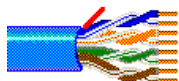


## 7813LC Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

CAT6 (250MHz), 4-Bonded-Pairs, U/UTP-Unshielded, Limited Combustible-FHC 25/50, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, FEP Insulation, Central Filler, FEP Jacket

### Usage (Overall)

Suitable Applications:

Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155 ATM, 622 ATM, 250MHz Category 6, Environments benefitting from Limited Combustible Cable

### Physical Characteristics (Overall)

#### Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4       | 23  | Solid     | BC - Bare Copper   |

Total Number of Conductors:

8

#### Insulation

Insulation Material:

| Insulation Material                  |
|--------------------------------------|
| FEP - Fluorinated Ethylene Propylene |

#### Outer Shield

Outer Shield Material:

| Outer Shield Material |
|-----------------------|
| Unshielded            |

#### Outer Jacket

Outer Jacket Material:

| Outer Jacket Trade Name | Outer Jacket Material                |
|-------------------------|--------------------------------------|
| Teflon                  | FEP - Fluorinated Ethylene Propylene |

Outer Jacket Diameter:

| Nom. Dia. (in.) |
|-----------------|
| 0.214           |

#### Overall Cable

Overall Cabling Separator Material:

Central Filler

#### Pair

Pair Color Code Chart:

| Number | Color                        |
|--------|------------------------------|
| 1      | White/Blue Stripe & Blue     |
| 2      | White/Orange Stripe & Orange |
| 3      | White/Green Stripe & Green   |
| 4      | White/Brown Stripe & Brown   |

### Mechanical Characteristics (Overall)

Operating Temperature Range: -40°C To +150°C

Bulk Cable Weight: 28 lbs/1000 ft.

Max. Recommended Pulling Tension: 40 lbs.

Min. Bend Radius/Minor Axis: 0.500 in.

Min. Bend/Installation: 2.100 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC(UL) Specification: CMP, FHC 25/50

NEC Articles: 800

## 7813LC Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable

|                                       |                                     |
|---------------------------------------|-------------------------------------|
| CEC/C(UL) Specification:              | CMP                                 |
| EU Directive 2011/65/EU (ROHS II):    | Yes                                 |
| Other Standards:                      | ISO/IEC 11801 ed 2.1 (2008) Class E |
| EU CE Mark:                           | Yes                                 |
| EU Directive 2000/53/EC (ELV):        | Yes                                 |
| EU Directive 2002/95/EC (RoHS):       | Yes                                 |
| EU RoHS Compliance Date (mm/dd/yyyy): | 01/01/2004                          |
| EU Directive 2002/96/EC (WEEE):       | Yes                                 |
| EU Directive 2003/11/EC (BFR):        | Yes                                 |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                                 |
| MIL Order #39 (China RoHS):           | Yes                                 |
| Telecommunications Standards:         | Category 6 - TIA 568.C.2            |
| Other Specification:                  | 6                                   |

### Applicable Patents:

| Country | Patent  |
|---------|---------|
| US      | 5734126 |

### Flame Test

|                   |                                                           |
|-------------------|-----------------------------------------------------------|
| UL Flame Test:    | NFPA 262 Plenum Flame Test (UL910)(FT6), UL723 (NFPA 255) |
| C(UL) Flame Test: | FT6                                                       |
| CSA Flame Test:   | FT6                                                       |

### Plenum/Non-Plenum

|                    |      |
|--------------------|------|
| Plenum (Y/N):      | Yes  |
| Non-Plenum Number: | 2412 |

## Electrical Characteristics (Overall)

### Nom. Mutual Capacitance:

| Capacitance (pF/ft) |
|---------------------|
| 15                  |

|                                           |     |
|-------------------------------------------|-----|
| Maximum Capacitance Unbalance (pF/100 m): | 330 |
|-------------------------------------------|-----|

### Nominal Velocity of Propagation:

| VP (%) |
|--------|
| 72     |

### Maximum Delay:

| Delay (ns/100 m) |
|------------------|
| 537 @ 100MHz     |

### Max. Delay Skew:

| Delay Skew (ns/100 m) |
|-----------------------|
| 45                    |

### Maximum Conductor DC Resistance:

| DCR @ 20°C (Ohm/100 m) |
|------------------------|
| 8.2                    |

### Max. Operating Voltage - UL:

| Voltage   |
|-----------|
| 300 V RMS |

### Maximum DCR Unbalanced:

| DCR Unbalance @ 20°C (%) |
|--------------------------|
| 5                        |

