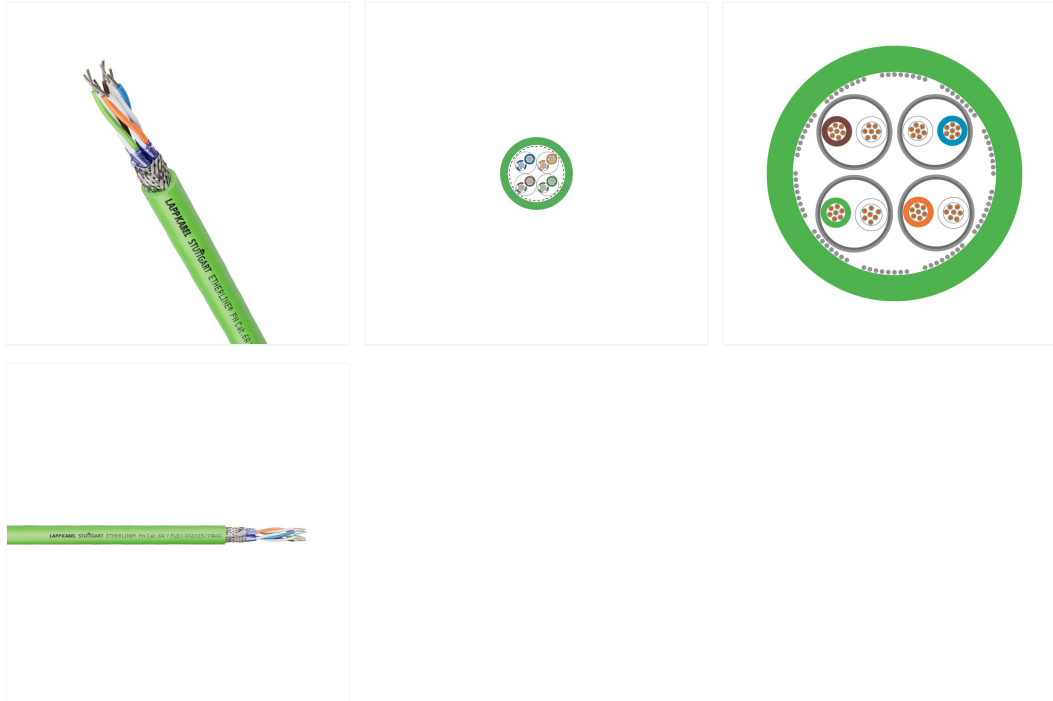


**ETHERLINE® PN FLEX Cat.6A FRNC 4x2x23/7**
**Article No.:** 2170931

Ethernet cable; Flexible; ETHERNET/IP, PROFINET, Ethernet; PROFINET® application: Type B; Cat.6A; S/FTP; Halogenfree; green



## Details

### Benefits

- Fast information exchange through Ethernet technology.
- Cat. 6A performance up to 10 Gbit/s.
- For transmission of analog 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 as robust PVC variant with proven resistance to ECOLAB® disinfectants and cleaning agents.
- Available as a flame retardant, halogen free FRNC cable, to meet special fire protection requirements in public areas.

- 
- Ideal protection against electromagnetic interference due to pair shielding with aluminum compound foil and copper shielding braiding as overall shielding (S/FTP).
  - UL certification according to technical data enables the product to be used on the North American market.

**Application**

- For flexible use in the PROFINET network (type B), due to stranded conductor design.
- Also suitable for EtherCAT and EtherNET/IP applications.
- Suitable for all LAN networks and Ethernet applications up to 10GBase-T.
- For fixed installation and occasional flexing.
- Can be used in dry, damp or wet environments.
- Suitable for many applications, depending on the jacket material.

**Notes**

Unless specified otherwise, the product values shown are rated values at room temperature. You can receive additional 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 additional charges and VAT. Sales only to business customers.

