

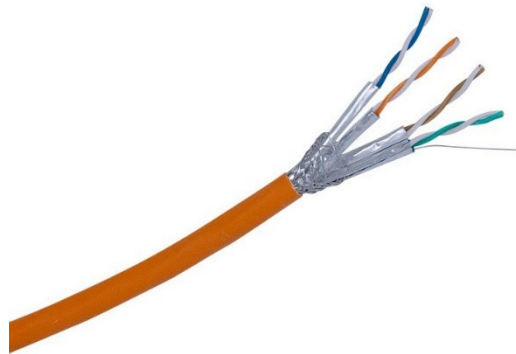


Cat.7A S/FTP AWG23/1

LAN cable with 4 pairs,
category 7A , Screened/foiled
Twisted pairs



Standards: ISO/IEC 11801, IEC 61156-5
EN 50173-1, EN 50288-10-1; 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

CAT 7A S/FTP (Screened/Foiled Twisted Pair) cable is a premium shielded LAN cable designed for high-speed data transmission in environments with high electromagnetic interference (EMI). Each twisted pair is individually foil-shielded, and the entire cable is protected by an overall braided shield, providing excellent noise immunity. It supports frequencies up to 1,000 MHz (Class FA).

It is used in: Data centers and server rooms, Enterprise LAN and campus backbone networks, Industrial Ethernet and factory automation, Smart buildings and building automation systems (BMS), High-speed office networks, Financial institutions and mission-critical IT infrastructure, Hospitals and medical facilities, Airports, railway stations, and transportation systems, Broadcast, multimedia, and broadband video transmission, IP surveillance (CCTV), VoIP telephone systems, Wi-Fi 6 / Wi-Fi 6E / Wi-Fi 7 access point backhaul, Power over Ethernet (PoE, PoE+, PoE++) devices such as: IP cameras, Wireless access points, IP phones, Network switches, Access control devices.

Main advantages

- Excellent protection against EMI/RFI
- Very low crosstalk (NEXT and Alien Crosstalk)
- High bandwidth (up to 1,000 MHz)
- Reliable 10 Gigabit Ethernet performance over 100 m
- Supports high-power PoE applications
- Suitable for installations in electrically noisy environments, such as factories, power plants, and automation systems.

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:

Conductor material

AWG size

Insulation material

Nominal diameter through insulation

Twisting:

Pair screen

Cable lay up:

Screen material

Screen over stranding

Sheath:

Outer diameter:

Sheath color:

Violet (RAL 4001)

1 = solid conductor

Pure copper

23/1

Skin-Foam-Skin PE

1.32 mm

2 cores in a pair

Aluminum Polyester Tape

4 pairs to the core

Tinned copper

Braiding

LSZH

7.8-8.0 mm

Orange (RAL 2003);

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

Resistance unbalance , max.

Loop resistance at 20°C , max.

Test voltage (DC,1min)

Operating voltage, max.

100±5 Ω

≤ % 2

(Ω/km) ≤ 154

v 1000

v 125

Capacitance unbalance
Capacitance at 800 Hz

(pF/km) ≤ 1500
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	Tensile force N
Cat 7 S/FTP LSZH	4	1.32	7.8-8.0	65-68	100

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	1.8	100	97	98	95	105	102	-
4	3.4	100	97	97	94	105	102	27
10	5.1	100	97	95	92	96	93	30
16	6.5	100	97	94	91	92	89	30
20	7.3	100	97	93	90	91	88	30
31.25	9.1	100	97	91	88	86	83	30
62.5	13.2	100	97	87	84	81	78	30
100	17.1	100	97	83	80	76	73	30
125	19.2	96	93	77	74	74	71	26
155.5	21.7	95	92	72	69	72	69	26
175	23.1	94	91	71	68	71	68	25
200	25.1	93	90	68	65	70	67	25
250	28.3	92	89	64	61	69	66	24
300	31.5	90	87	59	56	67	64	24
450	38.2	87	84	49	46	64	61	23
600	44.8	85	82	40	37	62	59	22



Technical Data Sheet