Solutions for Automation

Increased operability and profitability are driven by reliable automated processes. Discover the solutions that best suit your industry's requirements

ekabel®

Automation Solutions

Smarter production,
smarter businesses

There is an increasing demand for automation and lean production in every business. Industrial processes need to be **accurate, fast and provide high quality results.** Automation can be found in every industrial environment, especially in those where repetitive, high volume, and consistent processes are occurring. **To accomplish these tasks, energy and information are essential.**

Our Automation Solutions include a various range of cables for energy and data transmission, accessories and energy storage equipment to help businesses achieve their desired productivity goals.

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1 Communication Cable

Electronic Muticonductor Cables are specially designed for use in sound systems, voice communication, industrial equipment control, wiring of alarms and access control panels.

- Size 22AWG up to 16AWG
- Up to 4 conductors
- Voltage 300V & 600V
- Aluminum polyester foil shield
- Armored SWA, AIA, CCW, SIA among others
- UL 1685 Article 725 PLTC-CL2/ Article 800 CM
- Optional: Foil and/or braid shield

2 Can Bus/ RS-485 Cable

Designed specially to transmit information in high speed with low capacitance parameters. This cable is ideal to connect electronic devices and protect their sensitive signals. Meets UL 1685, IEC, NOM, NMX and VDE standards. It can also be manufactured with CWC-MC or SWA armors to make it suitable to be directly buried or for hazardous locations. Available for indoor or outdoor installations.

- Size 22AWG and 22AWG
- Up to 8 pairs
- Voltage 300 (CM)
- Aluminum polyester foil shield and tinned copper braid
- Armored SWA, AIA, MC, CCW and SIA
- UL 1685 Article 725 PLTC-CL2/ Article 800 CM.

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3 Profibus Cables

Suitable for protocols DP and PA Profibus Communication protocols in computer, industrial equipment and data transmission applications.

- Size 22AWG up to 18AWG
- Solid or stranded conductor
- 1 pair (red and green)
- Aluminum polyester foil shield and tinned copper braid
- Armored SWA, AIA, CCW, SIA among others
- Purple, blue and black jacket
- Voltage 300 V
- UL 1685 Article 725 PLTC/ 727 ITC

4 Data Highway Plus-Twinax Cables

Suitable for use in high speed communication systems such as blue hose applications, between PLC processors and industrial interface gadgets, I/0 devices, computers, and other industrial equipment that requires high performance and reliable communication. Available in 78Ohm, 10Ohm, 124Ohm and 150Ohm.

- Size 20AWG, 22AWG and 25AWG
- Up to 8 pairs
- Voltage 300 (CM)
- Aluminum polyester foil shield and tinned copper braid
- Armored SWA, AIA, CCW, SIA among others
- UL 1685 Article 725 PLTC-CL2/ Article 800 CM.

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5   Foundation Fieldbus Cable

Fieldbus cables are used in measurement and control systems connecting field devices with PLC's. The standards that define measuring and monitoring in fieldbus systems are IEC 61588-2. Cables can be manufactured in type A and B.

- Size 16AWG, 18AWG and 22AWG
- Stranded conductors, tinned or bare copper
- Up to 8 pairs
- Aluminum polyester foil shield or aluminum polyester foil shield and tinned copper braid
- Armored SWA, AIA, CCW, SIA among others
- Voltage 300 V, 30V, 60V
- UL 1685 Article 725 PLTC/ 727 ITC/ 800 Communications, IEC

6   DeviceNet, ControlNet, CC-Link Communication

Communication electronic cables have been designed to comply with industrial requirements to configure a reliable network with different communication protocols such as DeviceNet, ControlNet and CC-Link. Suitable to avoid noise and EMI under industrial environment.

- Sizes 20AWG, 18AWG and 15AWG
- Stranded conductors, tinned or bare copper
- 1 pair, +1 pair, coaxial and 3 conductors
- Aluminum polyester foil shield or aluminum polyester foil shield and tinned copper braid, Quadshield
- Armored SWA, AIA, CCW, SIA among others
- Voltage 300 V, 30V, 60V
- UL 1685 Article 725 PLTC/ 727 ITC/ 800 Communications, IEC

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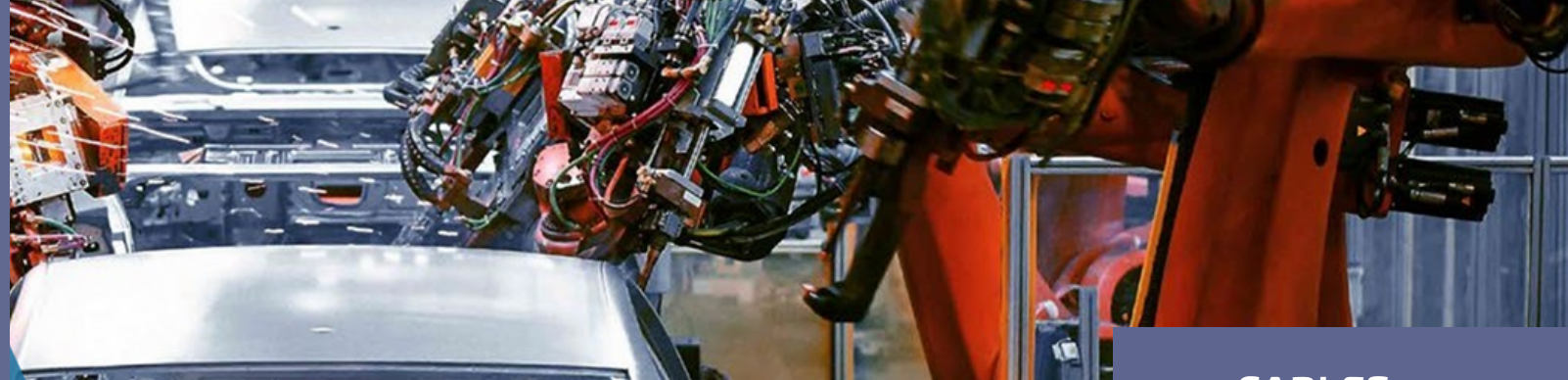
CABLES

