



TELDOR... The Best Connection™

Data Communication Cables

Typical Structures

Cat. 5, 5e, 6, 6_A, 7, 7_A

Indoor

Cable Standards

Data Centers

Outdoor

Teldor Data Communication Cables

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TELDOR CABLES & SYSTEMS Ltd.

Company Profile

TELDOR is a world-class cable manufacturer committed to innovation and excellence. We have continually lived up to that commitment with the help of the best personnel, the latest equipment and future-oriented management. Today, *TELDOR* is recognized as a leading cable manufacturer in almost all the markets where cables are sold and installed. The company was established in 1966, with the intent of manufacturing power and telecommunication cables. Over the years it has diversified to additional fields, always seeking the most competitive and profitable markets.

TELDOR products are sold and distributed in more than 25 countries on all 5 continents, Fifty-five percent (55%) of all sales are exported. *TELDOR* cables can be found in the most prestigious cabling projects all around the world, marked either with the *TELDOR* brand name or with one of the many international cabling companies to whom we provide cable with a private label. *TELDOR* is a certified supplier to many companies and organizations such as Panduit, Hubbell, RIT, Leviton, RW-Data, Israeli Air Force, Israels Department of Defense, ECI Telecom, and more.

TELDOR also anticipates the demands of future markets with progressive research and development. The company continuously monitors and interprets industry trends, and uses state-of-the-art R&D methods to introduce innovative new products that meet the needs of the rapidly changing market.

TELDOR utilizes the most advanced marketing methods, including a state-of-the-art Internet site at www.teldor.com. *TELDOR's* engineers lecture in international seminars and training sessions all over the world. They also represent Israel in international standardization organizations such as ISO/IEC, IEC, and IEEE.

TELDORs quality system is approved to conform to the requirements of ISO-9001:2008. In addition, many of *TELDOR's* products are approved and verified by national and international certification bodies such as UL, ETL and SII .

Engineering

- Product development management (from DRD to FDR)
- Consulting (materials, processing, applications, standards)
- Custom design (technical specs., drawings, modeling, prototype)
- Product verification (test regimes, standards conformance, simulations)
- Senior engineers with expertise in polymers, conductors, strength elements, advanced transmission systems
- Technology forecasting (based on active participation in all major national and international standards organizations)
- Rapid turnover, full NDA's, ISO 9001:2008 certified

Processing

- Drawing, stranding and insulation of conductors
- Precise twinning and cabling (twist, planetary, reverse oscillating)
- Extrusion of polymers (thermoplastics, thermosets, PVC, HFFR, TPU, TPE, PEE and many more)
- Armoring and shielding (wire braid, served wire, Moisture Barrier, corrugated steel, dielectric materials)
- Polymer compounding and granulation
- Precise process control
- Winding, spooling and packaging

Testing

- Fully equipped hi-frequency lab
- OTDR and OLS-PM testing for all major optical fibers and wavelengths
- Fully equipped mechanical testing laboratory
- Fully equipped chemical and materials testing laboratory
- Electric testing laboratory (up to 50 kV)
- Environmental testing (Temperature, Permeability, UV, Flame, Aging)
- Issuing of C.O.Cs and C.O.Ts



Cable Performance Icons

Teldor Cable Catalogues use a system of easily recognizable icons to indicate cable performance. The icons that appear in each cable family chapter indicate characteristics common or available in that particular family. Below is a legend of the icons used throughout this catalogue and their meaning:



UV Sunlight Resistant



Rodent Resistant



Flame Retardant



Water-blocked



Oil / Fuel Resistant



Enhanced Tensile Strength



Enhanced Crush Resistance



Electromagnetically Shielded / Dielectric



Enhanced Flexibility



Armored - Direct Burial



Aerial Applications



Very Cold Environments



Very Hot Environments



Robotic / Chain Applications



Highly Impact Resistant



For Petrochemical Environments

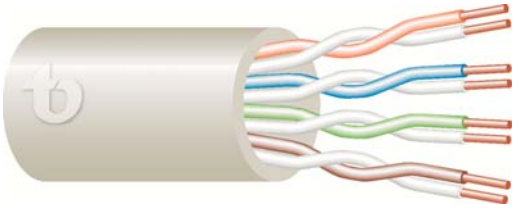
TELDOR DATA COMMUNICATION CABLES



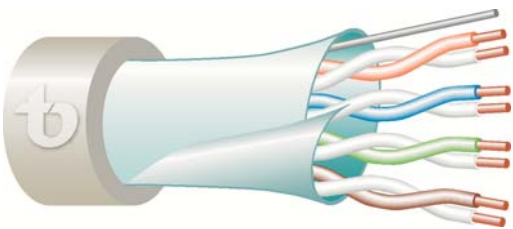
Twisted Pair Copper Solutions

Typical Structure, Shielding Configuration & Application of Teldor Cables

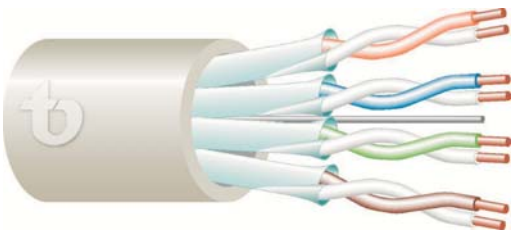
U/UTP



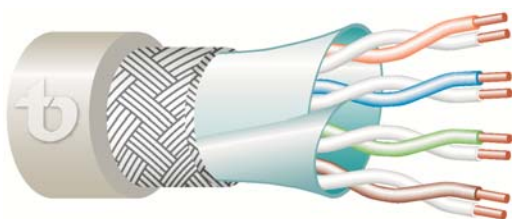
F/UTP



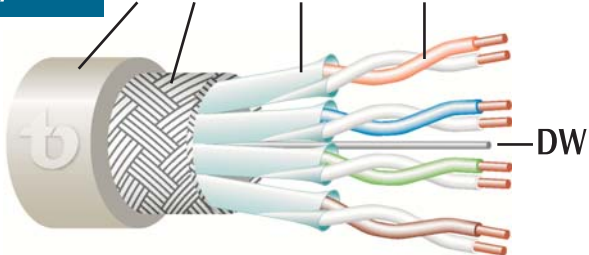
U/FTP



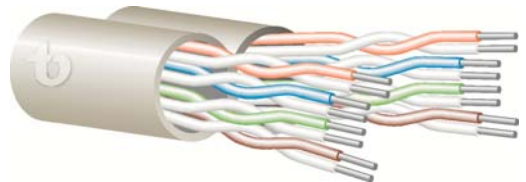
SF/UTP



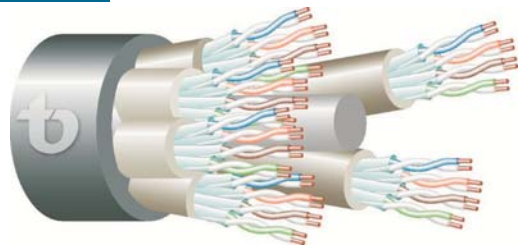
S/FTP



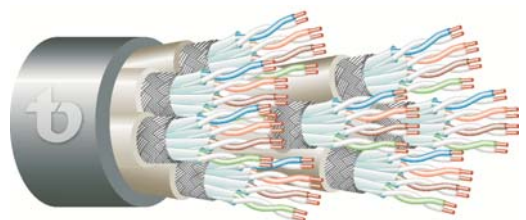
U/UTP



U/FTP



S/FTP



- S Braid
- TP Twisted Pairs
- DW Drain Wire
- F Individual and/or overall Al. foil shield
- J Jacket (FR-LSZH, HFFR, PVC, PU, etc.)

Typical Structure, Shielding Configuration

TELDOR Series P/N	Structure	Product Description	Category	Notes
7562004	U/UTP	HDC 4x2x24 AWG	Cat. 5e	
7564025	U/UTP	MC 25x(4x2x24 AWG)	Cat. 5e	Mulicore/multicable structure for backbone and Data Centers
8372216	F/UTP	MC 16x(2x2x24 AWG)	Cat. 5e	Mulicore/multicable structure for backbone and Data Centers
8375425	F/UTP	MC 25x(4x2x24 AWG)	Cat. 5e	For harsh installations to reduce bit errors
8301204	U/FTP	4x2x23/1 AWG	Cat. 6	For harsh installations to reduce bit errors
83G0204	U/FTP	4x2x23/1 AWG	Cat. 6 _A	Very good RFI/EMI interference attenuation to enable installation in high electrical noise locations
83U0204	U/FTP Ungrounded	4x2x23/1 AWG	Cat. 6 _A	Special design to enable U/UTP connecting hardware without any EMI/RFI or EMC limitations
9827B54	F/STP	4x2x23/1 AWG	Cat. 6 _A	Very good RFI/EMI interference attenuation to enable installation in high electrical noise locations
9827A54	F/FTP	4x2x23/1 AWG	Cat. 7	For harsh installations to reduce bit errors
9928654	S/FTP	4x2x23/1 AWG	Cat. 7	Excellent RFI/EMI interference attenuation to enable installation in high electrical noise locations
99XG504	S/FTP	4x2x23/1 AWG	Cat. 7 _A	
9907554	S/FTP	TeraDor 4x2x22/1 AWG	1200 MHz IEC 61156-7	

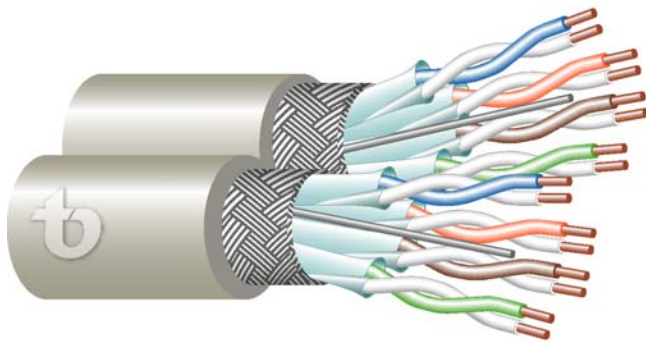
Notes: 1. Compatible work area (patch) cables available for P/N's listed above.

