

# CAT 5E CABLE

High reliability Cat 5e Ethernet cable & cordsets



- Applications**
- Robotics
  - Motion control
  - Railways
  - CNC machines
  - Battelfield communication
  - Industrial process control

**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
- Excellent hydrolysis resistance
- High microbial resistance
- Glossy finish
- UV resistant
- High flexibility

Datas for  
the cable alone only  
(without RJ45 plug)

**Physical characteristics**

<b>CONDUCTORS</b>	24 AWG (0,25 mm <sup>2</sup> ) tinned copper, 7x0.20 mm
<b>INSULATION</b>	Color coded 568-B, linear low Density 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>	40 lbs / mft (59 kg/km)
<b>OUTSIDE DIAM.</b>	0.28" (7.1 mm) nom.
<b>MIN BEND RADIUS (During installation)</b>	67.5mm (9x O. D.)
<b>MIN BEND RADIUS (During operation)</b>	37.5mm (5 x O.D.)
<b>MIN FLEXES TO FAILURE</b>	Passes IEC 61156-6 requirements
<b>TEMPERATURE</b>	Plus 85°C, minus 40°C

**Cordsets with a RJ45 plug overmolded on each end**

Length (m/ft)	Part number
0,76 m / 2,5 ft	RJF SFTP 5E 0076
1,00 m / 3.28 ft	RJF SFTP 5E 0100
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
5,00 m / 16.4 ft	RJF SFTP 5E 0500
6,00 m / 19.68 ft	RJF SFTP 5E 0600
6,24 m / 20.46 ft	RJF SFTP 5E 0624
7,62 m / 25 ft	RJF SFTP 5E 0762
8,00 m / 26.24 ft	RJF SFTP 5E 0800
10,00 m / 32.78 ft	RJF SFTP 5E 1000
14,00 m / 45.92 ft	RJF SFTP 5E 1400
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
50,00 m / 164 ft	RJF SFTP 5E 5000
61,00 m / 200.08 ft	RJF SFTP 5E 6100

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

<b>DC Resistance</b>	96 Ohms/Km	
<b>Impedance (1-100 MHz)</b>	100 +/- 15 Ohms	
<b>Frequency</b>	<b>Attenuation (dB/100m)</b>	<b>N.E.X.T. (Near-End Crosstalk Loss)</b>
772 KHz	2.70 dB	64 dB min.
1 MHz	3.15 dB	62 dB min.
4 MHz	6.45 dB	53 dB min.
10 MHz	9.90 dB	47 dB min.
16 MHz	12.3 dB	44 dB min.
20 MHz	13.8 dB	42 dB min.
31.25 MHz	17.7 dB	40 dB min.
62.5 MHz	25.6 dB	35 dB min.
100 MHz	33 dB	32 dB min.
<b>Capacitance (1 kHz)</b>	46nF/km nom.	
<b>LCL</b>	43 dB min. @ 64 KHz	
<b>Capacitance unbalance</b>	3.4 pF/m max. @ 1KHz (wire to ground)	
<b>Insulation resistance</b>	150 M Ohm min.	
<b>Voltage rating</b>	230 VMS	
<b>Dielectric strength</b>	VAC/1 min - 700 V/Min	
<b>Propagation delay (100 MHz)</b>	5.2 ns/m max.	
<b>Delay skew</b>	20 ns/100m max. @ 1-100 MHz	
<b>Resistance unbalance</b>	3% max.	
<b>Structural return loss (1-20 MHz)</b>	23db/100m min.	
<b>Spark test (tested during production)</b>	3 KV	
<b>Velocity of propagation</b>	67% nom.	

**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



# 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)

<b>DC Resistance</b>	290 Ohm/Km
<b>Impedance (100 MHz)</b>	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 / 22,96ft	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



# CAT 6A CABLE

High reliability Cat 6A Ethernet cable & cordsets



### General construction

A 4 pairs, 26 AWG, 100 Ohm SFTP round patch cable, designed to the ISO / IEC 11801 Category 6A 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

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

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

<b>DC Resistance</b>	290 Ohm/Km
<b>Impedance (100 MHz)</b>	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	5.7 dB	66.3 dB min.
8 MHz	8.0 dB	61.8 dB min.
10 MHz	8.9 dB	60.3 dB min.
16 MHz	11.2 dB	57.2 dB min.
20 MHz	12.6 dB	55.8 dB min.
25 MHz	14.1 dB	54.3 dB min.
31.25 MHz	15.8 dB	52.8 dB min.
62.5 MHz	22.5 dB	48.4 dB min.
100 MHz	28.7 dB	45.3 dB min.
200 MHz	41.4 dB	40.8 dB min.
250 MHz	46.6 dB	39.3 dB min.
300 MHz	51.4 dB	38.1 dB min.
400 MHz	60.1 dB	36.3 dB min.
500 MHz	67.9 dB	34.8 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 (500 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	191-031190-00
300 m / ~984 ft	191-031190-01

### Physical characteristics

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