

Category 6 S/FTP Euroclass B2_{CA} Cables

Datasheet: GD103443v3

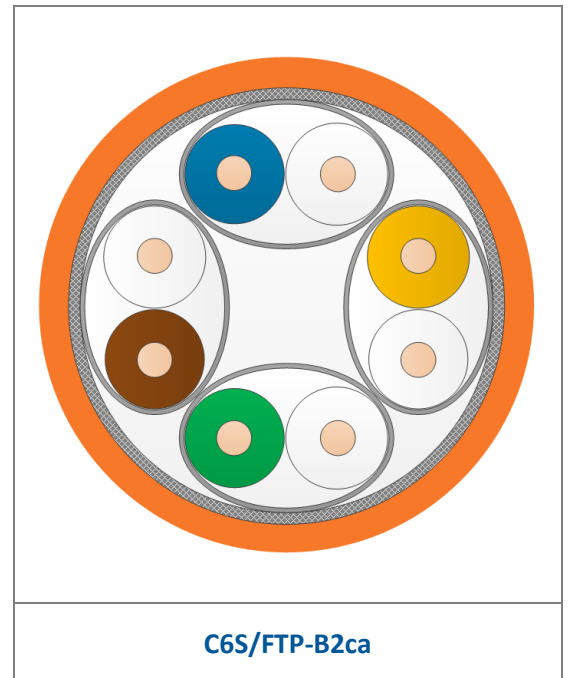
Brand-Rex | a **LEVITON** company

APPLICATION

The Brand-Rex Cat6Plus C6S/FTP cables exceed the Category 6 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 up to 250MHz.

FEATURES AND BENEFITS

- 23 AWG Solid Annealed Copper Wire
- 4 Twisted Pairs Individually Screened and cabled together – providing EMI immunity
- Overall Braided Screen – for improved shielding efficiency, increased mechanical robustness and heat dissipation
- Designed to Support all Class E protocols including Gigabit Ethernet
- 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 B2_{CA}
- Orange Coloured Jacket to identify Euroclassification 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



STANDARDS

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

MATERIAL IDENTIFICATION

| CHARACTERISTIC | STANDARD | RATING |
|------------------------------|------------------------|----------------------------|
| Single Cable Flame Rating | IEC 60332-1-2 | Pass |
| Bundled Cable Flame Rating | EN 50399 20.5kW source | B2 _{CA} |
| Smoke Production | EN 50399 & EN61034-2 | s1a |
| Flaming Droplets / Particles | EN 50399 | d0 |
| Acid Gas Emission / Acidity | EN 50267-2-3 | a1 |
| Euroclassification | EN 13501-6 | B2 _{CA} s1a d0 a1 |

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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) | 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 |

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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 | | |

PRINT LEGEND

Example print legend:

[Length Mark]m BRAND-REX a LEVITON company C6S/FTP-HF1-B2ca Cat 6 S/FTP EN 50399 Euroclass B2ca s1a d0 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 |
|-----------------------|----------------------|--------|-----------------------------|------------------------------|-------------------------------|------------------------|------------------|
| C6S/FTP-B2ca-500OR | 500 | Orange | 7.0 | 48.4 | 400 x 390 | 26.7 | 12 |
| C6S/FTP-B2ca-1000OR | 1000 | Orange | 7.0 | 48.4 | 600 x 405 | 54.8 | 4 |

*“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.