

SPECIAL CABLES | CONTROL CABLES  
CONTINUOUS FLEX CABLES | CABLE HARNESSING  
TEMPERATURE MEASUREMENT



SAB NORTH AMERICA

THE RIGHT SOLUTION FOR EVERY APPLICATION



866-722-2974 ▪ [www.sabcable.com](http://www.sabcable.com)

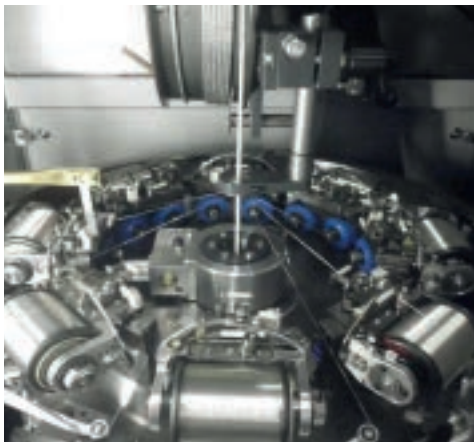
# SAB NORTH AMERICA

## ABOUT US



SAB North America is a focused supplier for automation, medical, high temperature, and robotics applications, providing cable 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.

Our parent company, SAB Bröckskes, is located in Viersen, Germany where the manufacturing and testing of our products is done. SAB Bröckskes has been a proven leader in the development and manufacturing of industrial cables for over 70 years. SAB Bröckskes adherence to product quality, ISO 9001 certified, has proven itself in thousands of the world's most demanding robotic and automated applications. SAB's level of speed and service as a capable supplier is unmatched. SAB lives up to its name in not only flexible cable but also flexible manufacturing. Special cables can be designed, manufactured and delivered in just 6-8 weeks, and even faster in special circumstances!



### **SAB Service Advantage...We make it Easy**

- 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
- Free drop shipments (no surcharges)
- 24-hour shipments from large inventory in stock in NJ
- No minimum on orders
- Prototypes available

# SAB CABLES

## SPECIAL/HYBRID CABLES

WE DEVELOP AND PRODUCE **CABLES AND WIRES**

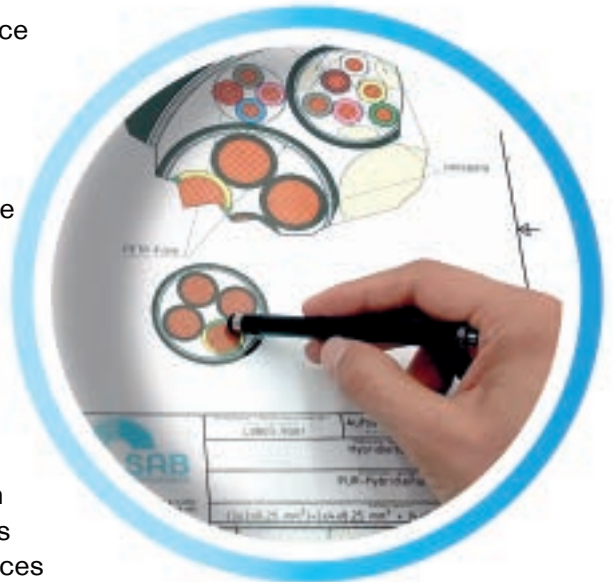
AS WELL AS **SPECIAL SOLUTIONS**

PARTICULARLY ACCORDING TO YOUR REQUIREMENTS AND APPLICATIONS.

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-** In situations with space and budget constraints, a hybrid cable accommodates multiple functions like communications and control, fiber optics, power, pneumatics, and hydraulics.
- **Harsh Environments-** Because cables must endure inhospitable environments, standard cables can be customized with the right materials to resist threats such as temperature extremes from -50°C to 200°C, tears and abrasions, oils, solvents, and flames.
- **Difficult applications-** In many cases, cables must function reliably despite distinctive operating conditions such as high-speed data handling, unique motion and mechanical stresses in robotics and automated machines, reeling and pulley structures in hoists and transport systems, resistance to EMI and RFI in motors and drives as well as use with disinfectants and cleaning substances in medical and other sanitary environments.
- **Industries-** SAB North America customizes Special Cables for a diversity of industries such as industrial automation, renewable energy, transportation, medical, and entertainment and amusements.



