

Cat.5e U/UTP AWG24/1

LAN cable with 4 pairs,
category 5, without screen



Standards: ISO/IEC 11801, IEC 61156-5
EN 50173-1, EN 50288-6-1; 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

The 4-pair high performance cable with 8 copper wires AWG24 is suitable for connecting sockets, patch fields and modules, also with IDC technology, for laying in buildings, in ducts and flush-mounted. Category 5e supports a frequency range of up to 100 MHz and is designed for transmission speeds of up to 1 gigabit per second (Gigabit Ethernet). The cable is suitable for operating PoE and PoE+ over a channel length of up to 100 m. It is also suitable for following application: Telephony, Ethernet, Fast Ethernet and Gigabit Ethernet, 10BaseT, 1000BaseT, 1GBaseT. Cat 5e cables are suitable for basic voice & data installations.

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)

- Installed (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 50339
- LSHF version additionally:
 - halogen-free according to IEC 60754-1
 - 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	24/1
Insulation material	Polyethylene (HDPE)
Nominal diameter through insulation	0.9 mm
Twisting:	2 cores in a pair
Cable lay up:	4 pairs to the core
Sheath:	PVC or LSHF (LSZH,FRNC)
Outer diameter:	5.1-5.3 mm
Sheath color:	Grey(RAL 7035)

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

Characteristic impedance at 100 MHz	(Ω) 100 ± 5
Resistance unbalance , max.	% 2
Loop resistance at 20°C , max.	(Ω /km) ≤ 192
Test voltage (DC,1min)	v 1000
Operating voltage, max.	v 125
Capacitance unbalance	(pF/km) ≤ 1500
Capacitance at 800 Hz	nF/km 48

Transmission characteristics

Propagation delay (max. 100MHz)	(ns/100m) ≤ 535
Delay skew	(ns/100m) ≤ 20
Nominal propagation speed	ca. 67 %

Technical data

Cable type	Number of pairs (24AWG)	insulation diameter mm	Outer diameter mm	weight kg/km	Tensile force N
Cat 5e U/UTP PVC	4	0.9	6.0-6.4	30-32	100
Cat 5e U/UTP LSHF	4	0.9	6.0-6.2	30-32	100
Cat 5e U/UTP PE	4	0.9	6.0-6.3	30-33	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	2	69.2	66.2	67.2	64.2	63.8	60.8	20
4	4.1	58.3	55.3	54.2	51.2	52.6	49.6	23
10	6.5	50.3	47.3	43.8	40.8	44.8	41.8	25
16	8.2	48.2	45.2	40	37	37.4	34.4	25
20	9.3	47.6	44.6	38.3	35.3	34.3	31.3	25
31.25	11.7	43.9	40.9	32.2	29.2	31.9	28.9	24
62.5	17	41.7	38.7	24.7	21.7	26.5	23.5	22
100	22	39.8	36.8	17.8	14.8	22.7	19.7	20
125	23.1	38.6	35.6	15.5	12.5	19.8	16.8	19
155.5	24.2	37	34	12.8	9.8	18.3	15.3	
175	25.8	36.2	33.2	10.4	7.4	17.4	14.4	
200	27.5	34.1	31.1	6.6	3.6	16.3	13.3	
250	29.3	33	30	3.7	0.7	15.7	12.7	



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.