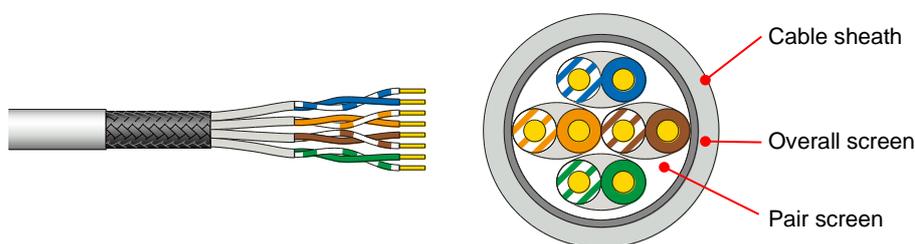


Cable reference	Part number	R949705
	Source code	V
	R&M positioning	Cat.7 _A ,
	EAN / GTIN	7611821076117

Cable construction	Conductor	Bare solid copper wire AWG22
	Insulation	Polyethylene ≤ Ø 1.5 mm
	Twisting	2 wires to the pair
	Cable lay up	4 pairs to the core
	Pair screen	Alu / polyester tape
	Overall screen	Tin plated copper braid (>30% coverage)
	Sheath	LSFRZH, gray RAL 7035



Application	Primary (Campus), Secondary (Riser), Tertiary (Horizontal)
	IEEE 802.3an: 10Base-T; 100Base-TX; 1000Base-T; 10GBase-T ; 25GBase-T IEEE 802.5 16 MB; ISDN; TPDDI; ATM IEEE 802.3af / IEEE 802.3at / IEEE 802.3bt Conforms to European regulation "CPR" EN 50575

Standards	ISO/IEC 11801 2nd ed.; EN 50173-1
	IEC 61156-5; EN 50288-4-1; EN 50288-9-1
	Power over Ethernet (PoE) / Type 1-4

Fire rating	LSFRZH
	IEC 60332-3-24; IEC 60754-2; IEC 61034
	EN50575; Cca-s1a,d1,a1; DOP C7594

Technical Data	Cable designation	S/FTP Cat.7 _A 1300MHz 4PxAWG22
	Packaging	Ring 100 m
	Outer diameter	Nominal 7.7 mm
	Weight	66 kg / km
	Thermal load	623 MJ / km
	Segregation class	D
	Tensile force	160 N

Mechanical Properties	Bending radius	≥ 35 mm during operation (without load)	
		≥ 70 mm during installation (with load)	
	Temperature range	During operation	-20°C...+ 70°C
		During installation	0°C...+ 50°C

Electrical Properties (at 20°C ± 5°C)

DC loop resistance		≤ 12.8 Ω / 100 m
Resistance unbalance		≤ 2 %
Test voltage	DC, 1 min, core/core	1000 V
Insulation resistance	500 V	≥ 5000 MΩ * km
Capacitance		43 pF / m nom.
Capacitance unbalance		≤ 1500 pF / km
Mean characteristic impedance at 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		≥ 70 dB
Transfer impedance	At 1 MHz	≤ 10 mΩ / m
	At 10 MHz	≤ 6 mΩ / m
	At 100 MHz	≤ 50 mΩ / m
Balance TCL	At 1 MHz	≥ 40 dB
	At 10 MHz	≥ 30 dB
	At 100 MHz	≥ 20 dB
PS-Alien NEXT	At 100 MHz	Min. 75 dB
		Typ. 80 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	3.3	78.0	100	75.0	97	78.0	97	75.0	94	23	27
10	5.8	5.1	78.0	100	75.0	97	78.0	95	75.0	92	25	30
20	8.2	7.3	78.0	93	75.0	90	78.0	90	75.0	87	25	30
62.5	14.6	13.2	78.0	93	75.0	90	69.4	85	66.4	82	21.5	30
100	18.5	16.7	75.4	90	72.4	87	65.3	80	62.3	77	20.1	30
250	29.7	26.8	69.4	90	66.4	87	57.3	69	54.3	66	17.3	25
500	42.8	38.9	64.9	86	61.9	83	51.3	63	48.3	60	17.3	25
600	47.1	41.8	63.7	85	60.7	82	49.7	45	46.7	42	17.3	20
1000	61.9	54.3	60.4	83	57.4	80	45.5	40	42.3	37	15.1	17
1200	-	61.6	-	83	-	80	-	35	-	32	-	16
1300	-	60.0	-	80	-	77	-	32	-	29	-	15

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	✓	✓	✓	✓	✓