

### DESCRIPTION

- 23 AWG 4 Pair F/UTP 10G Category 6A cable tested to ANSI/TIA 568-D.2 for 10Gbps @500Mhz premium grade, high performance for top level network cabling for maximum headroom and bandwidth. Available in Wood Reel for easier installation.

### FEATURES AND BENEFITS

- Category 6A performs at improved specifications, particularly in the area of alien cross-talk. Category 6A make use of their higher standards by allowing full 10GBASE-T transmission speeds of up to 10Gbps, at 500MHz of signal bandwidth, over 100 meters (330 ft)
- Improved cable temperature rating (90°C Plenum) for greater protection against increased operating temperatures and for high-wattage applications
- The internal separator optimizes each pair for superior electrical performance and maintains flexibility. This unique spline stabilizes each pair to create a smaller, round cable profile

### APPLICATIONS

- IEEE 802.3 10G Base-T, 1000Base-T, 100Base-TX, 10Base-T, PoE, PoE+
- ANSI/TIA 854: 1000Base-TX
- CDDI, Token Ring, ATM
- Digital Video
- Broadband and Baseband Analog Video

### STANDARD COMPLIANCES

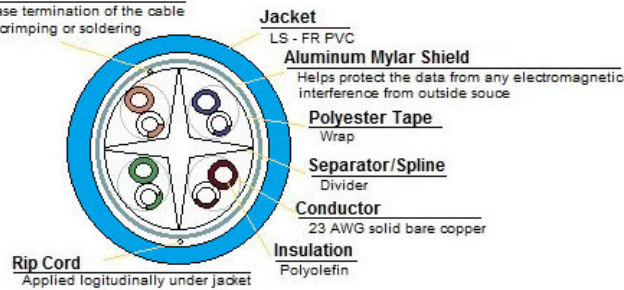
- ANSI/TIA 568-D.2
- ANSI/TIA 862 (Building Automation)
- ISO/IEC 11801 Ed. 2.0 (Class EI)
- ICEA 8-102-700 (Category 6 or 5E)
- REACH Compliant
- CPR Compliant (Fully Comply to 305/2011 & EN 50575:2014-09)
- RoHS Compliant Directive 2002/95/EG

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www.commoditycables.com



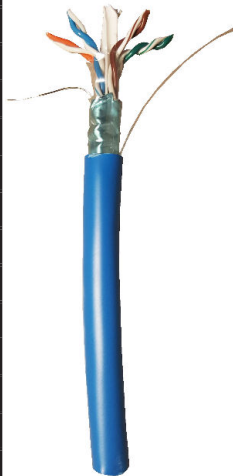
#### Drain Wire

Used to ease termination of the cable shield for crimping or soldering



### PHYSICAL PROPERTIES

|                      |                               |                              |
|----------------------|-------------------------------|------------------------------|
| Conductor            | Material                      | Bare copper                  |
|                      | Nominal Outside Diameter (mm) | 4x2x0.58 (±0.005)            |
| Insulation           | Material                      | FEP                          |
|                      | Diameter (± 0.05mm)           | 1.15                         |
| Screen Material      |                               | AL-FOIL + Drain Wire (0.4TC) |
| Construction         |                               | Shielded / Plenum            |
| Jacket               | Material                      | LS-FR PVC                    |
|                      | Average Thickness (mm)        | 0.75                         |
|                      | Minimum Point Thickness (mm)  | 0.6                          |
|                      | Outside Diameter (±0.2mm)     | 7.8                          |
| Rip Cord:            |                               | Yes                          |
| Drain Wire:          |                               | Yes                          |
| Packing              | Length                        | 1000ft ± 4ft                 |
|                      | Weight                        | 49 lbs/Reel                  |
| Voltage Rating (Max) |                               | DC 300v                      |
| Test Flame Method    |                               | CMP                          |



### ELECTRICAL CHARACTERISTICS

|  |                        |                  |
|--|------------------------|------------------|
| 1.0 - 250.0MHz characteristic impedance (ohms) |                        | 100Ω±15Ω         |
| 250-650.0MHz Delay Skew (ns/100m)              |                        | ≤45              |
| Pair-to-Ground Capacitance Unbalance (Pf/100m) |                        | ≤330             |
| Max. Conductor DC Resistance Unbalance (%)     |                        | ≤5               |
| Max. Resistance Unbalance (%)                  |                        | 9.38/100m        |
| Max Mutual Capacitance                         |                        | 5.6nF/100m       |
| Max DC Loop Resistance                         |                        | 19.2Ω/100m       |
| Min DC Insulation Resistance                   |                        | 150ms2/km        |
| Max Propagation Delay Skew                     |                        | 40ns/100m        |
| Before Aging                                   | Tensile Strength (Mpa) | ≥10.0            |
|  | Elongation (%)         | ≥100             |
| After Aging                                    | Tensile Strength (Mpa) | -                |
|  | Elongation (%)         | ≥75              |
| Aging Period (°C x hrs)                        |                        | 100°C x 24h x 7d |
| Cold Bend (No Visible Crack)                   |                        | -20±2°C          |
| Temperature Range                              |                        | -20°C ~ +75°C    |
| Velocity of Propagation (%) NVP                |                        | 70%              |



1000' Wood Reel  
Weight: 49 lbs.

