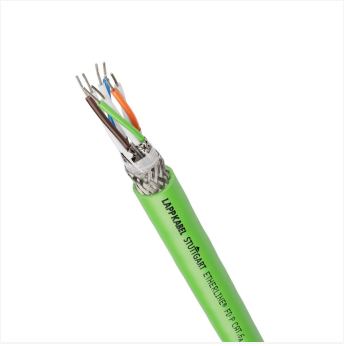
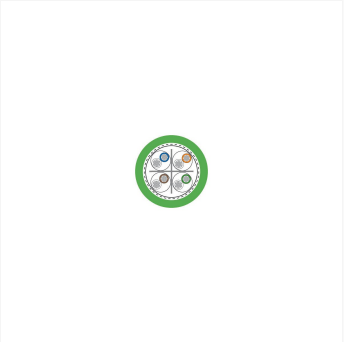
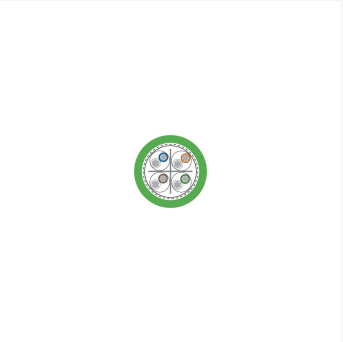
ETHERLINE® FD P CAT.6A 4X2X24/7AWG

Article No.: 2170484

Ethernet cable; Cable chain, Flexible; ETHERNET/IP, PROFINET, Ethernet; PROFINET® application: Type C; Cat.6A; SF/UTP; PUR; Halogen-free; green


Details

Benefits

- Fast information exchange through Ethernet technology.
- Cat. 6A performance up to 10 Gbit/s.
- For transmission of analogue and digital signals in the frequency range up to 500 MHz.
- Power over Ethernet-capable cable for simultaneous power and data supply of smaller network components with low energy requirements (e.g. IP cameras, wireless access points).
- Available with robust PVC or abrasion-resistant PUR outer sheath.
- Variant “P” with PUR outer sheath is halogen-free to comply with special fire protection requirements.

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- Ideal protection against electromagnetic interference due to aluminium-laminated pair shielding and copper stranded shielding as overall shielding (S /FTP).
- Successfully tested for over 2.5 million bending cycles in cable chains.
- UL/CSA certification according to technical data enables the product to be used in the North American market.

Application

- For highly flexible, constantly moving use in moving machine parts and in cable chains in the PROFINET network (type C).
- Also suitable for EtherCAT and EtherNet/IP applications.
- Suitable for all LAN networks and Ethernet applications up to 10GBase-T.
- Can be used in dry and damp environments.
- Variant “P” with PUR outer sheath is suitable for outdoor use.

Notes

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.

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

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.

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

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

Remarks

Technical Data

General information

Brand	ETHERLINE®
Product type	Ethernet cable
Weight	90 kg/km
Copper index	44 kg/km

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valid fieldbus or Ethernet system	ETHERNET/IP PROFINET Ethernet
Industry segment	Ships & boats
customs code	85444993

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 core/core	0.75 kV
Test voltage core/screening	0.75 kV
Supports Power over Ethernet	IEEE 802.3af (PoE) IEEE 802.3at (PoE+) IEEE 802.3bt (4PPoE)
Segregation class according to EN 50174-2	C
Loop resistance at 20°C	175.2 Ω/km
Nominal surge impedance	100 Ω
Possible data transmission rates	10000 Mbit/s
Signal propagation speed (nom.)	0.72 c

Product design

Conductor number/size	4x2x24/7AWG
Nominal conductor cross-section (metric)	0.22 mm²
Nominal conductor cross-section (AWG)	24 AWG
Leading conductor cross-section	AWG
Number of wires	7
Conductor material	Tin-plated copper
Conductor design	7-wire
Including protective earth	No
Number of cores	8
Number of pairs	4
Pair shielding type	Aluminium-laminated plastic foil

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Stranding type	Twisted-pair
Additional stranding element	Cross separator
Shielded	Yes
Type of overall screening	Aluminium-laminated plastic foil Tin-plated copper braiding
Shielding, short form	SF/UTP
Optical degree of coverage of the stranded screening, overall screen	85 %
With armouring	No
With rodent protection	No
With supporting core	No
Nominal core diameter	1.3 mm
Min. outer diameter	8.4 mm
Nominal outer diameter	8.9 mm
Max. outer diameter	9 mm
Cable shape	Round
Core insulation basic material	Polyethylene foam
Core insulation basic material, short form	Foam-Skin PE
Basic material of outer sheath	Polyurethane
Basic material of outer sheath, short form	PUR
Outer sheath colour	green
Cable sheath RAL colour	RAL 6018
Core identification	Colours
Conductor colour code	PROFINET Colour code 4-pair

Product features

Application area	Cable chain Flexible
PROFINET® application	Type C
For permanent bending	Yes
For torsional load	No
Reelable	No
Minimum bending radius, stationary	8 x outer diameter

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Minimum bending radius in mm, fixed installation	72 mm
Minimum bending radius, dynamic continuously flexing	15 x outer diameter
Minimum bending radius in mm, dynamic continuously flexing	135 mm
Minimum bending radius, occasionally flexing	15 x outer diameter
Minimum bending radius in mm, occasionally flexing	135 mm
Maximum bending cycles	2,500,000
Maximum travel distance	5 m
Temperature, fixed installation	-40 °C to 80 °C max. conductor temperature
Temperature, fixed installation max	80 °C
Temperature, fixed installation min	-40 °C
max. conductor temperature, occasionally moved	-30 °C to 70 °C max. conductor temperature
Temperature, occasionally moved max	70 °C
Temperature, occasionally moved min	-30 °C
Installation temperature min.	-30 °C
Max. assembly temperature	70 °C
Flame-retardant	Yes
Flame retardance according to	UL VW-1 IEC 60332-1-2 CSA FT2
UV-resistant	Yes
Halogen-free	Yes
Halogen-free according to	VDE 0472-815
Oil-resistant	Yes
Oil resistance according to	DIN EN 60811-2-1
PWIS-free	Yes
PWIS-free according to	VDMA 24364-B2-L
Ethernet cable category	Cat.6A
Fast Connect (FC) cable	No

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Certifications and standards	
CE marking	Yes
EAC-certified	Yes
EAC certification number	ЕАЭС N RU Д-DE.АЮ64.B.00130/20
UL recognized	Yes
UL AWM certification	21576 according to UL 758 (e-file number: E63634)
UL listed	Yes
UL certification	UL CMX according to UL 444 (e-file number: E236660)
cUR recognised	Yes
cUL listed	Yes
cUL certification	cUL CMX (75°C) according to CSA C22.2 No. 214 (e-file number: E236660)
CSA certified	No
VDE certified	No
TÜV certified	No
DNV-certified	No
Ecolab certified	No

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ETHERLINE® FD Cat.6A

Article No.	Name	Conductor number/size	Basic material of outer sheath	Nominal outer diameter	Copper index	Weight
2170484	ETHERLINE® FD P CAT.6A 4X2X24/7AWG	4x2x24/7AWG	Polyurethane	8.9 mm	44 kg/km	90 kg/km
2170485	ETHERLINE® FD CAT.6A 4X2X24/7AWG	4x2x24/7AWG	Polyvinylchloride	8.9 mm	44 kg/km	88 kg/km

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