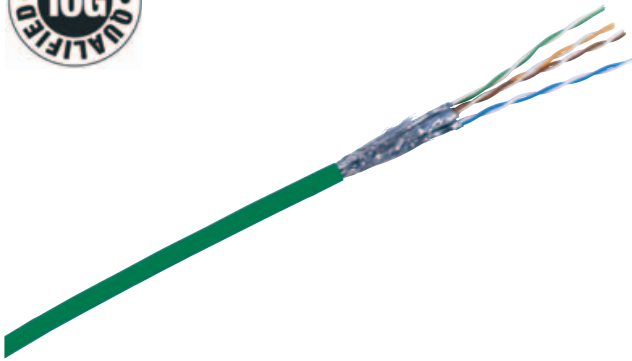




# 3M™ Volition™ 10 Gigabit Category 7, S/ FTP, LSOH



3M™ Volition™  
10 Gbit/s Cable Category 7, S/ FTP, LSOH

## 3M™ Volition™ 10 Gbit/s Cable Category 7, S7 FTP, LSOH

The new cable, VOL-10SFL, is part of the 10GT Volition system designed for 10 Gbit/s Ethernet applications over twisted pair cable. The construction of the cable VOL-10SFL facilitates easy installation without worry.

### Why without worry?

The parameter which causes most difficulty for 10 Gbit/s transmission is alien crosstalk, which is crosstalk between pairs in neighbouring cables. Alien crosstalk is a concern because of the improved crosstalk performance required at higher frequencies (up to 500 MHz) for 10 Gbit/s Ethernet over twisted pair to function. The surrounding braid and pair screening of the VOL-10SFL cable is an excellent protection against alien crosstalk, superior to other techniques employed in the cable industry against noise from neighbouring pairs.

### Why Easy?

Where cables have neither braid nor pair screening the techniques for reducing alien crosstalk involves separating the pairs, which increases the outside diameter of the cable (because of a thicker sheath and larger pair separator). Another technique involves making the 10G cable oval to reduce the risk of cables in trunking having pairs next to other pairs with the same twist. This technique derives from a statistical hypothesis! The VOL-10SFL cable is a round construction permitting normal termination of the Volition RJ45 K10 STP Jack.

The diameter of 7,8 mm and the minimum bend radius of 60 mm makes VOL-10SFL a traditional S/ FTP cable, which does not require any new restriction in the installation in trunking or cable pathways nor any complicated handling during the termination of the OCK10-S jack.

### Applications

- IEEE 802.3-IEEE 802.5
- FDDI
- ATM

### Standards

- EN 50167, EN 50173
- ISO/ IEC 11801
- IEC 801-2, IEC 801-3, IEC 801-4

### Environmental characteristics

Transportation and storage temperature	0 à +50°C
Installation temperature	-20 à +60°C
Flammability performance	PVC: IEC 332-1, NFC 32070 2.1 (Category C2)
	LSOH: IEC 332-3C

### Features

- 10G BASE T cable of round construction
- Flammability rating conforms with IEC 60322-3C (LSFROH)
- Circular braid
- Screening by pair (PIMF) in aluminum/ polyester (S/ FTP)
- Tested up to 1000 MHz (new class F)
- Metric length markings on the outer jacket

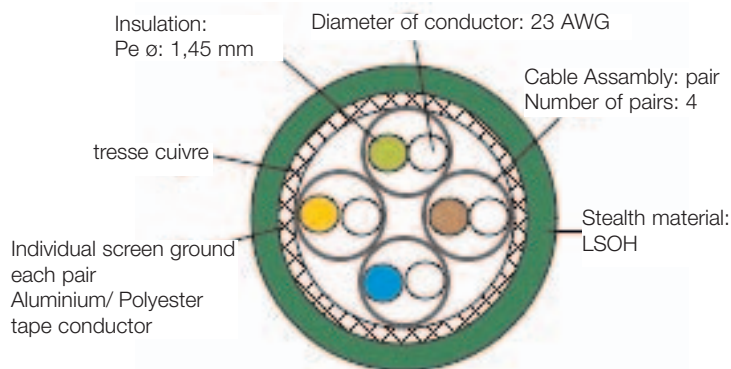
### Benefits

- Easy installation process
- Low smoke(LS), no fire propagation (FR), zero halogen cable (OH)
- Unparalleled protection against alien crosstalk. the number one problem in 10G BASE-T applications
- Optimised NEXT and FEXT reduction
- Good margin over new class E<sub>A</sub>/ Category 6<sub>A</sub>
- Easy cutting and laying of the cable

# Technical Specifications

## Electrical Characteristics at 20° C:

Conductor resistance (max.)	73,20 Ω/ km
Dielectric strength at 50 MHz	0,70 kV/ 1min
Insulation Resistance (min))	5000 MΩ/ km
Capacitance unbalanced, pair to ground	800 pF/ 500m
Transfer impedance Zt at 10 MHz (max.)	5 mΩ/ m
Velocity (nom) greater than	78 % NVP: 0,78)
Characteristic Impedance (Zc) from 1 to 100 MHzde 1 à 100 MHz	100 Ω
Delay skew	< 12 ns/ 100m



## Cable Performance

Frequency (MHz)	1,0	4,0	10,0	16,0	20,0	31,25	62,5	100,0	200,0	250,0	300,0	600,0
Attenuation (dB/ 100 m)	1,9	3,6	5,5	7,1	7,9	10,2	14,5	18,5	26,2	29,6	32,8	47,6
NEXT (dB)	90,0	90,0	90,0	90,0	90,0	90,0	90,0	85,0	79,0	77,0	76,0	73,0
ACR (dB/ 100m)	88,1	86,4	84,5	82,9	82,1	79,8	75,5	66,5	52,8	47,4	43,2	25,4
PS NEXT (dB)	87,0	87,0	87,0	87,0	87,0	87,0	87,0	82,0	76,0	74,0	73,0	70,0
ELFEXT (dB/ 100m)	88,0	86,0	85,0	83,0	82,0	80,0	76,0	72,0	64,0	60,0	57,0	42,0
PS ELFEXT (dB/ 100 m)	85,0	83,0	82,0	80,0	79,0	77,0	73,0	69,0	61,0	57,0	54,0	39,0
Return Loss (dB)	26,0	26,0	26,0	26,0	26,0	26,0	26,0	24,0	22,0	22,0	21,0	19,0

## Ordering Information

**3M™ Volition™ Cable 10G S/ FTP 100Ω LSOH**  
4 pairs, 500 m, 1 drum, 37,3 kgs

## Ref.-No.

**VOL-10SFL4-500**

**3M™ Volition™ Cable 10G S/ FTP 100Ω LSOH**  
4 pairs, 1000 m, 1 drum, 72,02 kgs

**VOL-10SFL4-1000**

**3M™ Volition™ Câble 10G S/ FTP 100Ω LSOH**  
2x4 pairs, 500 m, 1 drum, 75 kgs

**VOL-10SFL8-500**

**3M™ Volition™ Câble 10G S/ FTP 100Ω LSOH**  
2x4 pairs, 1000 m, 1 drum, 145,38 kgs

**VOL-10SFL8-1000**

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### Important Notice

All questions of liability relating to this product are governed by our Terms of Sale subject where applicable to the prevailing law.



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