# Data cables
## product portfolio

HELLENIC CABLES

Member of CENERGY HOLDINGS

www.hellenic-cables.com

**Data** cables

HELLENIC CABLES

Member of CENERGY HOLDINGS

33 EUR million average annual investments (last 5 years)

Sales in more than 46 countries

Established 1950

5 manufacturing plants in 3 countries

State of the art facilities

# With a wide portfolio of reliable and sustainable cable solutions for international customers, **Hellenic Cables is one of the largest cable producers.**

The Company is globally active in the energy transmission and distribution markets in the renewable energy sources, telecommunications and data transmission, construction and industry sectors, and is distinguished for its strong exports orientation.

Hellenic Cables represents the cable production and marketing sector of Viohalco S.A. The Company started its activities in 1950 as a Viohalco plant and in 1973 was incorporated as an independent subsidiary under the name Hellenic Cables, expanding its production and trade operations. Today, Hellenic Cables consists of Hellenic Cables S.A. which operates two plants in, Greece that produce cables, and plastic and elastomer compounds; the Fulgor S.A. plant in Corinth, Greece, which manufactures power cables, power and fibre optic submarine cables and copper wires; Icme Ecab S.A., a power and telecommunication cable manufacturer in Bucharest, Romania and Lesco Ltd Blagoevgrad, Bulgaria which manufactures wooden reels and pallets.
With a strong focus on development of value added products, such as high and extra-high voltage cables and submarine cables, the Company implements significant investments towards enriching its product portfolio and enhancing its sustainability profile. The Company has implemented a EUR 280 million approximately investment plan since 2011 for the production of high and extra-high voltage submarine and underground cables.

The Company's wide product range extends to PVC, EPR and XLPE insulated power cables (rated up to 500kV), marine and low smoke halogen free cables, fire resistant cables, telecommunication, signal and data cables with copper conductors or optical fibres, as well as fire retardant halogen free plastic and elastomer compounds. Cables are supplied to a variety of international standards, such as VOE, CEI, ICEA, NF, SEN, BS, UL, NEMA, JIS, ASTM, DIN, IEC, ITU and ELDT. Many of the Company's products are certified by BASEC, VOE, IMQ, NF-USE, NETWORK RAIL, KEMA, DNV and UL.

Technical know-how is combined with continual investment in state-of-the-art machinery, to ensure levels of efficiency and quality which meet the strictest standards. The Company's Quality Management System is certified to ISO 9001:2015, its Environmental Management System to ISO 14001:2015 and its Occupational Health and Safety to ISO 45001:2018. Hellenic Cables has the necessary expertise to develop and offer turnkey solutions that meet specific demands of its customers.

Commitment to quality and sustainable development has been a key factor in enabling Hellenic Cables to establish a strong market position internationally. The Company's highly experienced technical and managerial staff have a strong commitment to innovation, technological excellence and outstanding quality, which ensures that users of Hellenic Cables' products have made a reliable and sustainable choice.

Hellenic Cables aims to constantly improve its offering and respond swiftly to changes in customer requirements around the world with reliable and safe products, based on environmentally friendly technologies. At the same time, the Company places strong emphasis on the development of its people and the creation of value for its shareholders, partners and the communities in which it operates. Looking ahead, the Company plans additional investments in technology and innovative cable solutions, as a way of contributing to the creation of a sustainable future for its stakeholders.

Submarine & Power Cables

Rubber & Plastic Compounds

Power Cables

Telecommuni-cation & Data Cables=

# Information technology cabling standards

Data transmission cables are manufactured according to the following basic standards:

- **International standard ISO/IEC 11801:**
  Information technology - Generic cabling for customer premises.
- **European standard EN 50173-1:**
  Information technology - Generic cabling systems.
- **American standard EIA/TIA 568B & 568C2:**
  Commercial Building Telecommunications Cabling Standard.

These basic standards are supported by other, additional standards.

# Ethernet applications

Data cables are used for Ethernet applications, based on **IEEE 802.3 standard** as below:

| Networking technology | Speed | Cable rating (MHz) |
|---|---|---|
| 10Base-T | 10 Mbit/s | 16 MHz |
| 100Base-TX | 100 Mbit/s | 100 MHz |
| 1000Base-T | 1 Gbit/s | 100 MHz |
| 2.5GBASE-T | 2.5 Gbit/s | 100 MHz |
| 5GBASE-T | 5 Gbit/s | 250 MHz |
| 10GBASE-T | 10 Gbit/s | 500 MHz |
| 25GBASE-T | 25 Gbit/s | for usage in data centers only |
| 40GBASE-T | 40 Gbit/s | |





# A connected digital world

Nowadays, IP technology merged media such as telephone, TV and internet resulting in a connected digital world. Requirements for cabling systems are becoming more complex and demanding. The reliability of these networks depends on modernized cabling solutions, tailor-made to customer needs.

HELLENIC CABLES presents a wide portfolio of data cables solutions, from 100-Mbit up to 40-Gigabit Ethernet, which provides office, industrial and home consumers with a sustainable and future-proof network solution.

All HELLENIC CABLES data cables are designed and manufactured in full compliance with international standards and are characterized for their high quality, reliability and performance.

# Performance categories & classes

Data cables are categorized based on class and frequency according to the table below:

| Category | 5e | 6 | $6_A$ | 7 | $7_A$ | $7_{A+}$ | 8 |
|---|---|---|---|---|---|---|---|
| Class | D | E | $E_A$ | F | $F_A$ | $F_{A+}$ | II |
| Frequency | 100 MHz | 250 MHz | 500 MHz | 600 MHz | 1000 MHz | 1200 MHz | 2000 MHz |

# Cable type designations

Data cables are categorized into shielded and unshielded cables, with the following cable designations:

## Unshielded (Unscreened) cables

**U/UTP:** Unscreened cable / Unscreened Twisted Pairs **(known also as UTP)**

## Shielded (Screened) cables

**F/UTP:** Foil screened cable / Unscreened Twisted Pairs **(known also as FTP)**

**SF/UTP:** Braid & Foil screened cable / Unscreened Twisted Pairs **(known also as SFTP)**

**S/FTP:** Braid screened cable / Foil screened Twisted Pairs **(known also as SFTP PiMF)**

**U/FTP:** Unscreened cable / Foil screened Twisted Pairs

**F/FTP:** Foil screened cable / Foil screened Twisted Pairs

# Fire behavior & CPR

The vast majority of data cables are used indoors, so their fire behavior is crucial for fire safety inside buildings. The fire behavior of cables is specified through compliance with international standards:

- **IEC 60332-1-2:** flame retardance (singe cable test)
- **IEC 60332-3-24 Cat C:** fire retardance (bunched cable test)
- **IEC 61034:** smoke density
- **IEC 60754:** halogen acid gas content

From 1st of July 2017, all data cables for indoor usage within European Union need to be CPR (Construction Product Regulation) certified. HELLENIC CABLES has available CPR certificates for all data cables of its portfolio on our website. The new Euroclasses for fire behavior, introduced by CPR, are as below:

| Classes | Classification criteria | | Additional classification for classes B2ca, Cca, Dca | | | |
|---|---|---|---|---|---|---|
| | EN 50399 | EN 60332-1-2 | EN 50399 | EN 61034 | EN 50399 | EN 60754-2 |
| | Non-fire propagation | Non-flame propagation | Smoke production | Smoke transmittance | Burning droplets | Acidity |
| B2ca | x | x | s1 | s1a, s1b | d0 | a1 |
| Cca | x | x | s2 | | d1 | s2 |
| Dca | x | x | s3 | | d2 | a3 |
| Eca | | x | | | | |
| Fca | for outdoor cables only, no testing required | | | | | |

# Power over Ethernet (PoE)

Over the last years, copper data cables are being used for power transmission, apart from data transmission. PoE has been gradually integrated inside communication networks (PoE switches, VOIP telephony, surveillance cameras, etc.) and today active equipment devices can be used to supply power up to 100 watts, as per table below:

| Service | Standard | Max current | Pairs used for power transmission | Max power (source) | Max power (component) |
|---|---|---|---|---|---|
| PoE | IEEE 802.3af (802.3at Type 1) | 350 mA | 2 | 15,4 W | 12,95 W |
| PoE+ | IEEE 802.3at Type 2 | 600 mA | 2 | 30 W | 25,5 W |
| 4PPoE | IEEE 802.3at Type 3 | 600 mA | 4 | 60 W | 51 W |
| 4PPoE | IEEE 802.3at Type 4 | 860 mA | 4 | 90 (100) W | 72 W |

Application of PoE inside networks needs to take into consideration the increased power consumption and heat generation inside the racks.

**Key factors of importance**:

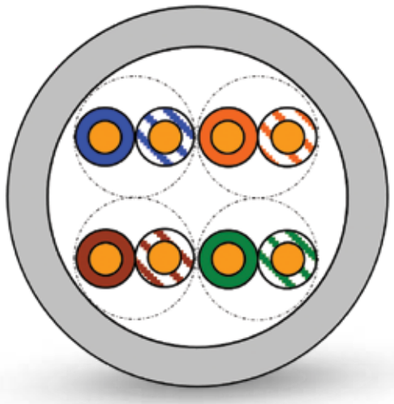
- Shielded cables have better heat dissipation compared to unshielded cables
- Higher copper diameters and smaller cable bundles are more suitable for PoE

HELLENIC CABLES data cables are suitable for PoE+ and 4PPoE applications as long as rest of structured cabling equipment is standards-compliant and proper installation practices are followed.





# Table of Contents



# U/UTP 5e

## 4x2x24 AWG - PVC sheath

Eca | PoE+ | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Outer jacket:** Grey PVC

**Description:**
Data transmission cable U/UTP cat. 5e, tested up to 200MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 1000 Base-T. Comply with IEEE 802.3at POE+ .

