

STP cable 4x2xAWG23, Category 6_A, 550 MHz, LSOH, Euroclass D_{ca} - s2, d1, a1

P/N: KE550HS23/1E-Dca



features

- complies with the Construction Products Regulation (CPR) EU No. 305/2011 and reaction to fire requirements according to the harmonized standards EN 50575: 2014+A1: 2016
- each pair individually shielded with AL/PET foil, halogen-free sheath
- enables transmission of all high-speed protocols including 10GBASE-T
- tested in bandwidth up to 550 MHz

application

- primary (Campus), secondary (Riser), tertiary (Horizontal)
- IEEE 802.3: 10BASE-T; 100BASE-TX; 1000BASE-T; 10GBASE-T
- IEEE 802.5 16 MB; ISDN; FDDI; ATM
- high bandwidth digital applications with low BER

construction

| | |
|----------------------|----------------------------------|
| Conductor | bare copper wire, AWG23 |
| Insulation | foamskin polyethylene, Ø 1,35 mm |
| Twisting | 2 cores to the pair |
| Pair screen | Al-laminated plastic foil |
| Cable lay up | 4 pairs to the core |
| Sheath | LSOH, gray RAL 7035 |
| Outer cable diameter | 7,0 mm |

reaction to fire and flame resistance

| | | |
|------------------|------------------------------|--------------------------|
| Reaction to fire | D _{ca} - s2, d1, a1 | |
| Fire safety | flame retardancy | IEC 60332-1-2 |
| | smoke performance | IEC 61034-1, IEC 61034-2 |
| | halogen acidity | IEC 60754-2 |

mechanical properties

| | | |
|----------------------|--------------|------------------|
| Min. bending radius | installation | 56 mm |
| | operation | 28 mm |
| Temperature range | installation | 0 °C to +50 °C |
| | operation | -20 °C to +60 °C |
| Max. tensile load | 100 N | |
| Cable weight (netto) | 49 kg / km | |

electrical properties at 20°C

| | | |
|---------------------------------------|---------------------------------------|---|
| Loop resistance | - | ≤ 165 Ω/ km |
| Resistance unbalance | - | ≤ 2% |
| Insulation resistance | (500V) | ≥ 5000 MΩ x km |
| Capacity | at 800 Hz | nom. 43 nF/ km |
| Capacity unbalance | (pair/ground) | ≤ 800 pF/ km |
| Characteristic impedance | 1 - 100 MHz | 100 ± 15 Ω |
| | 100 - 250 MHz | 100 ± 20 Ω |
| | 250 - 500 MHz | 100 ± 25 Ω |
| Nominal velocity of propagation (NVP) | - | cca 75% |
| Propagation delay | Nominal | ≤ 500 ns/100 m |
| Delay skew | Nominal | ≤ 20 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 |
| Coupling attenuation | Typ II (≥ 55dB@100MHz) | Alien crosstalk (ANEXT, AFEXT) is proven by design |

transmission properties 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 | 100,0 | 97,0 | 98,0 | 95,0 | 105,0 | 105,0 | - |
| 4,0 | 3,4 | 100,0 | 97,0 | 97,0 | 94,0 | 105,0 | 102,0 | 27,0 |
| 10,0 | 5,4 | 100,0 | 97,0 | 95,0 | 92,0 | 97,0 | 94,0 | 30,0 |
| 16,0 | 6,8 | 100,0 | 97,0 | 93,0 | 90,0 | 93,0 | 90,0 | 30,0 |
| 20,0 | 7,7 | 100,0 | 97,0 | 92,0 | 89,0 | 91,0 | 88,0 | 30,0 |
| 31,2 | 9,6 | 100,0 | 97,0 | 90,0 | 87,0 | 87,0 | 84,0 | 30,0 |
| 62,5 | 13,7 | 100,0 | 97,0 | 86,0 | 83,0 | 81,0 | 78,0 | 30,0 |
| 100,0 | 17,4 | 100,0 | 97,0 | 83,0 | 80,0 | 77,0 | 74,0 | 30,0 |
| 125,0 | 19,5 | 95,0 | 92,0 | 75,0 | 72,0 | 75,0 | 72,0 | 26,0 |
| 155,5 | 21,9 | 94,0 | 91,0 | 72,0 | 69,0 | 73,0 | 70,0 | 26,0 |
| 175,5 | 23,3 | 93,0 | 90,0 | 70,0 | 67,0 | 72,0 | 69,0 | 25,0 |
| 200,0 | 25,0 | 92,0 | 89,0 | 67,0 | 64,0 | 71,0 | 68,0 | 25,0 |
| 250,0 | 28,1 | 90,0 | 87,0 | 62,0 | 59,0 | 69,0 | 66,0 | 24,0 |
| 300,0 | 30,9 | 89,0 | 86,0 | 58,0 | 55,0 | 67,0 | 64,0 | 24,0 |
| 400,0 | 38,3 | 87,0 | 84,0 | 48,0 | 45,0 | 64,0 | 61,0 | 23,0 |
| 500,0 | 43,0 | 86,0 | 83,0 | 43,0 | 40,0 | 61,0 | 58,0 | 22,0 |
| 550,0 | 43,5 | 83,0 | 80,0 | 33,0 | 30,0 | 58,0 | 55,0 | 18,0 |



his product is certified on a component level by FORCE Technology international independent laboratories according to ISO/IEC 11801-1:2017 (Ed. 1.0) / ISO/IEC 11801-2:2017 (Ed. 1.0), IEC 61156-5:2012 (Ed. 2.1), EN 50173-1:2018 / EN 50173-2:2018, EN 50288-10 1:2012, TIA-568.2-D:2018, IEC 60332-1-1:2015 (Ed. 1.1) / IEC 60332-1-2:2015 (Ed. 1.1), IEC 60754-2:2011 (Ed. 2.0),

Mass production of this product is under permanent supervision of third party international laboratories performing FORCE Technology EC VERIFIED quality audit of the manufacturer's production.

The determination of Reaction to Fire Class Performance of this cable has been performed by Product Certification Body notified by European Commission

