

# Category 6A S/FTP EuroClass Eca Cables

Datasheet: GD102404v11

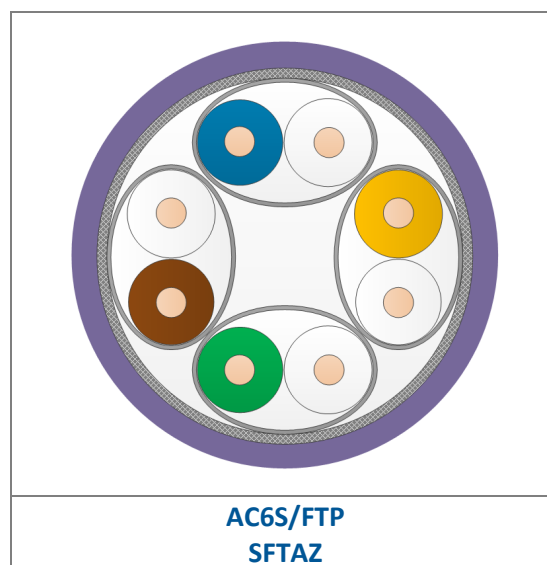


## APPLICATION

Leviton Category 6A S/FTP cables exceed Category 6A performance standards. They are rated to 500MHz and are suitable for use in all Class EA 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 EA, IEC 61156-5
  - EN50173-1 and EN 50288-10-1
  - ANSI/TIA 568.2-D
- Supports 10GBASE-T and 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) and Power over HDBaseT™ PoH (95 Watts)

## 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

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## PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 $\Omega$ /100m	14 $\Omega$ /100m
Conductor Resistance Unbalance	Max 2%	0.1%
Insulation Resistance	>5G $\Omega$ .km	>50G $\Omega$ .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	100 $\Omega$ +/- 5 $\Omega$ @ 100MHz	100 $\Omega$ $\pm$ 3 $\Omega$ @ 100MHz
Coupling Attenuation	Type 1	90dB
Transfer Impedance	Grade 1	8m $\Omega$ /m @ 10MHz

## ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	20	100	200	250	500	550
Insertion Loss (dB/100m)	Standard (Max)	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)	Standard (Min)	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)	Standard (Min)	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)	Standard (Min)	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)	Standard (Min)	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)	Standard (Min)	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)	Standard (Min)	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)	Standard (Min)	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	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	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.