



HALLEY CABLES

Category 7A(+) S/FTP 100 Ohm

Data and computer cables

Horizontal LAN cable Tested up to 1000, 1200, 1500 MHz



Construction, tests, and technical data:

4 color-coded, individually foil shielded twisted pairs cabled together, overall shielded with a tin-coated copper braid and overall jacketed. Siamese (Figure-8) cables are made of two identical 4-pair cables connected in a zip-cord formation, one cable identified with a longitudinal rib.

Basic Conductor	: solid, 22 AWG, bare annealed copper.
Insulation	: polyolefin.
Number of insulated conductors	: 8, twisted in 4 pairs. (8 pairs in FIG-8 cables).
Color Code of Pairs	: Blue x White, Orange x White, Green x White, Brown x White.
Individual pair shield	: Polyester-aluminum foil (foil face out), providing 100% coverage.
Overall shield	: tin coated copper braid, laid in close contact over the inner foils.
Outer Jacket	: LSZH Halogen free flame retardant or PVC compound.
Standard Jacket Color	: light Gray RAL 7035. Other colors available upon request.
Standard Surface Marking	: cable description, Meter mark and Batch Number.
Pulling force	: 50 N/mm ² max.
Short Term Bend Radius	: 8 x OD mm.
Long Term Bend Radius	: 4 x OD mm.
Storage temperature	: -20° to +80° C.
Operating temperature	: -20° to +60° C.
Installation temperature	: 0° to +50° C.
Flame Test	: IEC 60332-1, IEC 60332-3-24 or IEC 60332-3-25.
Conductor Size Test	: UL 444.
LSZH cables gas & smoke tests	: IEC 60754 (gas) & IEC 61034 (smoke).
Characteristic Impedance	: 100±5 Ohm @ 1-1000 MHz, @ 1-1200 MHz, @ 1-1500 MHz.
DC Resistance	: 93.0 Ohm/Km max.
Resistance unbalance	: 2% max.
Capacitance	: 45 pF/m nom. @ 1 KHz.
Cap. Unbalance (wire to ground)	: 1500 pF/Km max. @ 1 KHz.
Voltage rating	: 72 Vdc max.
Dielectric strength	: 700 Volts/1 minute min rms.
Velocity of Propagation (NVP)	: 77-80% @ 1-1000 MHz, @ 1-1200 MHz, @ 1-1500 MHz.
Propagation delay	: 534+36/f1/2 nS/100m max. @ 1-1000 MHz, @ 1-1200 MHz, @ 1-1500 MHz.
Delay Skew	: 25 nS/100m max @ 1-1000 MHz, @ 1-1200 MHz, @ 1-1500 MHz.
Insulation Resistance	: 5000 MegaOhm•Km min. @ 500 Vdc.
Coupling attenuation	: 85 dB min @ 30-100 MHz 85-20Log(f/100) @100-1000 MHz.
Screening Attenuation	: 60 dB min @ 30-1000 MHz.
Transfer Impedance	: 10 mOhm/m max @ 1-30 MHz 30 MOhm/m max @ 30-100 MHz.

Category 7A cables are tested and verified for full compliance with the following standards:

IEC 61156-5 (for ISO/IEC-11801 2nd Edition).





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Applications:

This horizontal LAN cable series consists of 100 Ohm impedance, 4-pair and 8-pair S/FTP cables for horizontal installations in local area networks (LANs). All cables fully conform to and provide a substantial margin above all Category 7A requirements of IEC 61156-5 (Specified in ISO/IEC 11801) and are tested up to 1000, 1200 and 1500 MHz.

Category 7A+ S/FTP 100 Ohm Horizontal cables support all presently available and future LAN applications, including the following protocols:

- Broadband Digital and Analog CATV signals up to 1500 MHz;
- SOHO and multiple simultaneous applications on all 4 pairs;
- 10GBASE-T 10 Gigabit Ethernet;
- 1000BASE-T 1 Gigabit Ethernet;
- ATM 155;
- TP-PMD;
- 100BASE-T "Fast Ethernet";
- 100BASE-T2;
- 100BASE-T4;
- ISALAN;
- 100BASE-TX;
- Token Ring 100 Mbps;
- ATM 52;
- ATM 25;
- 10BASE-T Ethernet;
- Token Ring 4 Mbps and 16 Mbps;
- Broadband and Baseband Video;
- ISDN Basic and Primary Access;
- 1BASE-5 Starlan;
- ITU V.21 and X.11.

