



PRODUCT DESCRIPTION

Category 6 Outdoor CMX is ideal for voice, data, video and security communication mediums for all your network installation requirements. Manufactured to the highest quality standards and approved by 3rd party organizations such as UL and ETL, Hyperline Cable, when compared to TIA guidelines; meets or surpasses the specifications in every category. The cable construction is comprised of 8 x 23-gauge solid bare copper cores with an overall metal foil screen with drain wire. Insulated with high density polyethylene insulation and organized into four color coded twisted pair sets of conductors. Hyperline Cat 6 CMX cable is easy to use during installations and pulls smoothly with no kinks.

PERFORMANCE COMPLIANCE

- UL 444
- EU Directive 2011/65/EC (RoHS2)
- EU Directive 2006/95/EC (LVD)
- Meets/exceeds ANSI/TIA-568-C.2 specification
- Meets ISO/IEC 11801 (Edition2.2)
- Meets IEC 61156-5 (Edition2.0)
- Flame Test –UL 2556 (CMX)

DESIGN FEATURES

- High performance of transmission
- High quality of safety property
- Sunlight resistant
- Protection from EMI noise
- For outdoor use
- Sweep frequency up to 400 MHz (Enhanced) verified to 250 MHz
- Quick Count marking system in feet

APPLICATIONS

- Structured cabling for horizontal and building backbone cable.
- Transmission of digital and analogue for data, video and audio applications.
- Overall metal shielded providing good protection from EMI noise.
- IEEE 802.3ab 1000BASE-T, 1000BASE-TX and legacy speeds.
- CDDI / ATM / Token Ring
- IEEE 802.3af (PoE) / IEEE 802.3at (PoE+)

ELECTRICAL CHARACTERISTICS

| at 20 °C | |
|---|-------------------|
| Temperature & voltage rating | 75°C / 300V |
| Spark test | 2.5 KV DC |
| AC leakage current through overall jacket | ≤ 10mA (1.5KV AC) |
| Cable cold bend | -20°C for 4 hr |
| Conductor DC resistance | ≤ 9.38 Ω/100m |
| Resistance unbalance | ≤ 5% |
| Dielectric strength | 1.5 KV ac for 2 s |
| Insulation resistance | ≥ 5000 MΩ•m |
| Mutual capacitance | ≤ 5.6 nF/100m |
| Capacitance unbalance pair-to-ground | ≤ 330 pF/100m |

ELECTRICAL PERFORMANCE (At 20 °C)

| Frequency (MHz) | INSERTION LOSS | | NEXT | | PS NEXT | |
|-----------------|----------------|------------------|--------------|------------------|--------------|------------------|
| | TIA- 568-C.2 | Hyperline | TIA- 568-C.2 | Hyperline | TIA- 568-C.2 | Hyperline |
| | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m |
| 1 | 2.0 | 2.0 | 74.3 | 74.3 | 72.3 | 72.3 |
| 4 | 3.8 | 3.7 | 65.3 | 65.2 | 63.3 | 63.2 |
| 8 | 5.3 | 5.3 | 60.8 | 60.7 | 58.8 | 58.7 |
| 10 | 6.0 | 5.9 | 59.3 | 59.3 | 57.3 | 57.3 |
| 16 | 7.6 | 7.5 | 56.2 | 56.2 | 54.2 | 54.2 |
| 20 | 8.5 | 8.4 | 54.8 | 54.7 | 52.8 | 52.7 |
| 25 | 9.5 | 9.5 | 53.3 | 53.3 | 51.3 | 51.3 |
| 31.25 | 10.7 | 10.6 | 51.9 | 51.8 | 49.9 | 49.8 |
| 62.5 | 15.4 | 15.3 | 47.4 | 47.3 | 45.4 | 45.3 |
| 100 | 19.8 | 19.8 | 44.3 | 44.3 | 42.3 | 42.3 |
| 200 | 29.0 | 28.9 | 39.8 | 39.7 | 37.8 | 37.7 |
| 250 | 32.8 | 32.8 | 38.3 | 38.3 | 36.3 | 36.3 |
| 300 | | 36.4 | | 37.1 | | 35.1 |
| 350 | | 39.7 | | 36.1 | | 34.1 |
| 400 | | 42.9 | | 35.2 | | 33.2 |

