

SAB NORTH AMERICA

PRODUCTS & CAPABILITIES



SAB Control

SAB Flex

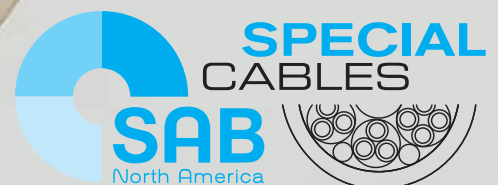
SAB Tray

SAB VFD

SAB CATLine

SAB Robot

www.sabcable.com
866-722-2974 ■ info@sabcable.com



SAB NORTH AMERICA

ABOUT US

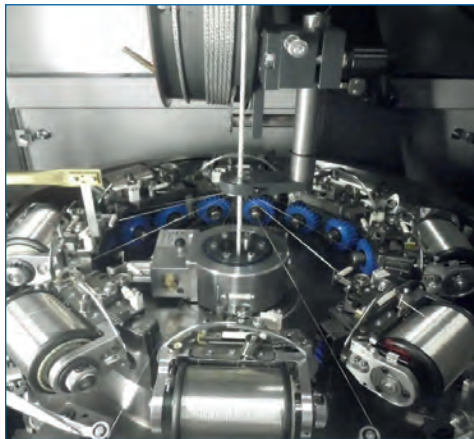


SAB North America is a focused supplier for automation, aerospace, food and beverage, medical, high temperature, and robotics industries, providing cable and thermocouple solutions that meet, exceed, and set new standards in the flexible cable market. In addition to flexible cable products, we offer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

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 75 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.

Equipment OEMs must have complete certainty that the cables they choose are suitable for their design. SAB North America provides a wide variety of flexible, continuous flex, torsional and reeling cables for use in equipment and manufacturing. SAB has more than 75 years of experience manufacturing quality, rugged cables for challenging applications so that you can be sure that SAB cable is a safe and reliable addition to your equipment.

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



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 from stock
- Free drop shipments (no surcharges)
- 24-hour shipments from large inventory in stock in NJ
- Cord Grips for securing and grounding cables
- Prototypes available

SAB CABLES

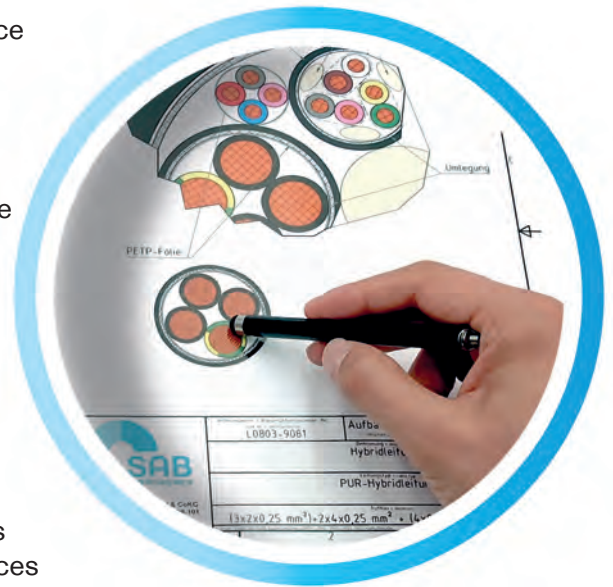
SPECIAL/HYBRID CABLES

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.

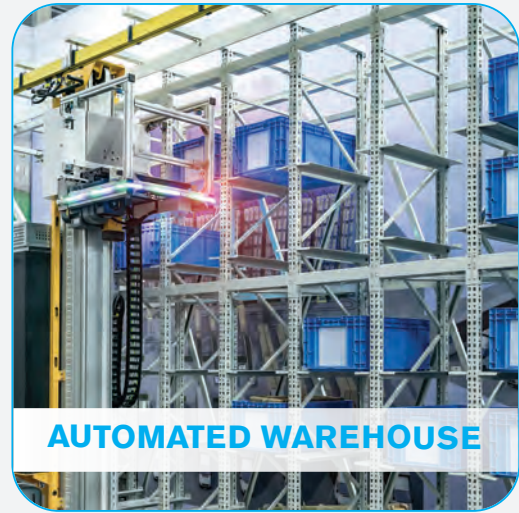
CABLES & ACCESSORIES FOR A VARIETY OF APPLICATIONS



