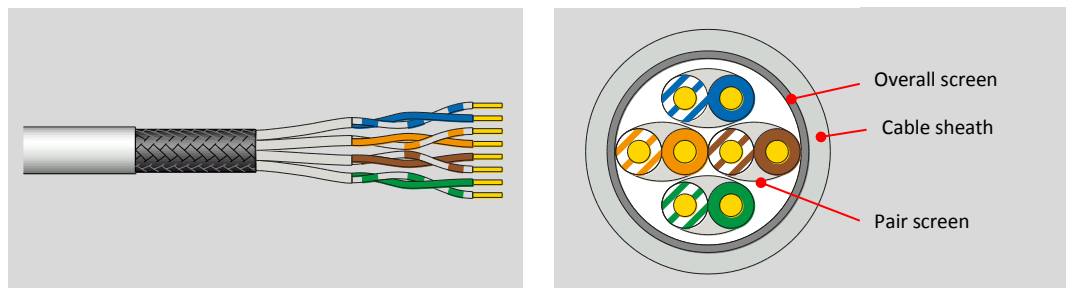


R&Mfreenet S/FTP Cat.7 1000 MHz



| | | |
|------------------------|----------------------------|----------------|
| Cable reference | Part number | R35257 |
| | Source code | R |
| | R&M positioning | Cat.7, Level 2 |

| | | |
|---------------------------|-----------------------|--|
| 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 (nom. 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-2002: POE; IEEE 802.3at: POE+
 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

Fire rating

LSZH
 IEC 60332-1; IEC 60754-2; IEC 61034
 EN50575; Dca s2-d1-a1; DOP D7073

| | | |
|-----------------------|--------------------------|------------------------------|
| Technical Data | Cable designation | S/FTP Cat.7 1000MHz 4PxAWG23 |
| | Packaging | Drum 500 m |
| | Outer diameter | Nominal 7.0 mm |
| | Weight | 48 kg / km |
| | Thermal load | 525 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 |
| During installation | | 0°C...+ 50°C |

R&Mfreenet S/FTP Cat.7 1000MHz 4PxAWG23 LSZH Dca NVP=82% ISO/IEC 11801 R <batch no.> <dd/mm/yy> <meter> m



Convincing cabling solutions

Datasheets may change without prior notice

15.03.2017 / V2.2 / Ri

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 | | ≤ 1.5 pF / m |
| Mean characteristic impedance @ 100 MHz | | 100 ± 5 Ω |
| Nominal velocity of propagation | | Approx. 82 % |
| Propagation delay | At 1 MHz | ≤ 500 ns / 100 m |
| Delay skew | | ≤ 20 ns / 100 m |
| Coupling attenuation | | ≥ 80 dB |
| Transfer impedance | At 1 MHz | ≤ 15 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/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 | 3.6 | 3.6 | 93.4 | 100 | 90.4 | 100 | 82.0 | 100 | 79.0 | 98.2 | 23 | 33 |
| 10 | 5.7 | 5.6 | 87.4 | 100 | 84.4 | 97 | 74.0 | 100 | 71.0 | 97 | 25 | 32 |
| 20 | 8.1 | 7.9 | 82.9 | 100 | 79.9 | 97 | 68.0 | 98 | 65.0 | 96 | 25 | 32 |
| 62.5 | 14.5 | 14.2 | 75.5 | 100 | 72.5 | 97 | 58.1 | 96 | 55.1 | 94 | 21.5 | 31 |
| 100 | 18.5 | 18.1 | 72.4 | 97.4 | 69.4 | 84.4 | 54.0 | 94 | 51.0 | 91 | 20.1 | 30.1 |
| 250 | 30.2 | 29.0 | 66.4 | 91.4 | 63.4 | 88.4 | 46.0 | 85.7 | 43.0 | 85.5 | 17.3 | 27.3 |
| 500 | 44.1 | 41.8 | 61.9 | 86.9 | 58.9 | 83.9 | 40.0 | 82.1 | 37.0 | 79.1 | 17.3 | 25.3 |
| 600 | 48.9 | 46 | 60.7 | 85.7 | 57.7 | 82.7 | 38.4 | 80 | 35.4 | 77 | 17.3 | 25.3 |
| 1000 | - | 60.5 | - | 81.3 | - | 78.3 | - | 72.7 | - | 69.7 | - | 23.1 |

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 Real10/s | ✓ | ✓ | ✓ | - | - |
|  | Cat.6A/s | ✓ | ✓ | ✓ | ✓ | ✓ |
|  | Cat.6A EL/s | ✓ | ✓ | ✓ | ✓ | ✓ |

Third party certificate 3P Third Party Testing