Innovations 2023

November

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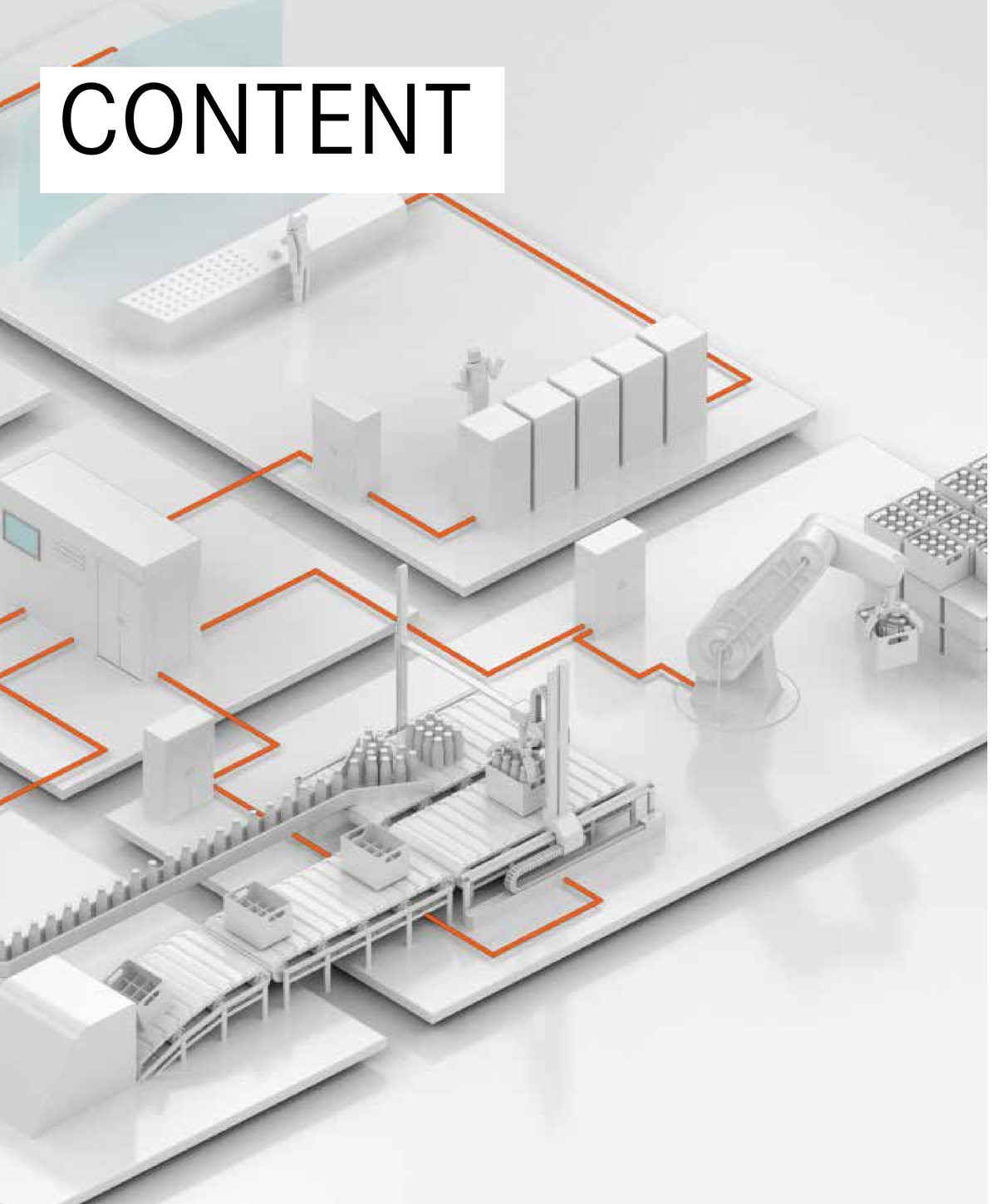

Cables

Our product brands ÖLFLEX®, UNITRONIC®, ETHERLINE® and HITRONIC®. In all variations for every requirement.

ÖLFLEX® HEAT 125 MC 300/500 V 03
ÖLFLEX® HEAT 125 MC 450/750 V 04
ETHERLINE® T1 FD 05
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Cable Glands

Sealing and strain-relieving cable entry.

