# R&M*freenet* Real10 U/FTP Cat.6$_A$ 500 MHz

09..03.2016 / V2.1 / Mng

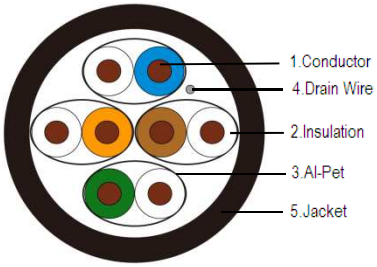
R&Mfreenet Real10 U/FTP Cat.6A 650MHz 4PxAWG23 LSZH NVP=76% ISO/IEC 11801 ANSI/TIA-568-C.2 U <batch no.> <dd/mm/yy> <meter> m

## Cable reference

| | |
|---|---|
| **Part number** | R795897 |
| **Source code** | U |
| **R&M positioning** | Cat.6$_A$, Level 1 |

## Cable construction

| | |
|---|---|
| **Conductor** | Bare solid copper wire AWG23 (≥ Ø 0.56 ± 0.01 mm) |
| **Insulation** | Polyethylene ≤ Ø 1.31 ± 0.1 mm |
| **Twisting** | 2 wires to the pair |
| **Cable lay up** | 4 pairs to the core |
| **Pair screen** | Alu / polyester tape |
| **Sheath** | LSZH, green RAL 6018 |




## 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

## Standards

ISO/IEC 11801: 2011; IEC61156-5:2009;
EN50173; EN50288; ANSI/TIA 568-C.2:2009

## Fire rating

LSZH
IEC 60332-1; IEC 60754; IEC 61034

## Technical Data

| | |
|---|---|
| **Cable designation** | Real10 U/FTP Cat.6A 650MHz 4PxAWG23 |
| **Packaging** | Drum 500 m |
| **Outer diameter** | Nominal 7.20 ±0.20 mm |
| **Segregation class** | c |

## Mechanical Properties

| | |
|---|---|
| **Bending radius** | ≥ 40 mm during operation (without load) |
| | ≥ 65 mm during installation (with load) |
| **Temperature range** | During operation -20°C…+ 60°C |
| | During installation 0°C…+ 50°C |

R&M
Convincing cabling solutions

Datasheets may change without prior notice

| Electrical Properties (at 20°C ± 5°C) | | | |
|---|---|---|---|
| **DC loop resistance** | | | ≤ 85.6 Ω / Km |
| **Impedance** | | 1-100MHz | 100±15 |
| | | 100-250MHz | 100±20 |
| | | 250-500MHz | 100±25 |
| **Nominal velocity of propagation** | | | Approx. 76 % |

## 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** | **Min** | **Min** | **Min** | **Min** | **Min** |
| **4** | 3.8 | 65.3 | 63.3 | 55.8 | 52.8 | 23.0 |
| **10** | 5.9 | 59.3 | 57.3 | 47.8 | 44.8 | 25.0 |
| **20** | 8.4 | 54.8 | 52.8 | 41.8 | 38.8 | 25.0 |
| **62.5** | 15.0 | 47.4 | 45.4 | 31.9 | 28.9 | 21.5 |
| **100** | 19.1 | 44.3 | 42.3 | 27.8 | 24.8 | 20.1 |
| **250** | 31.1 | 38.3 | 36.3 | 19.8 | 16.8 | 17.3 |
| **500** | 45.3 | 33.8 | 31.8 | 13.8 | 10.8 | 15.2 |

[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.$6_A$ EL/s | | | | | |
|  | Cat.6A/s | | | Best in Class | Best in Class | Best in Class |

(*): see installation guide

**Third party certificate** 3P Third Party Testing

**This product is to be used for indoor installations only. Not to be used for Outdoor and Wet conditions.**

R&M
Convincing cabling solutions

Datasheets may change without prior notice

R&Mfreenet Real10 U/FTP Cat.6A 650MHz 4PxAWG23 LSZH NVP=76% ISO/IEC 11801 ANSI/TIA-568-C.2 U <batch no.> <dd/mm/yy> <meter> m