

Category 6 F/UTP EuroClass Eca Cables

Datasheet: GD102470v7



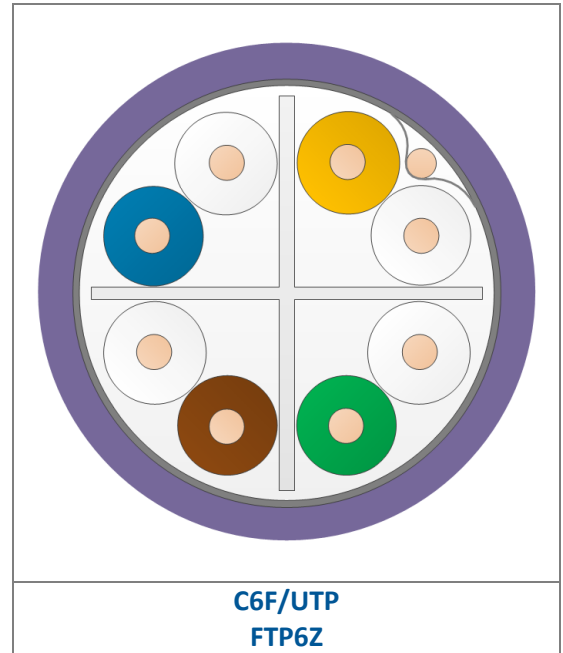
APPLICATION

Leviton Category 6 F/UTP cables exceed Category 6 performance standards. They are specified to 250MHz and are suitable for use in all Class E structured wiring cable systems. The applications supported include Gigabit Ethernet, Power over Ethernet and broadband video transmissions at frequencies up to 250MHz.

FEATURES AND BENEFITS

- 23 AWG solid annealed copper wire
- Polyolefin core insulation
- 4 unshielded twisted pairs cabled together
- Aluminium polyester screen
- Available in a range of sheath materials – to suit a variety of installation environments and colour coded for identification
- HFFR-LS* versions meet the requirements of the Construction Products Regulation (CPR) EuroClass Eca
- Included in the Leviton Limited 25-Year System Warranty when used in conjunction with Leviton copper connectivity. System warranties are available for qualified projects installed by certified contractors.

* Halogen Free Flame Retardant – Low Smoke



STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
 - ISO/IEC 11801 Class E, IEC 61156-5
 - EN 50173-1 and EN 50288-5-1
 - ANSI/TIA 568C.2
- Supports Gigabit Ethernet
- Meets the design requirements of 802.11ac wireless
- Recommended for PoE standards: IEEE 802.3af, 802.3at, 802.3bt, Cisco UPoE, and Power over HDBaseT™ (PoH) up to 100 watts

MATERIAL IDENTIFICATION

| | |
|--------------------------|------------------|
| Material Identifier | HF1 |
| Material Description | Standard HFFR-LS |
| Flammability Rating | IEC 60332-1-2 |
| Fire EuroClass EN13501-6 | Eca |
| Smoke Emission | IEC 61034-1 & 2 |
| Acid Gas Emission | IEC 60754-2 |

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PRIMARY ELECTRICAL PARAMETERS

| CHARACTERISTIC | SPECIFICATION | TYPICAL PERFORMANCE @ 20°C |
|--------------------------------|----------------|----------------------------|
| Conductor Loop Resistance | Max 19Ω/100m | 15Ω/100m |
| Conductor Resistance Unbalance | Max 2% | 0.1% |
| Insulation Resistance | >5GΩ.km | >490GΩ.km |
| Dielectric Strength | 2500 Vdc/2secs | Pass |

SECONDARY ELECTRICAL PARAMETERS

| CHARACTERISTIC | SPECIFICATION | TYPICAL PERFORMANCE @ 20°C |
|-------------------------------|--------------------------|----------------------------|
| Velocity of Propagation | <534nsec/100m @ 100MHz | 502nsec/100m @ 100MHz |
| Delay Skew | Max 45nsec/100m @ 100MHz | 23nsec/100m @ 100MHz |
| Mean Characteristic Impedance | 100Ω +/- 5Ω @ 100MHz | 100Ω ± 3Ω @ 100MHz |
| Coupling Attenuation | Type 1b | 86dB |
| Transfer Impedance | Grade 2 | 80mΩ/m @ 10MHz |

