

Cable reference

Part number R898187

Source code Z

R&M positioning Cat.7, Level 3

Cable construction

Conductor Bare solid copper wire AWG23 ($\geq \varnothing 0.56$ mm)

Insulation Polyethylene $\leq \varnothing 1.40$ mm

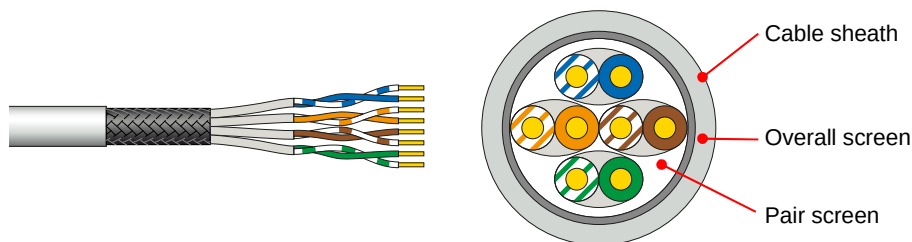
Twisting 2 wires to the pair

Cable lay up 4 pairs to the core

Pair screen Alu / polyester tape

Overall screen Tin plated copper braid ($\geq 30\%$ coverage)

Sheath LSFRZH, orange 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
IEC 61156-5 2nd ed.; EN 50288-4-1; Power over Ethernet (PoE) / Type 1-4

Fire rating

LSFRZH
IEC 60332-3-24; IEC 60754-2; IEC 61034
EN50575; Cca-s1a,d1,a1; DoP C7133

Technical Data

Cable designation S/FTP Cat.7 1000MHz 4PxAWG23

Packaging Drum 1000 m

Outer diameter Nominal 7.5 mm

Weight 62 kg / km

Thermal load 585 MJ / km

Segregation class D

Tensile force 100 N

Mechanical Properties

Bending radius ≥ 30 mm during operation (without load)

≥ 60 mm during installation (with load)

Temperature range During operation $-20^{\circ}\text{C} \dots +60^{\circ}\text{C}$

During installation $0^{\circ}\text{C} \dots +50^{\circ}\text{C}$

Electrical Properties
(at 20°C ± 5°C)

DC loop resistance		≤ 15.5 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		≤ 1.5 pF / m
Mean characteristic impedance	At 100MHz	100 ± 5 Ω
Nominal velocity of propagation		Approx. 76 %
Propagation delay	At 1 MHz	≤ 500 ns / 100 m
Delay skew		≤ 20 ns / 100 m
Coupling attenuation		≥ 80 dB
Transfer impedance	At 1 MHz	≤ 12 mΩ / m
	At 10 MHz	≤ 10 mΩ / m
	At 100 MHz	≤ 30 mΩ / m
Balance TCL	At 1 MHz	≥ 40 dB
	At 10 MHz	≥ 40 dB
	At 100 MHz	≥ 20 dB
PS-Alien NEXT	At 100 MHz	≥ 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	3.6	3.4	80	100	77	97	80	105	79	102	23	27
10	5.7	5.4	80	100	77	97	74	97	71	94	25	30
20	8.1	7.7	80	100	77	97	68	91	65	88	25	30
62.5	14.5	13.7	75.5	100	72.5	97	58.1	81	55.1	78	21.5	30
100	18.5	17.4	72.4	100	69.4	97	54	77	51	74	20.1	30
250	30.2	28.1	66.4	90	63.4	87	46	69	43	66	17.3	24
500	44.1	41.0	61.9	86	58.9	83	40	63	37	60	17.3	23
600	48.9	44.8	60.7	85	57.7	82	38.4	61	35.4	58	17.3	22
1000	–	63.1	–	80	–	77	–	57	–	54	–	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/s	✓	✓	✓	✓	✓
	Cat.6A EL/s	✓	✓	✓	✓	✓