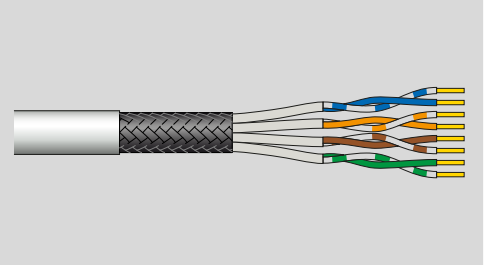
Cat.8.2 2000 MHz

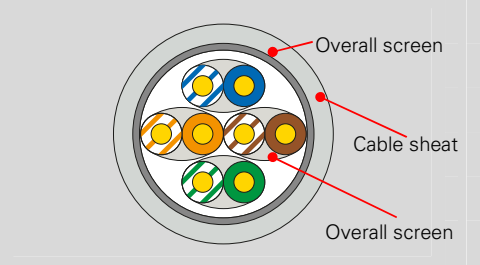
Cable reference

Part number	R828594
Source code	B/V
R&M positioning	Cat.8.2

Cable construction

Conductor	Bare solid copper wire AWG22 (≥ Ø 0.64 mm)
Insulation	Polyethylene ≤ Ø 1.60 mm
Twisting	2 wires to the pair
Cable lay up	2 times 4 paires to the core
Pair screen	Alu / polyester tape
Overall screen	Copper braid (nom. 50% coverage)
Sheath	LSFRZH, gray RAL 7035; acc. EN50289-2-27





Application

Primary (Campus), Secondary (Riser), Tertiary (Horizontal)
IEEE 802.3an: 10Base-T; 100Base-TX; 1000Base-T;
IEEE 802.3bq: 10GBASE-T over Class-EA 100 m channel; 25GBASE-T over Class-FA 30 m channel; 40GBASE-T over Class-I 30 m channel
IEEE 802.5 16 MB; ISDN; TPDDI; ATM; CATV; SOHO-Cabling
IEEE 802.3af-2002: POE; IEEE 802.3at:IEEE 802.3bt; POE+

Standards

ISO/IEC 11801 2nd ed.; EN 50173-1
IEC 61156-5; EN50288-9-1 ; IEC 61156-9 (46C/1037E/FDIS)

Fire rating

LSFRZH
IEC 60332-1;IEC 60332-3-24; IEC 60754-2; IEC 61034

Technical Data

Cable designation	S/FTP Cat.8.2 2000MHz 1x4PxAWG22
Packaging	Drum 500 m
Outer diameter	Nominal 8.5mm
Weight	40 kg / km
Thermal load	674 MJ / km
Segregation class	D
Tensile force	340 N

Mechanical Properties

Bending radius	≥ 34 mm during operation (without load)
	≥ 68 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 residence		≤ 14 Ω / 100 m
	Resistance unbalance		≤ 2 %
	Test voltage	DC, 1 min, core/core	1000 V
	Insulation resistance	500 V	≥ 5000 MΩ * km
	Capacitance	At 800 Hz	43 pF / m nom.
	Capacitance unbalance		≤ 1.2 pF / m
	Mean characteristic impedance @ 100 MHz		100 ± 5 Ω
	Nominal velocity of propagation		Approx. 76 %
	Propagation delay	At 1 MHz	≤ 500 ns / 100 m
	Delay skew		≤ 25 ns / 100 m
	Coupling attenuation		≥ 85 dB
	Transfer impedance	At 1 MHz	≤ 5 mΩ / m
		At 10 MHz	≤ 5 mΩ / m
		At 100 MHz	≤ 20 mΩ / m
	Balance TCL	At 1 MHz	≥ 40 dB
		At 10 MHz	≥ 35 dB
		At 100 MHz	≥ 20 dB
	PS-Alien NEXT	At 100 MHz	≥ 80 dB
			Typ. 85 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	3.7	3.0	78	102	75	99	78	98	75	95	17	33
10	5.8	4.9	78	102	75	99	78	97	75	94	25	32
20	8.2	7.0	78	102	75	99	74.6	96	71.6	93	25	31
62.5	14.5	12.5	78	100	75	97	64.7	94	61.7	91	23.6	30
100	18.5	16.1	75.4	100	72.4	97	60.6	90	57.6	87	22.2	27
250	29.7	24.2	69.4	97	66.4	94	52.6	83	49.6	83	19.4	22
600	47.1	48.0	63.7	96	60.7	93	45	80	42	77	16.8	22
1000	61.9	55.8	60.4	89	57.4	86	40.6	75	37.6	72	15.2	20
1500	77.2	67.5	57.8	83	54.8	80	37.1	66	34.1	63	14.0	19
2000	90.5	78.1	55.9	75	52.9	72	34.6	59	31.6	56	13.1	18

[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**	**Perm. Link Class I**
	Cat.5e/s	✓	–	–	–	–
	Cat.6 Real10/s	✓	✓	✓	–	–
	Cat.6_A EL/s	✓	✓	✓	✓	✓
	Cat.6A/s	✓	✓	✓ Best in Class	✓ Best in Class	✓ Best in Class

(*): see installation guide / **Third party certificate**

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