7 Ethernet and LAN cables

FTP, S/FTP, F/UTP, SF/UTP and UTP cables are mostly used for LAN networks. They can be used for voice, low-speed data, high-speed data, audio and paging systems, building automation and control systems. Can be manufactured in Cat 5, 5e, 6, and 6A. Also meet EIA and IEC and UL standards. Optionally, it can be manufactured with CWC-MC or Interlocked armors to make it suitable to be directly buried and for hazardous locations. Available for outdoor and indoor installations.

- **Available sizes:** 22, 23, 24 AWG
- **Available configurations**: 4 pairs

8 Continuous Flex Drag Chain Cable

A range of highly flexible cables made for continous motion applications. Suitable for the latest automated manufacturing systems indoor or outdoor. They meet the highest service life requirements.

9 Grounding System

Copper rods, copper conductor and copper compression connectors along with exothermic welding offer the best option to ground the electrical system for safe operation.

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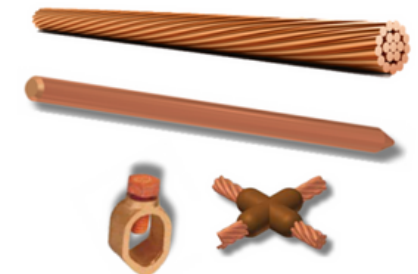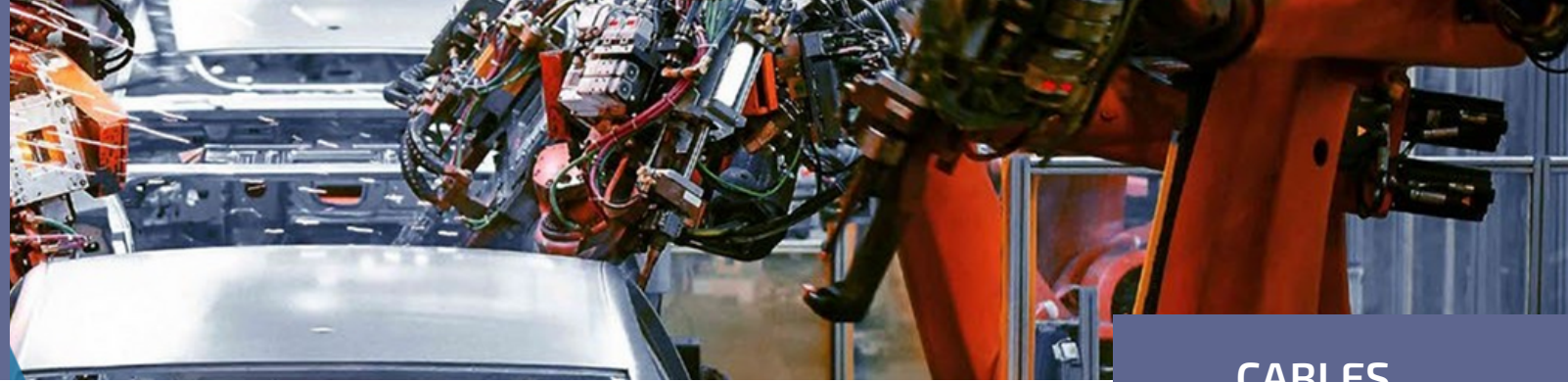
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10 Fire Alarm Cables

These cables are designed to be used in alarm systems and to connect fire equipment such as control panels, keypads, pull stations, sirens, strobes, smoke detectors, security systems, intercom systems and fire alarm systems.

- **Available sizes:** 22AWG up to 12AWG
- **Available configurations**: up to 4 conductors

11 Thermocouples Cables

Thermocouples are used in applications that range from home appliances to industrial processes and even rockets, satellites and spacecrafts. Thermocouples provide accurate temperature measurement in high vibration or shock environments.

- **Available sizes:** 24 AWG up to 12 AWG
- **Available configurations**: up to 36 pairs
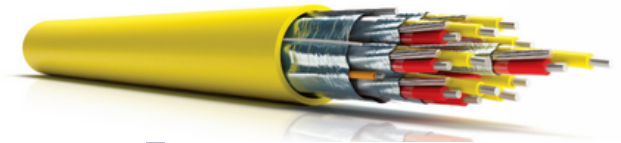
12 Instrumentation

Used for process and control applications where digital or discrete circuits will be required. UL listed as type PLTC and ITC approved for installation indoor or outdoors, either buried or in tray, conduits or ducts for circuits not exceeding 300 V. May be used in NEC Class 1, Division 2, hazardous locations.

