

Category 5e F/UTP Cables

Datasheet: GD103082v1

Brand-Rex | a **LEVITON** company

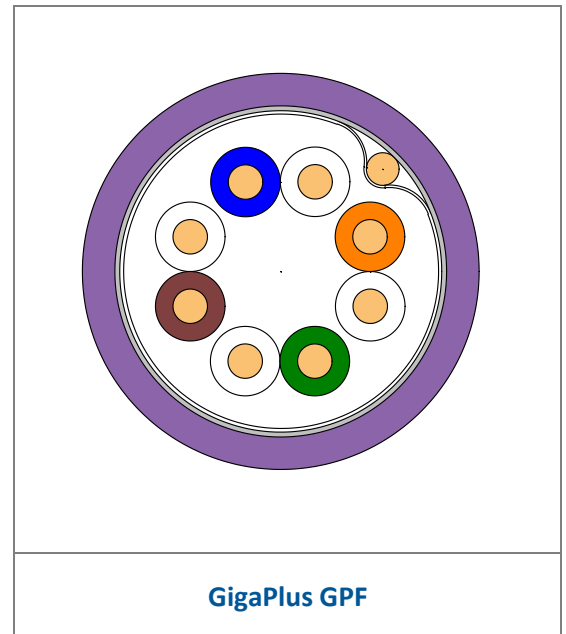
APPLICATION

The Brand-Rex GigaPlus GPF cables exceed the Category 5e performance standards. They are rated to 100MHz and are suitable for use in all Class D structured wiring cable systems.

The applications supported include Gigabit Ethernet, PoE and voice transmissions.

FEATURES AND BENEFITS

- 24 AWG Solid Annealed Copper Wire
- Polyolefin Core Insulation
- 4 Unshielded Twisted Pairs Cabled Together
- Aluminium Polyester screen
- Available in a Range of Sheath Materials – to suit a variety of installation environments and colour coded for identification
- Designed to Support all Class D protocols including Gigabit Ethernet
- Supports Power Over Ethernet (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: ANSI/TIA-568-C.2 Cat 5e, IEC 61156-5 and EN 50288-2-1

MATERIAL IDENTIFICATION

Material Identifier	HF1	HF3	HF1-X
Material Description	Standard HFFR-LS*	Enhanced HFFR-LS	Inner - HFFR-LS Outer - Polyethylene
Flammability Rating	IEC 60332-1-2	IEC 60332-1-2 IEC 60332-3-24	n/a – External Only
Fire Euroclass EN13501-6	Eca	Eca	n/a – External Only
Smoke Emission	IEC 61034-1 & 2	IEC 61034-1 & 2	n/a – External Only
Acid Gas Emission	IEC 60754-2	IEC 60754-2	n/a – External Only
Colour	Violet	Blue	Inner - Grey Outer - Black

* Halogen Free Flame Retardant – Low Smoke

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PRIMARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Conductor Loop Resistance	Max 19Ω/100m	16Ω/100m
Conductor Resistance Unbalance	Max 2%	0.1%
Insulation Resistance	>5GΩ.km	>310GΩ.km
Dielectric Strength	2500 Vdc/2secs	Pass

SECONDARY ELECTRICAL PARAMETERS

CHARACTERISTIC	SPECIFICATION	TYPICAL PERFORMANCE @ 20°C
Propagation Delay	<534nsec/100m @ 100MHz	480nsec/100m @ 100MHz
Delay Skew	Max 45nsec/100m @100MHz	11nsec/100m @100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω +/- 3Ω @ 100MHz
Transfer Impedance	Grade 2	14mΩ/m @ 10MHz

ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	16	20	31.25	100	200	250
Insertion Loss (dB/100m)	Standard	2.1	4.0	6.3	8.0	9.0	11.4	21.4	na	na
	Typical	2.0	3.8	6.0	7.6	8.6	10.8	20.4	30.3	34.5
NEXT (dB)	Standard	65.3	56.3	50.3	47.2	45.8	42.9	35.3	na	na
	Typical	73.3	64.3	58.3	55.2	53.8	50.9	43.3	38.8	37.3
PSNEXT (dB)	Standard	62.3	53.3	47.3	44.2	42.8	39.9	32.3	na	na
	Typical	70.3	61.3	55.3	52.2	50.8	47.9	40.3	35.8	34.3
ELFEXT (dB/100m)	Standard	63.8	51.8	43.8	39.7	37.8	33.9	23.8	na	na
	Typical	78.8	66.8	58.8	54.7	52.8	48.9	38.8	32.8	30.8
PSELFEXT (dB/100m)	Standard	60.8	48.8	40.8	36.7	34.8	30.9	20.8	na	na
	Typical	76.8	64.8	56.8	52.7	50.8	46.9	36.8	30.8	28.8
Return loss (dB)	Standard	na	23.0	25.0	25.0	25.0	23.6	20.1	na	na
	Typical	25.0	28.0	30.0	30.0	30.0	28.6	25.1	23.0	22.3
ACR (dB/100m)	Typical	71.3	60.5	52.3	47.6	45.2	40.0	22.9	8.5	2.9
PSACR (dB/100m)	Typical	68.3	57.5	49.3	44.6	42.2	37.0	19.9	5.5	-0.1

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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	0.68
Segregation Class	Class C		

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company GPF-HF1-Eca Cat 5e F/UTP IEC 60332-1-2 Euroclass Eca NVP 0.68 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
GPF-HF1-Eca-500VT [†]	6.1	40.0	400 x 310	22.0	18
GPF-HF1-Eca-1000VT [‡]	6.1	40.0	465 x 390	43.0	6
GPF-HF1-Eca-D500VT	12.3 x 6.1	80.1	600 x 315	46.0	6
GPF-HF1-Eca-D1000VT	12.3 x 6.1	80.1	750 x 410	89.4	2
GPF-HF3-Eca-500BU	6.7	50.2	400 x 390	27.6	12
GPF-HF3-Eca-1000BU	6.7	50.2	600 x 315	56.2	6
GPF-HF1-X-500BK	7.45	53.5	465 x 390	56.5	6
GPF-HF1-X-1000BK	7.45	53.5	600 x 405	60.0	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.