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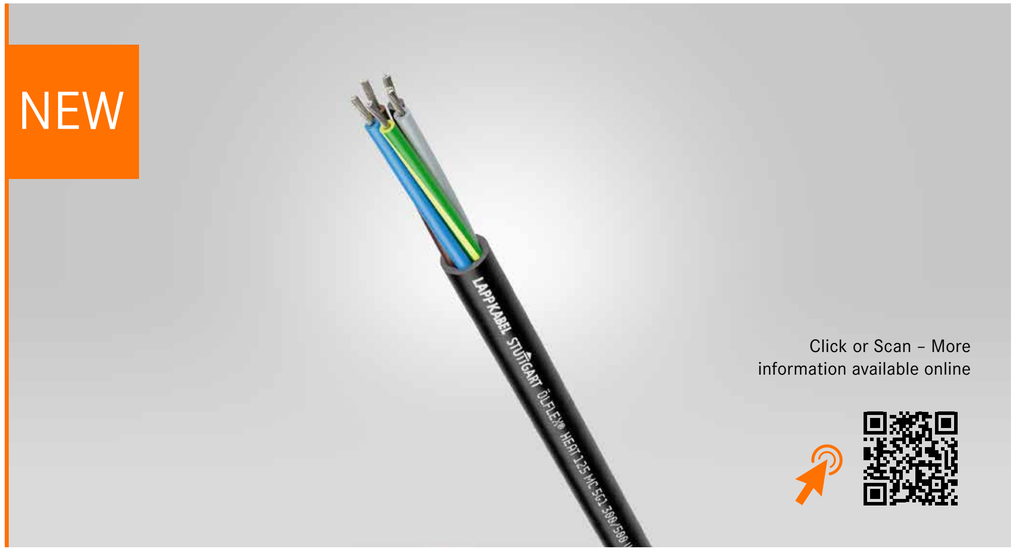
Cables

Power and control cables



ÖLFLEX® HEAT 125 MC 300/500 V

Halogen-free, electron beam cross-linked power cable, high flame retardance, for the protection of people and property, voltage class 300/500 V, DNV approval.

Benefits

- For protection against personal injury and damage to property.
- Electron beam cross-linked insulating material enables use at low and high temperatures (–55 °C to +125 °C).
- Halogen-free and highly flame-retardant materials reduce the risk of flame propagation, high smoke density and toxic flue gases in the event of a fire.
- Classified fire behaviour according to EU Directive 305/2011 (BauPVO/CPR) with article number selection on the LAPP website.
- DNV approval for maritime use.
- Suitable for voltage class 300/500 V.

Application

- For universal use for wiring machine-internal and cross-plant control circuits.
- Typical areas of application are heaters, switchgear, connection boxes, lighting, etc.
- For fixed installation and occasional flexing without tensile strain.
- Can be used in dry, damp and especially in harsh and oily environments.
- Suitable for moderate mechanical stress.
- The electron beam cross-linked polymer compound is highly resistant to oils, fuels, alkalis and acids.
- Suitable for outdoor use.
- Flexible use at temperatures down to –35 °C.

Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC001578
ETIM 5.0/6.0 Class-Description: Flexible cable

Core identification code
Up to 5 cores: colour-coded according to VDE 0293-308, refer to Appendix T9
From 6 cores: black with white numbers

Conductor stranding
Fine wire according to VDE 0295, class 5/IEC 60228 class 5

Minimum bending radius
Occasional flexing: 15 x outer diameter
Fixed installation: 4 x outer diameter

Nominal voltage
U_0/U: 300/500 V

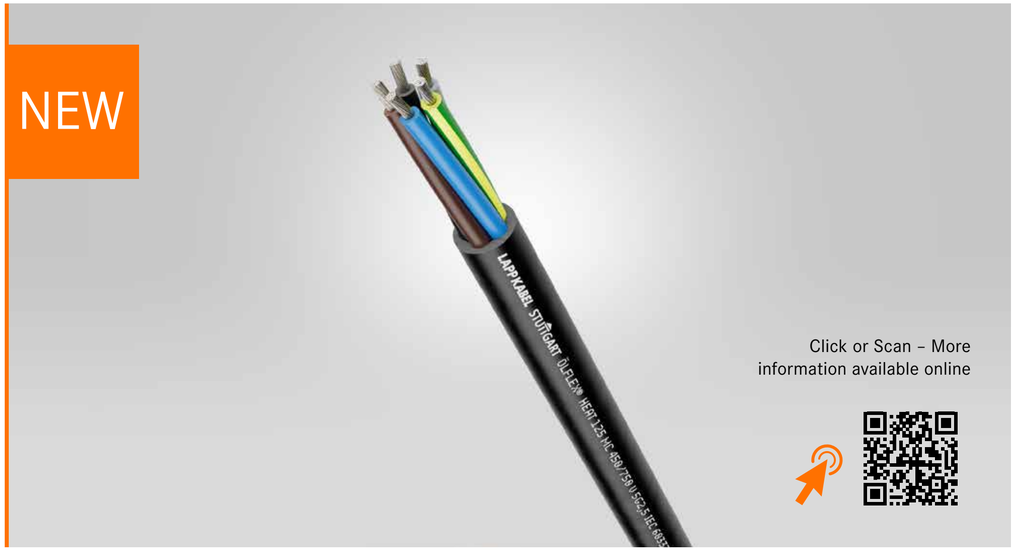
Test voltage
4000 V

Protective conductor
G = with GN-YE protective conductor
X = without protective conductor

Temperature range
Occasional flexing: –35 °C to +120 °C
Fixed installation: –55 °C to +125 °C
Temporary (3.000h): up to +145 °C

Cables

Power and control cables



ÖLFLEX® HEAT 125 MC 450/750 V

Halogen-free, electron beam cross-linked power cable, high flame retardance, for the protection of people and property, voltage class 450/750 V, DNV approval.