**Fire behavior:**
IEC 60332-1-2
Eca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 95 Ohm / km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50±3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 100 MHz |
| Velocity of Propagation | 67% nom. |
| Signal propagation time | < 510ns / 100m |
| Delay difference | < 20ns / 100m |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 4.5 ± 0.2 mm |
| Cable weight | 26 kg/km |

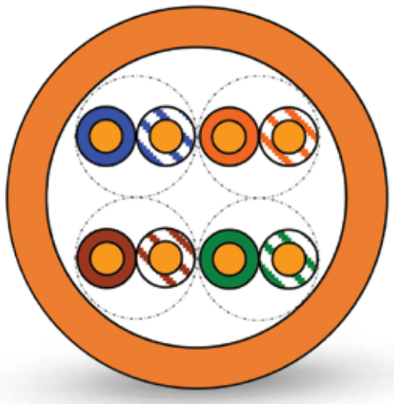
| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 5e max. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 65 | 73 | 64 | 72 | 20.0 | 28 |
| 4 | 4.1 | 3.8 | 56 | 65 | 52 | 60 | 23.0 | 30 |
| 10 | 6.5 | 6.0 | 50 | 60 | 44 | 55 | 25.0 | 30 |
| 16 | 8.3 | 7.7 | 47 | 58 | 40 | 50 | 25.0 | 32 |
| 31.25 | 11.7 | 10.9 | 43 | 52 | 34 | 44 | 23.6 | 30 |
| 62.5 | 17.0 | 15.7 | 38 | 49 | 28 | 41 | 21.5 | 28 |
| 100 | 22.0 | 19.8 | 35 | 42 | 24 | 36 | 20.1 | 25 |
| 155 | - | 25.8 | - | 39 | - | 29 | - | 22 |
| 200 | - | 29.4 | - | 37 | - | 25 | - | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1





**Data** cables



# U/UTP 5e

## 4x2x24 AWG - LSZH sheath

PoE+ | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Outer jacket:** Orange LSZH

**Description:**
Data transmission cable U/UTP cat. 5e, tested up to 200MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 1000 Base-T. Comply with IEEE 802.3at POE+ .

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 95 Ohm / km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50±3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 100 MHz |
| Propagation delay | 67% nom. |
| Delay Skew | < 510ns / 100m |
| Operating Voltage | < 20ns / 100m |

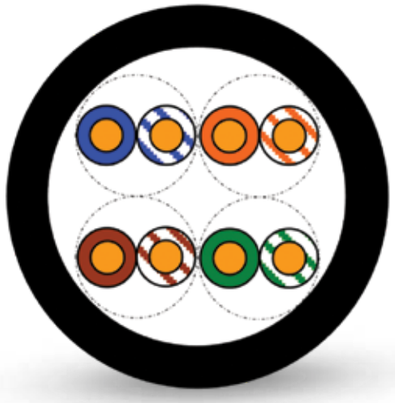
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |
| Fire behaviour | IEC 60332-1-2, IEC 60754-2, IEC 61034 | |

| Dimensions | |
|---|---|
| Outer Diameter | 4.8 ± 0.2 mm |
| Cable weight | 29 (kg/km) |

| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 5e max. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 65 | 73 | 64 | 72 | 20.0 | 28 |
| 4 | 4.1 | 3.8 | 56 | 65 | 52 | 60 | 23.0 | 30 |
| 10 | 6.5 | 6.0 | 50 | 60 | 44 | 55 | 25.0 | 30 |
| 16 | 8.3 | 7.7 | 47 | 58 | 40 | 50 | 25.0 | 32 |
| 31.25 | 11.7 | 10.9 | 43 | 52 | 34 | 44 | 23.6 | 30 |
| 62.5 | 17.0 | 15.7 | 38 | 49 | 28 | 41 | 21.5 | 28 |
| 100 | 22.0 | 19.8 | 35 | 42 | 24 | 36 | 20.1 | 25 |
| 155 | - | 25.8 | - | 39 | - | 29 | - | 22 |
| 200 | - | 29.4 | - | 37 | - | 25 | - | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1

Technical parameters are subject to modifications



# U/UTP 5e

## 4x2x24 AWG - PE sheath

Fca | PoE+ | PE

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair.
4. **Outer jacket:** Black PE

**Description:**
Data transmission cable U/UTP cat. 5e, tested up to 200MHz, with PE sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 1000 Base-T. Comply with IEEE 802.3at POE+ .

**Fire behavior:**
Fca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 95 Ohm / km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 100 MHz |
| Velocity of Propagation | 67% nom. |
| Signal propagation time | < 510ns / 100m |
| Delay difference | < 20ns / 100m |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -30°C to +70°C |
| | Dynamic | -10°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 5.1 ± 0.2 mm |
| Cable weight | 27 kg/km |

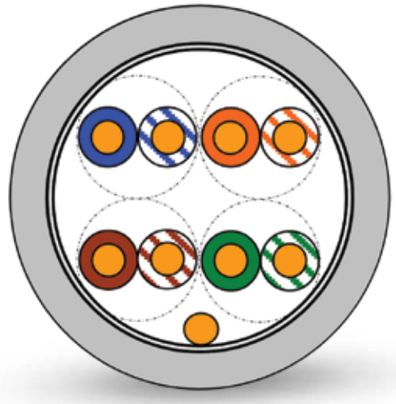
| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 5e max. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 65 | 73 | 64 | 72 | 20.0 | 28 |
| 4 | 4.1 | 3.8 | 56 | 65 | 52 | 60 | 23.0 | 30 |
| 10 | 6.5 | 6.0 | 50 | 60 | 44 | 55 | 25.0 | 30 |
| 16 | 8.3 | 7.7 | 47 | 58 | 40 | 50 | 25.0 | 32 |
| 31.25 | 11.7 | 10.9 | 43 | 52 | 34 | 44 | 23.6 | 30 |
| 62.5 | 17.0 | 15.7 | 38 | 49 | 28 | 41 | 21.5 | 28 |
| 100 | 22.0 | 19.8 | 35 | 42 | 24 | 36 | 20.1 | 25 |
| 155 | - | 25.8 | - | 39 | - | 29 | - | 22 |
| 200 | - | 29.4 | - | 37 | - | 25 | - | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1









# F/UTP 5e

## 4x2x24 AWG - PVC sheath

Eca | PoE+ | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Outer jacket:** Grey PVC

**Description:**
Data transmission cable F/UTP cat. 5e, tested up to 200MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 1000 Base-T. Comply with IEEE 802.3at POE+ .

**Fire behavior:**
IEC 60332-1-2
Eca DoP

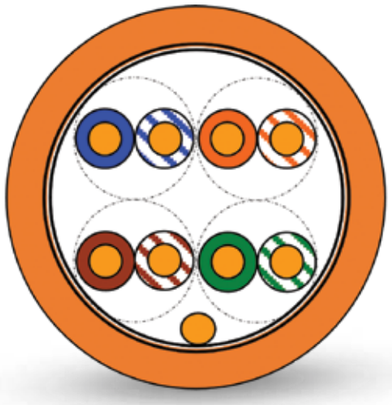
| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 88 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 22% Ω / 1 - 200 MHz; |
| Velocity of Propagation | 70% nom. |
| Signal propagation time | < 480ns / 100m |
| Delay difference | < 20ns / 100m |
| Coupling attenuation | > 55dB (up to 100MHz) |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 6.2 ± 0.2 mm |
| Cable weight | 40 kg/km |

| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 5e max. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 65 | 84 | 64 | 90 | 20.0 | 33 |
| 4 | 4.1 | 3.8 | 56 | 77 | 52 | 77 | 23.0 | 34 |
| 10 | 6.5 | 5.3 | 50 | 67 | 44 | 70 | 25.0 | 33 |
| 16 | 8.3 | 7.5 | 47 | 64 | 40 | 66 | 25.0 | 31 |
| 31.25 | 11.7 | 10.5 | 43 | 61 | 34 | 61 | 23.6 | 30 |
| 62.5 | 17.0 | 14.6 | 38 | 53 | 28 | 52 | 21.5 | 33 |
| 100 | 22.0 | 19.0 | 35 | 43 | 24 | 48 | 20.1 | 24 |
| 155 | - | 25.0 | - | 40 | - | 31 | - | 22 |
| 200 | - | 28.9 | - | 38 | - | 27 | - | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1



# F/UTP 5e

## 4x2x24 AWG - LSZH sheath

PoE+ LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Outer jacket:** Orange LSZH

**Description:**
Data transmission cable F/UTP cat. 5e, tested up to 200MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 1000 Base-T. Comply with IEEE 802.3at POE+ .

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 88 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 22% Ω / 1 - 100 MHz; |
| Velocity of Propagation | 70% nom. |
| Signal propagation time | < 480ns / 100m |
| Delay difference | < 20ns / 100m |
| Coupling attenuation | > 55dB (up to 100MHz) |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 6.2 ± 0.2 mm |
| Cable weight | 42 kg/km |

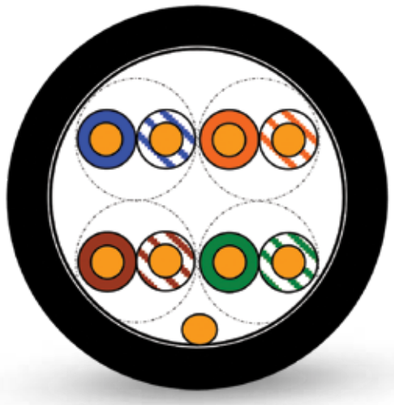
| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 5e max. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 65 | 84 | 64 | 90 | 20.0 | 33 |
| 4 | 4.1 | 3.8 | 56 | 77 | 52 | 77 | 23.0 | 34 |
| 10 | 6.5 | 5.3 | 50 | 67 | 44 | 70 | 25.0 | 33 |
| 16 | 8.3 | 7.5 | 47 | 64 | 40 | 66 | 25.0 | 31 |
| 31.25 | 11.7 | 10.5 | 43 | 61 | 34 | 61 | 23.6 | 30 |
| 62.5 | 17.0 | 14.6 | 38 | 53 | 28 | 52 | 21.5 | 33 |
| 100 | 22.0 | 19.0 | 35 | 43 | 24 | 48 | 20.1 | 24 |
| 155 | - | 25.0 | - | 40 | - | 31 | - | 22 |
| 200 | - | 28.9 | - | 38 | - | 27 | - | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1









# F/UTP 5e

## 4x2x24 AWG - PE sheath

Fca PoE+ PE

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Outer jacket:** Black PE

**Description:**
Data transmission cable F/UTP cat. 5e, tested up to 200MHz, with PE sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 1000 Base-T. Comply with IEEE 802.3at POE+ .

