE+BN/BK+OR/RD) - (RD+BK)
► 8390214	(0.14 mm ² /3pr)D + 0.14 mm ² + 20 AWG/2c	0.354 ± 0.016	9.0 ± 0.4	68 (RD/OR+BN/BK+GN/YE) - (BU+GY+WH-BK+WH-YE) - (BN-BU+BN-RD)
► 8391050	(0.14 mm ² /3pr)D + 0.14 mm ² /4c + 0.22 mm ² /4c + 20 AWG/2c	0.378 ± 0.016	9.6 ± 0.4	77 (RD/OR+BN/BK+GN/YE) - (BU+GY+WH-BK+WH-YE) - (BN-YE+GN-RD+BN-GY+GN-BK) - (BN-BU+BN-RD)
► 8390138	0.38 mm ² /4pr + 20 AWG/4c	0.346 ± 0.016	8.8 ± 0.4	75 (RD/OR+GN/YE+BU/VT+BN/BK) - (BK-WH+RD-WH+YE-WH+BU-WH)
► 8390318	0.18 mm ² /8pr	0.307 ± 0.016	7.8 ± 0.4	52 (WH/GY+VT/BU+GN/YE+OR/RD+BK/BN+WH-RD/WH-OR+WH-BK/WH-BN+WH-YE/WH-GN)
► 8390122	0.22 mm ² /12c	0.264 ± 0.016	6.7 ± 0.4	44 (RD+BK+BN+WH+GY+VT+BU+GN+YE+OR+WH-BN+WH-BK)
Jacket material PU acc. to UL 758				
► 8390118	0.18 mm ² /4c	0.193 ± 0.016	4.9 ± 0.4	20 (RD+BK+OR+BN)
► 8390218	0.18 mm ² /4pr	0.248 ± 0.016	6.3 ± 0.4	34 (VT/BU+GN/YE+OR/RD+BK/BN)
► 8390115	0.15 mm ² /2pr + 0.38 mm ² /2c	0.272 ± 0.012	6.9 ± 0.3	45 (GN/YE+BU/PK) + (RD+BK)
► 8390220	0.20 mm ² /2pr + 0.38 mm ² /2c	0.272 ± 0.012	6.9 ± 0.3	41 (GN/YE+BU/PK) + (RD+BK)

D = spiral shield with pairs

Other dimensions and colors are available on request

Note: DESINA® is a registered trademark of the German Machine Tool Builders' Association.

DESINA®

Servo Cables for Pitch Drive Systems

SL 841 C

Continuous flex TPE motor connection cable with black numbered power conductors,
1 or 2 supply pairs and overall tinned copper shield, 0.6/1 kV



Style 20235 80°C CSA AWM I/II A/B 80°C 300V FT1 FT2 CE

Marking for SL 841 C 8410407:

SAB BRÖCKSKES · D-VIERSEN · 8410407 SL 841 C 4 x 0.75 mm² (1000V) + 2 x (2 x 0.34 mm²) (300V) DESINA® AWM Style 20235 80°C CSA AWM I/II A/B 80°C 300V FT1 FT2 CE

Construction:	
Conductor:	bare copper strands acc. to IEC 60228, VDE 0295, class 6 < 20 AWG with reference to VDE 0812
Insulation:	TPE
Color code:	black conductors with consecutive numbers acc. to EN 50334 + VDE 0293-334 and a green/yellow ground power supply conductors: * U1, V2, W3 and a green/yellow ground control conductors: ** BR1 and BR2
Stranding:	control conductors: 22 - 14 AWG; twisted to pairs
Shielding:	pairs wrapped with alu. foil and tinned copper braiding
Wrapping:	pairs with PETP foil
Stranding:	shielded control pairs and power supply conductors twisted together in layers
Wrapping:	two layers non-woven tape
Shielding:	overall tinned copper braiding
Wrapping:	non-woven tape
Jacket material:	PUR, TMPU acc. to EN 50363-10-2 + VDE 0207-363-10-2 with matte surface
Jacket color:	orange (RAL 2003)

Outstanding features:



- UL recognized, CSA approval
- Very good EMC characteristics
- Long service life
- Adhesion-free installation
- High flexibility
- Suitable for cable tracks
- Halogen-free
- Free from paint wetting impairment substances (PWIS-free)
- Flexible at low temperatures
- DESINA® colors (see page G/3)
- In accordance with Indramat INK and Siemens 6FX8008

Technical data:

Peak operating voltage:	control conductors: max. 350 V
Nominal voltage:	power supply conductors: Uo/U 0.6/1 kV
Voltage UL/CSA:	control conductors: 300 V power supply conductors: 1000 V
Testing voltage:	power supply conductors: conductor/conductor: 4000 V conductor/shielding: 4000 V
control conductors:	conductor/conductor: 2000 V conductor/shielding: 2000 V
Min. bending radius:	
fixed installation:	5 x O.D.
free movement:	10 x O.D.
for continuous flexing:	12 x O.D.
Radiation resistance:	5 x 10 ⁷ cJ/kg
Temperature range:	DIN VDE static: -50/+90°C flexible: -40/+90°C
UL/CSA:	up to +80°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 FT1, CSA FT1, FT2
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.
Weather resistance:	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



Cable harnessing
possible on request

item no.	power supply conductors	control pairs individually shielded	outer-Ø	cable weight ≈lbs/mft
			inch	mm
► 8410407	19 AWG/4c	22 AWG/2pr	0.457 ± 0.020	11.6 ± 0.5
► 8410410	18 AWG/4c	19 AWG/2pr	0.465 ± 0.020	11.8 ± 0.5
► 8410415	16 AWG/4c	19 AWG/2pr	0.484 ± 0.020	12.3 ± 0.5
► 8410425	14 AWG/4c	18 AWG/2pr	0.571 ± 0.031	14.5 ± 0.8
► 8410441	12 AWG/4c	18 AWG/1pr	0.685 ± 0.024	17.4 ± 0.6
	+ 16 AWG/1pr			308
► 8410461	10 AWG/4c	18 AWG/1pr	0.744 ± 0.031	18.9 ± 0.8
	+ 16 AWG/1pr			374
► 8410471	8 AWG/4c	18 AWG/1pr	0.803 ± 0.039	20.4 ± 1.0
	+ 16 AWG/1pr			495
► 8410485	6 AWG/4c	16 AWG/2pr	1.024 ± 0.031	26.0 ± 0.8
► 8410490	4 AWG/4c	16 AWG/2pr	1.157 ± 0.031	29.4 ± 0.8
► 8410495	2 AWG/4c	16 AWG/2pr	1.232 ± 0.031	31.3 ± 0.8
► 8410496	1 AWG/4c	14 AWG/2pr	1.504 ± 0.031	38.2 ± 0.8
				1787

SIEMENS®

item no.	power conductors	control pairs individually shielded	outer-Ø	cable weight ≈lbs/mft
			inch	mm
► 8411415	16 AWG/4c	16 AWG/1pr	0.492 ± 0.012	12.5 ± 0.3
► 8411425	14 AWG/4c	16 AWG/1pr	0.524 ± 0.016	13.3 ± 0.4
► 8411440	12 AWG/4c	16 AWG/1pr	0.598 ± 0.016	15.2 ± 0.4
► 8411460	10 AWG/4c	16 AWG/1pr	0.654 ± 0.043	16.6 ± 1.1
► 8411470	8 AWG/4c	16 AWG/1pr	0.768 ± 0.063	19.5 ± 1.6
► 8411480	6 AWG/4c	16 AWG/1pr	0.933 ± 0.039	23.7 ± 1.0
► 8411490	4 AWG/4c	16 AWG/1pr	1.071 ± 0.028	27.2 ± 0.7
► 8411495	2 AWG/4c	16 AWG/1pr	1.185 ± 0.039	30.1 ± 1.0
► 8411496	1 AWG/4c	16 AWG/1pr	1.354 ± 0.039	34.4 ± 1.0
				1655

Other dimensions and colors are available on request

Note: SIEMENS® is a registered trademark. It is only used for comparative purposes.
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DESINA® is a registered trademark of the German Machine Tool Builders' Association.

Servo Cables for Pitch Drive Systems

Generator connection cable

Silicone impregnated fiber-glass braiding

+180 °C



Application: For the wiring of motors /generators / transformers. Suitable for the potting with impregnating materials for example with epoxy resin. Residues can be easily removed from the silicone impregnated surfaces.