- **Available sizes:** 20 AWG up to 12 AWG
- **Available configurations**: up to 36 pairs

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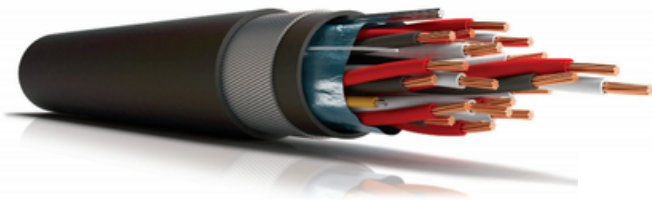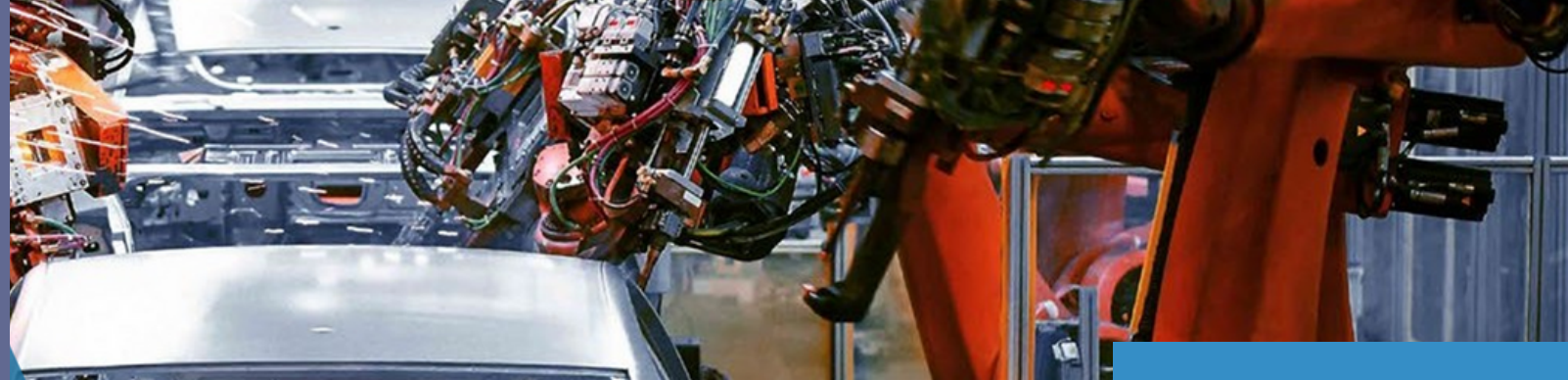
1 Fiber Optic Cables

Optical Fiber Cables are used in industrial communication systems, especially where high data transmission speeds cannot be attained by conventional communication cables. Available under IEC, TIA/EIA standards. Fiber optic cables can be used in environments where it is not possible to install electric cables due to explosion hazards or where strict EMC requirements are needed.

- **Single Mode:** OS1, OS2 –8-9/125µm
- **Multi Mode**: OM1, OM2, OM3, OM4, OM5 - 50/125 62.5/125µm
- **Construction:**
- Indoor/Outdoor installation
- Marine Application
- ADSS
- FIG-8

Tight Buffer
Loose Tube
Direct Buried
Single Jacket/Non-Armor
Single Jacket/Single Armor
Double Jacket/Single Armor
Double Jacket/Double Armor

2 Optical Couplings/Adapters

High Quality to reduce signal loss and maintain performance.
Types: LC, FC, SC, ST, or E2000 Connectors (PC, APC or UPC)

- Bionic Connector
- Standard Connector (SC)
- Ferrule Core Connector (FC)
- ST Connector (ST)
- SMA Connector
- Lucent Connector (LC)

- Plastic Fiber Optic Cable Connectors
- Enterprise Systems Connection Connector (ESCON)
- E-2000

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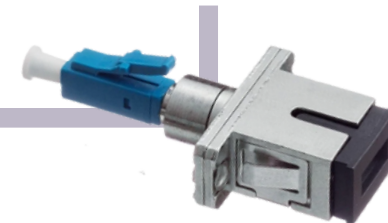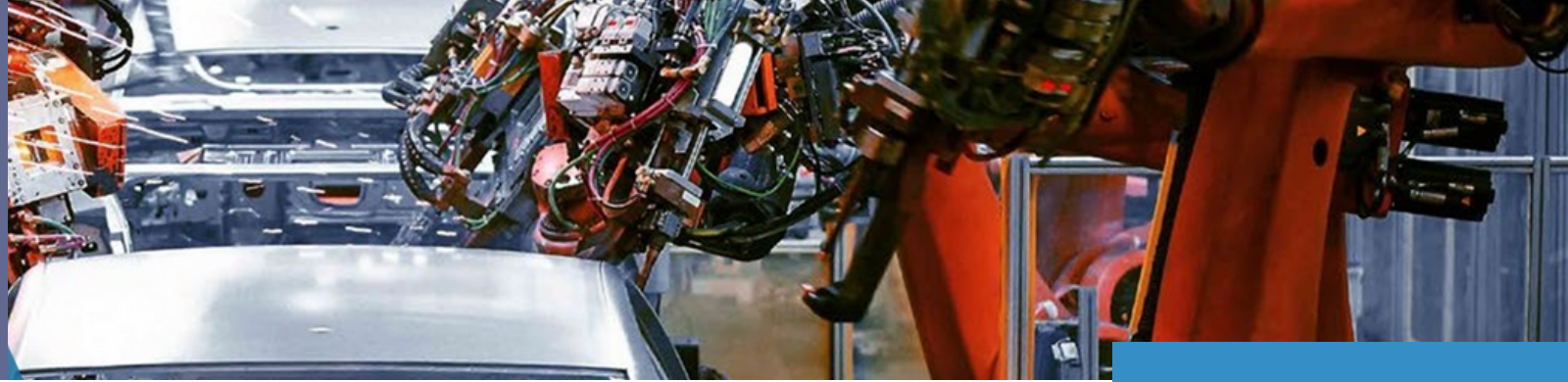
3 Fiber Optic Panels

For installation in ODF or Patch Panels. Capacity from 12 up to 96 optical ports; suitable to use with any E'kabel adapter or connector. Preconnected as an option.

4 Optical Patch Cords (Optical Jumpers)

For installations in data centers, communication closets or interconnects. Singlemode or multimode fibers. Simplex or duplex patch cords. LC, FC, SC, ST or E2000 Connectors (PC or APC). Patch Cords can be manufactured from 1 meter and up to 100 meters.

