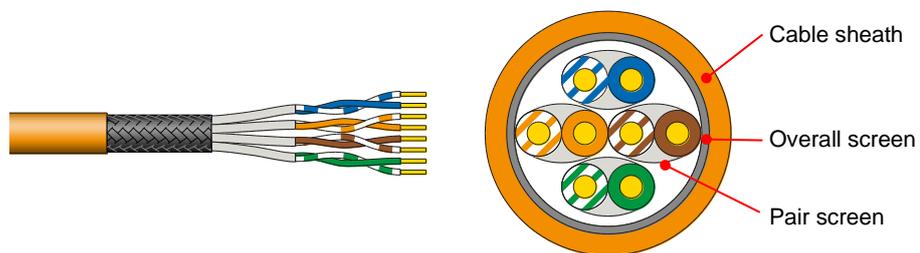


Cable reference	Part number	R949704
	Source code	V
	R&M positioning	Cat.7, Level 3
	EAN / GTIN	7611821076100

Cable construction	Conductor	Bare solid copper wire AWG23 ($\geq \varnothing 0.56$ mm)
	Insulation	Polyethylene $\leq \varnothing 1.40$ 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 ($\geq 30\%$ coverage)
	Sheath	LSFRZH, orange RAL 2003



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
 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; Power over Ethernet (PoE) / Type 1-4

Fire rating
 LSFRZH
 IEC 60332-3; IEC 60754-2; IEC 61034
 EN50575; Cca-s1a,d1,a1; DoP C7144

Technical Data	Cable designation	S/FTP Cat.7 1000MHz 4PxAWG23
	Packaging	Ring 100m
	Outer diameter	Nominal 7.3 mm
	Weight	58 kg / km
	Thermal load	585 MJ / km
	Segregation class	D
	Tensile force	100 N

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

Electrical Properties (at 20°C ± 5°C)

DC loop resistance		≤ 15.5 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		≤ 1.5 pF / m
Mean characteristic impedance	At 100MHz	100 ± 5 Ω
Nominal velocity of propagation		Approx. 76 %
Propagation delay	At 1 MHz	≤ 500 ns / 100 m
Delay skew		≤ 20 ns / 100 m
Coupling attenuation		≥ 80 dB
Transfer impedance	At 1 MHz	≤ 12 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 (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	3.6	3.4	80	100	77	97	80	105	79	102	23	27
10	5.7	5.4	80	100	77	97	74	97	71	94	25	30
20	8.1	7.7	80	100	77	97	68	91	65	88	25	30
62.5	14.5	13.7	75.5	100	72.5	97	58.1	81	55.1	78	21.5	30
100	18.5	17.4	72.4	100	69.4	97	54	77	51	74	20.1	30
250	30.2	28.1	66.4	90	63.4	87	46	69	43	66	17.3	24
500	44.1	41.0	61.9	86	58.9	83	40	63	37	60	17.3	23
600	48.9	44.8	60.7	85	57.7	82	38.4	61	35.4	58	17.3	22
1000	-	63.1	-	80	-	77	-	57	-	54	-	20

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	✓	✓	✓	✓	✓