# Category 7 S/FTP Cables

Datasheet: GD103088v1

**Brand-Rex** | a **LEVITON** company

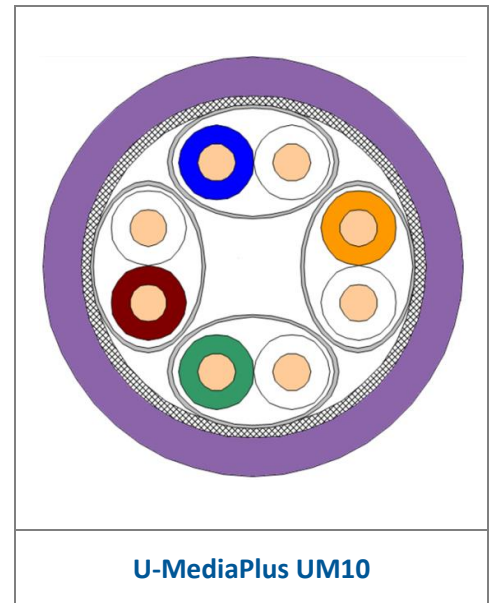## APPLICATION

The Brand-Rex U-MediaPlus UM10 cables exceed the Category 7 performance standards. They are specified to 600MHz and rated to 1000MHz and are suitable for use in all Class F structured wiring cable systems. The applications supported include 10 Gigabit Ethernet, Gigabit Ethernet, PoE, PoE+ and broadband video transmissions.

## FEATURES AND BENEFITS

- 23 AWG Solid Annealed Copper Wire
- Gas Injection Foamed Polyolefin Core Insulation – offering superior signal speed
- 4 Twisted Pairs Individually Screened and cabled together – providing EMI immunity
- Overall Braided Screen – for improved shielding efficiency, increased mechanical robustness and heat dissipation
- Available in a Range of Sheath Materials – to suit a variety of installation environments and colour coded for identification
- Designed to Support all Class F protocols including 10GBASE-T
- Supports Power Over Ethernet (PoE) and Power Over Ethernet Plus (PoE+) Applications
- HFFR-LS versions meet the requirements of the Construction Products Regulation (CPR) Euroclass Eca
- Included in the Leviton and Brand-Rex 25 Year System Warranties when used in conjunction with Leviton or Brand-Rex copper connectivity. System warranties available for qualified projects installed by certified contractors.



**U-MediaPlus UM10**

## STANDARDS

**Applicable Cable Standards:**    IEC 61156-5 and EN 50288-4-1

## MATERIAL IDENTIFICATION

| Material Identifier | HF1 | HF3 | HF1-X |
|---|---|---|---|
| **Material Description** | Standard HFFR-LS* | Enhanced HFFR-LS | Inner - HFFR-LS<br>Outer - Polyethylene |
| **Flammability Rating** | IEC 60332-1-2 | IEC 60332-3-24 | n/a – External Only |
| **Fire Euroclass EN13501-6** | Eca | Eca | n/a – External Only |
| **Smoke Emission** | IEC 61034-1 & 2 | IEC 61034-1 & 2 | n/a – External Only |
| **Acid Gas Emission** | IEC 60754-2 | IEC 60754-2 | n/a – External Only |
| **Colour** | Violet | Blue | Inner - Violet<br>Outer - Black |

*\* Halogen Free Flame Retardant – Low Smoke*

# Category 7 S/FTP Cables

**Brand-Rex** | a **LEVITON** company

## PRIMARY ELECTRICAL PARAMETERS

| CHARACTERISTIC | SPECIFICATION | TYPICAL PERFORMANCE @ 20°C |
|---|---|---|
| **Conductor Loop Resistance** | Max 19 Ω / 100m | 14Ω / 100m |
| **Conductor Resistance Unbalance** | Max 2% | 0.1% |
| **Insulation Resistance** | >5GΩ.km | >50GΩ.km |
| **Dielectric Strength** | 2500 Vdc/2secs | Pass |

## SECONDARY ELECTRICAL PARAMETERS

| CHARACTERISTIC | SPECIFICATION | TYPICAL PERFORMANCE @ 20°C |
|---|---|---|
| **Velocity of Propagation** | <534nsec/100m @ 100MHz | 413nsec/100m @ 100MHz |
| **Delay Skew** | Max 25nsec/100m @ 100MHz | 4nsec/100m @ 100MHz |
| **Mean Characteristic Impedance** | 100Ω +/- 5Ω @ 100MHz | 100Ω ± 3Ω @ 100MHz |
| **Coupling Attenuation** | Type 1 | 90dB |
| **Transfer Impedance** | Grade 1 | 8mΩ/m @ 10MHz |