5 Optical Pigtails

Installed in patch panels (ODF's) and termination/distribution optical boxes. Singlemode or multimode fibers. Simplex or duplex pigtails. LC, FC, SC, ST or E2000 Connectors (PC, UPC or APC). Pigtails can be manufactured from 0.5 meter and up to 3 meters.

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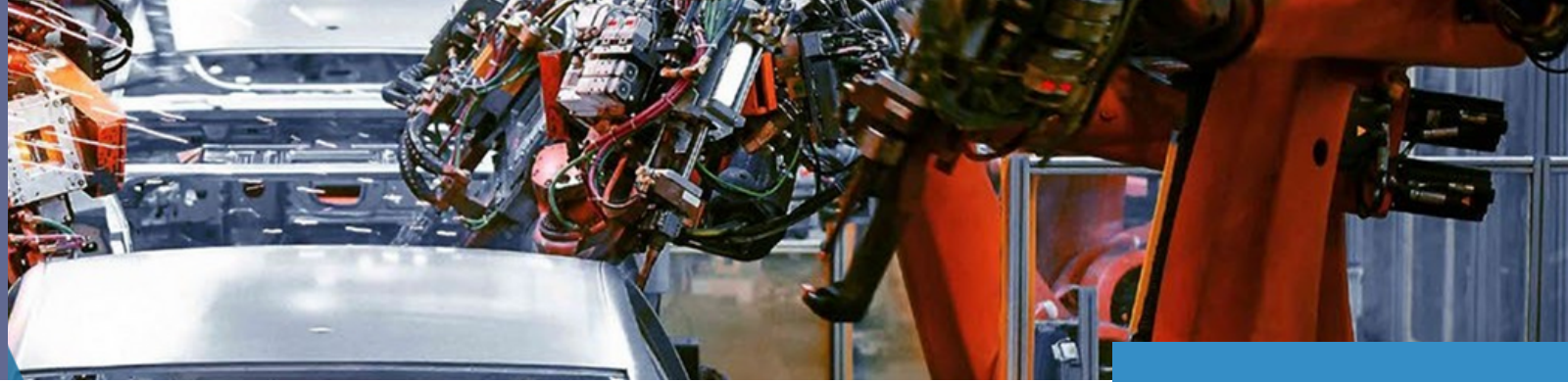
6 Optical Distribution Boxes and Domes

Used to match Fiber Optic outdoor (Outside) Networks with Inside Networks. Ideally, to be installed in building basements (industrial, commercial and residential buildings), malls and office centers. Installed on walls, concrete boxes or cabinets. Capacity up to 288 fibers, IEC as well as being UL/CSA approved.
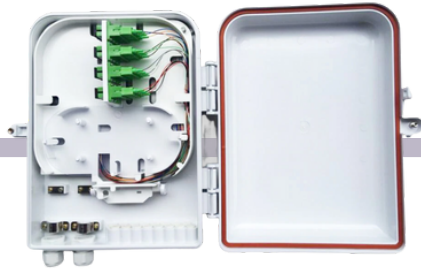
7 Optical Boxes

For indoor optical network use. Installation in walls or cabinet. Capacity up to 12 optical ports. Can be installed in offices, commercial or residential buildings.

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Automation Solutions
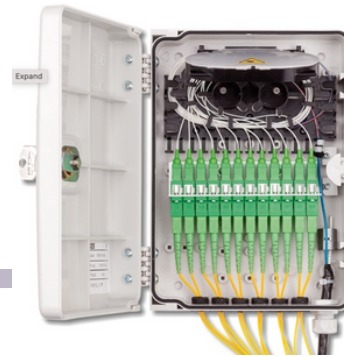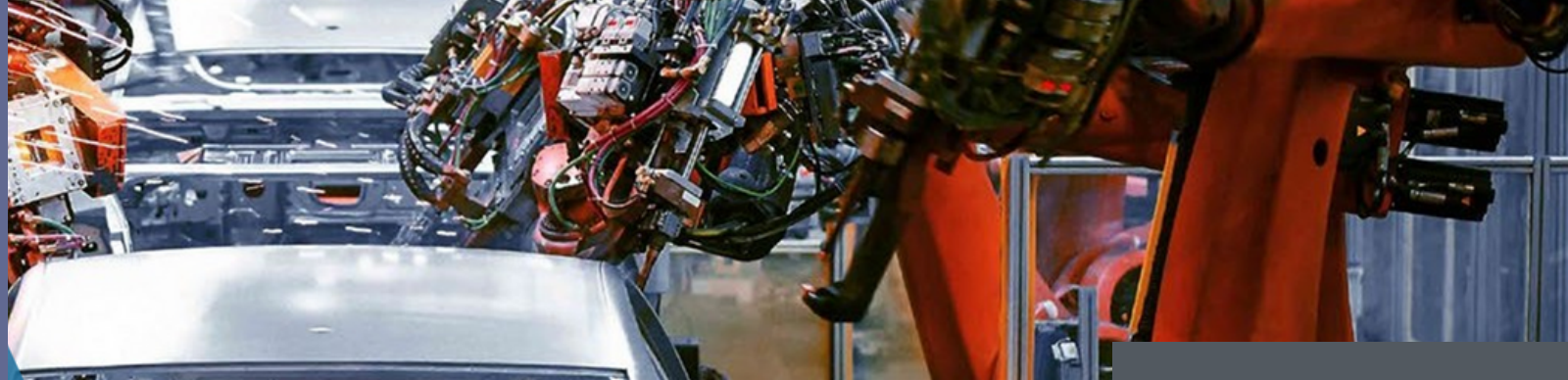
1 Cable Glands

Designed to fix the cables to the connection boxes providing impermeability in the circuit protecting it from external agents that can deteriorate internal connections and equipment inside cabinets.

