



**Product:** [3105A](#) 

RS485, 1 Pr #22 Str TC, PO Ins, OS+TC Brd, PVC Jkt, CM

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## Product Description

RS-485, 1 Pair 22AWG (7x30) Tinned Copper, PO Insulation, Overall Beldfoil®+Tinned Copper Braid(65%) Shield, PVC Outer Jacket, CM

## Technical Specifications

### Product Overview

|                        |                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------|
| Suitable Applications: | harsh environment, IIoT, factory or process automation, video, audio, data communication, etc. |
|------------------------|------------------------------------------------------------------------------------------------|

### Physical Characteristics (Overall)

#### Conductor

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

|                  |   |
|------------------|---|
| Conductor Count: | 2 |
|------------------|---|

#### Insulation

| Material                 | Material Trade Name | Nominal Diameter |
|--------------------------|---------------------|------------------|
| PE - Polyethylene (Foam) | Datalene®           | 0.087 in         |

#### Color Chart

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

#### Outer Shield Material

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

#### Outer Jacket Material

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

#### 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:               | 43 lbs/1000ft |
| Max Recommended Pulling Tension: | 200 lbs       |
| Min Bend Radius/Minor Axis:      | 6.0 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 2012/19/EU (WEEE):       | 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                    |
| MII Order #39 (China RoHS):           | Yes                           |

Suitability

|                                    |     |
|------------------------------------|-----|
| Suitability - Hazardous Locations: | Yes |
| Suitability - Indoor:              | Yes |
| Suitability - Oil Resistance:      | Yes |
| Suitability - Sunlight Resistance: | Yes |

Flammability, LS0H, Toxicity Testing

|                       |                           |
|-----------------------|---------------------------|
| UL Flammability:      | UL1685 UL Loading         |
| CSA Flammability:     | FT1                       |
| ISO/IEC Flammability: | IEC 60332-1-2             |
| UL voltage rating:    | 300 V RMS (NEC Type PLTC) |

Plenum/Non-Plenum

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

Part Number

|  |
|--|
|  |
|--|

**Variants**

| Item #         | Color | Putup Type | Length   | UPC/EAN       |
|----------------|-------|------------|----------|---------------|
| 3105A 01010000 | Black |            |          | 612825386551  |
| 3105A.00152    | Black | Reel       | 152 m    | 8719605005816 |
| 3105A.00305    | Black | Reel       | 305 m    | 8719605005830 |
| 3105A 010500   | Black | Reel       | 500 ft   | 612825141600  |
| 3105A.00610    | Black | Reel       | 610 m    | 8719605005854 |
| 3105A 0101000  | Black | Reel       | 1,000 ft | 612825141594  |
| 3105A.001000   | Black | Reel       | 1,000 m  | 8719605005809 |
| 3105A.001525   | Black | Reel       | 1,525 m  | 8719605005823 |
| 3105A.003050   | Black | Reel       | 3,050 m  | 8719605005847 |
| 3105A 0105000  | Black | Reel       | 5,000 ft | 612825141617  |

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

**Product Notes**

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

**History**

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.329 Revision Date: 04-28-2020 |
|----------------------|--------------------------------------------------|

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