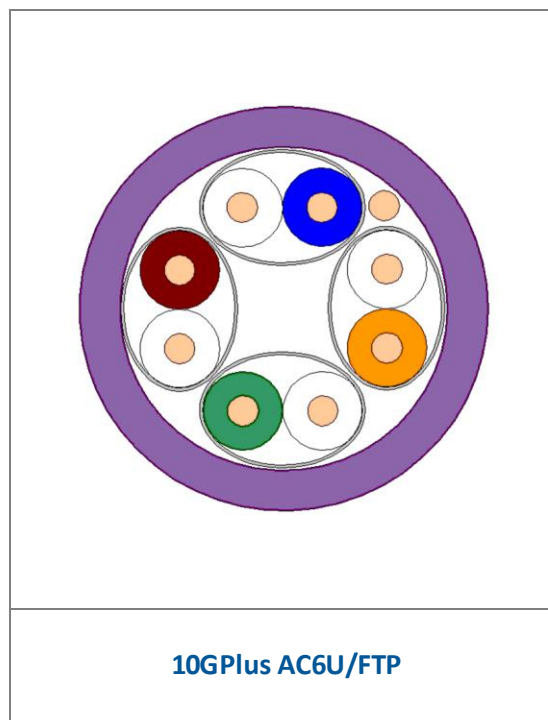


APPLICATION

The Brand-Rex 10GPlus AC6U/FTP cables exceed the Category 6_A performance standards. They are specified to 500MHz and are suitable for use in all Class E_A structured wiring cable systems. The 10GPlus AC6U/FTP cable supports 10 Gigabit Ethernet, Gigabit Ethernet, PoE, voice and broadband video transmissions at frequencies up to 500MHz.

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
- Available in a Range of Sheath Materials – to suit a variety of installation environments and colour coded for identification
- Designed to Support all Class E_A 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



STANDARDS

Applicable Cable Standards: IEC 61156-5 and EN50288-10-1

MATERIAL IDENTIFICATION

| Material Identifier | HF1 | HF3 | HF1-X |
|--------------------------|-------------------|------------------|---|
| Material Description | Standard HFFR-LS* | Enhanced HFFR-LS | Inner - HFFR-LS 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 Outer - Black |

* Halogen Free Flame Retardant – Low Smoke
Also available in a range of non-standard colours

Category 6_A U/FTP Cables

Datasheet: GD102401v4



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 1b | 75dB |
| Transfer Impedance | Grade 2 | 28mΩ/m @ 10MHz |

ELECTRICAL PERFORMANCE

| Frequency (MHz) | | 1 | 4 | 10 | 20 | 100 | 200 | 250 | 500 | 550 |
|--------------------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Insertion Loss (dB/100m) | Standard | na | 3.8 | 5.9 | 8.4 | 19.1 | 27.6 | 31.1 | 45.3 | na |
| | <i>Typical</i> | 1.9 | 3.5 | 5.5 | 7.8 | 18.0 | 26.1 | 29.4 | 43.0 | 45.4 |
| NEXT (dB) | Standard | na | 66.3 | 60.3 | 55.8 | 45.3 | 40.8 | 39.3 | 34.8 | na |
| | <i>Typical</i> | 100.0 | 100.0 | 100.0 | 100.0 | 94.3 | 88.9 | 87.1 | 81.7 | 81.0 |
| PSNEXT (dB) | Standard | na | 63.3 | 57.3 | 52.8 | 42.3 | 37.8 | 36.3 | 31.8 | na |
| | <i>Typical</i> | 97.0 | 97.0 | 97.0 | 97.0 | 91.3 | 85.9 | 84.1 | 78.7 | 78.0 |
| ELFEXT (dB/100m) | Standard | na | 56.0 | 48.0 | 42.0 | 28.0 | 22.0 | 20.0 | 14.0 | na |
| | <i>Typical</i> | 90.0 | 90.0 | 90.0 | 84.8 | 70.8 | 64.8 | 62.8 | 56.8 | 56.0 |
| PSELFEXT (dB/100m) | Standard | na | 53.0 | 45.0 | 39.0 | 25.0 | 19.0 | 17.0 | 11.0 | na |
| | <i>Typical</i> | 87.0 | 87.0 | 87.0 | 81.8 | 67.8 | 61.8 | 59.8 | 53.8 | 53.0 |
| Return loss (dB) | Standard | 20.0 | 23.0 | 25.0 | 25.0 | 20.1 | 18.0 | 17.3 | 17.3 | na |
| | <i>Typical</i> | 27.0 | 30.0 | 30.0 | 30.0 | 25.1 | 23.0 | 22.3 | 20.2 | 19.9 |
| PSANEXT (dB) | Standard | 67.0 | 67.0 | 67.0 | 67.0 | 62.5 | 58.0 | 56.5 | 52.0 | na |
| | <i>Typical</i> | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| PSAACR-F (dB) | Standard | 67.0 | 66.2 | 58.2 | 52.2 | 38.2 | 32.2 | 30.2 | 24.2 | na |
| | <i>Typical</i> | 98.1 | 96.5 | 94.5 | 92.2 | 82.0 | 73.9 | 70.6 | 57.0 | 54.6 |

Category 6_A U/FTP Cables

Datasheet: GD102401v4

Brand-Rex | a **LEVITON**
company

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 C | | |

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company AC6U/FTP-HF1-Eca Cat 6A U/FTP IEC 60332-1-2 Euroclass Eca NVP 0.80 MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS - REELS

| 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 |
|---------------------------------------|-----------------------------|------------------------------|-------------------------------------|---------------------------|------------------|
| AC6U/FTP-HF1-Eca-500VT [†] | 6.8 | 45.0 | 400 x 390 | 25 | 12 |
| AC6U/FTP-HF1-Eca-1000VT [‡] | 6.8 | 45.0 | 600 x 405 | 51.5 | 4 |
| AC6U/FTP-HF1-Eca-D500VT | 6.8 x 13.7 | 90.0 | 600 x 405 | 51.5 | 4 |
| AC6U/FTP-HF1-Eca-D1000VT | 6.8 x 13.7 | 90.0 | 750 x 405 | 99.0 | 2 |
| AC6U/FTP-HF3-Eca-500BU | 7.2 | 52.9 | 400 x 390 | 28.9 | 12 |
| AC6U/FTP-HF3-Eca-1000BU | 7.2 | 52.9 | 600 x 405 | 59.4 | 4 |

[†]500 = 500m length

[‡]1000 = 1000m length

^{||}'D' denotes duplex cable

STANDARD PACKAGING SPECIFICATIONS - BOXES

| Brand-Rex Part Number | Nominal Cable Diameter (mm) | Nominal Cable Weight (kg/km) | Box Size L x W x H (mm) | Gross Weight (kg/Item) | Items Per Pallet |
|---|-----------------------------|------------------------------|-------------------------------|---------------------------|------------------|
| AC6U/FTP-HF1-Eca-RLx-305VT [§] | 6.8 | 45.0 | 475 x 295 x 475 | 14.7 | 12 |

[§]305 = 305m box

"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.