Construction:

Conductor:	tinned copper strands acc. to IEC 60228, VDE 0295, class 5
Wrapping:	non-woven tape
Insulation:	special silicone
Color code	
450/750 V:	white
3.8/6.6 kV:	gray
8.0/13.8 kV:	black
Braiding:	fiber-glass
Impregnation:	special silicone

Outstanding features:



- halogen-free
- flexible at low temperatures
- heat resistant
- good mechanical characteristics
- fiber-glass braiding up to +400°C

Technical data:

Nominal voltage:	Uo/U 450/750 V Uo/U 3.8/6.6 V Uo/U 8.0/13.8 V
Testing voltage:	450/750 V = 2500 V 3.8/6.6 kV = 15000 V 8.0/13.8 kV = 30000 V
Min. bending radius:	7.5 x O.D.
Radiation resistance:	2 x 10 ⁷ cJ/kg
Temperature range	
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
Corrosiveness of conflagration gases:	in compliance with IEC 60754-2 + VDE 0482-754-2 - no development of corrosive conflagration gases
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

450/750 V

item no.	nominal cross-section mm ²	largest single wire ø mm	outer-ø ±10% mm	copper figure kg/km	cable weight ≈ kg/km
item group 0123	6.00	0.31	5.3	57.6	71
	10.00	0.41	6.9	96.0	125
	16.00	0.41	7.9	153.6	179
	25.00	0.41	10.1	240.0	279
item no. on request	35.00	0.41	11.5	336.0	381
	50.00	0.41	13.1	480.0	548
	70.00	0.41	15.4	672.0	722
	95.00	0.51	18.3	912.0	1004
	120.00	0.51	20.2	1152.0	1221

Other dimensions and colors are possible on request.

3.8/6.6 kV

item no.	nominal cross-section mm ²	largest single wire ø mm	outer-ø ±10% mm	copper figure kg/km	cable weight ≈ kg/km
item group 0123	16.00	0.41	10.3	153.6	224
	25.00	0.41	12.1	240.0	325
	35.00	0.41	13.5	336.0	434
	50.00	0.41	15.1	480.0	596
item no. on request	70.00	0.41	17.4	672.0	798
	95.00	0.51	19.5	912.0	1032
	120.00	0.51	21.4	1152.0	1250

Other dimensions and colors are possible on request.

8.0/13.8 kV

item no.	nominal cross-section mm ²	largest single wire ø mm	outer-ø ±10% mm	copper figure kg/km	cable weight ≈ kg/km
item group 0123	10.00	0.41	11.9	96.0	224
	16.00	0.41	12.9	153.6	286
	25.00	0.41	14.7	240.0	386
	50.00	0.41	17.3	480.0	663
item no. on request	70.00	0.41	19.6	672.0	870
	95.00	0.51	21.7	912.0	1109

Other dimensions and colors are possible on request.

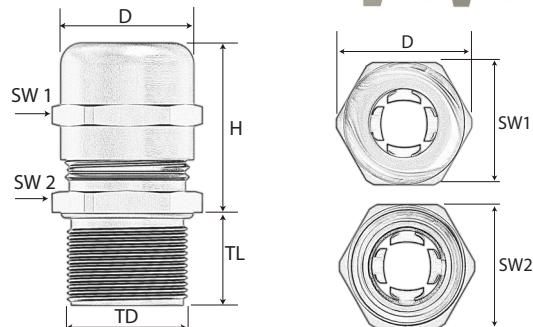
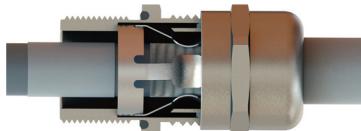
Shielding Cord Grips for Wind Turbine

CG EMC-4 Metric / CG EMC-4 PG / CG EMC-4 NPT

Nickel plated brass EMC cable gland, vibration proof

Metric, PG, &
NPT Thread

Optimal grounding of shielded
cable, bi-directional cable
installation, impact resistant.



Technical data:

Material:	Brass, Nickel Plated
Contact spring:	Special Copper Alloy
Clamping Insert:	Polyamide 6
Seal:	Chloroprene (CR)
O-Ring:	Neoprene (NBR)
Protection type:	IP 68 - 5 Bar NEMA 4X
Temperature range:	-20°C to +100°C intermittent: -40°C to +150°C
Flammability:	V2 (according to UL 94)
Approvals:	cURus, cULus, VDE, DNV-GL, CE