Benefits

- For protection against personal injury and damage to property.
- Electron beam cross-linked insulating material enables use at low and high temperatures (-55 °C to +125 °C).
- Halogen-free and highly flame-retardant materials reduce the risk of flame propagation, high smoke density and toxic flue gases in the event of a fire.
- Classified fire behaviour according to EU Directive 305/2011 (BauPVO/CPR) with article number selection on the LAPP website.
- DNV approval for maritime use.
- Suitable for voltage class 450/750 V.

Application

- For universal use for wiring machine-internal and cross-plant control circuits.
- Typical areas of application are heaters, switchgear, connection boxes, lighting, etc.
- For fixed installation and occasional flexing without tensile strain.
- Can be used in dry, damp and especially in harsh and oily environments.
- Suitable for moderate mechanical stress.
- The electron beam cross-linked polymer compound is highly resistant to oils, fuels, alkalis and acids.
- Suitable for outdoor use.
- Flexible use at temperatures down to -35 °C.

Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC001578
ETIM 5.0/6.0 Class-Description:
Flexible cable

Core identification code
Up to 5 cores: colour-coded according to VDE 0293-308, refer to Appendix T9
From 6 cores: black with white numbers

Conductor stranding
Fine wire according to VDE 0295, class 5/IEC 60228 class 5

Minimum bending radius
Occasional flexing: 15 x outer diameter
Fixed installation: 4 x outer diameter

Nominal voltage
U_0/U = 450/750 V AC
0.6/1kV from 1.5 mm² in the case of fixed and protected installation

Test voltage
4000 V

Protective conductor
G = with GN-YE protective conductor
X = without protective conductor

Temperature range
Occasional flexing: -35 °C to +120 °C
Fixed installation: -55 °C to +125 °C
Temporary (3.000h): up to +145 °C

Cables

Data cables

ETHERLINE® T1 FD

Highly flexible, shielded Single Pair Ethernet data cable with PUR outer sheath and UL approval. Suitable for permanent use in cable chains.

Benefits

- Fast information exchange thanks to future-proof Single Pair Ethernet (SPE) technology for a consistent and uniform network infrastructure right up to the field level.
- Ethernet networking of the field devices enables real-time data collection and analysis as well as providing a wealth of additional information (big data) for process optimisation (e.g. predictive maintenance).
- Complete interoperability of field devices and systems from various manufacturers thanks to seamless connection to the Industrial Ethernet network.
- Successfully tested for over 3.0 million bending cycles in cable chains.
- For the transmission of analogue and digital signals in the frequency range up to 600 MHz and up to 40 m distance.
- Single-paired cable design saves weight and space. Small bending radii and outer diameters are essential for connection to the field level.
- Power over Data Line (PoDL)-capable cable according to IEEE 802.3bu for simultaneous power and data supply of SPE terminal devices with low energy requirements (up to 50 W).
- Ideal protection against electromagnetic interference thanks to double shielding made of aluminium-laminated foil and copper braiding with high degree of coverage (SF/UTP).
- UL certification according to technical data enables the product to be used in the North American market.

Application

- For structured building cabling according to DIN EN 50173 and ISO/IEC 11801.
- For Single Pair Ethernet (SPE) applications 100Base-T1 according to IEEE 802.3bw and 1000Base-T1 according to IEEE 802.3bp.
- Cable design allows highly flexible, continuously flexing use in moving machine parts and in the cable chain.
- Can be used in dry, damp and especially in harsh and oily environments.
- The PUR outer sheath withstands high mechanical loads.
- The PUR outer sheath is resistant to mineral oil-based lubricants and highly resistant to chemicals.

Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000830
ETIM 5.0/6.0 Class-Description:
Data cable

Peak operating voltage
(not for power applications)
125 V

Minimum bending radius
Fixed installation: 4 x outer diameter
Flexing: 15 x outer diameter

