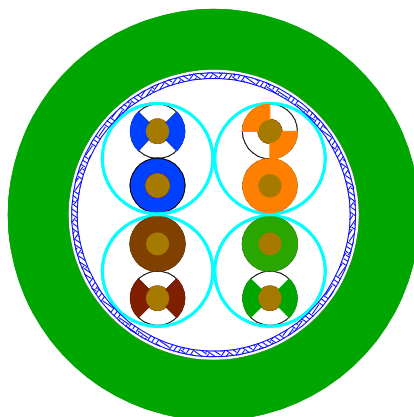
	DATA SHEET	2170465
	ETHERLINE[®] P PiMF * * 4 x 2 x AWG22/1 CAT.6a	Valid from: 02.12.2008

Industrial Ethernet CAT. 6a

* * UL/CSA Approval in preparation



Application:

High speed cable for Industrial Ethernet for fixed installations in dry, wet or damp rooms. Cable meets the transmission characteristics for Category 6a of IEC 61156-5 Ed. 2. These cables have excellent resistance against mechanical stress, oils and greases and are halogenfree.

Design

Solid bare copper wire \varnothing 0,64 (AWG22/1)	\varnothing 0.64 mm (0.025 in)
Insulation of foamed Polyethylene (PE) with skin	\varnothing 1.52 mm (0.059 in) nom.
	\varnothing 1.60 mm (0.063 in) max.

Core

2 cores individually screened with aluminium bonded plastic tape and stranded to form the stranded element

Sequence of colours: pair 1: white / blue (WH/BU)-blue (BU),
pair 2: white / orange (WH/OG)-orange (OG)
pair 3: white / green (WH/GN)-green (GN),
pair 4: white / brown (WH/BN)-brown (BN)

Shield braiding of tinned copper wires 0.13 mm diameter (36 AWG)

Coverage approx. 85%

Non woven tape, longitudinally applied	\varnothing 6.7 mm (0.264 in)
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Jacket


Special compound based on polyurethane (PUR) green (GN) flame retardant, halogen free

Wall thickness approx. 1.0 mm	\varnothing 8.7 \pm 0.3 mm (0.343 \pm 0.012 in)
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LAPP KABEL STUTT GART **ETHERLINE[®] P PiMF CAT. 6a**

4 x 2 x AWG22/1 SHIELDED ROHS ART. 2170465

prepared by: PD-AN Hans Euler	Document: DB2170465EN	Page 1 of 2
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	DATA SHEET	2170465
	ETHERLINE[®] P PiMF * * 4 x 2 x AWG22/1 CAT.6a	Valid from: 02.12.2008

Electrical data at 20°C

Loop resistance	≤ 118,2 Ohm/km
Signal run time	≤ 4.7 ns/m
Insulation resistance	≥ 5 GOhm*km
Capacitance at 800 Hz	approx. 45 pF/m
Velocity of propagation	nom. 79%
Characteristic impedance:	
1 - 100 MHz	100 (±15) Ohm
100 - 500 MHz	100 (± 22) Ohm
Operating voltage (peak)	≤ 100V
Test voltage (wire/wire/screen rms 50Hz 1min)	700V

Frequency (MHz)	4	10	16	20	31.25	62.5	100
NEXT (dB) ≥	71,3	65,3	62,2	60,8	57,9	53,4	50,3
Attenuation max. (dB/100m) (dB/100ft)	3,8 (1,16)	6,0 (1,83)	7,6 (2,32)	8,5 (2,59)	10,7 (3,26)	15,5 (4,72)	19,9 (6,07)

Frequency (MHz)	155	200	250	300	500
NEXT (dB) ≥	47,4	45,8	44,3	43,1	39,8
Attenuation max. (dB/100m) (dB/100ft)	25,3 (7,71)	29,1 (8,87)	33,0 (10,1)	36,6 (11,2)	49,2 (15,0)

Other electrical requirements acc. to IEC 61156-5 Ed. 2

Mechanical and thermal characteristics

- Conductor material acc. to DIN EN 13602 Cu-ETP-R460-P
- Screen material acc. to DIN EN 13602 Cu-ETP-A013-C
- Insulating material acc. to DIN EN 50290-2-23 (VDE 0819), table 2/B
- Jacket material acc. to CENELEC HD22.10, compound type TMPU
- Flame retardant acc. to IEC 60332-1-2
- Oil resistant acc. to DIN EN 60811-2-1
- Stripping of sheath: min. 5 N to max. 70 N at a length of 50 mm

Other characteristics:

RoHS compliant

Permissible temperature range:	-40 °C (-40 °F) up to 80 °C (176 °F)
Min. bending radius allowed:	single 10 x Ø
Weight approx.:	91 kg/km (61 lb/1000 ft)

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