Webguide

New Products July 2020

CABLES AND ACCESSORIES FOR MACHINES AND ENCLOSURES: A PERFECT MATCH

ÖLFLEX® CLASSIC 100 CY 300/500 V

The classic - now in more dimensions! Our robust, flexible PVC control cable with inner jacket is suitable for a wide range of applications and is particularly popular in applications where space is limited due to its reduced wall thickness. The copper braiding shields reliably against electromagnetic interference.

Power and control cables

Various applications • PVC outer sheath and coloured cores

ÖLFLEX® CLASSIC 100 CY 300/500 V

Colour-coded and screened PVC control cable – range extension of 1,5mm² up to 16mm²

Benefits

- Space-saving due to reduced wall thickness.
- Additional robustness due to extruded inner sheath.
- Ideal protection against electromagnetic interference due to copper braided shielding with high degree of coverage.
- High electrical safety through 4000V test voltage

Application range

- Universally applicable for wiring of machine-internal and plant-spanning control circuits.
- For fixed installation and occasional movement without tensile stress.
- Suitable for medium mechanical stress.
- Can be used in dry and damp rooms.
- PVC outer sheath is resistant to acids and alkalis and conditionally resistant to oil.

Technical data

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

Core identifi cation code
Up to 5 cores: colour-coded according to VDE 0293-308, refer to Appendix T9
From 6 cores: ÖLFLEX ® colour code, refer to Appendix T7

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

Minimum bending radius
Occasional fl exing: 20 x outer diameter
Fixed installation: 6 x outer diameter

Nominal voltage
U0/U: 300/500 V

Test voltage
4000 V

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

Temperature range
Occasional fl exing: -5°C to +70°C
Fixed installation: -40°C to +80°C

DATA TRANSMISSION SYSTEMS FOR ETHERNET TECHNOLOGY: YOUR HIGHWAY FOR BIG DATA

ETHERLINE® LAN 1000 CAT.7$_A$

The high-transmission 4- or 8-pair Ethernet cable (Cat. 7$_A$) is suitable for structured building cabling within LAN networks and all Ethernet applications (IEEE 802.3) up to 10 GBase-T. Pair shielding and copper braiding offer ideal protection against electromagnetic interference and also serve as mechanical reinforcement.

ETHERLINE® PN CAT.6$_A$ FC

For fixed installation in the PROFINET® network (Type A): Thanks to its Fast-Connect design with separating cross between the wire pairs, the UL-certified Ethernet cable (Cat. 6$_A$) can be assembled particularly quickly and at the same time offers excellent EMC properties. Choose from three different jacket materials.

ETHERLINE® PN CAT.6$_A$ FD FC

For highly flexible drag chain applications in the PROFINET® network (Type C): Thanks to its Fast-Connect design with separating cross between the wire pairs, the UL-certified Ethernet cable (Cat. 6$_A$) can be assembled particularly quickly and at the same time offers excellent EMC properties. Choose from two different jacket materials.

ETHERLINE® TRAY CAT.7 PLTC

This robust, oil-resistant Industrial Ethernet cable (Cat. 7) is the first of its kind with PLTC classification according to UL and can therefore be laid openly on cable trays. Its high-speed transmission rates and ideal shielding make it a perfect choice for many data and signal transmission applications.

