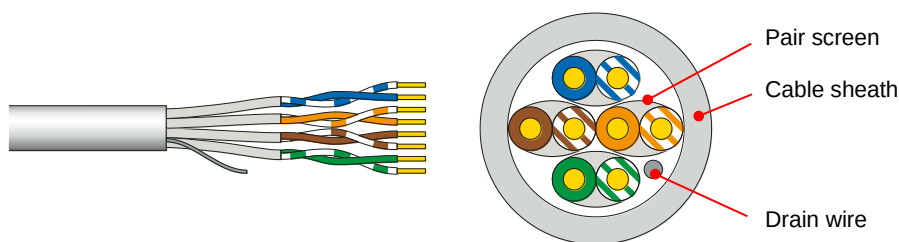


Cable reference

Part number	R308247
Source code	J
R&M positioning	Cat.6 _A , Level 1

Cable construction

Conductor	Bare solid copper wire AWG23 (≥ Ø 0.545 mm)
Insulation	Polyethylene ≤ Ø 1.30 mm
Twisting	2 wires to the pair
Cable lay up	4 pairs to the core
Pair screen	Alu / polyester tape
Overall screen	Non, tinned plated copper wire
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 2nded.; EN 50173-1; ANSI/TIA-568.2
 IEC 61156-5 2nded.; EN 50288-10 ; Power over Ethernet (PoE) / Type 1-4

Fire rating

LSZH
 IEC 60332-1; IEC 60754-2; IEC 61034; IEC 60332-3-22
 (3A) EN50575; D_{ca}; DOP E6578

Technical Data

Cable designation	U/FTP Cat.6 _A 650MHz 4PxAWG23
Packaging	Drum 500 m
Outer diameter	Nominal 7.50mm
Weight	51 kg / km
Segregation class	C
Tensile force	100 N

Mechanical Properties

Bending radius	≥ 40 mm during operation (without load)
	≥ 65 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 loopresistance		≤ 18.0 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 max.
Capacitance unbalance		≤ 1500 pF / km
Mean characteristic impedance		100 ± 25 Ω
Nominal velocity of propagation		Approx. 75 %
Propagation delay	At 1 MHz	≤ 420 ns / 100 m
Delay skew		≤ 20 ns / 100 m
Coupling attenuation		≥ 55 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	3.7	66.3	92	63.3	89	56	74	53	68	23	30
10	5.9	5.7	60.3	89	57.3	86	48	72	45	67	25	27
20	8.4	8.2	55.8	79	52.8	76	42	68	39	63	25	27
62.5	15	14.6	48.4	77	45.4	74	32.1	56	29.1	51	21.5	25
100	19.1	18.6	45.3	74	42.3	71	28	52	25	47	20.1	23
250	31.1	30.4	39.3	68	36.3	65	20	44	17	39	17.3	21
500	45.3	44.4	34.8	65	31.8	62	14	32	11	30	17.3	20
600	–	48.5	–	63	–	60	–	25	–	22	–	19
650	–	51.4	–	58	–	55	–	18	–	15	–	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/s	✓	–	–	–	–
	Cat.6/s	✓	✓	✓	–	–
	Cat.6AEL/s	✓	✓	✓	✓	✓
	Cat.6A/s	✓	✓	✓ Best in Class	✓ Best in Class	✓ Best in Class

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.