## ELECTRICAL PERFORMANCE

| Frequency (MHz) | | 1 | 4 | 10 | 100 | 200 | 250 | 500 | 600 | 1000 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Insertion Loss (dB/100m)** | Standard | 2.0 | 3.6 | 5.7 | 18.5 | 26.8 | 30.2 | 44.1 | 48.9 | na |
| | *Typical* | *1.9* | *3.5* | *5.5* | *18.0* | *26.1* | *29.4* | *43.0* | *47.6* | *63.8* |
| **NEXT (dB)** | Standard | 80.0 | 80.0 | 80.0 | 72.4 | 67.9 | 66.5 | 61.9 | 60.8 | na |
| | *Typical* | *100.0* | *100.0* | *100.0* | *94.3* | *88.9* | *87.1* | *81.7* | *80.3* | *76.3* |
| **PSNEXT (dB)** | Standard | 77.0 | 77.0 | 77.0 | 69.4 | 64.9 | 63.5 | 58.9 | 57.8 | na |
| | *Typical* | *97.0* | *97.0* | *97.0* | *91.3* | *85.9* | *84.1* | *78.7* | *77.3* | *73.3* |
| **ELFEXT (dB/100m)** | Standard | 80.0 | 80.0 | 74.0 | 54.0 | 48.0 | 46.0 | 40.0 | 38.4 | na |
| | *Typical* | *90.0* | *90.0* | *90.0* | *70.8* | *64.8* | *62.8* | *56.8* | *55.2* | *50.8* |
| **PSELFEXT (dB/100m)** | Standard | 77.0 | 77.0 | 71.0 | 51.0 | 45.0 | 43.0 | 37.0 | 35.4 | na |
| | *Typical* | *87.0* | *87.0* | *87.0* | *67.8* | *61.8* | *59.8* | *53.8* | *52.2* | *47.8* |
| **Return loss (dB)** | Standard | Na | 23.0 | 25.0 | 20.1 | 18.0 | 17.3 | 17.3 | 18.3 | na |
| | *Typical* | *27.0* | *30.0* | *30.0* | *25.1* | *23.0* | *22.3* | *20.2* | *19.7* | *18.1* |
| **ACR (dB/100m)** | *Typical* | *98.1* | *96.5* | *94.5* | *76.3* | *62.8* | *57.7* | *38.7* | *32.6* | *12.5* |
| **PSACR (dB/100m)** | *Typical* | *95.1* | *93.5* | *91.5* | *73.3* | *59.8* | *54.7* | *35.7* | *29.6* | *9.5* |

## INSTALLATION

| | | | |
|---|---|---|---|
| **Temperature** *(Installation)* | 0°C to +50°C | **Min Bend Radius** *(Installation)* | 8 x Outer Diameter |
| **Temperature** *(Operation)* | -20°C to +75°C | **Min Bend Radius** *(Operation)* | 4 x Outer Diameter |
| **Max Tensile Load** *(Installation)* | 10kg per simplex cable | **Field Test NVP Value** | 0.80 |
| **Segregation Class** | Class D | | |

## PRINT LEGEND

Example print legend:

> [Length Mark]m BRAND-REX a LEVITON company UM10-HF1-Eca Cat 7 S/FTP IEC 60332-1-2 Euroclass Eca NVP 0.80 MADE IN UK [ID number] [Week/Year]

## STANDARD PACKAGING SPECIFICATIONS

| Brand-Rex Part Number | Nominal Cable Diameter *(mm)* | Nominal Cable Weight *(kg/km)* | Reel Size *Flange x Width (mm)* | Gross Weight *(kg/Item)* | Items Per Pallet |
|---|---|---|---|---|---|
| UM10-HF1-Eca-500VT[†] | 7.0 | 48.4 | 400 x 390 | 26.7 | 12 |
| UM10-HF1-Eca-1000VT[‡] | 7.0 | 48.4 | 600 x 405 | 54.8 | 4 |
| UM10-HF1-Eca-D500VT[§] | 7.1 x 14.3 | 100.0 | 600 x 405 | 113.0 | 4 |
| UM10-HF1-Eca-D1000VT | 7.1 x 14.3 | 100.0 | 750 x 405 | 109.3 | 2 |
| UM10-HF3-Eca-500BU | 7.2 | 52.7 | 400 x 390 | 28.9 | 12 |
| UM10-HF3-Eca-1000BU | 7.2 | 52.7 | 600 x 405 | 59.2 | 4 |
| UM10-HF3-Eca-D500BU | 7.2 x 14.5 | 105.4 | 600 x 405 | 118.4 | 4 |
| UM10-HF3-Eca-D1000BU | 7.2 x 14.5 | 105.4 | 750 x 405 | 114.7 | 2 |
| UM10-HF1-X-500BK | 8.2 | 61.9 | 465 x 390 | 33.9 | 6 |
| UM10-HF1-X-1000BK | 8.2 | 61.9 | 750 x 405 | 70.8 | 2 |

[†] *500 = 500m length*
[‡] *1000 = 1000m length*
[§] *'D' denotes duplex cable*

*"Brand-Rex is **dedicated** to **designing**, **developing** and **manufacturing***
*sustainable **high performance** structured cabling and speciality **cabling solutions**"*

The information contained in this document is valid and correct at the time of issue. Brand-Rex reserves the right to modify details without notice in light of subsequent standard/specification changes and ongoing technical developments.