**Fire behavior:**
Fca DoP

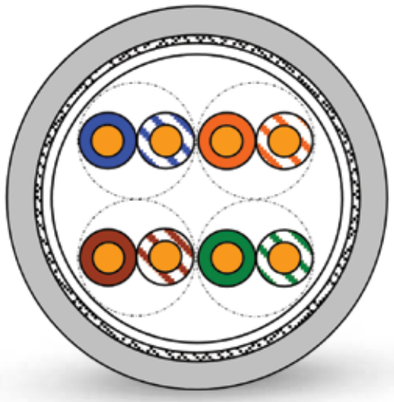
| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 88 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 22% Ω / 1 - 200 MHz; |
| Velocity of Propagation | 70% nom. |
| Signal propagation time | < 480ns / 100m |
| Delay difference | < 20ns / 100m |
| Coupling attenuation | > 55dB (up to 100MHz) |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -30°C to +70°C |
| | Dynamic | -10°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 6.5 ± 0.2 mm |
| Cable weight | 38 kg/km |

| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 5e max. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 65 | 84 | 64 | 90 | 20.0 | 33 |
| 4 | 4.1 | 3.8 | 56 | 77 | 52 | 77 | 23.0 | 34 |
| 10 | 6.5 | 5.3 | 50 | 67 | 44 | 70 | 25.0 | 33 |
| 16 | 8.3 | 7.5 | 47 | 64 | 40 | 66 | 25.0 | 31 |
| 31.25 | 11.7 | 10.5 | 43 | 61 | 34 | 61 | 23.6 | 30 |
| 62.5 | 17.0 | 14.6 | 38 | 53 | 28 | 52 | 21.5 | 33 |
| 100 | 22.0 | 19.0 | 35 | 43 | 24 | 48 | 20.1 | 24 |
| 155 | - | 25.0 | - | 40 | - | 31 | - | 22 |
| 200 | - | 28.9 | - | 38 | - | 27 | - | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1



# SF/UTP 5e

## 4x2x24 AWG - PVC sheath

Eca | PoE+ | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Screen:** overlapped laminated aluminium foil
5. **Additional screen:** braiding of tinned copper wire
6. **Outer jacket:** Grey PVC

**Description:**
Data transmission cable SF/UTP cat. 5e, tested up to 200MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 1000 Base-T. The double screen (foil+braiding) offers the most efficient protection against electromagnetic interference making them suitable for critical applications operating in the presence of strong electromagnetic fields. Comply with IEEE 802.3at POE+ .

**Fire behavior:**
IEC 60332-1-2,
Eca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 88 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 22% Ω / 1 - 100 MHz; |
| Velocity of Propagation | 69% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 75dB (up to 100MHz) |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 6.3 ± 0.2 mm |
| Cable weight | 42 kg/km |

**Basic transmission characteristics (20°C)**

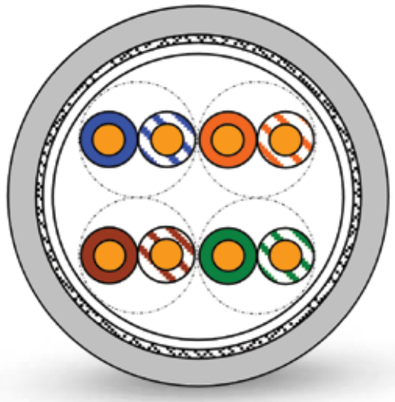
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 5e max. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 65 | 84 | 64 | 90 | 20.0 | 33 |
| 4 | 4.1 | 3.8 | 56 | 77 | 52 | 77 | 23.0 | 34 |
| 10 | 6.5 | 5.3 | 50 | 67 | 44 | 70 | 25.0 | 33 |
| 16 | 8.3 | 7.5 | 47 | 64 | 40 | 66 | 25.0 | 31 |
| 31.25 | 11.7 | 10.5 | 43 | 61 | 34 | 61 | 23.6 | 30 |
| 62.5 | 17.0 | 14.6 | 38 | 53 | 28 | 52 | 21.5 | 33 |
| 100 | 22.0 | 19.0 | 35 | 43 | 24 | 48 | 20.1 | 24 |
| 155 | - | 25.0 | - | 40 | - | 31 | - | 22 |
| 200 | - | 28.9 | - | 38 | - | 27 | - | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1









# SF/UTP 5e

## 4x2x24 AWG - LSZH sheath

Eca | PoE+ | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Outer jacket:** Grey LSZH

**Description:**
Data transmission cable SF/UTP cat. 5e, tested up to 200MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 1000 Base-T. The double screen (foil+braiding) offers the most efficient protection against electromagnetic interference making them suitable for critical applications operating in the presence of strong electromagnetic fields. Comply with IEEE 802.3at POE+ .

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034
Eca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 88 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 22% Ω / 1 - 100 MHz; |
| Velocity of Propagation | 69% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 75dB (up to 100MHz) |

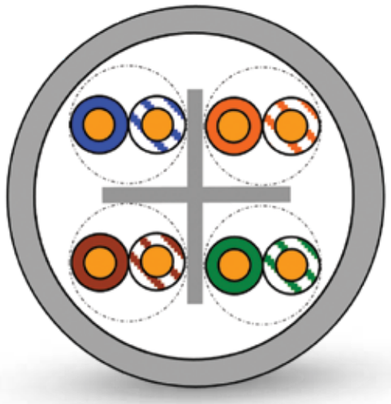
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 6.3 ± 0.2 mm |
| Cable weight | 43 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 5e max. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES | CAT 5e min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 65 | 83 | 64 | 83 | 20.0 | 31 |
| 4 | 4.1 | 3.7 | 56 | 73 | 52 | 71 | 23.0 | 33 |
| 10 | 6.5 | 5.7 | 50 | 71 | 44 | 63 | 25.0 | 37 |
| 16 | 8.3 | 7.5 | 47 | 68 | 40 | 59 | 25.0 | 27 |
| 31.25 | 11.3 | 10.5 | 43 | 63 | 34 | 55 | 23.6 | 38 |
| 62.5 | 17.0 | 15.0 | 38 | 57 | 28 | 49 | 21.5 | 33 |
| 100 | 22.0 | 19.1 | 35 | 49 | 24 | 47 | 20.1 | 28 |
| 155 | - | 23.2 | - | 45 | - | 41 | - | 25 |
| 200 | - | 25.5 | - | 41 | - | 37 | - | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1



# U/UTP 6

## 4x2x24 AWG - PVC sheath

Eca | 4PPoE | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Separating cross element:** MDPE compound
5. **Outer jacket:** Grey PVC

**Description:**
Data transmission cable U/UTP cat. 6, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE802.3) applications up to 1000Base-T. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
Eca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 86 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 2 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 68% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 5.5 ± 0.2 mm |
| Cable weight | 35 kg/km |

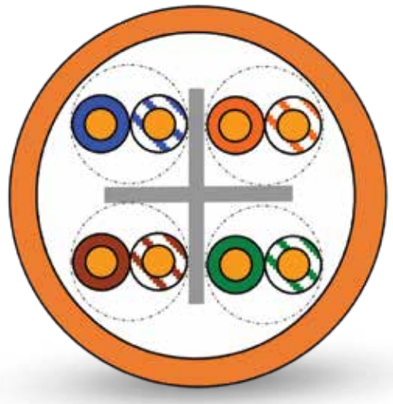
| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 6 max. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES |
| 1 | 2.1 | 1.8 | 75 | 90 | 68 | 82 | 20.0 | 25 |
| 4 | 3.8 | 3.5 | 66 | 80 | 56 | 75 | 23.0 | 30 |
| 10 | 6.0 | 5.6 | 60 | 75 | 48 | 67 | 25.0 | 34 |
| 16 | 7.6 | 7.2 | 57 | 70 | 44 | 65 | 25.0 | 35 |
| 31.25 | 10.7 | 10.1 | 53 | 68 | 38 | 60 | 23.6 | 35 |
| 62.5 | 15.5 | 14.4 | 48 | 62 | 32 | 53 | 21.5 | 33 |
| 100 | 19.9 | 18.4 | 45 | 60 | 28 | 50 | 20.1 | 30 |
| 250 | 33.0 | 29.1 | 39 | 57 | 20 | 44 | 17.3 | 25 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2





**Data** cables



# U/UTP 6

## 4x2x24 AWG - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Separating cross element:** MDPE compound
5. **Outer jacket:** Orange LSZH

**Description:**
Data transmission cable U/UTP cat. 6, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE802.3) applications up to 1000Base-T. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034
Dca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 86 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 2 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 68% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |

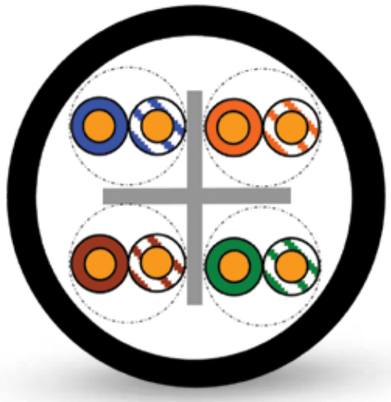
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 5.5 ± 0.2 mm |
| Cable weight | 35 kg/km |

| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 6 max. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES |
| 1 | 2.1 | 1.8 | 75 | 90 | 68 | 82 | 20.0 | 25 |
| 4 | 3.8 | 3.5 | 66 | 80 | 56 | 75 | 23.0 | 30 |
| 10 | 6.0 | 5.6 | 60 | 75 | 48 | 67 | 25.0 | 34 |
| 16 | 7.6 | 7.2 | 57 | 70 | 44 | 65 | 25.0 | 35 |
| 31.25 | 10.7 | 10.1 | 53 | 68 | 38 | 60 | 23.6 | 35 |
| 62.5 | 15.5 | 14.4 | 48 | 62 | 32 | 53 | 21.5 | 33 |
| 100 | 19.9 | 18.4 | 45 | 60 | 28 | 50 | 20.1 | 30 |
| 250 | 33.0 | 29.1 | 39 | 57 | 20 | 44 | 17.3 | 25 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2

