

# Category 6A S/FTP EuroClass Eca Cables

Datasheet: GD102404v10

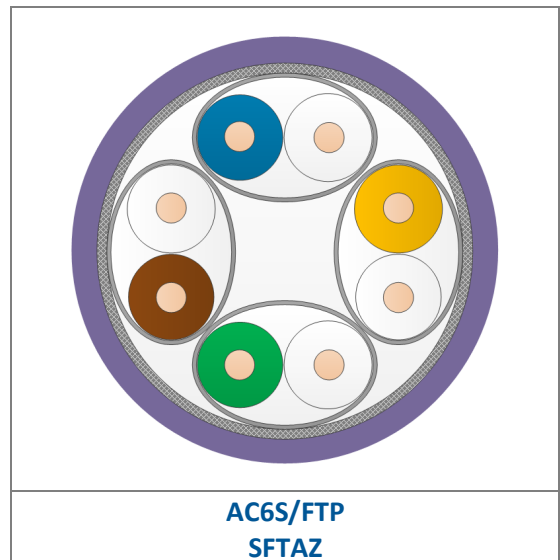


## APPLICATION

Leviton Category 6A S/FTP cables exceed Category 6A performance standards. They are rated to 500MHz and are suitable for use in all Class E<sub>A</sub> structured wiring cable systems. The applications supported include 10 Gigabit Ethernet, Gigabit Ethernet, Power over Ethernet, and broadband video transmissions at frequencies up to 500MHz.

## FEATURES AND BENEFITS

- 23 AWG solid annealed copper wire
- 4 twisted pairs individually shielded and cabled together providing EMI immunity
- Overall braided shield for improved shielding efficiency, increased mechanical robustness and heat dissipation
- Available in a range of HFFR-LS\* jacket materials to suit a variety of installation environments and color coded for identification
- 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<sub>A</sub>, IEC 61156-5
  - EN50173-1 and EN 50288-10-1
  - ANSI/TIA 568.2-D
- Supports 10GBASE-T
- Meets the design requirements of 802.11ac wireless
- 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)
  - Cisco UPoE (60 Watts)
  - Cisco UPoE+ (90 Watts)
  - Power over HDBaseT™ PoH (95 Watts)

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## REACTION TO FIRE

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
Classification / EuroClass	Eca	Eca	N/A – External Only
Color	Violet	Blue	Inner - Violet Outer - Black

## 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 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) max	Standard	N/A	3.8	5.9	8.4	19.1	27.6	31.1	45.3	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) min	Standard	N/A	66.3	60.3	55.8	45.3	40.8	39.3	34.8	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) min	Standard	N/A	63.3	57.3	52.8	42.3	37.8	36.3	31.8	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) min	Standard	N/A	56.0	48.0	42.0	28.0	22.0	20.0	14.0	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) min	Standard	N/A	53.0	45.0	39.0	25.0	19.0	17.0	11.0	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) min	Standard	20.0	23.0	25.0	25.0	20.1	18.0	17.3	17.3	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>
PSANEXT (dB) min	Standard	67.0	67.0	67.0	67.0	62.5	58.0	56.5	52.0	N/A
	<b>Typical</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
PSAACR-F (dB) min	Standard	67.0	66.2	58.2	52.2	38.2	32.2	30.2	24.2	N/A
	<b>Typical</b>	<b>98.1</b>	<b>96.5</b>	<b>94.5</b>	<b>92.2</b>	<b>82.0</b>	<b>73.9</b>	<b>70.6</b>	<b>57.0</b>	<b>54.6</b>

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## 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
Crush Resistance to BS EN 50289-3-5	1000N

## STANDARD PACKAGING SPECIFICATIONS

Part Number	Alternative** 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/Item)	Items Per Pallet
AC6S/FTP-HF1-Eca-500WH	128-SFTAZ-5WS	500	White	7.0	48.4	400 x 390	26.7	12
AC6S/FTP-HF1-Eca-500GY	127-SFTAZ-5SS	500	Gray	7.0	48.4	400 x 390	26.7	12
AC6S/FTP-HF1-Eca-500VT	129-SFTAZ-5VS	500	Violet	7.0	48.4	400 x 390	26.7	12
AC6S/FTP-HF1-Eca-1000VT*	-	1000	Violet	7.0	48.4	600 x 405	54.8	4
AC6S/FTP-HF1-Eca-D500VT*	-	500	Violet	7.1 x 14.3	100.0	600 x 405	113.0	4
AC6S/FTP-HF3-Eca-500BU*	-	500	Blue	7.2	52.7	400 x 390	28.9	12
AC6S/FTP-HF3-Eca-1000BU*	-	1000	Blue	7.2	52.7	600 x 405	59.2	4

\* Only available in Europe and Middle East regions

\*\* May be ordered using Alternative Part Number in some regions

§ '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.