

2170931	<b>DATA SHEET</b>	
Valid from: 11.10.2018	<b>ETHERLINE® PN Cat.6A FRNC FLEX 4x2x23/7</b>	

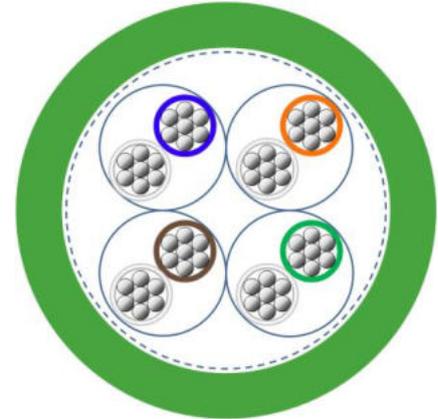
## Description

**ETHERLINE® PN Cat.6A FRNC FLEX** is a halogen free Cat.6<sub>A</sub> high speed data cable for industrial usage. It fulfills the requirements of the PROFINET CABLE SPECIFICATION TYPE B which is intended for flexible use. This cable is an excellent choice for LAN- and ETHERNET-cabling in acc. with IEEE802.3 up to 10GBase-T. The screening ensures high transmission reliability in areas with a high load of electromagnetic capacity. The cable construction is chosen to meet the requirements for following standards:

IEC 61156-5/ISO/IEC 11801 and EN 50173-1

### Certification:

c(UL)us Listing Type CM 75 °C acc. to UL 444



## General characteristics

Conductor	flexible tinned copper wires, conductor 0.27mm <sup>2</sup> or AWG 23/7
Insulation	Foam-Skin Polyolefin
Core identification code	Pair 1: white- blue                      Pair 2: white - orange Pair 3: white- green                    Pair 4: white - brown
Stranding	two cores stranded to pairs and covered with aluminum laminated plastic foil (pair screening)
Screening	four screened pairs stranded together as the cable core Braiding of tinned copper wires Coverage approx. 85%
Outer sheath	FRNC-compound outer Ø: approx. 8.8 mm color: green, similar to RAL 6018

## Mechanical characteristics

Minimum bending radius	flexible use:        15 x cable Ø fixed installation: 8 x cable Ø
Permissible temperature range	flexible use:        -10 °C up to +70 °C fixed installation: -40 °C up to +80 °C
Flame propagation	UL Flame Exposure Test acc. to UL1685

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### Electrical characteristics

DC-Resistance (loop)	max. 143.8 Ω/km
Insulation resistance	min. 5 GΩ x km
Mutual capacitance	nom. 44 nF/km at 1 kHz
Characteristic impedance	nom. 100 Ω acc. to IEC 61156-5
Operating peak voltage	100 V (not for power purposes)
Nominal voltage rating	300 V (not for power purposes)
Test voltage	core/core: 1050 V core/screen: 1050 V

### Transmission properties

Transmission properties acc. to IEC 61156-5 for Category Cat.6A:

f [MHz]	Attenuation [dB/100m]		NEXT [dB]	
	standard	typical	standard	typical
<b>4</b>	3.8	-	66.3	-
<b>10</b>	5.9	-	60.3	-
<b>16</b>	7.5	-	57.2	-
<b>20</b>	8.4	-	55.8	-
<b>31,25</b>	10.5	-	52.9	-
<b>62,5</b>	15	-	48.4	-
<b>100</b>	19.1	-	45.3	-
<b>250</b>	31.1	-	39.3	-
<b>500</b>	45.3	-	34.8	-

\* Extract of normative minimum requirements

### Standard

EU-Directive

Dangerous and forbidden substances acc. to RoHS directive (2011/65/EU) are not allowed to the manufacturing.

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