

## 8105 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 | Conductor Material |
|---------|-----|-----------|--------------------|
| 5       | 24  | 7x32      | TC - Tinned Copper |

Total Number of Conductors: 10

#### 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 | Type  | 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: 7.696 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     |

### Mechanical Characteristics (Overall)

|                                   |                          |
|-----------------------------------|--------------------------|
| Operating Temperature Range:      | -30°C To +80°C           |
| UL Temperature Rating:            | 80°C (UL AWM Style 2919) |
| Bulk Cable Weight:                | 63.993 Kg/Km             |
| Max. Recommended Pulling Tension: | 269.116 N                |
| Min. Bend Radius/Minor Axis:      | 82.550 mm                |

### 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                       |

## METRIC MEASUREMENT VERSION

### 8105 Multi-Conductor - Low Capacitance Computer Cable for EIA RS-232/422

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

#### Flame Test

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

#### Plenum/Non-Plenum

|                |       |
|----------------|-------|
| Plenum (Y/N):  | No    |
| Plenum Number: | 88105 |

#### Electrical Characteristics (Overall)

##### Nom. Characteristic Impedance:

|                        |
|------------------------|
| <b>Impedance (Ohm)</b> |
| 100                    |

##### Nom. Capacitance Conductor to Conductor:

|                           |
|---------------------------|
| <b>Capacitance (pF/m)</b> |
| 41.0125                   |

##### Nom. Capacitance Cond. to Other Conductor & Shield:

|                           |
|---------------------------|
| <b>Capacitance (pF/m)</b> |
| 72.182                    |

##### Nominal Velocity of Propagation:

|               |
|---------------|
| <b>VP (%)</b> |
| 78            |

##### Nom. Conductor DC Resistance:

|                            |
|----------------------------|
| <b>DCR @ 20°C (Ohm/km)</b> |
| 78.744                     |

##### Nominal Outer Shield DC Resistance:

|                            |
|----------------------------|
| <b>DCR @ 20°C (Ohm/km)</b> |
| 13.7802                    |

##### Max. Operating Voltage - UL:

| Voltage   | Description       |
|-----------|-------------------|
| 30 V RMS  | UL AWM Style 2919 |
| 300 V RMS |                   |

##### Max. Recommended Current:

|                               |
|-------------------------------|
| <b>Current</b>                |
| 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             |
|--------------|----------|-------------|--------|-------|-----------------------|
| 8105 060100  | 30 MT    | 2.359 KG    | CHROME |       | 5 PR #24 FHDPE SH PVC |
| 8105 0601000 | 305 MT   | 21.319 KG   | CHROME | C     | 5 PR #24 FHDPE SH PVC |
| 8105 060500  | 152 MT   | 11.340 KG   | CHROME | C     | 5 PR #24 FHDPE SH PVC |
| 8105 0605000 | 1,524 MT | 108.863 KG  | CHROME | C Z   | 5 PR #24 FHDPE SH PVC |

##### Notes:

C = CRATE REEL PUT-UP.

Z = FINAL PUT-UP LENGTH MAY VARY (+ OR -) 10% FOR SPOOLS OR REELS AND (+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

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