

UTP6Z

Category 6 UTP Cables

Datasheet: GD103011v2

Brand-Rex | a **LEVITON** company

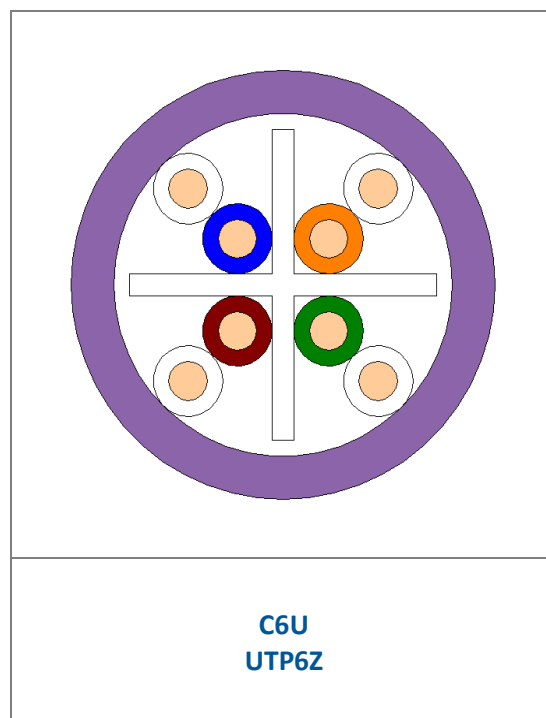
APPLICATION

The Brand-Rex C6U and Leviton UTP6Z cables exceed the Category 6 performance standards. They are rated to 250MHz and are suitable for use in all Class E structured wiring cable systems.

The applications supported include Gigabit Ethernet, PoE, voice and broadband video transmissions.

FEATURES AND BENEFITS

- 23 AWG Solid Annealed Copper Wire
- Polyolefin Core Insulation
- Central Cross Filler – for increased internal crosstalk performance
- 4 Unshielded Twisted Pairs Cabled Together
- 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 50288-6-1

MATERIAL IDENTIFICATION

Material Identifier	HF1	HF3-22	HF1-X
Material Description	Standard HFFR-LS*	Enhanced HFFR-LS	Inner - HFFR-LS Outer - Polyethylene
Flammability Rating	IEC 60332-1-2	IEC 60332-3-22 & NBN C 30-004 F2	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

* Halogen Free Flame Retardant – Low Smoke

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PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 Ω / 100m	16 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	490nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @100MHz	30nsec/100m @ 100MHz
Mean Characteristic Impedance	100 Ω +/- 5 Ω @ 100MHz	100 Ω $\pm$ 3 Ω @ 100MHz
Transverse Conversion Loss (TCL)	$\geq 50 - 10\log(f)$ dB	61dB @ 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	86.5	77.5	71.5	67.0	56.5	52.0	50.5	46.0	45.4
PSNEXT (dB)	Standard	64.0	63.3	57.3	52.8	42.3	37.8	36.3	na	na
	Typical	84.5	75.5	69.5	65.0	54.5	50.0	48.5	44.0	43.4
ELFEXT (dB/100m)	Standard	66.0	58.0	50.0	44.0	30.0	24.0	22.0	na	na
	Typical	85.0	73.0	65.0	59.0	45.0	39.0	37.0	31.0	30.2
PSELFEXT (dB/100m)	Standard	64.0	55.0	47.0	41.0	27.0	21.0	19.0	na	na
	Typical	82.0	70.0	62.0	56.0	42.0	36.0	34.0	28.0	27.2
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	84.6	73.9	66.0	59.1	38.5	25.9	21.1	3.0	0.0
PSACR (dB/100m)	Typical	82.6	71.9	64.0	57.1	36.5	23.9	19.1	1.0	-2.0

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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	0.69
Segregation Class	Class B		

PRINT LEGEND

Example print legend Leviton Parts:

[Length Mark]m LEVITON UTP6Z BRAND-REX C6U-HF1-Eca Cat 6 4 PAIR 23AWG HFFR IEC 60332-1-2 Euroclass Eca NVP 0.69
MADE IN UK [ID number] [Week/Year]

Example print legend Brand-Rex Parts:

[Length Mark]m BRAND-REX a LEVITON company C6U-HF1-Eca-D Cat 6 U/UTP IEC 60332-1-2 Euroclass Eca NVP 0.69 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
C6U-HF1-Eca-500WH	UTP6Z-5WS	500	White	5.8	37.5	400 x 310	20.8	18
C6U-HF1-Eca-500VT	UTP6Z-5VS	500	Violet	5.8	37.5	400 x 310	20.8	18
C6U-HF1-Eca-1000VT	-	1000	Violet	5.8	37.5	465 x 390	40.5	6
C6U-HF1-Eca-D500VT	-	500	Violet	11.6 x 5.8	75.0	465 x 390	40.5	6
C6U-HF1-Eca-D1000VT	-	1000	Violet	11.6 x 5.8	75.0	750 x 410	84.3	2
C6U-HF3-22-Eca-500GN	-	500	Green	5.8	38.3	400 x 310	21.2	18
C6U-HF3-22-Eca-1000GN	-	1000	Green	5.8	38.3	465 x 390	41.3	6
C6U-HF1-X-500BK	-	500	Black	7.0	48.7	400 x 390	26.8	12
C6U-HF1-X-1000BK	-	1000	Black	7.0	48.7	600 x 405	55.2	4

^{||}'D' denotes duplex cable

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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
C6U-HF1-Eca-Rlx-305VT	UTP6Z-MVB	305	Violet	5.8	37.5	405 x 265 x 405	11.4	27 or 18
C6U-HF1-Rlx-Eca-305BU	UTP6Z-MLB	305	Blue	5.8	37.5	405 x 265 x 405	11.4	27 or 18
C6U-HF1-Rlx-Eca-305GY	UTP6Z-MSB	305	Grey	5.8	37.5	405 x 265 x 405	11.4	27 or 18
C6U-HF1-Rlx-Eca-305WH	UTP6Z-MWB	305	White	5.8	37.5	405 x 265 x 405	11.4	27 or 18

*"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.