& Application of Teldor Cables

Frequency Bandwidth (MHz)	Application	Suggested Connecting Hardware
➔ 100 (tested to 150)	1 GBase-T	Unshielded Cat. 5e
➔ 100 (tested to 150)	1 GBase-T	Unshielded Cat. 5e
➔ 100 (tested to 150)	1 GBase-T	Unshielded Cat. 5e
➔ 100 (tested to 150)	1 GBase-T	Unshielded Cat. 5e
➔ 250	1 GBase-T	Shielded Cat. 6
➔ 500 (tested to 650)	10 GBase-T	Shielded Cat. 6 _A if available Shielded Cat. 6 may be used due to the very high margins
➔ 500 (tested to 650)	10 GBase-T	Un-shielded Cat. 6 _A if available Un-shielded Cat. 6 may be used due to the very high margins
➔ 500 (tested to 650)	10 GBase-T	Shielded Cat. 6 _A if available Shielded Cat. 6 may be used due to the very high margins
➔ 600 (tested to 900)	10 GBase-T	Shielded Cat. 6 _A if available Shielded Cat. 6 may be used due to the very high margins
➔ 600 (tested to 900)	10 GBase-T / PoEP	Shielded Cat. 7 if available. Shielded Cat. 6 _A if available Shielded Cat. 6 may be used due to the very high margins
➔ 1000 (tested to 1200)	10 GBase-T 40 GBase-T PoEP ready	Shielded Cat. 7 _A if available. Shielded Cat. 7 if available Shielded Cat. 6 _A if available Shielded Cat. 6 may be used due to the very high margins
➔ 1200 (tested to 1500)	10 GBase-T 40 GBase-T ready / PoEP Multiservice Transmission	Shielded Cat. 7 _A if available. Shielded Cat. 7 if available Shielded Cat. 6 _A if available Shielded Cat. 6 may be used due to the very high margins

2. All cables are available with a wide range of jacket materials.

CATEGORY 5e 100 Ohm Cables



The BASIC Solution

CATEGORY 5e, 100 Ohm

100 MHz DATA TRANSMISSION CABLES

THE BASIC-Solution is a complete line of high-performance 100 Ohm cables, conforming to Category 5e in accordance with TIA/EIA-568-C, ISO/IEC 11801, IEC 61156-5, IEC 61156-6 and CENELEC prEN 50288, supporting CLASS D (new) Links.

The product range includes Horizontal, Working area (Patch) and Backbone Cables, available in a wide range of constructions, including U/UTP, F/UTP, SF/UTP and S/FTP (Basic-Solution cables for Outdoor use are given in Teldor's Outdoor Solution brochure).

TELDOR Cables & Systems guarantees that when BASIC-Solution cables are properly installed and terminated with adequate connecting hardware, the basic link supports the application of IEEE 802.3ab 1000Base-T (better known as "Gigabit Ethernet"). The attenuation of the BASIC-Solution cables is low enough to allow the use of patch cords having up to 50% higher attenuation than horizontal cables, as defined in IEC 61156-5 and IEC-61156-6.

BASIC-Solution cables are constantly tested and verified to maintain all their transmission parameters after installation and throughout the warranty period. They are officially verified by internationally recognized independent third-party testing houses.

All cables are available with PVC, PU (Polyurethane), PE (Polyethylene) and FR-LSZH (Flame Retardant Low Smoke Zero Halogen) jackets, in single or "Siamese twin" (FIG-8), multi-cable, or multi-core constructions.

Testing is conducted up to 160 MHz to ensure the transmission requirements of the more advanced digital encoding schemes.

CATEGORY 5e 100 Ohm Cables

Cat. 5e Work Area Cables*

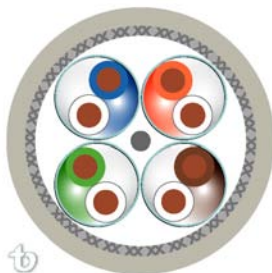
Freq. MHz	Attenuation 20% (24AWG & lower) dB/100m 20°C		Attenuation 50% (26AWG & higher) dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e
1	2.4	2.5	3.1	3.2	68.3	62.3	71.3	65.3	22.0	20.0	64.0	61.0	2.4	2.5
4	4.8	4.9	5.8	6.0	59.3	53.3	62.3	56.3	25.0	23.0	52.0	49.0	4.8	4.9
10	7.6	7.8	9.2	9.5	53.3	47.3	56.3	50.3	28.0	25.0	44.0	41.0	7.6	7.8
20	10.8	11.1	13.1	13.5	48.8	42.8	51.8	45.8	28.0	25.0	38.0	35.0	10.8	11.1
30	13.4	13.8	16.2	16.8	46.1	40.1	49.1	43.1	27.0	23.8	35.0	31.5	13.4	13.8
60	19.4	20.0	23.5	24.2	41.6	35.6	44.6	38.6	24.0	21.1	28.0	25.4	19.4	20.0
100	25.5	26.4	31.0	32.0	38.3	32.3	41.3	35.3	22.0	18.8	24.0	21.0	25.5	26.4

*Supplied cables meet minimum Cat. 5e transmission requirements of **IEC 61156-6 Ed. 2** and **ANSI/EIA/TIA 568-B.2**

Cat. 5e Horizontal Cables

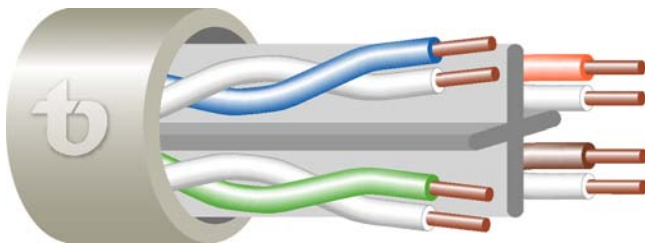
Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e	Typical Value	Cat. 5e
1	2.0	2.1	68.3	62.3	71.3	65.3	22.0	20.0	64.0	61.0	67.0	64.0
4	3.9	4.1	59.3	53.3	62.3	56.3	25.0	23.0	52.0	49.0	55.0	52.0
10	6.2	6.5	53.3	47.3	56.3	50.3	28.0	25.0	44.0	41.0	47.0	44.0
20	8.8	9.3	48.8	42.8	51.8	45.8	28.0	25.0	38.0	35.0	41.0	38.0
30	10.9	11.5	46.1	40.1	49.1	43.1	27.0	23.8	35.0	31.5	38.0	34.5
60	15.8	16.6	41.6	35.6	44.6	38.6	24.0	21.1	28.0	25.4	31.0	28.4
100	21.0	22.0	38.3	32.3	41.3	35.3	22.0	18.8	24.0	21.0	27.0	24.0

*Supplied cables meet minimum Cat. 5e transmission requirements of **IEC 61156-5 Ed. 2** and **ANSI/EIA/TIA 568-B.2**

CATEGORY 5e 100 Ohm Cables

Category 5e Data Transmission Cables

Teldor P/N	Product Description	Computer & LAN Applications	Outer Jacket Material	Outer Diameter (mm nom.)
4T00080101	Cat. 5e 4x2x24/1 AWG U/F/UTP + 17 AWG CCS Fig-8 Double Jacket Outdoor UL1581-VW1/CMX Jacket Outdoor UL1581-VW1/CMX	Outdoor installations	UV resistant FR-PVC	7.9
8393204xxx	Cat. 5e 4x2x24/1 AWG F/UTP Outdoor PVC/PVC UL (1581 VW 1) (UL) LISTED E211498	Outdoor installations	UV resistant FR-PVC	7.9
7272604xxx	Cat. 5e 4x2x26/7 AWG Work Area U/UTP PVC	Indoor use, fixed or portable installations	FR-PVC	4.9
8272626xxx	Cat. 5e 4x2x26/7 AWG F/UTP Work Area PVC	Work area cabling	FR-PVC	5.70
9292604xxx	Cat. 5 4x2x26/7 AWG SF/UTP Work Area PVC	Work area cabling	FR-PVC	5.3
7562004xxx	Cat. 5e 4x2x24/1 AWG U/UTP PVC	Indoor use, fixed installations	FR-PVC	5.0
7568204xxx	Cat. 5e 2x(4x2x24/1 AWG) FIG-8 U/UTP PVC P FIG-8	Indoor use, fixed installations	FR-PVC	5.1
8371204xxx	Cat. 5e 4x2x24/1 AWG F/UTP PVC	Indoor use, fixed installations	FR-PVC	6.1
8391304xxx	Cat. 5e 4x2x24/1 AWG F/UTP Outdoor Low Temperatures PVC peratures	Indoor/Outdoor use, fixed installations	UV resistant FR-PVC	7.2
8371804xxx	Cat. 5e 2x(4x2x24/1 AWG) FIG-8 F/UTP PVC	Trunking	FR-PVC	6.1
8371406xxx	Cat. 5e 6x(4x2x24 AWG F/UTP) Multi-Cable PVC	Indoor use, fixed installations	FR-PVC	20
8371412xxx	Cat. 5e 12x(4x2x24 AWG F/UTP) Multi-Cable PVC	Indoor use, fixed installations	FR-PVC	27.6
8371425xxx	Cat. 5 25x(4x2x24 AWG F/UTP) Multi-Cable PVC	Trunk Cable for Local Area Networks	FR-PVC	35.5

250 MHz 100 Ohm Data Transmission Cables



The GIGA-STAR Solution

CATEGORY 6, 100 Ohm

250 MHz DATA TRANSMISSION CABLES

The GIGA-STAR Solution is a complete line of data-transmission cables horizontal and work area types, designed for Cat. 6 and Cat. 5e for use in CLASS D and CLASS E cabling systems.