Part Number	Thread Type	Clamping Range Ø min-max (CR)		Outer Ø (D) inches	Shield Diameter (Ø min)		Wrenching Flats Cap (SW1) inches	Wrenching Flats Body (SW2) inches	Thread Diameter (TD) inches	Thread Length (TL) inches	Max. Height (H) inches	UL	
Metric													
EM4-12	M12x1.5	0.118	- 0.256	3.0 - 6.5	0.610	0.079	2.0	0.551	0.551	0.472	0.236	1.181	cURus
EM4-16	M16x1.5	0.197	- 0.394	5.0 - 10.0	0.866	0.138	3.5	0.787	0.787	0.630	0.236	1.378	cURus
EM4-20	M20x1.5	0.236	- 0.472	6.0 - 12.0	0.965	0.177	4.5	0.866	0.866	0.787	0.236	1.319	cULus
EM4-20C	M20x1.5	0.295	- 0.551	7.5 - 14.0	1.055	0.217	5.5	0.945	0.945	0.787	0.315	1.634	cULus
EM4-25	M25x1.5	0.394	- 0.709	10.0 - 18.0	1.299	0.276	7.0	1.181	1.181	0.984	0.315	1.752	cULus
EM4-32	M32x1.5	0.630	- 0.984	16.0 - 25.0	1.752	0.472	12	1.575	1.575	1.260	0.354	2.165	cULus
EM4-40	M40x1.5	0.866	- 1.260	22.0 - 32.0	2.185	0.709	18	1.969	1.969	1.575	0.354	2.461	cULus
EM4-50	M50x1.5	1.181	- 1.496	30.0 - 38.0	2.520	1.024	26	2.283	2.283	1.969	0.354	2.913	cULus
EM4-63	M63x1.5	1.339	- 1.732	34.0 - 44.0	2.953	1.181	30	2.520	2.677	2.480	0.551	2.362	cULus
EM4-63C	M63x1.5	1.457	- 2.087	37.0 - 53.0	3.268	1.299	33	2.953	2.953	2.480	0.394	2.953	cULus
PG^{1*}													
EP4-7	PG 7	0.118	- 0.256	3.0 - 6.5	0.650	0.079	2.0	0.551	0.591	0.492	0.236	1.181	-
EP4-11	PG 11	0.197	- 0.394	5.0 - 10.0	0.906	0.138	3.5	0.787	0.827	0.732	0.236	1.378	-
EP4-13	PG 13.5	0.236	- 0.472	6.0 - 12.0	0.965	0.177	4.5	0.866	0.866	0.803	0.256	1.319	-
EP4-16	PG 16	0.295	- 0.551	7.5 - 14.0	1.083	0.217	5.5	0.945	0.984	0.886	0.256	1.634	-
EP4-21	PG 21	0.394	- 0.709	10.0 - 18.0	1.398	0.276	7.0	1.181	1.260	1.114	0.276	1.752	-
EP4-29	PG 29	0.630	- 0.984	16.0 - 25.0	1.752	0.472	12	1.575	1.575	1.457	0.354	2.165	-
EP4-36	PG 36	0.866	- 1.260	22.0 - 32.0	2.185	0.709	18	1.969	1.969	1.850	0.354	2.441	-
EP4-42	PG 42	1.181	- 1.496	30.0 - 38.0	2.618	1.024	26	2.283	2.362	2.126	0.472	2.933	-
EP4-48	PG 48	1.339	- 1.732	34.0 - 44.0	2.953	1.181	30	2.520	2.677	2.335	0.551	2.382	-
NPT^{**}													
EN4-1/4	NPT 1/4	0.118	- 0.256	3.0 - 6.5	0.650	0.079	2.0	0.551	0.591	0.540	0.453	1.181	-
EN4-3/8	NPT 3/8	0.197	- 0.394	5.0 - 10.0	0.866	0.138	3.5	0.787	0.787	0.675	0.453	1.378	-
EN4-1/2	NPT 1/2	0.236	- 0.472	6.0 - 12.0	0.965	0.177	4.5	0.866	0.866	0.840	0.591	1.555	cULus
EN4-1/2C	NPT 1/2	0.295	- 0.551	7.5 - 14.0	1.055	0.217	5.5	0.945	0.945	0.840	0.591	1.634	cULus
EN4-1/2C-2	NPT 1/2	0.295	- 0.551	7.5 - 14.0	1.055	0.217	5.5	0.945	0.945	0.840	0.314	1.634	cULus
EN4-3/4	NPT 3/4	0.394	- 0.709	10.0 - 18.0	1.299	0.276	7.0	1.181	1.181	1.050	0.591	1.713	cULus
EN4-1	NPT 1	0.630	- 0.984	16.0 - 25.0	1.752	0.472	12	1.575	1.575	1.315	0.787	2.126	cULus
EN4-1 1/4	NPT 1 1/4	0.866	- 1.260	22.0 - 32.0	2.185	0.709	18	1.969	1.969	1.660	0.787	2.480	cULus
EN4-1 1/2	NPT 1 1/2	1.181	- 1.496	30.0 - 38.0	2.520	1.024	26	2.283	2.283	1.900	0.866	2.874	cULus
EN4-2	NPT 2	1.339	- 1.732	34.0 - 44.0	2.953	1.181	30	2.520	2.677	2.375	0.866	0.866	cULus