### AVAILABLE CATEGORY 6 (PART NUMBERS)

| PVC        | Plenum     | Shielded   | Shielded Plenum   | Direct Burial | Shielded Direct Burial |
|------------|------------|------------|-------------------|---------------|------------------------|
| 6ACMR234Rx | 6ACMP234Rx | 6ASHDCMRRx | <b>6ASHDCMPRx</b> | 6AOUTG234RB   | 6AOUTGSHDRB            |

\*All values in this specification are nominal and are subjective to tolerances of +/- 10 to 15%. It is the sole responsibility of the user to have the most current specification. Specifications are subject to change without notice\*

### ELECTRICAL PERFORMANCE

ACRF - Attenuation to Crosstalk Ratio - Far End (dB/100m)

NEXT - Near End Crosstalk (dB/100m)

ACR - Attenuation to Crosstalk Ratio (dB/100m)

PSNEXT - Power Sum Near End Crosstalk (dB/100m)

ELFEXT - Equal Level Far End Crosstalk (dB/100m)

PSELFEXT - Power Sum Equal Level Far End Crosstalk (dB/100m)

RL - Return Loss (dB)

TCL - Transverse Conversion Loss (dB/100m)

ATT - Attenuation (dB/100m)

| FREQUENCY (MHz) | ATT (dB/100m) | RL (dB) | ACR (dB) | Next (dB) | PSNEXT (dB) | TCL (dB/100m) | PHASE DELAY | ELFEXT (dB/100m) | PSELFEXT (dB/100m) |
|-----------------|---------------|---------|----------|-----------|-------------|---------------|-------------|------------------|--------------------|
| 1               | 2.1           | 20.0    | 72.2     | 75.3      | 72.3        | 40.0          | 570.0       | 68.0             | 65.0               |
| 4               | 3.8           | 23.0    | 61.5     | 66.3      | 63.3        | 40.0          | 552.0       | 56.0             | 53.0               |
| 8               | 5.3           | 24.5    | 55.4     | 61.8      | 58.8        | 40.0          | 546.7       | 49.9             | 46.9               |
| 10              | 5.9           | 25.0    | 53.4     | 60.3      | 57.3        | 40.0          | 545.4       | 48.0             | 45.0               |
| 16              | 7.5           | 25.0    | 48.8     | 57.2      | 54.2        | 38.0          | 543.0       | 43.9             | 40.9               |
| 20              | 8.4           | 25.0    | 46.4     | 55.8      | 52.8        | 37.0          | 542.1       | 42.0             | 39.0               |
| 25              | 9.4           | 24.3    | 43.7     | 54.3      | 51.3        | 36.0          | 541.2       | 40.0             | 37.0               |
| 31.25           | 10.5          | 23.6    | 41.4     | 52.9      | 49.9        | 35.1          | 540.4       | 38.1             | 35.1               |
| 62.5            | 15.0          | 21.5    | 32.4     | 48.4      | 45.4        | 32.0          | 538.6       | 32.1             | 29.1               |
| 100             | 19.1          | 20.1    | 25.2     | 45.3      | 42.3        | 30.0          | 537.6       | 28.0             | 25.0               |
| 200             | 27.6          | 18      | 12.2     | 40.8      | 37.8        | 27.0          | 536.5       | 22.0             | 19.0               |
| 250             | 31.1          | 17.3    | 7.2      | 39.3      | 36.3        | 26.0          | 536.3       | 20.0             | 17.0               |
| 300             | 34.3          | 16.8    | 2.9      | 38.3      | 35.5        | 25.2          | 535.5       | -                | -                  |
| 400             | 40            | 15.9    | -        | 37.8      | 35          | 24.0          | 535         | -                | -                  |
| 500             | 45.3          | 15.2    | -        | 36.5      | 34.3        | 23.0          | 533         | -                | -                  |
| 600             | 50.1          | 14.5    | -        | 35        | 33.5        | -             | 532         | -                | -                  |
| 650             | 52.4          | 13.9    | -        | 34.6      | 31.2        | -             | 530         | -                | -                  |

\*Electrical performance with frequency over 500MHz is only for reference\*

| AVAILABLE JACKET COLORS |                       |       |
|-------------------------|-----------------------|-------|
| STANDARD                | BLUE                  | WHITE |
| SPECIAL                 | Per Customer Request* |       |
| INSULATION COLORS       |                       |       |
| PAIR 1                  | BLUE                  | WHITE |
| PAIR 3                  | GREEN                 | WHITE |
| PAIR 4                  | BROWN                 | WHITE |

### JACKETS ABBREVIATION

|        |    |  |
|--------|----|--|
| Black  | B  | Last alphabetical character of each part number indicates the color code that the Jacket is available in. For example Part # 6CMR244Bx ("x" indicates all the colors to the left are available for this product. |
| White  | W  |  |
| Gray   | G  |  |
| Blue   | O  |  |
| Yellow | Y  |  |
| Green  | V  |  |
| Orange | OR |  |
| Purple | P  |  |
| Red    | R  |  |

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