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

Datasheet: GD103630v3

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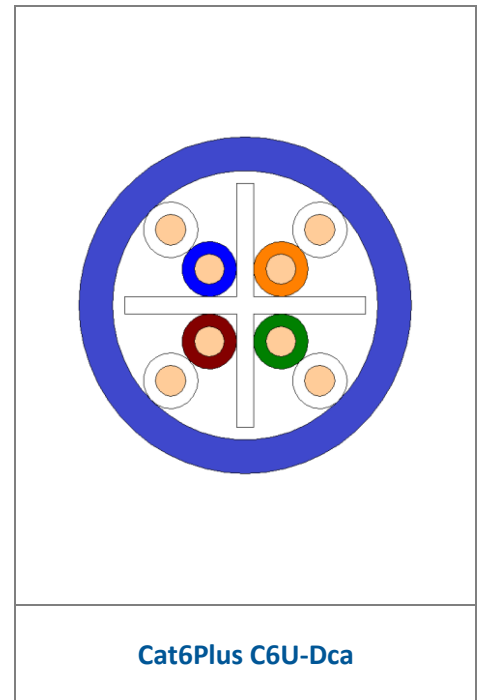
APPLICATION

Brand-Rex Cat6Plus 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 Cat6Plus C6U cable supports Gigabit Ethernet, PoE, PoE+, voice and broadband video transmissions at frequencies up to 250MHz.

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
- Designed to support all class E protocols including Gigabit Ethernet
- 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 EuroClass 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

Cat6Plus C6U-Dca

STANDARDS

Applicable Cable Standards: IEC 61156-5 & EN 50288-6-1

REACTION TO FIRE

CHARACTERISTIC	STANDARD	RATING
Single Cable Flame Rating	IEC/EN 60332-1-2	Pass
Acid Gas Emission / Acidity	EN 50267-2-3	Pass
Classification	EN 13501-6	D$_{ca}$ s2 d2 a1

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

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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*
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*

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:

[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†	5.75	38.2	400 x 310	21.1	18
C6U-Dca-1000BU	1000	Blue†	5.75	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†	5.75	38.2	405 x 265 x 405	11.6	27 or 18

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