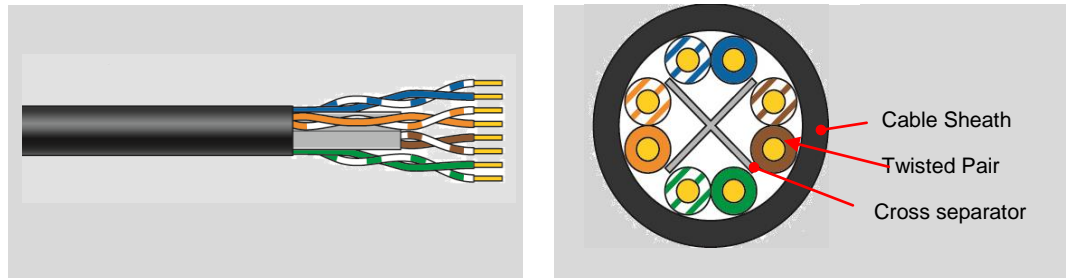


Cable reference	Part number	R 823882
	Source code	B
	R&M positioning	Cat.6

Cable construction	Conductor	Solid copper wire AWG23 (Ø 0.58mm)
	Insulation	Polyethylene ≤ Ø 1.1 mm
	Twisting	2 cores to the pair,
	Cable lay up	4 pairs to the core, non metallic cross separator (spline)
	Cable core filling	Waterproof compound to prevent moisture migration and water protection.
	Sheath	PE, Black,RAL 9005 UV stabilized



Application

Primary (Campus), Secondary (Riser), Tertiary (Horizontal)
 IEEE 802.3: 10Base-T; 100Base-T; 1000Base-T;
 IEEE 802.5 16 MB; ISDN; TPDDI; ATM
 IEEE 802.3af-2002: POE; IEEE 802.3at: POE+
 Outdoor installations. Filled with compound to prevent water penetration.
 To ensure electrical properties even in continuous wet conditions

Standards

ISO/IEC 11801.; EN 50288-6-1;IEC 61156-5

EN 50173-1,
 IEC 60794-1-2F5 , methode B

Water penetration rating

Fire rating

-(PE outer sheath)
 IEC 60754-2;
 Smoke classification: No

Technical Data	Cable designation	Industry U/UTP Cat.6 450MHz 4PxAWG23
	Packaging	Drum 500 m
	Outer diameter	Nominal 7.2 mm
	Weight	55 kg / km
	Thermal load	1884 MJ / km
	Segregation class	b
	Tensile force	100 N

Mechanical Properties	Bending radius	≥ 33 mm during operation (without load)
		≥ 65 mm during installation (with load)
	Temperature range	During operation -55°C...+ 60°C
	During installation -15°C...+ 50°C	

Electrical Properties
(at 20°C ± 5°C)





DC loop resistance		≤ 17.6 Ω / 100 m
Resistance unbalance		≤ 2 %
Test voltage	DC, 1 min, core/core	1000 V
Insulation resistance	500 V	≥ 5000 MΩ * km
Capacitance		48 pF / m nom.
Capacitance unbalance		≤ 1500 pF / km
Mean characteristic impedance		100 ± 5 Ω
Nominal velocity of propagation		Approx. 67 %
Propagation delay	At 1 MHz	≤ 535 ns / 100 m
Delay skew		≤ 20 ns / 100 m
Coupling attenuation		≥ 40 dB
Balance TCL	At 1 MHz	≤ 55 dB
	At 10 MHz	≤ 40 dB
	At 100 MHz	≤ 35 dB

Typical transmission characteristics (at 20°C)

f (MHz)	Attenuation (dB/100 m)		NEXT (dB)		PS-NEXT (dB)		ACR-F ¹⁾ (dB/100 m)		PS-ACR-F ¹⁾ (dB/100 m)		Return loss (dB)	
	Max	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ	Min	Typ
4	3.8	3.8	66	71	63	66	58	59	55	56	23	26
10	6	5.6	60	65	57	60	50	50	47	48	25	28
20	8.5	8.5	56	60	53	56	44	45	41	42	25	28
62.5	15.5	15.1	48	53	45	48	34	35	31	32	21.5	25
100	19.9	19.1	45	50	42	45	30	31	27	28	20.1	23
250	33	32.0	39	44	36	39	22	23	19	20	17.3	20
450	-	44.8	-	40	-	35	-	15	-	17	-	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/u	✓	-	-	-	-
	Cat.6/u	✓	✓	-	-	-
	Cat.6 _A /u	✓	✓	-	-	-
	Cat.6 _A /u ISO	✓	✓	-	-	-