

Twisted Pair Installation Cable - Category 7 Class F - S/FTP - Buried Cable



Abstract

CAT 7 Class F, S/FTP, Twisted Pair Buried Cable, PE outer sheath, inner sheath E_{CA} acc. to EN 50575, 1200 MHz

Application areas

Primary (Campus), Secondary (Riser), Tertiary (Horizontally)

IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T; 10GBase-T

IEEE 802.5: 16 MB; ISDN; FDDI; ATM; PoE/PoE+

Norms

ISO/IEC 11801 2nd Ed.; IEC 61156-5

EN 50173; EN 50288-4-1

FRNC (flame retardancy)

IEC 60332-1; IEC 60754-2; IEC 61034

Inner sheath

Physical Properties

| | |
|--------------------------------------|--|
| Conductor | Bare annealed copper, solid AWG 23/1; diameter 0.56 mm nominal |
| Insulation | SFS-PE (Foam-Skin Polyethylene) |
| Total number of insulated conductors | 8, twisted in 4 pairs |
| Color code | Blue-white, orange-white, green-white, brown-white |
| Individual pair shielding | Aluminum foil, providing 100% coverage |
| Overall shielding | 20% wire braid |
| Outer sheath | PE (Polyethylene); UV resistant |
| Outer sheath diameter | 0.50 mm nominal |
| Outer sheath color | Black (RAL 9005) |
| Inner sheath | E _{CA} acc. to EN 50575 |
| Inner sheath diameter | 0.50 mm nominal |
| Inner sheath color | Purple |
| DoP number | 1000_007 |

Mechanical Properties

| | |
|---|-----------------------------|
| Tensile loading | 150 N max. |
| Dynamic bending radius | 8x AD mm min. |
| Static bending radius | 4x AD mm min. |
| Shipping- and storage temperature range | -20 °C up to +60 °C |
| Operating temperature range | -50 °C up to +60 °C |
| Installations temperature range | 0 °C up to +60 °C |
| Overall diameter | 8.5 mm nominal |
| Flame retardancy inner sheath | IEC 60332-1 (LSZH-1/FRNC-B) |
| Halogen free & smoke-proof inner sheath | IEC 60754-2 & IEC 61034 |
| Fire load | 650 Mj/km |
| Weight | 66,5 kg/km |

Electrical Properties

| | |
|-------------------------------------|--|
| Impedance | 100 ± 15 Ohm @ 4-100 MHz; 100 ± 25 Ohm @ 100-600 MHz |
| Capacitance | 45 pF/m nominal @ 1 KHz |
| Capacitance unbalance (pair-ground) | 1.6 pF/m max. @ 1 KHz |
| Insulation resistance | 5 GOhm x km min. |
| DC resistance | 95 Ohm/km max. (2% max. resistance unbalance) |
| DC loop resistance | 190 Ohm/km max. (2% max. resistance unbalance) |
| Voltage resistance | 72 Vdc max. |
| Coupling attenuation | 70 dB |
| Signal propagation delay | 450 nS/100 m max. |
| Propagation delay | 25 nS/100 m max. |
| Separating class | „d“ acc. to EN 50174-2 |
| NVP | 79% |

Transmission Properties

| FREQ. | ATT | NEXT | PS NEXT | RL | ACR | PS ACR | ELFEXT | PS ELFEXT | EL TCL |
|-------|------|------|---------|------|------|--------|--------|-----------|--------|
| MHz | dB | dB | dB | dB | dB | dB | dB | dB | dB |
| 1 | 2.0 | 78.0 | 75.0 | 20.0 | 76.0 | 73.0 | 78.0 | 75.0 | 35.0 |
| 10 | 5.9 | 78.0 | 75.0 | 25.0 | 72.1 | 69.1 | 74.0 | 71.0 | 15.0 |
| 100 | 19.1 | 72.4 | 69.4 | 20.1 | 53.3 | 50.3 | 54.0 | 51.0 | NS |
| 250 | 31.0 | 66.5 | 63.5 | 17.3 | 35.5 | 32.5 | 46.0 | 43.0 | NS |
| 500 | 45.3 | 61.9 | 58.9 | 17.3 | 16.6 | 13.6 | 40.0 | 37.0 | NS |
| 600 | 50.1 | 60.8 | 57.8 | 17.3 | 10.7 | 7.7 | 38.4 | 35.4 | NS |
| 1000 | 66.9 | 57.4 | 54.4 | 13.1 | NS | NS | 35.3 | 32.3 | NS |
| 1200 | 74.4 | 56.2 | 53.2 | 12.6 | NS | NS | 33.8 | 30.8 | NS |

Product Number Information

| Item code | Length | Packaging | Version |
|------------------|--------|-----------|---------|
| DK-1741-VH-10-OD | 1000 m | Drum | Simplex |
| DK-1741-VH-1-OD | 100 m | Ring | Simplex |