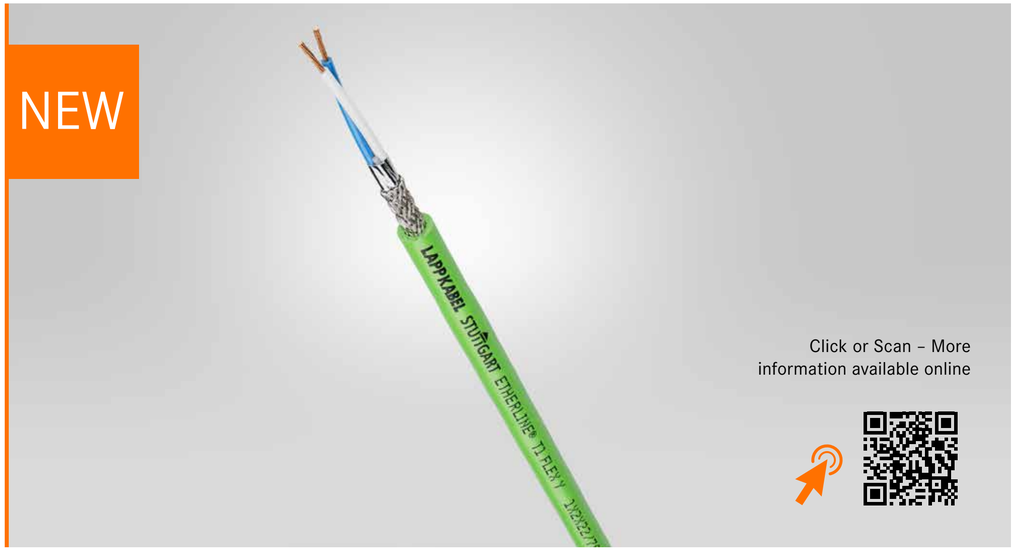
Test voltage
C/C: 2000 V
C/S: 2000 V

Characteristic impedance
nom. 100 Ω

Temperature range
Fixed installation: –40 °C bis +80 °C
Permanent flexing: –20 °C bis +60 °C
UL: 80 °C according to UL 758

Cables

Data cables



ETHERLINE® T1 FLEX

Flexible, shielded Single Pair Ethernet data cable with PVC outer sheath, single-pair cable design saves weight and minimises space requirements, with UL approval.

Benefits

- Fast information exchange thanks to future-proof Single Pair Ethernet (SPE) technology for a consistent and uniform network infrastructure right up to the field level.
- Ethernet networking of the field devices enables real-time data collection and analysis as well as providing a wealth of additional information (big data) for process optimisation (e.g. predictive maintenance).
- Complete interoperability of field devices and systems from various manufacturers thanks to seamless connection to the Industrial Ethernet network.
- For the transmission of analogue and digital signals in the frequency range up to 600 MHz and up to 40 m distance.
- Single-paired cable design saves weight and space. Small bending radii and outer diameters are essential for connection to the field level.
- Power over Data Line (PoDL)-capable cable according to IEEE 802.3bu for simultaneous power and data supply of SPE terminal devices with low energy requirements (up to 50 W).
- Ideal protection against electromagnetic interference thanks to double shielding made of aluminium-laminated foil and copper braiding with high degree of coverage (SF/UTP).
- UL certification according to technical data enables the product to be used in the North American market.

Application

- For structured building cabling according to DIN EN 50173 and ISO/IEC 11801.
- For Single Pair Ethernet (SPE) applications 100Base-T1 according to IEEE 802.3bw and 1000Base-T1 according to IEEE 802.3bp.
- Also available as a Power Limited Tray Cable (PLTC) variant listed according to UL for open installation on cable trays.
- For fixed installation and occasional flexing.
- Can be used in dry and damp rooms.
- Suitable for moderate mechanical stress.
- The PVC outer sheath is resistant to acids and alkalis, and to oil to a limited degree.

Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000830
ETIM 5.0/6.0 Class-Description:
Data cable

Peak operating voltage
(not for power applications)
125 V

Minimum bending radius
see data sheet

Test voltage
C/C: 2000 V
C/S: 2000 V

Characteristic impedance
nom. 100 Ω

Temperature range
See data sheet

Cables

Data cables

ETHERLINE® T1L

Shielded Ethernet APL data cable (10 Mbit/s) for potentially explosive areas in the process industry, bridging distances of up to 1000 m, with „Fast Connect“ design and UL approval.

Benefits

- Ethernet Advanced Physical Layer (Ethernet-APL) enables data transmission via Ethernet up to the field level in potentially explosive environments in the process industry.
- Fast and efficient transmission of large data volumes via Ethernet at 10 Mbit/s for bridging long distances (trunk length up to 1000 m or spurs up to 200 m).
- Complete interoperability of field devices and systems from various manufacturers thanks to seamless connection to the Industrial Ethernet network.
- Ethernet networking of the field devices enables real-time data collection and analysis as well as providing a wealth of additional information (big data) for process optimisation (e.g. predictive maintenance).
- Ethernet APL supports the intrinsically safe ignition protection type and is based on the 2-WISE (2-Wire Intrinsically Safe Ethernet) concept according to IEC TS 60079-47. This achieves an explosion-protection technology with a high level of protection.
- Power over Data Line (PoDL)-capable cable according to IEEE 802.3bu for simultaneous power and data supply of SPE terminal devices with low energy requirements (up to 50 W).
- The „Fast Connect“ structure with inner sheath enables easy stripping and assembly of the cable.
- Ideal protection against electromagnetic interference thanks to double shielding made of aluminium-laminated foil and copper braiding with high degree of coverage (SF/UTP).
- UL/CSA certification according to technical data enables the product to be used in the North American market.

