# **Detailed Specifications & Technical Data**

#### **ENGLISH MEASUREMENT VERSION**



# 8104 Multi-Conductor - Low Capacitance Computer Cables 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:

| ı | # Pairs | AWG | Stranding | Conductor Material |
|---|---------|-----|-----------|--------------------|
|   | 4       | 24  | 7x32      | TC - Tinned Copper |

Total Number of Conductors:

8

#### Insulation

#### Insulation Material:

| Insulation Trade Name | Insulation Material     | Wall Thickness (in.) |
|-----------------------|-------------------------|----------------------|
| Datalene®             | FPE - Foam Polyethylene | 0.013                |

#### **Outer Shield**

#### Outer Shield Material:

| L | Layer # Outer Shield Trade Name   1 |           | Type  | Outer Shield Material                        | Coverage (%) |
|---|-------------------------------------|-----------|-------|--|--------------|
| 1 | 1                                   | Beldfoil® | Таре  | Aluminum Foil-Polyester Tape w/Shorting Fold | 100          |
| 2 | 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 Jac | cket Material    | Nom.  | Wall | Thickness | (in.) |
|-----------|------------------|-------|------|-----------|-------|
| PVC - Po  | lyvinyl Chloride | 0.035 |      |           |       |

### **Overall Cable**

**Overall Nominal Diameter:** 

0.279 in.

#### 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   |

# **Mechanical Characteristics (Overall)**

| Operating Temperature Range:      | -30°C To +80°C           |
|-----------------------------------|--------------------------|
| UL Temperature Rating:            | 80°C (UL AWM Style 2919) |
| Bulk Cable Weight:                | 42 lbs/1000 ft.          |
| Max. Recommended Pulling Tension: | 49.500 lbs.              |
| Min. Bend Radius/Minor Axis:      | 3 in.                    |

# **Applicable Specifications and Agency Compliance (Overall)**

### **Applicable Standards & Environmental Programs**

| 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 CE Mark:                        | Yes                       |
|                                    |                           |

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|      | 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               |
|      | MII Order #39 (China RoHS):           | Yes               |
| Flai | ne Test                               |                   |
|      | UL Flame Test:                        | UL1685 UL Loading |
| Plei | num/Non-Plenum                        |                   |
|      | Plenum (Y/N):                         | No                |
|      | Plenum Number:                        | 88104             |

#### **Electrical Characteristics (Overall)**

Nom. Characteristic Impedance:



Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft)

Nominal Velocity of Propagation:

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

Max. Operating Voltage - UL:

Voltage 30 V RMS UL AWM Style 2919 300 V RMS

Max. Recommended Current:

1.5 Amps per conductor @ 25°C

### 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             |
|---------------|-----------|-------------|--------|-------|-----------------------|
| 8104 060100   | 100 FT    | 5.000 LB    | CHROME |       | 4 PR #24 FHDPE SH PVC |
| 8104 0601000  | 1,000 FT  | 46.000 LB   | CHROME | С     | 4 PR #24 FHDPE SH PVC |
| 8104 06010000 | 10,000 FT | 460.000 LB  | CHROME | CY    | 4 PR #24 FHDPE SH PVC |
| 8104 060500   | 500 FT    | 23.000 LB   | CHROME | С     | 4 PR #24 FHDPE SH PVC |

C = CRATE REEL PUT-UP.

Y = FINAL PUT-UP LENGTH MAY VARY -10% TO +20% FROM LENGTH SHOWN.MAY CONTAIN 2 PIECES. MINIMUM LENGTH OF ANY ONE PIECE IS 1500'.

Revision Number: 3 Revision Date: 08-15-2012

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