ETHERLINE® PN CAT.6$_A$ FLEX FC

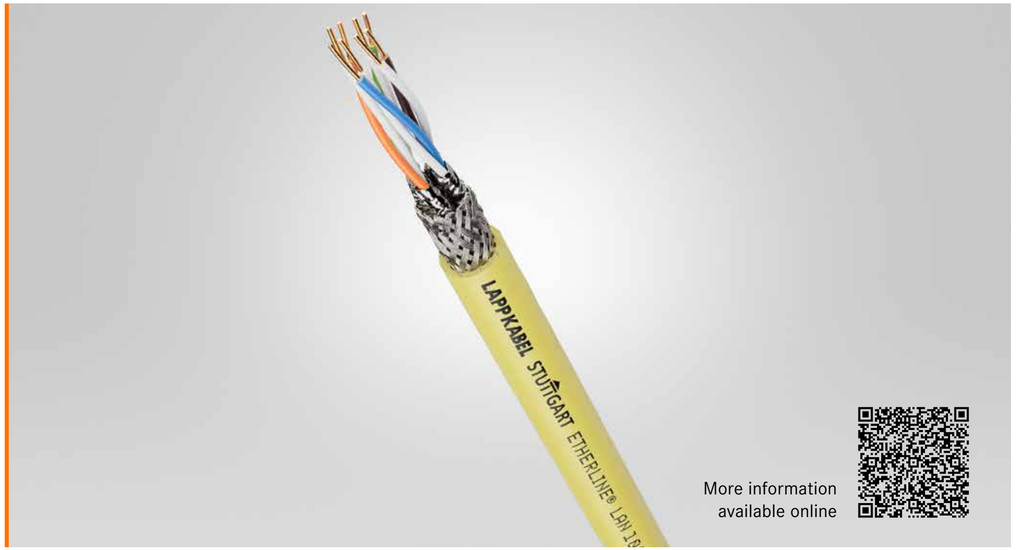
For flexible use in the PROFINET® network (Type C): Thanks to its Fast-Connect design with separating cross between the wire pairs, the UL-certified Ethernet cable (Cat. 6$_A$) can be assembled particularly quickly and at the same time offers outstanding EMC properties. Choose from two different jacket materials.

Data transmission systems for ETHERNET technology

structured building cabling Cat.7_A • cables for fixed installation

ETHERLINE® LAN 1000 Cat.7_A

Ethernet cable category 7_A, class F_A – tested up to 1000 MHz



Benefits

- Fast information exchange through Ethernet- Technology.
- Cat.7_A performance up to 10 Gbps.
- For transmission of analog and digital signals in the frequency range up to 1000 MHz.
- Fulfils requirements for transmission behavior according to EIA/TIA-568 and TSB36 and ISO/IEC 11801/EN 50173 (link class FA).
- Ideal protection against electromagnetic interference by Pair shielding with aluminium composite foil and copper braiding as Overall shielding (S/FTP).
- No fire propagation on halogen-free cable according to IEC 60332-3-25 (Flame propagation on vertical cable or wire bundle).
- Classified fire behaviour according to EU directive 305/2011 (CPR).
- As 4-pair standard cable or also as duplex cable Cable outlet for reduced cabling effort available.

Application range

- For fixed installation and structured building cabling according to EN 50173 and ISO/IEC 11801.
- For horizontal floor cabling at max. 100 m Cable length (of which 90 m for installation and 10 m at workplace).
- For all LAN networks and Ethernet applications up to 10GBase-T suitable.

Technical data

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

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

Characteristic impedance
ETHERLINE® LAN 1000 Cat. 7_A
100 W ± 15%

Temperature range
ETHERLINE® LAN 1000 Cat. 7_A
During installation: 0 °C to +50 °C
Fixed installation: -20°C to +60°C

Data communication systems for ETHERNET technology

ETHERLINE TRAY Cat.7 PLTC

First IE data line with tray classification (UL PLTC) on the market

Technical data

Minimum bend radius
for stationary use: 10 x cable diameter
for flexible use: 15 x cable diameter

Temperature range
for stationary use: -40°C to +80°C
for flexible use: -20°C to +80°C

Nominal voltage
(not for power applications)
UL/CSA 300V
UL/CSA AWM 600V

Test voltage:
1500V

Characteristic impedance
100 Ω ± 15 Ω (1 – 100 MHz)

Color code
white/blue & blue,
white/orange & orange,
white/green & green,
white/brown & brown

Approvals
UL: CMG per UL 444
PLTC per UL 13
AWM 21695 per UL 758
NEC: Class 1 Division 2 per NEC Article 501
Canada: c(UL) CMG per CSA C22.2 No. 214
Additional: cRU AWM II A/B FT4 per CSA C22.2 No 210

Benefits

- Cable specially developed for use in the US.
- Certification for the North American market.
- Listed as Power Limited Tray Cable (PLTC) according to UL, for open installation on cable trays.
- versatile use in various applications and environments.
- Power-over-Ethernet capable line for simultaneous power and data supply of smaller network components with low energy consumption (e.g. IP cameras, Wireless Access Points).
- Ideal protection against electromagnetic interference through Pair shielding with aluminium composite foil and copper braiding as Overall shielding (S/FTP).
- Fast information exchange through Ethernet- Technology.
- Cat.7 performance up to 10 Gbps.
- For transmission of analog and digital signals in the frequency range up to 600 MHz.