AGGREGATE & CONSTRUCTION



AIRPORT EQUIPMENT



AUTOMATED WAREHOUSE



AUTOMOTIVE



CLEANROOM



CRANE & CONVEYOR



DATA

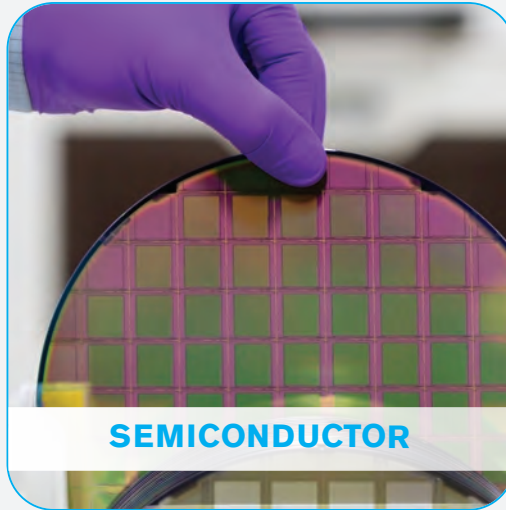


FOOD & BEVERAGE



INDUSTRIAL AUTOMATION

CABLES & ACCESSORIES FOR A VARIETY OF APPLICATIONS





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 (UR/CSA/CE) - Flexible, Unshielded & Braid Shielded, Oil Resistant 600V, 90°C PVC
- CC 600 P & CC 600 CP (UR/CSA/CE) - Flexible, Unshielded & Braid Shielded, Notch Resistant, PUR



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



Torsion Cables

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

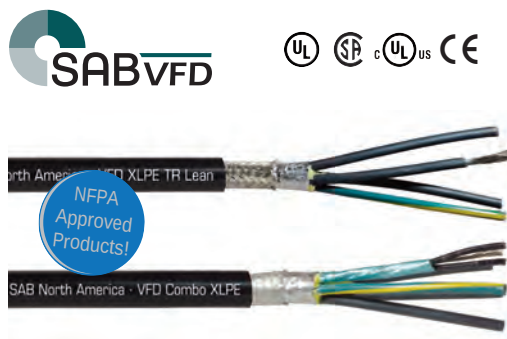
- RT 123 (UR/CSA/CE) - Torsional and Continuous Flex Cable for $\pm 450^\circ$ / 1/2 m, Available Shielded and Unshielded, TPE/PUR



Tray Cables

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

- TR 600 S & TR 600 S CY (UL TC-ER/CSA-TC/CE) - UV & Oil Resistant Flexible Cable, Shielded & Unshielded
- TR 600 HD & TR 600 AUTO HD - Tray Series for Hazardous Classified Locations. 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.

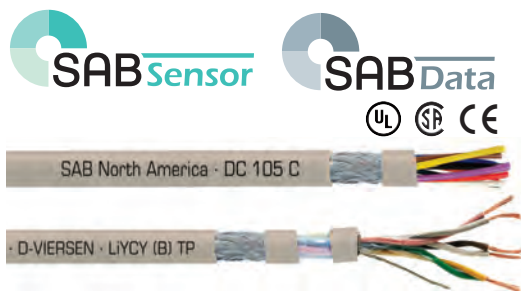
- VFD XLPE TR (UL TC-ER-JP, WTTC/cUL/CSA/CE) - 4c Power with Overall Shield
- VFD Combo XLPE (UL TC-ER-JP, WTTC/cUL/CSA/CE) - 4c Power Plus Shielded Pair for Brake or Sensor
- VFD XLPE TR Lean (UL TC-ER-JP, WTTC/cUL/CSA/CE) - 4c Power with Overall Shield with reduced diameter
- VFD Symmetrical XLPE TR (UL TC-ER, WTTC/CSA/CE) - Ranging from 14 AWG to 500 KCMIL



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 Wire
- H07V-K/MTW/TEW (UL/CSA/HAR/VDE/CE) - Harmonized 450/750 Volt Hook-Up
- H07RN-F (HAR/CE) - Harmonized 450/750 Volt Neoprene Heavy Duty Multi-Conductor Cable



Data & Sensor Cables

General purpose European and North American style data cables.