GIGA-STAR cables are tested up to 300 MHz, and are fully compatible with ISO/IEC 11801, IEC 61156-5, IEC 61156-6, and TIA/EIA 568C.

The GIGA-STAR Solution consists of the following three groups:

- U/UTP cables, where high NEXT and FEXT loss values are achieved by mechanical pair separation
- U/FTP cables, where high NEXT and FEXT loss values are achieved by individual pair shielding
- S/FTP cables, where an additional overall braid shield provides outstanding EMC performance

Our customers have the option of selecting a true Category 6 cable that meets all the transmission parameters required to support the advanced applications with 3 different levels of EMC performance:

- U/UTP cables: 50 dB coupling attenuation
- U/FTP cables: 75 dB coupling attenuation
- S/FTP cables: 85 dB coupling attenuation

All GIGA-STAR cables feature high values of PS-ACR and PS-ELFEXT, and a stable 100 Ohm characteristic impedance ensuring very low Return-Loss, making The GIGA-STAR Solution ideal for GIGABIT-Ethernet applications. All cables are available with a PVC or Flame Retardant Low-Smoke Zero-Halogen (FR-LSZH \ HFFR) jacket and in a single or "Siamese twin" (FIG-8) construction.

250 MHz 100 Ohm Data Transmission Cables

Cat. 6 Screened-Pair Work Area Cables

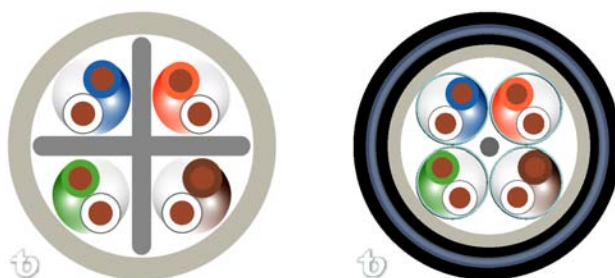
Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 6	Typical Value	Cat. 6	Typical Value	Cat. 6	Typical Value	Cat. 6	Typical Value	Cat. 6	Typical Value	Cat. 6
1	3.0	3.1	90.0	72.3	93.0	75.3	22.0	20.0	90.0	65.0	93.0	68.0
4	5.6	5.8	85.0	63.3	88.0	66.3	25.0	23.0	90.0	53.0	93.0	56.0
10	8.7	9.0	85.0	57.3	88.0	60.4	28.0	25.0	80.0	45.0	83.0	48.0
20	12.4	12.8	85.0	52.8	88.0	55.8	28.0	25.0	80.0	39.0	83.0	42.0
30	15.3	15.8	85.0	50.1	88.0	53.1	27.0	23.8	70.0	35.5	73.0	38.5
100	29.0	29.9	80.0	42.3	83.0	45.3	24.0	21.1	63.0	25.0	66.0	28.0
150	36.2	37.4	80.0	39.7	83.0	42.7	22.0	18.8	60.0	21.5	63.0	24.5
200	42.5	43.8	80.0	37.8	83.0	40.8	21.0	18.0	58.0	19.0	61.0	22.0
250	48.2	49.7	77.0	36.3	80.0	39.3	20.0	17.3	55.0	17.0	58.0	20.0

Cat. 6 Screened-Pair Horizontal Cables

Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 6	Typical Value	Cat. 6	Typical Value	Cat. 6	Typical Value	Cat. 6	Typical Value	Cat. 6	Typical Value	Cat. 6
1	2.0	2.8	90.0	72.3	93.0	75.3	22.0	20.0	90.0	65.0	93.0	68.0
4	3.7	3.8	85.0	63.3	88.0	66.3	25.0	23.0	90.0	53.0	93.0	56.0
10	5.7	6.0	85.0	57.3	88.0	60.4	28.0	25.0	80.0	45.0	83.0	48.0
20	8.1	8.5	85.0	52.8	88.0	55.8	28.0	25.0	80.0	39.0	83.0	42.0
30	10.0	10.5	85.0	50.1	88.0	53.1	27.0	23.8	70.0	35.5	73.0	38.5
100	19.0	19.9	80.0	42.3	83.0	45.3	24.0	21.1	63.0	25.0	66.0	28.0
150	23.6	24.9	80.0	39.7	83.0	42.7	22.0	18.8	60.0	21.5	63.0	24.5
200	27.7	29.1	80.0	37.8	83.0	40.8	21.0	18.0	58.0	19.0	61.0	22.0
250	31.4	33.0	77.0	36.3	80.0	39.3	20.0	17.3	55.0	17.0	58.0	20.0

Teldor Data Communication Cables / Category 6 Data Transmission Cables

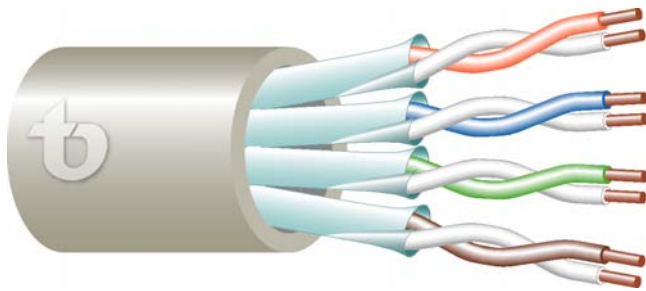
250 MHz 100 Ohm Data Transmission Cables



Category 6 Data Transmission Cables

Teldor P/N	Product Description	Computer & LAN Applications	Outer Jacket Material	Outer Diameter (mm nom.)
720KZ04xxx	Cat. 6 4x2x24/7 AWG U/UTP Work Area PVC	High bandwidth digital applications with low BER	FR-PVC	6.5
9828022xxx	Cat. 6 4x2x26/7 AWG U/FTP Work Area PVC	High bandwidth digital applications with low BER	FR-PVC	6.3
9828026xxx	Cat. 6 4x2x26/7 AWG S/FTP Work Area PVC	High bandwidth digital applications with low BER	FR-PVC	6.4
750AZ04xxx	Cat. 6 4x2x23/1 AWG U/UTP PVC	Indoor use, fixed installations	FR-PVC	6.7
750BZ04xxx	Cat. 6 4x2x23/1 AWG U/UTP FR-LSZH	Data-Centers/SANs	FR-LSZH	6.6
750BZR4101	Cat. 6 4x2x23/1 AWG U/UTP SWA Outdoor Direct Burial LSZH	Trunk Cable for Local Area Networks	UV resistant PO compound	12.7
750UZ04xxx	Cat. 6 4x2x23/1 AWG U/UTP Indoor/Outdoor FR-LSZH/FR-LSZH	Low temperature Indoor/Outdoor applications	FR-LSZH	8.3
8300204xxx	Cat. 6 4x2x23/1 AWG U/FTP FR-LSZH	Indoor use, fixed installations	FR-LSZH	7.3
8300804xxx	Cat. 6 2x(4x2x23/1 AWG) FIG-8 U/FTP FR-LSZH	Trunk Cable for Local Area Networks	FR-LSZH	7.6
8300904101	Cat. 6 4x2x23/1 AWG U/FTP Outdoor LSZH	Indoor/Outdoor use, fixed installations	FR-LSZH	9.6
8300C04101	Cat. 6 4x2x23/1 AWG U/FTP CSA FR-LSZH/PE	Outdoor and direct burial installations	UV Resistant FR-PO	13.2
830D104xxx	Cat. 6 4x2x23/1 AWG U/FTP Drop PVC	Trunk Cable for Local Area Networks	UV resistant FR-PVC	7.4

500 MHz Data Transmission Cables



The GIGA-TEN Solution

CATEGORY 6_A, 100 Ohm

500 MHz DATA TRANSMISSION CABLES

Teldor's Giga-Ten Solution cables is a complete line of data-transmission horizontal and work area cables, designed for state-of-the-art cabling systems including Class E_A of ISO/IEC 11801 and Cat. 6_A of IEC 61156-5/6.

These cables are tested up to 650 MHz, and are fully compatible with the ISO/IEC 11801, IEC 61156-5, IEC 61156-6, and TIA/EIA 568C.