Types
- Round or flat cable
- Teck type
- Type mc, aia, sia

Materials
- Stainless steel, galvanized steel
- Aluminum, steel body, aluminum nut
- Nickel-plated brass, bronze
- Iron alloy
- Polyamide 6,
- thermoplastic polyester

Certificates
- Certificate UL, cUL, cULcs
- Certificate CSA
- Class I, Div. 1, Groups C, D
- Class II, Div. 1 & 2, Groups E, F, G
- Class III
- Class I, Div. 1, Groups B, C, D
- Class II, Div. 1, Groups F, G
- Class I, Div. 1, Groups A, B, C, D
- Class II, Groups E, F, G
- ATEX, IECEx, cULus, CEPEL, NANIO CCV, NEPSI, CCOE,
- Bureau Veritas, DNV, ABS, Lloyds
- NEMA 6P (1/2" to 1-1/4" size 1)
- NEMA 4 (1-1/4" size 2 to 4")

2 Cable Tray

E'kabel's Cable trays are suitable for any environment and industry to provide mechanical protection and to support a large quantities of power, control, and instrumentation cables.

Materials:
- Galvanized steel
- Aluminium
- Stainless steel
- Glass-fiber reinforced plastic

Types:
- Ladder
- Solid or perforated bottom Mesh
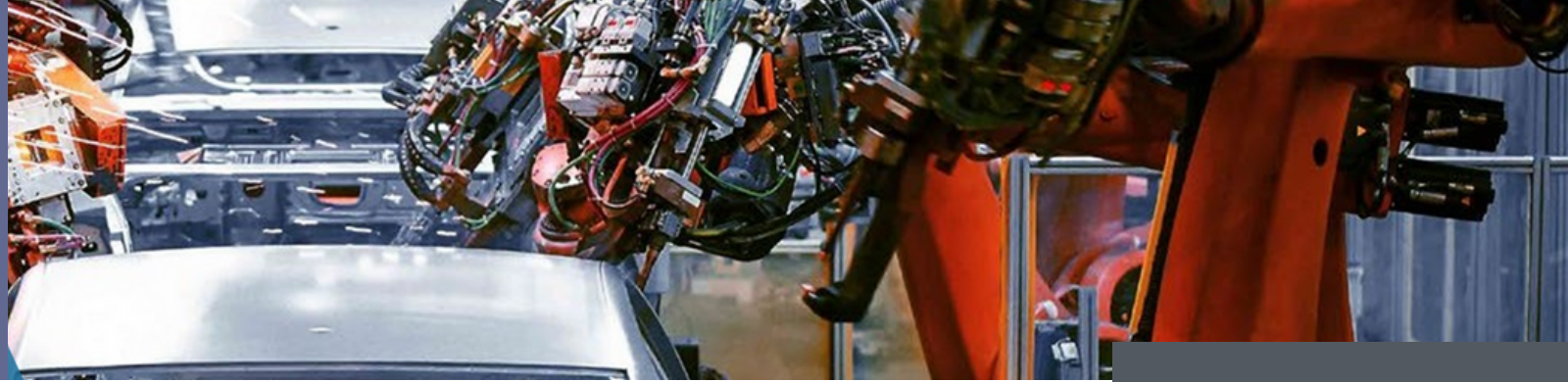
Standards:
- ANCE / UL / NEMA VE1/VE2 / IEC-61537

3 Cable Transit Systems

Cable transit systems for cable management going through solid obstacles in potentially hazardous zones, are designed for structures supporting mechanical loads by reducing mechanical stress and minimizing cracks. They are regulated by UL/NEMA or IEC, where international certifications like ATEX apply.

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4 Standing enclosure system
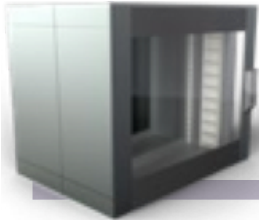
Enclosures NEMA or IP standards are ideal for electrical, electronic and communication networks. Also for floor distribution in environments that require a high degree of security and a high industrial protection rating.

5 Explosion Proof Enclosures

E'kabel's explosion proof enclosures satisfy NEC, IECEx, and ATEX standards. Our enclosures are suitable to contain sparks that can ignite vapors, gases, dust, or fibers in the air.

6 Cable Lugs and Splices

Connectors can be manufactured with different metals, and characteristics such as barrel lengths, holes, angles, inspection holes etc. We can also provide heat or cold shrink sleeves for corrosion protection

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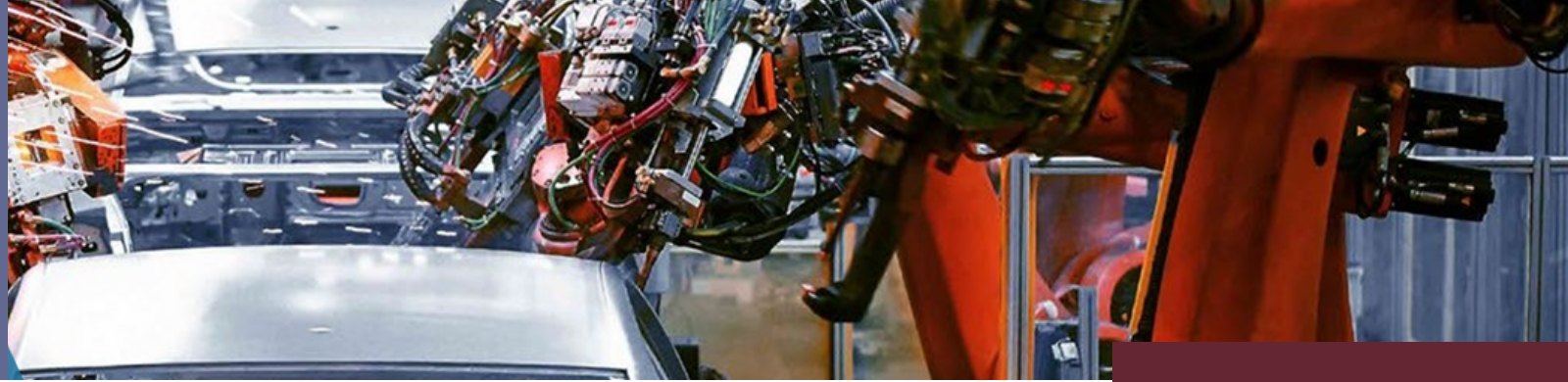
1 Generator Sets

