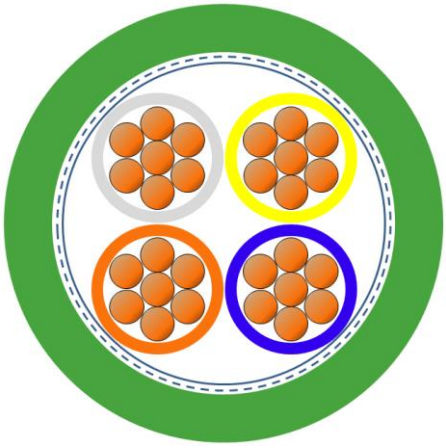
Description

ETHERLINE® Cat.5e 105 plus (bandwidth up to 100 MHz) has the performance for the cabling class “D” acc. to IEEE 802.3. The electrical parameter of the cable with a nominal impedance of 100 Ω and excellent shielding properties are normatively specified acc. to IEC 61156-5. It is suitable for industrial secondary and tertiary cabling acc. to EN 50173-3 resp. ISO/IEC 11801-3.
Other applications are PROFINET® with 2 pairs, EtherCat, EtherNet/IP, Power over Ethernet (IEEE 802.3af) and Power over Ethernet Plus (IEEE 802.3 at).
The product is specially designed for use in applications with increased temperature range requirements in rough industrial environments. It is suitable for fixed installation as well as occasional flexible use according to PROFINET® type B cabling.



General characteristics

Conductor	Stranded bare copper wire, AWG 22/7 approx. 0.34mm²
Insulation	Solid Polyolefine core Ø approx. 1.55 mm
Core identification code	Pair 1: white – blue, Pair 2: yellow – orange,
Stranding	Star quad
Wrapping	Plastic foil
Screening	Aluminum laminated foil braid of tinned copper wires, coverage approx. 85 %
Outer sheath	TPE-compound color: green similar to RAL 6018 outer Ø: approx. 6.3 mm

Mechanical characteristics

Minimum bending radius	fixed installation: 10 x cable Ø flexible use: 15 x cable Ø
Permissible temperature range	fixed installation: -40 ˚C up to +105 ˚C flexible use: -30 ˚C up to +105 ˚C short term: + 120°C
Flame propagation	flame retardant acc. to IEC 60332-1-2

Electrical characteristics

Resistance (loop)	max. 115.0 Ω/km
Insulation resistance	min. 5 GΩ x km
Mutual capacitance	nom. 48 nF/km at 800 Hz
Characteristic impedance	nom. 100 Ω acc. to IEC 61156-5
Operating peak voltage	125 V (not for power purposes)
Test voltage	core/core: 2000 V core/screening: 2000 V

Transmission Properties

Transmission properties acc. to IEC 61156-5:
Extract of normative minimum requirements for CAT.5e

f [MHz]	Attenuation [dB/100m]	NEXT [dB]
	standard	standard
4	4.1	56.3
10	6.5	50.3
16	8.3	47.2
20	9.3	45.8
31,25	11.7	42.9
62,5	17.0	38.4
100	22.0	35.3

Standard

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