



## 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

EIA/TIA 568-B.2;  
ISO/IEC 11801 2<sup>nd</sup> ed.; IEC 61156-5  
EN 50173; EN 50288-3-1

## Flame resistance

PVC: IEC 60332-1

## Construction

|              |  |
|--------------|--|
| Conductor    | bare copper wire, $\varnothing$ 0.5 mm (AWG24) |
| Insulation   | Polyethylene, $\varnothing$ 0.9 mm             |
| Twisting     | 2 cores to the pair                            |
| Cable lay up | 4 pairs to the core                            |
| Sheath       | 2 x PVC, black                                 |

## Mechanical properties

Minimum bending radius

Temperature range

|                     |                   |
|---------------------|-------------------|
| Installation        | 8 x D             |
| Installed           | 4 x D             |
| during operation    | -20°C upto + 60°C |
| during installation | 0°C upto + 50°C   |

**KELine<sup>®</sup>**  
**Cable****U/UTP 4x2x0.5(AWG24) CAT.5E IND**  
**100Ω Data Cable ISO/IEC 11801 CAT.5e****U/UTP****Electrical properties****at 20°C**

|  |                        |
|--|------------------------|
| DC loop resistance                     | ≤ 190Ω/km              |
| Resistance unbalance                   | ≤ 2%                   |
| Insulation resistance (500 V)          | ≥ 2000 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           |
| Nominal velocity of propagation        | approx. 67%            |
| Propagation delay                      | Nominal ≤ 535 ns/100 m |
| Delay skew                             | Nominal ≤ 20 ns/100 m  |
| Test voltage (DC, 1 min)<br>Core/Core  | 1000 V                 |

**Nominal transmission characteristics****at 20°C**

| F<br>(MHZ) | Attenuation<br>(dB/100m) | NEXT<br>(dB) | PS-NEXT<br>(dB) | ACR<br>(dB/100m) | PS-ACR<br>(dB/100m) | ELFEXT<br>(dB/100m) | PS-ELFEXT<br>(dB/100m) | Return loss<br>(dB) |
|------------|--------------------------|--------------|-----------------|------------------|---------------------|---------------------|------------------------|---------------------|
| 1.0        | 1.9                      | 71           | 68              | 69.1             | 66.1                | 68                  | 65                     | 20                  |
| 4.0        | 3.7                      | 62           | 59              | 58.3             | 55.3                | 56                  | 53                     | 23                  |
| 10.0       | 6.0                      | 56           | 53              | 50.0             | 47.0                | 48                  | 45                     | 25                  |
| 16.0       | 7.6                      | 53           | 50              | 45.4             | 42.4                | 44                  | 41                     | 25                  |
| 20.0       | 8.5                      | 51           | 48              | 42.5             | 39.5                | 42                  | 39                     | 25                  |
| 31.2       | 10.7                     | 49           | 46              | 38.3             | 35.3                | 38                  | 35                     | 24                  |
| 62.5       | 15.7                     | 44           | 41              | 28.3             | 25.3                | 32                  | 29                     | 22                  |
| 100.0      | 19.8                     | 41           | 38              | 21.2             | 18.2                | 28                  | 25                     | 20                  |
| 125.0      | 22.3                     | 40           | 37              | 17.7             | 14.7                | 26                  | 23                     | 19                  |
| 155.5      | 24.2                     | 38           | 35              | 13.8             | 10.8                | 24                  | 21                     |                     |
| 175.0      | 25.7                     | 37           | 34              | 11.3             | 8.3                 | 23                  | 20                     |                     |
| 200.0      | 27.5                     | 36           | 33              | 8.5              | 5.5                 | 22                  | 19                     |                     |
| 250.0      | 29.2                     | 35           | 32              | 5.8              | 2.8                 | 20                  | 17                     |                     |
| 300.0      | 32.0                     | 34           | 31              | 2.0              | -1.0                | 16                  | 13                     |                     |

**Technical data**

| Product code | Designation           | Brand name | Colour | Outer diameter<br>mm | Fire load |       | Weight netto<br>kg/km | Copper content | Tensile force |
|--------------|-----------------------|------------|--------|----------------------|-----------|-------|-----------------------|----------------|---------------|
|              |                       |            |        |                      | MJ/km     | kWh/m |                       |                |               |
| KE300U24IND  | U/UTP<br>4x2x0.5AWG24 | KELine     | black  | 7.5                  | 447       | 0.124 | 47                    | 17.5           | 103N          |