Technical parameters are subject to modifications



# U/UTP 6

## 4x2x24 AWG - PE sheath

Fca | 4PPoE | PE

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Separating cross element:** MDPE compound
5. **Outer jacket:** Black PE

**Description:**
Data transmission cable U/UTP cat. 6, with PE sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE802.3) applications up to 1000Base-T. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
Fca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 86 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 2 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 68% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 5.9 ± 0.2 mm |
| Cable weight | 33 kg/km |

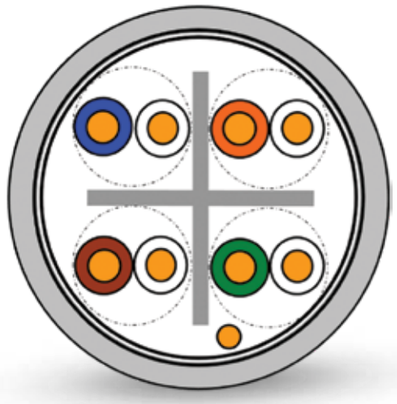
| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 6 max. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES |
| 1 | 2.1 | 1.8 | 75 | 90 | 68 | 86 | 20.0 | 25 |
| 4 | 3.8 | 3.5 | 66 | 80 | 68 | 82 | 20.0 | 25 |
| 10 | 6.0 | 5.6 | 60 | 75 | 56 | 75 | 23.0 | 30 |
| 16 | 7.6 | 7.2 | 57 | 70 | 48 | 67 | 25.0 | 34 |
| 31.25 | 10.7 | 10.1 | 53 | 68 | 44 | 65 | 25.0 | 35 |
| 62.5 | 15.5 | 14.4 | 48 | 62 | 38 | 60 | 23.6 | 35 |
| 100 | 19.9 | 18.4 | 45 | 60 | 32 | 53 | 21.5 | 33 |
| 250 | 33.0 | 29.1 | 39 | 57 | 28 | 50 | 20.1 | 30 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# F/UTP 6

## 4x2x23 AWG - PVC sheath

Eca | 4PPoE | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Separating cross element:** MDPE compound
7. **Outer jacket:** Grey PVC

**Description:**
Data transmission cable F/UTP cat. 6, tested up to 350MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE802.3) applications up to 1000Base-T. The foil screen prevents electromagnetic interference making them suitable for use in industrial environments. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
Eca DoP

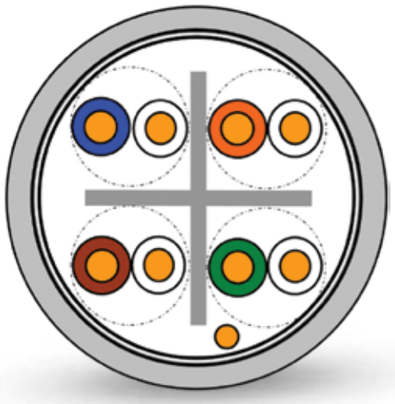
| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 66% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 55 dB @ 30 - 250 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.5 ± 0.2 mm |
| Cable weight | 52 kg/km |

| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 6 max. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 75 | 90 | 68 | 86 | 20.0 | 30 |
| 4 | 3.8 | 3.6 | 66 | 79 | 56 | 79 | 23.0 | 29 |
| 10 | 6.0 | 5.6 | 60 | 76 | 48 | 76 | 25.0 | 33 |
| 16 | 7.6 | 7.0 | 57 | 72 | 44 | 68 | 25.0 | 30 |
| 31.25 | 10.7 | 9.9 | 53 | 67 | 38 | 64 | 23.6 | 29 |
| 62.5 | 15.5 | 14.0 | 48 | 63 | 32 | 58 | 21.5 | 27 |
| 100 | 19.9 | 17.8 | 45 | 62 | 28 | 52 | 20.1 | 26 |
| 250 | 33.0 | 28.4 | 39 | 57 | 20 | 49 | 17.3 | 25 |
| 300 | - | 31.2 | - | 51 | - | 44 | - | 30 |
| 350 | - | 35.3 | - | 46 | - | 41 | - | 25 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# F/UTP 6

## 4x2x23 AWG - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Separating cross element:** MDPE compound
7. **Outer jacket:** grey LSZH

**Description:**
Data transmission cable F/UTP cat. 6, tested up to 350MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE802.3) applications up to 1000Base-T. The foil screen prevents electromagnetic interference making them suitable for use in industrial environments. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 66% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 55 dB @ 30 – 250 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.5 ± 0.2 mm |
| Cable weight | 52 kg/km |

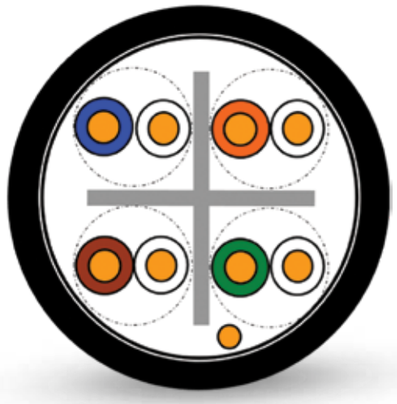
**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6 max. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 75 | 90 | 68 | 86 | 20.0 | 30 |
| 4 | 3.8 | 3.6 | 66 | 79 | 56 | 79 | 23.0 | 29 |
| 10 | 6.0 | 5.6 | 60 | 76 | 48 | 76 | 25.0 | 33 |
| 16 | 7.6 | 7.0 | 57 | 72 | 44 | 68 | 25.0 | 30 |
| 31.25 | 10.7 | 9.9 | 53 | 67 | 38 | 64 | 23.6 | 29 |
| 62.5 | 15.5 | 14.0 | 48 | 63 | 32 | 58 | 21.5 | 27 |
| 100 | 19.9 | 17.8 | 45 | 62 | 28 | 52 | 20.1 | 26 |
| 250 | 33.0 | 28.4 | 39 | 57 | 20 | 49 | 17.3 | 25 |
| 300 | - | 31.2 | - | 51 | - | 44 | - | 30 |
| 350 | - | 35.3 | - | 46 | - | 41 | - | 25 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2







# F/UTP 6

## 4x2x23 AWG - PE sheath

Fca | 4PPoE | PE

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound.
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Separating cross element:** MDPE compound
7. **Outer jacket:** Black PE

**Description:**
Data transmission cable F/UTP cat. 6, tested up to 350MHz, with PE sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE802.3) applications up to 1000Base-T. The foil screen prevents electromagnetic interference making them suitable for use in industrial environments. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
Fca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 74% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 55 dB @ 30 – 250 MHz |

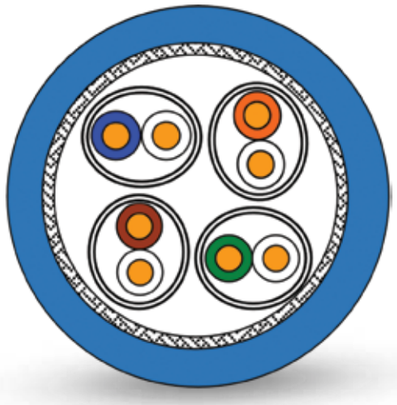
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -30°C to +70°C |
| | Dynamic | -10°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.5 ± 0.2 mm |
| Cable weight | 48 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6 max. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 75 | 90 | 68 | 86 | 20.0 | 30 |
| 4 | 3.8 | 3.6 | 66 | 79 | 56 | 79 | 23.0 | 29 |
| 10 | 6.0 | 5.6 | 60 | 76 | 48 | 76 | 25.0 | 33 |
| 16 | 7.6 | 7.0 | 57 | 72 | 44 | 68 | 25.0 | 30 |
| 31.25 | 10.7 | 9.9 | 53 | 67 | 38 | 64 | 23.6 | 29 |
| 62.5 | 15.5 | 14.0 | 48 | 63 | 32 | 58 | 21.5 | 27 |
| 100 | 19.9 | 17.8 | 45 | 62 | 28 | 52 | 20.1 | 26 |
| 250 | 33.0 | 28.4 | 39 | 57 | 20 | 49 | 17.3 | 25 |
| 300 | - | 31.2 | - | 51 | - | 44 | - | 30 |
| 350 | - | 35.3 | - | 46 | - | 41 | - | 25 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 6

## 4x2x23 AWG - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminium foil
5. **Overall Screen:** braiding of tinned copper wires
6. **Outer jacket:** blue LSZH

**Description:**
Data transmission cable S/FTP cat. 6, tested up to 350MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10 GBase-T and higher. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 75 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 75 dB @ 30 – 250 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.3 ± 0.2 mm |
| Cable weight | 52 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6 max. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES |
| 1 | 2.1 | 1.8 | 75 | 100 | 68 | 105 | 20.0 | 30 |
| 4 | 3.8 | 3.4 | 66 | 100 | 56 | 105 | 23.0 | 27 |
| 10 | 6.0 | 5.4 | 60 | 100 | 48 | 97 | 25.0 | 30 |
| 16 | 7.6 | 6.8 | 57 | 100 | 44 | 93 | 25.0 | 30 |
| 31.25 | 10.7 | 9.6 | 53 | 100 | 38 | 87 | 23.6 | 30 |
| 62.5 | 15.5 | 13.7 | 48 | 100 | 32 | 81 | 21.5 | 30 |
| 100 | 19.9 | 17.4 | 45 | 100 | 28 | 77 | 20.1 | 30 |
| 200 | 29.1 | 25.0 | 41 | 92 | 22 | 71 | 18.0 | 25 |
| 250 | 33.0 | 28.1 | 39 | 90 | 20 | 69 | 17.3 | 24 |
| 300 | - | 31.2 | - | 51 | - | 44 | - | 30 |
| 350 | - | 35.3 | - | 46 | - | 41 | - | 25 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2





