

# Category 6<sub>A</sub> U/FTP Zone EuroClass D<sub>ca</sub> Cables

Datasheet: GD103582v5

**Brand-Rex** | a **LEVITON** company

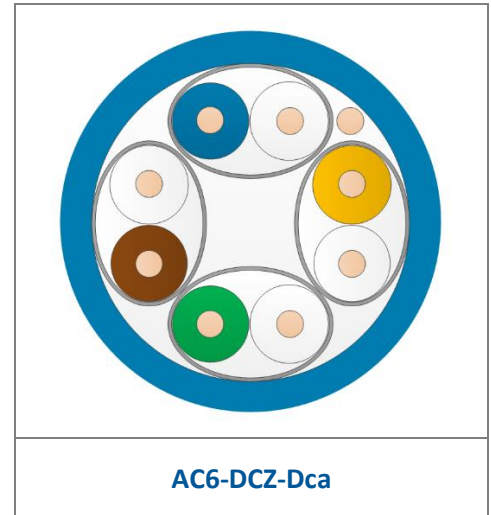
## APPLICATION

Brand-Rex Zone cables exceed the Category 6<sub>A</sub> performance standards in a channel of up to 70m in length. They are specified to 500MHz and are suitable for use in all Class E<sub>A</sub> structured wiring cable systems. Zone cables have been designed specifically for the challenges in the data centre environment by being smaller and lighter than equivalent conventional cables. Zone cables support 10 Gigabit Ethernet, Gigabit Ethernet, Power over Ethernet, voice and broadband video transmissions at frequencies up to 500MHz.

## FEATURES AND BENEFITS

- 26 AWG solid annealed copper wire
- 4 twisted pairs individually screened and cabled together – providing EMI immunity
- HFFR-LS\* sheath material to suit a variety of installation environments, including CPR fire performance ratings E<sub>ca</sub>, D<sub>ca</sub>, C<sub>ca</sub> and B2<sub>ca</sub> and colour coded for identification.
- 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% recycled packaging

\* Halogen Free Flame Retardant – Low Smoke



## STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
  - ISO/IEC 11801 Class E<sub>A</sub>, IEC 61156-6
  - EN50173-1 and EN 50288-10-2
- Supports 10GBASE-T
- Meets design requirements for 802.11ac wireless
- Recommended for PoE standards up to 60W: IEEE 802.3af, 802.3at & Cisco UPoE, as well as emerging 4 pair PoE standards such as IEEE 802.3bt (Type 3), up to 51 watts at the powered device (PD).

## FIRE CLASSIFICATION

CHARACTERISTIC	IEC STANDARD	EN STANDARD	CPR RATING
Reaction to Fire Classification / EuroClass	-	EN 13501-6	D <sub>ca</sub> s <sub>2</sub> d <sub>1</sub> a <sub>1</sub>
Single Cable Flame Rating	IEC 60332-1-2	EN 60332-1-2	Pass
Smoke Emission	-	EN 50399	s <sub>2</sub>
Acid Gas Emission	IEC 60754	EN 60754	Pass

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## PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 28.5 Ω / 100m	23Ω/100m (<17Ω/70m)
Conductor Resistance Unbalance	Max 2%	0.2%
Insulation Resistance	>5GΩ.km	>50GΩ.km
Dielectric Strength	2500 Vdc/2secs	Pass

## SECONDARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Velocity of Propagation	<537.6nsec/100m @ 100MHz	413nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @ 100MHz	3nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Coupling Attenuation	Type 1b	77dB
Transfer Impedance	Grade 2	15mΩ/m @ 10MHz

## ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	20	100	200	250	500	550
Insertion Loss (dB/100m) max	Standard	3.1	5.7	8.9	12.6	28.7	41.4	46.6	67.9	na
	<b>Typical</b>	<b>2.4</b>	<b>4.4</b>	<b>6.8</b>	<b>9.7</b>	<b>22.0</b>	<b>31.7</b>	<b>35.7</b>	<b>52.0</b>	<b>54.8</b>
NEXT (dB) min	Standard	na	66.3	60.3	55.8	45.3	40.8	39.3	34.8	na
	<b>Typical</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>94.3</b>	<b>88.9</b>	<b>87.1</b>	<b>81.7</b>	<b>81.0</b>
PSNEXT (dB) min	Standard	na	63.3	57.3	52.8	42.3	37.8	36.3	31.8	na
	<b>Typical</b>	<b>97.0</b>	<b>97.0</b>	<b>97.0</b>	<b>97.0</b>	<b>91.3</b>	<b>85.9</b>	<b>84.1</b>	<b>78.7</b>	<b>78.0</b>
ACR-F (dB) min	Standard	na	56.0	48.0	42.0	28.0	22.0	20.0	14.0	na
	<b>Typical</b>	<b>90.0</b>	<b>90.0</b>	<b>90.0</b>	<b>84.8</b>	<b>70.8</b>	<b>64.8</b>	<b>62.8</b>	<b>56.8</b>	<b>56.0</b>
PSACR-F (dB) min	Standard	na	53.0	45.0	39.0	25.0	19.0	17.0	11.0	na
	<b>Typical</b>	<b>87.0</b>	<b>87.0</b>	<b>87.0</b>	<b>81.8</b>	<b>67.8</b>	<b>61.8</b>	<b>59.8</b>	<b>53.8</b>	<b>53.0</b>
Return Loss (dB) min	Standard	20.0	23.0	25.0	25.0	20.1	18.0	17.3	17.3	na
	<b>Typical</b>	<b>27.0</b>	<b>30.0</b>	<b>30.0</b>	<b>30.0</b>	<b>25.1</b>	<b>23.0</b>	<b>22.3</b>	<b>20.2</b>	<b>19.9</b>
PSANEXT (dB) min	Standard	67.0	67.0	67.0	67.0	62.5	58.0	56.5	52.0	na
	<b>Typical</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
PSAACR-F (dB) min	Standard	67.0	66.2	58.2	52.2	38.2	32.2	30.2	24.2	na
	<b>Typical</b>	<b>98.1</b>	<b>96.5</b>	<b>94.5</b>	<b>92.2</b>	<b>82.0</b>	<b>73.9</b>	<b>70.6</b>	<b>57.0</b>	<b>54.6</b>

## 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	0.80
Segregation Class	Class C		

NB: Network designers should use an attenuation factor of 1.5 when designing with these cables

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## PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company AC6-DCZ-Dca ZONE CABLE Cat 6A U/FTP EN 50399 EuroClass Dca s2 d1 a1  
NVP 0.80 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 Dia x Width (mm)	Gross Weight (kg/Item)	Items/Pallet
AC6-DCZ-Dca-500BU	500	Blue†	5.6	32.6	400 x 315	18.3	18
AC6-DCZ-Dca-1000BU	1000	Blue†	5.6	32.6	465 x 390	35.6	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 / Pallet
AC6-DCZ-Dca-Rlx-305BU§	305	Blue†	5.6	32.6	405 x 265 x 405	10.0	27 or 18††

§ = 305m box

† Also available in a range of non-standard colours

†† 3 Layer pallet is 27 boxes, 2 layers is 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.