

# CAT 6 CABLE

High reliability Cat 6 Ethernet cable & cordsets



## General construction

A 4 pairs, 26 AWG, 100 Ohm SFTP round patch cable, designed to the ISO / IEC 11801 Category 6 requirements. The cable contains 4 twisted pairs individually shielded, 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
- Excellent hydrolysis resistance
- High microbial resistance
- Glossy finish
- UV resistant
- High flexibility

## Applications

- Robotics
- Motion control
- Railways
- CNC machines
- Battlefield communication
- Industrial process control

## Electrical characteristics (at 20°C - 68°F)

**DC Resistance** 290 Ohm/Km

**Impedance (100 MHz)** 100 +/- 5 Ohm

Frequency	Attenuation (dB/100m)	N.E.X.T. (Near-End Crosstalk Loss)
1 MHz	3.1 dB	75.3 dB min.
4 MHz	5.8 dB	66.3 dB min.
8 MHz	8.0 dB	61.8 dB min.
10 MHz	9.0 dB	60.3 dB min.
16 MHz	11.4 dB	57.2 dB min.
20 MHz	12.8 dB	55.8 dB min.
25 MHz	14.1 dB	54.3 dB min.
31.25 MHz	16.1 dB	52.8 dB min.
62.5 MHz	23.2 dB	48.4 dB min.
100 MHz	29.9 dB	45.3 dB min.
200 MHz	43.7 dB	40.8 dB min.
250 MHz	49.7 dB	39.3 dB min.

<b>Capacitance (1 kHz)</b>	50nF/km nom.
<b>Capacitance unbalance</b>	1600 pF/km max.
<b>Insulation resistance</b>	5 GOhm/km
<b>Voltage rating (peak)</b>	230 V
<b>Dielectric strength</b>	VAC/1 min - 700 V/Min
<b>Propagation delay</b>	4.6 ns/m
<b>Skew</b>	45 ns/100m
<b>Resistance unbalance</b>	2%
<b>Return loss (250 MHz)</b>	15.6dB
<b>Velocity of propagation</b>	72% nom.

## Reel of cable (without RJ45 plug on ends)

Length (m / ft)	Part number
100 m / ~328 ft	191-031179-00
300 m / ~984 ft	191-031179-01

## Physical characteristics

*Datas for the cable alone only (without RJ45 plug)*

<b>Conductors</b>	26 AWG (0,14 mm <sup>2</sup> ) tinned copper
<b>Insulation</b>	Polyethylene Nom. Dia. 0,039" (1mm)
<b>Assembly</b>	Pairs cabled with Kevlar strength members and separation tape wrapped
<b>Shields</b>	Inner: aluminium mylar 100% coverage Outer: tinned copper braid 80% coverage
<b>Jacket</b>	Black, special PUR compound
<b>Weight</b>	36.9 lbs / mft (55 kg/km)
<b>Outside diam.</b>	0.272" (6.9 mm) nom.
<b>Min bend radius (During installation)</b>	72mm (10x O. D.)
<b>Min bend radius (During operation)</b>	36mm (5 x O.D.)
<b>Min flexes to failure</b>	Passes IEC 61156-6 requirements
<b>Temperature</b>	-40°C (-40°F) / + 85°C (185°F)

## Cordsets with a RJ45 plug overmolded on each end

Length (m/ft)	Part number
0,75 m / 2,46 ft	RJF SFTP 6 0075
1,00 m / 3,28 ft	RJF SFTP 6 0100
1,50 m / 4,92 ft	RJF SFTP 6 0150
2,00 m / 6,56 ft	RJF SFTP 6 0200
2,50 m / 8,20 ft	RJF SFTP 6 0250
3,00 m / 9,84 ft	RJF SFTP 6 0300
3,50 m / 11,48 ft	RJF SFTP 6 0350
4,00 m / 13,12 ft	RJF SFTP 6 0400
4,50 m / 14,76 ft	RJF SFTP 6 0450
5,00 m / 16,40 ft	RJF SFTP 6 0500
6,00 m / 19,68 ft	RJF SFTP 6 0600
7,00 m / 22,96 ft	RJF SFTP 6 0700
8,00 m / 26,24 ft	RJF SFTP 6 0800
9,00 m / 29,52 ft	RJF SFTP 6 0900
10,00 m / 32,80 ft	RJF SFTP 6 1000
15,00 m / 49,20 ft	RJF SFTP 6 1500
20,00 m / 65,60 ft	RJF SFTP 6 2000
25,00 m / 82,00 ft	RJF SFTP 6 2500
30,00 m / 98,40 ft	RJF SFTP 6 3000
35,00 m / 114,80 ft	RJF SFTP 6 3500
40,00 m / 131,20 ft	RJF SFTP 6 4000
45,00 m / 147,60 ft	RJF SFTP 6 4500
50,00 m / 164,00 ft	RJF SFTP 6 5000
60,00 m / 196,80 ft	RJF SFTP 6 6000