# U/FTP 6

## 4x2x23 AWG - LSZH sheath

4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminium foil
5. **Earth wire:** tinned copper wire
6. **Outer jacket:** Orange LSZH

**Description:**
Data transmission cable U/FTP cat. 6, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 18% Ω / 100 - 250 MHz |
| | 100 ± 25% Ω / 250 - 500 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |

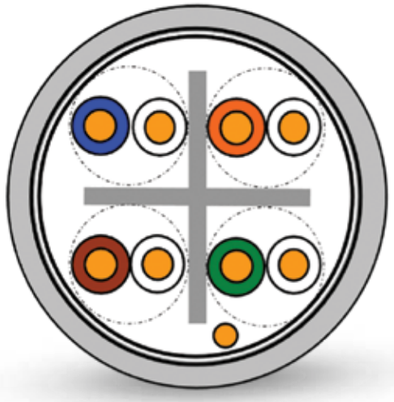
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 6.9 ± 0.2 mm |
| Cable weight | 50 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6 max. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES | CAT 6 min. | HELLENIC CABLES |
| 1 | 2.1 | 1.8 | 75 | 95 | 68 | 86 | 20.0 | 27 |
| 4 | 3.8 | 3.5 | 66 | 90 | 56 | 76 | 23.0 | 26 |
| 10 | 6.0 | 5.6 | 60 | 84 | 48 | 69 | 25.0 | 26 |
| 16 | 7.6 | 6.8 | 57 | 81 | 44 | 63 | 25.0 | 27 |
| 31.25 | 10.7 | 10.0 | 53 | 78 | 38 | 59 | 23.6 | 27 |
| 62.5 | 15.5 | 14.3 | 48 | 71 | 32 | 54 | 21.5 | 25 |
| 100 | 19.9 | 18.1 | 45 | 64 | 28 | 49 | 20.1 | 24 |
| 250 | 33.0 | 29.2 | 39 | 60 | 20 | 44 | 17.3 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# F/UTP 6A

## 4x2x23 AWG - PVC sheath

Eca | 4PPoE | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Separating cross element:** MDPE compound
7. **Outer jacket:** Grey PVC

**Description:**
Data transmission cable F/UTP cat. 6A, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE802.3) applications up to 1000Base-T. The foil screen prevents electromagnetic interference making them suitable for use in industrial environments. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
Eca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 66% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 55 dB @ 30 – 500 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.5 ± 0.2 mm |
| Cable weight | 52 kg/km |

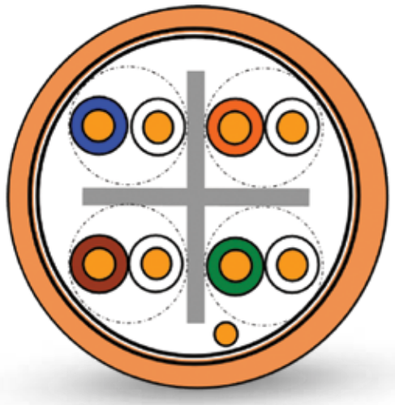
**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6A max. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 75 | 90 | 68 | 86 | 20.0 | 30 |
| 4 | 3.8 | 3.6 | 66 | 79 | 56 | 79 | 23.0 | 29 |
| 10 | 5.9 | 5.6 | 60 | 76 | 48 | 76 | 25.0 | 33 |
| 16 | 7.5 | 7.0 | 57 | 72 | 44 | 68 | 25.0 | 30 |
| 31.25 | 10.5 | 9.9 | 53 | 67 | 38 | 64 | 23.6 | 29 |
| 62.5 | 15.0 | 14.0 | 48 | 63 | 32 | 58 | 21.5 | 27 |
| 100 | 19.1 | 17.8 | 45 | 62 | 28 | 52 | 20.1 | 26 |
| 250 | 31.1 | 28.4 | 39 | 57 | 20 | 49 | 17.3 | 25 |
| 300 | 34.3 | 31.2 | 37 | 51 | 18 | 44 | 16.8 | 30 |
| 500 | 45.3 | 39.1 | 34 | 46 | 14 | 41 | 15.2 | 21 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2







# F/UTP 6A

## 4x2x23 AWG - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Earth wire:** tinned copper wire
5. **Screen:** overlapped laminated aluminium foil
6. **Separating cross element:** MDPE compound
7. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable F/UTP cat. 6A, with LSF sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE802.3) applications up to 1000Base-T. The foil screen prevents electromagnetic interference making them suitable for use in industrial environments. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 50 ± 3 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| | 66% nom. |
| Velocity of Propagation | 100 V max. |
| Operating Voltage | 1000 Volts / 1 minute DC |
| Dielectric Strength | > 55 dB @ 30 – 500 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.5 ± 0.2 mm |
| Cable weight | 52 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6A max. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES |
| 1 | 2.1 | 1.9 | 75 | 90 | 68 | 86 | 20.0 | 30 |
| 4 | 3.8 | 3.6 | 66 | 79 | 56 | 79 | 23.0 | 29 |
| 10 | 5.9 | 5.6 | 60 | 76 | 48 | 76 | 25.0 | 33 |
| 16 | 7.5 | 7.0 | 57 | 72 | 44 | 68 | 25.0 | 30 |
| 31.25 | 10.5 | 9.9 | 53 | 67 | 38 | 64 | 23.6 | 29 |
| 62.5 | 15.0 | 14.0 | 48 | 63 | 32 | 58 | 21.5 | 27 |
| 100 | 19.1 | 17.8 | 45 | 62 | 28 | 52 | 20.1 | 26 |
| 250 | 31.1 | 28.4 | 39 | 57 | 20 | 49 | 17.3 | 25 |
| 300 | 34.3 | 31.2 | 37 | 51 | 18 | 44 | 16.8 | 30 |
| 500 | 45.3 | 39.1 | 34 | 46 | 14 | 41 | 15.2 | 21 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2

# U/FTP 6A

## 4x2x23 AWG - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminium foil
5. **Earth wire:** tinned copper wire
6. **Outer jacket:** Orange LSZH

**Description:**
Data transmission cable U/FTP cat. 6A, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz; |
| | 100 ± 18% Ω / 100 - 250 MHz |
| | 100 ± 25% Ω / 250 - 500 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 6.9 ± 0.2 mm |
| Cable weight | 51 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6A max. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES |
| 1 | 2.1 | 1.8 | 75 | 98 | 68 | 95 | 20.0 | 27 |
| 4 | 3.8 | 3.5 | 66 | 99 | 56 | 98 | 23.0 | 26 |
| 10 | 5.9 | 5.6 | 60 | 102 | 48 | 100 | 25.0 | 26 |
| 16 | 7.5 | 6.8 | 57 | 100 | 44 | 100 | 25.0 | 27 |
| 31.25 | 10.5 | 10.0 | 53 | 106 | 38 | 98 | 23.6 | 27 |
| 62.5 | 15.0 | 14.3 | 48 | 106 | 32 | 95 | 21.5 | 28 |
| 100 | 19.1 | 18.1 | 45 | 103 | 28 | 88 | 20.1 | 26 |
| 250 | 31.1 | 29.2 | 49 | 101 | 20 | 84 | 17.3 | 28 |
| 300 | 34.3 | 32.1 | 38 | 98 | 18 | 77 | 16.8 | 27 |
| 500 | 45.3 | 44.0 | 35 | 97 | 14 | 65 | 15.2 | 25 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2





# F/FTP 6A

## 4x2x23 AWG - LSZH sheath

4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminium foil
5. **Overall screen:** overall aluminium foil
6. **Earth wire:** tinned copper wire
7. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable F/FTP cat. 6A, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 78% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 55 dB @ 30 - 500 MHz |

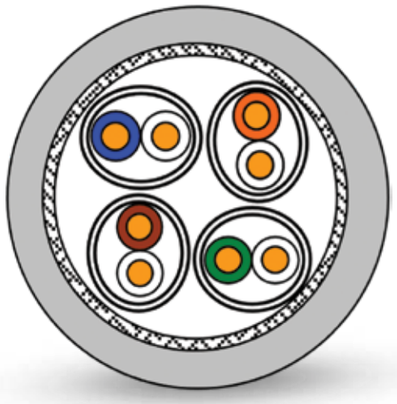
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.2 ± 0.2 mm |
| Cable weight | 53 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6A max. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 75 | 100 | 68 | 105 | 20.0 | 26 |
| 4 | 3.7 | 3.4 | 66 | 100 | 56 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 60 | 100 | 48 | 97 | 25.0 | 30 |
| 16 | 7.4 | 6.8 | 57 | 100 | 44 | 93 | 25.0 | 30 |
| 31.25 | 10.4 | 9.6 | 53 | 100 | 38 | 87 | 23.6 | 30 |
| 62.5 | 14.9 | 13.7 | 48 | 100 | 32 | 81 | 21.5 | 30 |
| 100 | 19.0 | 17.4 | 45 | 100 | 28 | 77 | 20.1 | 30 |
| 200 | 27.5 | 25.0 | 49 | 92 | 20 | 71 | 17.3 | 25 |
| 300 | 34.2 | 30.8 | 38 | 89 | 18 | 67 | 16.8 | 24 |
| 500 | 45.3 | 39.7 | 35 | 85 | 14 | 61 | 15.2 | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 6A

## 4x2x23 AWG - PVC sheath

Eca | 4PPoE | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** Grey PVC

**Description:**
Data transmission cable S/FTP cat. 6A, tested up to 500MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10 GBase-T and higher. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
Eca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 78% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 – 500 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.3 ± 0.2 mm |
| Cable weight | 51 kg/km |

