
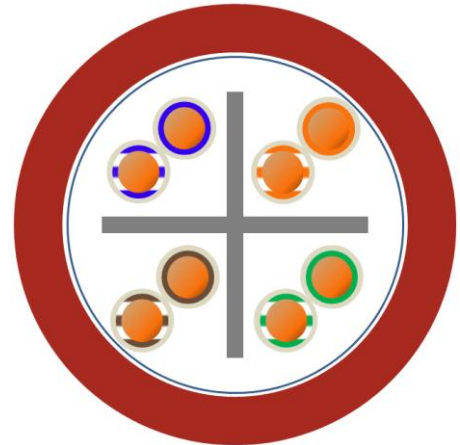


2170905	<b>DATA SHEET</b>	
Valid from: 29.05.2018	<b>ETHERLINE® FIRE Cat.5e PH120</b> <b>4x2x23/1AWG</b>	

## Description

**ETHERLINE® FIRE Cat.5e PH120** is a CATEGORY 5e high speed data transmission cable with isolation integrity suitable for application in the industrial environments. The high quality screen ensures high transmission reliability of data transfer in electromagnetically polluted areas.




## General characteristics

Conductor	Solid bare copper wire, AWG 23/1 or approx. 0.25 mm <sup>2</sup>	
Insulation	solid polyethylene core Ø approx. 0.95 mm	
Core identification code	Pair 1: white/blue – blue	Pair 2: white/orange – orange
Core-wrapping	Pair 3: white/green – green	Pair 4: white/brown – brown
Stranding	special tape (fire barrier)	
Pair-wrapping	2 cores stranded to pair	
Overall stranding	plastic-tape	
Wrapping	4 pairs are separated by a central cross element	
Screening	special tape (fire barrier)	
Outer sheath	plastic laminated metal foil with drain wire (26/1 AWG)	
	Flame retardant special compound color: red, similar to RAL 3000 outer Ø: approx. 8.6 mm	

## Mechanical characteristics

Minimum bending radius	fixed installation: 15 x cable Ø
Permissible temperature range	fixed installation: -20 °C up to +70 °C
Flame propagation	flame retardant acc. to IEC 60332-1-2 insulation integrity class PH 120 acc. to EN50200
Halogen free	acc. to IEC 60754-1
Halogen acid gas contents	acc. to IEC 60754-2

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### Electrical characteristics

DC-Resistance (loop)	max. 134.0 Ω/km
Insulation resistance	min. 2 GΩ x km
Mutual capacitance	nom. 65 nF/km at 1 kHz
Characteristic impedance	nom. 100 Ω acc. to IEC 61156-5
Operating peak voltage	125 V (not for power purposes)
Velocity of propagation	approx. 0.67 c
Signal propagation time	nom. 510 ns/100m
Test voltage	core/core: 700 V core/screen: 700 V

### Transmission properties

Transmission properties acc. to IEC 61156-5 for Category Cat.5e:

f [MHz]	Attenuation [dB/100m]	PS NEXT [dB]	EL FEXT [dB]	Return Loss [dB]
	Standard	Standard	Standard	Standard
<b>1*</b>	2.1	62.3	64.0	20.0
<b>4</b>	4.1	53.3	52.0	23.0
<b>10</b>	6.5	47.3	44.0	25.0
<b>16</b>	8.3	44.2	39.9	25.0
<b>31,25</b>	11.7	39.9	34.1	23.6
<b>62,5</b>	17.0	35.4	28.1	21.5
<b>100</b>	22.0	32.3	24.0	20.1

\* Extract of normative minimum requirements

### Standard

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