

ETHERLINE® P Cat. 5e 2x2x24/1 AWG**DB2170281**
valid from: 25.03.2014**Application**

ETHERLINE® P Cat. 5e 2x2x24/1 AWG is a CATEGORY 5e high speed data transmission cable for industrial environments. 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 screen ensures high transmission reliability of data transfer in electromagnetically polluted areas. The PUR sheath is widely resistant against mineral oils and abrasion. The cable is intended for fixed installation in dry and damp interiors and outdoors.

Approvals: UL AWM styles 11117 and 21576 (1000 V, 80 °C) acc. to UL 758
cRU AWM I/II A/B (FT2) acc. to CSA C22.2 No.210-05

Design

Conductor	bare copper wire, \varnothing ca. 0.51 mm (24 AWG)
Insulation	foam-skin polyolefin, core \varnothing ca. 0.95 mm
Core identification code	acc. to IEC 708-1 pair 1: white(-orange)/orange; pair 2: white(-green)/green
Stranding	cores twisted to pairs, pairs stranded together
Wrapping	1 layer plastic-foil
Screening	plastic laminated aluminum foil <u>on top:</u> braid of tinned copper wire, coverage ca. 85 %
Outer sheath	PUR halogen free compound, blue (similar to RAL 5021), outer \varnothing : ca. 5.8 mm

Electrical properties at 20° C

Resistance (loop)	max. 192 Ω /km
Insulation resistance	min. 5 G Ω xkm
Mutual capacitance	nom. 48 nF/km (at 800 Hz)
Characteristic impedance	100 Ω \pm 15 Ω (1MHz up to 100 MHz)
Operating peak voltage	125 V (not for power purposes)
Velocity of propagation	ca. 0.77 c
Signal propagation time	nom. 433 ns/100m
Delay difference	<20 ns/100m
Test voltage (1 minute)	core/core: 1000 V core/screening: 1000 V

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Transmission properties

Transmission properties acc. to IEC 61156-5: 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 7,5 x cable Ø

Permissible temperature range

moved (VDE): -5° C up to +50° C
 fixed installation (VDE): -30° C up to +80° C
 moved (UL): -5° C up to +80° C
 fixed installation (UL): -30° C up to +80° C

Halogen free acc. to VDE 0472-815

Flame retardant acc. to IEC 60332-1-2

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