


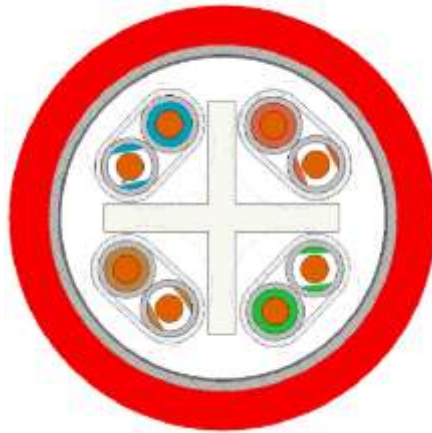
2170913	DATA SHEET	
valid from: 02.12.2019	ETHERLINE® FIRE Cat.6 PH120 4X2XAWG22/1	

Application

ETHERLINE® FIRE Cat.6 PH120 is a halogen free CATEGORY 6 high speed data transmission cable up to 250 MHz with improved fire behavior. With multiple additional fire barriers, the cable also contains the circuit integrity test acc. to EN 50200 resp. EN 50289-4-16 for data communication cables. It also comes to use in emergency circuits for alarm, lighting and communication purposes in areas where there is increased risk of fire and to protect human life.

This cable is suitable for fixed installation.

Design




Certification	Fire resistant and functional integrity for data cables acc. to EN 50200: - low voltage test 125 Vac PH120 classification acc. to EN 50289-4-16 - Data electrical signal test PH120 classification acc. to EN 50289-4-16 Fire resistant and functional integrity for signal cables acc. to IEC 60331-23, low voltage test classification 90 Minutes
Conductor	Solid bare copper 22/1AWG (nom. 0.34 mm ²)
Insulation	Polyolefine with wrapping of special mineral glass tape, Ø RJ45 plug compatible
Core identification code	Paar 1: white/blue + blue; Paar 2: white/orange + orange; Paar 3: white/green + green; Paar 4: white/brown + brown
Stranding	2 cores twisted to pairs and wrapped with special glass fibre tape, 4 pairs twisted together around a central halogen free separation cross
Screen	Copper tape, overlapping Copper wire braid, coverage approx. 65% ± 5 %
Outer sheath	LSZH, flame retardant and not corrosive outer Ø: 10.6 mm ± 0.3 mm Color: Red, similar to RAL 3000

Electrical properties at 20°C

Conductor resistance	max. 5,94 Ω/100 m
Insulation resistance	min. 5 GΩ x km
Mutual capacitance	nom. 58 nF/km at 1 kHz
Characteristic impedance	100 Ω acc. To IEC 61156-5
Velocity of propagation	0.65 c
Peak operating voltage	110 V (not for power purposes)
Test voltage	core/core: 700 V core/screening: 700 V

Creator: KIOS / PDC	Document: DB2170913EN	Page 1 of 2
Released: ALTE / PDC	Version: 1	

2170913	DATA SHEET	
valid from: 02.12.2019	ETHERLINE® FIRE Cat.6 PH120 4X2XAWG22/1	

Electrical transmission properties at 20°C

The minimum transmission properties have to meet the Cat.6 specification of IEC 61156-5.
Requirements before EN 50200 and EN 50289-4-16 requirements after EN 50200

f [MHz]	1*	4	10	16	100	155	250
max. Att. std. [dB/100m]	2.1	3.8	6.0	7.6	19.9	25.3	33
max. Att. before EN50200	1.9	3.6	5.6	7.1	18.7	23.8	30.9
max. Att. after EN50200	2.1	3.7	5.8	7.4	19.7	24.6	32
min. PS NEXT std. [dB]	72.3	63.3	57.3	54.2	42.3	39.4	36.3
min. PS NEXT before EN 50200	80	74	70	66	53	50	42
min. PS NEXT after EN 50200	77	71	67	63	50	47	39
min. PS EL-FEXT std. [dB/100m]	65	53	45	39	25	21.2	17
min. PS EL-FEXT before EN50200	75	70	66	63	45	39	31
min. PS EL-FEXT after EN50200	72	67	63	60	42	36	28
min. RL std. [min dB]	—	23	25	25	20.1	18.8	17.3
min. RL before EN 50200	24	26	26	28	25	23	20
min. RL after EN 50200	>22	>21	>21	>20	>10	>10	>10

Mechanical and thermal properties

Minimum bending radius	fixed installation: 15 x cable Ø
Temperature range	fixed installation: -20° C up to +70° C
Flammability	Flame retardant acc. to IEC 60332-1-2; IEC 60322-3-24
Halogen free	acc. to EN 50267-2-1, IEC 60754-1
Corrosivity of gases	acc. to EN 50267-2-2, IEC 60754-2
Smoke density	acc. to IEC 61034-2
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

Creator: KIOS / PDC	Document: DB2170913EN	Page 2 of 2
Released: ALTE / PDC	Version: 1	