¹ PG - DNV-GL & CE only

² NPT - cULus, DNV-GL & CE only

* PG & NPT are not NEMA 4X rated

Locknuts need to be purchased separately

Tray Cable for Tower and Drip Loop

TR 600 S

UV and oil resistant 90°C flexible tray cable,
Type TC-ER, MTW, WTTC, and CSA approved



-25°C SR FT4 OR AWM I/I A/B 90C 1000V FT4 RoHS CE



Marking for TR 600 S 93331641:

SAB NORTH AMERICA TR 600 S 93331641 16 AWG/41C (UL) TC-ER 90C DRY/WET 600V SUN RES DIR BUR OIL RES I/I OR WTTC 1000V OR MTW
"FLEXING" OR DP-1 OR AWM 2586 105°C CSA CIC-TC PVC/N 90°C DRY 75°C WET 600V -25°C SR FT4 OR AWM I/I A/B 90C 1000V FT4 RoHS CE

Construction:

Conductor:	bare copper strands class K (30 AWG multiple strands)
Insulation:	special formulated PVC/Nylon
Color code:	black conductors with consecutive white numbers; green/yellow ground from 3 conductors
Stranding:	in layers
Jacket material:	special oil resistant pressure extruded PVC
Jacket color:	black (RAL 9005)

Outstanding features:

- flexible stranding for easy installation
- oil resistant meeting UL Oil Res I and II
- NFPA 79 for Industrial Machinery
- UL TC-ER (exposed runs)
- CSA approved for TC
- Submersible pump (14 AWG ≥ 3 thru 7 cond.)
- WTTC: Wind Turbine tray cable
- 90°C Wet rated
- Class 1 Div 2 per NEC Article 501.4 (B)

Technical data:

Voltage:	UL-AWM / (UL) / CSA: 600 V (UL) WTTC: 1000 V	
Testing voltage:	2500 V	
Min. bending radius:	4 x O.D. 6 x O.D.	
fixed installation:		
free movement:		
Temperature range:	UL -AWM up to +105°C -40°C	(UL) / CSA: up to +90°C
static:		
Burning characteristics:	(UL) / CSA FT4	
Oil resistance I & II:	yes	
Sunlight resistance:	yes	
Exposed runs:	yes	
Cold bend test:	-40°C	
Direct burial:	yes	
Machinery area:	yes	
Approvals:	UL TC-ER UL MTW, UL WTTC, UR AWM, CSA CIC-TC, CSA AWM, CE, RoHS	
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30	

item no.	no. of conductors incl. ground	outer-ø inch	outer-ø mm	cable weight ≈lbs/mft
► 18 AWG				
93331802*	2	0.286	7.3	45
93331803	3	0.300	7.6	55
93331804	4	0.324	8.2	67
93331805	5	0.349	8.9	79
93331807	7	0.376	9.6	100
93331809	9	0.432	11.0	125
93331812	12	0.480	12.2	157
93331818	18	0.596	15.1	244
93331825	25	0.686	17.4	319
93331850	50	0.940	23.9	622
► 16 AWG				
93331602*	2	0.306	7.8	52
93331603	3	0.321	8.2	70
93331604	4	0.348	8.8	81
93331605	5	0.376	9.6	96
93331607	7	0.412	10.5	126
93331608	8	0.440	11.2	137
93331609	9	0.473	12.0	152
93331612	12	0.527	13.4	196
93331616	16	0.613	15.6	273
93331618	18	0.646	16.4	300
93331619	19	0.646	16.4	310
93331625	25	0.746	18.9	395
93331634	34	0.884	22.5	544
93331637	37	0.896	22.8	592
93331641	41	0.945	24.0	654
93331650	50	1.025	26.0	756