Special cables and hybrid cables can help solve design problems or perform in challenging operating environments where standard cables may fall short. Customers can select from a large catalog of materials and jacket combinations, and SAB North America can assist customers in modifying or designing a completely new cable. Order minimums are as low as 1,500 feet, and we can test your unique product in our lab. No matter your application's requirements, SAB North America Special Cables expand the possibilities of standard cables and address your design challenges.

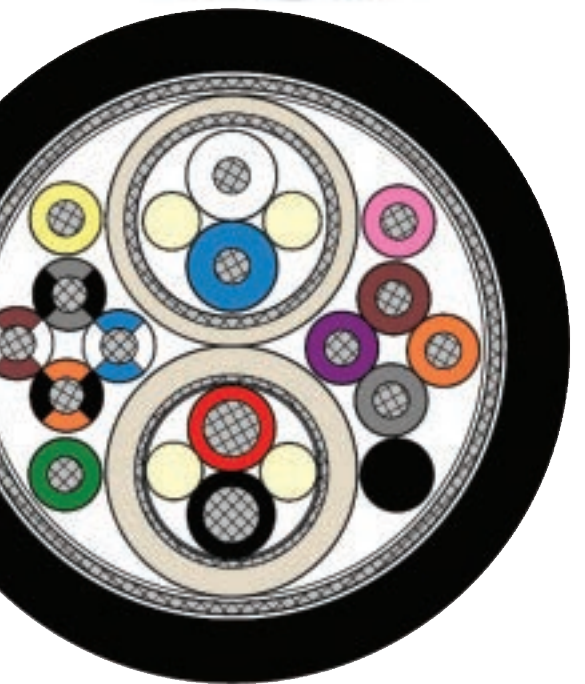
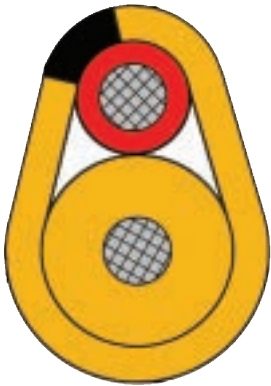
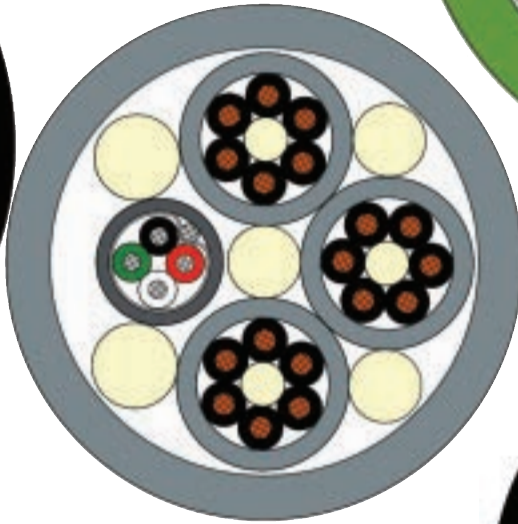
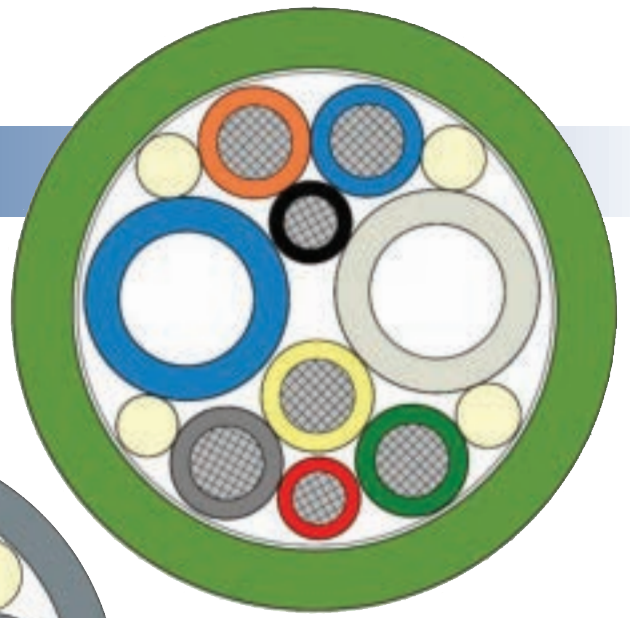
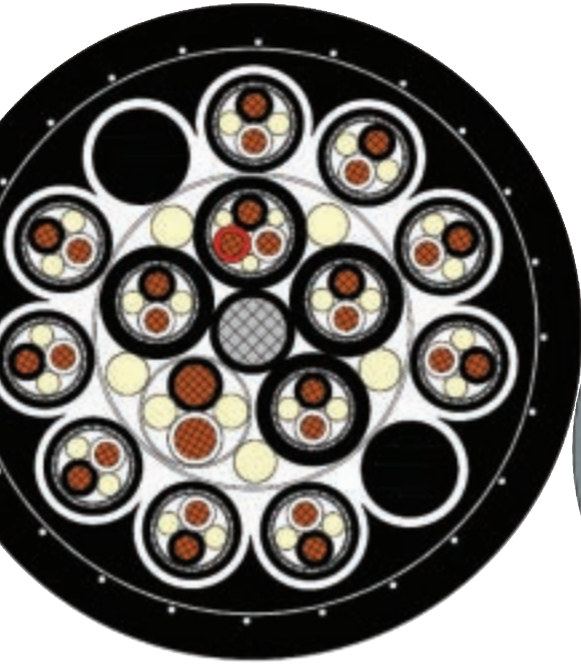
**Download the SAB Cable Design Form**