Application range

- For open installation on cable trays, together with other line types.
- Permanently installed Universally applicable at machine interfaces for many applications for data and signal transmission.
- Also for EtherCAT, EtherNET/IP and 4-pair PROFINET®-applications.
- Can be used in dry, humid and especially in rough and oily environments.
- Suitable for medium mechanical stress.
- Special PVC outer sheath is resistant to acids and alkalis.
- Suitable for outdoor use, under consideration of temperature range.

RoHS EtherCAT Technology Group EtherNet/IP

For further questions please contact the product management.

Germany/Christian Illenseer,
International LAPP USA/Sagar Patel

Data communication systems for ETHERNET technology

PROFINET®, Cat.6_A • Type A - Cables for fixed installation

More information available online

Technical data

Peak operating voltage
(not for power applications) 125 V

Minimum bending radius
Fixed installation: 8 x outer diameter

Test voltage
see data sheet

Characteristic impedance
nom. 100 Ω acc. to IEC 61156-5

Temperature range
See data sheet

ETHERLINE® PN Cat.6_A FC

Ethernet cable Category 6_A, Class E_A for fixed installation with FC inner sheath – verified up to 500 MHz

Benefits

- The „Fast Connect“ construction with inner jacket and a Separation cross between the wire pairs instead of pair shielding considerably shortens the cable assembly time, because the complex fourfold removal of the pair shielding not applicable. It also offers undiminished shielding of the Pairs of wires among each other.
- Additional protection against electromagnetic interference by double overall shielding made of aluminium laminated foil and copper braided shield with high coverage (SF/ UTP).
- Pover-over-Ethernet capable line for simultaneous power and data supply of smaller network components with low energy consumption (e.g. IP cameras, wireless Access Points).
- Certification for the North American market.
- Fast information exchange through Ethernet technology.
- Cat.6_A performance up to 10 Gbit/s.
- For transmission of analog and digital signals in the frequency range up to 600 MHz.
- With robust PVC outer sheath, abrasion-resistant PUR outer sheath or halogen-free FRNC outer sheath available.

Application range

- For fixed installation in the PROFINET® network (type A), conditionally through solid conductor construction.
- Also suitable for EtherCAT and EtherNET/IP applications.
- Can be used in dry, moist and wet environments.
- Can be used in many different ways, depending on the sheath material.

Data communication systems for ETHERNET technology

PROFINET®, Cat.6_A • Type B - Cables for flexible applications

ETHERLINE® PN Cat.6_A FLEX FC

Ethernet cable Category 6_A, Class E_A for flexible use with FC inner sheath – verified up to 500 MHz

Benefits

- The „Fast Connect“ construction with inner jacket and a Separation cross between the wire pairs instead of pair shielding considerably shortens the cable assembly time, because the complex fourfold removal of the pair shielding not applicable. It also offers undiminished shielding of the Pairs of wires among each other.
- Additional protection against electromagnetic interference by double overall shielding made of aluminium laminated foil and copper braided shield with high coverage (SF/ UTP).
- Pover-over-Ethernet capable line for simultaneous power and data supply of smaller network components with low energy consumption (e.g. IP cameras, wireless Access Points).
- Certification for the North American market.
- Fast information exchange through Ethernet technology.
- Cat.6_A performance up to 10 Gbit/s.
- For transmission of analog and digital signals in the frequency range up to 600 MHz.
- With robust PVC outer sheath or halogen-free FRNC outer sheath available.

