



Application

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

Standards

ISO/IEC 11801 2nd ed.; IEC 61156-5
EN 50173-1; EN 50288-6-1
EIA/TIA 568-B.2-1

Flame resistance

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

Construction

Conductor	bare copper wire, AWG23
Insulation	Polyethylene, \varnothing 1.0 mm
Twisting	2 cores to the pair
Cable lay up	4 pairs to the core non metallic cross separator (spline)
Sheath	LSHF (LSOH), grey RAL 7037

Mechanical properties

Minimum bending radius

Temperature range

Installation	8 x D
Installed	4 x D
during operation	-20°C upto + 75°C
during installation	0°C upto + 50°C

Electrical properties
at 20°C±5°C

DC loop resistance	≤ 175 Ω/km
Resistance unbalance	≤ 2%
Insulation resistance (500 V)	≥ 5000 MΩxkm
Capacitance at 800 Hz	nom. 48 nF/km
Capacitance unbalance (pair to ground)	≤ 1500 pF/km
Characteristic impedance	(1 – 100 MHz) (100 ± 15) Ω (100 – 250 MHz) (100 ± 22) Ω
Nominal velocity of propagation	Approx. 69%
Propagation delay	Nominal ≤ 535 ns/100 m
Delay skew	Nominal ≤ 20 ns/100 m
Test voltage (DC, 1 min)	1000 V
Core/Core	

Transmission characteristics acc. to Category 6
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)
	Max.	Nom.	Min.	Nom.	Min.	Nom.	Min.	Nom.	Min.	Nom.	Min.	Nom.	Min.	Nom.	
1	2.1	1.9	74	86	72	84	72.0	84.6	70.0	82.6	68	85	65	83	20
4	3.8	3.5	65	77	63	75	61.2	73.9	59.2	71.9	56	73	53	71	23
10	6.0	5.5	59	71	57	69	53.0	57.0	51.0	56.0	48	65	45	63	25
16	7.6	7.0	56	68	54	56	48.4	61.4	46.4	59.4	44	61	41	59	25
20	8.5	7.8	55	67	53	55	46.5	59.1	44.5	57.1	42	59	39	57	25
31.2	10.7	9.9	52	64	50	62	41.3	54.2	39.3	52.2	38	55	35	53	23.6
62.5	15.5	14.1	47	59	45	57	31.5	45.5	29.5	43.5	32	46	29	44	21.5
100.0	19.9	18.0	44	57	42	55	24.1	38.5	22.1	36.1	28	42	25	40	20.1
125	22.5	21.3	43	55	41	53	20.5	35.2	18.5	33.2	26	40	23	38	19.5
155.5	25.4	22.7	42	54	40	52	16.6	30.9	14.6	28.9	24	38	21	36	18.8
175	27.1	25.3	41	53	39	51	13.9	27.1	11.9	25.1	23	37	20	35	18.4
200	29.2	26.1	40	52	38	50	10.8	25.9	8.8	23.9	22	36	19	34	18.0
250	33.0	29.4	38	51	36	49	5.0	21.1	2.0	19.1	20	34	17	32	17.3
300		32.5		49		47		16.9		14.9		32		30	
400		41.7		45		43		5.7		3.7		30		28	

Technical data

Product code	Designation	Brand name	Colour	Outer diameter mm	Calorific value kWh/m	Weight netto kg/km	Copper content	Tensile force
KE400U23LSOH	U/UTP 4x2xAWG23	KELine	grey	6.2	0.18	39,8	20.5	100N

Printing: KELine Giga+ UTP 4x2xAWG23 Cat.6 LSOH - 3P verified ISO/IEC 11801,
 EN 50173-1:2007, TIA/EIA-568-B2-1 KE400U23LSOH 4P + length marking in m.