

Category 6_A UTP Euroclass D_{ca} Cables

Datasheet: GD103608v1

Brand-Rex | a **LEVITON** company

APPLICATION

The Brand-Rex 10GPlus AC6U cables are compliant with the European Construction Products Regulation, achieving Euroclass level D_{ca} according to EN 13501-6. These D_{ca} Euroclass cables also have superior levels of smoke emission, flaming droplets and acid gas production making them a versatile choice for many internal installations. The AC6U D_{ca} Euroclass cables are suited to many high density backbone installations where people safety in the case of fire is a high priority.

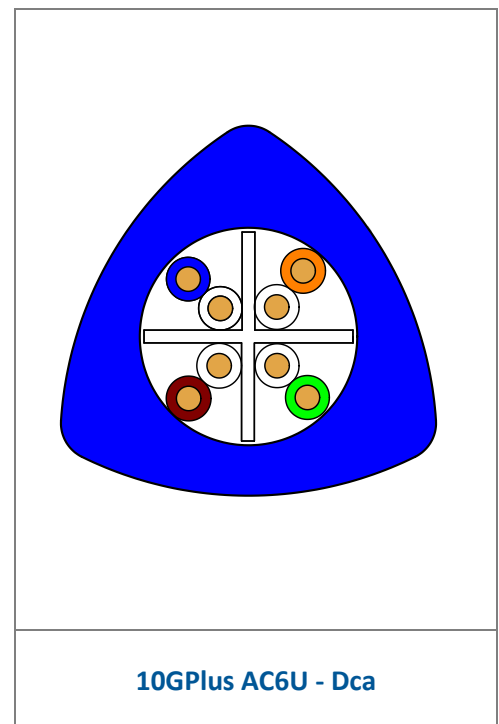
The UTP cable construction combines superior levels of pair balance with an innovative finished cable geometry specially designed to reduce 'Alien' crosstalk. The 10GPlus AC6U cable supports 10 Gigabit Ethernet, Gigabit Ethernet, PoE, PoE+ and voice / broadband video transmissions at frequencies as high as 500MHz. They are rated to 500MHz and are suitable for use in all Class E_A structured wiring cable systems.

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
- Designed to Support all Class E_A protocols including 10GBASE-T
- Supports Power Over Ethernet (PoE) and Power Over Ethernet Plus (PoE+) Applications
- HFFR-LS* material meets the requirements of the Construction Products Regulation (CPR) Euroclass D_{ca}
- Blue† Coloured Jacket to identify Euroclassification level D_{ca}
- 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.

* Halogen Free Flame Retardant – Low Smoke

† Also available in a range of non-standard colours



STANDARDS

Applicable Cable Standards: IEC 61156-5 and EN 50288-11-1

REACTION TO FIRE

CHARACTERISTIC	STANDARD	RATING
Single Cable Flame Rating	IEC 60332-1-2	Pass
Bundled Cable Flame Rating	EN 50399 20.5kW source	D _{ca}
Smoke Production	EN 50399	s2
Flaming Droplets / Particles	EN 50399	d2
Acid Gas Emission / Acidity	EN 50267-2-3	a1
Euroclassification	EN 13501-6	D _{ca} s2 d2 a1

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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 a LEVITON company AC6U-Dca Cat 6A U/UTP EN 50399 Euroclass Dca s2 d2 a1 NVP 0.67
MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS

Brand-Rex Part Number	Packaging Length (m)	Colour	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Reel Size Flange x Width (mm)	Gross Weight (kg/Item)	Items Per Pallet
AC6U-Dca-500BU	500	Blue†	8.8	82.3	600 x 325	47.2	6
AC6U-Dca-1000BU	1000	Blue†	8.8	82.3	750 x 405	91.3	2

† Also available in a range of non-standard colours

“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.