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# SAB CABLES

## SPECIAL/HYBRID CABLES



# SAB CABLES

## DESIGNED TO SPECIFICATION

Order minimums are as low as 1,500 feet, and we can test your unique product in our lab. No matter your application's requirements, SAB North America Special Cables expand the possibilities of standard cables and address your design challenges.

### Conductor Materials

- Bare copper
- Tinned copper
- Silver plated copper
- Nickel plated copper
- Nickel
- Nickel pure
- Compensating cable alloys

### Conductor Sizes

- 0.14 mm<sup>2</sup> - 300 mm<sup>2</sup>  
(26 AWG to 500 MCM)
- variety of stranding styles

### Insulation and Jacketing Materials

- PVC (many varieties)
- Polyethylene
- Polypropylene
- TPE
- Fiberglass
- Besilen®/Silicone
- Pi foil
- FEP, ETFE, PFA, PTFE
- SABIX® zero halogen
- Polyurethane

### Conductor Count Ranges

- unshielded - up to 125 conductors
- shielded - up to 100 conductors

### Temperature Ranges (based on material)

- Thermoplastic Elastomers -50°C up to +145°C
- Besilen®/Silicone -40°C up to +220°C
- FEP, ETFE, PFA, PTFE -90°C up to +260°C
- Halogen-free -50°C up to +220°C
- Fiberglass up to +600°C

### Shielding and Braiding Materials

- Bare copper
- Tinned copper
- Galvanized steel
- Stainless steel
- Aluminum foil
- Fiberglass
- Aramid