- DC 105, DC 105 C, & DC 105 TP (UL PLTC/ITC/CMG) - Flexible Multi-Conductor & Paired Cable, Shielded & Unshielded, PVC
- LiYY, LiYCY, & LiYCY TP (CE) - General Purpose, Multi-Conductor and Twisted Pair, Shielded & Unshielded, PVC
- DC 300 DS & DC 300 DS TP - Flexible Multi-Conductor & Paired Cable, Shielded & Unshielded, PVC



Servo Motor Cables

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

- SL 863 C (UR/CE) - Braid Shielded Servo Motor Cables for Stationary Applications, 1000V, PVC
- SL 834 C (UR/CSA/CE) - Braid Shielded Servo Motor Cable for Continuous Flex, 1000V, PUR
- SL 841 C (UR/CSA/CE) - Braid Shielded Composite Servo Motor Cable with Pairs for Continuous Flex, 1000V, PUR
- SL 843 C (UR/CE) - Braid Shielded Servo Motor Cables for Resolver/Encoder, PUR



Industrial Ethernet Cables

Category cables (CAT 5/Profinet, CAT 5e, CAT 6 & 6A, CAT 7A) for a multitude of applications: static, flexible, continuous flex, torsion, and reeling.

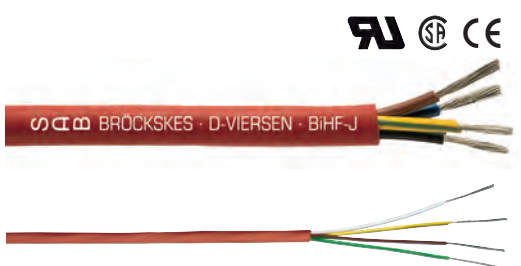
- Profinet/CAT5 Cables for Type A, B, & C Applications Plus Torsion and Reeling
- CAT 5e with PLTC and Rail for Flexible Applications (CE)
- CATLine 6 & 6A Cables for Continuous Flex, Torsion, Reeling, Rail & High Temp.
- CATLine 7A Cables for Continuous Flex, Torsion, Reeling, and Rail Applications
- CATLine SPE (Single-Pair-Ethernet Cable) Suitable for Cable Tracks, Robots, & High Temperature



Bus Cables

Flexible Bus Cables designed for industrial applications requiring data, sensor and power communications. Halogen-free versions available.

- DeviceNet™ Cables for Flexible, Continuous Flex, and Torsion Applications
- Profibus Cables for Flexible, Continuous Flex, Torsion, and Outdoor Applications.
- CANBUS Cables for Flexible and Continuous Flex Applications
- USB 2.0 Cables for Flexible, Continuous Flex, and Torsion Applications.
- USB 3.0 Cables for Flexible, Continuous Flex, and Torsion Applications.



High Temperature Cables

High temperature flexible silicone cables for extreme heat and cold.

- SC 600 HDTR (UR/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



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 (UR/CSA/CE) - Halogen-Free, Shielded, Non-Corrosive Cable
- SABIX® BL (DNV/CE) - Halogen-Free Cable for the Shipboard
- SABIX® Rail FRNC Series (CE) - Meeting DIN EN 45545-2 and NFPA 130
- SABIX® Ultra Series (CE) - Halogen-Free Continuous Flex Cables

Specialty Cables

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



Round & Flat Lift & Festoon Cables

- SABIX® Lift (CE) - Halogen-Free Control Cable with Sisal Center
- SABIX® Lift ST (CE) - Halogen-Free Control Cable with Steel Center
- H05VVH6-F & H07VVH6-F (VDE/HAR/CE) - PVC Flat Cables
- Festoon 715 P (CE) - PUR Cable for Flexible Applications
- Festoon 716 CP (CE) - Shielded PUR Cable for Flexible Applications

Reeling Cables

- DR 730 P Highflex (UL/CE) - PUR Reeling Cable
- DR 717 P Highflex (CE) - PUR Reeling Cable for Spring Loaded Cable Reels
- DR 718 CP Highflex (CE) - PUR Shielded Reeling Cable for Crane Arms

Spreader Cables

- DR 724 P Spreader (CE) - PUR Reeling Cable for Spreader Application
- Spreader 722 (CE) - PUR Control Cable for Basket Operation

Special Cables for High Mechanical Stress

- SAB 755- Exploration (UR/cUR) - Highly flexible PUR control and power supply
- SAB S 745- Exploration (UR/cUR) - Continuous flex oil resistant PUR control
- SL 851 C- Exploration (UR/cUR) - PUR shielded motor connection cable
- SAB S 745- Exploration (UR/cUR) - PUR Control Cable for Basket Operation

Shipboard Cables

- SABIX® BL (DNV/CE) - Halogen-Free Cable for the Shipboard
- CATLine CAT 5e/ 6A/ 7A BL - Halogen-Free Ethernet Cables for Maritime Use
- BL TA 180 C (UL/DNV/CE) - Flexible FEP Connection Cable for Shipboard
- DR 750 P Off Shore (CE) - PUR reeling cable for offshore applications