Cable Features:

- Exceptional transmission properties - suitable for 10GBE applications on 100m channels.
- Testing every reel of cable prior to shipment - providing the highest degree of quality assurance.
- Exceptional material properties and cable design - providing a unique Century™ Lifetime Warranty.
- High ACR values - providing low BER (Bit-Error-Rate) in all applications.
- Extremely high pair-balance and double shield - providing excellent EMC (Electro Magnetic Compatibility), minimizing radiation, maximizing noise immunity and preventing any alien-crosstalk (AXT).
- Revolutionary pair lay scheme - providing an extremely low delay skew.
- Descending sequential meter mark - providing easy stock and left-over handling.
- Smooth and rigid jacket - proving fast and easy cable pulling and installation.
- Batch number printed every meter - providing fast retrieval of test results from data-base.
- A comprehensive product range - providing all state-of-the-art cable constructions.
- Large variety of packaging options - providing minimum scrap and left-over cable sections.
- Unique DoubleSafe™ Quality Assurance Program providing lowest rejection rate available.
- Full compliance with EU Directive 2002/95/CE (RoHS).





Transmission Properties and Electrical Specifications 1000, 1200, 1500 MHz

Frequency MHz	Insertion Loss dB/100m Max.	NEXT dB Min.	PS NEXT dB Min.	EL FEXT db/100m Min.	PS EL FEXT dB/100m Min.	RL dB Min.	TCL dB Min.	EL-TCTL dB Min.	PS ANEXT dB Min.	PS AFEXT dB Min.
1	NS	78	75	78	75	20	40	35	67	67
4	3.75	78	75	83.1	80.1	23	40	23	67	67
10	5.82	78	75	75.1	72.1	25	40	15	67	67
20	8.21	78	75	69.1	66.1	25	37	9	67	67
25	9.18	78	75	67.1	64.1	24.3	36	7	67	65.2
31.25	10.26	78	75	65.2	62.2	23.6	35.1	5.1	67	63.3
62.5	14.57	78	75	59.2	56.2	21.5	32	NS	67	57.3
100	18.53	75.4	72.4	55.1	52.1	20.1	30	NS	67	53.2
200	26.47	70.9	67.9	49.1	46.1	18	27	NS	67	47.2
250	29.73	69.4	66.4	47.1	44.1	17.3	26	NS	67	45.2
300	32.69	68.2	65.2	45.6	42.6	17.3	NS	NS	67	43.7
400	38.01	66.4	63.4	43.1	40.1	17.3	NS	NS	67	41.2
500	42.76	64.9	61.9	41.1	38.1	17.3	NS	NS	67	39.2
600	47.1	63.7	60.7	39.5	36.5	17.3	NS	NS	65.8	37.6
700	51.13	62.7	59.7	38.2	35.2	16.6	NS	NS	64.8	36.3
800	54.92	61.9	58.9	37	34	16.1	NS	NS	64	35.1
1000	61.93	60.4	57.4	35.1	32.1	15.1	NS	NS	62.5	33.2
1200	68.36	59.2	56.2	33.5	30.5	14.3	NS	NS	61.3	31.6
1400	74.36	58.2	55.2	32.2	29.2	13.6	NS	NS	60.3	30.3
1500	77.22	57.8	54.8	31.6	28.6	13.3	NS	NS	59.9	29.7

Note: Values above 1000 MHz are nominal, for reference only.

Ordering info:

4x2x22# S/FTP CAT 7A+ PVC Grey Tested to 1500 MHz / OD (mm) 7.2 / Kg/km 55 / Kj/m 670 / 500/1000 m drum.

2x(4x2x22#) S/FTP CAT 7A+ PVC Grey Tested to 1500 MHz / OD (mm) 7.2 x 14.5 / Kg/km 11 / Kj/m 1340 / 500/1000 m drum / Notes FIG-8.

2x(4x2x22#) S/FTP CAT 7A+ LSZH Grey Tested to 1500 MHz / OD (mm) 7.2 x 14.5 / Kg/km 11 / Kj/m 1340 / 500/1000 m drum / Notes FIG-8.

