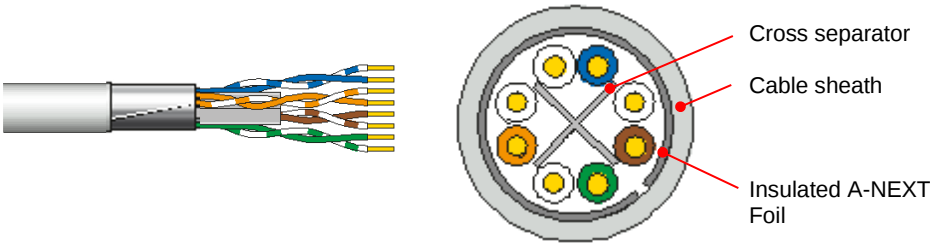


Cable reference	Part number	R 873769
	Source code	J
	R&M positioning	Cat.6 _A

Cable construction	Conductor	Bare solid copper wire AWG23 (≥ Ø 0.55 mm)
	Insulation	Polyethylene ≤ Ø 1.22 mm
	Twisting	2 wires to the pair
	Cable lay up	4 pairs to the core with cross separator
	Pair screen	Non
	Overall screen	Double insulated continous Alien-Next supression foil
	Sheath	LSZH, gray RAL 7035



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; ANSI/TIA-568.2
	IEC 61156-5 2nd ed.; Power over Ethernet (PoE) / Type 1-4

Fire rating	LSZH
	IEC 60332-1; IEC 60754-1&2; IEC 61034-1&2; IEC 60332-3-22 (3A) EN50575; Dca s1-d1-a1 ;

Technical Data	Cable designation	U/UTP Cat.6 _A 650MHz 4PxAWG23
	Packaging	Drum 500 m
	Outer diameter	Nominal 7.1 mm
	Weight	50 kg / km
	Thermal load	650 MJ / km
	Tensile force	100 N

Mechanical Properties	Bending radius	≥ 28 mm during operation (without load)
		≥ 42 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		≤ 18.8 Ω / 100 m
Resistance unbalance		≤ 5 %
Test voltage	DC, 1 min, core/core	1000 V
Insulation resistance	500V	≥ 50 MΩ * km
Capacitance		56 pF / m max.
Capacitance unbalance		≤ 3.3 pF / m
Mean characteristic impedance		100 ± 15 Ω
Nominal velocity of propagation		Approx. 64 %
Propagation delay	At 1 MHz	≤ 570 ns / 100 m
Delay skew		≤ 45 ns / 100 m
Coupling attenuation		N/A
Balance TCL (level 1)	At 1 MHz	≥ 40 dB
	At 10 MHz	≥ 30 dB
	At 100 MHz	≥ 20 dB
PS-Alien NEXT	At 100MHz	Min. 63 dB
		Typ. 73 dB

Typical transmission characteristics (at 20°C)

f (MHz)	Attenuation (B/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	3.8	3.6	66.3	71	63.3	68	56	75	53	72	23	25
10	5.9	5.7	60.3	65	57.3	62	48	63	45	60	25	27
20	8.4	8.1	55.8	60	52.8	57	42	57	39	54	25	27
62.5	15	14.5	48.4	53	45.4	50	32.1	47	29.1	44	21.5	24
100	19.1	18.5	45.3	50	42.3	47	28	43	25	40	20.1	23
250	31.1	29.6	39.3	44	36.3	41	20	35	17	32	17.3	20
500	45.3	42.3	34.8	39	31.8	36	14	29	11	26	16.2	19
600	–	48	–	36	–	39	–	17	–	20	–	18
650	–	50	–	35	–	38	–	16	–	19	–	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	Short Link Class E _A
	Cat.5e/u	✓	–	–	–	–
	Cat.6/u	✓	✓	–	–	–
	Cat.6/u	✓	✓	✓	–	–
	Cat.6 _A /u	✓	✓	✓	✓	✓

IEEE Extended Channel Lengths

This cable is covered under the R&Mfreenet cabling system warranty for Channel length longer than 100m if installed and tested according to R&M Installation and Testing Guideline.