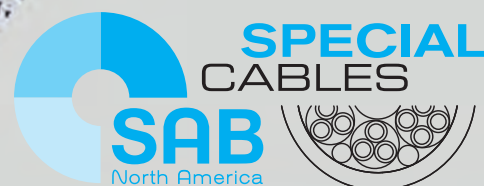


CABLES & ACCESSORIES FOR AUTOMATED WAREHOUSES



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



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:

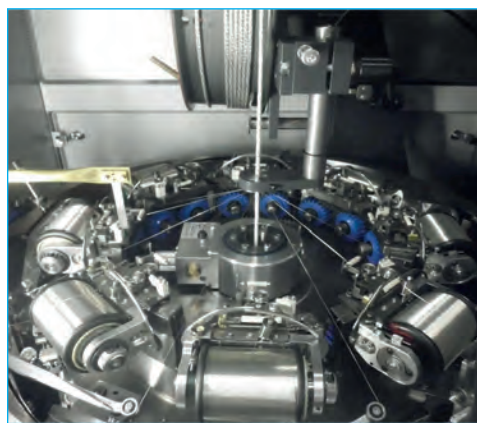
- Hybrid designs for multiple functions
- Harsh environments
- Difficult applications
- Industry-specific requirements



Automation in warehousing allows for faster processing of materials for shipping and storage. This includes bulk material handling including retrieval and storage, automated order filling, moving items/orders with conveyors, robots, and cranes from storage to shipping or receiving to storage. SAB has a wide range of cables and accessories for the equipment and machinery which can meet the requirements for flexibility, power, control, signal, and data transmission.

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 Automated Warehouses

Cable Manufacturing - Made in Germany

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 550 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 DIN norms. This gives you an indestructible product, because:

IT DEPENDS ON THE RIGHT CONNECTION!

- *Over 75 years experience as a cable specialist*
- *Outstanding customer service*
- *Customized solutions according to your special needs*
- *Excellent quality through continuous quality control*
- *Latest innovations in the cable and temperature measurement technology in the industry*



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 please contact us. We will find the solution for you.

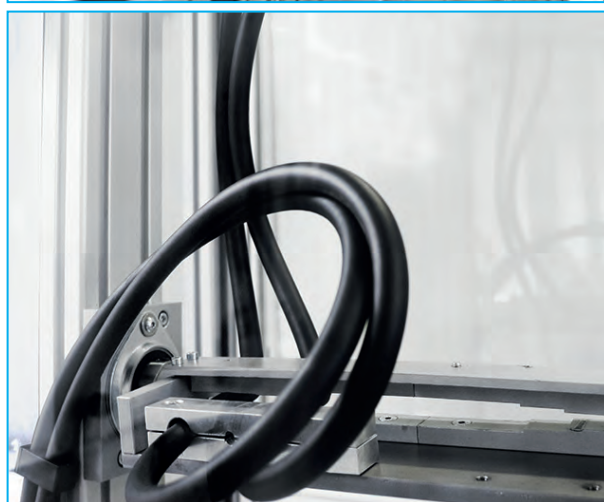
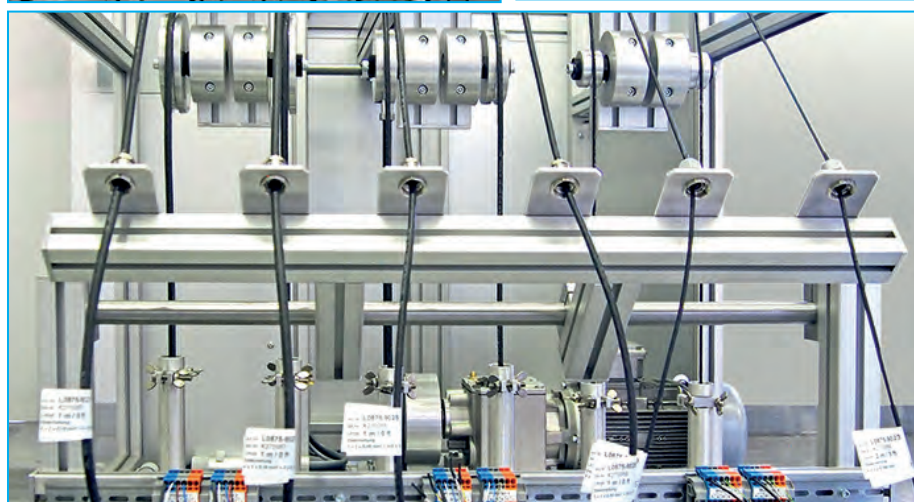


