# **Detailed Specifications & Technical Data**

### METRIC MEASUREMENT VERSION





# 8108 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/422

For more Information please call

1-800-Belden1



# **General Description:**

24 AWG stranded (7x32) TC conductors, Datalene® insulation, twisted pairs, overall Beldfoil® (100% coverage) + TC braid shield (65% coverage), 24 AWG stranded TC drain wire, PVC jacket.

# **Physical Characteristics (Overall)**

### Conductor

#### AWG:

| # Pairs | AWG | Stranding | <b>Conductor Material</b> |
|---------|-----|-----------|---------------------------|
| 8       | 24  | 7x32      | TC - Tinned Copper        |

Total Number of Conductors: 16

#### Insulation

#### **Insulation Material:**

| Insulation Trade Name | Insulation Material     | Wall Thickness (mm) |
|-----------------------|-------------------------|---------------------|
| Datalene®             | FPE - Foam Polyethylene | 0.330               |

#### **Outer Shield**

### **Outer Shield Material:**

| Layer # | Outer Shield Trade Name | Туре  | Outer Shield Material                        | Coverage (%) |
|---------|-------------------------|-------|--|--------------|
| 1       | Beldfoil®               | Tape  | Aluminum Foil-Polyester Tape w/Shorting Fold | 100          |
| 2       |                         | Braid | TC - Tinned Copper                           | 65           |

### **Outer Shield Drain Wire AWG:**

| AWG | Stranding | Drain Wire Conductor Material |
|-----|-----------|-------------------------------|
| 24  | 7x32      | TC - Tinned Copper            |

### **Outer Jacket**

## **Outer Jacket Material:**

| Outer Jacket Material    | Nom. Wall Thickness (mm) |
|--------------------------|--------------------------|
| PVC - Polyvinyl Chloride | 0.889                    |

#### **Overall Cable**

Overall Nominal Diameter: 9.398 mm

#### Pair

#### Pair Color Code Chart:

| Number | Color                       |
|--------|-----------------------------|
| 1      | White/Blue & Blue/White     |
| 2      | White/Orange & Orange/White |
| 3      | White/Green & Green/White   |
| 4      | White/Brown & Brown/White   |
| 5      | White/Gray & Gray/White     |
| 6      | Red/Blue & Blue/Red         |
| 7      | Red/Orange & Orange/Red     |
| 8      | Red/Green & Green/Red       |

## **Mechanical Characteristics (Overall)**

| Operating Temperature Range: | -30°C To +80°C           |
|------------------------------|--------------------------|
| UL Temperature Rating:       | 80°C (UL AWM Style 2919) |
| Bulk Cable Weight:           | 99.709 Kg/Km             |

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|     | Max. Recommended Pulling Tension:             | 415.907 N         |  |
|-----|---|-------------------|--|
|     | Min. Bend Radius/Minor Axis:                  | 95.250 mm         |  |
| Apı | olicable Specifications and Agency Com        | pliance (Overall) |  |
| Ap  | Applicable Standards & Environmental Programs |                   |  |

Yes

Yes

| NEC/(UL) Specification:            | CM                        |
|------------------------------------|---------------------------|
| CEC/C(UL) Specification:           | CM                        |
| AWM Specification:                 | UL Style 2919 (30 V 80°C) |
| EU Directive 2011/65/EU (ROHS II): | 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 |
|---------------------------------------|------------|
| ELL Directive 2002/06/EC (MEEE).      | Vaa        |

| LO Directive 2002/30/LO (VILLE).  | 103 |
|-----------------------------------|-----|
| EU Directive 2003/11/EC (BFR):    | Yes |
| CA Prop 65 (CJ for Wire & Cable): | Yes |

| MII Order #39 (China RoHS): |  |
|-----------------------------|--|
|-----------------------------|--|

| UL Flame Test: | UL1685 UL Loading |
|----------------|-------------------|
|                |                   |

## Plenum/Non-Plenum

**Flame Test** 

**EU CE Mark:** 

| Plenum (Y/N): | 0 |
|---------------|---|
|---------------|---|

# **Electrical Characteristics (Overall)**

Nom. Characteristic Impedance:

Impedance (Ohm) 100

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/m) 41.0125

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/m) 72.182

**Nominal Velocity of Propagation:** 

78

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)

**Nominal Outer Shield DC Resistance:** 

DCR @ 20°C (Ohm/km) 8.8587

Max. Operating Voltage - UL:

Voltage Description 30 V RMS UL AWM Style 2919 300 V RMS CM

Max. Recommended Current:

1.1 Amps per conductor @ 25°C

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# **Notes (Overall)**

Notes: Datalene® insulation features include low dielectric constant and a dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.

### **Put Ups and Colors:**

| Item #       | Putup    | Ship Weight | Color  | Notes | Item Desc             |
|--------------|----------|-------------|--------|-------|-----------------------|
| 8108 060100  | 100 FT   | 7.600 LB    | CHROME |       | 8 PR #24 FHDPE SH PVC |
| 8108 0601000 | 1,000 FT | 72.000 LB   | CHROME | С     | 8 PR #24 FHDPE SH PVC |
| 8108 060500  | 500 FT   | 37.500 LB   | CHROME | С     | 8 PR #24 FHDPE SH PVC |

#### Notes:

C = CRATE REEL PUT-UP.

Revision Number: 2 Revision Date: 08-31-2012

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