Category 6 F/FTP EuroClass B2$_{CA}$ Cables

Datasheet: GD103674v2

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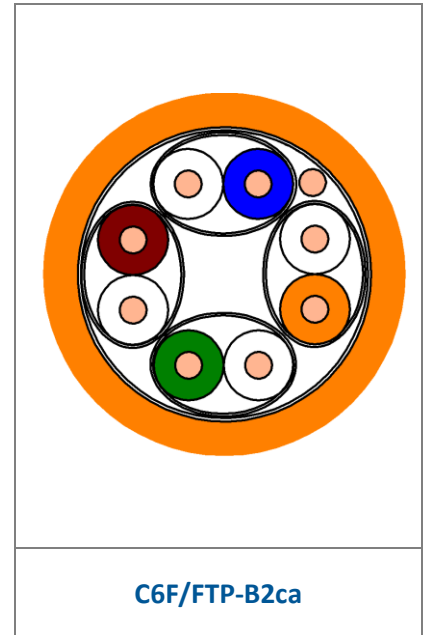
APPLICATION

Brand-Rex Cat6Plus cables exceed the Category 6 performance standards. They are rated to 500MHz and are suitable for use in all Class E structured wiring cable systems. The applications supported include Gigabit Ethernet, PoE, PoE+ and broadband video transmissions at frequencies up to 500MHz.

FEATURES AND BENEFITS

- 23 AWG solid annealed copper wire
- 4 twisted pairs individually screened and cabled together – providing EMI immunity
- Overall aluminium polyester screen – for improved shielding efficiency and increased heat dissipation
- Designed to support all Class E protocols including Gigabit Ethernet
- Supports Power Over Ethernet (PoE & PoE+) applications
- Enhanced HFFR-LS* jacket enables the cable to meet the requirements of the Construction Products Regulation (CPR) EuroClass B2$_{CA}$
- Orange† coloured jacket to identify EuroClass level B2$_{CA}$
- 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

C6F/FTP-B2ca

STANDARDS

Applicable Cable Standards: ISO/IEC 11801 Class E, IEC 61156-5 and EN50288-5-1

REACTION TO FIRE

CHARACTERISTIC	STANDARD	RATING
Single Cable Flame Rating	IEC/EN 60332-1-2	Pass
Smoke Production	EN 61034	Pass
Acid Gas Emission / Acidity	EN 50267-2-3	Pass
Classification	EN 13501-6	B2$_{CA}$ s1a d1 a1

PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19 Ω / 100m	14Ω / 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	413nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @ 100MHz	4nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Coupling Attenuation	Type 1b	84dB
Transfer Impedance	Grade 2	11mΩ/m @ 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	*100.0*	*100.0*	*100.0*	*100.0*	*94.3*	*88.9*	*87.1*	*81.7*	*81.0*
PSNEXT (dB)	Standard	64.0	63.3	57.3	52.8	42.3	37.8	36.3	na	na
	Typical	*97.0*	*97.0*	*97.0*	*97.0*	*91.3*	*85.9*	*84.1*	*78.7*	*78.0*
ELFEXT (dB/100m)	Standard	66.0	58.0	50.0	44.0	30.0	24.0	22.0	na	na
	Typical	*90.0*	*90.0*	*90.0*	*84.8*	*70.8*	*64.8*	*62.8*	*56.8*	*56.0*
PSELFEXT (dB/100m)	Standard	64.0	55.0	47.0	41.0	27.0	21.0	19.0	na	na
	Typical	*87.0*	*87.0*	*87.0*	*81.8*	*67.8*	*61.8*	*59.8*	*53.8*	*53.0*
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*	*98.1*	*96.5*	*94.5*	*92.2*	*76.3*	*62.8*	*57.7*	*38.7*	*35.6*
PSACR (dB/100m)	*Typical*	*95.1*	*93.5*	*91.5*	*89.2*	*73.3*	*59.8*	*54.7*	*35.7*	*32.6*

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 D		

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company C6F/FTP-B2ca Cat 6 F/FTP EN 50399 EuroClass B2ca s1a d1 a1 NVP 0.80 MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS

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
C6F/FTP-B2ca-500OR	500	Orange†	7.0	50.2	400 x 390	27.6	12
C6F/FTP-B2ca-1000OR	1000	Orange†	7.0	50.2	600 x 325	56.2	6

† Also available in a range of non-standard colours

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*"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.