Category 6 U/UTP EuroClass D_{ca} Cables

Datasheet: GD103630v5
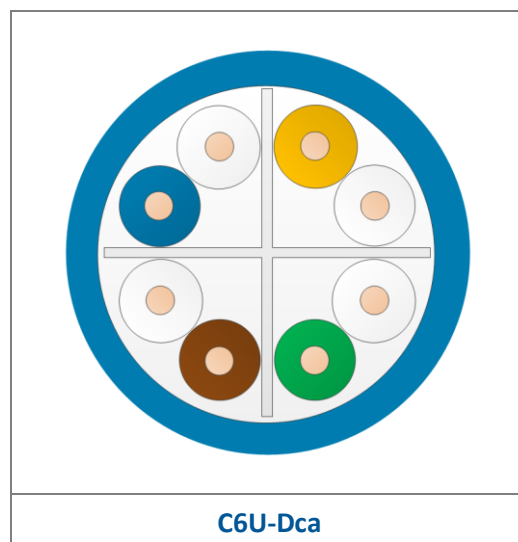
Brand-Rex | a **LEVITON** company

APPLICATION

Brand-Rex C6U 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 C6U cables support Gigabit Ethernet, Power over Ethernet, voice and broadband video transmissions at frequencies up to 250MHz.

FEATURES AND BENEFITS

- 23 AWG solid annealed copper wire
- 4 unshielded twisted pairs cabled together
- Central separator for increased internal crosstalk performance
- HFFR-LS* sheath enables cable to meet the requirements of the Construction Products Regulation (CPR) EuroClass 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.
- Designed and manufactured in a carbon neutral facility in the UK
- Delivered in 100% recyclable packaging

* *Halogen Free Flame Retardant – Low Smoke*

C6U-Dca

STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
    - ISO/IEC 11801 Class E, IEC 61156-5
    - EN50173-1 and EN 50288-6-1
    - ANSI/TIA 568C.2
- Supports Gigabit Ethernet
- Meets the design requirements of 802.11ac wireless
- Recommended for PoE standards: IEEE 802.3af, 802.3at, Cisco UPoE, and Power over HDBaseT™ (PoH) up to 100 watts, as well as emerging 4 pair PoE standards such as the IEEE 802.3bt, including 90 watts at the powered device (PD)

FIRE CLASSIFICATION

CHARACTERISTIC	IEC STANDARD	EN STANDARD	CPR RATING
Reaction to Fire Classification / EuroClass	-	EN 13501-6	Dca s2 d2 a1
Single Cable Flame Rating	IEC 60332-1-2	EN 60332-1-2	Pass
Smoke Emission	-	EN 50399	s2
Acid Gas Emission	IEC 60754	EN 60754	Pass

Category 6 U/UTP EuroClass D_{ca} Cables

Brand-Rex | a **LEVITON** company

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	>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	490nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @100MHz	30nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Transverse Conversion Loss (TCL)	≥50-10log(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
ACR-F (dB)	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
PSACR-F (dB)	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)	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

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		

Category 6 U/UTP EuroClass D$_{ca}$ Cables

Datasheet: GD103630v5

Brand-Rex | a **LEVITON** company

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company C6U-Dca Cat 6 U/UTP EN 50399 EuroClass Dca s2 d2 a1 NVP 0.69
MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS - REELS

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
C6U-Dca-500BU	500	Blue†	5.8	38.2	400 x 310	21.1	18
C6U-Dca-1000BU	1000	Blue†	5.8	38.2	465 x 390	40.5	6

STANDARD PACKAGING SPECIFICATIONS - BOXES

Brand-Rex 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-Dca-Rlx-305BU	305	Blue†	5.8	38.2	405 x 265 x 405	11.6	27 or 18 ††

† Also available in a range of non-standard colours

†† Double or single stacked pallets

*"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 a Leviton Company reserves the right to modify details without notice in light of subsequent standard/specification changes and ongoing technical developments.