**Basic transmission characteristics (20°C)**

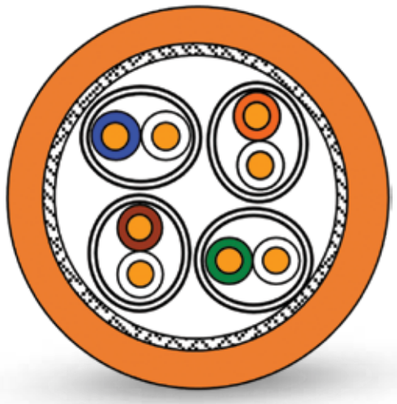
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6A max. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES |
| 1 | 2.1 | 1.8 | 75 | 100 | 68 | 105 | 20.0 | 30 |
| 4 | 3.8 | 3.4 | 66 | 100 | 56 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 60 | 100 | 48 | 97 | 25.0 | 30 |
| 16 | 7.5 | 6.8 | 57 | 100 | 44 | 93 | 25.0 | 30 |
| 31.25 | 10.5 | 9.6 | 53 | 100 | 38 | 87 | 23.6 | 30 |
| 62.5 | 15.0 | 13.7 | 48 | 100 | 32 | 81 | 21.5 | 30 |
| 100 | 19.1 | 17.4 | 45 | 100 | 28 | 77 | 20.1 | 30 |
| 250 | 31.1 | 28.1 | 39 | 90 | 20 | 69 | 17.3 | 24 |
| 300 | 34.3 | 32.1 | 37 | 89 | 18 | 67 | 16.8 | 23 |
| 500 | 45.3 | 40.6 | 34 | 86 | 14 | 65 | 15.2 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# S/FTP 6A

## 4x2x23 AWG - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminium foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** Orange LSZH

**Description:**
Data transmission cable S/FTP cat. 6A, tested up to 500MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10 GBase-T and higher. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 78% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 – 500 MHz |

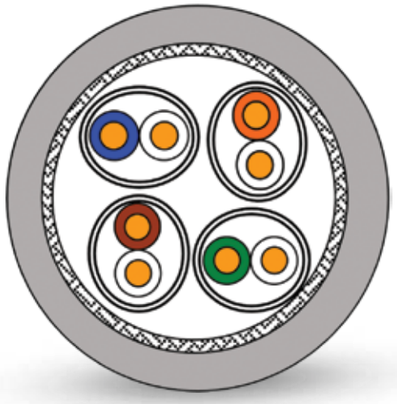
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.3 ± 0.2 mm |
| Cable weight | 51 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 6A max. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES | CAT 6A min. | HELLENIC CABLES |
| 1 | 2.1 | 1.8 | 75 | 100 | 68 | 105 | 20.0 | 30 |
| 4 | 3.8 | 3.4 | 66 | 100 | 56 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 60 | 100 | 48 | 97 | 25.0 | 30 |
| 16 | 7.5 | 6.8 | 57 | 100 | 44 | 93 | 25.0 | 30 |
| 31.25 | 10.5 | 9.6 | 53 | 100 | 38 | 87 | 23.6 | 30 |
| 62.5 | 15.0 | 13.7 | 48 | 100 | 32 | 81 | 21.5 | 30 |
| 100 | 19.1 | 17.4 | 45 | 100 | 28 | 77 | 20.1 | 30 |
| 250 | 31.1 | 28.1 | 39 | 90 | 20 | 69 | 17.3 | 24 |
| 300 | 34.3 | 32.1 | 37 | 89 | 18 | 67 | 16.8 | 23 |
| 500 | 45.3 | 40.6 | 34 | 86 | 14 | 65 | 15.2 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 7

## 4x2x23 AWG - PVC sheath

4PPoE PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** Grey PVC

**Description:**
Data transmission cable S/FTP cat. 7, tested up to 600MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 600 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

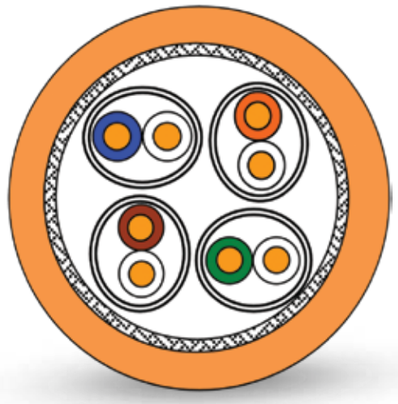
| Dimensions | |
|---|---|
| Outer Diameter | 7.3 ± 0.2 mm |
| Cable weight | 50 kg/km |

| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 7 max. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 100 | 78 | 105 | 20.0 | 26 |
| 4 | 3.7 | 3.4 | 78 | 100 | 78 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 78 | 100 | 74 | 97 | 25.0 | 30 |
| 16 | 7.4 | 6.8 | 78 | 100 | 70 | 93 | 25.0 | 30 |
| 31.25 | 10.4 | 9.6 | 78 | 100 | 64 | 87 | 23.6 | 30 |
| 62.5 | 14.9 | 13.7 | 76 | 100 | 58 | 81 | 21.5 | 30 |
| 100 | 19.0 | 17.4 | 72 | 100 | 54 | 77 | 20.1 | 30 |
| 200 | 27.5 | 25.0 | 68 | 92 | 48 | 71 | 18.0 | 25 |
| 300 | 34.2 | 30.8 | 65 | 89 | 44 | 67 | 17.3 | 24 |
| 600 | 50.1 | 44.4 | 61 | 85 | 38 | 63 | 17.3 | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2







# S/FTP 7

## 4x2x23 AWG - LSZH sheath

Dca 4PPoE LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminium foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable S/FTP cat. 7, tested up to 600MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1
IEC 60754-2
IEC 61034
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 15% Ω / 1 - 100 MHz |
| | 100 ± 18% Ω / 100 - 250 MHz |
| Velocity of Propagation | 78% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 600 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.3 ± 0.2 mm |
| Cable weight | 51 kg/km |

| Basic transmission characteristics (20°C) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
| | CAT 7 max. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 100 | 78 | 105 | 20.0 | 26 |
| 4 | 3.7 | 3.4 | 78 | 100 | 78 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 78 | 100 | 74 | 97 | 25.0 | 30 |
| 16 | 7.4 | 6.8 | 78 | 100 | 70 | 93 | 25.0 | 30 |
| 31.25 | 10.4 | 9.6 | 78 | 100 | 64 | 87 | 23.6 | 30 |
| 62.5 | 14.9 | 13.7 | 76 | 100 | 58 | 81 | 21.5 | 30 |
| 100 | 19.0 | 17.4 | 72 | 100 | 54 | 77 | 20.1 | 30 |
| 200 | 27.5 | 25.0 | 68 | 92 | 48 | 71 | 18.0 | 25 |
| 300 | 34.2 | 30.8 | 65 | 89 | 44 | 67 | 17.3 | 24 |
| 600 | 50.1 | 44.4 | 61 | 85 | 38 | 63 | 17.3 | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2

# S/FTP 7

## 4x2x23 AWG - PE sheath

Fca | 4PPoE | PE

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** black PE

**Description:**
Data transmission cable S/FTP cat. 7, tested up to 600MHz, with PE sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
Fca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 – 600 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -30°C to +70°C |
| | Dynamic | -10°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.6 ± 0.2 mm |
| Cable weight | 48 kg/km |

**Basic transmission characteristics (20°C)**

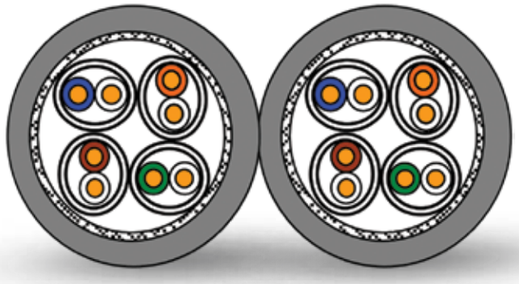
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7 max. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 100 | 78 | 105 | 20.0 | 26 |
| 4 | 3.7 | 3.4 | 78 | 100 | 78 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 78 | 100 | 74 | 97 | 25.0 | 30 |
| 16 | 7.4 | 6.8 | 78 | 100 | 70 | 93 | 25.0 | 30 |
| 31.25 | 10.4 | 9.6 | 78 | 100 | 64 | 87 | 23.6 | 30 |
| 62.5 | 14.9 | 13.7 | 76 | 100 | 58 | 81 | 21.5 | 30 |
| 100 | 19.0 | 17.4 | 72 | 100 | 54 | 77 | 20.1 | 30 |
| 200 | 27.5 | 25.0 | 68 | 92 | 48 | 71 | 18.0 | 25 |
| 300 | 34.2 | 30.8 | 65 | 89 | 44 | 67 | 17.3 | 24 |
| 600 | 50.1 | 44.4 | 61 | 85 | 38 | 63 | 17.3 | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# S/FTP 7

## 2 x (4x2x23 AWG) - PVC sheath

Eca | 4PPoE | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminium foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** grey PVC

**Description:**
Data transmission cable S/FTP cat. 7, tested up to 600MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
Eca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 – 600 MHz |

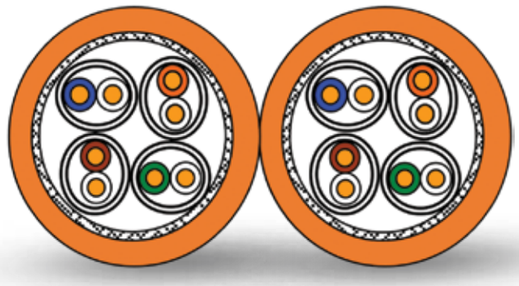
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | -0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | (7.3 x 15) ± 0.2 mm |
| Cable weight | 102 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7 max. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 100 | 78 | 105 | 20.0 | 26 |
| 4 | 3.7 | 3.4 | 78 | 100 | 78 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 78 | 100 | 74 | 97 | 25.0 | 30 |
| 16 | 7.4 | 6.8 | 78 | 100 | 70 | 93 | 25.0 | 30 |
| 31.25 | 10.4 | 9.6 | 78 | 100 | 64 | 87 | 23.6 | 30 |
| 62.5 | 14.9 | 13.7 | 76 | 100 | 58 | 81 | 21.5 | 30 |
| 100 | 19.0 | 17.4 | 72 | 100 | 54 | 77 | 20.1 | 30 |
| 200 | 27.5 | 25.0 | 68 | 92 | 48 | 71 | 18.0 | 25 |
| 300 | 34.2 | 30.8 | 65 | 89 | 44 | 67 | 17.3 | 24 |
| 600 | 50.1 | 44.4 | 61 | 85 | 38 | 63 | 17.3 | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 7

