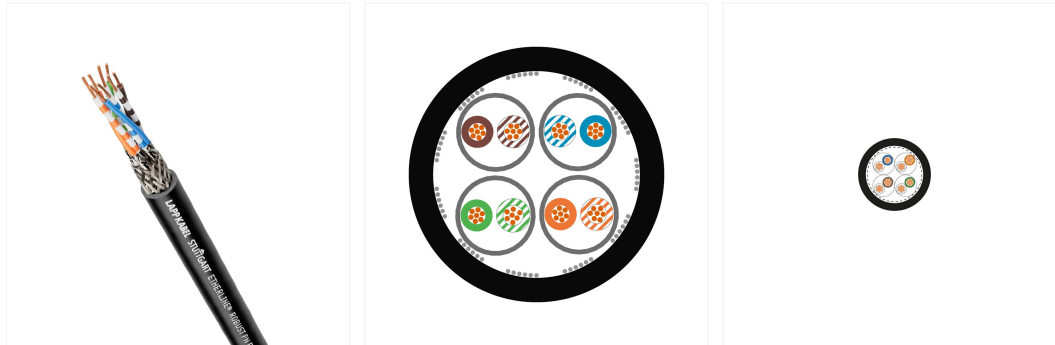


ETHERLINE® ROBUST FR Cat.7 FLEX

Article No.: 2170456

Ethernet cable; Flexible; ETHERNET/IP, EtherCAT; Cat.7; S/FTP; TPE; black



Details

Benefits

- Particularly flame retardant data cable for demanding environments.
- Excellent resistance to a wide range of chemical substances (e.g. ammonia compounds, biogases), as well as plant, animal or synthetic fats and oils (e.g. bio-oils and ester-based hydraulic oils).
- Particularly suitable in conjunction with water-soluble cleaning agents and coolants.
- Resistant to hot water and steam when subjected to frequent steam jet cleaning.
- Tested resistance to ECOLAB® disinfectants and cleaning agents.
- Ideal protection against electromagnetic interference thanks to double shielding made of aluminium-laminated foil and copper stranded shielding with high degree of coverage (SF/UTP).
- For the transmission of analogue and digital signals in the frequency range up to 100 MHz (Cat. 5e) or up to 600 MHz (Cat. 7).

Application

- Can be used universally on machine interfaces for many applications in data and signal transmission.
- Typical areas of application are washing bays, sewage treatment plants, composting plants and applications in the food industry.
- “PN” variants are suitable for flexible use in the PROFINET network (type B).

- The “FLEX” variant with reduced conductor cross-section is suitable for applications with limited space.
- Also suitable for EtherCAT and EtherNet/IP applications.
- For structured building cabling according to EN 50173 and ISO/IEC 11801.
- Suitable for applications with UV-C radiation (according to LAPP's internal test method).
- Suitable for outdoor use.

Notes

Photographs and graphics are not to scale and do not represent detailed images of the respective products.

If applicable, the prices are solid metal prices without surcharges and VAT. Sales only to business customers.

Unless specified otherwise, the product values shown are rated values at room temperature. You can receive further values, such as tolerances, upon request if they are available and have been released for publication.

The absence of PWIS raw materials does not protect against the potential risk of contamination with substances that interfere with the paint wetting during subsequent handling of the product(s) during transport, storage or further processing after delivery.

PROFINET® is a registered trademark of PNO (PROFIBUS user organisation).

Remarks

Technical Data

General information

Brand	ETHERLINE®
Product type	Ethernet cable
Weight	40 kg/km
Copper index	27 kg/km
valid Fieldbus or Ethernet System	ETHERNET/IP EtherCAT
Industry segment	Intralogistics

Electrical parameters

Nominal voltage	48 V AC rms according to IEC
Rated voltage core to core	50 V AC rms according to IEC

Maximum operating voltage (not for power transmission)	125 V
test voltage conductor/conductor	1 kV
Test voltage core/screening	1 kV
Supports Power over Ethernet	IEEE 802.3af (PoE) IEEE 802.3at (PoE+) IEEE 802.3bt (4PPoE)
Loop resistance at 20°C	290 Ω/km
Nominal surge impedance	100 Ω
Possible data transmission rates	10000 Mbit/s
Signal propagation speed (nom.)	0.76 c

Product design

Conductor count/size	4x2x26/7AWG
Conductor cross-section (mm ²)	0.14 mm ²
Nominal cross section conductor (AWG)	26 AWG
Leading conductor cross-section	AWG
Number of wires	7
Conductor design	7-wire
Including protective conductor	No
Number of cores	8
Number of pairs	4
Pair screening type	Aluminium-laminated plastic foil
Stranding type	Twisted-pair
Shielded	Yes
Type of overall screen	Tin-plated copper braiding
Abbreviation shielding	S/FTP
optical degree of coverage overall screen	85 %
With armouring	No
With rodent protection	No
Nominal core diameter	1.05 mm
Min. outer diameter	5.9 mm
Nominal outer diameter	6.2 mm
Max. outer diameter	6.5 mm

Shape of cable	Round
Core insulation base material	Polyethylene foam
Core insulation base material, shortname	Foam-Skin PE
Base material of outer sheath	Thermoplastic elastomers
Base material of outer sheath, shortname	TPE
Cable sheath colour	black
Cable insulation RAL colour	RAL 9005
Core identification	Colours

Product features

Application area	Flexible
For continuous flexing	No
For torsional load	No
Windable	No
Minimum bending radius, stationary	8 x outer diameter
Minimum bending radius in mm, fixed installation	52 mm
Minimum bending radius, occasionally moved	10 x outer diameter
Minimum bending radius in mm, occasionally flexing	65 mm
max. conductor temperature, fixed installation	-50 °C to 80 °C
max. conductor temperature, occasionally moved	-40 °C to 80 °C
Installation temperature min.	-40 °C
Installation temperature max.	80 °C
Flame-retardant	Yes
Flame retardance according to	IEC 60332-1-2
UV-resistant	Yes
UV-resistant according to	VDE 0276-605
UV-C resistant	Yes
Ozone resistant	Yes
Ozone-resistant according to	EN 50396, method B
Halogenfree	No

Oil-resistant	No
PWIS-free	Yes
PWIS-free according to	VDMA 24364-B2-L
Ethernet cable category	Cat.7
Fast Connect (FC) cable	No

Certifications and standards

CE marked	Yes
EAC-certified	Yes
EAC certification number	EAЭC N RU Д-DE.АЮ64.В.00130/20
UL recognised	No
UL listed	No
cUR recognized	No
cUL listed	No
CSA certified	No
VDE certified	No
Tested for fire protection for railway vehicles	No
Ecolab certified	Yes

ETHERLINE® ROBUST FR

Article No.	Name	Conductor count/size	Ethernet cable category	Conductor cross-section (mm ²)	Nominal outer diameter	Copper index	Weight
2170454	ETHERLINE® ROBUST PN FR Cat.5	1x4x22AWG	Cat.5e	0.34 mm ²	6.5 mm		55 kg/km
2170455	ETHERLINE® ROBUST PN FR Cat.7	4x2x23/7AWG	Cat.7	0.25 mm ²	8.7 mm		73 kg/km
2170456	ETHERLINE® ROBUST FR Cat.7 FLEX	4x2x26/7AWG	Cat.7	0.14 mm ²	6.2 mm		40 kg/km

V1.1