

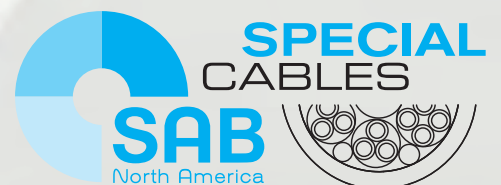
# SAB NORTH AMERICA

## CUSTOM CABLE CAPABILITIES



PETP-Folie

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# Custom Cable Capabilities

## About Us

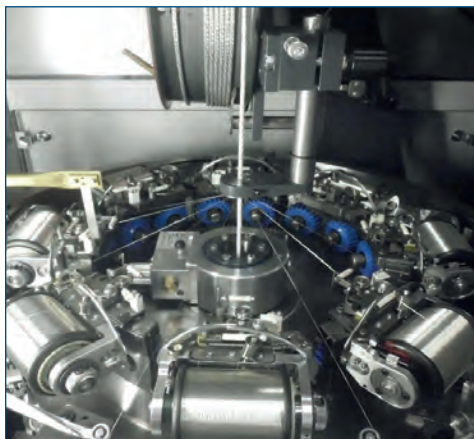


SAB North America is a focused supplier for automation, aerospace, food and beverage, medical, high temperature, and robotics industries, providing cable and thermocouple solutions that meet, exceed, and set new standards in the flexible cable market. In addition to flexible cable products, we offer 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



# Custom Cable Capabilities

## Overview

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, coax, 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 flame.
- **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.

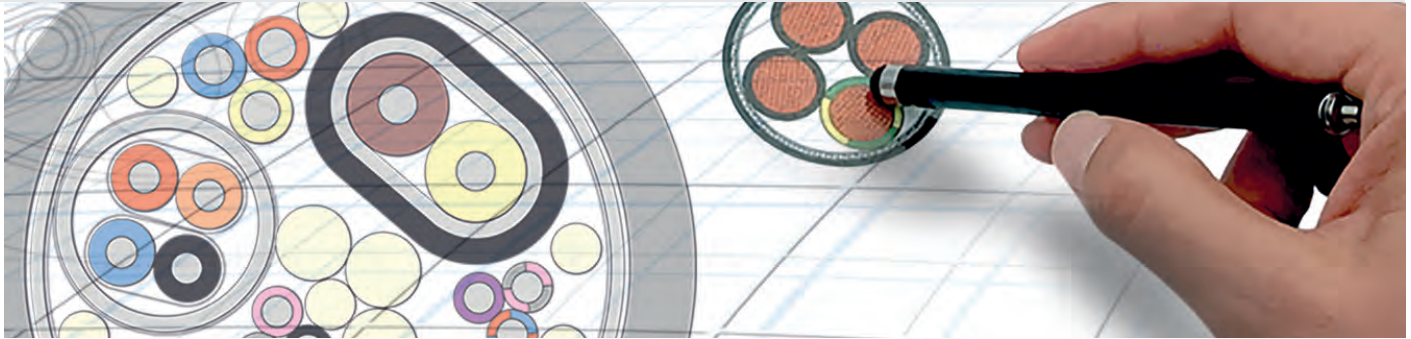
No matter your application's requirements, SAB North America Special Cables expand the possibilities of standard cables and address your design challenges.

# Custom Cable Capabilities

## **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 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, LR, ABS, RINA, BSI, RoHS





# Custom Cable Capabilities

## Specialty Cables

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

### REELING & LIFT CABLES



Our control, robotics and automation capabilities allow us to design custom manufactured flexible cables that meet the most demanding specs for use in highly chemical resistant applications, reeling cable, spreader, forestry, and boarding bridge.



### CLEANROOMS CABLES



SABclean cables are used in cleanrooms where combined twisting and bending stresses occur. The high quality insulation with its smooth surface and slide wrapping increases cable life expectancy under extreme twisting and bending stresses. The outer jacket made of specially formulated TPE is highly resistant to abrasion, oil, notching, microbes, and hydrolysis. In addition, the surface quality prevents adhesion to adjacently installed cables. SABclean cables meet the highest requirements acc. to ISO 14644-1.



### MARINE CABLES



SABIX<sup>®</sup> BL flexible cables can meet the marine industry's challenges shipboard as well as below deck. SABIX<sup>®</sup> BL marine cables are halogen-free, flame retardant, and self-extinguishing. These cables are very resistant to high temperatures as well as against oils and chemicals.



### RAILWAY CABLES



SABIX<sup>®</sup> Rail cables are available as a control or data cable, these flexible halogen-free cables carry HL 1-3 flame protection — the highest level according to EN 45545-2. They withstand harsh weather and also exhibit exceptional oil and fuel resistance, making them well-suited for mechanically dynamic applications like railway construction, or it can be used in the bogie, as jumper cable or as sensor cable at the wheel set. Several SAB Data cables meet NFPA 130. This standard specifies fire protection and life safety requirements for underground, surface, and elevated fixed guideway transit and passenger rail systems.