Cables & Accessories for Automated Warehouses

German Testing Lab

When you need a cable, there's a good chance it will have to stand up to harsh conditions. From frequent bending and flexing in moving automated machinery to exposure to liquids and temperature extremes, there are many potential causes of cable failure that can lead to equipment downtime and lost productivity. That's why your cable selection considerations should include your supplier's testing capabilities. When you partner with a cable manufacturer whose products are tested extensively, your cables will provide a longer service life to keep your equipment running.

SAB has a dedicated test lab, extensive test capabilities and expertise to both test standard cables and perform special testing when necessary, giving you the peace of mind of knowing cable failure won't stand in the way of machine productivity. We test to international standards.



Cables & Accessories for Automated Warehouses

WAREHOUSE AUTOMATION & EQUIPMENT



Retrieval:

- Picking
- Moving
- Sorting
- Combining
- Boxing
- Labeling
- Palletizing
- Shrink Wrapping



Storage:

- Receiving
- Depalletizing
- Sorting
- Placing in Storage Bins
- Labeling
- Moving
- Stocking/Racking

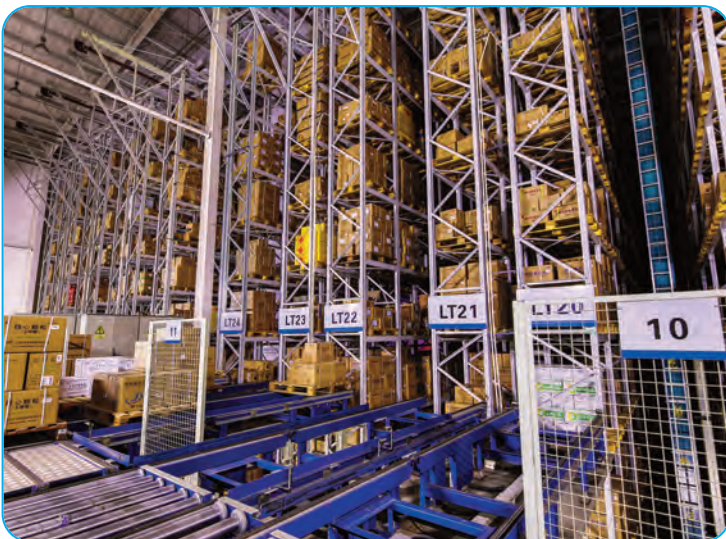
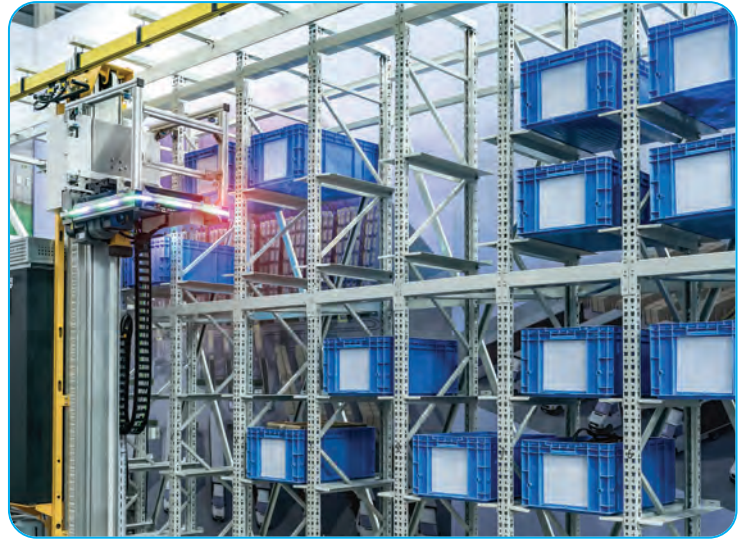
Equipment:

- Storage & Handling Equipment
- Bulk Material Handling
 - Stackers
 - Conveyors
 - Grain elevators
 - Order pickers
 - Platform trucks
 - AGV (Automated Guided Vehicle)
 - Lift Tables
 - Robots
- Automated order-filling stations
- Electrical material carts
- Computerized order picking
- Overhead cranes
- Robotic Pick & Place
- Forklifts



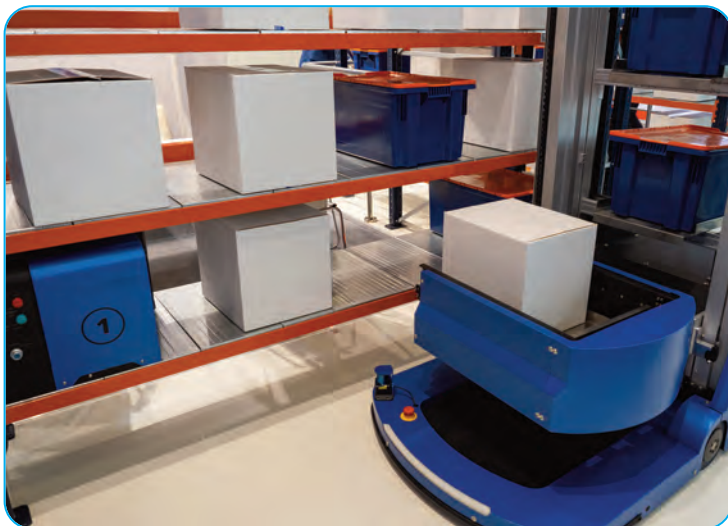
Cables & Accessories for Automated Warehouses

ORDER PROCESSING: Picking • Moving • Sorting
REPLENISHING INVENTORY: Moving • Stocking/Racking



Cables & Accessories for Automated Warehouses

ORDER PROCESSING: Boxing • Labeling • Palletizing • Shrink Wrapping
REPLENISHING INVENTORY: Receiving • Depalletizing • Sorting in Bins



Cables & Accessories for Automated Warehouses



Halogen-free versions available

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
- SABIX® CC 625 FRNC M (UR/CSA/CE) - Halogen-Free, Shielded, Non-Corrosive 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 (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



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

Cables & Accessories for Automated Warehouses



D-VIERSEN · CATLine CAT 6A HT

VIERSEN · CATLine SPE HT



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



BRÖCKSKES · D-VIERSEN · DN 650

BRÖCKSKES · D-VIERSEN · USB 2.0



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.



SAB North America · DC 105 C

D-VIERSEN · LiYCY (B) TP



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



BRÖCKSKES · D-VIERSEN · H07V-K/MTW/TEW



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 Wire
- H07RN-F (HAR/CE) - Harmonized 450/750 Volt Neoprene Heavy Duty Multi-Conductor Cable



D-VIERSEN · SAB Lift ST

BRÖCKSKES · D-VIERSEN · H07VVH6-F

DR 730 P Highflex

BRÖCKSKES · D-VIERSEN · Spreader 722

D-VIERSEN · Festoon 715 P



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

Cables & Accessories for Automated Warehouses

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

Cables & Accessories for Automated Warehouses

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:

- ✓ 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

CABLE ASSEMBLIES



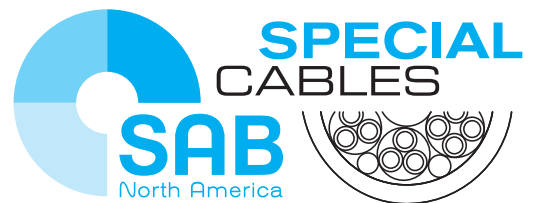
MEASUREMENT TECHNOLOGY



Measuring technology for industrial applications

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

- ✓ mineral insulated thermocouples
- ✓ mineral insulated resistance thermometers
- ✓ temperature sensors
- ✓ mobile high voltage measuring technology
- ✓ temperature sensors for vehicle testing



344 Kaplan Drive
Fairfield, NJ 07004
Toll Free: 866-722-2974
www.sabcable.com
info@sabcable.com