

FTP6Z

Category 6 F/UTP Cables

Datasheet: GD103010v2

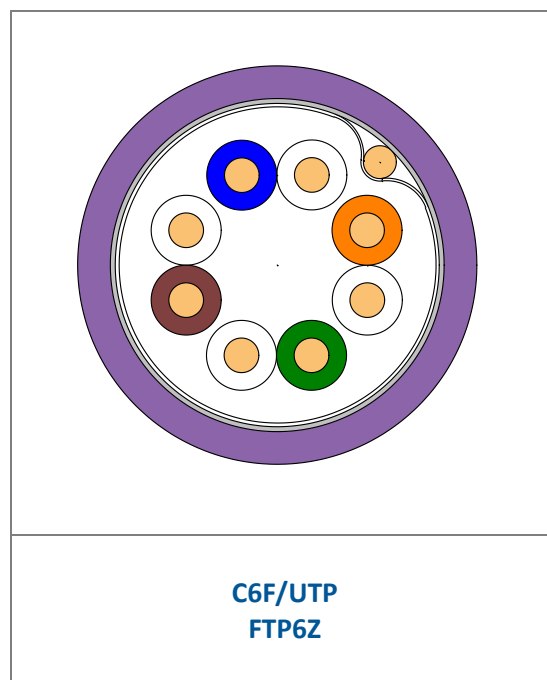
Brand-Rex | a **LEVITON** company

APPLICATION

The Brand-Rex C6F/UTP and Leviton FTP6Z 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, PoE and PoE+ and broadband video transmissions.

FEATURES AND BENEFITS

- 23 AWG Solid Annealed Copper Wire
- Polyolefin Core Insulation
- 4 Unshielded Twisted Pairs Cabled Together
- Aluminium Polyester screen
- Available in a Range of Sheath Materials – to suit a variety of installation environments and colour coded for identification
- Designed to Support all Class E protocols including Gigabit Ethernet
- Supports Power Over Ethernet (PoE) and Power Over Ethernet Plus (PoE+) Applications
- HFFR-LS versions meet the requirements of the Construction Products Regulation (CPR) Euroclass Eca
- Included in the Leviton and Brand-Rex 25 Year System Warranties when used in conjunction with Leviton or Brand-Rex copper connectivity. System warranties available for qualified projects installed by certified contractors.



STANDARDS

Applicable Cable Standards: ANSI/TIA-568-C.2 Cat 6, IEC 61156-5 and EN 50288-5-1

MATERIAL IDENTIFICATION

Material Identifier	HF1
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

* Halogen Free Flame Retardant – Low Smoke

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PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19Ω/100m	15Ω/100m
Conductor Resistance Unbalance	Max 2%	0.1%
Insulation Resistance	>5GΩ.km	>490GΩ.km
Dielectric Strength	2500 Vdc/2secs	Pass

SECONDARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Velocity of Propagation	<534nsec/100m @ 100MHz	502nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @ 100MHz	23nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Coupling Attenuation	Type 1b	86dB
Transfer Impedance	Grade 2	80mΩ/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	na	na
	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	na	na
	Typical	80.0	71.0	65.0	60.5	50.0	45.5	44.0	39.5	38.9
PSNEXT (dB)	Standard	64.0	63.3	57.3	52.8	42.3	37.8	36.3	na	na
	Typical	80.0	71.0	65.0	60.5	50.0	45.5	44.0	39.5	38.9
ELFEXT (dB/100m)	Standard	66.0	58.0	50.0	44.0	30.0	24.0	22.0	na	na
	Typical	82.0	70.0	62.0	56.0	42.0	36.0	34.0	28.0	27.2
PSELFEXT (dB/100m)	Standard	64.0	55.0	47.0	41.0	27.0	21.0	19.0	na	na
	Typical	79.0	67.0	59.0	53.0	39.0	33.0	31.0	25.0	24.2
Return loss (dB)	Standard	na	23.0	25.0	25.0	20.1	18.0	17.3	na	na
	Typical	27.0	30.0	30.0	30.0	25.1	23.0	22.3	20.2	19.9
ACR (dB/100m)	Typical	78.1	67.4	59.5	52.6	32.0	19.4	14.6	-3.5	-6.5
PSACR (dB/100m)	Typical	78.1	67.4	59.5	52.6	32.0	19.4	14.6	-3.5	-6.5

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INSTALLATION

Temperature (<i>Installation</i>)	0°C to +50°C	Min Bend Radius (<i>Installation</i>)	8 x Outer Diameter
Temperature (<i>Operation</i>)	-20°C to +75°C	Min Bend Radius (<i>Operation</i>)	4 x Outer Diameter
Max Tensile Load (<i>Installation</i>)	10kg per simplex cable	Field Test NVP Value	0.68
Segregation Class	Class C		

PRINT LEGEND

Example print legend Leviton Parts:

[Length Mark]m LEVITON FTP6Z BRAND-REX C6F/UTP-HF1-Eca Cat 6 4 PAIR 23AWG HFFR IEC 60332-1-2 Euroclass Eca NVP 0.68
MADE IN UK [ID number] [Week/Year]

Example print legend Brand-Rex Parts:

[Length Mark]m BRAND-REX a LEVITON company C6F/UTP-HF1-Eca-D Cat 6 F/UTP IEC 60332-1-2 Euroclass Eca NVP 0.68 MADE
IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS - REELS

Brand-Rex Part Number	Leviton Part Number	Packaging Length (m)	Colour	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Reel Size Flange Diameter x Width (mm)	Gross Weight (kg/Item)	Items Per Pallet
C6F/UTP-HF1-Eca-500WH	FTP6Z-5WS	500	White	7.1	51.5	400 x 390	28.2	12
C6F/UTP-HF1-Eca-500VT	FTP6Z-5VS	500	Violet	7.1	51.5	400 x 390	28.2	12
C6F/UTP-HF1-Eca-1000VT	-	1000	Violet	7.1	51.5	600 x 405	58.0	4
C6F/UTP-HF1-Eca-D500VT [†]	-	500	Violet	14.3 x 7.1	102.9	600 x 405	58.0	4
C6F/UTP-HF1-Eca-D1000VT [†]	-	1000	Violet	14.3 x 7.1	102.9	750 x 405	112.2	2

[†]'D' denotes duplex cable

STANDARD PACKAGING SPECIFICATIONS - BOXES

Brand-Rex Part Number	Leviton Part Number	Packaging Length (m)	Colour	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Box Size L x W x H (mm)	Gross Weight (kg/Item)	Items Per Pallet
C6F/UTP-HF1-Eca-RLx-305GY	FTP6Z-MSB	305	Grey	7.1	51.5	405 x 265 x 405	16.7	12
C6F/UTP-HF1-Eca-RLx-305VT	FTP6Z-MVB	305	Violet	7.1	51.5	405 x 265 x 405	16.7	12

*"Brand-Rex 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. Brand-Rex reserves the right to modify details without notice in light of subsequent standard/specification changes and ongoing technical developments.