Teldor's Cat. 6_A cables come in the following designs:

- U/FTP cables grounded, where high AXT, NEXT and FEXT attenuation values are achieved by individual pair shielding
- U/FTP cables ungrounded, where high AXT, NEXT and FEXT attenuation values are achieved by individual pair shielding. These cables may be terminated with non-shielded connecting hardware with out any performance or EMC issues. (Detailed technical information about this unique design can be found at the following link - <http://www.teldor.com/files.php?actions=show&id=1117>).
- F/FTP cables, where high AXT, NEXT and FEXT attenuation values are achieved by both overall and individual pair aluminum foil shields
- S/FTP cables, where high AXT, NEXT and FEXT attenuation values are achieved by both overall copper braid and individual pair aluminum foil shields. This structure is recommended for PoE (Power over Ethernet) applications

Giga-Ten Cat. 6_A Solution cables have Coupling Attenuation complying with Type II and Type I (depending on shield design) requirements per IEC 61156-5/6 therefore AXT performance is proven by design.

The cable's high values of PS-ACR and PS-ELFEXT attenuation, and a stable 100 Ohm characteristic impedance ensuring very low Return-Loss, make it ideal for 1 and 10 GIGABIT-Ethernet applications.

All cables are available with a PVC or Flame Retardant Low-Smoke Zero-Halogen (FR-LSZH \ HFFR) jackets as well as other compounds, and in single or "Siamese twin" (FIG-8) constructions.

500 MHz Data Transmission Cables

Cat. 6_A Screened-pair Work Area Cables

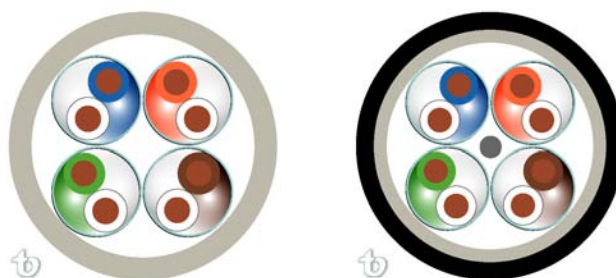
Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ANEXT dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A
1	3.0	3.1	95.0	72.3	98.0	75.3	22.0	20.0	70.0	67.0	85.0	65.0	88.0	68.0
4	5.6	5.8	95.0	63.3	98.0	66.3	25.0	23.0	70.0	67.0	73.0	53.0	76.0	56.0
10	8.7	9.0	95.0	57.3	98.0	60.3	28.0	25.0	70.0	67.0	65.0	45.0	68.0	48.0
20	12.4	12.8	90.0	52.8	93.0	55.8	28.0	25.0	70.0	67.0	59.0	39.0	62.0	42.0
30	15.3	15.8	85.0	50.1	88.0	53.1	27.0	23.8	70.0	67.0	55.4	35.4	58.4	38.4
100	29.0	29.9	80.0	42.3	83.0	45.3	24.0	21.1	67.0	62.5	45.0	25.0	48.0	28.0
150	36.2	37.4	78.0	39.7	81.0	42.7	22.0	18.8	66.0	59.8	41.5	21.5	44.5	24.5
200	42.5	43.8	78.0	37.8	81.0	40.8	21.0	18.0	65.0	58.0	49.0	19.0	52.0	22.0
250	48.2	49.7	75.0	36.3	78.0	39.3	20.0	17.3	63.0	56.5	37.0	17.0	40.0	20.0
300	53.4	55.1	75.0	35.1	78.0	38.1	19.0	17.3	62.0	55.3	35.5	15.5	38.5	18.5
400	63.1	65.1	70.0	33.3	73.0	36.3	19.0	17.3	61.0	53.4	33.0	13.0	36.0	16.0
500	71.9	74.0	70.0	31.8	73.0	34.8	19.0	17.3	59.0	52.0	31.0	11.0	34.0	14.0

500 MHz Data Transmission Cables

Cat. 6_A Screened-pair Horizontal Cables*

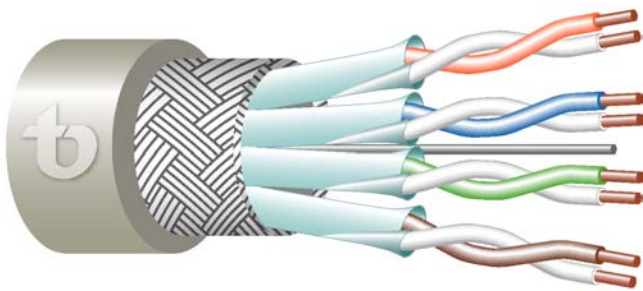
Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ANEXT dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A	Typical Value	Cat. 6 _A
1	2.0	2.0	95.0	72.3	98.0	75.3	22.0	20.0	70.0	67.0	85.0	65.0	88.0	68.0
4	3.7	3.8	95.0	63.3	98.0	66.3	25.0	23.0	70.0	67.0	73.0	53.0	76.0	56.0
10	5.6	5.9	95.0	57.3	98.0	60.3	28.0	25.0	70.0	67.0	65.0	45.0	68.0	48.0
20	7.9	8.4	90.0	52.8	93.0	55.8	28.0	25.0	70.0	67.0	59.0	39.0	62.0	42.0
30	9.7	10.3	85.0	50.1	88.0	53.1	27.0	23.8	70.0	67.0	55.4	35.4	58.4	38.4
100	18.0	19.1	80.0	42.3	83.0	45.3	24.0	21.1	67.0	62.5	45.0	25.0	48.0	28.0
150	22.4	23.6	78.0	39.7	81.0	42.7	22.0	18.8	66.0	59.8	41.5	21.5	44.5	24.5
200	26.0	27.6	78.0	37.8	81.0	40.8	21.0	18.0	65.0	58.0	49.0	19.0	52.0	22.0
250	29.4	31.0	75.0	36.3	78.0	39.3	20.0	17.3	63.0	56.5	37.0	17.0	40.0	20.0
300	32.5	34.3	75.0	35.1	78.0	38.1	19.0	17.3	62.0	55.3	35.5	15.5	38.5	18.5
400	38.0	40.0	70.0	33.3	73.0	36.3	19.0	17.3	61.0	53.4	33.0	13.0	36.0	16.0
500	43.0	45.2	70.0	31.8	73.0	34.8	19.0	17.3	59.0	52.0	31.0	11.0	34.0	14.0

*Supplied cables meet the minimum Cat. 6_A transmission requirements as per IEC 61156-5 Ed. 2

500 MHz Data Transmission Cables

Category 6_A Cables

Teldor P/N	Product Description	Computer & LAN Applications	Outer Jacket Material	Outer Diameter (mm nom.)
9828U22xxx	Cat. 6 _A 4x2x26/7 AWG U/FTP Ungrounded U/UTP use Workarea FR-LSZH	High bandwidth digital applications with low BER	FR-LSZH	6.1
9828U61xxx	Cat. 6 _A 4x(2x24/1 AWG) U/FTP ungrounded FR-LSZH	Indoor use, fixed installations	FR-LSZH	6.4
9828U71xxx	Cat. 6 _A 4x(2x24/1 AWG) U/FTP ungrounded FR-PVC	Indoor use, fixed installations	FR-PVC	6.4
9828G22xxx	Cat. 6 _A 4x2x26/7 AWG U/FTP Work Area FR-LSZH	High bandwidth digital applications with low BER	FR-LSZH	6.0
9828G24xxx	Cat. 6 _A 4x2x0.45/1 mm U/FTP Workarea FR-LSZH	High bandwidth digital applications with low BER	FR-LSZH	6.3
83U0204xxx	Cat. 6 _A 4x2x23/1 AWG U/FTP Ungrounded U/UTP use FR-LSZH	Indoor use, fixed installations	FR-LSZH	7.4
83UM204xxx	Cat. 6 _A 4x2x23/1 AWG U/FTP Ungrounded U/UTP use FR-LSZH IEC 60332-3	Indoor use, fixed installations	FR-LSZH	8.0
83G0204xxx	Cat. 6 _A 4x2x23/1 AWG U/FTP FR-LSZH	Indoor use, fixed installations	FR-LSZH	7.3
83G0208xxx	Cat. 6 _A 2x(4x2x23/1 AWG) FIG-8 U/FTP FR-LSZH	Indoor use, fixed installations	FR-LSZH	7.3
83GU204xxx	Cat. 6 _A 4x2x23/1 AWG U/FTP Indoor/Outdoor FR-LSZH/HFFR-PU	Indoor/Outdoor use, fixed installations	FRZH-PU	9.0

600 MHz Data Transmission Cables



The GIGA-DOR Solution

CATEGORY 7, 100 Ohm

600 MHz DATA TRANSMISSION CABLES

The GIGA-DOR Solution is a complete line of high-performance Cat. 7 horizontal and work area data cables, designed for CLASS F links and for advanced high data-rate networks, available in a wide range of constructions.

TELDOR's GIGA-DOR Solution cables conform to the ISO/IEC 11801 requirements for Cat. 7 cables as specified in IEC 61156-5 and 61156-6. These cables are composed of balanced twisted pairs having a nominal 100 Ohm characteristic impedance up to 600 MHz, with a very high NEXT loss.

The high NEXT loss, achieved by individual aluminum foil pair shields, provides a typical margin of 60 dB ACR over U/UTP cables, making GIGA-Solution cables ideal for multiple high-frequency services.

GIGA-DOR & GIGA-DOR Jr. S/FTP horizontal cables and GIGA-Patch 4 pair S/FTP 26 AWG work area (patch) cables are overall shielded with a tin-coated copper braid. When properly grounded, this copper braid and the individual aluminum foil shields provide exceptional EMC performance, having a minimum coupling attenuation of 90 dB.

