



## Cat.8.2 S/FTP AWG22/1

LAN cable with 4 pairs,  
category 8.2 , with shielded pairs  
and overall braiding



Standards: ISO/IEC 11801, IEC 61156-5  
EN 50173-1, EN 50288-9-1; IEC61156-5



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 8.2 (Cat 8.2) cable, part of the ISO/IEC 11801 standards, is designed for high-speed data transmission up to 40 Gbps, primarily used in data centers. It uses S/FTP construction (Screened/Foiled Twisted Pair), featuring individual pair shielding and an overall braid shield. Cat 8.2 is designed for frequencies up to 2000 MHz and is backwards compatible with Class FA and Class F (Cat 7A/7) cabling, often using TERA or GG45 connectors instead of RJ45. The 4-pair simplex installation cable with 8 copper wires AWG22 is suitable for the connection of sockets, patch fields and modules, also with IDC technology, for installation in buildings, in ducts and flush-mounted.

Cat 8.2 S/FTP (Screened Foiled Twisted Pair) is a high-performance, 2000 MHz copper cable designed for 25/40 Gbps data transmission over short distances (up to 30m). It is primarily used in data centers for switch-to-server connections and high-density enterprise network infrastructure, supporting PoE++. Optimized for 25GBase-T and 40GBase-T, specifically in backbones and server rooms. S/FTP construction (individual pair foil + overall braid) ensures maximum protection against

interference, critical for high-speed performance. Often featuring AWG22 conductors for high-frequency bandwidth up to 2000 MHz. Ideal for horizontal cabling in buildings, typically limited to a 30-meter maximum length for 40Gbps speeds. Frequently uses LSZH (Low Smoke Zero Halogen) materials for fire safety in data environments

**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: 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	22/1
Insulation material	Skin-Foam-Skin PE
Nominal diameter through insulation	1.45 mm
Twisting:	2 cores in a pair
Screen over stranding elements	Aluminum polyester foil
Cable lay up:	4 pairs to the core
Screen material	Tinned copper
Screen over stranding	Braiding
Sheath material:	LSHF (LSZH, FRNC)
Outer diameter:	8.3-8.5 mm
Sheath color:	Green (RAL 6018); Violet (RAL 4001)

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 1 - 2000 MHz	100±15 Ω
Resistance unbalance , max.	≤ % 2
Insulation resistance min.	(GΩxkm) 5
Loop resistance at 20°C , max.	(Ω/km) ≤ 110
Test voltage ( DC,1min)	v 1000
Operating voltage, max.	v 72
Capacitance unbalance	(pF/km) ≤ 1500
Capacitance at 1000 Hz	pF/30 m 99

Phase delay max.	nS/130m 13.5
Transfer impedance at 10 MHz	(MΩ/m) 5
<b>Transmission characteristics</b>	
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 8.2 S/FTP LSZH	4	1.45	8.3-8.5	83-85	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	1.7	100	97	98	95	100	97	23
4	3.2	100	97	97	94	97	94	25
10	5.1	100	97	95	92	95	92	25
16	6.5	100	97	94	91	90	87	30
20	7.1	100	97	93	90	90	87	30
31.2	8.9	100	97	91	88	90	87	29
62.5	12.7	100	97	87	84	90	87	27
100	16	100	97	84	81	90	87	25
155	20	96	93	76	73	88	85	24
200	22.8	93	90	70	67	84	81	23
250	25.5	92	88	66	63	83	80	22
300	28	90	87	62	59	81	78	22
600	40	86	83	46	43	80	77	20
1000	52.1	82	79	30	27	75	72	20
1200	57.2	81	78	24	21	73	70	19
1500	64.3	80	77	16	13	66	63	18
1600	68.4	79	76	11	8	65	62	18
2000	78.1	75	75	-3	-6	59	56	18



The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.