E'kabel's generator sets cover 3 fuel technologies required in the market: Diesel, Natural gas, and Dual Gas LP/NG; with power rating from 10kW to 4000kW, single-phase or three-phase. Stand Alone or Containerized with complete PLC and Monitor Systems suitable for Commercial, Industrial, Mining and Marine Offshore applications.

2 UPS (Uninterruptible Power Supply)

E'kabel's portfolio contains double-conversion UPS from 1kVA to 1600kVA for general purposes, industrial or marine environment; suitable for rack mounting or self-supporting and capable of protecting critical loads against all types of electrical service disturbances. They are built under UL and IEC standards.

3 PDU (Power Distribution Unit)

Distributes electrical energy for critical applications, it can be self-supported as a tower or rackable (depending on capacity or customer requirements). It can also have multiple outputs and be electrically protected (if necessary).

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Automation Solutions
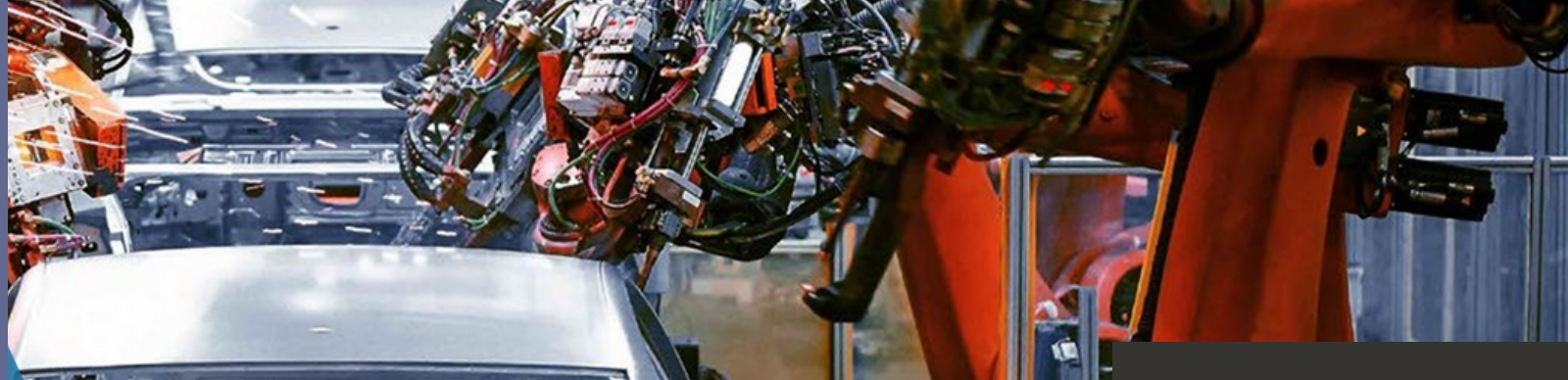
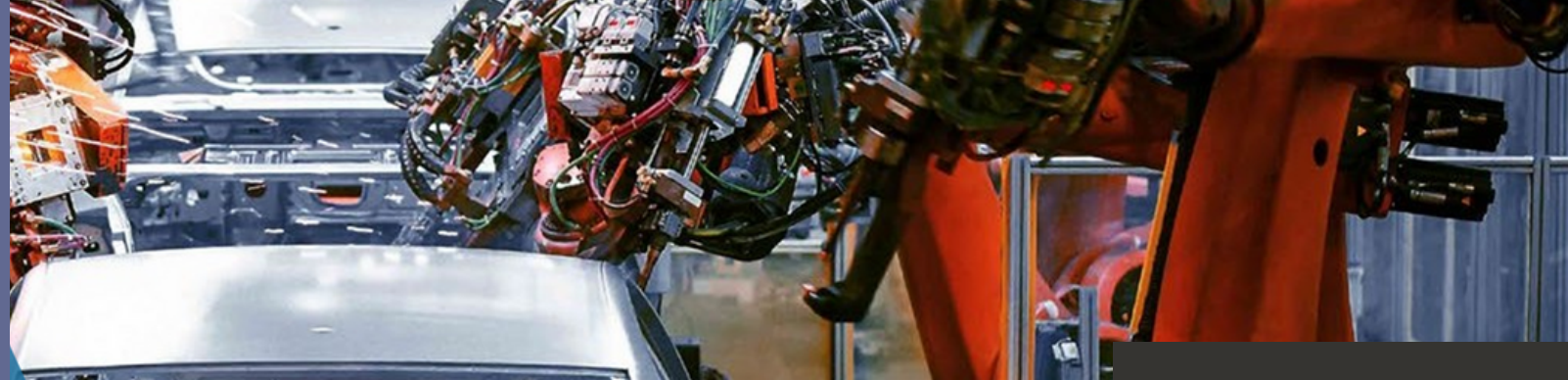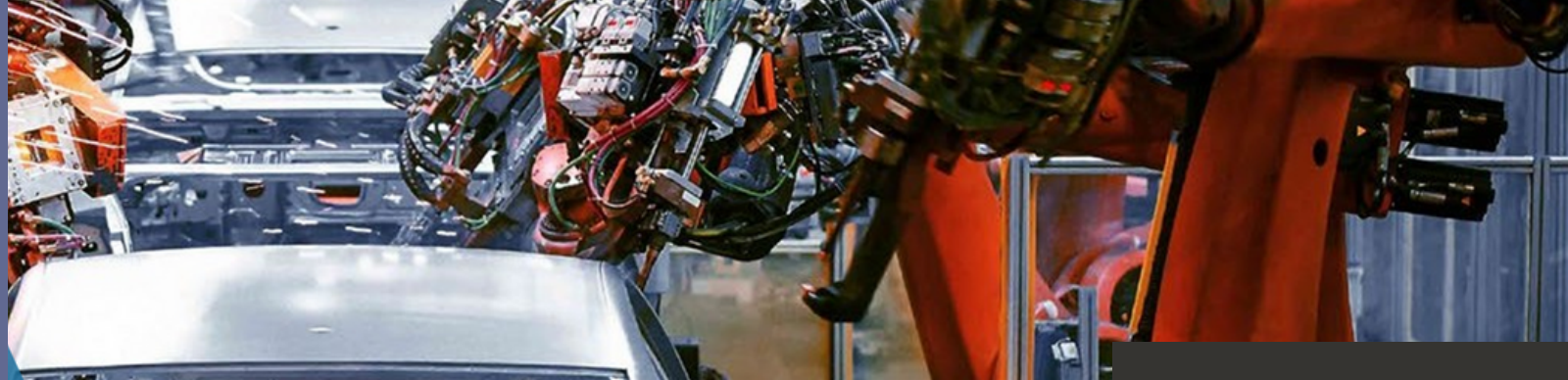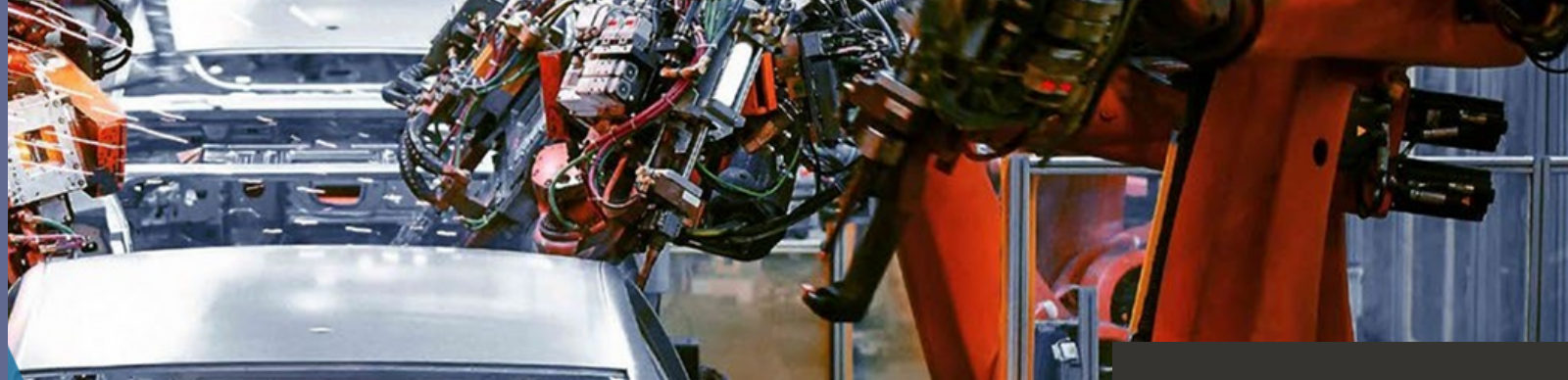| System Name		Ekabel's Serie	Picture
Can Open/HART/ RS-485	**ELC**	1 Pair 24AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		2 Pairs 24AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		3 Pairs 24AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		4 Pairs 24AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		8 Pairs 24AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		1 Pair 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		1 Pair+1Con. 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		2 Pairs 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		3 Pairs 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		4 Pairs 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		1 Pair 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		2 Pairs 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		3 Pairs 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
		4 Pairs 22AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC	
DeviceNet	**EDN**	1-25 Pairs 24AWG TnCu PVC Insulation / Foil Shield / PVC Jacket CM	
		1-15 Pairs 22AWG TnCu PVC Insulation / Foil Shield / PVC Jacket CM	
		1-15 Pairs 20AWG TnCu PVC Insulation / Foil Shield / PVC Jacket CM	
CC Link	**ECC**	3 Conductors 20AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket PLTC & CM	
		3 Conductors 20AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC / SWA / PVC Jacket PLTC & CM	