Application

- For structured building cabling according to DIN EN 50173 and ISO/IEC 11801.
- Especially suitable for long transmission distances of up to 1000 m according to IEC 61156-13.
- For Single Pair Ethernet (SPE) applications 10Base-T1-L according to IEEE 802.3cg.
- Especially for challenging applications in the process industry.
- Listed as a Power Limited Tray Cable (PLTC) according to UL, for open installation on cable trays.
- For fixed installation.
- Can be used in dry and damp environments.
- Suitable for moderate mechanical stress.
- The PVC outer sheath is resistant to acids and alkalis, and to oil to a limited degree.

Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000830
ETIM 5.0/6.0 Class-Description:
Data cable

Peak operating voltage
(not for power applications)
125 V

Minimum bending radius
Fixed installation: 4 x outer diameter

Test voltage
Core/core: 2000 V
Core/screen: 2000 V

Characteristic impedance
nom. 100 Ω

Temperature range
Fixed installation (IEC): -40 °C to +80 °C
UL: max. +80 °C

Cables

Data cables

ETHERLINE® T1L FLEX

Flexible, shielded Ethernet APL data cable (10 Mbit/s) for potentially explosive areas in the process industry, bridging distances of up to 1000 m, with „Fast Connect“ design and UL approval.

Benefits

- Ethernet Advanced Physical Layer (Ethernet-APL) enables data transmission via Ethernet up to the field level in potentially explosive environments in the process industry.
- Fast and efficient transmission of large data volumes via Ethernet at 10 Mbit/s for bridging long distances (trunk length up to 1000 m or spurs up to 200 m).
- Complete interoperability of field devices and systems from various manufacturers thanks to seamless connection to the Industrial Ethernet network.
- Ethernet networking of the field devices enables real-time data collection and analysis as well as providing a wealth of additional information (big data) for process optimisation (e.g. predictive maintenance).
- Ethernet APL supports the intrinsically safe ignition protection type and is based on the 2-WISE (2-Wire Intrinsically Safe Ethernet) concept according to IEC TS 60079-47. This achieves an explosion-protection technology with a high level of protection.
- Power over Data Line (PoDL)-capable cable according to IEEE 802.3bu for simultaneous power and data supply of SPE terminal devices with low energy requirements (up to 50 W).
- The „Fast Connect“ structure with inner sheath enables easy stripping and assembly of the cable.
- Ideal protection against electromagnetic interference thanks to double shielding made of aluminium-laminated foil and copper braiding with high degree of coverage (SF/UTP).
- UL/CSA certification according to technical data enables the product to be used in the North American market.

Application

- For structured building cabling according to DIN EN 50173 and ISO/IEC 11801.
- Especially suitable for long transmission distances of up to 1000 m according to IEC 61156-13.
- For Single Pair Ethernet (SPE) applications 10Base-T1-L according to IEEE 802.3cg.
- Especially for challenging applications in the process industry.
- Listed as a Power Limited Tray Cable (PLTC) according to UL, for open installation on cable trays.
- For fixed installation and occasional flexing.
- Can be used in dry and damp environments.
- Suitable for moderate mechanical stress.
- The PVC outer sheath is resistant to acids and alkalis, and to oil to a limited degree.

Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000830
ETIM 5.0/6.0 Class-Description:
Data cable

Peak operating voltage
(not for power applications)
125 V

Minimum bending radius
Fixed installation: 4 x outer diameter
Flexing: 8 x outer diameter

Test voltage
Core/core: 2000 V
Core/screen: 2000 V

Characteristic impedance
nom. 100 Ω

Temperature range
Fixed installation (IEC): -40 °C to +80 °C
UL: max. +80 °C
Flexing: -30 °C to +70 °C

Connectors

Circular connectors

NEW

Click or Scan – More information available online

EPIC® POWER M23 D6 TWIST

M23 circular connector housing with insert (depending on article), cable connector D6 TWIST, powerful up to 26 A, for assembly with servo cables.

Benefits

- Particularly high power despite extremely space-saving design for very small devices.
- Stability thanks to die-cast zinc metal housing.
- Reliable protection against electromagnetic interference thanks to integrated EMC cable gland.
- TWIST quick-locking system enables easy connection to the counterpart (locking takes place after a quarter of rotation). TWIST can be connected to market-standard connectors.
- Housing is available separately or including insert.
- The individual housing can be used with inserts for either sockets or male contacts (available separately).

Application

- For use with matching TWIST counterparts of the EPIC® POWER M23 series.
- For connecting the power supply of devices and machines with higher voltages and currents.
- Typical areas of application are electric motors and servo drives.
- Especially for environments where electromagnetic compatibility (EMC) is required.

