

## UC300 24 Cat.5e

### U/UTP AWG23/1 Installation Cable



## Application

Primary (Campus), Secondary (Riser), Tertiary (Horizontal)  
IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T;  
IEEE 802.5 16 MB; ISDN; TPDDI; ATM  
Power over Ethernet (PoE) / PoE+.

## Standards

EIA/TIA 568 C.2  
ISO/IEC 11801.; IEC 61156-5  
EN 50173; EN 50288-3-1  
IEEE 802.3at

## Flame resistance

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

## Construction

|              |  |
|--------------|--|
| Conductor    | bare copper wire Ø 0.5 mm (AWG24/1)  |
| Insulation   | Polyethylene, Ø 0.9 mm   |
| Twisting     | 2 cores to the pair  |
| Cable lay up | 4 pairs to the core  |
| Sheath       | PVC alt. LSHF (FRNC, LSOH), grey RAL 7035<br>Duplex sheath: two cables parallel, separable |

## Mechanical properties

|                        |                     |                    |
|------------------------|---------------------|--------------------|
| Minimum bending radius | Installation        | 8 x D              |
|                        | Installed           | 4 x D              |
| Temperature range      | during operation    | -20°C up to + 60°C |
|                        | during installation | 0°C up to + 50°C   |

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### Electrical properties

at 20°C

|  |                       |
|--|-----------------------|
| DC loop resistance                     | ≤ 190 Ω /km           |
| Resistance unbalance                   | ≤ 2%                  |
| Insulation resistance (500 V)          | ≥ 2000 MΩ *km         |
| Capacitance at 800 Hz                  | nom. 48 nF/km         |
| Capacitance unbalance (pair to ground) | ≤ 1500 pF/km          |
| Mean characteristic impedance 100 MHz  | 100 ± 5 Ω             |
| Nominal velocity of propagation        | approx. 67 %          |
| Propagation delay                      | Nominal ≤ 535 ns/100m |
| Delay skew                             | Nominal ≤ 20 ns/100m  |
| Test voltage (DC, 1 min)               | 1000 V                |
| Core/Core                              |                       |
| Coupling attenuation                   | ≥ 40 dB               |

### Nominal transmission characteristics

acc. Cat.5e at 20°C

| f     | Attenuation | NEXT | PS-NEXT | ACR       | PS-ACR    | ACRF      | PS-ACRF   | Return loss |
|-------|-------------|------|---------|-----------|-----------|-----------|-----------|-------------|
| (MHz) | (dB/100m)   | (dB) | (dB)    | (dB/100m) | (dB/100m) | (dB/100m) | (dB/100m) | (dB)        |
| 1     | 1,9         | 71   | 68      | 69,1      | 66,1      | 68        | 65        | 20          |
| 4     | 3,7         | 62   | 59      | 58,3      | 55,3      | 56        | 53        | 23          |
| 10    | 6           | 56   | 53      | 50        | 47,0      | 48        | 45        | 25          |
| 16    | 7,6         | 53   | 50      | 45,4      | 42,4      | 44        | 41        | 25          |
| 20    | 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   | 19,8        | 41   | 38      | 21,2      | 18,2      | 28        | 25        | 20          |
| 125   | 22,3        | 40   | 37      | 17,7      | 14,7      | 26        | 23        | 19          |
| 155,5 | 24,2        | 38   | 35      | 13,8      | 10,8      | 24        | 21        |             |
| 175   | 25,7        | 37   | 34      | 11,3      | 8,3       | 23        | 20        |             |
| 200   | 27,5        | 36   | 33      | 8,5       | 5,5       | 22        | 19        |             |
| 250   | 29,2        | 35   | 32      | 5,8       | 2,8       | 20        | 17        |             |
| 300   | 32,0        | 34   | 31      | 2,0       | -1,0      | 16        | 13        |             |

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### Product order data

| Product Reference Code | Designation          | Product name                    | Outer diameter | Euro Class | Fire load |       | Weight | Copper content | Tensile force |
|------------------------|----------------------|---------------------------------|----------------|------------|-----------|-------|--------|----------------|---------------|
|                        |                      |                                 | Mm             |            | MJ/km     | kWh/m | kg/km  |                |               |
| 60011254               | J-2YY<br>4x2x0.5     | UC300 24 Cat.5e U/UTP 4P PVC    | 5.0            | Eca        | 365       | 0.101 | 35     | 17.5           | 100N          |
| 60026275               | J-2YH<br>4x2x0.5     | UC300 24 Cat.5e U/UTP 4P LSHF   |                |            | 336       | 0.093 | 36     |                |               |
| 60017480               | J-2YY<br>2x(4x2x0.5) | UC300 24 Cat.5e U/UTP 2x4P PVC  | 5.0/10.0       | Eca        | 730       | 0.202 | 70     | 35             | 200N          |
| 60017487               | J-2YH<br>2x(4x2x0.5) | UC300 24 Cat.5e U/UTP 2x4P LSHF |                |            | 672       | 0.186 | 72     |                |               |

### Product Code Table

| Product Description                | PG Reference Code | PG Part Number |
|------------------------------------|-------------------|----------------|
| UC300 24 C5e U/UTP 4P PVC          | 60011254          | 60011254       |
| UC300 24 C5e U/UTP 4P PVC 100RW    | 60011254          | 60016130       |
| UC300 24 C5e U/UTP 4P PVC 305BR    | 60011254          | 60011062       |
| UC300 24 C5e U/UTP 4P PVC 500DW    | 60011254          | 60011253       |
| UC300 24 C5e U/UTP 4P PVC 1000DW   | 60011254          | 60011255       |
| UC300 24 C5e U/UTP 4P PVC 500DP    | 60011254          | 60017476       |
| UC300 24 C5e U/UTP 4P PVC 1000DP   | 60011254          | 60017477       |
| UC300 24 C5e U/UTP 4P PVC 2000DP   | 60011254          | 60017478       |
| UC300 24 C5e U/UTP 4P PVC 5000DW   | 60011254          | 60016135       |
| UC300 24 C5E U/UTP LSHF            | 60026275          | 60026275       |
| UC300 24 C5e U/UTP LSHF 305BR      | 60026275          | 60011512       |
| UC300 24 C5e U/UTP LSHF 500DW      | 60026275          | 60011514       |
| UC300 24 C5e U/UTP LSHF 500DP      | 60026275          | 60017464       |
| UC300 24 C5e U/UTP LSHF 1000DW     | 60026275          | 60011513       |
| UC300 24 C5e U/UTP LSHF 1000DP     | 60011515          | 60017465       |
| UC300 24 C5e U/UTP LSHF BU 305BR   | 60011703          | 60011703       |
| UC300 24 C5e U/UTP 2x4P PVC        | 60017480          | 60017480       |
| UC300 24 C5e U/UTP 2x4P PVC 500DP  | 60017480          | 60017481       |
| UC300 24 C5e U/UTP 2x4P PVC 500DW  | 60017480          | 60017482       |
| UC300 24 C5e U/UTP 2x4P LSHF 500DP | 60017487          | 60017487       |

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