

Category 6_A UTP Cables

Datasheet: GD102398v2

Brand-Rex a **LEVITON** company

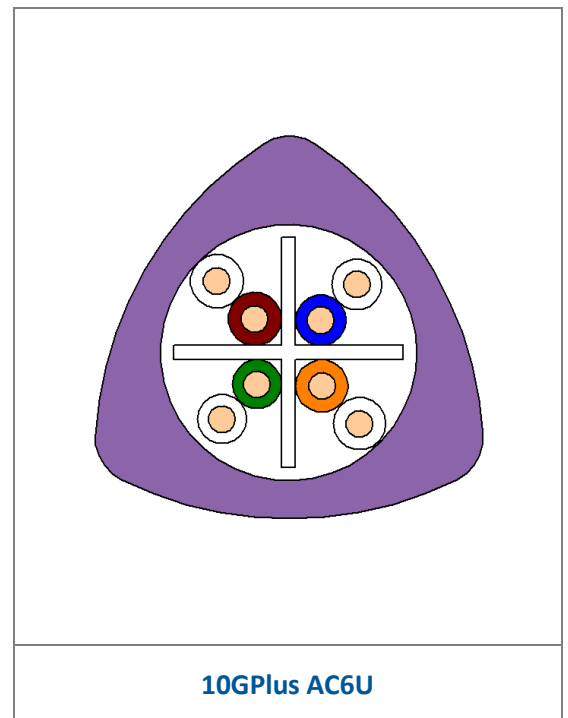
APPLICATION

The Brand-Rex 10GPlus AC6U cable exceeds the Category 6_A performance standards. They are rated to 500MHz and are suitable for use in all Class E_A structured wiring cable systems.

The UTP cable construction combines superior levels of pair balance with an innovative finished cable geometry specially designed to reduce 'Alien' crosstalk. The 10GPlus AC6U cable supports 10 Gigabit Ethernet, Gigabit Ethernet, PoE, voice and broadband video transmissions at frequencies as high as 500MHz.

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
- Patented Reuleaux Profile – offering superior alien crosstalk performance
- 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_A protocols including 10GBASE-T
- Supports Power Over Ethernet (PoE) and Power Over Ethernet Plus (PoE+) Applications
- 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: ISO/IEC 11801, IEC 61156-5, EN 50173-1 and EN 50288-11-1

MATERIAL IDENTIFICATION

Material Identifier	HF1	HF3	HF3-22
Material Description	Standard HFFR-LS*	Enhanced HFFR-LS	Enhanced HFFR-LS
Flammability Rating	IEC 60332-1-2	IEC 60332-3-24 & UL1666 riser	IEC 60332-3-22
Smoke Emission	IEC 61034-1 & 2	IEC 61034-1 & 2	IEC 61034-1 & 2
Acid Gas Emission	IEC 60754-2	IEC 60754-2	IEC 60754-2
Colour	Violet	Blue	Green

* 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	15 Ω / 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	515nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @100MHz	17.5nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Transverse Conversion Loss (TCL)	≥60-10log(f)dB	65dB @ 10MHz

ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	20	100	200	250	500	550
Insertion Loss (dB/100m)	Standard	2.0	3.7	5.9	8.3	19.0	27.5	31.0	45.3	na
	<i>Typical</i>	2.0	3.6	5.7	8.1	18.5	26.8	30.2	44.1	46.5
NEXT (dB)	Standard	74.3	65.3	59.3	54.8	44.3	39.8	38.3	33.8	na
	<i>Typical</i>	84.3	75.3	69.3	64.8	54.3	49.8	48.3	43.8	43.2
PSNEXT (dB)	Standard	72.3	63.3	57.3	52.8	42.3	37.8	36.3	31.8	na
	<i>Typical</i>	82.3	73.3	67.3	62.8	52.3	47.8	46.3	41.8	41.2
ELFEXT (dB/100m)	Standard	67.8	55.8	47.8	41.8	27.8	21.8	19.8	13.8	na
	<i>Typical</i>	79.8	67.8	59.8	53.8	39.8	33.8	31.8	25.8	25.0
PSELFEXT (dB/100m)	Standard	64.8	52.8	44.8	38.8	24.8	18.8	16.8	10.8	na
	<i>Typical</i>	76.8	64.8	56.8	50.8	36.8	30.8	28.8	22.8	22.0
Return loss (dB)	Standard	20.0	23.0	25.0	25.0	20.1	18.0	17.3	15.2	na
	<i>Typical</i>	27.0	30.0	32.0	30.0	25.1	23.0	22.3	20.2	19.9
PSANEXT (dB)	Standard	67.0	67.0	67.0	67.0	62.5	58.0	56.5	52.0	na
	<i>Typical</i>	72.0	72.0	72.0	72.0	67.5	63.0	61.5	57.0	56.4
PSAACR-F (dB)	Standard	67.0	66.2	58.2	52.2	38.2	32.2	30.2	24.2	na
	<i>Typical</i>	73.0	72.2	64.2	58.2	44.2	38.2	36.2	30.2	29.4

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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	0.67
Segregation Class	Class C		

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX AC6U-HF1 Cat6A IEC 60332-1-2 NVP 0.67 Made in the UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS

Brand-Rex Part Number	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Reel Size Flange x Width (mm)	Gross Weight (kg/Item)	Items Per Pallet
AC6U-HF1-500VT [†]	8.8	82.3	600 x 325	47.2	6
AC6U-HF1-1000VT [‡]	8.8	82.3	750 x 405	91.6	2
AC6U-HF3-500BU	8.8	85.2	600 x 325	48.6	6
AC6U-HF3-1000BU	8.8	85.2	750 x 405	94.5	2
AC6U-HF3-22-500GN	8.8	85.2	600 x 325	48.6	6
AC6U-HF3-22-1000GN	8.8	85.2	750 x 405	94.5	2

[†]500 = 500m length

[‡]1000 = 1000m length

*“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.