

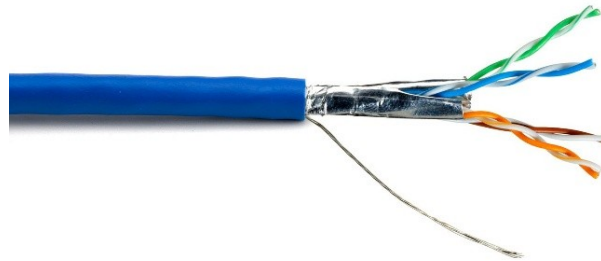


Cat.7 F/UTP LSZH AWG23/1



LAN cable with 4 pairs,
category 7 , with cable core screen

Standards: ISO/IEC 11801, IEC 61156-5
EN 50173-1, EN 50288-11-1; EIA/TIA 568-B



Ambient installation T°
C range
0 + 50 °C



Operating temp.
-20 + 60 °C



Storage temperature
range
-20 + 70 °C



Flame retardant
IEC 60332-1



Smoke density

Application

Category 7 F/UTP LSZH cable is a **shielded high-performance twisted-pair cable** designed for high-speed Ethernet networks and data transmission in environments requiring enhanced electromagnetic interference (EMI) protection and low-smoke, halogen-free fire performance. It is used for: High-speed LAN networks, Enterprise office networks, Data centers, Server rooms, Industrial Ethernet, Building backbone cabling, Horizontal structured cabling systems, Smart buildings, Building Management Systems (BMS), Security and CCTV IP networks, IP telephony (VoIP), Wireless Access Point (Wi-Fi 6 / Wi-Fi 6E / Wi-Fi 7) connections, Audio/Video over IP (AV over IP) and Automation and control networks.

Also is suitable for: Commercial buildings, Hospitals, Airports, Railway stations, Hotels, Shopping malls, Universities and schools, Government buildings, Industrial facilities and Data centers.

Category 7 F/UTP LSZH Supports transmission frequencies up to **600 MHz** (typical for Category 7), **10 Gigabit Ethernet (10GBASE-T)** up to **100 m**, Overall **foil shield (F/UTP)** provides protection against electromagnetic interference (EMI). **LSZH (Low Smoke Zero Halogen)** outer sheath minimizes smoke and eliminates corrosive halogen gases in case of fire. Suitable for fixed indoor installation. Compatible with **PoE, PoE+, and PoE++ (IEEE 802.3af/at/bt)**, subject to cable conductor size and installation conditions.

Temperature limit conditions:

- Ambient installation temperature, range: from 0°C to +50°C
- Operating temperature, range: from -20 °C to +60°C

Mechanical properties:

Minimum internal bending radius:
(D = cable outer diameter)

- No load 4xD
- during installation (under load): 8xD
- packaging: 305m in box, 500m on wooden reel

Flame resistance:

- the cable is self-extinguishing according to IEC 60332-1 / EN 60332-1
- LSHF version additionally:
 - halogen-free according to IEC 60754-2; IEC 60332-1
 - non-corrosive combustion gases according to IEC 60754-2
 - minimal smoke emission according to IEC 61034-2

Cable construction

Conductor category class:	1 = solid conductor
Conductor material	Pure copper
AWG size	23/1
Insulation material (HDPE)	Skin-Foam-Skin or Polyethylene
Nominal diameter through insulation	1.32 mm
Twisting:	2 cores in a pair
Cable lay up:	4 pairs to the core
	PE cross separator (spline)
Screen	Aluminum Polyester Tape
Sheath:	LSZH
Outer diameter:	7.4-7.6 mm
Sheath color:	Blue (RAL 5012)

Conductor color marking:

- 1st suit: blue/white with blue line
- 2nd suit: orange/white with orange line
- 3rd suit: green/white with green line
- 4th suit: brown/white with brown line

Electrical characteristics at 20°C ± 5°C

Main characteristic impedance at 100 MHz	100±5 Ω
Resistance unbalance , max.	% 2
Loop resistance at 20°C , max.	(Ω/km) ≤ 154
Test voltage (DC,1min)	v 1000
Operating voltage, max.	v 125
Capacitance unbalance	(pF/km) ≤ 1500
Capacitance at 800 Hz	nF/km 43

Transmission characteristics

Propagation delay (max. 100MHz)

(ns/100m) ≤ 427

Delay skew

(ns/100m) ≤ 12

Nominal velocity of propagation

approx. 79 %

Technical data

Cable type	Number of pairs (23AWG)	insulation diameter mm	Outer diameter mm	weight kg/km
Cat 7 F/UTP LSZH	4	1.32	7.4-7.6	61-64

Electrical performance

f (MHz)	Attenuation (dB/100 m)	NEXT (dB)	PS-NEXT (dB)	ACR (dB/100m)	PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)	Return loss (dB)
1	2	100	97	98	95	105	102	-
4	3.6	100	97	97	94	105	102	27
10	5.6	100	97	95	92	97	94	30
20	7.9	100	97	92	89	91	88	30
30	9.7	100	97	90	87	87	84	30
100	18.0	100	97	83	80	77	74	30
150	22.4	94	91	72	69	73	70	26
200	26.0	92	89	67	64	71	68	25
250	29.4	90	87	62	59	69	66	24
300	32.5	89	86	58	55	67	64	24
400	38.0	88	85	52	49	65	62	23
500	43.0	86	83	46	43	63	60	22
600	47.6	85	82	40	37	61	58	22



Technical Data Sheet