



## ETHERLINE® H Flex Cat. 5e

DB2170283

valid from: 08.07.2013

## Application

ETHERLINE® H FLEX CAT. 5e 2 x 2 x 26 AWG is a flexible and halogen free CATEGORY 5e high speed data transmission cable for industrial applications. This data cable meets the requirements of Standards EIA/TIA-568 TSB-36 and ISO/IEC 11801 „Generic Cabling for Customer Premises“ for Class D Links.

The high quality double screening ensures a high security during data transmission in areas with electromagnetic fields. The cable is designed for flexible and fixed installation in dry and damp interiors.

## Design

Conductor	bare stranded copper, ca. $0.14 \text{ mm}^2$ (7 x 0.16 mm; 7/34 AWG), 26/7 AWG
Insulation	Foam-Skin PE, ca. 0.95 mm core Ø
Core identification code	pair 1: white/orange-orange; pair 2: white/green-green
Stranding	cores twisted to pair, pairs twisted to bundle
Wrapping	non-woven tape
Screening	plastic-laminated aluminum foil <u>on top:</u> braid of copper wire, tinned wire, coverage ca. 85 %
Outer sheath	halogen free compound, blue similar to RAL 5021, outer Ø: ca. 5.6 mm

## Electrical properties at 20° C

Resistance (loop)	max. 284 $\Omega$ /km
Insulation resistance	min. 5 G $\Omega$ xkm
Mutual capacitance	nom. 48 nF/km (at 800 Hz)
Characteristic impedance	100 $\Omega$ $\pm$ 15 $\Omega$ (1MHz up to 100 MHz)
Operating peak voltage	125 V (not for power purposes)
Velocity of propagation	ca. 0.77 c
Signal propagation time	<430 ns/100m
Delay difference	<20 ns/100m
Test voltage $U_{\text{eff}}$	core/core: 1000 V core/screening: 500 V



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**Transmission properties**

Transmission properties acc. to IEC 61156-6; abstract of the minimum requirements shown in the table:

f [MHz]	Attenuation [dB/100m]	NEXT [dB]	PS NEXT [dB]	EL FEXT [dB/100m]	PS EL FEXT [dB/100m]	RL
1	2.1	65.3	62.3	-	-	-
4	4.1	56.3	53.3	52.0	49.0	-
10	6.5	50.3	47.3	44.0	41.0	-
16	8.3	47.2	44.2	39.9	36.9	-
31.25	11.7	42.9	39.9	34.1	31.1	23.6
62.5	17.0	38.4	35.4	28.1	25.1	21.5
100	22.0	35.3	32.3	24.0	21.0	20.1

**Mechanical and thermal properties**

Minimum bending radius

moved: 15 x cable Ø  
fixed installation: 6 x cable Ø

Permissible temperature range

moved: -5° C up to +60° C  
fixed installation: -30° C up to +80° C

Flame propagation

flame retardant acc. to IEC 60332-1-2

Halogen free

halogen free acc. to IEC 60754-1, 60754-2

General requirements

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