**Remarks**

## Technical Data

**General information**

Brand	ETHERLINE®
Product type	Ethernet cable
Copper index	322.5 lb/10000 ft

valid Fieldbus or Ethernet System	ETHERNET/IP PROFINET Ethernet
Industry segment	Assembly Machines Automotive Construction Machinery Food & Beverage Healthcare & Pharma Packaging

### Electrical parameters

Nominal voltage	48 V AC rms according to IEC
Rated voltage conductor to conductor	50 V AC rms according to IEC
Maximum operating voltage (not for power transmission)	125 V
Test voltage conductor/conductor	1 kV
Test voltage conductor/shielding	1 kV
Supports Power over Ethernet	IEEE 802.3af (PoE) IEEE 802.3at (PoE+) IEEE 802.3bt (4PPoE)
Loop resistance at 20°C	143.8 Ω/km
Nominal characteristic impedance	100 Ω
Possible data transmission rates	10000 Mbit/s

### Product design

Conductor count/size	4X2X23/7AWG
Nominal cross section conductor (mm <sup>2</sup> )	0.25 mm <sup>2</sup>
Nominal cross section conductor (AWG)	23 AWG
Leading conductor cross-section	AWG
Wire count	7
Conductor material	Tin-plated Copper
Conductor design	7-wire
Including protective ground	No
Number of cores	8
Number of pairs	4

Type of pair shielding	Aluminum-laminated plastic foil
Stranding type	Twisted-pair
Shielded	Yes
Type of overall shielding	Aluminum-laminated plastic foil Tin-plated copper braiding
Abbreviation shielding	S/FTP
Optical degree of coverage of the stranded shielding, overall shield	85 %
With rodent protection	No
Nominal conductor diameter	0.059 in
Min. outer diameter	0.339 in
Nominal outer diameter	0.346 in
Max. outer diameter	0.354 in
Cable form	Round
Core insulation base material	Polyethylene foam
Conductor insulation basic material, short form	Foam-Skin PE
Basic material of outer jacket	Halogen-free compound
Outer jacket color	green
Colour outer sheath RAL code	RAL 6018
Core identification	Colors
Conductor color code	PROFINET Colour code 4-pair

#### Product features

Application area	Flexible
PROFINET® application	Type B
For permanent bending	No
Windable	No
Minimum bending radius, stationary	8 x outer diameter
Minimum bending radius in inch, fixed installation	2.835 in
Minimum bending radius, occasionally moved	15 x outer diameter
Minimum bending radius in mm, occasionally moved	5.315 in

Temperature, fixed installation	-40 °C to 80 °C max. conductor temperature
Temperature, occasionally moved	-20 °C to 60 °C max. conductor temperature
Installation temperature min.	-20 °C
Max. assembly temperature	60 °C
Flame-retardant	Yes
Flame retardance according to	UL VW-1
UV-resistant	Yes
UV-resistant according to	UL sunlight resistant
Halogenfree	Yes
Halogen-free according to	VDE 0472-815
Oil resistant	No
PWIS-free	Yes
PWIS-free according to	VDMA 24364-B2-L
Ethernet cable category	Cat.6A
Fast Connect (FC) cable	No

#### Certifications and standards

CE marking	Yes
EAC certified	Yes
EAC certification number	EAЭC N RU Д-DE.АЮ64.В.00130/20
UL recognized	No
UL listed	Yes
UL certification	UL CM according to UL 444 (e-file number: E236660)
cUR recognized	No
cUL listed	Yes
cUL certification	cUL CM (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	Yes

---

---

**ETHERLINE® PN FLEX Cat.6A**

Article No.	Name	Conductor count/size	Nominal outer diameter	Copper index
2170930	ETHERLINE® PN FLEX Cat.6A Y 4x2x23/7	4X2X23/7AWG	0.346 in	29 lb/10000 ft
2170931	ETHERLINE® PN FLEX Cat.6A FRNC 4x2x23/7	4X2X23/7AWG	0.346 in	322.5 lb/10000 ft

V1.1