All cables are available with flame-retardant PVC or halogen-free (HFFR) jackets, in a range of colors, in single or "Siamese" twin (FIG-8) constructions.

600 MHz Data Transmission Cables

Cat. 7 Work Area Cables

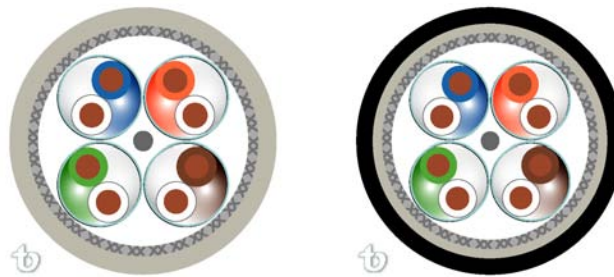
Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ANEXT dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7
1	2.9	3.0	105.0	99.4	108.0	102.4	22.0	20.0	68.0	N/A	95.0	75.0	98.0	78.0
4	5.4	5.6	98.0	90.4	101.0	93.4	25.0	23.0	68.0	N/A	90.0	75.0	93.0	78.0
10	8.5	8.8	95.0	84.4	98.0	87.4	28.0	25.0	68.0	N/A	86.0	71.0	89.0	74.0
20	12.1	12.4	90.0	80.0	93.0	83.0	28.0	25.0	68.0	N/A	80.0	65.0	83.0	68.0
30	14.8	15.3	85.0	77.2	88.0	80.2	27.0	23.8	68.0	N/A	76.0	61.5	79.0	64.5
100	27.7	28.5	80.0	69.4	83.0	72.4	24.0	21.1	68.0	N/A	66.0	51.0	69.0	54.0
150	34.3	35.3	78.0	66.7	81.0	69.7	22.0	18.8	65.0	N/A	63.0	47.5	66.0	50.5
200	40.0	41.2	78.0	65.0	81.0	68.0	21.0	18.0	65.0	N/A	60.0	45.0	63.0	48.0
250	45.1	46.5	75.0	63.4	78.0	66.4	20.0	17.3	62.0	N/A	58.0	43.0	61.0	46.0
300	49.7	51.3	75.0	62.2	78.0	65.2	19.0	17.3	62.0	N/A	52.0	41.5	55.0	44.5
400	58.2	60.0	70.0	60.4	73.0	63.4	19.0	17.3	62.0	N/A	49.0	38.9	52.0	41.9
500	65.8	67.9	70.0	58.9	73.0	61.9	19.0	17.3	62.0	N/A	47.0	37.0	50.0	40.0
600	72.9	75.1	70.0	57.7	73.0	60.7	19.0	17.3	62.0	N/A	45.0	35.4	48.0	38.4

600 MHz Data Transmission Cables

Cat. 7 Horizontal Cables

Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ANEXT dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7	Typical Value	Cat. 7
1	2.0	2.0	105.0	75.0	108.0	78.0	22.0	20.0	68.0	N/A	95.0	75.0	98.0	78.0
4	3.6	3.7	98.0	75.0	101.0	78.0	25.0	23.0	68.0	N/A	90.0	75.0	93.0	78.0
10	5.6	5.8	95.0	75.0	98.0	78.0	28.0	25.0	68.0	N/A	86.0	71.0	89.0	74.0
20	7.9	8.3	90.0	75.0	93.0	78.0	28.0	25.0	68.0	N/A	80.0	65.0	83.0	68.0
30	9.7	10.2	85.0	75.0	88.0	78.0	27.0	23.8	68.0	N/A	76.0	61.5	79.0	64.5
100	18.0	19.0	80.0	69.4	83.0	72.4	24.0	21.1	68.0	N/A	66.0	51.0	69.0	54.0
150	22.4	23.6	78.0	66.7	81.0	69.7	22.0	18.8	65.0	N/A	63.0	47.5	66.0	50.5
200	26.0	27.5	78.0	65.0	81.0	68.0	21.0	18.0	65.0	N/A	60.0	45.0	63.0	48.0
250	29.4	31.0	75.0	63.4	78.0	66.4	20.0	17.3	62.0	N/A	58.0	43.0	61.0	46.0
300	32.5	34.2	75.0	62.2	78.0	65.2	19.0	17.3	62.0	N/A	52.0	41.5	55.0	44.5
400	38.0	40.0	70.0	60.4	73.0	63.4	19.0	17.3	62.0	N/A	49.0	38.9	52.0	41.9
500	43.0	45.2	70.0	58.9	73.0	61.9	19.0	17.3	62.0	N/A	47.0	37.0	50.0	40.0
600	47.6	50.1	70.0	57.7	73.0	60.7	19.0	17.3	62.0	N/A	45.0	35.4	48.0	38.4

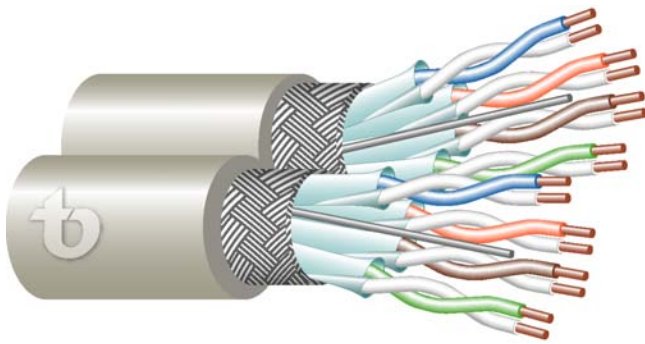
600 MHz Data Transmission Cables



Category 7 Cables

Teldor P/N	Product Description	Computer & LAN Applications	Outer Jacket Material	Outer Diameter (mm nom.)
9928244xxx	Cat. 7 4x2x26/7 AWG S/FTP Work Area FR-LSZH	High data rates	FR-LSZH	6.4
9928264xxx	Cat. 7 4x2x26/7 AWG S/FTP Work Area PU	Outdoor installations	PU	6.5
9928312xxx	Cat. 7 12x(4x2x26/7 AWG S/FTP) Multi-Cable Work Area FR-LSZH	Indoor Backbone	FR-LSZH	27.8
9827A54xxx	Cat. 7 4x2x23/1 AWG F/FTP FR-LSZH	Indoor use, fixed installations	FR-LSZH	7.4
9928675xxx	Cat. 7 1000 MHz 4x2x23/1 AWG S/FTP FR-LSZH	Indoor use, fixed installations	FR-LSZH	7.5
9928654xxx	Cat. 7 4x2x23/1 AWG S/FTP FR-LSZH	Data-Centers/SANs	FR-LSZH	8.0
9928554xxx	Cat. 7 4x2x22/1 AWG S/FTP FR-LSZH	Indoor use, fixed installations	FR-LSZH	8.2
9928692xxx	Cat. 7 2x(4x2x23/1 AWG) FIG-8 S/FTP FR-LSZH	Data-Centers/SANs	FR-LSZH	8.0
9928604xxx	Cat. 7 4x2x23/1 AWG S/FTP FR-PVC	Indoor use, fixed installations	FR-PVC	7.8
9928659xxx	Cat. 7 4x2x23/1 AWG S/FTP CSA Direct Burial PE	Outdoor and direct burial installations	PE	12.0

1000 MHz Data Transmission Cables



The GIGA-DOR Solution

CATEGORY 7_A, 100 Ohm

1000 MHZ DATA TRANSMISSION CABLES

Teldor's Giga-Ten Solution cables are a complete line of horizontal and work area data-transmission cables, designed for state-of-the-art cabling systems including IEEE 802.3ae, ISO/IEC 11801 otherwise known as 10 GBaseT.

These cables are tested up to 1200 MHz, and are fully compatible with the ISO/IEC 11801, IEC 61156-5, and IEC 61156-6 with the highest coupling attenuation level Type I, which makes the application to be defined as "Alien Crosstalk proven by design".

Giga-Ten Solution cables come in S/FTP shielding structure where very high NEXT and FEXT values and outstanding EMC performance are achieved.

Giga-Ten Solution cables have Coupling Attenuation complying with Type I requirements as per IEC 61156 therefore the AXT requirements are achieved by design, and feature high values of PS-ACR and PS-ELFEXT attenuations together with a stable 100 Ohm characteristic impedance ensuring high Return-Loss attenuation, making them ideal for very high bandwidth applications as 10 GBase-T.

Giga-Ten horizontal and work area cables are compatible with shielded RJ45 connecting hardware, allowing use in variety of communication application including Video Over Ethernet and IEEE 802.3af (Power over Ethernet) and IEEE 802.3at (Power over Ethernet Plus).

The cables are available with a FR-PVC or Flame Retardant Low-Smoke Zero-Halogen (FR-LSZH \ HFFR) jacket and in single or "Siamese twin" (FIG-8) constructions.

