

Category 6 U/FTP Cables

Datasheet: GD103084v6



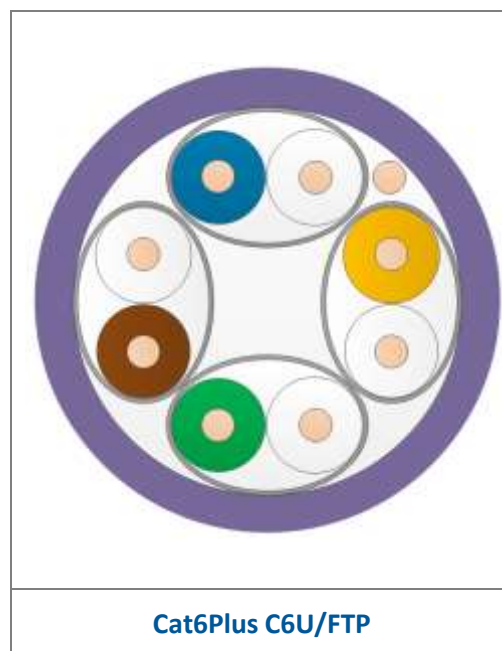
APPLICATION

Leviton Category 6 U/FTP cables exceed the Category 6 performance standards. They are specified to 250MHz and are suitable for use in all Class E structured wiring cable systems. The applications supported include 10 Gigabit Ethernet, 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
- 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
- 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 802.3af, 802.3at, 802.3bt, Cisco UPoE, and Power over HDBaseT™ (PoH) up to 100 watts

MATERIAL IDENTIFICATION

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
Fire EuroClass EN13501-6	Eca	Eca	N/A – External Only
Smoke Emission	IEC 61034-1 & 2	IEC 61034-1 & 2	N/A – External Only
Acid Gas Emission	IEC 60754-2	IEC 60754-2	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 Ω /100m	14 Ω /100m
Conductor Resistance Unbalance	Max 2%	0.1%
Insulation Resistance	>5G Ω .km	>50G Ω .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	100 Ω +/- 5 Ω @ 100MHz	100 Ω \pm 3 Ω @ 100MHz
Coupling Attenuation	Type 1b	75dB
Transfer Impedance	Grade 2	28m Ω /m @ 10MHz

ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	20	100	200	250	500	550
Insertion Loss (dB/100m)	Standard	2.1	3.8	6.0	8.5	19.9	29.1	33.0	N/A	N/A
	Typical	1.9	3.5	5.5	7.8	18.0	26.1	29.4	43.0	45.4
NEXT (dB)	Standard	66.0	65.3	59.3	54.8	44.3	39.8	38.3	N/A	N/A
	Typical	100.0	100.0	100.0	100.0	94.3	88.9	87.1	81.7	81.0
PSNEXT (dB)	Standard	64.0	63.3	57.3	52.8	42.3	37.8	36.3	N/A	N/A
	Typical	97.0	97.0	97.0	97.0	91.3	85.9	84.1	78.7	78.0
ELFEXT (dB/100m)	Standard	66.0	58.0	50.0	44.0	30.0	24.0	22.0	N/A	N/A
	Typical	90.0	90.0	90.0	84.8	70.8	64.8	62.8	56.8	56.0
PSELFEXT (dB/100m)	Standard	64.0	55.0	47.0	41.0	27.0	21.0	19.0	N/A	N/A
	Typical	87.0	87.0	87.0	81.8	67.8	61.8	59.8	53.8	53.0
Return Loss (dB)	Standard	N/A	23.0	25.0	25.0	20.1	18.0	17.3	N/A	N/A
	Typical	27.0	30.0	30.0	30.0	25.1	23.0	22.3	20.2	19.9
ACR (dB/100m)	Typical	98.1	96.5	94.5	92.2	76.3	62.8	57.7	38.7	35.6
PSACR (dB/100m)	Typical	95.1	93.5	91.5	89.2	73.3	59.8	54.7	35.7	32.6

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 C		

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PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company C6U/FTP-HF1-Eca Cat 6 U/FTP IEC 60332-1-2 Euroclass Eca NVP 0.80
MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS - REELS

Part Number	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Packaging Dimensions (mm)	Gross Weight (kg/Item)	Items Per Pallet
C6U/FTP-HF1-Eca-500VT [†]	6.8	45.0	400 x 390	25	12
C6U/FTP-HF1-Eca-1000VT [‡]	6.8	45.0	600 x 405	51.5	4
C6U/FTP-HF1-Eca-D500VT	6.8 x 13.7	90.0	600 x 405	51.5	4
C6U/FTP-HF1-Eca-D1000VT	6.8 x 13.7	90.0	750 x 405	99.0	2
C6U/FTP-HF3-Eca-500BU	7.2	52.9	400 x 390	28.9	12
C6U/FTP-HF3-Eca-1000BU	7.2	52.9	600 x 405	59.4	4

[†]500 = 500m length

[‡]1000 = 1000m length

^{||}'D' denotes duplex cable

STANDARD PACKAGING SPECIFICATIONS - BOXES

Part Number	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Box Size L x W x H (mm)	Gross Weight (kg/Item)	Items Per Pallet
C6U/FTP-HF1-Eca-Rlx-305VT [§]	6.8	45.0	475 x 295 x 475	14.7	12

[§]305 = 305m box

*"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.