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 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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