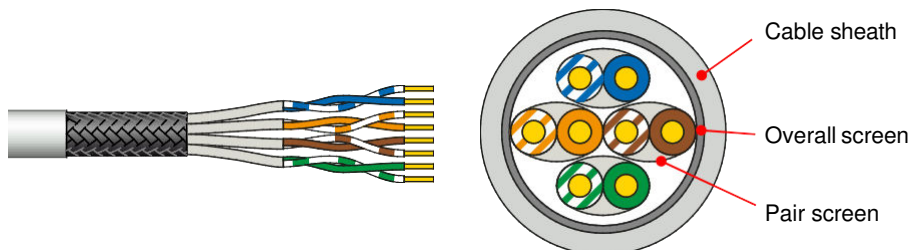


Cable reference

Part number	R305649
Source code	U
R&M positioning	Cat.6A, Level 3

Cable construction

Conductor	Bare solid copper wire AWG23 ($\geq \varnothing 0.56$ mm)
Insulation	Polyethylene $\leq \varnothing 1.32$ mm (Nom.)
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 (≥ 25 % coverage)
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 (PoE) / IEEE 802.3at (PoE+) / IEEE 802.3bt (4PPoE)
 Universal PoE (UPoE / UPoE+) / Power Over HDBASE-T (POH)
 Confirming to European regulation "CPR" EN 50575

Standards

ISO/IEC 11801 2nd ed.; EN 50173-1 ; Power over Ethernet (PoE) / Type 1-4; IEC 61156-5 2nd ed.; EN 50288-10; ANSI/TIA 568.2

Fire rating

LSFRZH
 IEC 60332-3-24; IEC 60754-2; IEC 61034
 EN50575; Dca s2, d2, a1 ; DOP D6532

Technical Data

Cable designation	S/FTP Cat.6A 650MHz 4PxAWG23
Packaging	Drum 500 m
Outer diameter	Nominal 7.6 mm
Weight	66 kg / km
Segregation class	D
Tensile force	100 N

Mechanical Properties

Bending radius	≥ 35 mm during operation (without load)
	≥ 60 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		≤ 16.5 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		≤ 1200 pF / km
Mean characteristic impedance		100 ± 5 Ω
Nominal velocity of propagation		Approx. 76 %
Propagation delay		≤ 420 ns / 100 m
Delay skew		≤ 19 ns / 100 m
Coupling attenuation		≥ 80 dB
Balance TCL	At 1MHz	≥ 40 dB
	At 10MHz	≥ 40 dB
	At 100MHz	≥ 20 dB
PS-Alien NEXT		At 100MHz Min. 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	3.8	3.5	66.3	100	63.3	97	56	84	53	81	23	30
10	5.9	5.6	60.3	100	57.3	97	48	83	45	80	25	30
20	8.4	7.9	55.8	100	52.8	97	42	81	39	78	25	30
62.5	15	14.2	48.4	100	45.4	97	32.1	67	29.1	64	21.5	30
100	19.1	18.5	45.3	100	42.3	97	28	63	25	60	20.1	30
250	31.1	29.1	39.3	90	36.3	87	20	55	17	52	17.3	25
500	45.3	44.4	34.8	83	31.8	80	14	52	11	49	17.3	21
600	-	48.5	-	82	-	79	-	47	-	44	-	20
650	-	51.4	-	82	-	79	-	45	-	42	-	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.6A EL/s		✓	✓	✓	✓	✓
 Cat.6A ISO/s		✓	✓	✓ Best in Class	✓ Best in Class	✓ Best in Class

Third party certificate 3P Third Party Testing