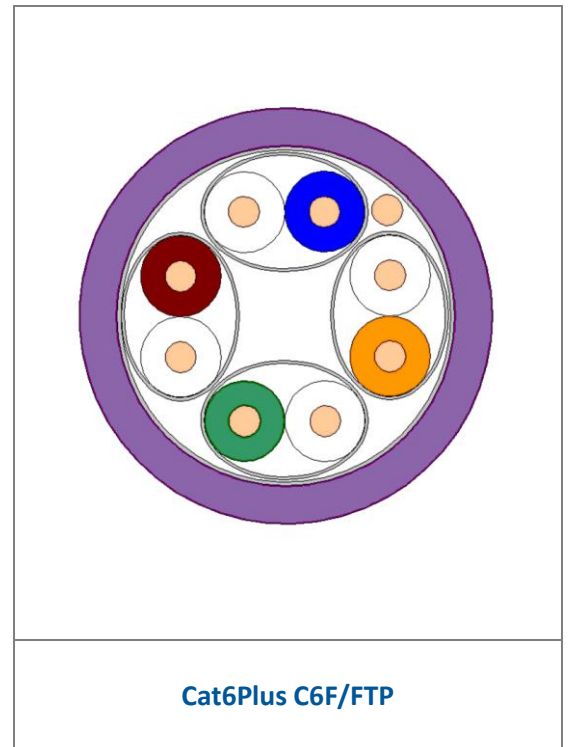


APPLICATION

The Brand-Rex Cat6Plus cables exceed the Category E performance standards. They are rated to 250MHz and are suitable for use in all Class E structured wiring cable systems. The applications supported include Gigabit Ethernet, PoE and PoE+ and broadband video transmissions at frequencies as high as 250MHz.

FEATURES AND BENEFITS

- 23 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
- Overall Aluminium Polyester Screen – for improved shielding efficiency and increased heat dissipation
- 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 protocols including Gigabit Ethernet
- Supports Power Over Ethernet (PoE) and Power Over Ethernet Plus (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



STANDARDS

Applicable Cable Standards: IEC 61156-5 and EN50288-5-1

MATERIAL IDENTIFICATION

Material Identifier	HF1	HF3
Material Description	Standard HFFR-LS*	Enhanced HFFR-LS
Flammability Rating	IEC 60332-1-2	IEC 60332-3-24
Fire Euroclass EN13501-6	Eca	Eca
Smoke Emission	IEC 61034-1 & 2	IEC 61034-1 & 2
Acid Gas Emission	IEC 60754-2	IEC 60754-2
Colour	Violet	Blue

* Halogen Free Flame Retardant – Low Smoke

Category 6 F/FTP Cables

Datasheet: GD102030v3

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

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
	<i>Typical</i>	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
	<i>Typical</i>	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
	<i>Typical</i>	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
	<i>Typical</i>	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
	<i>Typical</i>	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
	<i>Typical</i>	27.0	30.0	30.0	30.0	25.1	23.0	22.3	20.2	19.9
ACR (dB/100m)	<i>Typical</i>	98.1	96.5	94.5	92.2	76.3	62.8	57.7	38.7	35.6
PSACR (dB/100m)	<i>Typical</i>	95.1	93.5	91.5	89.2	73.3	59.8	54.7	35.7	32.6

Category 6 F/FTP Cables

Datasheet: GD102030v3

Brand-Rex | a **LEVITON**
company

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-HF1-Eca Cat 6 F/FTP IEC 60332-1-2 Euroclass Eca NVP 0.80 MADE IN UK [ID number] [Week/Year]

STANDARD PACKAGING SPECIFICATIONS

Brand-Rex Part Number	Nominal Cable Diameter (mm)	Nominal Cable Weight (kg/km)	Reel Size Flange x Width (mm)	Gross Weight (kg/Item)	Items Per Pallet
C6F/FTP-HF1-Eca-500VT [†]	7.1	49.7	400 x 390	27.4	12
C6F/FTP-HF1-Eca-1000VT [‡]	7.1	49.7	600 x 405	56.2	4
C6F/FTP-HF1-Eca-D500VT [§]	7.1 x 14.3	99.5	600 x 405	56.2	4
C6F/FTP-HF1-Eca-D1000VT	7.1 x 14.3	99.5	750 x 405	108.8	2
C6F/FTP-HF3-Eca-500BU	7.5	57.9	465 x 390	31.9	6
C6F/FTP-HF3-Eca-1000BU	7.5	57.9	600 x 405	64.4	4

[†] 500 = 500m length

[‡] 1000 = 1000m length

[§] 'D' denotes duplex cable

*“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.