item no.	no. of conductors incl. ground	outer-ø inch	outer-ø mm	cable weight ≈lbs/mft
► 14 AWG				
93331402*	2	0.346	8.8	65
93331403	3	0.364	9.2	88
93331404	4	0.396	10.1	112
93331405	5	0.430	10.9	130
93331407	7	0.472	12.0	169
93331409	9	0.578	14.7	236
93331412	12	0.644	16.4	297
93331418	18	0.744	18.9	417
93331425	25	0.904	23.0	596
► 12 AWG				
93331202*	2	0.385	9.8	99
93331203	3	0.403	10.2	120
93331204	4	0.440	11.2	150
93331205	5	0.479	12.2	189
93331207	7	0.526	13.4	240
► 10 AWG				
93331003	3	0.487	12.4	179
93331004	4	0.568	14.4	248
93331005	5	0.618	15.7	298
93331007	7	0.674	17.1	403
► 8 AWG				
93330803	3	0.662	16.8	309
93330804	4	0.728	18.5	388
93330805	5	0.826	21.0	465
► 6 AWG				
93330603	3	0.765	19.4	443
93330604	4	0.879	22.3	580
93330605	5	0.954	24.2	717

item no.	no. of conductors incl. ground	outer-ø inch	outer-ø mm	cable weight ≈lbs/mft
► 4 AWG				
93330403	3	0.966	24.5	696
93330404	4	1.061	26.9	845
93330405	5	1.179	29.9	1035
► 2 AWG				
93330203	3	1.114	28.3	977
93330204	4	1.160	29.5	1215
93330205	5	1.363	34.6	1575
► 1 AWG				
93330104	4	1.401	35.6	1588
► 1/0 AWG				
93331104	4	1.458	37.0	1971
► 2/0 AWG				
93332104	4	1.588	40.3	2301
► 3/0 AWG				
93333104	4	1.733	44.0	2946
► 4/0 AWG				
93334104	4	1.841	46.8	3459
► 250 MCM				
93332504	4	2.138	54.3	4538
► 350 MCM				
93333504	4	2.335	59.3	5591
► 500 MCM				
93335004	4	2.815	71.5	8065

Other dimensions and colors are available on request

* 2 conductor cables are rated UL TC only

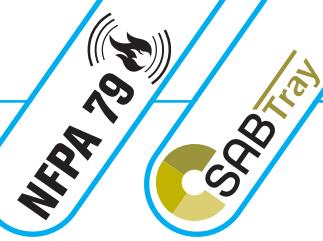
UL TC-ER-JP (joist pull) available upon request

Tray Cable for Tower and Drip Loop

TR 600 S CY

UV and oil resistant 90°C shielded flexible tray cable

Type TC-ER, MTW, WTTC



SR FT4 OR AWM I/II A/B 90C 1000V FT4 RoHS CE



Marking for TR 600 S CY 93341604:

SAB NORTH AMERICA TR 600 S CY 93341604 16 AWG/ 4C (UL) TC-ER 90C DRY/WET 600V SUN RES DIR BUR OIL RES I/II OR WTTC 1000V OR

MTW "FLEXING" OR DP-1 OR AWM 2586 105°C CSA CIC-TC PVC/N 90°C DRY 75°C WET 600V -25°C SR FT4 OR AWM I/II A/B 90C 1000V FT4 RoHS CE

Construction:

Conductor:	bare copper strands class K (30 AWG multiple strands)
Insulation:	special formulated PVC/Nylon
Color code:	black conductors with consecutive white numbers; green/yellow ground from 3 conductors
Stranding:	in layers
Wrapping:	fleece tape
Shielding:	tinned copper braiding (85% coverage)
Jacket material:	special oil resistant pressure extruded PVC
Jacket color:	black (RAL 9005)

Outstanding features:

- flexible stranding for easy installation
- oil resistant meeting UL Oil Res I and II
- NFPA 79 for Industrial Machinery
- UL TC-ER (exposed run)
- CSA approved for TC
- Submersible pump (14 AWG ≥ 3 thru 7 cond.)
- WTTC: Wind Turbine tray cable
- 90°C Wet rated
- Class 1 Div 2 per NEC Article 501.4 (B)

Technical data:

Voltage:	UL-AWM / (UL) / CSA: (UL) WTTC:	600 V 1000 V
Testing voltage:	2500 V	
Min. bending radius:	6 x O.D. fixed installation: free movement:	8 x O.D.
Temperature range:	UL -AWM up to +105°C -40°C	(UL) / CSA: up to +90°C
static:		
Burning characteristics:	(UL) / CSA FT4	
Oil resistance I & II:	yes	
Sunlight resistance:	yes	
Exposed runs:	yes	
Cold bend test:	-40°C	
Direct burial:	yes	
Machinery area:	yes	
Approvals:	UL TC-ER, UL MTW, UL WTTC, UR AWM, CSA CIC-TC, CSA AWM, CE, RoHS	
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30	

