# High Reliability Cat 5e Ethernet Cable & Cordsets

**General Construction :**

A 4 pair, 24 AWG, 100 Ohm SFTP round patch cable, designed to the ISO / IEC 11801 Category 5e requirements (cat 5e on 76m). The cable contains 4 twisted pairs, cabled, double shielded with kevlar reinforcement strands, jacketed in black UV resistant Polyurethane HFFR. Designed for fixed or portable applications in harsh environments.

**HFFR : Halogen Free Flame Retardant**

**Jacket Compound Specification :**

Halogen Free Flame Retardant Polyether-based Polyurethane. Glossy finish. Excellent hydrolysis resistance. High microbial resistance. UV resistant. High flexibility.

| PHYSICAL CHARACTERISTICS | |
|---|---|
| **CONDUCTORS** | 24 AWG (0,25 mm²) tinned copper, 7x0.20 mm |
| **INSULATION** | Color coded 568-B, Linear Low Density Polyethylene, Nom. Dia. 0,039" (1mm) |
| **ASSEMBLY** | Pairs cabled with Kevlar strength members and separation tape wrapped |
| **SHIELDS** | Inner : Aluminium mylar 100% coverage<br>Outer : Tinned copper braid 80% coverage |
| **JACKET** | Black, special PUR compound |
| **WEIGHT** | 40 Lbs / mft (59 KG/Km) |
| **OUTSIDE DIAM.** | 0.28" (7.1 mm) nom. |
| **MIN BEND RADIUS (During installation)** | 67.5mm ( 9x O. D.) |
| **MIN BEND RADIUS (During operation)** | 37.5mm ( 5 x O.D.) |
| **MIN FLEXES TO FAILURE** | Passes IEC 61156-6 requirtements |
| **TEMPERATURE** | Plus 105°C, minus 70°C |

| ELECTRICAL CHARACTERISTICS | |
|---|---|
| **DC Resistance** | 96 Ohms/Km @ 20° C |
| **Impedance** | 100 +/- 15 Ohms 1-100 MHz |
| | |
| **Attenuation** | |
| 772 KHz | 2.70 db/100m nom. |
| 1 MHz | 3.15 db/100m nom. |
| 4 MHz | 6.45 db/100m nom. |
| 10 MHz | 9.90 db/100m nom. |
| 16 MHz | 12.3 db/100m nom. |
| 20 MHz | 13.8 db/100m nom. |
| 31.25 MHz | 17.7 db/100m nom. |
| 62.5 MHz | 25.6 db/100m nom. |
| 100 MHz | 33 db/100m nom. |
| | |
| **N.E.X.T. (Near-End Crosstalk Loss)** | |
| 772 KHz | 64 db min. |
| 1 MHz | 62 db min. |
| 4 MHz | 53 db min. |
| 10 MHz | 47 db min. |
| 16 MHz | 44 db min. |
| 20 MHz | 42 db min. |
| 31.25 MHz | 40 db min. |
| 62.5 MHz | 35 db min. |
| 100 MHz | 32 db min. |
| | |
| **Capacitance** | 46pF / m nom. @ 1KHz |
| **LCL** | 43 dB min. @ 64 KHz |
| **Capacitance Unbalance** | 3.4 pF / m max. @ 1KHz (wire to ground) |
| **Insulation Resistance** | 150 M Ohm min. |
| **Voltage Rating** | 230 VMS |
| **Dielectric Strength** | VAC/1 min - 700 V/Min |
| **Propagation Delay (100 MHz)** | 5.2 ns/m max. @ 100 MHz |
| **Delay Skew** | 20 ns/100m max. @ 1-100 MHz |
| **Resistance Unbalance** | 3% max. @ 20° C |
| **Structural Return Loss (100 MHz)** | 23db/100m min. @ 1-20 MHz |
| **Spark test (tested during production)** | 3 KV |
| **Velocity of propagation** | 67% nom. |

| Cordsets with a RJ45 plug overmolded on each end | |
|---|---|
| **Length (m/ft)** | **Part Number** |
| 0,76 m / 2,5 ft | RJF SFTP 5E 0076 |
| 1,52 m / 5 ft | RJF SFTP 5E 0152 |
| 3,05 m / 10 ft | RJF SFTP 5E 0305 |
| 4,57 m / 15 ft | RJF SFTP 5E 0457 |
| 6,24 m / 20,46 ft | RJF SFTP 5E 0624 |
| 7,62 m / 25 ft | RJF SFTP 5E 0762 |
| 9,37 m / 30,72 ft | RJF SFTP 5E 0937 |
| 10,00 m / 32,78 ft | RJF SFTP 5E 1000 |
| 15,25 m / 50 ft | RJF SFTP 5E 1525 |
| 22,87 m / 75 ft | RJF SFTP 5E 2287 |
| 30,5 m / 100 ft | RJF SFTP 5E 3050 |
| 45,75 m / 150 ft | RJF SFTP 5E 4575 |

| Reel of cable (without RJ45 plug on ends) | |
|---|---|
| **Length (m / ft)** | **Part Number** |
| 100 m / ~328 ft | 190-038045-00 |
| 300 m / ~984 ft | 190-038045-01 |

## Applications

- Robotics
- Motion Control
- Railways
- CNC Machines
- Battelfield communication
- Industrial Process Control



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