



Application

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

Standards

EN 50173-1; EN 50288-4-1
ISO/IEC 11801; IEC 61156-5

Flame resistance

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

Construction

| | |
|--------------|---|
| Conductor | bare copper wire, \varnothing 0.56 mm (AWG23) |
| Insulation | Foamskin Polyethylene, \varnothing 1.35 mm |
| Twisting | 2 cores to the pair |
| Pair screen | Al-laminated plastic foil |
| Cable lay up | 4 pairs (PiMF) to the core |
| Screen | Copper braid, tinned (ca. 40% coverage) |
| Sheath | LSHF (LSOH), grey RAL 7035 |

Mechanical properties

Bending radius

| | |
|---------------------|-------------------|
| Without load | ≥ 40 mm |
| With load | ≥ 80 mm |
| during operation | -20°C upto + 60°C |
| during installation | 0°C upto + 50°C |

Temperature range

KELine[®]
Cable**S/FTP 4x2x0.56(AWG23) CAT.7 900 MHz LSOH**
100Ω Data Cable ISO/IEC 11801**S/FTP****Electrical properties****at 20°C±5°C**

| | | |
|---------------------------------|------------------------------------|----------------|
| Loop resistance | | ≤ 165 Ω/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 |
| | (250 – 600 MHz) | (100 ± 25) Ω |
| Nominal velocity of propagation | | Ca. 79% |
| Propagation delay | | ≤ 427 ns/100 m |
| Delay skew | | ≤ 12 ns/100 m |
| Test voltage | (DC, 1 min) core/core; core/screen | 1000 V |
| Transfer impedance | at 1 MHz | ≤ 20 mΩ/m |
| | at 10 MHz | ≤ 30 mΩ/m |
| | at 30 MHz | ≤ 40 mΩ/m |
| | at 100 MHz | ≤ 200 mΩ/m |

Electrical data (nominal)**acc. to Cat.7 (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 | 102 | - |
| 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 |
| 450.0 | 38.3 | 87 | 84 | 48 | 45 | 64 | 61 | 23 |
| 600.0 | 44.8 | 85 | 82 | 40 | 37 | 61 | 58 | 22 |
| 750.0 | 52.0 | 83 | 80 | 31 | 28 | 59 | 56 | 21 |
| 900.0 | 59.4 | 82 | 79 | 23 | 20 | 58 | 55 | 20 |

Technical data

| Product code | Designation | Brand name | Outer diameter mm | Fire load | | Weight | Copper content | Tensile force |
|--------------|------------------------|------------|-------------------|-----------|-------|--------|----------------|---------------|
| | | | | MJ/km | kWh/m | | | |
| KE900HS23 | S/FTP 4x2x0.56AWG23 | KELine | 7.2 | 590 | 0.170 | 65 | 26 | 110N |