item no.	no. of conductors incl. ground	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 18 AWG				
93341803	3	0.324	8.2	71
93341804	4	0.348	8.8	85
93341805	5	0.373	9.5	95
93341807	7	0.400	10.2	120
93341809	9	0.455	11.6	149
93341812	12	0.504	12.8	185
93341818	18	0.617	15.7	270
93341825	25	0.710	18.0	365
► 16 AWG				
93341603	3	0.345	8.8	83
93341604	4	0.372	9.4	100
93341605	5	0.400	10.2	116
93341607	7	0.430	10.9	145
93341609	9	0.492	12.5	187
93341612	12	0.579	14.7	245
93341618	18	0.664	16.9	335
93341625	25	0.770	19.6	445

item no.	no. of conductors incl. ground	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 14 AWG				
93341403	3	0.388	9.9	108
93341404	4	0.420	10.7	131
93341405	5	0.454	11.5	155
93341407	7	0.490	12.4	190
93341412	12	0.662	16.8	350
93341418	18	0.764	19.4	482
93341425	25	0.924	23.5	701
► 12 AWG				
93341203	3	0.427	10.8	145
93341204	4	0.464	11.8	178
93341205	5	0.506	12.9	210
93341207	7	0.578	14.7	307
► 10 AWG				
93341003	3	0.562	14.3	190
93341004	4	0.568	14.4	250
93341005	5	0.643	16.3	350
93341007	7	0.695	17.7	408

item no.	no. of conductors incl. ground	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 8 AWG				
93340804	4	0.759	19.3	447
► 6 AWG				
93340604	4	0.915	23.2	672
93340605	5	0.936	23.8	766
► 4 AWG				
93340404	4	1.097	27.9	993
► 2 AWG				
93340204	4	1.271	32.3	1455

Other dimensions and colors are available on request

UL TC-ER-JP (joist pull) available upon request

Cordage for Generator to Tower

H07RN-F

Heavy duty neoprene jacketed harmonized cordage 450/750 V



HAR CE RoHS ✓

Construction:

Conductor:	bare copper strands acc. to IEC 60228, EN 60228, class 5
Insulation:	synthetic rubber, Type E14
Color code:	acc. to HD 308, see below
Stranding:	from 2 conductors stranded in layers
Jacket material:	synthetic rubber, EM2
Jacket color:	black



Outstanding features:

- harmonized to European standards
- high mechanical loading capacity
- UV resistant

Technical data:

Nominal voltage:	Uo/U 450/750 V
Testing voltage:	2500 V
Min. bending radius:	6 x O.D.
Temperature range:	-25/+60°C
Approvals:	HAR, CE, RoHS
Absence of harmful substances:	acc. to RoHS directive of the European Union see page O/30

item no.	no. of conductors incl. ground	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 18 AWG (≈ 30/32) • 1.00 mm²				
39550210	2	0.295	7.5	54
39550310	3	0.327	8.3	64
39550410	4	0.354	9.0	81
39550510	5	0.386	9.8	97
► 16 AWG (≈ 27/29/30) • 1.50 mm²				
39550215	2	0.327	8.3	67
39550315	3	0.362	9.2	84
39550415	4	0.406	10.3	108
39550515	5	0.437	11.1	128
► 14 AWG (≈ 46/30) • 2.50 mm²				
39550225	2	0.386	9.8	97
39550325	3	0.429	10.9	124
39550425	4	0.469	11.9	155
39550525	5	0.520	13.2	188
► 12 AWG (≈ 52/28) • 4.00 mm²				
39550240	2	0.429	10.9	131
39550340	3	0.488	12.4	175
39550440	4	0.543	13.8	215
39550540	5	0.602	15.3	269
► 10 AWG (≈ 78/28) • 6.00 mm²				
39550160	1	0.323	8.2	74
39550260	2	0.488	12.4	178
39550360	3	0.567	14.4	235
39550460	4	0.614	15.6	292
39550560	5	0.697	17.7	366