Technical Data

Rated voltage (V)
630 V (2 mm contacts)
250 V (1 mm contacts)
Rated impulse voltage
6 kV (2 mm contacts)
4 kV (1 mm contacts)

Rated current (A)
26A/3+PE+4, 25A/5+PE (2 mm contacts)
7 A (1 mm contacts)

Pollution degree
3

Contact resistance
< 4 mOhm

Contacts
Gold-plated brass

Number of contacts
3+PE+4 (2 mm/1 mm)
5+PE(2 mm)

Termination methods
Crimp termination: 0.5–4.0 mm² (2 mm contacts)
Crimp termination: 0.14–1.0 mm² (1 mm contacts)

Material
Housing: nickel-plated zinc die-casting, nickel-plated brass
Insert: PA, Seal: FPM

Protection rating
IP68 (10h/1m)

Cycle of mechanical operation
500

Temperature range
–25 °C up to +125 °C

Connectors

Circular connectors

NEW

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EPIC® POWER M23 D6

M23 circular connector housing with insert (depending on article), cable connector D6, powerful up to 26 A, for assembly with servo cables.

Benefits

- Particularly high power despite extremely space-saving design for very small devices.
- Stability thanks to die-cast zinc metal housing.
- Reliable protection against electromagnetic interference thanks to integrated EMC cable gland.
- Housing is available separately or including insert.
- The individual housing can be used with inserts for either sockets or male contacts (available separately).

Application

- For connecting the power supply of devices and machines with higher voltages and currents.
- Typical areas of application are electric motors and servo drives.
- Especially for environments where electromagnetic compatibility (EMC) is required.

Technical Data

Rated voltage (V)
630 V (2 mm contacts)
250 V (1 mm contacts)
Rated impulse voltage
6 kV (2 mm contacts)
4 kV (1 mm contacts)

Rated current (A)
26A/3+PE+4, 25A/5+PE (2mm contacts)
7 A (1 mm contacts)

Pollution degree
3

Contact resistance
< 4 mOhm

Contacts
Gold-plated brass

Number of contacts
3+PE+4 (2 mm/1 mm)
5+PE (2 mm)

Termination methods
Crimp termination: 0.5–4.0 mm² (2 mm contacts)
Crimp termination: 0.14–1.0 mm² (1 mm contacts)

Material
Housing: nickel-plated zinc die-casting, nickel-plated brass
Insert: PA, Seal: FPM

Protection rating
IP68 (10h/1m)

Cycle of mechanical operation
500

Temperature range
–25 °C up to +125 °C

Connectors

Circular connectors

EPIC® POWER M23 F6 TWIST

M23 circular connector housing with insert (depending on article), coupling connector F6 TWIST, powerful up to 26 A, for assembly with servo cables.

Benefits

- F6 coupling connector for use with D6 cable connector.
- Particularly high power despite extremely space-saving design for very small devices.
- Stability thanks to die-cast zinc metal housing.
- Reliable protection against electromagnetic interference thanks to integrated EMC cable gland.
- TWIST quick-locking system enables easy connection to the counterpart (locking takes place after a quarter of rotation). TWIST can be connected to market-standard connectors.
- Housing is available separately or including insert.
- The individual housing can be used with inserts for either sockets or male contacts (available separately).

Application

- For use with matching TWIST counterparts of the EPIC® POWER M23 series.
- For connecting the power supply of devices and machines with higher voltages and currents.
- Typical areas of application are electric motors and servo drives.
- Especially for environments where electromagnetic compatibility (EMC) is required.

Technical Data

Rated voltage (V)
630 V (2 mm contacts)
250 V (1 mm contacts)
Rated impulse voltage
6 kV (2 mm contacts)
4 kV (1 mm contacts)

Rated current (A)
26A/3+PE+4, 25A/5+PE (2 mm contacts)
7 A (1 mm contacts)

Pollution degree
3

Contact resistance
< 4 mOhm

Contacts
Gold-plated brass

Number of contacts
3+PE+4 (2 mm/1 mm)
5+PE (2 mm)

Termination methods
Crimp termination: 0.5–4.0 mm² (2 mm contacts)
Crimp termination: 0.14–1.0 mm² (1 mm contacts)

Material
Housing: nickel-plated zinc die-casting, nickel-plated brass
Insert: PA, Seal: FPM

Protection rating
IP68 (10h/1m)

Cycle of mechanical operation
500

Temperature range
–25 °C up to +125 °C

Connectors

Circular connectors

NEW

Click or Scan – More information available online

EPIC® POWER M23 Inserts

M23 circular connector insert for sockets or male contacts, with PE crimp contact, for manufacturing an EPIC® POWER M23 circular connector.

Benefits

- For individual fitting with sockets or male contacts.
- Inserts for sockets and inserts for male contacts fit equally in D6 and F6 housings and can be exchanged as desired (housings available separately).

Application

- For manufacturing an EPIC® POWER M23 circular connector.
- For use with housings of the EPIC® POWER M23 series.

