



Application

Primary (Campus), Secondary (Riser), Tertiary (Horizontal)
IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T; 10Gbase-T
IEEE 802.5 16 MB; ISDN; FDDI; ATM

Standards

EIA/TIA 568-B.2-10 Draft 5.0
ISO/IEC 11801 2nd ed.
EN 50173-1
IEC 61156-5 (46C/783/CDV)

Flame resistance

LSHF(LSOH): IEC 60332-1; IEC 60754-2; IEC 61034

Construction

Conductor	bare copper wire, ø 0.56 mm (AWG23)
Insulation	Foamskin Polyethylene, ø 1.35 mm
Twisting	2 cores to the pair
Pair screen	High Performance STP: Al-laminated plastic foil, patented wrapping of two pairs each, drain wire AWG26 tinned
Cable lay up	2x2 pairs to the core
Sheath	LSHF (LSOH), grey RAL 7035

Mechanical properties

Bending radius

Temperature range

Installation	8 x Outer diameter
Installed	4 x Outer diameter
during operation	-20°C upto + 60°C
during installation	0°C upto + 50°C

KELine® Cable	U/FTP 4x2x0.56(AWG23) CAT.6 500 MHz LSOH 100Ω Data Cable ISO/IEC 11801	U/FTP
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Electrical properties

at 20°C±5°C

Loop resistance		≤ 176Ω/km
Resistance unbalance		≤ 2%
Insulation resistance	(500 V)	≥ 2000 MΩxkm
Mutual capacitance	At 800 Hz	nom. 43 nF/km
Capacitance unbalance	(pair/ground)	≤ 1500 pF/km
Characteristic impedance	(1-100 MHz)	(100 ± 15) Ω
	(100 – 250) MHz	(100 ± 18) Ω
Nominal velocity of propagation		ca. 79%
Propagation delay	Nominal	≤ 450 ns/100 m
Delay skew	Nominal	≤ 15 ns/100 m
Test voltage	(DC, 1 min) core/core; core/screen	1000 V
Transfer impedance	at 1 MHz	≤ 50 mΩ/m
	at 10 MHz	≤ 100 mΩ/m
	at 30 MHz	≤ 200 mΩ/m
	at 100 MHz	≤ 1000 mΩ/m

Electrical data (nominal)

at 20°C

F (MHZ)	Attenuation (dB/100m)	NEXT (dB)	PS-NEXT (dB)	ACR (dB/100m)	PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	Return loss (dB)
1.0	1.8	100	97	98	95	105	105	-
4.0	3.4	100	97	97	94	105	102	27
10.0	5.4	100	97	95	92	97	94	30
16.0	6.8	100	97	93	90	93	90	30
20.0	7.7	100	97	92	89	91	88	30
31.2	9.6	100	97	90	87	87	84	30
62.5	13.7	100	97	86	83	81	78	30
100.0	17.4	100	97	83	80	77	74	30
125.0	19.5	95	92	75	72	75	72	26
155.5	21.9	94	91	72	69	73	70	26
175.0	23.3	93	90	70	67	72	69	25
200.0	25.0	92	89	67	64	71	68	25
250.0	28.1	90	87	62	59	69	66	24
300.0	30.9	89	86	58	55	67	64	24
400.0	38.3	87	84	48	45	64	61	23
500.0	43.0	86	83	43	40	61	58	22

Technical data

Product code	Designation	Brand name	Colour	Outer diameter mm	Fire load		Weight	Copper content	Tensile force
					MJ/km	kWh/m			
KE500S23/1	U/FTP 4x2x0.56AWG23	KELine	grey	6.5	501	0.139	44	24	100N