## Electrical Characteristics-Premise (Overall)

### Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min RL (dB) | Min. SRL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|---------------|
| 1           | 2.0                         | 74.3           | 72.3             | 72.3          | 70.3            | 20.0        | na            |
| 4           | 3.8                         | 65.3           | 63.3             | 61.5          | 59.5            | 23.0        | na            |
| 8           | 5.3                         | 60.8           | 58.8             | 55.4          | 53.4            | 24.5        | na            |
| 10          | 6.0                         | 59.3           | 57.3             | 53.3          | 51.3            | 25.0        | na            |
| 16          | 7.6                         | 56.2           | 54.3             | 48.7          | 46.7            | 25.0        | na            |
| 20          | 8.5                         | 54.8           | 52.8             | 46.3          | 44.3            | 25.0        | na            |
| 25          | 9.5                         | 53.3           | 51.3             | 43.8          | 41.8            | 24.3        | na            |

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|       |      |      |      |      |      |      |    |
|-------|------|------|------|------|------|------|----|
| 31.25 | 10.7 | 51.9 | 49.9 | 41.2 | 39.2 | 23.6 | na |
| 62.5  | 15.4 | 47.4 | 45.4 | 32.0 | 30.0 | 21.5 | na |
| 100   | 19.8 | 44.3 | 42.3 | 24.5 | 22.5 | 20.1 | na |
| 155   | 25.2 | 41.5 | 39.5 | 16.3 | 14.3 | 18.8 | na |
| 200   | 29.0 | 39.8 | 37.8 | 10.8 | 8.8  | 18.0 | na |
| 250   | 32.8 | 38.3 | 36.3 | 5.5  | 3.5  | 17.3 | na |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-------------|------------------------------|------------------|------------------|--------------------|
| 1           | 100 ± 15                     | 100 ± 15         | 67.8             | 64.8               |
| 4           | 100 ± 15                     | 100 ± 15         | 55.8             | 52.8               |
| 8           | 100 ± 15                     | 100 ± 15         | 49.7             | 46.7               |
| 10          | 100 ± 15                     | 100 ± 15         | 47.8             | 44.8               |
| 16          | 100 ± 15                     | 100 ± 15         | 43.7             | 40.7               |
| 20          | 100 ± 15                     | 100 ± 15         | 41.8             | 38.8               |
| 25          | 100 ± 15                     | 100 ± 15         | 39.8             | 36.8               |
| 31.25       | 100 ± 15                     | 100 ± 15         | 37.9             | 34.9               |
| 62.5        | 100 ± 15                     | 100 ± 15         | 31.9             | 28.9               |
| 100         | 100 ± 15                     | 100 ± 15         | 27.8             | 24.8               |
| 155         | 100 ± 22                     | 100 ± 15         | 23.9             | 20.9               |
| 200         | 100 ± 22                     | 100 ± 15         | 21.8             | 18.8               |
| 250         | 100 ± 32                     | 100 ± 15         | 19.8             | 16.8               |

## Notes (Overall)

**Notes:** Jacket sequentially marked at 2 ft. intervals. Third party verified to ANSI/TIA-568-C.2, Category 6.

## Put Ups and Colors:

| Item #          | Putup    | Ship Weight | Color       | Notes | Item Desc               |
|-----------------|----------|-------------|-------------|-------|-------------------------|
| 7813LC 006U1000 | 1,000 FT | 34.000 LB   | BLUE, LIGHT |       | CAT6 4PRB U/UTP LC BOX  |
| 7813LC 006I000  | 1,000 FT | 37.000 LB   | BLUE, LIGHT | C     | CAT6 4PRB U/UTP LC REEL |
| 7813LC 009U1000 | 1,000 FT | 34.000 LB   | WHITE       |       | CAT6 4PRB U/UTP LC BOX  |
| 7813LC 009I000  | 1,000 FT | 37.000 LB   | WHITE       | C     | CAT6 4PRB U/UTP LC REEL |

**Notes:**

C = CRATE REEL PUT-UP.

Revision Number: 6    Revision Date: 02-24-2014

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