Application range

- For industrial secondary and tertiary cabling according to EN 50173-3 ISO/IEC 24702
- Wiring of machines, devices and control cabinets
- Suitable for EtherCAT and EtherNet/IP applications
- For flexible application (7-wire stranded conductor)

Technical data

Peak operating voltage
(not for power applications) 125 V

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

Test voltage
Core/Core: 1500 V AC
Core/Screen: 1000 V AC

Characteristic impedance
nom. 100 Ω acc. to IEC 61156-5

Temperature range
PVC: Fixed: -30 °C up to +80 °C
Moving: -25 °C up to +70 °C
FRNC: Fixed: -25 °C up to +80 °C
Moved: -25 up to +80 °C

Data communication systems for ETHERNET technology

PROFINET®, Cat.6_A • Type C - Cables for continuous flexing applications

More information
available online

ETHERLINE® PN Cat.6_A FD FC

Ethernet cable Category 6_A, Class E_A for highly flexible use with FC inner sheath – verified up to 500 MHz

Technical data

Peak operating voltage
(not for power applications) 125 V

Minimum bending radius
Flexing: 15 x outer diameter
Fixed installation: 8 x cable diameter

Test voltage
Core/Core: 1500 V AC
Core/Screen: 1000 V AC

Characteristic impedance
100 Ohm

Temperature range
Fixed installation
PVC: -40°C bis +80°C
PUR: -40°C bis +80°C
Flexing
PVC: -10°C to +70°C
PUR: -30°C to +70°C°C

Benefits

- The „Fast Connect“ construction with inner jacket and a Separation cross between the wire pairs instead of pair shielding considerably shortens the cable assembly time, because the complex fourfold removal of the pair shielding not applicable. It also offers undiminished shielding of the Pairs of wires among each other.
- Additional protection against electromagnetic interference by double overall shielding made of aluminium laminated foil and copper braided shield with high coverage (SF/UTP).
- Pover-over-Ethernet capable cable for simultaneous pow-er and data supply of smaller network components with low energy consumption (e.g. IP cameras, wireless Access Points).
- Certification for the North American market.
- Fast information exchange through Ethernet technology.
- Cat.6_A performance up to 10 Gbit/s.
- For transmission of analog and digital signals in the frequency range up to 600 MHz.
- With robust PVC outer sheath or abrasion-resistant PUR outer sheath available.
- Successfully tested on over 1 million alternating bending cycles in the drag chain.

Application range

- For the highly flexible, permanently moving use in moving machine parts and in the drag chain in PROFINET®- Network (Type C), due to the finest stranded conductor construction.
- Also suitable for EtherCAT and EtherNET/IP applications.
- Can be used in dry, humid and wet environments.
- Versatile use, depending on the sheath material.

STORAGE, TRANSPORT, PROCESSING – OUR SMART TRANSPORT AND LOGISTICS SOLUTIONS

TRONIC SINGLE CORE-CART S12

The mobile, user-friendly TRONIC Single core-cart S12 is the optimal 3 in1 solution for storage, transport and processing of 12 to 18 single-wire coils. Your workplace will be tidier, clearer and therefore safer than before. The direct material removal at the place of use enables a fast and efficient further processing of the single wires.

DRUM TROLLEY

The drum trolley is suitable for the transport and storage of up to 8 cable drums of the sizes L040-L050 and offers the following advantages: reduced travel distances, easier cutting of cables to length thanks to the brakeable reel axles, and a workplace that is tidier, clearer and therefore safer.

SPINOFF

Quickly taking a heavy cable drum with you – no problem with the SpinOff! With this transport solution you can transport your cable drums almost effortlessly directly to the place of use. By turning the trolley over, the cable can be unwound directly from the cable drum and simply cut to length. The empty SpinOff can be folded up and stowed away to save space.

Tools and cable accessories

Transporting, storing, unwinding • Single core shelves

TRONIC Single core-cart S 12

TRONIC Single core-cart S 12 is optimized for LAPP single core spools.

Benefits

- Mobile means of transport for single core spools ensures high flexibility at the place of use and reduced walking distances.
- Serves as a practical and safe storage option at the same time of several single core spools at the same time and thus enables a tidy and clear workplace. This provides increased occupational safety.
- Safe unwinding of the single wires, due to the horizontal trigger without twist.
- Simultaneous unwinding and winding of several single core spools possible.
- Direct material removal at the place of use enables easier and faster processing of the single wires.
- Quick and easy reloading for a user-friendly handling.
- With useful shelf for tools and smaller work equipment.
- Easy to dismantle for transport with the vehicle.

