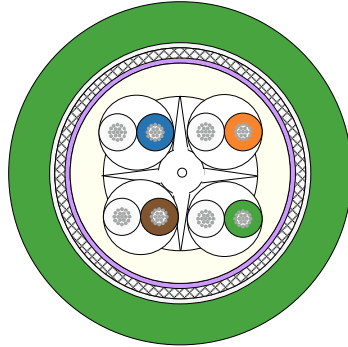


U.I. Lapp GmbH	DATA SHEET/ Datenblatt	 LAPP GROUP
	ETHERLINE® FD P CAT.6	DB 2170488 valid from/ gültig ab: 25.03.2010

Application

ETHERLINE® FD P 4 x 2 x AWG 26/19 is a **halogen free CATEGORY 6** high speed data transmission cable. The high quality double screening ensures a high security during data transmission in areas with electromagnetic fields. The PUR outer sheath is largely robust against mineral oils, fat, abrasion and atmospherical UV radiation. The cable is designed for use in drag chains and permanent moved machine parts in dry and wet rooms.

Design



Conductor	Stranded tinned copper wire 19x0.11	Ø 0,55 mm															
Core Insulation	Polypropylene (PP)	Ø 0,98 mm															
Pair	2 wires twisted to a pair																
Color code:	according to IEC 708-1																
	<table> <tr> <td></td> <td>a-core</td> <td>b-core</td> </tr> <tr> <td>pair 1:</td> <td>white</td> <td>blue</td> </tr> <tr> <td>pair 2:</td> <td>white</td> <td>orange</td> </tr> <tr> <td>pair 3:</td> <td>white</td> <td>green</td> </tr> <tr> <td>pair 4:</td> <td>white</td> <td>brown</td> </tr> </table>		a-core	b-core	pair 1:	white	blue	pair 2:	white	orange	pair 3:	white	green	pair 4:	white	brown	
	a-core	b-core															
pair 1:	white	blue															
pair 2:	white	orange															
pair 3:	white	green															
pair 4:	white	brown															
Filler	Filler as central element, 1 layer: 4 pairs twisted (TP)																
Inner jacket	Thermoplastic Copolymer FRNC. (Flame Retardant Non Corrosive) halogen-free and flame-retardant compound																
Shield	Aluminum laminated foil (overlapped) Shield braiding of tinned copper wires 0,1 mm dia (38 AWG) Coverage about 85 ± 5 % Plastic tape, overlapped	Ø 5,7 mm Ø 6,3 mm															
Jacket	PUR halogen-free and flame-retardant compound Color: green, similar RAL 6018	Ø 7,8 mm															

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Electrical data at 20°C

Loop resistance		max.Ω/100m	280
Insulation resistance		min. GΩ x km	0,5
Capacitance	800 Hz	nom. nF/km	52
Char. impedance	1 up to 100 MHz	Ω	100 ± 15
Operating voltage (not for power purpose)	(peak)	V	100
Rel. Propagation velocity		ca.	0.67%
Signal run time		Max. ns/100m	534
Time delay skew (pair to pair)		max. ns/100 m	30
Transfer impedance	10 MHz	max. mΩ/m	30
Test voltage rms 50Hz 1 Min	core/core	V	700
	core/screen	V	700

Frequency	Attenuation	NEXT	PS NEXT	EL FEXT	PS EL FEXT	RL
[MHz]	max.[dB/100m]	min. [dB]	min. [dB]	min. [dB]	min. [dB]	min. [dB]
1	3,1	66,0	64,0	66,0	64,0	23,1
4	5,8	65,3	63,3	58,0	55,0	24,5
10	9,0	59,3	57,3	50,0	47,	25,0
16	11,4	56,2	54,2	45,9	43,0	25,0
20	12,8	54,8	52,8	44,0	41,0	25,0
31,25	16,1	51,9	49,9	40,1	37,1	23,6
62,5	23,2	47,4	45,4	34,1	31,1	21,5
100	29,9	44,3	42,3	30,0	27,0	20,1
155	38,0	41,4	39,4	26,2	23,2	18,8
200	43,7	39,8	37,8	24,0	21,0	18,0
250	49,5	38,3	36,3	22,0	19,0	17,3

Electrical requirements acc. to **DIN EN 50288-5-2; VDE 0819-5-2**

NEXT	near-end crosstalk attenuation
PS NEXT	Power sum near-end crosstalk attenuation
FEXT	far-end crosstalk attenuation
PS EL FEXT	Power sum far-end crosstalk attenuation - attenuation
RL	Return Loss

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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
Communications cable, Type CMX (UL444).
File Nr. E224252

Maximum pull force		max. N	100
Temperature range	stationary	°C	- 40 to + 80
	flexing	°C	- 30 to + 70
Minimum bending radius	flexing	mm	7,5x Ø
	stationary	mm	4xØ
Flame retardant		acc. to IEC 60332-1-2 acc. to CSA FT1 und NEC VW-1	
Oil resistance		acc. to CSA 22.2, 4Tage/100°C	

General requirements

RoHS directive Dangerous and forbidden substances acc. to RoHS directive (2002/95 EG) are not allowed to the manufacturing.

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