### Approvals

- UL, CSA, CE, EAC, VDE, HAR, IEC, EN, ISO, DNV-GL, LR, ABS, RINA, RMRS, BSI

**SPECIAL**  
CABLES



# INSIGHTS IN OUR PRODUCTION

Everything starts with copper. We draw our own copper so we have complete control from the very beginning of production through extruding the overall jacket. With over 500 experienced employees worldwide, we develop, produce and market more than 1,500 special solutions annually. These, as well as our standard cables and thermocouples have been thoroughly tested in our test laboratory based on our DIN norms. This gives you an indestructible product, because:

- n Over 70 years experience as a cable specialist*
- n Outstanding customer service*
- n Customized solutions according to your special needs*
- n Excellent quality through continuous quality control*
- n Latest innovations in the cable and temperature measurement technology industry*

DELIVERED WHEN YOU NEED IT!



## ... EVERYTHING FROM A SINGLE SOURCE



We develop and produce high quality cables and wires as well as special solutions that are manufactured according to your individual requirements and for your application. If you do not find the appropriate cable in our catalog "Flexible Control and Automation Cables" please contact us! We will find the solution for you!



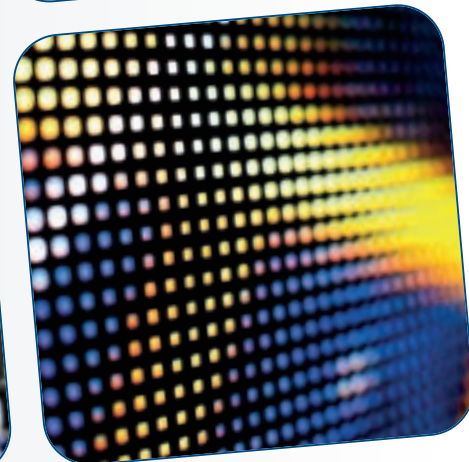
We offer an extensive range of thermocouples for various applications such as the automotive and plastics industries. In addition, our product spectrum includes: resistance thermometers, temperature sensors, protecting armatures, gauge slides and mobile high-voltage measurement. Our sensors are used for a variety of temperature measurements. Whether in test vehicles, machinery, or on hot plates, our temperature measurement technology allows you to perform precise measurements.



Our product range is rounded off with cables and wires from our subsidiary KANSA Kabeltechnik. It does not matter if it is a standard or special product; we design and produce high-quality cables as well as ready-made cables with a connector. Our harnessed cables are used for a variety of industrial applications. They are, for example, used in the automobile industry, machine, plant MRO and new construction as well as in industries for household appliances.



# INDUSTRIES AND APPLICATIONS



- ▶ Robot Cables
- ▶ Cables for Building and Utility Vehicles
- ▶ Cables for Automotive

- ▶ Railway Cables
- ▶ Automation Cables
- ▶ Cables for Food & Beverage

- ▶ Marine Cables for Shipbuilding
- ▶ Cables for Airport Equipment
- ▶ Cables for the Medical Industry





- ▶ Ethernet Cables
- ▶ Cleanroom Cables and Wires
- ▶ Cables for Motors & Drives

- ▶ Lift Control Cables
- ▶ Reeling Cables
- ▶ Cord Grip & Cable Accessories

- ▶ Cables for Crane and Conveyor Applications
- ▶ Heat Resistant Cables
- ▶ Thermocouples/Plastics Processing Industry



### **Flexible Control Cables**

**Flexible & oil resistant cables for use on industrial machinery, electrical equipment, assembly and production lines, and processing machinery.**

- CC 600 & CC 600 CY (UL/CSA/CE) Flexible, Unshielded & Braid Shielded, Oil Resistant PVC Control Cable
- CC 600 P & CC 600 CP (UL/CSA/CE) Flexible, Unshielded & Braid Shielded, Notch Resistant PUR Control Cable



### **Continuous Flex Cables**

**Continuous flex cables for a variety of applications from heavy-duty power & control to sensitive data communications. Designed & tested for X-Y flexing and alternate bending. Life cycle testing available up to 20 million cycles.**