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System Name		Ekabel's Serie	Picture
ControlNet	**ECN**	RG-6 (18AWG) CCS FOAM-PE Insualtion / Foil + TnCu Brd + Foil + TnCu Brd Shield / PVC Jacket 75 ohm	
		RG-6 (18AWG) CCS FOAM-PE Insualtion / Foil + TnCu Brd + Foil + TnCu Brd Shield / PVC /SWA / PVC Jacket 75 ohm	
DataHighway (DH) & DataHighway Plus (DH+) Remote I/0	**EDH** **EDT** **EDA** **EDK**	1 Pair 20AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket 78 ohm	
		1 Pair 20AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC /SWA / PVC Jacket 78 ohm	
		1 Pair 20AWG Cu+TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket 100 ohm	
		1 Pair 25AWG TnCu FOAM PO Insulation / Foil Shield / PVC Jacket 124 ohm	
		1 Pair 22AWG TnCu FOAM PP Insulation / Foil Shield / PVC Jacket 150 ohm	
		1 Pair 22AWG TnCu FOAM PP Insulation / Foil Shield / PVC / SWA / PVC Jacket 150 ohm	
Device Net	**EDB** **EDN**	1 Pair 15AWG + 1Pair 18AWG TnCu PP+PVC/NYL Insulation / Ind. Foil + OA TnCu Braid Shield / PVC Jacket PLTC 120 ohm	
		1 Pair 15AWG + 1Pair 18AWG TnCu PP+PVC/NYL Insulation / Ind. Foil + OA TnCu Braid Shield / PVC / SWA / PVC Jacket PLTC 120 ohm	
Foundation Fieldbus (Type SP50 ISA/IEC)	**EFF**	1Pair 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type A	
		1Pair 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC / SWA / PVC Jacket Orange PLTC FF Type A	
		2Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type A	
		2Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC / SWA / PVC Jacket Orange PLTC FF Type A	
		4Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type A	

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System Name		Ekabel's Serie	Picture
ControlNet	**ECN**	RG-6 (18AWG) CCS FOAM-PE Insualtion / Foil + TnCu Brd + Foil + TnCu Brd Shield / PVC Jacket 75 ohm	
		RG-6 (18AWG) CCS FOAM-PE Insualtion / Foil + TnCu Brd + Foil + TnCu Brd Shield / PVC /SWA / PVC Jacket 75 ohm	
DataHighway (DH) & DataHighway Plus (DH+) Remote I/0	**EDH** **EDT** **EDA** **EDK**	1 Pair 20AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket 78 ohm	
		1 Pair 20AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC /SWA / PVC Jacket 78 ohm	
		1 Pair 20AWG Cu+TnCu PE Insulation / Foil + TnCu Braid Shield / PVC Jacket 100 ohm	
		1 Pair 25AWG TnCu FOAM PO Insulation / Foil Shield / PVC Jacket 124 ohm	
		1 Pair 22AWG TnCu FOAM PP Insulation / Foil Shield / PVC Jacket 150 ohm	
		1 Pair 22AWG TnCu FOAM PP Insulation / Foil Shield / PVC / SWA / PVC Jacket 150 ohm	
Device Net	**EDB** **EDN**	1 Pair 15AWG + 1Pair 18AWG TnCu PP+PVC/NYL Insulation / Ind. Foil + OA TnCu Braid Shield / PVC Jacket PLTC 120 ohm	
		1 Pair 15AWG + 1Pair 18AWG TnCu PP+PVC/NYL Insulation / Ind. Foil + OA TnCu Braid Shield / PVC / SWA / PVC Jacket PLTC 120 ohm	
Foundation Fieldbus (Type SP50 ISA/IEC)	**EFF**	1Pair 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type A	
		1Pair 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC / SWA / PVC Jacket Orange PLTC FF Type A	
		2Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type A	
		2Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC / SWA / PVC Jacket Orange PLTC FF Type A	
		4Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type A	

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System Name		Ekabel's Serie	Picture
Foundation Fieldbus (Type SP50 ISA/IEC)	EFF	4Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC / SWA / PVC Jacket Orange PLTC FF Type A	
		8Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type A	
		8Pairs 18AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC / SWA / PVC Jacket Orange PLTC FF Type A	
		1Pair 16AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type A	
		1Pair 16AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC / SWA / PVC Jacket Orange PLTC FF Type A	
		1Pair 22AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC Jacket Orange PLTC FF Type B	
		1Pair 22AWG TnCu PE Insulation (Blue&Orange) / Foil Shield / PVC / SWA / PVC Jacket Orange PLTC FF Type B	
Modbus	EMP	3 Conductors 20AWG TnCu PE Insulation / Foil + TnCu Braid Shield / PVC / SWA / PVC Jacket PLTC & CM	
Profibus DP	EPD	1 Pair 22AWG Cu PE Insulation (Red&Green) / Foil + TnCu Braid Shield / PVC Jacket Purple CM	
		1 Pair 22AWG Cu PE Insulation (Red&Green) / Foil + TnCu Braid Shield / PVC / SWA / PVC Jacket Purple CM	
Profibus PA	EPA	1 Pair 18AWG Cu PE Insulation (Red&Green) / Foil + TnCu Braid Shield / PVC Jacket Black CM	
		1 Pair 18AWG Cu PE Insulation (Red&Green) / Foil + TnCu Braid Shield / PVC / SWA / PVC Jacket Black CM	

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System Name	Ekabel's Serie		Picture
Other Communications, Audio, & Instrument.	EMC	1 Pair 18AWG Cu PE Insulation (Red&Green) / Foil + TnCu Braid Shield / PVC Jacket Blue CM	
		1 Pair 18AWG Cu PE Insulation (Red&Green) / Foil + TnCu Braid Shield / PVC / AIA / PVC Jacket Blue CM	
		Multiconductor 24AWG TnCu PE, PP, PVC Insulation / Foil Shield / PVC Grey Jacket	
		Multiconductor 22AWG TnCu PE, PP, PVC Insulation / Foil Shield / PVC Grey Jacket	
		Multiconductor 20AWG TnCu PE, PP, PVC Insulation / Foil Shield / PVC Grey Jacket	
		Multiconductor 18AWG TnCu PE, PP, PVC Insulation / Foil Shield / PVC Grey Jacket	
		Multiconductor 16AWG TnCu PE, PP, PVC Insulation / Foil Shield / PVC Grey Jacket	
		Multiconductor 14AWG TnCu PE, PP, PVC Insulation / Foil Shield / PVC Grey Jacket	
		Multiconductor 12AWG TnCu PE, PP, PVC Insulation / Foil Shield / PVC Grey Jacket	

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