

**LOCAL AREA NETWORK CABLES****APPLICATIONS**

**FTP kat.5e 4x2x0,14c mm<sup>2</sup>** are patch cables, applied in multimedia computer networks (data, sound and HDTV transmission) including structural wiring of buildings, in industrial and other dedicated networks sensitive to electromagnetic interferences.

The overall shield protects the cables against external electromagnetic interferences and prevents emission of interferences produced in the cables.

The cables are also applied in computer networks of increased binary transfer where simultaneous transmission in both directions in all 4 symmetrical circuits is used (full duplex, Gigabit Ethernet technique).

The cables are suitable for fixed indoor installations.

**CONSTRUCTION**

- flexible, multiwire conductors, stranded of annealed tin-plated copper wires, cross-section 0.14 mm<sup>2</sup> (7x0.16 mm), 26 AWG,
- polyethylene (PE) insulation coloured: white-blue and blue, white-orange and orange, white-green and green, white-brown and brown,
- insulated conductors twisted into pairs,
- pairs laid-up into a cable core,
- collective shield, incorporating aluminium-polyester tape and stranded of an annealed tinned copper drain wire,
- PVC cable sheath, grey RAL 7035, other colours also available.

**AVAILABLE UPON REQUEST**

**FTP-H kat.5e 4x2x0,14c mm<sup>2</sup>** - halogen free material sheathed cables applied in locations where, in case of fire, higher safety level is required. The cables are flame retardant and their smoke emission is low, emitted fumes are non toxic and non corrosive.

# FTP kat.5e 4x2x0,14c mm<sup>2</sup>

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## CHARACTERISTICS

|  |                   |   |  |
|--|-------------------|---|--|
| Characteristic impedance                                   | 100 ± 15 Ω        | Minimum shielding attenuation at the frequency f=30 ÷ 1000 MHz - min. | 50 dB  |
| Mutual capacitance of any pair at 1 kHz, approximate       | 50 nF/km          | Shielding impedance at 10 MHz, maximum                                | 100 mΩ/m   |
| Capacitance unbalance of any pair to ground at 1 kHz, max. | 1600 pF/km        | DC loop resistance at 20°C, maximum                                   | 290 Ω/km   |
| Insulation resistance, minimum                             | 5000 MΩ·km        | Resistance unbalance of any pair of conductors, max.                  | 2 %  |
| Operating voltage  | 150 V             | Operating temperature range during operation                          | from - 20 to + 70°C  |
| Voltage test   | 700 V rms         | Operating temperature range during installation                       | from 0 to + 50°C   |
| Velocity of propagation                                    | 65 %              | Minimum bending radius  | 4 x cable diameter   |
| Return loss, minimum at f=4÷10 MHz                         | 25+5lg(f) dB      | Cable combustibility  | flame retardant  |
| Return loss, minimum at f=10÷20 MHz                        | 25 dB             | Combustibility tests  | PN-EN 60332-1-2, IEC 60332-1-2                               |
| Return loss, minimum at f=20÷125 MHz                       | 25-8.6lg(f/20) dB | Reference standards   | PN-EN 50288-2-2, IEC 61156-6<br>ISO/IEC 11801, TIA/EIA 568 A |

### Attenuation loss, maximum

| f | [MHz]      | 1   | 4   | 10  | 16   | 20   | 31.25 | 62.5 | 100 | 125  |
|---|------------|-----|-----|-----|------|------|-------|------|-----|------|
| A | [dB/100 m] | 3.2 | 6.0 | 9.5 | 12.1 | 13.5 | 17.1  | 24.8 | 32  | 34.0 |

### Near end cross-talk between pairs, minimum

| f      | [MHz] | 1    | 4    | 8    | 10   | 16   | 20   | 25   | 31.25 | 62.5 | 100  | 125  |
|--------|-------|------|------|------|------|------|------|------|-------|------|------|------|
| NEXT   | [dB]  | 65.0 | 56.0 | 50   | 50.3 | 47   | 46   | 44.3 | 43    | 38   | 35   | 34   |
| PSNEXT | [dB]  | 62.3 | 53.3 | 48.8 | 47.3 | 44.3 | 42.8 | 41.3 | 39.9  | 35.4 | 32.3 | 29.5 |
| ACR    | [dB]  | 68.3 | 57.2 | 51.0 | 48.8 | 44.0 | 41.5 | 38.9 | 36.2  | 26.4 | 18.3 | 4.4  |

### Far end cross-talk between pairs, minimum

| f        | [MHz] | 1    | 4    | 8    | 10   | 16   | 20   | 25   | 31.25 | 62.5 | 100  | 155  |
|----------|-------|------|------|------|------|------|------|------|-------|------|------|------|
| ELFEXT   | [dB]  | 63.8 | 51.7 | 45.7 | 43.8 | 39.7 | 37.7 | 35.8 | 33.9  | 27.8 | 23.8 | 19.9 |
| PSELFEXT | [dB]  | 60.8 | 48.7 | 42.7 | 40.8 | 36.7 | 34.7 | 32.8 | 30.9  | 24.8 | 20.8 | 16.9 |

CE = the cable meets requirements of the low voltage directive 2014/35/EU

| Product No. | Cable type | Number of pairs (x 2) x conductor cross-section | Cable outer diameter (appr.) | Copper index | Cable weight (appr.) | Product No. | Cable type   | Number of pairs (x 2) x conductor cross-section | Cable outer diameter (appr.) | Copper index | Cable weight (appr.) |
|-------------|------------|---|------------------------------|--------------|----------------------|-------------|--------------|---|------------------------------|--------------|----------------------|
|             |            | mm <sup>2</sup>                                 | mm                           | kg/km        | kg/km                |             |              | mm <sup>2</sup>                                 | mm                           | kg/km        | kg/km                |
| 0013 010    | FTP kat.5e | 4 x 2 x 0,14c                                   | 5.0                          | 12.1         | 27.5                 | 0503 004    | FTP-H kat.5e | 4 x 2 x 0,14c                                   | 5.3                          | 12.1         | 33.3                 |

TECHNOKABEL S.A. reserves the right to change specifications without prior notice.