- S 960 & S 960 CY (UL/CSA/CE) Unshielded & Braid Shielded, Oil Resistant PVC Cable
- S 200 & S 200 C (CE) TPE/PUR Unshielded & Braid Shielded Cable, Extreme Temperatures, and Tight Bending Radius
- S 980 P & S 980 CP (UL/CSA/CE) Unshielded & Braid Shielded, Oil Resistant PUR Cable
- S 900 & S 900 P (UL/VDE/CE) PVC & PUR Single Conductor, Tight Bend Radius for Confined Areas



### **Torsion Cables**

**Flexible robotic cables designed for twisting applications used on robotic arms and other applications requiring rotary motion.**

- RT 123 (UL/CSA/CE) TPE/PUR Torsional and Continuous Flex Cable for  $\pm 450^\circ$  / 1/2 m
- Available Shielded and Unshielded



### **Tray Cables**

**Flexible tray cables for easier installation saving on labor costs. Oil & humidity resistant for longer plant life.**

- TR 600 S & TR 600 S CY (UL TC-ER/CSA-TC/CE) UV & Oil Resistant Flexible Cable, Shielded & Unshielded
- TR 600 Plus & TR 600 PLUS CY (UL TC-ER/CSA-TC/CE) UV & Oil Resistant Reduced Diameter Cable, Shielded & Unshielded
- TR 600 HD & TR 600 AUTO HD Tray Series for Automotive Installations, Available with Red, Blue or Black Numbered Conductors, Shielded & Unshielded



### **VFD Cables**

**VFD cables for connection of VFD drives and motors. Various designs to fit your specific need all UL TC-ER and 1000V.**

- VFD XLPE TR (UL/CSA/CE) 4c Power with Overall Shield
- VFD Combo XLPE (UL/CSA/CE) 4c Power Plus Shielded Pair for Brake or Sensor
- VFD Symmetrical XLPE & VFD 2KV Symmetrical Design Ranging from 14 AWG to 500 KCMIL

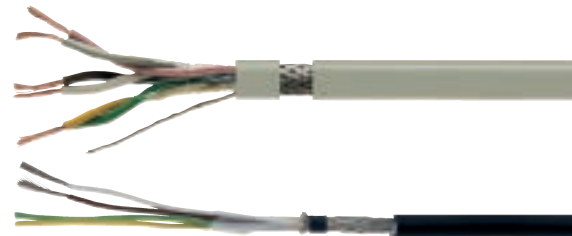
# SAB NORTH AMERICA

## PRODUCT RANGE

### Data & Sensor Cables

General purpose European and North American style data cables.

- DC 105, DC 105 C, & DC 105 TP (PLTC/ITC/CMG) Flexible Multi-Conductor & Paired Cable, Shielded & Unshielded, PVC
- LiYY, LiYCY, & LiYCY TP (VDE/CE) General Purpose, Multi-Conductor and Twisted Pair, Shielded & Unshielded, PVC
- Sensor **minus** 50 Low Temperature Resistant FEP Insulated Sensor Cable **NEW**
- Sensor **plus** 150 High Temperature Resistant FEP Insulated Sensor Cable **NEW**



### Servo Motor Cables

Industrial grade cables for servo motor connections for power, power with signal pairs, and for encoder/resolver.

- SL 860 C & SL 863 C (UL/CE) Braid Shielded Servo Motor Cables for Stationary Applications, PVC
- SL 834 C (UL/CSA/CE) Braid Shielded Servo Motor Cable for Continuous Flex, PUR
- SL 841 C (UL/CSA/CE) Braid Shielded Composite Servo Motor Cable with Pairs for Continuous Flex, PUR
- SL 839 C & SL 843 C (UL/CE) Braid Shielded Servo Motor Cables for Resolver/Encoder, PUR



### European Standardized Cables

European Standardized Hook-up wire and cables built to the European Union's Harmonized standards.

