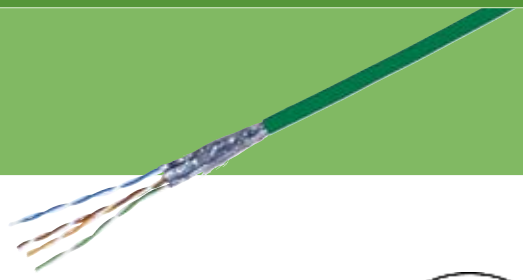
Datasheet



3M™ Volition™ 500MHz 10 Gigabit Cable Category 6A U/FTP LSOH

Volition™ 10 Gigabit cables are specially designed to ensure total immunity to alien crosstalk to 500 MHz. They were developed to exceed the requirements of the 6 around 1 test, that is, the Powersum of ANEXT effects generated by 6 cables (or 24 pairs) on one pair of an adjacent cable.

All constructions of 10 Gigabit Volition™ cables have general shielding and/or shielding by pair. Volition™ 10 Gigabit cables have unequalled immunity against AXTLK.

Volition™ 10 Gigabit cables allow easy installation, with no particular precautions, thanks to their round shape. Connection to Volition™ OCK10S8 jack remains simple and natural. Cable laying is easy thanks to the external diameter of the cable, which is the same as the Volition™ Category 6/Class E 250MHz cable. Volition™ 10 Gigabit cables are available in LSOH versions.

Features

- Screening by pair in aluminium/polyester
- Length printed on the cable sheath
- LSOH sheath, IEC 60332-1 Category C2 type
- Round shape

Benefits

- Alien crosstalk immunity certified up to 500MHz
- Simplified installation
- Complies with public building requirements
- Easy to connect on RJ45 OCK10S8

Standards

Applications

- Ethernet IEEE 802.3
- FDDI
- ATM
- RNIS
- EEE 802.5

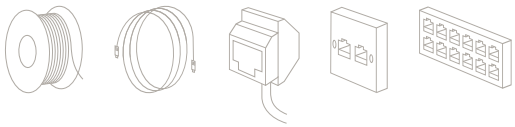
Cabling standards

- EN 50173
- ISO/IEC 11801
- TIA/EIA 568
- EN 50188-10 (draft)
- IEC 61156-5 Ed 2 (draft)

Environmental standards

- Fire resistance IEC 60332-1 Cat. C2
- Low smoke emission IEC 61034
- Toxicity/Corrosion IEC 60754-1/-2

Technology built for business



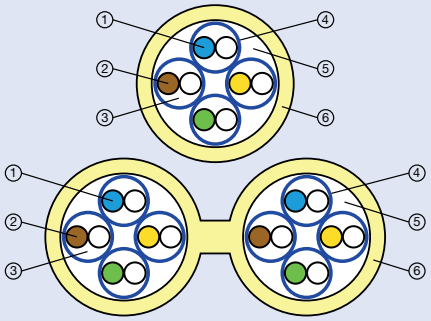
Specification

Electrical characteristics at 20º C:

Conductor resistance (max.)	≤ 146,4 Ω /km
Insulation resistance (min)	≥ 5000 MΩ/km
Dielectric strength at 50Hz	1 KV / 1 min
Unbalanced capacitance - pair to ground (max)	≤ 1600 pF / 500 km
Propagation velocity (NVP)	78%
Characteristic impedance at 100 MHz	100 ± 5 Ω

Mechanical installation characteristics

Minimum bend radius at installation	≥ 65 mm
Minimum bend radius once installed	≥ 35 mm
Maximum pulling tension	78 (4p) and 156 (2x4p)
Nominal weight	51 kg/km
Temperature characteristics (°C)	
Transport / storage	0 to +50°C
Operating temperature	-20 to +60°C



Cable construction

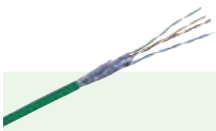
1	Conductor diameter:	23 AWG (0,560mm)
2	Insulation:	Pe diameter 1,45 mm
3	Cable assembly:	pair
	Number of pairs:	4 or 8 (2x4)
4	Individual screen around each pair:	Alu/Polyester tape
5	Drain wire	
6	Sheath material:	LSOH

Electrical performance

Frequency (MHz)		4	10	20	62,5	100	250	500	550**
Attenuation (max)	Typical value	3,6	5,6	8	14,2	18,1	28,9	41,2	43,5
(dB/100 m)	Cat 6A* (min.)	3,8	5,9	8,4	15	19,1	31,1	45,3	–
NEXT	Typical value	90	90	82	75	72	65	60	59
(dB)	Cat 6A* (min.)	65,3	59,3	54,8	47,4	44,3	38,3	33,8	–
PSNEXT	Typical value	87	87	79	72	69	62	57	56
(dB)	Cat 6A* (min.)	63,3	57,3	52,8	45,4	42,3	36,3	31,8	–
ELFEXT	Typical value	80	80	77	71	67	52	46	45
(dB)	Cat 6A* (min.)	58	50	44	34,1	30	22	16	–
PS ELFEXT	Typical value	77	77	74	68	64	49	43	42
(dB)	Cat 6A* (min.)	55	47	41	31,1	27	19	13	–
Return Loss	Typical value	25	26	26	23	22	19	16,7	16
(dB)	Cat 6A* (min.)	23	25	25	21,5	20,1	17,3	15,2	–
PS ANEXT	Typical value	85	85	85	85	80	73	68	67
(dB)	Cat 6A* (min.)	76,5	72,5	69,5	64,5	62,5	56,5	52	–

* Category 6A acc. Draft IEC 61156-5 Ed.2 ** Only for information

Ordering Information

		Ref. No.
	Volition™ Catergory 6A U/FTP 100 Ohms LSOH 4 pairs Length: 1000 m Unit: 1 drum Weight: 63 Kg	VOL6AUFL41000
	Volition™ Catergory 6A U/FTP 100 Ohm LSOH 2x4 pairs Length: 500 m Unit: 1 drum Weight: 63 Kg	VOL6AUFL8500

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3M a Volition jsou ochranné známky společnosti 3M.
Pro více informací kontaktujte 3M.

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