1000 MHz Data Transmission Cables

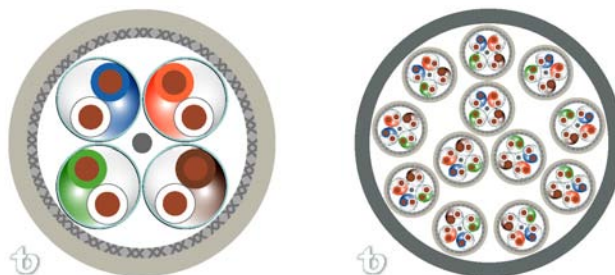
Cat. 7_A Work Area Cables

Freq. MHz	Attenuation dB/100m 20°C		PS NEXT Loss dB		NEXT Loss dB		RL dB		PS ANEXT dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A
1	2.9	3.0	96.0	75.0	99.0	78.0	22.0	20.0	78.0	67.0	90.0	70.0	93.0	N/A
4	5.4	5.6	96.0	75.0	99.0	78.0	25.0	23.0	78.0	67.0	90.0	70.0	93.0	N/A
10	8.5	8.7	96.0	75.0	99.0	78.0	28.0	25.0	78.0	67.0	86.0	70.0	89.0	N/A
20	12.1	12.3	94.0	75.0	97.0	78.0	28.0	25.0	78.0	67.0	80.0	65.0	85.0	N/A
30	14.8	15.0	90.0	75.0	93.0	78.0	27.0	23.8	78.0	67.0	76.0	61.5	80.0	N/A
100	27.0	27.8	85.0	75.0	88.0	78.0	24.0	21.1	78.0	67.0	66.0	51.0	70.0	N/A
200	38.3	39.7	85.0	71.0	88.0	74.0	21.0	18.0	78.0	67.0	60.0	45.0	65.0	N/A
300	46.9	49.0	85.0	68.2	88.0	71.2	21.0	15.6	78.0	67.0	52.0	41.5	57.0	N/A
600	66.3	70.6	80.0	63.7	83.0	66.7	20.0	15.6	75.0	64.0	45.0	35.5	52.0	N/A
700	71.7	76.7	80.0	62.7	83.0	65.4	19.0	15.6	73.0	63.0	45.0	34.0	52.0	N/A
900	81.3	87.7	80.0	61.1	83.0	64.1	19.0	15.6	73.0	61.0	45.0	32.0	52.0	N/A
1000	85.0	92.9	78.0	60.4	81.0	63.4	19.0	15.6	73.0	60.0	45.0	31.0	50.0	N/A
1100	89.8	N/A	78.0	N/A	81.0	N/A	18.0	N/A	73.0	N/A	45.0	N/A	50.0	N/A
1200	93.8	N/A	78.0	N/A	81.0	N/A	18.0	N/A	73.0	N/A	45.0	N/A	50.0	N/A

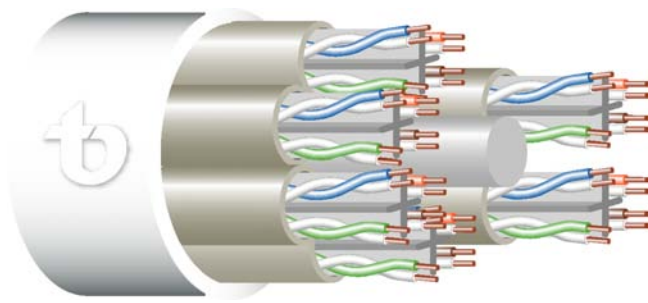
1000 MHz Data Transmission Cables

Cat. 7_A Horizontal Cables

Freq. MHz	Attenuation dB/100m 20°C		NEXT Loss dB		PS-NEXT Loss dB		RL dB		PS ANEXT dB		PS ELFEXT dB		ELFEXT dB	
	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A	Typical Value	Cat. 7 _A
1	1.8	2.0	103.0	78.0	100.0	75.0	31.0	20.0	100.0	67.0	108.0	75.0	110.0	78.0
4	3.2	3.8	103.0	78.0	100.0	75.0	31.0	23.0	100.0	67.0	105.0	75.0	108.0	78.0
10	4.9	5.8	103.0	78.0	100.0	75.0	31.0	25.0	100.0	67.0	100.0	71.0	103.0	74.0
20	7.0	8.2	103.0	78.0	100.0	75.0	31.0	25.0	100.0	67.0	90.0	65.0	93.0	68.0
30	8.6	10.1	103.0	78.0	100.0	75.0	31.0	23.8	100.0	67.0	90.0	61.5	93.0	64.5
100	15.7	18.5	103.0	78.0	100.0	75.0	31.0	21.1	100.0	62.5	85.0	51.0	88.0	54.0
150	19.4	22.8	103.0	78.0	100.0	75.0	26.0	18.8	95.0	59.8	84.0	47.5	87.0	50.5
200	22.5	26.5	98.0	76.8	95.0	73.8	26.0	18.0	95.0	58.0	80.0	45.0	83.0	48.0
250	25.3	29.7	96.0	75.4	93.0	72.4	25.0	17.3	92.0	56.5	78.0	43.0	81.0	46.0
300	27.8	32.7	95.0	74.2	92.0	71.2	25.0	17.3	92.0	55.3	75.0	41.5	78.0	44.5
400	32.3	38.0	94.0	72.3	91.0	69.3	23.0	17.3	92.0	53.4	70.0	38.9	73.0	41.9
500	36.3	42.7	93.0	70.9	90.0	67.9	23.0	17.3	90.0	52.0	69.0	37.0	72.0	40.0
600	40.0	47.1	92.0	69.7	89.0	66.7	23.0	17.3	90.0	50.8	68.0	35.4	71.0	38.4
1000	52.7	62.0	88.0	66.4	85.0	63.4	21.0	17.3	90.0	47.5	67.0	31.0	70.0	34.0

1000 MHz Data Transmission Cables

Category 7_A Data Transmission Cables

Teldor P/N	Product Description	Computer & LAN Applications	Outer Jacket Material	Outer Diameter (mm nom.)
992G244xxx	Cat. 7 _A 4x2x26/7 AWG S/FTP Work Area FR-LSZH	High bandwidth digital applications with low BER	FR-LSZH	6.3
99XG504xxx	Cat. 7 _A 4x2x23/1 AWG S/FTP FR-LSZH	Data-Centers/SANs	FR-LSZH	8.1
99XG508xxx	Cat. 7 _A 2x(4x2x23/1 AWG) FIG-8 S/FTP FR-LZSH	Data-Centers/SANs	FR-LSZH	8.1
99XG254xxx	Cat. 7 _A 4x2x22/1 AWG S/FTP FR-LSZH	Indoor use, fixed installations	FR-LSZH	8.7
99XG258xxx	Cat. 7 _A 2x(4x2x22/1 AWG) FIG-8 S/FTP FR-LSZH	Indoor Backbone	FR-LSZH	8.7
99XG524xxx	Cat. 7 _A 4x2x23/1 AWG S/FTP ND FR-LSZH IEC60332-3	Indoor use, fixed installations	FR-LSZH	8.4
99XG954xxx	Cat. 7 _A 4x2x22/1 AWG S/FTP OUTDOOR PVC	Outdoor installations	UV resistant FR-PVC	10.4
99XGM07xxx	Cat. 7 _A 7x(4x2x23/1 AWG) S/FTP) Multi-Cable FR-LSZH	Indoor Backbone	FR-LSZH	27.5
99XGM12xxx	Cat. 7 _A 12x(4x2x23/1 AWG) S/FTP) Multi-Cable FR-LSZH	Indoor Backbone	FR-LSZH	35
99XG544xxx	Cat. 7 _A 4x2x23/1 AWG S/FTP FR-LSZH	Data-Centers/SANs	FR-LSZH	8.0
99XG548xxx	Cat. 7 _A 2x(4x2x23/1 AWG) FIG-8 S/FTP FR-LZSH	Data-Centers/SANs	FR-LSZH	
99XG854xxx	Cat. 7 _A 4x2x23/1 AWG S/FTP FR-LSZH/PVC	Data-Centers/SANs	FR-PVC	10.4



DATA CENTER CABLES

we at Teldor know that your Data Center is much more than a space that houses servers and network equipment. In the IT world we live in today, the Data Center has become the most critical asset – and a crucial investment – for nearly every organization. It is truly the operations center of every business: housing all the critical applications, equipment and systems needed to run the business - to enable every transaction, communication and task; providing the communication links to customers and business partners and suppliers around the world; and even controlling building environmental, security and life safety systems.

Faced with today's fundamental importance of the Data Center and the need to provide for daily increasing applications, transmission speeds and data storage, businesses are investing in the amount of equipment their Data Centers must support. Consequently, IT managers must design scalable Data Centers to support their future growth and potentially new technologies, while ensuring the best performance.

- TELDOR Data-Center cables consist of Cat.5e to Cat.7_A multi-cable, multi-pair and multi-core structures solid and matched work area cables.
- All cables are fully compatible with the standard connecting hardware (i.e. RJ-45)
- All products are available with FR-LSZH, PVC, PU and PE jackets combined with different optional shielding structures such as S/FTP, SF/UTP, F/UTP, U/FTP.
- The cables are designed with optimized lay lengths, size, transmission performance and structures to enable peak high density data-center cabling.
- High-density cabling creates less congestion in pathways which means better cooling conditions in particular for PoE and PoE⁺ applications, lower installation time, minimizes down time, accelerates recovery time, minimizes site access by non-essential personnel, and allows place-and-plug modular installation for Gigabit and up to 10 Gigabit applications.

Teldor Meets Your Cabling System Needs

As your Data Center partner, Teldor offers an in-depth knowledge of structured cabling, Data Centers and the interaction between them. Teldor understands the needs and design challenges– and has leveraged its expertise in the design of highly-flexible, end-to-end structured cabling systems that are unique in their ability to provide optimal system performance, while simultaneously solving your density and manageability issues – both now and in the future.