- H05V-K/MTW/TEW (UL/CSA/HAR/VDE/CE) Harmonized 300/500 Volt Hook-Up Wire
- H07V-K/MTW/TEW (UL/CSA/HAR/VDE/CE) Harmonized 450/750 Volt Hook-Up Wire
- H07RNF (HAR/CE) Harmonized 450/750 Volt Neoprene Heavy Duty Multi-Conductor Cable



### Category Cables

Category cables (CAT5/Profinet, CAT5e, CAT6 & 6A, CAT7A) for a multitude of applications: static, flexible, continuous flex, torsion, reeling & Rail.

- Profinet/CAT5 Cables for Type A, B, & C Applications Plus Torsion and Reeling
- CAT5e with PLTC and Rail for Flexible Applications
- CATLine 6 & 6A Cables for Continuous Flex, Torsion, Reeling, Rail and High Temperature Applications
- CATLine 7A Cables for Continuous Flex, Torsion, Reeling, and Rail Applications
- CATLine SPE C-Track Single-Pair-Ethernet Cable, Suitable for Cable Tracks **NEW**
- CATLine SPE Robot Single-Pair-Ethernet Cable, Suitable for Robots **NEW**
- CATLine SPE HT Single-Pair-Ethernet Cable – High Temperature Resistant **NEW**



### Bus Cables

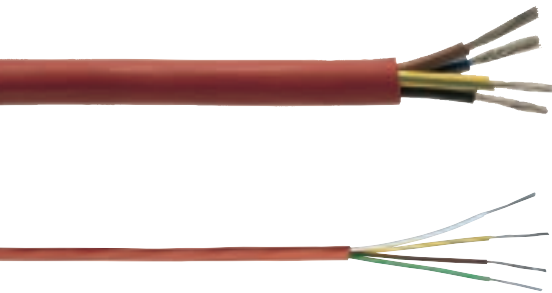
Flexible Bus Cables designed for industrial applications requiring data, sensor and power communications.

- DeviceNet™ Cables for Flexible, Continuous Flex, and Torsion Applications
- Profibus Cables for Flexible, Continuous Flex, Torsion, and Outdoor Applications. Halogen-Free
- CANBUS cables for Flexible and Continuous Flex Applications. Halogen-Free Available
- USB 2.0 Cables for Flexible, Continuous Flex, and Torsion Applications. Halogen-Free Available
- USB 3.0 Cables for Flexible, Continuous Flex, and Torsion Applications. Medical Version Available



# SAB NORTH AMERICA

## PRODUCT RANGE



### High Temperature Cables

High temperature flexible silicone cables for extreme heat and cold.

- SC 600 HDTR (UL/CSA/CE) Heavy-Duty, Tear Resistant Silicone Multi-Conductor Cable, Shielded Available
- SC 113 (CE) 300 Volt Silicone Hook-Up Wire & SC 123 (CE) 500 Volt Silicone/Fiberglass Hook-Up Wire

### Extreme Temperature flexible FEP, ETFE, & PFA cables

- TD 809 F (UL/CE) -90°C to 180°C, Chemical Resistant FEP/FEP Cable
- TD 846 DS TP (UL/CE) -90°C to 180°C, Chemical Resistant FEP/FEP Paired Cable



### Halogen-Free Cables

Flexible Halogen-Free cables designed not to give off corrosive gases in case of fire. Over 30 different SABIX® compounds available to meet your specific application.

- SABIX® CC 625 FRNC M (UL/CSA/CE) Halogen-Free, Non-Corrosive Cable. Shielded
- SABIX® BLUELINE Halogen-Free Cable for the Shipboard with ABS, GL, LR, RINA, CE
- SABIX® Rail FRNC Series Meeting DIN EN 45545-2
- SABIX® Ultra Series of Halogen-Free Continuous Flex Cables



### Specialty Cables

Specialty flexible cables built for specific needs and approvals for demanding applications.