item no.	no. of conductors incl. ground	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 8 AWG (≈ 77/26) • 10.00 mm²				
39550161	1	0.394	10.0	114
39550261	2	0.689	17.5	326
39550361	3	0.764	19.4	420
39550461	4	0.843	21.4	517
39550561	5	0.933	23.7	635
► 6 AWG (≈ 122/26) • 16.00 mm²				
39550162	1	0.441	11.2	158
39550262	2	0.768	19.5	437
39550362	3	0.858	21.8	575
39550462	4	0.957	24.3	722
39550562	5	1.059	26.9	887
► 4 AWG (≈ 190/26) • 25.00 mm²				
39550163	1	0.520	13.2	235
39550263	2	0.976	24.8	679
39550363	3	1.024	26.0	843
39550463	4	1.161	29.5	1089
39550563	5	1.295	32.9	1341
► 2 AWG (≈ 272/26) • 35.00 mm²				
39550164	1	0.579	14.7	312
39550364	3	1.150	29.2	1112
39550464	4	1.280	32.5	1415
► 1 AWG (≈ 400/26) • 50.00 mm²				
39550165	1	0.669	17.0	423
39550365	3	1.319	33.5	1502
39550465	4	1.472	37.4	1932

item no.	no. of conductors incl. ground	outer-Ø inch	outer-Ø mm	cable weight ≈lbs/mft
► 2/0 AWG (≈ 543/26) • 70.00 mm²				
39550166	1	0.744	18.9	564
39550366	3	1.469	37.3	1996
39550466	4	1.646	41.8	2570
► 3/0 AWG (≈ 484/24) • 95.00 mm²				
39550167	1	0.843	21.4	739
39550367	3	1.732	44.0	2644
39550467	4	1.866	47.4	3347
► 4/0 AWG (≈ 589/24) • 120.00 mm²				
39550168	1	0.933	23.7	921
► 250 MCM (≈ 740/24) • 150.00 mm²				
39550169	1	1.016	25.8	1132
► 350 MCM (≈ 902/24) • 185.00 mm²				
39550170	1	1.106	28.1	1371
► 450 MCM (≈ 1220/24) • 240.00 mm²				
39550171	1	1.232	31.3	1757
► 550 MCM (≈ 1525/24) • 300.00 mm²				
39550172	1	1.358	34.5	2201

Other dimensions and colors are available on request

HD 308 color code:

1c: nature; 2c: blue - brown; 3c: green/yellow - blue - brown; 4c: green/yellow - brown - black - gray; 5c: green/yellow - blue - brown - black - gray

Accessories for Wind Turbines

CORD GRIP & ACCESSORIES

Secure & Protect Your Cable

Liquid tight seal, fast and easy installation, wide clamping range, multi-purpose applications, easy handling.



Technical data:

Protection type:	IP 68 - 5 Bar NEMA 4X
Temperature range: permanent: intermittent:	-20°C to +100°C -30°C to +150°C
Flammability:	V2 (according to UL 94)

CG 100 POLYAMIDE CORD GRIPS

Dome cap, black or gray available in NPT, PG, or metric thread

Liquid tight seal, fast and easy installation, wide clamping range, multi-purpose applications, easy handling.



CG 200 POLYAMIDE CORD GRIPS

CG 200 POLYAMIDE CORD GRIPS

Flex cap, black or gray available in NPT, PG, or metric thread

Strain relief gland offers maximum protection against conductor fatigue caused by flexing cables



CG 300 NICKEL PLATED BRASS CORD GRIPS

Available in NPT, PG, or metric thread

Impact resistant, suitable for industrial applications, water tight, corrosion resistant.



CG 350 STAINLESS STEEL CORD GRIPS

Available in NPT, PG, or metric thread and SS 303 or SS 316

Impact resistant, suitable for industrial applications, water tight, corrosion resistant.



EMC-2 GROUNDING CORD GRIPS

Nickel plated brass EMC cable gland available in NPT, PG, or metric thread

EMC-2 is a nickel plated brass strain relief with integral grounding springs in the gland.



Features:

- One Direction Installation
- Affordable
- Nickel Plated Brass with Tinned Copper Springs

EMC-4 GROUNDING CORD GRIPS

Nickel plated brass, EMC cable gland, vibration proof, available in NPT, PG, or metric thread

EMC-4 is a nickel plated brass strain relief with integral grounding springs in the gland that will allow the cable to move without damage to the shield.

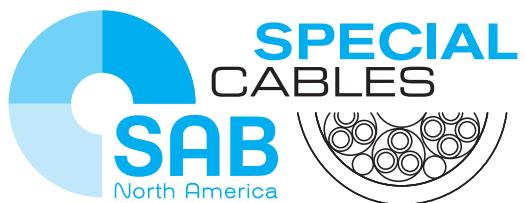


Features:

- Bi-directional Installation
- Great Anti-Vibration Mechanisms
- Nickel Plated Brass with Tinned Copper Springs

Accessories & Fittings

Enlargers	Reducers	Hole Plugs	Multi-Hole Bushing	Vent Gland & Plugs	Locknuts



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