ELECTRICAL PERFORMANCE

| Frequency (MHz) | | 1 | 4 | 10 | 20 | 100 | 200 | 250 | 500 | 550 |
|--------------------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Insertion Loss (dB/100m) | Standard | 2.1 | 3.8 | 6.0 | 8.5 | 19.9 | 29.1 | 33.0 | N/A | N/A |
| | Typical | 1.9 | 3.5 | 5.5 | 7.8 | 18.0 | 26.1 | 29.4 | 43.0 | 45.4 |
| NEXT (dB) | Standard | 66.0 | 65.3 | 59.3 | 54.8 | 44.3 | 39.8 | 38.3 | N/A | N/A |
| | Typical | 80.0 | 71.0 | 65.0 | 60.5 | 50.0 | 45.5 | 44.0 | 39.5 | 38.9 |
| PSNEXT (dB) | Standard | 64.0 | 63.3 | 57.3 | 52.8 | 42.3 | 37.8 | 36.3 | N/A | N/A |
| | Typical | 80.0 | 71.0 | 65.0 | 60.5 | 50.0 | 45.5 | 44.0 | 39.5 | 38.9 |
| ELFEXT (dB/100m) | Standard | 66.0 | 58.0 | 50.0 | 44.0 | 30.0 | 24.0 | 22.0 | N/A | N/A |
| | Typical | 82.0 | 70.0 | 62.0 | 56.0 | 42.0 | 36.0 | 34.0 | 28.0 | 27.2 |
| PSELFEXT (dB/100m) | Standard | 64.0 | 55.0 | 47.0 | 41.0 | 27.0 | 21.0 | 19.0 | N/A | N/A |
| | Typical | 79.0 | 67.0 | 59.0 | 53.0 | 39.0 | 33.0 | 31.0 | 25.0 | 24.2 |
| Return Loss (dB) | Standard | N/A | 23.0 | 25.0 | 25.0 | 20.1 | 18.0 | 17.3 | N/A | N/A |
| | Typical | 27.0 | 30.0 | 30.0 | 30.0 | 25.1 | 23.0 | 22.3 | 20.2 | 19.9 |
| ACR (dB/100m) | Typical | 78.1 | 67.4 | 59.5 | 52.6 | 32.0 | 19.4 | 14.6 | -3.5 | -6.5 |
| PSACR (dB/100m) | Typical | 78.1 | 67.4 | 59.5 | 52.6 | 32.0 | 19.4 | 14.6 | -3.5 | -6.5 |

INSTALLATION

| | |
|---------------------------------|------------------------|
| Temperature (Installation) | 0°C to +50°C |
| Temperature (Operation) | -20°C to +75°C |
| Max Tensile Load (Installation) | 10kg per simplex cable |
| Segregation Class | Class C |

| | |
|--------------------------------|--------------------|
| Min Bend Radius (Installation) | 8 x Outer Diameter |
| Min Bend Radius (Operation) | 4 x Outer Diameter |
| Field Test NVP Value | 0.68 |

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PRINT LEGEND

Example print legend FTP6Z Parts:

[Length Mark]]m LEVITON FTP6Z BRAND-REX C6F/UTP-HF1-Eca Cat 6 4 PAIR 23AWG HFFR IEC 60332-1-2 EuroClass Eca NVP 0.68
MADE IN UK [ID number] [Week/Year]

Example print legend C6F/UTP Parts:

[Length Mark]]m BRAND-REX a LEVITON company C6F/UTP-HF1-Eca Cat 6 F/UTP IEC 60332-1-2 EuroClass Eca NVP 0.68 MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS - REELS

| Brand-Rex Part Number | Leviton Part Number | Packaging Length (m) | Colour | Nominal Cable Diameter (mm) | Nominal Cable Weight (kg/km) | Reel Size Flange Dia x Width (mm) | Gross Weight (kg/Item) | Items Per Pallet |
|----------------------------|---------------------|----------------------|--------|-----------------------------|------------------------------|-----------------------------------|------------------------|------------------|
| C6F/UTP-HF1-Eca-500WH | 128-FTP6Z-5WS | 500 | White | 7.1 | 51.5 | 400 x 390 | 28.2 | 12 |
| C6F/UTP-HF1- Eca-500VT | 129-FTP6Z-5VS | 500 | Violet | 7.1 | 51.5 | 400 x 390 | 28.2 | 12 |
| C6F/UTP-HF1- Eca-1000VT* | - | 1000 | Violet | 7.1 | 51.5 | 600 x 405 | 58.0 | 4 |
| C6F/UTP-HF1- Eca-D500VT*† | - | 500 | Violet | 14.3 x 7.1 | 102.9 | 600 x 405 | 58.0 | 4 |
| C6F/UTP-HF1- Eca-D1000VT*† | - | 1000 | Violet | 14.3 x 7.1 | 102.9 | 750 x 405 | 112.2 | 2 |

* Only available in Europe and Middle East regions

† 'D' denotes duplex cable

STANDARD PACKAGING SPECIFICATIONS - BOXES

| Brand-Rex Part Number | Leviton Part Number | Packaging Length (m) | Colour | Nominal Cable Diameter (mm) | Nominal Cable Weight (kg/km) | Box Size L x W x H (mm) | Gross Weight (kg/Item) | Items Per Pallet |
|---------------------------|---------------------|----------------------|--------|-----------------------------|------------------------------|-------------------------|------------------------|------------------|
| C6F/UTP-HF1-Eca-Rlx-305GY | 124-FTP6Z-MSB | 305 | Grey | 7.1 | 51.5 | 405 x 265 x 405 | 16.7 | 12 |
| C6F/UTP-HF1-Eca-Rlx-305VT | 125-FTP6Z-MVB | 305 | Violet | 7.1 | 51.5 | 405 x 265 x 405 | 16.7 | 12 |

*"Leviton 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. Leviton reserves the right to modify details without notice in light of subsequent standard/specification changes and ongoing technical developments.