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please call

1-800-Belden1



### General Description:

22 AWG stranded (7x30) tinned copper conductors, Datalene® insulation, twisted pairs, overall Beldfoil® shield (100% coverage) plus a tinned copper braid (65% coverage), drain wire, UV resistant PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material | Dia. (mm) |
|---------|-----|-----------|--------------------|-----------|
| 1       | 22  | 7x30      | TC - Tinned Copper | 0.762     |

Total Number of Conductors: 2

#### Insulation

Insulation Material:

| Insulation Trade Name | Insulation Material                    |
|-----------------------|----------------------------------------|
| Datalene®             | FHDPE - Foam High Density Polyethylene |

#### Outer Shield

Outer Shield Material:

| Layer # | Outer Shield Trade Name | Type  | Outer Shield Material        | Coverage (%) |
|---------|-------------------------|-------|------------------------------|--------------|
| 1       | Beldfoil®               | Tape  | Aluminum Foil-Polyester Tape | 100.000      |
| 2       |                         | Braid | TC - Tinned Copper           | 65.000       |

Outer Shield Drain Wire AWG:

| AWG | Stranding | Drain Wire Conductor Material |
|-----|-----------|-------------------------------|
| 22  | 7x30      | TC - Tinned Copper            |

#### Outer Jacket

Outer Jacket Material:

| Outer Jacket Material    |
|--------------------------|
| PVC - Polyvinyl Chloride |

#### Overall Cable

Overall Nominal Diameter: 7.137 mm

#### Pair

Pair Color Code Chart:

| Number | Color                                   |
|--------|-----------------------------------------|
| 1      | White/Blue Stripe and Blue/White Stripe |

Pair Lay Length & Direction:

| Lay Length (mm) |
|-----------------|
| 95.250          |

### Mechanical Characteristics (Overall)

Operating Temperature Range: -20°C To +60°C

Non-UL Temperature Rating: 80C

Bulk Cable Weight: 65.481 Kg/Km

Max. Recommended Pulling Tension: 266.892 N

Min. Bend Radius/Minor Axis: 71.120 mm

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

|                                       |            |
|---------------------------------------|------------|
| NEC/(UL) Specification:               | CM, PLTC   |
| CEC/C(UL) Specification:              | CM         |
| EU Directive 2011/65/EU (ROHS II):    | Yes        |
| 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): | 10/01/2005 |
| 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 |
| CSA Flame Test: | FT1               |

### Suitability

|                      |                  |
|----------------------|------------------|
| Sunlight Resistance: | Yes              |
| Oil Resistance:      | Yes - Oil Res II |

### Plenum/Non-Plenum

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

## Electrical Characteristics (Overall)

### Nom. Characteristic Impedance:

|                 |
|-----------------|
| Impedance (Ohm) |
| 120             |

### Nom. Capacitance Conductor to Conductor:

|                    |
|--------------------|
| Capacitance (pF/m) |
| 36.091             |

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

|                    |
|--------------------|
| Capacitance (pF/m) |
| 68.5729            |

### Nominal Velocity of Propagation:

|        |
|--------|
| VP (%) |
| 78     |

### Nom. Conductor DC Resistance:

|                     |
|---------------------|
| DCR @ 20°C (Ohm/km) |
| 48.2307             |

### Nominal Outer Shield DC Resistance:

|                     |
|---------------------|
| DCR @ 20°C (Ohm/km) |
| 12.337              |

### Nom. Attenuation:

| Description | Freq. (MHz) | Start Freq. (MHz) | Stop Freq. (MHz) | Attenuation (dB/100m) |
|-------------|-------------|-------------------|------------------|-----------------------|
|             | 1           |                   |                  | 1.6405                |

### Max. Operating Voltage - UL:

|                           |
|---------------------------|
| Voltage                   |
| 300 V RMS (NEC Type PLTC) |
| 300 V RMS (NEC Type CM)   |

## 3105A Multi-Conductor - EIA Industrial RS-485 PLTC/CM

**Max. Recommended Current:**

| Current                       |
|-------------------------------|
| 2.7 Amps per conductor @ 25°C |

**Other Electrical Characteristic 1:** Input Impedance/Unfitted Impedance .5 - 10 MHZ, 120 +/-12 Ohms

### Notes (Overall)

**Notes:** Oil Resistance: Passes Oil Res II Per UL1277, Table 10.17. For CPE jacketed version order Part No. YR44345.

### Put Ups and Colors:

| Item #         | Putup     | Ship Weight | Color | Notes | Item Desc             |
|----------------|-----------|-------------|-------|-------|-----------------------|
| 3105A 0101000  | 1,000 FT  | 46.000 LB   | BLACK | C     | 1 PR #22 FHDPE SH PVC |
| 3105A 01010000 | 10,000 FT | 490.000 LB  | BLACK |       | 1 PR #22 FHDPE SH PVC |
| 3105A 010500   | 500 FT    | 23.000 LB   | BLACK | C     | 1 PR #22 FHDPE SH PVC |
| 3105A 0105000  | 5,000 FT  | 230.000 LB  | BLACK | C N   | 1 PR #22 FHDPE SH PVC |

**Notes:**

C = CRATE REEL PUT-UP.

N = FINAL PUT-UP LENGTH MAY VARY -0% TO +10% FROM LENGTH SHOWN.

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