

# Category 6A U/FTP Euroclass C<sub>ca</sub> Cables

Datasheet: GD103175v2

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

## APPLICATION

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

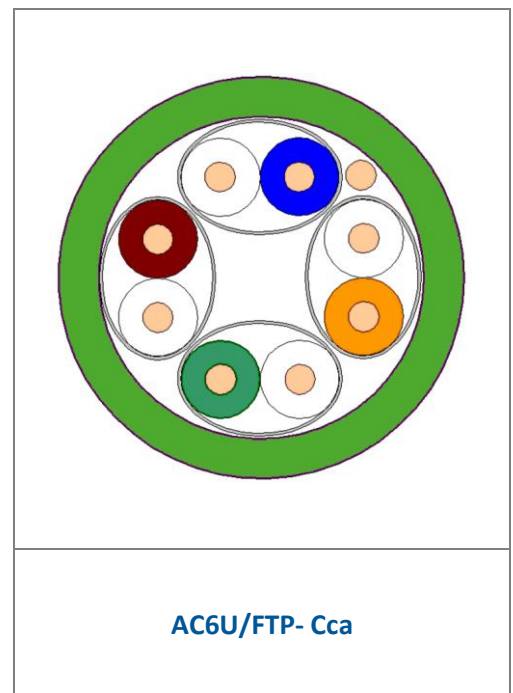
Brand-Rex AC6U/FTP cables exceed the Category 6A performance standards. They are specified to 500MHz and are suitable for use in all Class EA structured wiring cable systems. The applications supported include 10 Gigabit Ethernet, Gigabit Ethernet, PoE, PoE+, voice and broadband video transmissions.

## FEATURES AND BENEFITS

- 23 AWG Solid Annealed Copper Wire
- 4 Twisted Pairs Individually Screened and cabled together – providing EMI immunity
- Designed to Support all Class EA protocols including 10GBASE-T
- Supports Power Over Ethernet (PoE) and Power Over Ethernet Plus (PoE+) Applications
- Enhanced HFFR-LS\* material meets the requirements of the Construction Products Regulation (CPR) Euroclass C<sub>ca</sub>
- Green† Coloured Jacket to identify Euroclassification level C<sub>ca</sub>
- 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: EN 50288-10-1 and IEC 61156-5

## REACTION TO FIRE

CHARACTERISTIC	STANDARD	RATING
Single Cable Flame Rating	IEC 60332-1-2	Pass
Bundled Cable Flame Rating	EN 50399 20.5kW source	C <sub>ca</sub>
Smoke Production	EN 50399	s1
Flaming Droplets / Particles	EN 50399	d1
Acid Gas Emission / Acidity	EN 50267-2-3	a1
Euroclassification	EN 13501-6	C <sub>ca</sub> s1 d1 a1

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## PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 Ω / 100m	14 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	413nsec/100m @ 100MHz
Delay Skew	Max 25nsec/100m @ 100MHz	4nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Coupling Attenuation	Type 1b	75dB
Transfer Impedance	Grade 2	28mΩ/m @ 10MHz

## ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	20	100	200	250	500	550
Insertion Loss (dB/100m)	Standard	na	3.8	5.9	8.4	19.1	27.6	31.1	45.3	na
	<b>Typical</b>	<b>1.9</b>	<b>3.5</b>	<b>5.5</b>	<b>7.8</b>	<b>18.0</b>	<b>26.1</b>	<b>29.4</b>	<b>43.0</b>	<b>45.4</b>
NEXT (dB)	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)	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>
ELFEXT (dB/100m)	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>
PSELFEXT (dB/100m)	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)	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)	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)	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>

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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		

## PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company AC6U/FTP-Cca Cat 6A U/FTP EN 50399 Euroclass Cca s1 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 x Width (mm)	Gross Weight (kg/Item)	Items Per Pallet
AC6U/FTP-Cca-500GN	500	Green†	6.7	44.5	400 x 390	24.7	12
AC6U/FTP-Cca-1000GN	1000	Green†	6.7	44.5	600 x 325	50.5	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
AC6U/FTP-Cca-305GN	305	Green†	6.7	44.5	475 x 295 x 475	14.6	12

†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.

**DECLARATION OF PERFORMANCE**

**DoP No. 00041**

For the Construction product: Communication cables

- 1. Unique identification code of the product-type **AC6 U/FTP- Cca**

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- 2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4): See cable print.

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- 3. Intended use or uses of the construction product Supply of communications in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

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- 4. Contact address of the manufacturer According to Article 11(5): Brand-Rex Ltd, Viewfield Industrial Estate, Glenrothes Fife, KY6 2RS, Scotland, UK  
Tel: +441592772124 Fax: +441592775314  
Email: support@brand-rex.com

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- 5. Contact address of authorized representative: According to Article 12(2): As per Item 4.

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- 6. System of assessment and verification of constancy of performance of the construction product as set out in CPR EU Annex V. System 1+

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- 7. Notified product certification body NB2661  
Performed the determination of product type, the initial inspection of the manufacturing plant and of FPC, the continuous surveillance, assessment and evaluation of the FPC and the audit testing of samples taken before placing the product on the market and issued the certificate of constancy of performance.

8. Declared performance

Essential characteristics	Performance	Harmonized technical standard
Reaction to fire	<b>Cca-s1a,d1,a1</b>	EN 50575: 2014 +A1: 2016
Release of dangerous substances	None	

9. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.


Signed for and on behalf of the manufacturer by:

Ken Hodge, Senior Director, Engineering

(Name and function)

Glenrothes, 30th June 2017

(Place and date of issue)



(Signed or on behalf of)