



DATA SHEET	2170901
ETHERLINE® Y CAT.5e BK 2x2xAWG22/7	Valid from: 03.05.2011

Application

ETHERLINE® Y CAT.5e BK 2x2xAWG22/7 is a **CATEGORY 5e high speed data transmission cable** suitable for application in the industrial environment **according to PROFINET Type B**. The cable has a black UV-resistant PVC outer sheath.

The 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 screening ensures a high security during data transmission in areas with electromagnetic fields.

The cable is designed for stationary applications and occasional movements in dry and wet rooms. It may be used outside regarding the thermal characteristics. At room temperature, the cable is widely resistant against impact of acids, soaps and certain oils. Permanent, operational movements, forced guidance respectively the use of cable reels or rolls or under tensile stress with more than 15 N/mm² conductor cross-section are not allowed.

Design



Conductor	stranded bare copper wire, AWG 22/7	ø 0.75 mm (0.029 in)
Core insulation	Polyolefin	ø 1.5 mm (0.059 in)
Stranding	4 cores twisted to star quad	
Colour Code	pair 1: white + blue RJ45: PIN 3 + 6 M12 PIN 2 + 4 pair 2: yellow + orange RJ45: PIN 1 + 2 M12 PIN 1 + 3	
Wrapping	1 layer plastic foil (overlapped)	
Screening	aluminium laminated foil (metal side outside, overlapped) braid of tinned copper wires coverage 85 ± 5 %	
Sheath	PVC mixture TM12 according to HD21 respectively VDE0281 Part 1	ø 6.2 mm (0.244 in)
	Colour: black Colour of printing: white	



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Electrical data at 20°C

Loop resistance	max.	115	Ω/km
Insulation resistance	min.	5	GΩ*km
Mutual capacitance	800Hz	48	nom. nF/km
Characteristic impedance	1 up to 100 MHz	100±15	Ω
Operating peak voltage (not for purposes of power)		125	V
Surface transfer impedance	10 MHz	50	max. mΩ/m
Test voltage (core/core/screen rms 50 Hz 1min)	core/core	1000	V
	core/screen	500	V

Frequency [MHz]	Attenuation max. [dB/100m]	NEXT min. [dB]
1	2.1	65.3
4	4	56.3
10	6.3	50.3
16	8	47.2
20	9	45.8
31.25	11.4	42.9
62.5	16.5	38.4
100	21.3	35.3

The electrical requirements acc. to DIN EN 50288-2-1

Mechanical and thermal characteristics

Conductor material acc. to DIN EN 13602 Cu-ETP-A...
 Screen material acc. to DIN EN 13602 Cu-ETP-A...-B
 Flame retardant acc. to IEC 60332-1-2

Permissible tensile strength during installation		max. 100	N
Permissible temperature range	single	-40 up to +80	°C
	repeated	-10 up to +70	°C
Min. bending radius allowed	single	10 X ø	
	repeated	15 X ø	

General properties

RoHS standard procedure The cable is compliant to RoHS standard procedure (2002/95/EG)
REACH/WEEE The cable is compliant to prescription (EG) # 1907/2006 (REACH)