#### Reeling & Lift Cables

- SAB DR Series for Reeling Applications. DNV-GL Approval Available
- Spreader Cables for Cranes and Ports Designed and Built to Spec
- Boarding Bridge & Festoon Cables for Passenger Bridges



#### Shipboard Cables

- SABIX® BLUELINE Halogen-Free Cable for the Shipboard with ABS, GL, LR, RINA, CE
- SABIX® BLUELINE TA 180°C Flexible FEP Connection Cable for Shipboard with UL, DNV-GL, ABS, GL, LR, RINA, CE



#### Compensation & Extension Cables

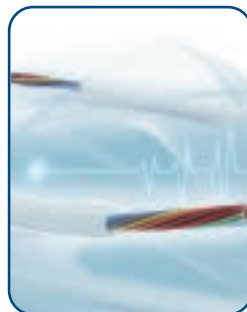
- PVC, Fiber-Glass or PFA Insulated Compensation and Extension Cables for Temperature Measurement



### Airport Cables

Boarding Bridge & Festoon Cables for Passenger Bridges

- GP 400 Series 400 Hz Ground Power Supply Cable



### Medical Cables

Biocompatible Cables for Medical Devices

SABmed Line is our product range of biocompatible, highly flexible, non-kinking cable solutions for medical devices that withstand the demanding requirements of cleaning, disinfection, and handling. A wide range of materials can be customized to find the right product for your application.

# CORD GRIP

## SECURING YOUR CABLE

### **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**

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 SS303 or SS316 Stainless Steel Cord Grips**

Available in NPT, PG, or metric thread

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



### **EMC-2 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 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**



### **Dummy Plugs**



### **Multi-Hole Bushing**



### **Vent Gland & Plugs**



### **Locknuts**



# TEMPERATURE MEASUREMENT AT A GLANCE

WITH US YOU GET **TEMPERATURE MEASUREMENT**  
AND **ACCESSORIES** FOR A WIDE VARIETY OF REQUIREMENTS AND INDUSTRIES.

SAB North America has expertise in thermocouples, resistance thermometers and the cabling you need to build an optimal assembly. We're well-positioned to answer cabling questions that pertain to your temperature measurement needs.

## Protecting armatures and gauge slides

- Immersion protecting armatures
- Screwed protecting armatures
- Welding protecting armatures, etc.

## Temperature measurement in test vehicles

- Thermo 8-plug connector
- Dipstick thermocouples
- Thermocouples for cooling water tube applications, etc.

## Mineral insulated thermocouples/ Mineral insulated resistance thermometers

- With fixed connecting cable
- With bare connection ends
- With thermo-plug/miniature plug, etc.

## Temperature measurement in plastics processing industry/hot runner process

- Hot runner mineral insulated thermocouples
- Plug-in thermocouples
- Molten mass thermocouples, etc.

## Probe with stainless steel sleeve

- Available as thermocouple
- Available as resistance thermometer

## Compensating and extension cables

- Compensating and extension cables for thermocouples
- Connection cables for resistance thermometers, etc.

## Accessories

- Clamping screw connections
- Flanges
- Screw sockets
- Connection heads
- Welding protecting tubes
- Transmitters
- Thermo-plugs/sockets
- Screw-in nipples
- Miniature plugs/sockets



# CABLE HARNESSING AT A GLANCE

## WE SUPPLY **HARNESSED CABLES AND WIRES**

FROM A SINGLE SOURCE.

- Helix cables
- Harnessed cables acc. to customers' specification
- Cable harnesses
- Harnessed motor and transmission cables for Siemens and Indramat drives
- Harnessed track cable
- Various combinations of connector types and terminals
- Many application of various materials and jacket materials
- Complete solutions
- High quality standard by continuous quality control





**SPECIAL  
CABLES**



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