

# Category 7A S/FTP EuroClass Eca Cables

Datasheet: GD102248v6



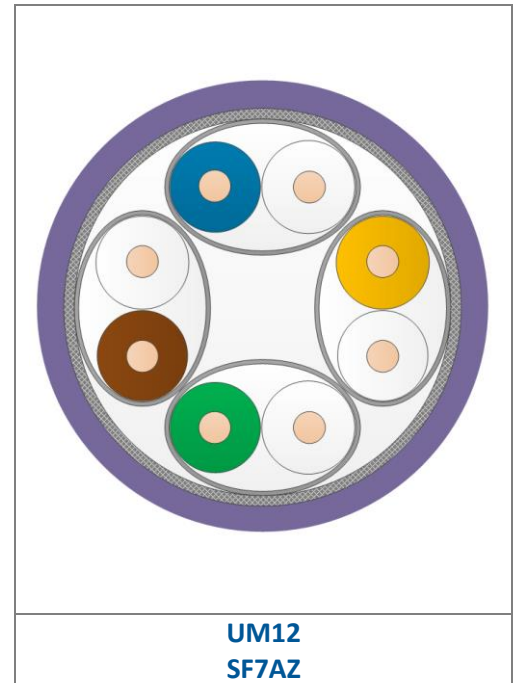
## APPLICATION

Leviton Category 7A S/FTP cables exceed Category 7A performance standards. They are specified to 1000MHz and rated to 1200MHz and are suitable for use in all Class F<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 1000MHz.

## FEATURES AND BENEFITS

- 22 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 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

\* Halogen Free Flame Retardant – Low Smoke



## STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
  - ISO/IEC 11801 Class F<sub>A</sub>, IEC 61156-5
  - EN50173-1 and EN 50288-9-1
  - 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 PERFORMANCE

Material Identifier	HF1	HF3
Material Description	Standard HFFR-LS	Enhanced HFFR-LS
Flammability Rating	IEC/EN 60332-1-2	IEC/EN 60332-3-24
EuroClass Level EN13501-6	Eca	Eca
Color	Violet †	Blue †
Calorific Value (kWh/m)	0.13	0.14

† Also available in a range of non-standard colors

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## PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 Ω/100m	12Ω/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	7mΩ/m @ 10MHz

## ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	100	250	500	600	1000	1200
Insertion Loss (dB/100m)	Standard	N/A	3.7	5.8	18.5	29.7	42.8	47.1	61.9	N/A
	<b>Typical</b>	<b>1.9</b>	<b>3.4</b>	<b>5.3</b>	<b>16.7</b>	<b>26.9</b>	<b>38.7</b>	<b>42.7</b>	<b>56.2</b>	<b>62.1</b>
NEXT (dB)	Standard	78.0	78.0	78.0	75.4	69.4	64.9	63.7	60.4	N/A
	<b>Typical</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>97.2</b>	<b>91.8</b>	<b>90.4</b>	<b>86.4</b>	<b>85.0</b>
PSNEXT (dB)	Standard	75.0	75.0	75.0	72.4	66.4	61.9	60.7	57.4	N/A
	<b>Typical</b>	<b>90.0</b>	<b>90.0</b>	<b>90.0</b>	<b>90.0</b>	<b>88.0</b>	<b>83.5</b>	<b>82.3</b>	<b>79.0</b>	<b>77.8</b>
ELFEXT (dB/100m)	Standard	78.0	78.0	78.0	65.3	57.3	51.3	49.7	45.3	N/A
	<b>Typical</b>	<b>100.0</b>	<b>99.0</b>	<b>91.0</b>	<b>71.0</b>	<b>63.0</b>	<b>57.0</b>	<b>55.4</b>	<b>51.0</b>	<b>49.4</b>
PSELFEXT (dB/100m)	Standard	75.0	75.0	75.0	62.3	54.3	48.3	46.7	42.3	N/A
	<b>Typical</b>	<b>90.0</b>	<b>90.0</b>	<b>84.5</b>	<b>64.5</b>	<b>56.5</b>	<b>50.5</b>	<b>48.9</b>	<b>44.5</b>	<b>42.9</b>
Return Loss (dB)	Standard	N/A	23.0	25.0	20.1	17.3	17.3	17.3	15.1	N/A
	<b>Typical</b>	<b>30.0</b>	<b>33.0</b>	<b>36.0</b>	<b>35.1</b>	<b>32.3</b>	<b>31.3</b>	<b>30.5</b>	<b>28.3</b>	<b>27.5</b>
ACR (dB/100m)	<b>Typical</b>	<b>98.1</b>	<b>96.6</b>	<b>94.7</b>	<b>83.3</b>	<b>70.4</b>	<b>53.1</b>	<b>47.7</b>	<b>30.2</b>	<b>22.8</b>
PSACR (dB/100m)	<b>Typical</b>	<b>88.1</b>	<b>86.6</b>	<b>84.7</b>	<b>73.3</b>	<b>61.2</b>	<b>44.8</b>	<b>39.6</b>	<b>22.8</b>	<b>15.7</b>

## INSTALLATION

Temperature (Installation)	0°C to +50°C
Temperature (Operation)	-20°C to +75°C
Max Tensile Load (Installation)	10kg
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 SF7AZ Parts:

[Length Mark]m LEVITON SF7AZ BRAND-REX UM12-HF1-Eca CAT 7A 4 PAIR 22AWG HFFR IEC 60332-1-2 EuroClass Eca NVP 0.80  
MADE IN UK [ID number] [Week/Year]

Example print legend UM12 Parts:

[Length Mark]m BRAND-REX a LEVITON company UM12-HF1-Eca Cat 7A S/FTP IEC 60332-1-2 EuroClass Eca NVP 0.80 MADE IN  
UK [ID number] [Week/Year]

## STANDARD PACKAGING SPECIFICATIONS

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/Item)	Items Per Pallet
UM12-HF1-Eca-500WH	125-SF7AZ-5WS	500	White	7.55	59.9	465 x 390	33.0	6
UM12-HF1-Eca-500OR	128-SF7AZ-5OS	500	Orange	7.55	59.9	465 x 390	33.0	6
UM12-HF1-Eca-500BU	129-SF7AZ-5LS	500	Blue	7.55	59.9	465 x 390	33.0	6
UM12-HF1-Eca-500VT	126-SF7AZ-5VS	500	Violet	7.55	59.9	465 x 390	33.0	6
UM12-HF1-Eca-1000VT*	-	1000	Violet	7.55	59.9	600 x 405	66.4	4
UM12-HF3-Eca-500BU*	-	500	Blue	7.75	64.6	465 x 390	35.3	6
UM12-HF3-Eca-1000BU*	-	1000	Blue	7.75	64.6	600 x 405	71.1	4

\* Only available in Europe and Middle East regions

*“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.