### 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. (DIN EN ISO 10993-5 cytotoxicity)

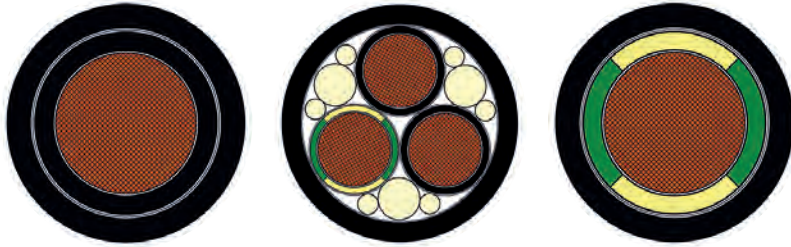


# Custom Cable Capabilities

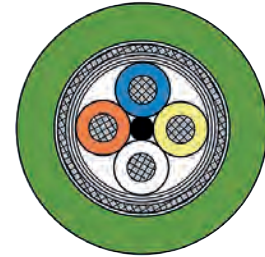
## **Robot Cables**

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

### WELDING CABLES



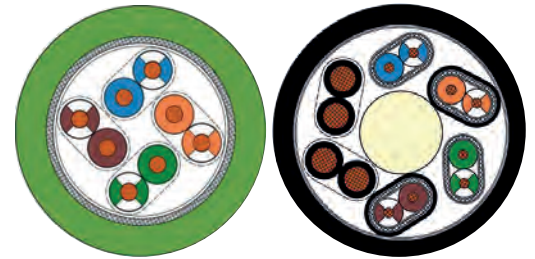
### PROFINET CAT 5 CABLES



### TRANSMISSION CABLES/ENCODER CABLES



### RT ETHERNET CAT 6A



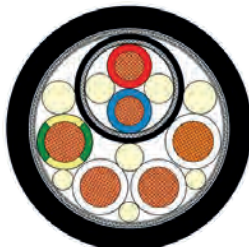
### ROBOT HYBRID CABLE



### CONTROL CABLES



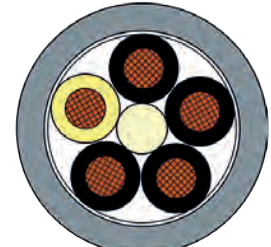
