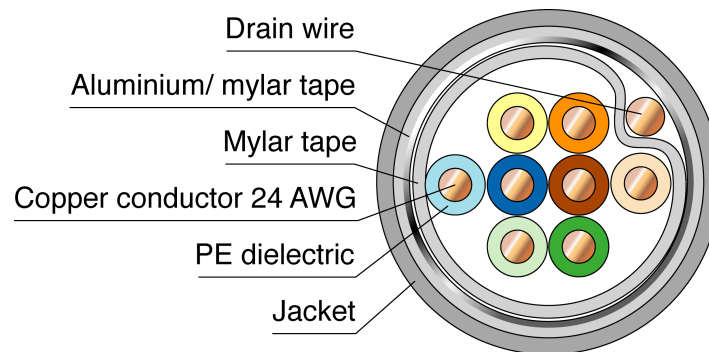


L02002A0038
Solid Cable
Cat.5e FTP

100Ω Data Cable EIA/TIA-568-B.2 Cat.5e



Application	Tertiary (Horizontal) IEEE 802.3: 10Base-T; 100Base-T; Gigabit-Ethernet
Standards	EIA/TIA 568-B.2; IEC 61156-5; ISO/IEC 11801; EN50173
Fire Rating	
	PVC IEC 60332-1; UL 1581, FT2 (horizontal flame test)
	CM-PVC IEC 60332-1, UL 1581 VW-1; UL 444 CM
	LSZH IEC 60332-1; UL 1581, FT2 (horizontal flame test)

Construction

Conductor	Bare copper wire Ø 0.52 mm (24 AWG)
Insulation	Polyethylene, Ø 1.07 mm
Twisting	4 twisted pairs, 2 single conductors paired, Twisted pair color code: 1: white-orange / orange 2: white-blue / blue 3: white-brown / brown 4: white-green / green
Cable lay up	4 pairs with different pitches
Shielding	1. Mylar tape as buffer layer. 2. Mylar tape laminated with aluminum foil as shield, with foil facing inward. 3. Drain wire (24 AWG) placed between Mylar tape and aluminum-foil-laminated Mylar tape.
Outer jacket	PVC or LSZH
Outer diameter	6.2 mm ± 0.2 mm

Mechanical Properties

Bending radius	≥ 20 mm without load ≥ 40 mm with load
Temperature range,	
during operation	-20 °C up to 60 °C
during installation	0 °C up to 50 °C

Electrical Properties (at 20°C ± 5°C)

DC resistance	max. 9.2 Ω / 100 m at 20 °C
Resistance unbalance	max. 2 % at 20 °C
Insulation resistance (500V)	min. 5000 MΩ/Km at 20 °C

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Mutual capacitance	nom. 5.1 nf / 100 m at 1 kHz
Capacitance unbalance (pair to ground)	max. 160 pf / 100 m at 1 kHz
Characteristic impedance (1-100 MHz)	100 Ω ± 15 Ω
Nominal velocity of propagation	67 %
Test voltage (DC, 1 min)	1 kV / 1 min

Transmission characteristics acc. to ISO/IEC 11801 Cat.5e (at 20 °C)

Frequency (MHz)	Impedance (Ω)		Attenuation (dB)		NEXT (dB)		PSNEXT (dB)		ACR (dB)		PSACR (dB)		ELFEXT (dB)	
	Min.	Typ.	Max.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.	Min.	Typ.
1			(2.1)	2.1	65.3	69.3	62.3	66.3	63.3	67.2	60.3	64.2	63.8	67.8
4			4.1	4.1	56.3	60.3	53.3	57.3	52.2	56.2	49.2	53.2	51.7	55.7
8			5.8	5.8	51.8	55.8	48.8	52.8	46.0	50.0	43.0	47.0	45.7	49.7
10			6.5	6.5	50.3	54.3	47.3	51.3	43.8	47.8	40.8	44.8	43.8	47.8
16	100	100	8.3	8.3	47.3	51.3	44.3	48.3	39.0	43.0	36.0	40.0	39.7	43.7
20	± 15	± 10	9.3	9.3	45.8	49.8	42.8	46.8	36.5	40.5	33.5	37.5	37.7	41.7
25			10.4	10.4	44.3	48.3	41.3	45.3	33.9	37.9	30.9	34.9	35.8	39.8
31.25			11.7	11.7	42.9	46.9	39.9	43.9	31.2	35.2	28.2	32.2	33.9	37.9
62.5			17.0	16.0	38.4	42.4	35.4	39.4	21.4	26.4	18.4	23.4	27.8	31.8
100			22.0	21.0	35.3	39.3	32.3	36.3	13.3	18.3	10.3	15.3	23.8	27.8

Frequency (MHz)	PSELFEXT (dB)		Return Loss (dB)		Propagation Delay (ns)		Delay Skew (ns)	
	Min.	Typ.	Min.	Typ.	Max.	Typ.	Max.	Typ.
1	60.8	64.8	20.2	23.0	570.0	554.0		
4	48.7	52.7	23.0	26.0	552.0	536.0		
8	42.7	46.7	24.5	27.5	546.7	530.7		
10	40.8	44.8	25.0	28.0	545.4	529.4		
16	36.7	40.7	25.0	28.0	543.0	527.0	45	30
20	34.7	38.7	25.0	28.0	542.1	526.1		
25	32.8	36.8	24.3	28.0	541.2	525.2		
31.25	30.9	34.9	23.6	26.6	540.4	524.4		
62.5	24.8	28.8	21.5	24.5	538.6	522.6		
100	20.8	24.8	20.1	23.1	537.6	521.6		

Packing

Parts number	Product	Color	Length	Package	Dimensions (cm)
L02002A0038-305	FTP C5E horizontal cable	Light grey	1000 ft (305 m)	Reel carton	33 × 26.5 × 33.5
L02002A0038-500			500 m	Wooden reel	Ø 40 × 24
L02002A0038-1000			1000 m	Wooden reel	Ø 50 × 28