Category 6A F/FTP EuroClass Eca Cables

Datasheet: GD102423v6

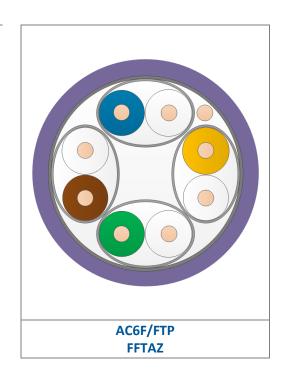


APPLICATION

Leviton Category 6A F/FTP cables exceed Category 6A performance standards. They are rated to 500MHz and are suitable for use in all Class EA structured wiring cable systems. The applications supported include 10 Gigabit Ethernet, Gigabit Ethernet, Power over Ethernet, and broadband video transmissions at frequencies as high as 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
- Overall aluminium polyester screen for improved shielding efficiency and increased heat dissipation
- Available in a range of sheath materials to suit a variety of installation environments and color 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



STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
 - ISO/IEC 11801 Class E_A, IEC 61156-5
 - EN 50173-1 and EN 50288-10-1
 - ANSI/TIA 568C.2
- Supports 10GBASE-T
- 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 | HF3 | | |
|--------------------------|------------------|------------------|--|--|
| Material Description | Standard HFFR-LS | Enhanced HFFR-LS | | |
| Flammability Rating | IEC 60332-1-2 | IEC 60332-3-24 | | |
| Fire EuroClass EN13501-6 | Eca | Eca | | |
| Smoke Emission | IEC 61034-1 & 2 | IEC 61034-1 & 2 | | |
| Acid Gas Emission | IEC 60754-2 | IEC 60754-2 | | |
| Colour | Violet | Blue | | |

^{*} Halogen Free Flame Retardant – Low Smoke

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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 45nsec/100m @ 100MHz | 4nsec/100m @ 100MHz | | | |
| Mean Characteristic Impedance | 100Ω +/- 5Ω @ 100MHz | 100Ω ± 3Ω @ 100MHz | | | |
| Coupling Attenuation | Type 1b | 84dB | | | |
| Transfer Impedance | Grade 2 | 11mΩ/m @ 10MHz | | | |

ELECTRICAL PERFORMANCE

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

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 D |

| Min Bend Radius (Installation) | 8 x Outer Diameter | | |
|--------------------------------|--------------------|--|--|
| Min Bend Radius (Operation) | 4 x Outer Diameter | | |
| Field Test NVP Value | 0.80 | | |

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PRINT LEGEND

Example print legend FFTAZ Parts:

[Length Mark]m LEVITON FFTAZ BRAND-REX AC6F/FTP-HF1-Eca Cat 6A F/FTP 4 PAIR 23AWG HFFR IEC 60332-1-2 EuroClass Eca NVP 0.80 MADE IN UK [ID number] [Week/Year]

Example print legend AC6F/FTP Parts:

[Length Mark]m BRAND-REX a LEVITON company AC6F/FTP-HF1-Eca Cat 6A F/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 | Leviton Part Number | Packaging Length (m) | Color | Nominal Cable Diameter (mm) | Nominal Cable Weight (kg/km) | Reel Size Flange Diameter x Width (mm) | Gross Weight (kg/ltem) | Items Per Pallet |
|-------------------------------|------------------------|-------------------------|--------|--------------------------------------|---------------------------------------|---|------------------------------|------------------------|
| AC6F/FTP-HF1-Eca- 500GY* | 121-FFTAZ-5SS* | 500 | Grey | 7.1 | 49.7 | 400 x 390 | 27.4 | 12 |
| AC6F/FTP-HF1-Eca- 500VT+ | - | 500 | Violet | 7.1 | 49.7 | 400 x 390 | 27.4 | 12 |
| AC6F/FTP-HF1-Eca- 1000VT+ | - | 1000 | Violet | 7.1 | 49.7 | 600 x 405 | 56.2 | 4 |
| AC6F/FTP-HF1-Eca- D500VT+§ | - | 500 | Violet | 7.1 x 14.3 | 99.5 | 600 x 405 | 56.2 | 4 |
| AC6F/FTP-HF1-Eca- D1000VT+ | - | 1000 | Violet | 7.1 x 14.3 | 99.5 | 750 x 405 | 108.8 | 2 |
| AC6F/FTP-HF3-Eca- 500BU+ | - | 500 | Blue | 7.5 | 57.9 | 465 x 390 | 31.9 | 6 |
| AC6F/FTP-HF3-Eca- 1000BU+ | - | 1000 | Blue | 7.5 | 57.9 | 600 x 405 | 64.4 | 4 |

^{*} Only available in Middle East region

"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.

[†] Only available in Europe and Middle East regions

^{§ &#}x27;D' denotes duplex cable