Compensation & Extension Cables

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

Cleanroom Cables

Specialty cables for clean rooms for applications such as the production of semiconductors, devices for biological or medical engineering, food, and medical production. SABclean cables meet highest requirements acc. to ISO 14644-1

- SABclean CATLine (UR/CE) - Industrial Ethernet cable for Cleanrooms
- SABclean RT 793 D/ SABclean RT 795 D (UR/CSA/CE) - Torsional cable
- SABclean SD 776 (CE) - Continuous Flex Data Cable
- SABclean S 776 (CE) - Continuous Flex Control Cable
- SABclean SD 780 C/ S 780 C (CE) - Shielded Continuous Flex Data & Control Cable
- SABclean SD 787 C TP (CE) - Shielded Continuous Flex Data Cable

Airport Cables / Ground Power Support 400 Hz

Boarding Bridge & Power Supply Cables for Passenger Bridges

- BB 380 Boarding Bridge (CE) - Halogen-free, weather, sunlight and oil resistant, PUR
- GP 400 Sy (CE) - 400 Hz Ground Power Supply Cable - Symmetrical, PVC
- GP 400 SC (CE) - 400 Hz Ground Power Supply Cable - SingleCore, PVC
- GP 400 SC DC (CE) - 400 Hz Ground Power Supply Cable - 28 V DC SingleCore Direct Current, PVC
- GP 400 QF (CE) - 400 Hz Ground Power Supply Cable - QuadFlex, PVC
- GP 400 SF DR (CE) - 400 Hz Ground Power Supply Cable - SymmetricalFlex Drum
- GP 400 TF DR (CE) - 400 Hz Ground Power Supply Cable - TripleFlex Drum, PVC

SABmed Line Medical Cables

Biocompatible Cables for Medical Devices (DIN EN ISO 10993-5 cytotoxicity).

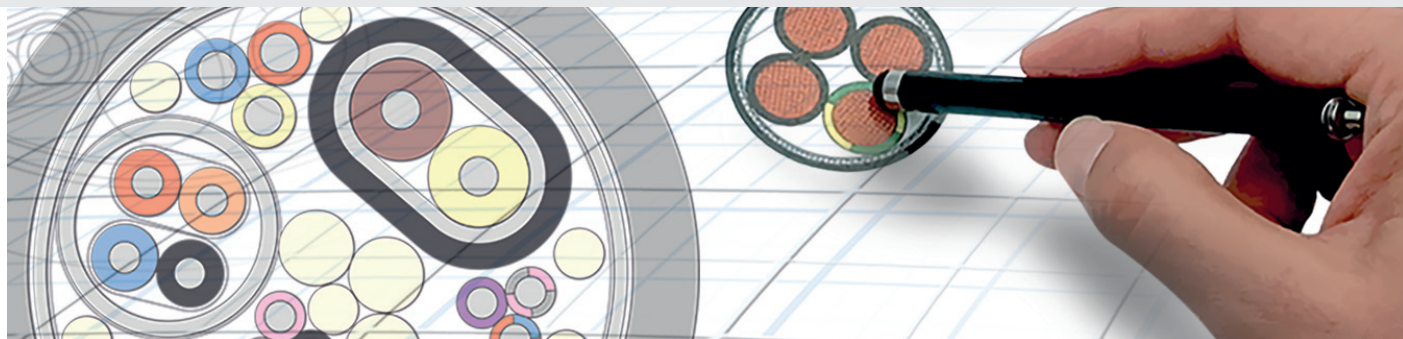
SABmed Line is our product range of biocompatible, highly flexible, non-kinking cable solutions for medical devices that withstand the demanding requirements of cleaning, disinfection, and handling. A wide range of materials can be customized to find the right product for your application.

Cables for Industrial Automation

Manufacturing Capabilities

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

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 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 mm² - 300 mm²
(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, LR, ABS, RINA, BSI, RoHS



SAB North America Product Range

CORD GRIPS & 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:	-20°C to +100°C
intermittent:	-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

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

SAB North America Product Range

CABLE ASSEMBLIES

From a single source

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 In-dramat 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



TEMPERATURE MEASUREMENT

Manufacturer of thermocouples & resistance thermometers

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

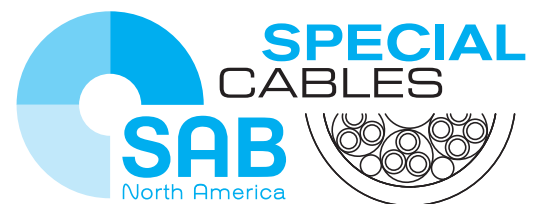
Compensating and extension cables:

- 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





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