Multi-Pair/Core/Cable Data Transmission Cables



Data Center Cables

Teldor P/N	Product Description	Frequency Range (MHz)	Outer Jacket Material
7564004xxx	Cat. 5e 4x(4x2x24/1 AWG) U/UTP Multi-Cable PVC	1 - 100	FR-PVC
7564012xxx	Cat. 5e 12x(4x2x24/1 AWG) U/UTP Multi-Cable PVC	1 - 100	FR-PVC
7574008xxx	Cat. 5e 8x(4x2x24/1 AWG) U/UTP Multi-Cable FR-LSZH	1 - 100	FR-LSZH
7574025xxx	Cat. 5e 25x(4x2x24/1 AWG) U/UTP Multi-Cable FR-LSZH	1 - 100	FR-LSZH
75AZM04xxx	Cat. 6 4x(4x2x23/1 AWG) U/UTP Multi-Cable PVC	1 - 250	FR-PVC
75VZM06xxx	Cat. 6 6x(4x2x23/1 AWG) U/UTP Multi-cable PVC-R	1 - 250	FR-PVC
75VZM08xxx	Cat. 6 8x(4x2x23/1 AWG) U/UTP Multi-cable PVC-R	1 - 250	FR-PVC
9928A12xxx	Cat. 6 _A 12x(4x2x26/7 AWG U/FTP) Multi-Cable Work Area PVC	1 - 500	FR-PVC
9928M08xxx	Cat. 7 8x(4x2x26/7 AWG U/FTP) Multi-Cable Work Area FR-LSZH IEC 60332-3	1 - 600	FR-LSZH
9928M16xxx	Cat. 7 16x(4x2x26/7 AWG U/FTP) Multi-Cable Work Area FR-LSZH IEC 60332-3	1 - 600	FR-LSZH
992G244xxx	Cat. 7 _A 4x2x26/7 AWG S/FTP Work Area FR-LSZH	1 - 1000	FR-LSZH
99XGM03xxx	Cat. 7 _A 3x(4x2x23/1 AWG) S/FTP Multi-Cable FR-LSZH	1 - 1000	FR-LSZH
99XGM06xxx	Cat. 7 _A 6x[4x2x23/1 AWG S/FTP] Multi-Cable FR-LSZH	1 - 1000	FR-LSZH
99XGM07xxx	Cat. 7 _A 7x(4x2x23/1 AWG) S/FTP Multi-Cable FR-LSZH	1 - 1000	FR-LSZH
99XGM12xxx	Cat. 7 _A 12x(4x2x23/1 AWG S/FTP) Multi-Cable FR-LSZH	1 - 1000	FR-LSZH

Warranty Applicable to Products Sold by Teldor Cables & Systems Ltd. ("Teldor")

1. Teldor warrants that the products, under normal use, shall meet in all material respects the specifications of Teldor for such products as reflected in the respective Teldor Data Specifications Sheet, for the following periods of time from the time of completion of production (the "Warranty Period"):

A Warranty Period of 15 years shall apply to the products expressly listed below only:

- Data transmission cables with 100 Ω characteristic impedance, made of twisted pairs, designated as Category 5, Category 5e, Category 6, Category 6_A, Category 7, Category 7_A, or "Category 8"
- Data transmission cables made of optical fibers
- Instrumentation, Control and signal cables made of copper conductors
- Telecom cables made of twisted pairs of copper conductors
- Low voltage electric power cables
- Coaxial, Twinaxial and Triaxial cables
- Electronic and Audio cables for analog and/or digital transmission
- Industrial Ethernet or Industrial BUS cables

A Warranty Period of one year shall apply to all products, other than those expressly listed above.

2. Teldor warrants further that at the time of delivery the products shall be adequately contained, packed and labeled and conform in all material respects to statements made by Teldor on any container packaging or label.

3. Under no circumstances shall Teldor be liable for any repair or replacement needed in whole or in part (i) as a result of inappropriate environment, improper storage, transportation, handling, installation, use, removal, modification, maintenance or repair, negligence or fault, by any party other than by Teldor; or (ii) as a result of accident.

4. During the Warranty Period Teldor shall, at Teldor's discretion, either repair, replace or give credit for the purchase price of, any defective products found to fail to comply with this Warranty and returned by the Buyer to Teldor. In no event shall Teldor be liable for damages in excess of the purchase price received by Teldor for the product. Teldor shall acquire the ownership of all the products that have been replaced or given credited for. This Warranty shall also apply to the repaired or replacement part during the remaining portion of the Warranty Period, if any.

5. This Warranty applies only if (i) Teldor has received a written notice from the Buyer giving details of the defective item before the end of the Warranty Period, (ii) Teldor has been afforded a reasonable opportunity to inspect the item in question, and (iii) the Buyer has provided at its expense all assistance and support needed by Teldor to fulfill its obligations under this Warranty.

6. To the extent permitted by applicable law, this Warranty is exclusive and constitutes the entire warranty and liability of Teldor with respect to the products, and all other warranties or liabilities imposed or implied by statute, law or custom are explicitly excluded. In no circumstances shall Teldor have any liability for consequential or indirect loss or damage no matter how arising, or of any loss arising out or in connection with the ability or inability to use the products. Teldor expressly excludes liability for all costs associated with the installation of the replacement items, the removal of the items being removed, and the repair of defective items other than at Teldor's premises.

The full description of the terms, conditions and limitations of the Teldor warranty are agreed on a case-by-case basis.

TELDOR CABLES & SYSTEMS LTD.



1) Governing Terms

- a) These terms and conditions apply to all products sold by Teldor Cables & Systems Ltd., an Israeli corporation ("Teldor"), to the Buyer.
- b) Any addition, deletion or alternation proposed by the Buyer but not expressly agreed and confirmed in writing by the Buyer, shall not bind the parties and shall not constitute part of the contract.

2) Delivery

- a) Teldor shall use reasonable efforts to adhere to the stated delivery date, but Teldor shall not be liable for any loss resulting from any delay in delivery, nor shall the Buyer be entitled to cancel the contract by reason only of Teldor's failure to deliver at the stated time.
- b) The products shall be delivered in accordance with the provisions of the specific INCOTERMS 2000 specified.
- c) Where products are delivered in installments, each installment shall be deemed a separate sale. Default of Teldor in respect of any one or more installments shall not entitle the Buyer to repudiate the contract with regard to any other installments.

3) Risk and Title

- a) Risk or loss or damage to and in the products, including associated risk of hazard, shall pass to the Buyer upon delivery.
- b) The products shall remain the property of Teldor unless and until Teldor receives all payments due for the products. Until used, the Buyer shall not remove, or obscure any label or marking which may allow the products to be identified. When the products are incorporated into another product by the Buyer or otherwise, title to such other products shall vest in Teldor until payment in full as aforesaid. The Buyer shall be entitled to sell such other product to a third party before such payment, provided that all sums received by the Buyer with respect to the sale of such other product be held in trust for the benefit of Teldor in a separate bank account until payment in full for the products.

4) Price and Payment

a) The purchase price to be paid for the products and the terms of payment shall be as agreed in writing between Buyer and Seller. Teldor may at any time require the Buyer to provide security satisfactory to Teldor.

b) Unless otherwise specified overleaf, prices are exclusive of VAT, duties, taxes, levies, imposts, deposits or surcharges related to the importation or otherwise, which shall be paid by the Buyer.

c) The Buyer may not, for any reason whatsoever, withhold any payment or claim any right of deduction or set-off against any payment payable under the contract.

d) If the Buyer is in default in respect of the payment of any sum payable under the contract, then without prejudice to Teldor's other rights and remedies, the Buyer shall pay Teldor cumulative interest on all overdue sums at the rate of 5% above the London Inter Bank Rate for the currency of the contract, as certified by Teldor's bankers.

5) Claims, Warranty and Limited Liability

a) The Buyer must examine the applicable products immediately upon receipt of shipment. Claims for partial or total non-delivery due to fault of Teldor must be made to Teldor within 10 days of receipt of shipment. In such situations, Teldor shall have the right to examine the applicable products in their original form and the shipping records at the Buyer's location. Failure to make a claim within said 10 days shall mean the products are deemed delivered in accurate numbers and the full invoice shall be payable.

b) Teldor warrants that the products, under normal use, shall meet in all material respects the specifications of Teldor for such products as reflected in the respective Teldor Data Specifications Sheet, for the following periods of time from the time of completion of production (the "Warranty Period"):

A Warranty Period of 15 years shall apply to the products expressly listed below only:

- Data transmission cables with 100 Ω characteristic impedance, made of twisted pairs, designated as Category 5, Category 5e, Category 6, Category 6_A, Category 7, Category 7_A, or "Category 8"
- Data transmission cables made of optical fibers
- Instrumentation, Control and signal cables made of copper conductors
- Telecom cables made of twisted pairs of copper conductors
- Low voltage electric power cables
- Coaxial, Twinaxial and Triaxial cables
- Electronic and Audio cables for analog and/or digital transmission
- Industrial Ethernet or Industrial BUS cables

A Warranty Period of one year shall apply to all products, other than those expressly listed above.