## 2 x (4x2x23 AWG) - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable S/FTP cat. 7, tested up to 600MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1
IEC 60754-2
IEC 61034
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 – 600 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | (7.3 x 15.0) ± 0.2 mm |
| Cable weight | 105 kg/km |

**Basic transmission characteristics (20°C)**

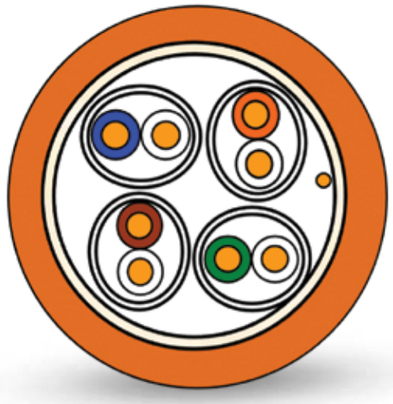
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7 max. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES | CAT 7 min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 100 | 78 | 105 | 20.0 | 26 |
| 4 | 3.7 | 3.4 | 78 | 100 | 78 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 78 | 100 | 74 | 97 | 25.0 | 30 |
| 16 | 7.4 | 6.8 | 78 | 100 | 70 | 93 | 25.0 | 30 |
| 31.25 | 10.4 | 9.6 | 78 | 100 | 64 | 87 | 23.6 | 30 |
| 62.5 | 14.9 | 13.7 | 76 | 100 | 58 | 81 | 21.5 | 30 |
| 100 | 19.0 | 17.4 | 72 | 100 | 54 | 77 | 20.1 | 30 |
| 200 | 27.5 | 25.0 | 68 | 92 | 48 | 71 | 18.0 | 25 |
| 300 | 34.2 | 30.8 | 65 | 89 | 44 | 67 | 17.3 | 24 |
| 600 | 50.1 | 44.4 | 61 | 85 | 38 | 63 | 17.3 | 22 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# F/FTP 7A (1000MHz)

## 4x2x23 AWG - LSZH sheath

4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** overall aluminum foil
6. **Earth wire:** tinned copper wire
7. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable F/FTP cat. 7A, tested up to 1000MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10 GBase-T and higher. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |

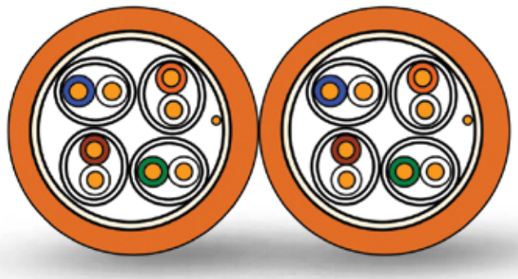
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.4 ± 0.2 mm |
| Cable weight | 55 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 100 | 78 | 105 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 100 | 78 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 78 | 100 | 74 | 97 | 25.0 | 30 |
| 16 | 7.4 | 6.8 | 78 | 100 | 70 | 93 | 25.0 | 30 |
| 31.25 | 10.4 | 9.6 | 78 | 100 | 64 | 87 | 23.6 | 30 |
| 62.5 | 14.9 | 13.7 | 76 | 100 | 58 | 81 | 21.5 | 30 |
| 100 | 19.0 | 17.4 | 72 | 100 | 54 | 77 | 20.1 | 30 |
| 200 | 27.5 | 25.0 | 68 | 92 | 48 | 71 | 18.0 | 25 |
| 300 | 34.2 | 30.8 | 65 | 89 | 44 | 67 | 17.3 | 24 |
| 600 | 50.1 | 44.4 | 61 | 85 | 38 | 61 | 17.3 | 22 |
| 900 | 58.5 | 54.8 | 61 | 80 | 36 | 57 | 15.5 | 21 |
| 1000 | 61.9 | 57.9 | 60 | 78 | 35 | 55 | 15.1 | 21 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# F/FTP 7A (1000MHz)

## 2 x (4x2x23 AWG) - LSZH sheath

4PPoE LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** overall aluminum foil
6. **Earth wire:** tinned copper wire
7. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable F/FTP cat. 7A, tested up to 1000MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10 GBase-T and higher. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | (7.4 x 15.0) ± 0.2 mm |
| Cable weight | 112 kg/km |

**Basic transmission characteristics (20°C)**

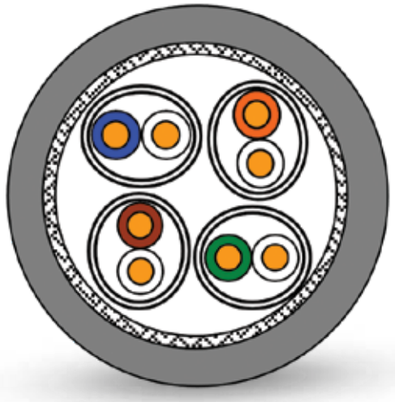
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 100 | 78 | 105 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 100 | 78 | 105 | 23.0 | 27 |
| 10 | 5.9 | 5.4 | 78 | 100 | 74 | 97 | 25.0 | 30 |
| 16 | 7.4 | 6.8 | 78 | 100 | 70 | 93 | 25.0 | 30 |
| 31.25 | 10.4 | 9.6 | 78 | 100 | 64 | 87 | 23.6 | 30 |
| 62.5 | 14.9 | 13.7 | 76 | 100 | 58 | 81 | 21.5 | 30 |
| 100 | 19.0 | 17.4 | 72 | 100 | 54 | 77 | 20.1 | 30 |
| 200 | 27.5 | 25.0 | 68 | 92 | 48 | 71 | 18.0 | 25 |
| 300 | 34.2 | 30.8 | 65 | 89 | 44 | 67 | 17.3 | 24 |
| 600 | 50.1 | 44.4 | 61 | 85 | 38 | 61 | 17.3 | 22 |
| 900 | 58.5 | 54.8 | 61 | 80 | 36 | 57 | 15.5 | 21 |
| 1000 | 61.9 | 57.9 | 60 | 78 | 35 | 55 | 15.1 | 21 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# S/FTP 7A (1000MHz)

## 4x2x23 AWG - PVC sheath

4PPoE PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** grey PVC

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1000MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 1000 MHz |

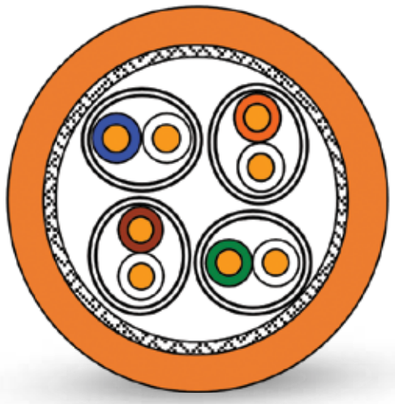
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.3 ± 0.2 mm |
| Cable weight | 51 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 7A (1000MHz)

## 4x2x23 AWG - LSZH sheath

Cca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1000MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034
Cca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 1000 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.2 ± 0.2 mm |
| Cable weight | 50 kg/km |

**Basic transmission characteristics (20°C)**

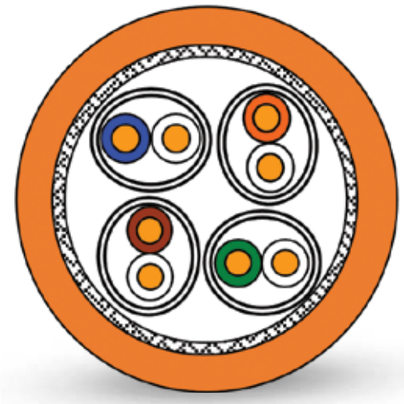
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# S/FTP 7A (1000MHz)

## 4x2x23 AWG - LSZH sheath

B2ca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1000MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-3-24 Cat C
IEC 60754-2
IEC 61034
B2ca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 1000 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.4 ± 0.2 mm |
| Cable weight | 57 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2

# S/FTP 7A (1000MHz)

## 4x2x23 AWG - PE sheath

Fca | 4PPoE | PE

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** black PE

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1000MHz, with PE sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
Fca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 – 1000 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -30°C to +50°C |
| | Dynamic | -10°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.6 ± 0.2 mm |
| Cable weight | 48 kg/km |

**Basic transmission characteristics (20°C)**

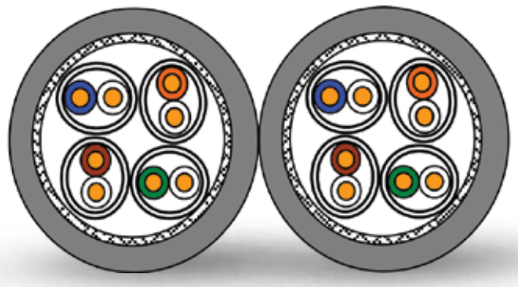
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# S/FTP 7A (1000MHz)

## 2 x (4x2x23 AWG) - PVC sheath

4PPoE | PVC

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** grey PVC

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1000MHz, with PVC sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 – 1000 MHz |

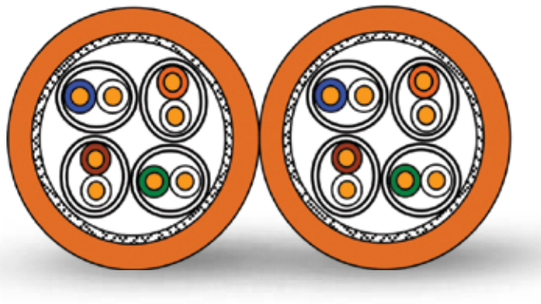
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | (7.3 x 15) ± 0.2 mm |
| Cable weight | 103 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 7A (1000MHz)

## 2 x (4x2x23 AWG) - LSZH sheath

Cca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1000MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-1-2
IEC 60754-2
IEC 61034
Cca DoP

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 1000 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | (7.2 x 14.8) ± 0.2 mm |
| Cable weight | 105 kg/km |

