

UTP5Z

Category 5e UTP Cables

Datasheet: GD103012v2

Brand-Rex | a **LEVITON** company

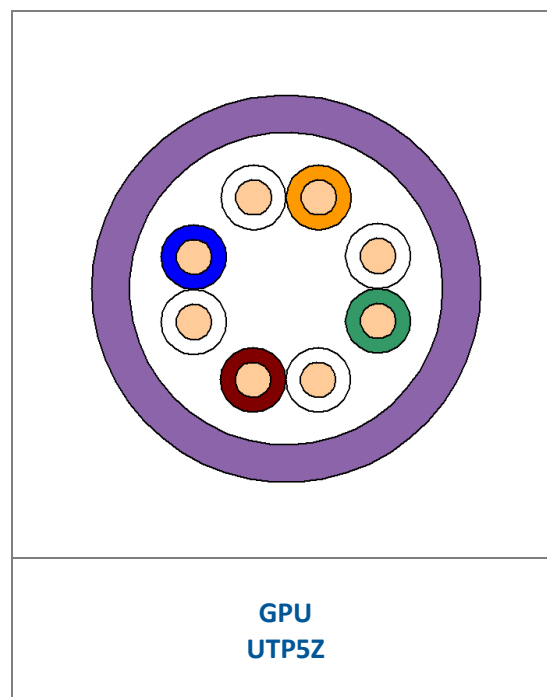
APPLICATION

The Brand-Rex GPU and Leviton UTP5Z cables exceed the Category 5e performance standards. They are rated to 100MHz and are suitable for use in all Class D structured wiring cable systems.

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

FEATURES AND BENEFITS

- 24 AWG Solid Annealed Copper Wire
- Polyolefin Core Insulation
- 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 D protocols including Gigabit Ethernet
- Supports Power Over Ethernet (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 5e, IEC 61156-5 and EN 50288-3-1

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

* 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	18 Ω / 100m
Conductor Resistance Unbalance	Max 2%	0.1%
Insulation Resistance	>5G Ω .km	>45G Ω .km
Dielectric Strength	2500 Vdc/2secs	Pass

SECONDARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Propagation Delay	<534nsec/100m @ 100MHz	487nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @100MHz	38nsec/100m @100MHz
Mean Characteristic Impedance	100 Ω $\pm$ 5 Ω @ 100MHz	100 Ω $\pm$ 3 Ω @ 100MHz
Transverse Conversion Loss (TCL)	$\geq$ 50-10log(f)dB	65dB @ 10MHz

ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	16	20	31.25	100	200	250
Insertion Loss (dB/100m)	Standard	2.0	4.1	6.5	8.2	9.3	11.7	22.0	n/a	n/a
	Typical	1.9	3.8	6.0	7.7	8.6	10.9	20.6	30.4	34.6
NEXT (dB)	Standard	65.3	56.3	50.3	47.2	45.8	42.9	35.3	n/a	38.3
	Typical	76.8	67.8	61.8	58.7	57.3	54.4	46.8	42.3	40.8
PSNEXT (dB)	Standard	62.3	53.3	47.3	44.2	42.8	39.9	32.3	n/a	n/a
	Typical	73.8	64.8	58.8	55.7	54.3	51.4	43.8	39.3	37.8
ELFEXT (dB/100m)	Standard	63.8	51.8	43.8	39.7	37.8	33.9	23.8	n/a	n/a
	Typical	81.4	69.4	61.4	57.3	55.4	51.5	41.4	35.4	33.4
PSELFEXT (dB/100m)	Standard	60.8	48.8	40.8	36.7	34.8	30.9	20.8	n/a	n/a
	Typical	78.4	66.4	58.4	54.3	52.4	48.5	38.4	32.4	30.4
Return loss (dB)	Standard	20.0	23.0	25.0	25.0	25.0	23.6	20.1	n/a	n/a
	Typical	24.8	27.8	29.8	29.8	29.8	28.4	24.9	22.8	22.1
ACR (dB/100m)	Typical	74.9	64.0	55.8	51.1	48.7	43.4	26.2	11.9	6.2
PSACR (dB/100m)	Typical	71.9	61.0	52.8	48.1	45.7	40.4	23.2	8.9	3.2

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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 UTP5Z BRAND-REX GPU-HF1-Eca Cat 5e 4 PAIR 24AWG 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 GPU-HF1-Eca-D Cat 5e 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
GPU-HF1-Eca-500WH	UTP5Z-5WS	500	White	4.85	30.0	400 x 210	16.1	24
GPU-HF1-Eca-500VT	UTP5Z-5VS	500	Violet	4.85	30.0	400 x 210	16.1	24
GPU-HF1-Eca-1000VT	-	1000	Violet	4.85	30.0	400 x 390	31.7	12
GPU-HF1-Eca-D500VT [†]	-	500	Violet	5.05 x 10.0	63.1	400 x 390	34.0	12
GPU-HF1-Eca-D1000VT [†]	-	1000	Violet	5.05 x 10.0	63.1	600 x 405	70.5	4
GPU-HF3-Eca-500BU	-	500	Blue	5.65	42.7	400 x 310	23.4	18
GPU-HF3-Eca-1000BU	-	1000	Blue	5.65	42.7	465 x 390	45.7	6
GPU-HF1-X-500BK	-	500	Black	6.1	39.3	400 x 310	21.6	18
GPU-HF1-X-1000BK	-	1000	Black	6.1	39.3	465 x 390	42.3	6

[†]'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
GPU-HF1-Eca-Rlx-305WH	UTP5Z-MWB	305	White	4.85	30.0	365 x 250 x 365	9.9	27 or 18
GPU-HF1-Rlx-Eca-305VT	UTP5Z-MVB	305	Violet	4.85	30.0	365 x 250 x 365	9.9	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.