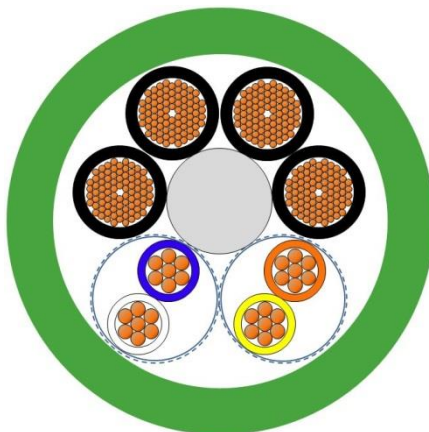


2170887	DATA SHEET	
valid from: 01.01.2019	ETHERLINE® Cat5 FRNC HYBRID	

Application

ETHERLINE® Cat. 5 FRNC HYBRID is a CATEGORY 5 hybrid data cable for simultaneous data transmission and power supply for industrial usage. The cable is designed for fixed installation and occasional movement. The separately screened core pairs ensure high transmission reliability in areas with a high load of electromagnetic capacity. The cable is halogen free and sunlight resistant.

Design



Certification	UL AWM style 21282
Conductor	data cores: fine-stranded bare copper wires, ca. 0.5mmØ control cores: fine-stranded bare copper wires, ca. 1.55 mm Ø, ca. 1.5 mm²
Insulation	data cores: Foam-Skin PE, outer Ø ca. 1.5 mm control cores: halogen free compound, outer Ø ca. 2.4 mm
Core identification code	data cores: pair 1: white/blue; pair 2: yellow/orange control cores: black with numbers
Stranding	data cores: two cores twisted to pair completely cable: two screened pairs and four control cores are twisted together around central filling element
Screen	data cores: plastic laminated aluminum foil, overlapping, on top braid of tinned copper wire, coverage 75 %
Taping	data cores: non-woven tape wrapping completely wrapping: non-woven tape wrapping
Outer sheath	halogen free compound, green similar to RAL 6018, outer Ø ca. 10.3 mm

Electrical properties at 20°C

Conductor resistance	control cores: max. 14 Ω/km
Loop resistance	data cores: 120 Ω/km
Insulation resistance	data cores: min. 500 MΩxkm control cores: min. 20 MΩxkm

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Characteristic impedance	100 Ω $\pm$ 15 Ω (1MHz up to 100 MHz)
Signal transit time	4,4 ns/m
Peak operating voltage	100 V
Test voltage	data cores: core/core: 700 V core/screening: 700 V control cores: core/core: 1000 V core/screening: 1000 V

Electrical transmission properties at 20°C

f [MHz]	Attenuation [dB/100m]	NEXT [dB]	EL FEXT [dB]	Return Loss [dB]
	standard	standard	standard	standard
1		52	64	64
4	4	44,3	52	52
10	6,4	39,8	44	44
16	8,1	37,6	39,9	39,9
31,25	11,4	34,6	34,1	34,1
62,5	16,5	31,5	28,1	28,1
100	21,4	29,4	24	24

Mechanical and thermal properties

Minimum bending radius	moved: 10 x cable $\emptyset$ fixed installation: 5 x cable $\emptyset$
Temperature range	-20° C bis +70° C
Flammability	flame retardant acc. to IEC 60332-1-2
Halogen free	acc. to IEC60754-1
Corrosivity of gases	acc. to IEC60754-2
UV resistance	sunlight resistant acc. to UL 1581 Sec. 1200
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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