Values above 250MHz are for information only

CATEGORY 6 FUTP – OUTDOOR – CMX

FUTP4-C6-SOLID-OUTDOOR-40-305



ELECTRICAL PERFORMANCE (At 20 °C) con'd

| Frequency (MHz) | ACR | | PS ACR | | ACRF | |
|-----------------|--------------|------------------|--------------|------------------|--------------|------------------|
| | TIA- 568-C.2 | Hyperline | TIA- 568-C.2 | Hyperline | TIA- 568-C.2 | Hyperline |
| | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m |
| 1 | 72.3 | 72.2 | 70.3 | 70.2 | 67.8 | 67.8 |
| 4 | 61.5 | 61.4 | 59.5 | 59.4 | 55.8 | 55.7 |
| 8 | 55.4 | 55.4 | 53.4 | 53.4 | 49.7 | 49.7 |
| 10 | 53.3 | 53.3 | 51.3 | 51.3 | 47.8 | 47.8 |
| 16 | 48.6 | 48.6 | 46.6 | 46.6 | 43.7 | 43.7 |
| 20 | 46.3 | 46.3 | 44.3 | 44.3 | 41.8 | 41.7 |
| 25 | 43.8 | 43.8 | 41.8 | 41.8 | 39.8 | 39.8 |
| 31.25 | 41.2 | 41.2 | 39.2 | 39.2 | 37.9 | 37.9 |
| 62.5 | 32.0 | 31.9 | 30.0 | 29.9 | 31.9 | 31.8 |
| 100 | 24.5 | 24.5 | 22.5 | 22.5 | 27.8 | 27.8 |
| 200 | 10.8 | 10.8 | 8.8 | 8.8 | 21.8 | 21.7 |
| 250 | 5.4 | 5.4 | 3.5 | 3.4 | 19.8 | 19.8 |
| 300 | | 0.7 | | N.A. | | 18.2 |
| 350 | | N.A. | | N.A. | | 16.9 |
| 400 | | N.A. | | N.A. | | 15.7 |

| Frequency (MHz) | PS ACRF | | RETURN LOSS | | PROPAGATION DELAY | |
|-----------------|--------------|------------------|--------------|------------------|-------------------|------------------|
| | TIA- 568-C.2 | Hyperline | TIA- 568-C.2 | Hyperline | TIA- 568-C.2 | Hyperline |
| | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m | Max. dB/100m |
| 1 | 64.8 | 64.8 | 20.0 | 20.0 | 570 | 570 |
| 4 | 52.8 | 52.7 | 23.0 | 23.0 | 552 | 552.00 |
| 8 | 46.7 | 46.7 | 24.5 | 24.5 | 545 | 546 |
| 10 | 44.8 | 44.8 | 25.0 | 25.0 | 543 | 545 |
| 16 | 40.7 | 40.7 | 25.0 | 25.0 | 542 | 543 |
| 20 | 38.8 | 38.7 | 25.0 | 25.0 | 541 | 542 |
| 25 | 36.8 | 36.8 | 24.3 | 24.3 | 540 | 541 |
| 31.25 | 34.9 | 34.9 | 23.6 | 23.6 | 539 | 540 |
| 62.5 | 28.9 | 28.8 | 21.5 | 21.5 | 538 | 538 |
| 100 | 24.8 | 24.8 | 20.1 | 20.1 | 537 | 537 |
| 200 | 18.8 | 18.7 | 18.0 | 18.0 | 536 | 536 |
| 250 | 16.8 | 16.8 | 17.3 | 17.3 | | 536 |
| 300 | | 15.2 | | 16.7 | | 536 |
| 350 | | 13.9 | | 16.3 | | 536 |
| 400 | | 12.7 | | 15.8 | | 535 |

Values above 250MHz are for information only

PHYSICAL CHARACTERISTICS

| | | |
|-------------------------|-------------------------------|---------------|
| Temperature Range | Storage & shipping | -20°C to 75°C |
| | Installation | 0°C to 60°C |
| | Operation | -20°C to 60°C |
| Minimum Bending Radius | ≥ 4 times of overall diameter | |
| Maximum Pulling Tension | ≤ 110 N | |

PRODUCT CHARACTERISTICS

| | | | |
|---------------------------------|---|--|----------------|
| Conductor | Material | 23AWG solid bare copper | |
| Insulation | Material | Polyolefin (PO) | |
| | Color code & diameter | Blue & white/blue Stripe | 1.08 ± 0.02 mm |
| | | Orange & white/orange stripe | 1.05 ± 0.02 mm |
| | | Green & white/green stripe | 1.08 ± 0.02 mm |
| | | Brown & white/brown stripe | 1.05 ± 0.02 mm |
| Twisted | Description | Left hand direction | |
| Filler | Material | Polyolefin (PO) | |
| Assembly | Description | Left hand direction | |
| Jacket | Material | Polyethylene (PE) | |
| | Diameter | 7.20 ± 0.2 mm | |
| | Thickness | 0.50 ± 0.05 mm | |
| | Color | Per Hyperline standard | |
| Shield | Material | Al Mylar tape 100 % coverage and mylar side facing out | |
| Drain wire | Material | 24AWG solid tinned copper | |
| Nominal Velocity of Propagation | (NVP) 69% | | |
| NRTL Program | c(UL)us listed CMX ETL Verified | | |
| Marking | Hyperline FUTP4-C6-SOLID-CMX-BK --- E303448 F/UTP 4PR 23AWG C(UL)US CMX OUT-DOOR --- ETL VERIFIED TO ANSI/TIA-568-C.2 CAT 6 400MHz WW/YY XXXXFT-A | | |

ORDERING

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|-------------------------------|---|
| FUTP4-C6-SOLID-OUTDOOR-40-305 | Category 6 Outdoor CMX, F/UTP, 23 AWG, Black 305 Meter/1000 FT Reel |
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