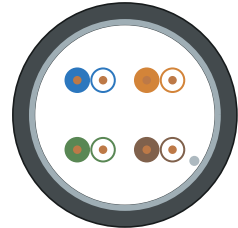


# Cat5e F/UTP

4 pairs / 24 AWG / PE / 100 MHz



Ø 5.3 mm approx.

SCHEMATIC / NOT TO SCALE

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

**5.30 mm**

APPROX. OUTER DIAMETER

**34 kg/km**

APPROX. CABLE WEIGHT

**17.5 kg/km**

COPPER WEIGHT

A foil screen surrounds four unshielded twisted pairs in this 100 MHz fixed installation cable. The screen and drain wire provide a connection path for a screened structured cabling system.

## CONSTRUCTION

|                        |                                          |
|------------------------|------------------------------------------|
| Conductor              | Solid annealed copper, 24 AWG            |
| Insulation             | Solid polyethylene (PE); EN 50290-2-23   |
| Core assembly          | 4 twisted pairs                          |
| Pair identification    | Colour coded to ANSI/TIA-568             |
| Core wrapping          | Polyester tape                           |
| Individual pair screen | None                                     |
| Overall screen         | Aluminium/polyester foil                 |
| Drain wire             | Tinned copper                            |
| Outer jacket           | Polyethylene (PE); EN 50290-2-24         |
| Jacket colour          | RAL 9005 Black; 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.

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4 pairs / 24 AWG / PE

## ELECTRICAL CHARACTERISTICS / 20°C

|                                         |                        |                                  |                         |
|-----------------------------------------|------------------------|----------------------------------|-------------------------|
| Conductor resistance at 20°C            | <b>&lt; 95 Ω/km</b>    | Delay skew                       | <b>&lt; 45 ns/100 m</b> |
| Resistance unbalance                    | <b>&lt; 1%</b>         | Operating voltage                | <b>72 V</b>             |
| Insulation resistance, 500 V DC / 1 min | <b>&gt; 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>         | 3.8                          | 75         | 72            | 23                |
| <b>10</b>        | 6                            | 75         | 72            | 23                |
| <b>16</b>        | 7.8                          | 65         | 62            | 23                |
| <b>31.25</b>     | 10.5                         | 55         | 52            | 22                |
| <b>62.5</b>      | 15.5                         | 45         | 42            | 21                |
| <b>100</b>       | 19                           | 40         | 37            | 21                |

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              | PE-jacketed version for routes specifying a polyethylene outer sheath. UV exposure, water blocking and direct burial requirements must be specified separately. |
| <b>Minimum bend radius</b>   | 8 × D / approx. 42.4 mm     |                                                                                                                                                                 |
| <b>D</b>                     | Actual cable outer diameter |                                                                                                                                                                 |

PE jacket fire performance and installation exposure are confirmed for the specified order.

Reference specifications: IEC 61156-5, ISO/IEC 11801, EN 50173-1, EN 50288-2-1, ANSI/TIA-568.2-D.

State any required fire class explicitly when requesting a PE-jacketed construction.