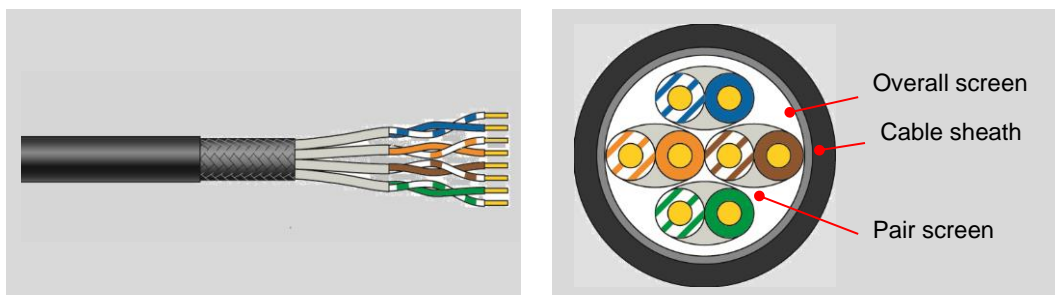


R&M industry S/FTP Cat.7A 1500 MHz IN/Outdoor

| | | |
|------------------------|----------------------------|---------|
| Cable reference | Part number | R870428 |
| | Source code | B |
| | R&M positioning | Cat.7A |

| | | |
|---------------------------|-----------------------|-----------------------------------------------------------------|
| Cable construction | Conductor | Plain solid copper wire AWG22/1 |
| | Insulation | Polyethylene ≤ Ø 1.5 mm |
| | Twisting | 2 cores to the pair |
| | Pair screen | Alu / polyester tape |
| | Cable lay up | 4 paires (PiMF) to the core,swellable yarns and tape |
| | Overall screen | Tin plated copper braid 30 % coverage) |
| | Sheath | LSZH, Black RAL 9005 |
| | Sheath | Black FireBur® sheath, UV stabilised, ASTM-G154, IEC 50290-2-27 |



| | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Application | Primary (Campus), Secondary (Riser), Tertiary (Horizontal) IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T; 25GBase-T up to 30m acc. ISO/IEC TR 11801-9905 / IEEE 802.5 ISDN, TPDDI, ATM, CATV, Broadband Video, SOHO-Cabling Power over Ethernet (PoE) / Type 1-4 Confirming to European regulation "CPR" EN 50575 |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| | |
|------------------|-------------------------------------------------------------------------------------------|
| Standards | EN 50173-1; ISO/IEC 11801; EN 50288-9-1; IEC61156-5; IEC61156-7 IEEE 802.3at / af / bt |
|------------------|-------------------------------------------------------------------------------------------|

| | |
|--------------------|------------------------------------------------------------------------|
| Fire rating | LSZH IEC 60332-1; IEC 60754-2; IEC61034 EN50575; Eca ; DOP E7581 |
|--------------------|------------------------------------------------------------------------|

| | | |
|-----------------------|--------------------------|----------------------------------------|
| Technical Data | Cable designation | Industry S/FTP Cat.7A 1500MHz 4PxAWG22 |
| | Packaging | Drum 500 m |
| | Outer diameter | Nominal 7.6 mm |
| | Weight | 66 kg / km |
| | Thermal load | 675 MJ / km |
| | Segregation class | d |
| | Tensile force | 140 N |

| | | |
|------------------------------|--------------------------|------------------------------------------------------------------------------------|
| Mechanical Properties | Bending radius | ≥ 34 mm during operation (without load) ≥ 68 mm during installation (with load) |
| | Temperature range | During operation -25°C...+ 60°C During installation -0°C...+ 50°C |

Electrical Properties
(at 20°C ± 5°C)

| | | |
|----------------------------------------|----------------------|------------------|
| DC loop residence | | ≤ 12.8 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 | | ≤ 1500 pF / km |
| Mean characteristic impedance | | 100 ± 5 Ω |
| Nominal velocity of propagation | | Approx. 79 % |
| Propagation delay | At 1 MHz | ≤ 450 ns / 100 m |
| Delay skew | | ≤ 15 ns / 100 m |
| Coupling attenuation | | ≥ 85 dB |
| Transfer impedance | At 1 MHz | ≤ 5mΩ / m |
| | At 10 MHz | ≤ 5 mΩ / m |
| | At 30 MHz | ≤ 9 mΩ / m |





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 | 3.3 | 78 | 100 | 75 | 97 | 78 | 97 | 75 | 94 | 20 | 26 |
| 10 | 5.7 | 5.1 | 78 | 100 | 75 | 97 | 75.3 | 95 | 72.3 | 92 | 25 | 28 |
| 20 | 8.1 | 7.3 | 78 | 100 | 75 | 90 | 69.3 | 90 | 66.3 | 87 | 25 | 28 |
| 62.5 | 14.5 | 12.8 | 78 | 100 | 75 | 90 | 59.4 | 85 | 56.4 | 82 | 21.5 | 25 |
| 100 | 18.5 | 16.3 | 75.4 | 100 | 72.4 | 87 | 55.3 | 80 | 52.3 | 77 | 20.1 | 23 |
| 250 | 29.7 | 25.8 | 69.4 | 90 | 66.4 | 87 | 47.3 | 69 | 44.3 | 66 | 17.3 | 20 |
| 600 | 47.1 | 40.2 | 63.7 | 85 | 60.7 | 82 | 39.7 | 45 | 36.7 | 42 | 17.3 | 20 |
| 1000 | 61.9 | 52.1 | 60.4 | 83 | 57.4 | 80 | 35.3 | 40 | 32.3 | 37 | 15.1 | 20 |
| 1200 | 68.4 | 57.1 | - | 83 | - | 80 | - | 35 | - | 32 | - | 18 |
| 1500 | - | 64.1 | - | 80 | - | 77 | - | 28 | - | 25 | - | 17 |

¹⁾ ACR-F was formerly known as ELFEXT.

Recommended connection technique

**25G
READY**

| Module | Perm. Link Class D | Perm. Link Class E | Channel Class E _A | Perm. Link Class E _A | Short Link Class E _A | Channel TR11801-9905 |
|----------------------------------------------------------------------------------------------------|--------------------|--------------------|------------------------------|---------------------------------|---------------------------------|----------------------|
|  Cat.5e/s | ✓ | - | - | - | - | - |
|  Cat.6 Real10/s | ✓ | ✓ | ✓ | - | - | - |
|  Cat.6A EL/s | ✓ | ✓ | ✓ | ✓ | ✓ | - |
|  Cat.6A/s | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Third party certificate 3P Third Party Testing

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