

# Category 6 S/FTP EuroClass Eca Cables

Datasheet: SS1329-AP-EU-ME ENv1

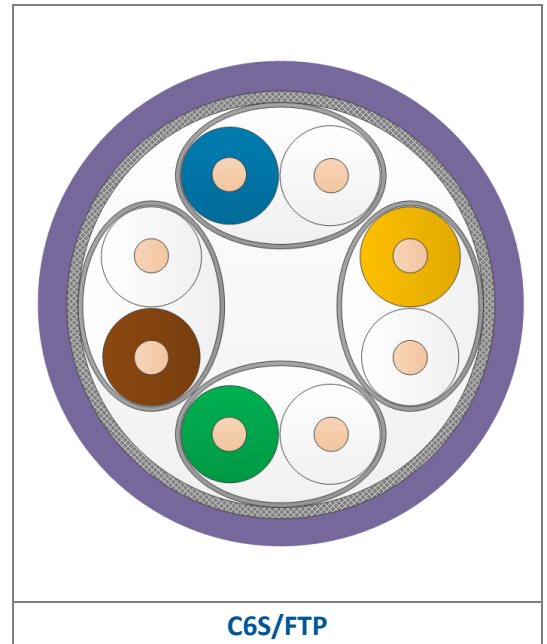


## APPLICATION

Leviton Category 6 S/FTP cables exceed Category 6 performance standards. They are rated 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
- 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 jacket materials – to suit a variety of installation environments and color coded for identification
- Designed to support all Class E protocols including Gigabit Ethernet
- HFFR-LS\* versions meet the requirements of the Construction Products Regulation (CPR) EuroClass Eca
- CE marked for CPR
- 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
  - EN50173-1 and EN 50288-5-1
  - ANSI/TIA 568.2-D
- Recommended for PoE standards:
  - IEEE 802.3bt PoE Type 1 (15.4 Watts) formerly 802.3af
  - IEEE 802.3bt PoE Type 2 (30 Watts) formerly 802.3at
  - IEEE 802.3bt PoE Type 3 (60 Watts)
  - IEEE 802.3bt PoE Type 4 (90 Watts)
    - Exceeds IEEE 802.3bt standard up to 0.5 amps per conductor (100 watts) continuously
  - Cisco UPoE (60 Watts)
  - Cisco UPoE+ (90 Watts)
  - Power over HDBaseT™ PoH (95 Watts)

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## REACTION TO FIRE

|                          |                  |
|--------------------------|------------------|
| Material Identifier      | <b>HF1</b>       |
| 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      |
| Color                    | Violet           |

## 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           | 20           | 100         | 200         | 250         | 500         | 550         |
|--------------------------|----------------|--------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|
| Insertion Loss (dB/100m) | Standard       | 2.0          | 3.8          | 6.0          | 8.5          | 19.8        | 29.0        | 32.8        | N/A         | N/A         |
|                          | <b>Typical</b> | <b>1.9</b>   | <b>3.5</b>   | <b>5.5</b>   | <b>7.8</b>   | <b>18.0</b> | <b>26.1</b> | <b>29.4</b> | <b>43.0</b> | <b>45.4</b> |
| NEXT (dB)                | Standard       | 75.3         | 66.3         | 60.3         | 55.8         | 45.3        | 40.8        | 39.3        | N/A         | N/A         |
|                          | <b>Typical</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>100.0</b> | <b>94.3</b> | <b>88.9</b> | <b>87.1</b> | <b>81.7</b> | <b>81.0</b> |
| PSNEXT (dB)              | Standard       | 72.3         | 63.3         | 57.3         | 52.8         | 42.3        | 37.8        | 36.3        | N/A         | N/A         |
|                          | <b>Typical</b> | <b>97.0</b>  | <b>97.0</b>  | <b>97.0</b>  | <b>97.0</b>  | <b>91.3</b> | <b>85.9</b> | <b>84.1</b> | <b>78.7</b> | <b>78.0</b> |
| ACR-F (dB)               | Standard       | 67.8         | 58.0         | 50.0         | 44.0         | 30.0        | 24.0        | 22.0        | N/A         | N/A         |
|                          | <b>Typical</b> | <b>90.0</b>  | <b>90.0</b>  | <b>90.0</b>  | <b>84.8</b>  | <b>70.8</b> | <b>64.8</b> | <b>62.8</b> | <b>56.8</b> | <b>56.0</b> |
| PSACR-F (dB)             | Standard       | 64.8         | 55.0         | 47.0         | 41.0         | 27.0        | 21.0        | 19.0        | N/A         | N/A         |
|                          | <b>Typical</b> | <b>87.0</b>  | <b>87.0</b>  | <b>87.0</b>  | <b>81.8</b>  | <b>67.8</b> | <b>61.8</b> | <b>59.8</b> | <b>53.8</b> | <b>53.0</b> |
| Return Loss (dB)         | Standard       | 20.0         | 23.0         | 25.0         | 25.0         | 20.1        | 18.0        | 17.3        | N/A         | N/A         |
|                          | <b>Typical</b> | <b>27.0</b>  | <b>30.0</b>  | <b>30.0</b>  | <b>30.0</b>  | <b>25.1</b> | <b>23.0</b> | <b>22.3</b> | <b>20.2</b> | <b>19.9</b> |

• The standard values shown are the most demanding taken from the relevant IEC, TIA and EN specifications. These standard values are the maximum permissible for Insertion loss and the minimum permissible for other parameters

• N/A – Not Applicable

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## 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                |                                |                    |

## STANDARD PACKAGING SPECIFICATIONS

| Part Number                          | Nominal Cable Diameter (mm) | Nominal Cable Weight (kg/km) | Reel Size<br>Flange Diameter x<br>Width (mm) | Gross Weight<br>(kg/Item) | Items Per Pallet |
|--------------------------------------|-----------------------------|------------------------------|--|---------------------------|------------------|
| C6S/FTP-HF1-Eca-500VT <sup>†</sup>   | 7.0                         | 48.4                         | 400 x 390                                    | 26.7                      | 12               |
| C6S/FTP-HF1- Eca-D500VT <sup>‡</sup> | 7.1 x 14.3                  | 100.0                        | 600 x 405                                    | 113.0                     | 4                |

<sup>†</sup>500 = 500m length

<sup>‡</sup>1000 = 1000m length

<sup>§</sup>'D' denotes Duplex Cable

## COUNTRY OF ORIGIN

COO: United Kingdom

*“Leviton is **dedicated to designing, developing and manufacturing** sustainable **high-performance** structured cabling and specialty **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.