R&M*freenet* S/FTP Cat.7 LSZH 800MHz

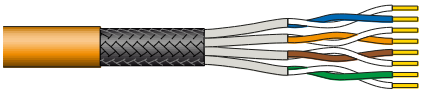
R&Mfreenet S/FTP Cat.7 800MHz 4PxAWG23 LSZH NVP=82% ISO/IEC 11801 R <batch no.> <dd/mm/yy> <meter> m

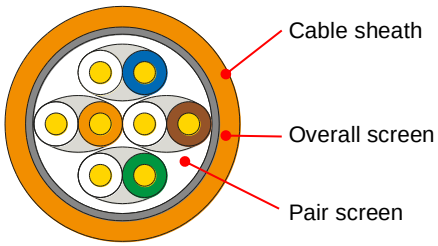
Cable reference

Part number	R885323
Source code	R
R&M positioning	Cat.7

Cable construction

Conductor	Bare solid copper wire AWG23 (≥ Ø 0.58 mm)
Insulation	Polyethylene ≤ Ø 1.32 mm
Twisting	2 wires to the pair
Cable lay up	4 pairs to the core
Pair screen	Two insulated conductors twisted to a pair
Overall screen	Tin copper braid -Optical Coverage >80%, type 1
Sheath	LSZH- SHF1, orange





Application

Primary (Campus), Secondary (Riser), Tertiary (Horizontal)
IEEE 802.3an: 10Base-T; 100Base-TX; 1000Base-T; 10GBase-T
IEEE 802.5 16 MB; ISDN; TPDDI; ATM
IEEE 802.3af / IEEE 802.3at / IEEE 802.3bt

Standards

ISO/IEC 11801 2nd ed.; EN 50173-1; IEC61156-5; IEC60092-360
IEC 61156-5 2nd ed.; EN 50288-4-1; Power over Ethernet (PoE) / Type 1-4

Fire rating

LSZH-SHF1

IEC 60332-1; IEC 60754-2; EN50267-2-2

Technical Data

Cable designation	SFTP cat.7 LSZH 800MHz 4PxAWG23 DNV
Packaging	Drum 500m
Outer diameter	Nominal 7.8 mm
Weight	76 kg / km
Thermal load	525 MJ / km
Segregation class	D
Tensile force	120 N

Mechanical Properties

Bending radius	≥ 32 mm during operation (without load)	
	≥ 64 mm during installation (with load)	
Temperature range	During operation	-0°C…+ 50°C
	During installation	-20°C…+ 70°C

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Electrical Properties (at 20°C ± 5°C)

DC loop resistance		≤ 70 Ω / km
Resistance unbalance		≤ 2 %
Test voltage	DC, 1 min, core/core	1000 V
Insulation resistance	500 V	≥ 5000 MΩ * km
Capacitance		45 pF / m nom.
Capacitance unbalance		≤ 1.5 pF / m
Mean characteristic impedance	At 100MHz	100 ± 5 Ω
Nominal velocity of propagation		Approx. 82 %
Propagation delay	At 1 MHz	≤ 500 ns / 100 m
Delay skew		≤ 20 ns / 100 m
Coupling attenuation		≥ 85 dB

Typical transmission characteristics (at 20°C)

f (MHz)	Attenuation (dB/100m)		NEXT (dB)		PS-NEXT (dB)		ACR-F [1] (dB/100m)		PS-ACR-F [1] (dB/100m)		Return loss (dB)	
	Max	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**
4	3.7	3.6	75.0	100.0	75.0	100.0	75.0	100.0	75.0	98.2	23.0	33.0
100	19.0	18.1	72.4	97.4	69.4	94.4	55.3	94.0	52.3	91.0	20.1	30.1
200	27.5	25.8	67.9	92.9	64.9	89.9	49.3	90.1	46.3	87.1	18.0	28.0
250	31.0	29.0	66.4	91.4	63.4	88.4	47.3	85.7	44.3	85.5	17.3	27.3
350	37.2	34.6	64.2	89.2	61.2	86.2	44.4	85.7	41.4	82.7	17.3	26.3
500	45.3	41.8	61.9	86.9	58.9	83.9	41.3	82.1	38.3	79.1	17.3	25.3
600	50.1	46.0	60.7	85.7	57.7	82.7	39.7	80.0	36.7	77.0	17.3	25.3
700	-	50.0	-	84.4	-	81.4	-	78.0	-	75.0	-	24.6
800	-	53.7	-	83.2	-	80.2	-	76.2	-	73.2	-	24.1

[1] ACR-F was formerly known as ELFEXT.

Recommended connection technique

Module		Perm. Link Class D	Perm. Link Class E	Channel Class E_A	Perm. Link Class E_A	Short Link Class E_A
	Cat.5e/s	✓	–	–	–	–
	Cat.6/s	✓	✓	✓	–	–
	Cat.6_A/s	✓	✓	✓	✓	✓
	Cat.6_A EL/s	✓	✓	✓	✓	✓

Third party certificate