



DATA SHEET	CE217489
ETHERLINE® FD P BK CAT.5 4 x 2 x AWG26/19	Valid from : 02.02.2011

Application

ETHERLINE® FD P BK CAT. 5 4 x 2 x AWG26/19 is a **CATEGORY 5 high speed data transmission cable** suitable for application in the industrial environments. It is made of halogen free materials. This data cable meets the requirements of standards EIA/TIA-568, TSB-36 and ISO/IEC IS 11801 „Generic Cabling for Customer Premises“ for CLASS D Links. The high quality screen ensures high transmission reliability of data transfer in electromagnetically polluted areas. The PUR outer sheath is very resistant against mineral oils and fats, against abrasion and atmospheric UV radiation. The cable is intended for highly flexible applications in power chains or permanently moving machines and linear robots in dry and damp interiors and in harsh industrial environment.

Connector RJ45 connector, TM21 Hirose, beige (# CE6324)
RJ45 connector FM45 (# 21700540)

Design

Conductor wire strands of bare copper, nom. 0,15 mm² (19x 0,10), (26AWG)
 Core insulation Foam- Skin Polyetyhlen, Ø1,0 mm (RJ45 compatible)
 Stranding 2 cores twisted to pairs, all pairs are together in a central synthetic filler
 Color of cores white-blue, blue, white-orange, orange, white-green, green, white-brown, brown
 Inner sheath halogen free TPE, nom. Ø 5,1mm
 Screen braid of tinned copper wires, coverage 85% (± 5%)
 Outer sheath ETHER PUR (halogen free),
 color: black
 outer diameter max. 6,3 mm, nom.

Labeling

LAPP KABEL STUTTGART ETHERLINE® FD P BK CAT. 5 4 x 2 x AWG 26/19 ART. CE217489

Electrical characteristics at 20°C

Loop impedance		max.Ω/km	284
Insulation resistance		min. GΩxkm	5
Mutal capacitance at	800 Hz	nom. nF/km	48
Characteristic impedance	1 up to 100 MHz	Ω	100 ± 15
Nominal Velocity of Propagation		nom.	0,72c
Signal propagation delay		nom. ns/m	≤ 5,2
Run time difference (delay skew)		nsec./m max.	≤0,4
Transfer impedance	1,10,30 MHz	max. mΩ/m	35,200,500
Operating peak voltage (not for purposes of power)		Peak value V	125
Test voltage	Core/core	U _{eff.} V	1000
	Core/screen	U _{eff.} V	700

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Frequency [MHz]	Attenuation [db/100m]	NEXT	PS NEXT [dB]	PS EL FEXT	ACR [dB]	PS ACR [dB]	RL [dB]
0,064	1,0	75	70	-	74,0	-	-
0,256	1,3	75	70	-	73,7	-	-
0,512	1,5	75	70	-	73,5	-	-
0,772	1,9	73	70	-	71,1	-	-
1	2,6	70	67	65	67,4	68,1	26
4	5,4	61	58	52	55,6	64,4	28
10	9,3	55	52	45	45,7	52,6	29
16	11,9	52	49	40	40,1	42,7	29
20	13,5	50	47	38	36,5	37,1	29
31,25	16,9	46	43	34	29,1	33,5	27
62,5	24,6	42	39	28	17,4	26,1	25
100	31,7	39	36	24	7,3	14,4	23
125	36,0	37	34	24	1,0	4,3	23

NEXT Near-end crosstalk
 PS NEXT Power sum near-end crosstalk
 FEXT Far-end crosstalk
 PS EL FEXT Power sum equal level far-end crosstalk
 ACR Attenuation to crosstalk ratio
 RL return loss

Values in () are purely calculative values and only for information

Mechanical and thermal properties

Minimum bending radius	for flexing use	10xØ
Mindestbiegeradius	static	15xØ
Temperature range	for flexing use	- 5°C up to +70°C
	static	- 40°C up to +70°C

General requirements

RoHS directive: This cable is conform to RoHS directive (2002/95/EG)

All materials used and during manufacturing are **free of LBS** (e.g. silicone).

LBS = substances destructive to lacquer- coatings.