### ROBOT MOTOR CABLES



### ROBOT MULTIBUS CABLE

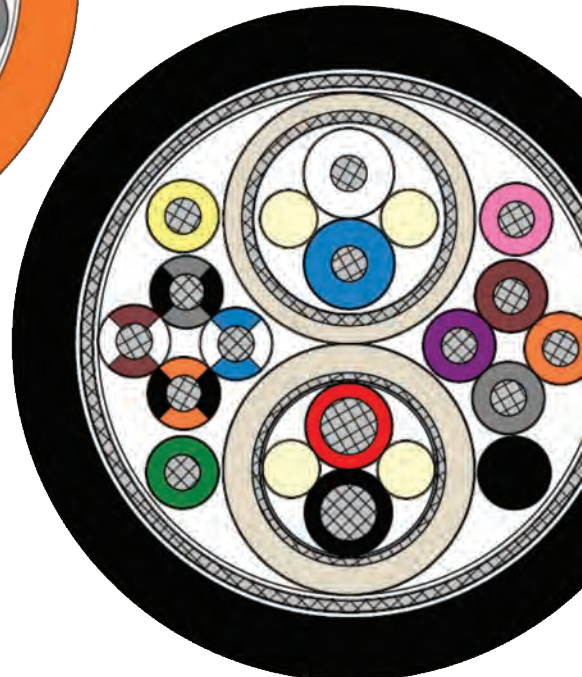
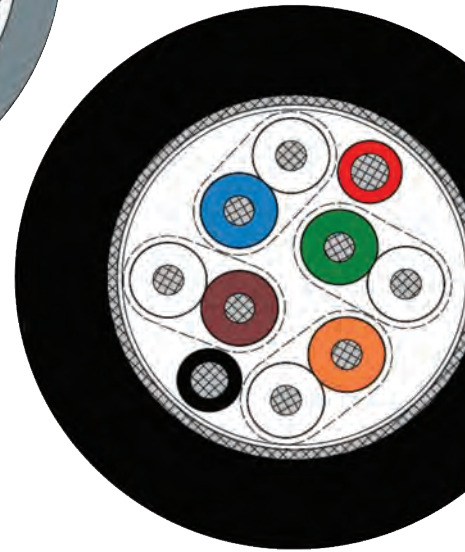
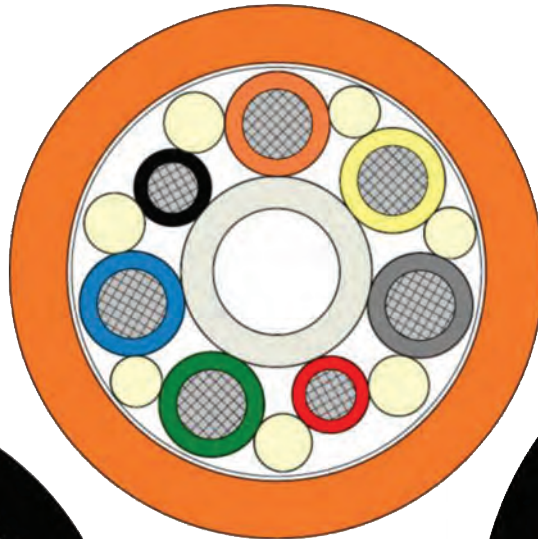
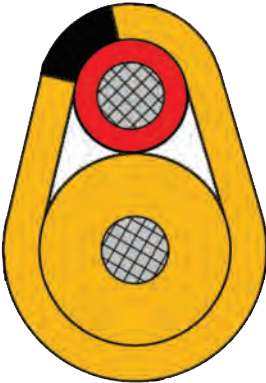
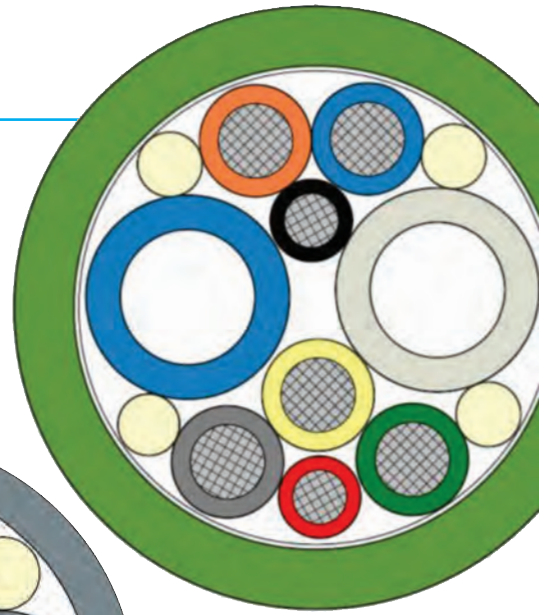
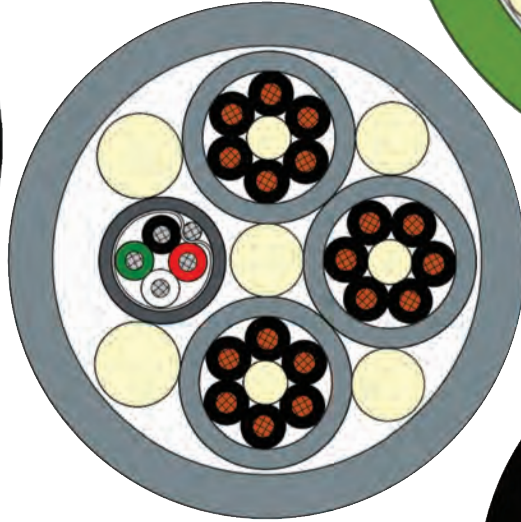
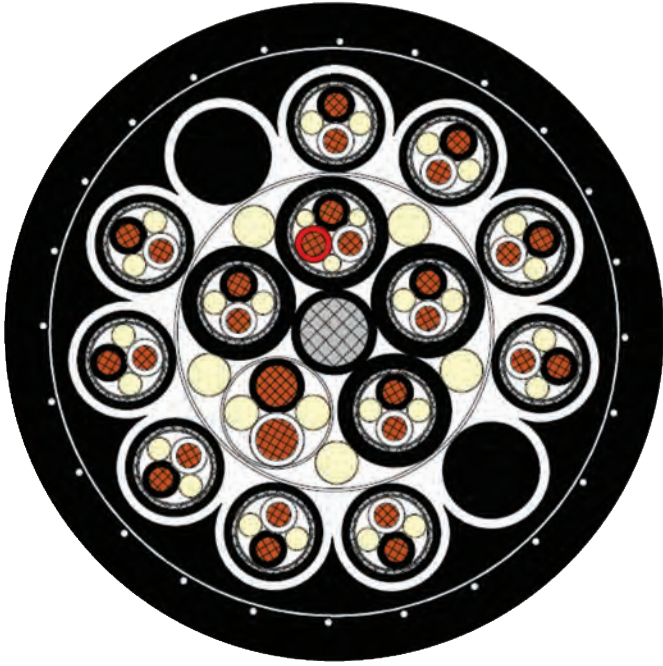


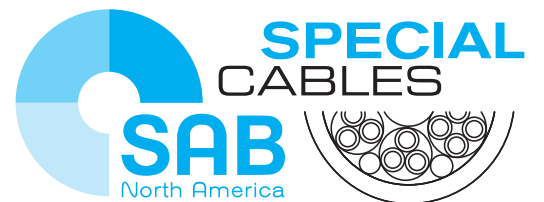
### POWER CABLE





**Custom Cable examples**





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