Application range

- For transporting, storing and unwinding single core coils.
- Can be equipped with 12 to 18 single core bobbins, depending on the bobbin width.

Technical data

Dimensions
Card details:
L = 620, W = 590mm, H = 1160mm
Empty Weight:
20 kg

General data
Max. loading TRONIC Single core-cart S12:
1. Level: 60 kg
2. Level: 40 kg
3. Level: 30 kg

Material
Painted steel

Tools and cable accessories

Transporting, storing, unwinding • Unwinding devices

SpinOff

Transport and cutting to length solution for cable drums

Benefits

- Mobile means of transport for the cable drum ensures high flexibility on site.
- By flipping the SpinOff, the cable can be removed from the cable drum. Therefore the cable can be directly unwound and simply cut to length.
- With height-adjustable handle in favour of an ergonomically optimal posture of the user.
- Safe unwinding of the cable, due to horizontal pulling without twist.
- Simple exchange of cable drums for a user-friendly handling. The short cylinder for large cable drums can be easily replaced by the enclosed long cylinder for small cables drums.
- Practical folding mechanism and low weight enable the simple and space-saving transport of the device with the vehicle.
- The SpinOff uses the drum flanges as rollers for the transport. This means that separate transport rollers are superfluous.
- Also available in a version with measuring device.

Application range

- For the transport of a cable drum to the place of use.
- For unwinding and cutting a cable to length.
- For wooden and plastic cable drums of the following dimensions suitable: drum width 34 - 47 cm, flange diameter 40 - 80 cm, flange drilling 7.5 - 8.0 cm.

Technical data

Dimensions
W=585 mm, H= up to 1100 mm

General data
Weight (without drums): 7 kg
Max. load: 140 kg

Tools and cable accessories

Transporting, storing, unwinding • Unwinding devices

Drum cart

Mobile cart for transporting, storing and unwinding cable drums.

Benefits

- Mobile transport means for up to 8 cable drums grant high flexibility at the place of use and reduces the walking distances.
- Serves as a practical and safe storage option of cable drums at the same time of cable drums and thus enables a tidy and clearly arranged workplace. This ensures increased occupational health and safety.
- Handy transport by pulling and steering with the help of a tie rod.
- Safe unwinding of the cables, due to the horizontal Trigger without twist.
- Brakeable spool axes (Ø 25 mm) with centering crowns enable the direct unwinding of the cable drums and thus makes it easier to cut the cables to length.
- Simultaneous unwinding and winding of several cable drums possible.
- Holder for 4 additional cable drums optionally available.

Application range

- For transporting and storing cable drums.
- Can be equipped with 8 cable drums of sizes L040-L050.

Technical data

Dimensions
Card:
L=1250mm, W=1100mm, H=1150mm
Drum:
Flange diameters: 400 and 500 mm
Drum width: up to 420mm
Flange drilling: 80mm

General data
Weight (without drums): 90 kg
Max. load: 400 kg (50 kg per drum)

LEGEND

NEW PRODUCT

ARTICLE EXTENSION

PRODUCT CHARACTERISTICS


Suitable for outdoor use


Maximum vibration protection


Clean room

Temperature-resistant


Good chemical resistance


Mechanical resistance


Robust


Torsion-resistant


Flame-retardant


Assembly time


Acid-resistant


Torsion load

Wide clamping range


Low weight


Reliability

UV-resistant


Halogen-free


Oil-resistant


Integrated SKINTOP® cable gland


Waterproof


Heat-resistant


Optimum strain relief


Voltage


Variety of approval certifications


Cold-resistant


Space requirement


Connector with standard housing unit


Corrosion-resistant


Power Chain


Interference signals

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

ETHERLINE®
Data communication systems
for ETHERNET technology

SILVYN®
Protective cable conduit systems
and cable carrier systems

HITRONIC®
Optical transmission systems

FLEXIMARK®
Marking systems

Note: A detailed article list is available online or from your contact person.

LAPP