Technical Data

Rated voltage (V)
630 V (2 mm contacts)
250 V (1 mm contacts)
Rated impulse voltage
6 kV (2 mm contacts)
4 kV (1 mm contacts)

Rated current (A)
26A/3+PE+4, 25A/5+PE (2 mm contacts)
7 A (1 mm contacts)

Pollution degree
3

Contact resistance
< 4 mOhm

Contacts
Gold-plated brass

Number of contacts
3+PE+4 (2 mm/1 mm)
5+PE (2 mm)

Termination methods
Crimp termination: 0.5–4.0 mm² (2 mm contacts)
Crimp termination: 0.14–1.0 mm² (1 mm contacts)

Material
PA Polyamid

Protection rating
IP68 (10h/1m)

Cycle of mechanical operation
500

Temperature range
–25 °C up to +125 °C

Connectors

Data connectors

NEW

Click or Scan – More information available online

EPIC® DATA SPE-6 FA M CS1

Compact Single Pair Ethernet connector with crimp termination, connector face according to DIN EN IEC 63171-6, for making a detachable SPE connection.

Benefits

- Fast information exchange thanks to future-proof Single Pair Ethernet (SPE) technology for a consistent and uniform network infrastructure right up to the field level.
- Compact design for use in restricted spaces.
- Time-saving and simplified installation compared to conventional Ethernet connectors.
- Connector face of the SPE connector in accordance with IN EN IEC 63171-6.
- Power over Data Line (PoDL)-capable connector according to IEEE 802.3bu for simultaneous power and data supply of SPE terminal devices with low energy requirements (up to 50 W).
- Crimp termination creates a vibration-proof connection, provides maximum contact protection between the contact and cable and is suitable for automated assembly.

Application

- For establishing a detachable Single Pair Ethernet connection.
- Typical applications include control cabinets, industrial robots and field equipment.
- For use with the SPE circuit board socket EPIC® DATA SPE-6 PCB F.

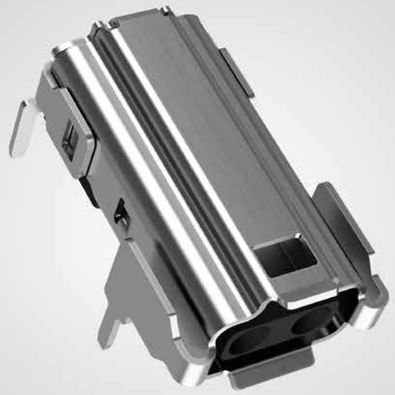
Technical Data

IP **Protection rating**
IP 20

Connectors

Data connectors

NEW



Click or Scan – More information available online

EPIC® DATA SPE-6 PCB F

Compact Single Pair Ethernet circuit board socket, for connecting SPE connectors to a PCB inside active devices, connector face in accordance with DIN EN IEC 63171-6.

Benefits

- Fast information exchange thanks to future-proof Single Pair Ethernet (SPE) technology for a consistent and uniform network infrastructure right up to the field level.
- Compact design for use in restricted spaces.
- Connector face of the SPE connector in accordance with DIN EN IEC 63171-6.
- Power over Data Line (PoDL)-capable circuit board socket according to IEEE 802.3bu for simultaneous power and data supply of SPE terminal devices with low energy requirements (up to 50 W).

Application

- For connecting SPE connectors to a PCB inside active devices.
- For use with the SPE connector EPIC® DATA SPE-6 FA M CS1.
- For use with the SPE patch cable EPIC® DATA SPE-6 PC M-M CT001.

Technical Data

IP **Protection rating**
IP 20

Connectors

Data connectors

NEW

Click or Scan – More information available online

EPIC® DATA M12X

Solid M12 data connector, x-coded, for highly flexible use and the connection of fine and ultra-fine conductor.

Benefits

- Stability thanks to die-cast zinc metal housing.
- Easy cable connection thanks to crimping or insulation displacement technology.
- The connector‘s integrated vibration protection makes it resistant to shocks and vibrations.
- UL certification according to technical data enables the product to be used in the North American market.
- When connected, protection class IP 67 can be achieved.

Application

- For use with fine and ultra-fine wire conductors of classes 5 and 6.
- Can be used universally on machine interfaces for many applications in data and signal transmission.
- For highly flexible, continuously flexing use in moving machine parts and in the cable chain.
- Also suitable for EtherCAT, EtherNET/IP and 4-pair PROFINET applications.

Connectors

Data connectors

EPIC® DATA M12-RJ45

Control cabinet feed-through, M12 connection and RJ45 connection.

Benefits

- Enables easy transition from M12 to RJ45.
- When connected, protection class IP 67 can be achieved on the M12 side.
- D-coded or x-coded available.

Application

- Designed as a control cabinet feed-through for connecting an M12 connection to an RJ45 patch cable.
- For use with assembled data cables (M12D or M12X connector).

