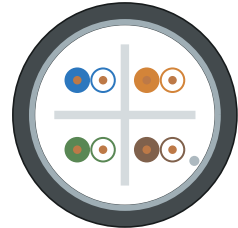


# Cat6 F/UTP

4 pairs / 23 AWG / PVC / 250 MHz



Ø 7.1 mm approx.

SCHEMATIC / NOT TO SCALE

UPCOM series illustration. Jacket colour and conductor size follow the specification below.

**7.10 mm**

APPROX. OUTER DIAMETER

**56 kg/km**

APPROX. CABLE WEIGHT

**19 kg/km**

COPPER WEIGHT

An overall foil screen encloses four twisted pairs arranged around a cross separator. The 250 MHz cable is intended for fixed Cat6 networks using screened connecting hardware.

## CONSTRUCTION

|                        |                                                           |
|------------------------|-----------------------------------------------------------|
| Conductor              | Solid annealed copper, 23 AWG                             |
| Insulation             | Solid polyethylene (PE); EN 50290-2-23                    |
| Core assembly          | 4 twisted pairs around a cross separator                  |
| Pair identification    | Colour coded to ANSI/TIA-568                              |
| Individual pair screen | None                                                      |
| Overall screen         | Aluminium/polyester foil                                  |
| Drain wire             | Tinned copper                                             |
| Outer jacket           | Polyvinyl chloride (PVC); EN 50290-2-22                   |
| Jacket colour          | RAL 2003 Orange / RAL 7035 Grey; other colours on request |

## APPLICATION

10BASE-T, 100BASE-TX and 1000BASE-T. IEEE 802.3af / 802.3at (Types 1 and 2).

Link length, connecting hardware and PoE bundle temperature must be checked for the complete installation.

# Cat6 F/UTP

4 pairs / 23 AWG / PVC

## ELECTRICAL CHARACTERISTICS / 20°C

|                                         |                     |                                  |                        |
|-----------------------------------------|---------------------|----------------------------------|------------------------|
| Conductor resistance at 20°C            | < <b>85 Ω/km</b>    | Delay skew                       | < <b>45 ns/100 m</b>   |
| Resistance unbalance                    | < <b>1%</b>         | Operating voltage                | <b>72 V</b>            |
| Insulation resistance, 500 V DC / 1 min | > <b>5000 MΩ·km</b> | Dielectric test, 1 min           | <b>1000 V</b>          |
| Mutual capacitance                      | <b>50 pF/m</b>      | Transverse conversion loss (TCL) | <b>Minimum level 2</b> |
| Capacitance unbalance                   | <b>1600 pF/km</b>   | Coupling attenuation             | <b>Type II</b>         |
| Characteristic impedance at 100 MHz     | <b>100 ± 5 Ω</b>    | Transfer impedance               | <b>Grade 2</b>         |
| Velocity of propagation                 | <b>67%</b>          | Segregation class                | <b>c</b>               |

## SELECTED TRANSMISSION CHARACTERISTICS

| Frequency<br>MHz | Insertion loss<br>dB / 100 m | NEXT<br>dB | PS NEXT<br>dB | Return loss<br>dB |
|------------------|------------------------------|------------|---------------|-------------------|
| <b>4</b>         | 3.6                          | 78         | 75            | 32                |
| <b>10</b>        | 5.7                          | 75         | 72            | 25                |
| <b>16</b>        | 7.2                          | 70         | 66            | 25                |
| <b>31.25</b>     | 10.5                         | 70         | 64            | 30                |
| <b>62.5</b>      | 14.6                         | 60         | 60            | 30                |
| <b>100</b>       | 18.5                         | 60         | 58            | 30                |
| <b>250</b>       | 30                           | 55         | 52            | 24                |

Cable reference values over the stated operating band. Channel performance depends on the installed link.

## INSTALLATION AND JACKET

|                              |                             |                                                                                                                                                         |
|------------------------------|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Operating temperature</b> | -20°C to +60°C              | PVC-jacketed version for routes specified with a conventional thermoplastic outer sheath. Check the project fire requirement before selecting a jacket. |
| <b>Minimum bend radius</b>   | 8 × D / approx. 56.8 mm     |                                                                                                                                                         |
| <b>D</b>                     | Actual cable outer diameter |                                                                                                                                                         |

Flame propagation reference: IEC/EN 60332-1-2.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-5-1, ANSI/TIA-568.2-D.

CPR classification and the corresponding Declaration of Performance must be confirmed for the ordered construction.