

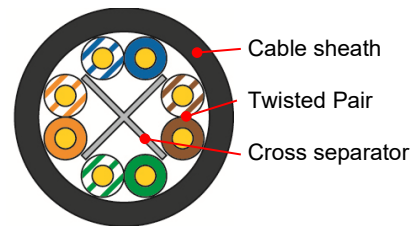
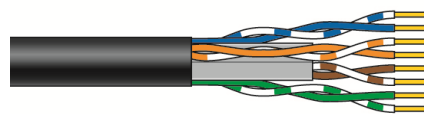
R&Mindustry U/UTP Cat.6 450 MHz

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-TX; 1000Base-T;
 IEEE 802.5 16 MB; ISDN; TPDDI; ATM
 IEEE 802.3af-2002: POE; IEEE 802.3at: POE+
 Confirming to European regulation "CPR" EN 50575
 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,

Water penetration rating

IEC 60794-1-2F5 , methode B

Fire rating

-(PE outer sheath) ; IEC 60754-2;
 EN50575; Fca; DOP F3505
 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

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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/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	3.8	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	✓	✓	–	–	–