R&M*freenet* S/FTP Cat.7 1000 MHz

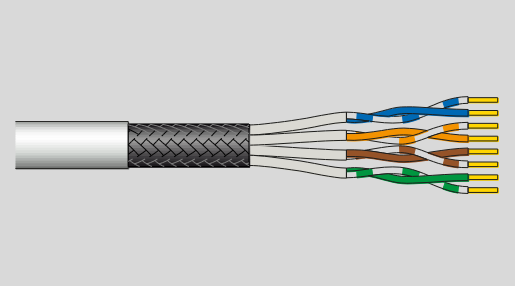
Dca CPR

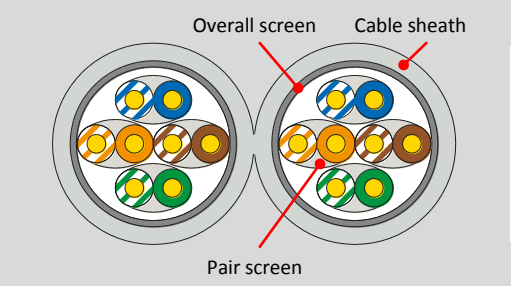
Cable reference

Part number	R35258
Source code	R
R&M positioning	Cat.7, Level 2

Cable construction

Conductor	Bare solid copper wire AWG23 (≥ Ø 0.56 mm)
Insulation	Polyethylene ≤ Ø 1.40 mm
Twisting	2 wires to the pair
Cable lay up	2 times 4 paires to the core
Pair screen	Alu / polyester tape
Overall screen	Tin plated copper braid (≥ 25% coverage)
Sheath	LSZH, gray RAL 7035, two cables parallel (separable)





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-2002: POE; IEEE 802.3at: POE+
Confirming to European regulation “CPR” EN 50575

Standards

ISO/IEC 11801 2nd ed.; EN 50173-1
IEC 61156-5 2nd ed.; EN 50288-4-1

Fire rating

LSZH
IEC 60332-1; IEC 60754-2; IEC 61034
EN50575; Dca s2-d1-a1 ; DOP D7076

Technical Data

Cable designation	S/FTP Cat.7 1000MHz 2x4PxAWG23
Packaging	Drum 500 m
Outer diameter	Nominal 7.0 / 14.2 mm
Weight	97 kg / km
Thermal load	115 MJ / km
Segregation class	D
Tensile force	160 N

Mechanical Properties

Bending radius	≥ 30 mm during operation (without load)	
	≥ 60 mm during installation (with load)	
Temperature range	During operation	-20°C...+ 60°C
	During installation	0°C...+ 50°C

Electrical Properties (at 20°C ± 5°C)

DC loop resistance		≤ 16.5 Ω / 100 m
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		≥ 80 dB
Transfer impedance	At 1 MHz	≤ 15 mΩ / m
	At 10 MHz	≤ 10 mΩ / m
	At 100 MHz	≤ 30 mΩ / m
Balance TCL	At 1 MHz	≥ 40 dB
	At 10 MHz	≥ 40 dB
	At 100 MHz	≥ 20 dB
PS-Alien NEXT	At 100 MHz	≥ 75 dB
		Typ. 80 dB

Typical transmission characteristics (at 20°C)

f	Attenuation		NEXT		PS-NEXT		ACR-F [1]		PS-ACR-F [1]		Return loss	
(MHz)	(dB/100 m)		(dB)		(dB)		(dB/100 m)		(dB/100 m)		(dB)	
	Max	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**	**Min**	**Typ**
4	3.6	3.6	93.4	100	90.4	100	82.0	100	79.0	98.2	23	33
10	5.7	5.6	87.4	100	84.4	97	74.0	100	71.0	97	25	32
20	8.1	7.9	82.9	100	79.9	97	68.0	98	65.0	96	25	32
62.5	14.5	14.2	75.5	100	72.5	97	58.1	96	55.1	94	21.5	31
100	18.5	18.1	72.4	97.4	69.4	84.4	54.0	94	51.0	91	20.1	30.1
250	30.2	29.0	66.4	91.4	63.4	88.4	46.0	85.7	43.0	85.5	17.3	27.3
500	44.1	41.8	61.9	86.9	58.9	83.9	40.0	82.1	37.0	79.1	17.3	25.3
600	48.9	46	60.7	85.7	57.7	82.7	38.4	80	35.4	77	17.3	25.3
1000	–	60.5	–	81.3	–	78.3	–	72.7	–	69.7	–	23.1

[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 Real10/s	✓	✓	✓	–	–
	Cat.6_A/s	✓	✓	✓	✓	✓
	Cat.6_A EL/s	✓	✓	✓	✓	✓

Third party certificate 3P Third Party Testing