



**Part Number: 3105A**

RS-485, (1 pr) 22 AWG (7x30) TC, FHDPE/PVC, Foil+TC Braid Shld, CM, PLTC

## Product Description

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

## Technical Specifications

### Physical Characteristics (Overall)

#### Conductor

| AWG | Stranding | Material           | Nominal Diameter | No. of Pairs |
|-----|-----------|--------------------|------------------|--------------|
| 22  | 7x30      | TC - Tinned Copper | 0.03 in          | 1            |

|                  |        |
|------------------|--------|
| Conductor Count: | 2      |
| Conductor Size:  | 22 AWG |

#### Insulation

| Material                                 | Material Trade Name |
|------------------------------------------|---------------------|
| FHDPE - Foamed High Density Polyethylene | Datalene®           |

#### Color Chart

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

#### Outer Shield Material

| Type  | Layer | Material           | Material Trade Name | Coverage [%] | Drainwire Material | Drainwire AWG | Drainwire Construction n x D |
|-------|-------|--------------------|---------------------|--------------|--------------------|---------------|------------------------------|
| Tape  | 1     | Aluminum/Polyester | Beldfoil®           | 100 %        | TC - Tinned Copper | 22            | 7x30 mm                      |
| Braid | 2     | TC - Tinned Copper |                     | 65 %         |                    |               |                              |

#### Outer Jacket Material

| Material                 | Nominal Diameter |
|--------------------------|------------------|
| PVC - Polyvinyl Chloride | 0.281 in         |

### Construction and Dimensions

#### Stranding

| Lay Length |
|------------|
| 3.75 in    |

### Electrical Characteristics

#### Conductor DCR

| Nominal Conductor DCR | Nominal Outer Shield DCR |
|-----------------------|--------------------------|
| 14.7 Ohm/1000ft       | 2.8 Ohm/1000ft           |

#### Capacitance

| Nom. Capacitance Conductor to Conductor | Nom. Capacitance Conductor to Other Conductor to Shield |
|-----------------------------------------|---------------------------------------------------------|
| 11 pF/ft                                | 20.9 pF/ft                                              |

|            |                 |
|------------|-----------------|
| Shielding: | Foil + Braid(s) |
|------------|-----------------|

#### Impedance

**Nominal Characteristic Impedance**

120 Ohm

**High Frequency (Nominal/Typical)****Nom. Insertion Loss**

0.5 dB/100ft

**Delay****Nominal Velocity of Propagation (VP) [%]**

78 %

**Current****Max. Recommended Current [A]**

2.7 Amps per conductor @ 25°C

**Voltage****UL Voltage Rating**

300 V RMS (NEC Type PLTC)

300 V RMS (NEC Type CM)

Electrical Characteristics Notes: Input Impedance/Unfitted Impedance .5 - 10 MHZ, 120 +-12 Ohms

**Temperature Range**

|                       |                |
|-----------------------|----------------|
| Non-UL Temp Rating:   | 60°C           |
| UL Temp Rating:       | 60°C           |
| Operating Temp Range: | -20°C To +60°C |

**Mechanical Characteristics**

|                                  |               |
|----------------------------------|---------------|
| Bulk Cable Weight:               | 44 lbs/1000ft |
| Max Recommended Pulling Tension: | 60 lbs        |
| Min Bend Radius/Minor Axis:      | 2.8 in        |

**Standards**

|                          |          |
|--------------------------|----------|
| NEC/(UL) Specification:  | CM, PLTC |
| CEC/C(UL) Specification: | CM       |
| CPR Euroclass:           | Eca      |

**Applicable Environmental and Other Programs**

|                                       |                               |
|---------------------------------------|-------------------------------|
| EU Directive 2000/53/EC (ELV):        | Yes                           |
| EU Directive 2002/96/EC (WEEE):       | Yes                           |
| EU Directive 2003/11/EC (BFR):        | Yes                           |
| EU Directive 2011/65/EU (ROHS II):    | Yes                           |
| EU Directive 2015/863/EU:             | Yes                           |
| EU Directive Compliance:              | EU Directive 2003/11/EC (BFR) |
| EU CE Mark:                           | Yes                           |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2005-10-01                    |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                           |
| MII Order #39 (China RoHS):           | Yes                           |

**Suitability**

|                                    |     |
|------------------------------------|-----|
| Suitability - Oil Resistance:      | Yes |
| Suitability - Sunlight Resistance: | Yes |

**Flammability, LS0H, Toxicity Testing**

|                    |                           |
|--------------------|---------------------------|
| UL Flammability:   | UL1685 UL Loading         |
| CSA Flammability:  | FT1                       |
| UL voltage rating: | 300 V RMS (NEC Type PLTC) |

**Plenum/Non-Plenum**

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

## Part Number

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### Variants

| Item #         | Color | Footnote |
|----------------|-------|----------|
| 3105A.001000   | Black |          |
| 3105A.00152    | Black |          |
| 3105A.001525   | Black |          |
| 3105A.00305    | Black |          |
| 3105A.003050   | Black |          |
| 3105A.00610    | Black |          |
| 3105A 0101000  | Black | C        |
| 3105A 010500   | Black | C        |
| 3105A 0105000  | Black | C N      |
| 3105A 01010000 | Black |          |

|           |                                                                 |
|-----------|-----------------------------------------------------------------|
| Footnote: | C - CRATE REEL PUT-UP.                                          |
| Footnote: | N - FINAL PUT-UP LENGTH MAY VARY -0% TO +10% FROM LENGTH SHOWN. |

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