

Category 6_A S/FTP Cables

Datasheet: GD102404v6

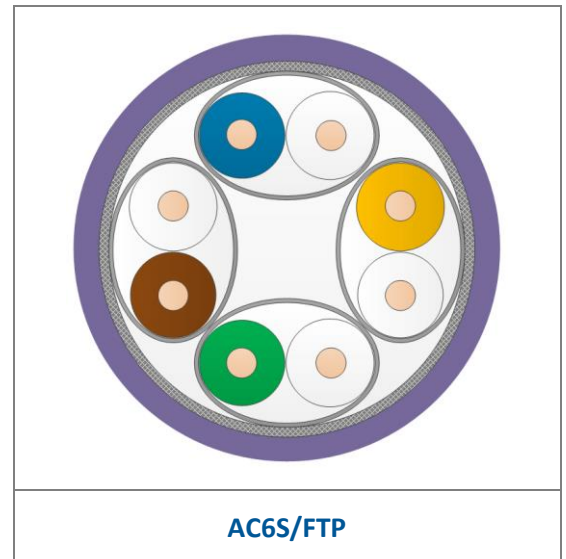
APPLICATION

Brand-Rex AC6S/FTP cables exceed the Category 6_A performance standards. They are rated to 500MHz and are suitable for use in all Class E_A structured wiring cable systems. The applications supported include 10 Gigabit Ethernet, Gigabit Ethernet, Power over Ethernet and broadband video transmissions at frequencies up to 500MHz.

FEATURES AND BENEFITS

- 23 AWG solid annealed copper wire
- 4 twisted pairs individually shielded and cabled together providing EMI immunity
- Overall braided shield for improved shielding efficiency, increased mechanical robustness and heat dissipation
- Available in a range of HFFR-LS* sheath materials to suit a variety of installation environments and colour coded for identification.
- 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



STANDARDS

- Designed and constructed to give optimum electrical performance to the following standards:
 - ISO/IEC 11801 Class E_A, IEC 61156-5
 - EN50173-1 and EN 50288-10-1
 - ANSI/TIA 568C.2
- Supports 10GBASE-T
- Meets the design requirements of 802.11ac wireless
- Recommended for PoE standards: IEEE 802.3af, 802.3at, Cisco UPoE, and Power over HDBaseT™ (PoH) up to 100 watts, as well as emerging 4 pair PoE standards such as the IEEE 802.3bt, including 90 watts at the powered device (PD)

FIRE CLASSIFICATION

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 60332-3-24	n/a – External Only
Reaction to Fire Classification / EuroClass	Eca	Eca	n/a – External Only
Colour	Violet	Blue	Inner - Violet Outer - Black

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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 25nsec/100m @ 100MHz	4nsec/100m @ 100MHz
Mean Characteristic Impedance	100Ω +/- 5Ω @ 100MHz	100Ω ± 3Ω @ 100MHz
Coupling Attenuation	Type 1	90dB
Transfer Impedance	Grade 1	8mΩ/m @ 10MHz

ELECTRICAL PERFORMANCE

Frequency (MHz)		1	4	10	20	100	200	250	500	550
Insertion Loss (dB/100m) max	Standard	na	3.8	5.9	8.4	19.1	27.6	31.1	45.3	na
	Typical	1.9	3.5	5.5	7.8	18.0	26.1	29.4	43.0	45.4
NEXT (dB) min	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) min	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
ACR-F (dB) min	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
PSACR-F (dB) min	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) min	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) min	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) min	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 D	Crush Resistance to BS EN 50289-3-5	1000N

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company AC6S/FTP-HF1-Eca Cat 6A S/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
AC6S/FTP-HF1-Eca-500VT [†]	7.0	48.4	400 x 390	26.7	12
AC6S/FTP-HF1-Eca-1000VT [‡]	7.0	48.4	600 x 405	54.8	4
AC6S/FTP-HF1-Eca-D500VT [§]	7.1 x 14.3	100.0	600 x 405	113.0	4
AC6S/FTP-HF1-Eca-D1000VT	7.1 x 14.3	100.0	750 x 405	109.3	2
AC6S/FTP-HF3-Eca-500BU	7.2	52.7	400 x 390	28.9	12
AC6S/FTP-HF3-Eca-1000BU	7.2	52.7	600 x 405	59.2	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.