# Cable for flexible links UTP (U/UTP), Category 5E, 125 MHz, 



## Features

- cable unshielded, PVC sheath
- enables transmission of all high-speed protocols up to 1000BASE-T
- tested in a bandwidth up to 125 MHz
- enables RJ45 connectors to be mounted directly to a cable


## Application

- patch cables and flexible links
- tertiary (Horizontal)
- IEEE 802.3: 10BASE-T; 100BASE-TX; 1000BASE-T
- IEEE 802.5: 16 MB; ISDN; FTDDI; ATM


## Construction

| Conductor | stranded bare copper wire, $\varnothing 0.48 \mathrm{~mm}, \mathrm{AWG} 26$ |
| :--- | :--- |
| Insulation | polyethylene, $\varnothing 0,95 \mathrm{~mm}$ |
| Twisting | 2 cores to the pair |
| Cable lay up | 4 pairs to the core |
| Sheath | PVC, grey RAL 7035 |
| Outer cable diameter | $4,5 \mathrm{~mm}$ |

## Mechanical properties

| Min. bending radius | installation | 36 mm |
| :--- | :--- | :--- |
| operation | 18 mm |  |
| Temperature range | installation | $0^{\circ} \mathrm{C} \mathrm{to}+50^{\circ} \mathrm{C}$ |
| operation | $-20^{\circ} \mathrm{C} \mathrm{to}+60^{\circ} \mathrm{C}$ |  |
| Max. tensile load | $55 \mathrm{~N} \mathrm{(5kg)}$ |  |
| Cable weight (netto) | $25 \mathrm{~kg} / \mathrm{km}$ |  |

## Electrical properties at $20^{\circ} \mathrm{C}$

| Loop resistance | - | $\leq 260 \Omega / \mathrm{km}$ |
| :--- | :--- | :--- |
| Resistance unbalance | - | $\leq 3 \%$ |
| Insulation resistance | $(500 \mathrm{~V})$ | $\geq 2000 \mathrm{M} \Omega \times \mathrm{km}$ |
| Capacity | at 800 Hz | $\mathrm{nom} .48 \mathrm{nF} / \mathrm{km}$ |
| Capacity unbalance | (pair/ground) | $\leq 1500 \mathrm{pF} / \mathrm{km}$ |
| Characteristic impedance 100 MHz | $(100 \pm 5) \Omega$ |  |
| Nominal velocity of propagation (NVP) | - | $\mathrm{cca} 67 \%$ |
| Propagation delay | Nominal | $\leq 536 \mathrm{~ns} / 100 \mathrm{~m}$ |
| Delay skew | Nominal | $\leq 20 \mathrm{~ns} / 100 \mathrm{~m}$ |
| Test voltage | (DC, 1 min$)$ | 1000 V |
|  | core $/ \mathrm{core}$ | $\leq 50 \mathrm{~m} \Omega / \mathrm{m}$ |
| Transfer impendance | at 1 MHz | $\leq 100 \mathrm{~m} \Omega / \mathrm{m}$ |
| Coupling attenuation | at 10 MHz | $\leq 200 \mathrm{~m} \Omega / \mathrm{m}$ |

Transmission properties at $20^{\circ} \mathrm{C}$

| $\begin{aligned} & f \\ & (\mathrm{MHz}) \end{aligned}$ | Attenuation (dB/100m) | NEXT <br> (dB min) |  | PS-NEXT <br> (dB min) |  | ELFEXT <br> (dB/100m) |  | PS-ELFEXT <br> (dB/100m) |  | Return loss (dB) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1,0 | 0,3 | 65,0 | 71,0 | 62,0 | 68,0 | 64,0 | 68,0 | 61,0 | 65,0 | 23,0 |
| 4,0 | 0,6 | 56,0 | 62,0 | 53,0 | 59,0 | 52,0 | 56,0 | 49,0 | 53,0 | 23,0 |
| 10,0 | 0,9 | 50,0 | 56,0 | 47,0 | 53,0 | 44,0 | 48,0 | 41,0 | 45,0 | 23,0 |
| 16,0 | 1,1 | 47,0 | 53,0 | 44,0 | 50,0 | 40,0 | 44,0 | 37,0 | 41,0 | 23,0 |
| 20,0 | 1,3 | 46,0 | 51,0 | 43,0 | 48,0 | 38,0 | 42,0 | 35,0 | 39,0 | 23,0 |
| 31,2 | 1,6 | 43,0 | 49,0 | 40,0 | 46,0 | 34,0 | 38,0 | 31,0 | 35,0 | 23,0 |
| 62,5 | 2,4 | 38,0 | 44,0 | 35,0 | 41,0 | 28,0 | 32,0 | 25,0 | 29,0 | 23,0 |
| 100,0 | 3,0 | 35,0 | 41,0 | 32,0 | 38,0 | 24,0 | 28,0 | 21,0 | 25,0 | 23,0 |
| 125,0 | 3,3 | - | 40,0 | - | 37,0 | - | 26,0 | - | 23,0 | 23,0 |
| 155,5 | 3,6 | - | 38,0 | - | 35,0 | - | 24,0 | - | 21,0 | - |
| 175,5 | 3,9 | - | 37,0 | - | 34,0 | - | 23,0 | - | 20,0 | - |
| 200,0 | 4,1 | - | 36,0 | - | 33,0 | - | 22,0 | - | 19,0 | - |
| 250,0 | 4,4 | - | 35,0 | - | 32,0 | - | 20,0 | - | 17,0 | - |
| 300,0 | 4,8 | - | 34,0 | - | 31,0 | - | 16,0 | - | 13,0 | - |