Cable assemblies

Data cable assemblies

EPIC® DATA SPE-6 PC M-M CT001

Shielded Single Pair Ethernet patch cable, assembled on both sides, for establishing a detachable SPE connection, overmoulded connector for a secure hold.

Benefits

- Fast information exchange thanks to future-proof Single Pair Ethernet (SPE) technology for a consistent and uniform network infrastructure right up to the field level.
- Single-paired cable design saves weight and space. Small bending radii and outer diameters are essential for connection to the field level.
- The patch cable assembled on both sides saves time during installation and reduces or eliminates the potential for errors during on-site assembly.
- Power over Data Line (PoDL)-capable patch cable according to IEEE 802.3bu for simultaneous power and data supply of SPE terminal devices with low energy requirements (up to 50 W).
- Ideal protection against electromagnetic interference thanks to double shielding made of aluminium-laminated foil and copper braiding with high degree of coverage (SF/UTP).
- Secure hold and increased mechanical stability thanks to overmoulded connectors.

Application

- For establishing a detachable Single Pair Ethernet connection.
- For Single Pair Ethernet (SPE) applications 100Base-T1 according to IEEE 802.3bw and 1000Base-T1 according to IEEE 802.3bp.
- Typical applications include control cabinets, industrial robots and field equipment.
- For use with the SPE circuit board socket EPIC® DATA SPE-6 PCB F.
- For fixed installation and occasional flexing.
- Can be used in dry rooms.
- Suitable for moderate mechanical stress.

Technical Data

IP **Protection rating**
IP 20

Cable assemblies

Power and control cable assemblies

EPIC® POWER M12L-M12L

Power cable (600 V) assembled on both sides with M12L connectors and PVC outer sheath, for constantly moving applications in the cable chain.

Benefits

- Ready-made connection assemblies to save time during installation.
- Proven cable successfully tested for over 5 million bending cycles in cable chains and >2 million torsion cycles.
- Cable design allows rotations with torsion angles of up to ± 180°/m.
- Connectors are mechanically robust, insensitive to shock and vibration and therefore extremely reliable, thanks to the double overmoulding.
- The mechanical L coding of the connector face prevents incorrect plugging with the mating connector.

Application

- For connecting the power supply of devices and machines with higher voltages and currents.
- The cable design allows flexible, continuously flexing use in moving machine parts and in the cable chain.
- Also suitable as the power supply in the PROFINET network (M12L is regarded as a standardised power interface).
- Can be used in dry, damp or wet rooms.
- Suitable for moderate mechanical stress.
- The PVC outer sheath is resistant to acids and alkalis, and to oil to a limited degree.

Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC001855
ETIM 5.0/6.0 Class-Description:
Sensor-actuator patch cord

Protection rating
IP65/IP67

Cable assemblies

Data cable assemblies

UNITRONIC® SENSOR M12-M8 Snap-in

PVC patch cable assembled on both sides for sensor-actuator or fieldbus applications, with M12 screw connection and M8 snap-in connection (tool-free connection).

Benefits

- The patch cable assembled on both sides saves time during installation and reduces or eliminates the potential for errors during on-site assembly.
- The snap-in connector M8 allows quick, tool-free connection to the mating connector (no screwing necessary, pushing is enough). Snap-in function specifically supports maintenance and cleaning work.
- Compact dimensions enable easy integration into the machine concept.

Application

- Can be used universally on machine interfaces for many applications in data and signal transmission.
- Can be used in dry, damp or wet rooms.
- The PVC outer sheath is resistant to acids and alkalis, and to oil to a limited degree.
- Suitable for moderate mechanical stress.

Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC001855
ETIM 5.0/6.0 Class-Description:
Sensor-actuator patch cord

Protection rating
IP65/IP67/IP68

LEGEND

NEW PRODUCT

PRODUCT EXTENSION

PRODUCT CHARACTERISTICS


Suitable for outdoor use


Good chemical resistance


Flame-retardant

Wide clamping range


Halogen-free


Heat-resistant


Cold-resistant


Corrosion-resistant


Maximum vibration protection


Mechanical resistance


Assembly time


Low weight


Oil-resistant


Optimum strain relief


Space requirement


Cable chain


Clean room


Robust


Acid-resistant


Reliability


Integrated SKINTOP® cable gland


Voltage


Connector with standard housing unit


Interference signals

Temperature-resistant


Torsion-resistant


Torsion load

UV-resistant


Waterproof


Variety of approval certifications


Submersible use

Please note:
The purpose of the icons is to provide you with a quick overview and a rough indication of the product features to which the corresponding information relates. You can find details of product characteristics in the “technical data” sections on the product pages.

ÖLFLEX®
Power and control cables

EPIC®
Industrial connectors

UNITRONIC®
Data communication systems

SKINTOP®
Cable glands

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Data communication systems
for ETHERNET technology

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Protective cable conduit systems
and cable carrier systems

HITRONIC®
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