**Basic transmission characteristics (20°C)**

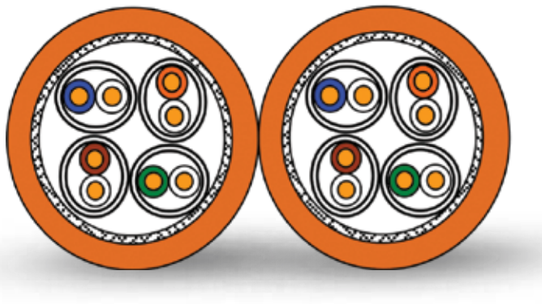
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# S/FTP 7A (1000MHz)

## 2 x (4x2x23 AWG) - LSZH sheath

B2ca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** orange LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1000MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-3-24 Cat C
IEC 60754-2
IEC 61034
B2ca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 80 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 1000 MHz |

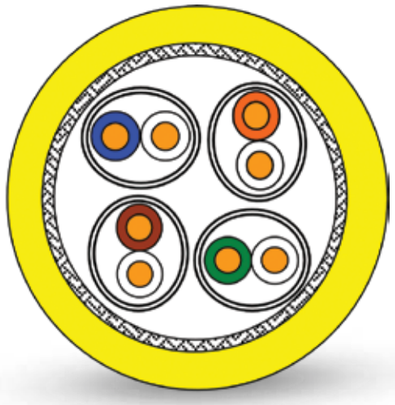
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | (7.5 x 15.4) ± 0.2 mm |
| Cable weight | 108 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 7A (1200MHz)

## 4x2x23 AWG - LSZH sheath

4PPoE LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** yellow LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1200MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-3-24
IEC 60754-2
IEC 61034

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 75 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 1000 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.5 ± 0.2 mm |
| Cable weight | 58 kg/km |

**Basic transmission characteristics (20°C)**

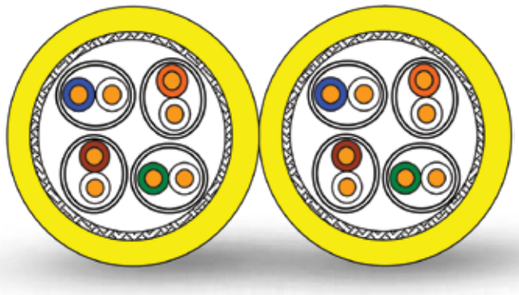
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |
| 1200 | - | 61.3 | - | 84 | - | 51 | - | 21 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# S/FTP 7A (1200MHz)

## 2 x (4x2x23 AWG) - LSZH sheath

4PPoE LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** yellow LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1200MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-3-24
IEC 60754-2
IEC 61034

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 75 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 80 dB @ 30 - 1000 MHz |

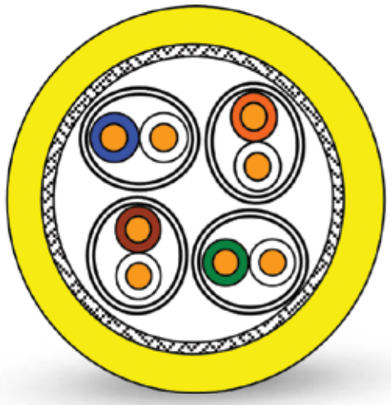
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | (7.5 x 15.4) ± 0.2 mm |
| Cable weight | 118 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |
| 1200 | - | 61.3 | - | 84 | - | 51 | - | 21 |

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 7A (1200MHz)

## 4x2x22 AWG - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** yellow LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1200MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-3-24
IEC 60754-2
IEC 61034
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 70 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 75 dB @ 30 – 1200 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 7.9 ± 0.2 mm |
| Cable weight | 62 kg/km |

**Basic transmission characteristics (20°C)**

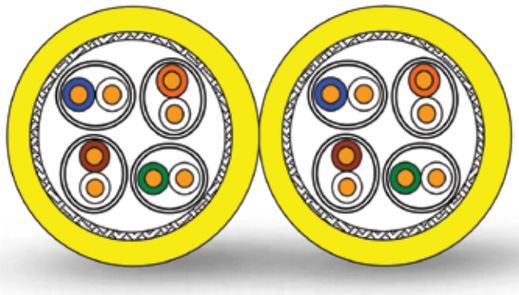
| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |
| 1200 | - | 61.3 | - | 84 | - | 51 | - | 21 |

**Standards:** IEC 61156-7, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2









# S/FTP 7A (1200MHz)

## 2 x (4x2x22 AWG) - LSZH sheath

Dca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** braiding of tinned copper wires
6. **Outer jacket:** yellow LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1200MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE.

**Fire behavior:**
IEC 60332-3-24
IEC 60754-2
IEC 61034
Dca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 70 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 75 dB @ 30 – 1200 MHz |

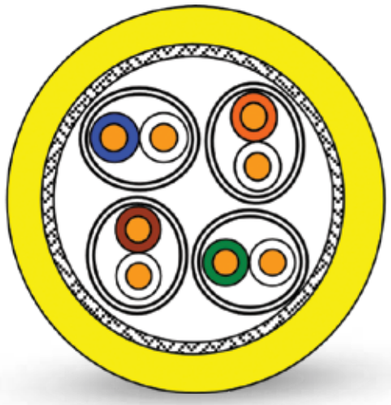
| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | (7.9 x 16.0) ± 0.2 mm |
| Cable weight | 127 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | | NEXT dB | | ELFEXT (dB/100m) | | Return loss dB | |
|---|---|---|---|---|---|---|---|---|
| | CAT 7A max. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES | CAT 7A min. | HELLENIC CABLES |
| 1 | 2.0 | 1.8 | 78 | 103 | 78 | 101 | 20.0 | - |
| 4 | 3.7 | 3.4 | 78 | 103 | 78 | 101 | 23.0 | 29 |
| 10 | 5.9 | 5.3 | 78 | 103 | 75 | 96 | 25.0 | 35 |
| 16 | 7.4 | 6.7 | 78 | 103 | 71 | 91 | 25.0 | 35 |
| 31.25 | 10.4 | 9.5 | 78 | 103 | 65 | 85 | 23.6 | 35 |
| 62.5 | 14.9 | 13.7 | 78 | 103 | 59 | 81 | 21.5 | 34 |
| 100 | 19.0 | 17.2 | 75 | 102 | 55 | 80 | 20.1 | 34 |
| 200 | 27.5 | 24.5 | 71 | 100 | 49 | 80 | 18.0 | 34 |
| 300 | 34.2 | 30.3 | 68 | 96 | 46 | 75 | 17.3 | 32 |
| 600 | 50.1 | 43.2 | 64 | 92 | 40 | 71 | 17.3 | 31 |
| 900 | 58.5 | 53.5 | 61 | 90 | 36 | 60 | 15.5 | 25 |
| 1000 | 61.9 | 56.8 | 60 | 89 | 35 | 55 | 15.1 | 23 |
| 1200 | - | 61.3 | - | 84 | - | 51 | - | 21 |

**Standards:** IEC 61156-7, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



# S/FTP 7A (1600MHz)

## 4x2x22 AWG - LSZH sheath

Cca | 4PPoE | LSZH

1. **Conductor: 100% copper** solid wire
2. **Insulation:** PE compound
3. **Twisting:** 2 cores twisted in a pair
4. **Individual Screen:** overlapped laminated aluminum foil
5. **Overall screen:** Braiding of tinned copper wires
6. **Outer jacket:** yellow LSZH

**Description:**
Data transmission cable S/FTP cat. 7A, tested up to 1600MHz, with LSZH sheath.

**Application:**
Installation cables for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10 GBase-T and higher. The copper braid overall screen offers protection against electromagnetic interference as well as mechanical reinforcement. Comply with IEEE 802.3bt 4PPoE..

**Fire behavior:**
IEC 60332-3-24
IEC 60754-2
IEC 61034
Cca CPR

| Basic electrical characteristics (20°C) | |
|---|---|
| DC Conductor Resistance | ≤ 65 Ohm/km |
| Insulation Resistance | ≥ 5000 MΩ-Km / 500 VDC |
| Mutual Capacitance | 43 nF / km / 1.0 KHz |
| Capacitance pair to ground | ≤ 1500 pF / km / 1.0 KHz |
| Characteristic Impedance | 100 ± 7% Ω / 1 - 100 MHz; |
| | 100 ± 10% Ω / 100 - 250 MHz |
| | 100 ± 15% Ω / 250 - 600 MHz |
| Velocity of Propagation | 79% nom. |
| Operating Voltage | 100 V max. |
| Dielectric Strength | 1000 Volts / 1 minute DC |
| Coupling attenuation | > 75 dB @ 30 – 1000 MHz |

| Operating conditions | | |
|---|---|---|
| Temperature range | Static | -20°C to +60°C |
| | Dynamic | 0°C to +50°C |
| Bending radius | Static | 4 x D |
| | Dynamic | 8 x D |

| Dimensions | |
|---|---|
| Outer Diameter | 8.0 ± 0.2 mm |
| Cable weight | 70 kg/km |

**Basic transmission characteristics (20°C)**

| Frequency MHz | Attenuation dB/100m | NEXT dB | ELFEXT dB/100m | Return loss dB |
|---|---|---|---|---|
| 4 | 3.4 | 110 | 105 | 30 |
| 10 | 5.1 | 110 | 105 | 33 |
| 16 | 6.5 | 110 | 105 | 37 |
| 31.25 | 9.4 | 110 | 105 | 35 |
| 62.5 | 13.4 | 110 | 103 | 31 |
| 100 | 17.1 | 110 | 103 | 31 |
| 200 | 24.3 | 110 | 101 | 33 |
| 300 | 29.9 | 110 | 98 | 33 |
| 600 | 43.0 | 106 | 93 | 32 |
| 1000 | 56.5 | 105 | 91 | 27 |
| 1200 | 62.8 | 100 | 86 | 23 |
| 1500* | 70.1 | 95 | 85 | 22 |
| 1600* | 77.2 | 94 | 81 | 21 |

* Frequency range > 1200 MHz only for information

**Standards:** IEC 61156-5, ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2





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