- c) Teldor warrants further that at the time of delivery the products shall be adequately contained, packed and labeled and conform in all material respects to statements made by Teldor on any container packaging or label.
- d) Under no circumstances shall Teldor be liable for any repair or replacement needed in whole or in part (i) as a result of inappropriate environment, improper storage, transportation, handling, installation, use, removal, modification, maintenance or repair, negligence or fault, by any party other than by Teldor; or (ii) as a result of accident.
- e) During the Warranty Period Teldor shall, at Teldor's discretion, either repair, replace or give credit for the purchase price of, any defective products found to fail to comply with this Warranty and returned by the Buyer to Teldor. In no event shall Teldor be liable for damages in excess of the purchase price received by Teldor for the product. Teldor shall acquire the ownership of all the products that have been replaced or given credited for. This Warranty shall also apply to the repaired or replacement part during the remaining portion of the Warranty Period, if any.
- g) This Warranty applies only if (i) Teldor has received a written notice from the Buyer giving details of the defective item before the end of the Warranty Period, (ii) Teldor has been afforded a reasonable opportunity to inspect the item in question, and (iii) the Buyer has provided at its expense all assistance and support needed by Teldor to fulfill its obligations under this Warranty.
- h) To the extent permitted by applicable law, this Warranty is exclusive and constitutes the entire warranty and liability of Teldor with respect to the products, and all other warranties or liabilities imposed or implied by statute, law or custom are explicitly excluded. In no circumstances shall Teldor have any liability for consequential or indirect loss or damage no matter how arising, or of any loss arising out or in connection with the ability or inability to use the products. Teldor expressly excludes liability for all costs associated with the installation of the replacement items, the removal of the items being removed, and the repair of defective items other than at Teldor's premises.

6) Buyer's Default

- a) Without prejudice to other rights and remedies available, Teldor shall be entitled to immediately terminate in whole or in part the contract, or to immediately suspend all or any further deliveries, if:
- i) any sum is due and payable under any contract between the parties and remains unpaid; or
 - ii) the Buyer fails to take delivery of any products under any contract between the parties; or
 - iii) the Buyer becomes insolvent or has a winding up resolution or order passed or made or has a receiver appointed or suspends payments of its debts in whole or part or has proposed or entered into any composition or arrangement with creditors or is the subject of a bankruptcy order, or any equivalent proceeding takes place under the laws in which the Buyer is incorporated, carries on businesses or has assents.
- b) Additionally, in the event of any such action, Teldor shall be entitled to require prepayment and such security, as it

may deem necessary as a condition to resuming delivery under this or any other contract with the Buyer.

7) Intellectual Property

a)The Buyer acknowledges Teldor's sole ownership of all present and future right, title and interest to any and all trademarks and trade names, homologations, product registrations, patents, all applications relating to any of the know-how and other intellectual property relating in any way to the TELDOR trade name or products. The Buyer will not impair its right, title, or interest to any such intellectual property.

b)The Buyer will not use the trade name "TELDOR" and trademarks owned by Teldor in any manner or for any purpose except, to the extent permitted by Teldor to designate products purchased by the Buyer from Teldor.

8) Force Majeure

Seller shall not be liable for any delay or failure in the performance of its obligations, when such delay or failure results in whole or in part from shortages or disruption in the supply of materials from normal sources, shortage of means of transport, floods, fire, act of God, war, riot, civil insurrection, strikes, lock-outs, industrial unrest, inclement weather, acts of civil or military authorities, or circumstances beyond Teldor's reasonable control or force majeure.

9) Notices

Notices under any contract between the parties shall be in writing and shall be deemed to have been duly given 14 days after being mailed by prepaid registered air mail, or three days after being transmitted by facsimile or manually delivered, addressed to the stated addresses of Teldor and the Buyer.

10) Assignment

The Buyer shall not assign the contract or any of the Buyer's rights or obligations under the contract without the prior written consent of Teldor.

11) Governing Law and Jurisdiction

The laws of The State of Israel shall govern the contract. All disputes in connection with the contract shall be subject to the exclusive jurisdiction of the competent courts of the District of Tel Aviv, unless Teldor prefers another competent jurisdiction.

12) Entire Agreement and Amendment

These terms and conditions contain the entire agreement between the parties with respect to the subject matter hereof; and may not be amended other than by a written agreement signed by Teldor and the Buyer.



Certificate

This is to certify that the
Quality Management System
of

TELDOR CABLES & SYSTEMS LTD

EIN-DOR, GESHUR, ISRAEL

*has been audited by SII and found to comply with the Quality
Management Standard SI ISO 9001: 2008*

scope:

MANUFACTURE AND DESIGN OF WIRES & CABLES FOR
TELECOMMUNICATION, INSTRUMENTATION, ELECTRONICS,
DATA COMMUNICATION AND ELECTRICAL PURPOSES.

The Certificate is granted in accordance with SII's Rules for the Certification of Quality Systems (SII procedure-002). The validity of the Certificate is subject to the continuous maintenance of the Quality System according to the above standard, and the follow-up surveillance performed by SII. Further clarifications regarding the scope of the certificate and applicability of ISO 9001:2008 requirements may be obtained by consulting the organization.

Date of initial approval: 16 . 03 . 1993
Date of expiration: 15 . 01 . 2013

License No: 52665
Date of issue: 06 . 01 . 2010

www.sii.org.il

THE STANDARDS INSTITUTION OF ISRAEL




Doron Tamir
Director General



Cable Standards

IEC 61156-1	Multicore and symmetrical pair cables for digital communications Part 1: Generic specification
IEC 61156-5	Symmetrical pair cables with transmission characteristics <u>up to 1000 MHz</u> - Horizontal floor wiring - Sectional specification
IEC 61156-6	Symmetrical pair cables with transmission characteristics <u>up to 1000 MHz</u> - Work area wiring - Sectional specification
IEC 61156-7	Symmetrical pair cables with transmission characteristics <u>up to 1200 MHz</u> - Sectional specification for digital and analog communication cables
IEC 61156-8	Symmetrical pair cables with transmission characteristics <u>up to 1200 MHz</u> - Work area wiring - Sectional specification

Cabling Standards Information Technology

ISO/IEC 11801	- Generic cabling for customer premises
SI 1907-1	- Generic cabling for customer premises
TIA/EIA 568-C	- Generic Telecommunications Cabling for Customer Premises
ISO/IEC 24764	- Generic cabling systems for data centres
TIA 942	- Telecommunications Infrastructure Standard for Data Centers
ISO/IEC 15018	- Generic cabling for homes
SI 1907-5	- Generic cabling for homes
ISO/IEC 24702	- Generic cabling- Industrial premises
SI 1907-8	- Generic cabling- Industrial premises

Fire Safety Standards For Cables

IEC 60331	Tests for electric cables under fire conditions - Circuit integrity
IEC 60332-1	Tests on electric and optical fibre cables under fire conditions - test for vertical flame propagation
IEC 60332-3	Tests on electric and optical fibre cables under fire conditions - Part 3-10: Test for vertical flame spread of vertically-mounted bunched wires or cables
IEC 60754-1	Test on gases evolved during combustion of materials from cables - Part 1: Determination of the halogen acid gas content
IEC 60754-2	Test on gases evolved during combustion of materials from cables - Part 2: Determination of acidity (by pH measurement) and conductivity
IEC 61034	Measurement of smoke density of cables burning under defined conditions
UL 910	Standard for Safety Test for Flame-Propagation and Smoke-Density Values for Electrical and Optical-Fiber Cables Used in Spaces Transporting Environmental Air (CMP)
UL 1666	Test for Flame Propagation Height of Electrical and Optical-Fiber Cables Installed Vertically in Shafts (CMR)
UL 1581	Reference Standard for Electrical Wires, Cables, and Flexible Cords (VW-1, CMG, CMX)

Category	Char. Impedance	Frequency Range	Highest Supported Ethernet rate
5	100 Ω	100 MHz	100 MbE
5e	100 Ω	100 MHz	1 GbE
6	100 Ω	250 MHz	1 GbE
6 _A	100 Ω	500 MHz	10 GbE
7	100 Ω	600 MHz	10 GbE
7 _A	100 Ω	1000 MHz	10 GbE up to 40 GbE (optional)

Symbols and Terminology for Symmetrical Pair Cable Construction

Left to/= overall screens

Right to/= per pair

F = Foil Tape Screen (usually aluminum tape)

S = Braid Shield / U = Unshielded / TP= Twisted pairs

U/UTP = No overall shield / Unshielded pairs

U/FTP= No overall shield / Foiled Shielded pairs

F/FTP= Overall Foil Tape Screen / Foiled Shielded pairs

F/UTP= Overall Foil Tape Screen / Unshielded pairs

SF/UTP = Overall copper braid + Foil Tape Screen / Unshielded pairs

S/FTP= Overall Copper Braid Shield / Foiled shielded pairs

Nominal Properties of Solid Copper Conductors

AWG	Diameter	Resistance Ω /km @20°C	Weight kg/km
22	.643	53.15	2.89
23	.574	66.60	2.31
24	.511	84.32	1.82
25	.455	106.3	1.44
26	.404	134.5	1.14
27	.361	168.8	.908
28	.320	214.2	.716

Nominal Properties of Stranded Copper Conductors

AWG	Construction	Diameter mm	Resistance Ω /km @20°C	Weight kg/km
22	7x0.254	.76	53.3	3.3
22	19x0.160	.80	49.5	3.5
24	7x0.203	.61	83.4	2.1
24	19x0.127	.63	78.5	2.2
26	7x0.160	.48	134.1	1.28
26	19x0.102	.50	121.6	1.42
28	7x0.127	.381	212.9	.807
28	19x0.079	.390	208.0	.821





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