Category 6$_A$ Zone Cables

Datasheet: GD102413v4

Brand-Rex | a **LEVITON** company

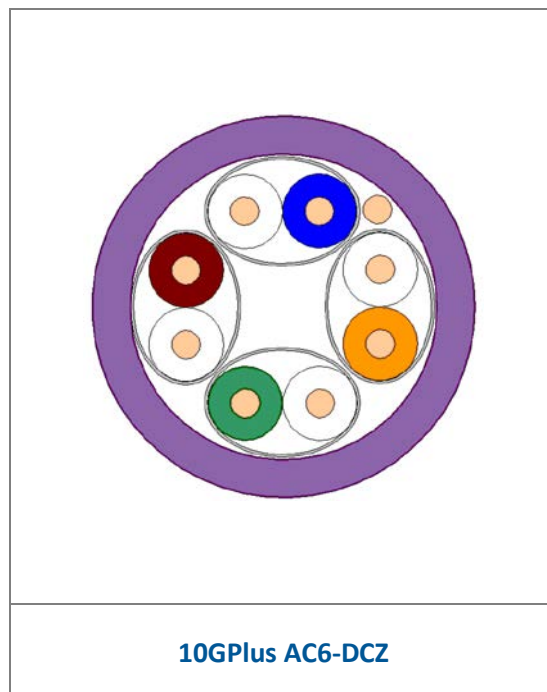## APPLICATION

Brand-Rex 10GPlus Zone cables exceed the Category 6$_A$ 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$_A$ structured wiring cable systems. Zone cables have been designed specifically for the challenges in the data centre environment. They are smaller and lighter than equivalent conventional cables. The 10GPlus Zone cable supports 10 Gigabit Ethernet, Gigabit Ethernet, PoE, voice and broadband video transmissions at frequencies up to 500MHz.

FEATURES AND BENEFITS

- 26 AWG solid annealed copper wire
- Gas injection foamed polyolefin core insulation – offering superior signal speed
- 4 twisted pairs individually screened and cabled together – providing EMI immunity
- 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 & PoE+) applications
- HFFR-LS versions meet the requirements of the Construction Products Regulation (CPR) EuroClass Eca
- 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.

10GPlus AC6-DCZ

STANDARDS

Applicable Cable Standards: IEC 61156-6 and EN50288-10-2

MATERIAL PERFORMANCE

Material Identifier	HF1	HF3
Material Description	Standard HFFR-LS*	Enhanced HFFR-LS*
Flammability Rating	IEC/EN 60332-1-2	IEC/EN 60332-3-24
EuroClass Level EN13501-6	Eca	Eca
Colour	Violet†	Blue†

Halogen Free Flame Retardant – Low Smoke

† Also available in a range of non-standard colours

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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	<534nsec/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)	Standard	3.1	5.7	8.9	12.6	28.7	41.4	46.6	67.9	na
	Typical	*2.4*	*4.4*	*6.8*	*9.7*	*22.0*	*31.7*	*35.7*	*52.0*	*54.8*
NEXT (dB)	Standard	na	66.3	60.3	55.8	45.3	40.8	39.3	34.8	na
	Typical	*100.0*	*100.0*	*100.0*	*100.0*	*94.3*	*88.9*	*87.1*	*81.7*	*81.0*
PSNEXT (dB)	Standard	na	63.3	57.3	52.8	42.3	37.8	36.3	31.8	na
	Typical	*97.0*	*97.0*	*97.0*	*97.0*	*91.3*	*85.9*	*84.1*	*78.7*	*78.0*
ELFEXT (dB/100m)	Standard	na	56.0	48.0	42.0	28.0	22.0	20.0	14.0	na
	Typical	*90.0*	*90.0*	*90.0*	*84.8*	*70.8*	*64.8*	*62.8*	*56.8*	*56.0*
PSELFEXT (dB/100m)	Standard	na	53.0	45.0	39.0	25.0	19.0	17.0	11.0	na
	Typical	*87.0*	*87.0*	*87.0*	*81.8*	*67.8*	*61.8*	*59.8*	*53.8*	*53.0*
Return Loss (dB)	Standard	20.0	23.0	25.0	25.0	20.1	18.0	17.3	17.3	na
	Typical	*27.0*	*30.0*	*30.0*	*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
	Typical	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
PSAACR-F (dB)	Standard	67.0	66.2	58.2	52.2	38.2	32.2	30.2	24.2	na
	Typical	*98.1*	*96.5*	*94.5*	*92.2*	*82.0*	*73.9*	*70.6*	*57.0*	*54.6*

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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**	0.80
Segregation Class	Class C		

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

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company AC6-DCZ-Eca ZONE CABLE Cat 6A U/FTP IEC 60332-1-2 EuroClass Eca NVP 0.80 MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS - REELS

Brand-Rex Part Number	Nominal Cable Diameter (*mm*)	Nominal Cable Weight (*kg/km*)	Packaging Dimensions (*mm*)	Gross Weight (*kg/Item*)	Items Per Pallet
AC6-DCZ-Eca-500VT[†]	5.6	32.5	400 x 400 x 312	18.3	18
AC6-DCZ-Eca-1000VT[‡]	5.6	32.5	465 x 465 x 375	35.5	6
AC6-DCZ-HF3-Eca-500BU	5.7	34.7	400 x 400 x 312	19.3	18
AC6-DCZ-HF3-Eca-1000BU	5.7	34.7	465 x 465 x 375	37.5	6

[†]*500 = 500m length*
[‡]*1000 = 1000m length*

STANDARD PACKAGING SPECIFICATIONS - BOXES

Brand-Rex Part Number	Nominal Cable Diameter (*mm*)	Nominal Cable Weight (*kg/km*)	Box Size L x W x H (*mm*)	Gross Weight (*kg/Item*)	Items Per Pallet
AC6-DCZ-Eca-Rlx-305VT[§]	5.6	32.5	405 x 265 x 405	10.1	27 or 18

[§]*305 = 305m box*

*"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.