



Product: [3109A](#)

RS485, 4 Pr #22 Str TC, PE Ins, OS+TC Brd, PVC Jkt, CM, PLTC, Oil Resistant

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Product Description

RS-485, 4 Pair 22AWG (7x30) Tinned Copper, PE Insulation, Overall Beldfoil®+Tinned Copper Braid(65%) Shield, PVC Outer Jacket, CM, PLTC, and oil-resistant

Technical Specifications

Product Overview

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

Construction Details

Conductor

| Element | No. of Elements | Size   | Stranding | Material           |
|---------|-----------------|--------|-----------|--------------------|
| Pair(s) | 4               | 22 AWG | 7x30      | TC - Tinned Copper |

Insulation

| Element | Material                 | Nom. Thickness     | Nom. Insulation Diameter | Color Code                                                                                                                                                         | Notes |
|---------|--------------------------|--------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Pair(s) | PE - Polyethylene (Foam) | 0.023 in (0.58 mm) | 0.075 in (1.9 mm)        | White/Blue Stripe & Blue/White Stripe, White/Orange Stripe & Orange/White Stripe, White/Green Stripe & Green/White Stripe, White/Brown Stripe & Brown/White Stripe | HDPE  |

Outer Shield

| Shield Type | Material                | Coverage | Drainwire Type   |
|-------------|-------------------------|----------|------------------|
| Tape        | Bi-Laminate (Alum+Poly) | 100%     | 22 AWG (7x30) TC |
| Braid       | Tinned Copper (TC)      | 65%      |                  |

Outer Jacket

| Material                 | Nom. Thickness    | Nom. Diameter      |
|--------------------------|-------------------|--------------------|
| PVC - Polyvinyl Chloride | 0.053 in (1.3 mm) | 0.448 in (11.4 mm) |

|                                   |                    |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.448 in (11.4 mm) |
|-----------------------------------|--------------------|

Electrical Characteristics

Electricals

| Element | Nom. Conductor DCR | Nom. Capacitance Cond-to-Cond | Nom. Capacitance Cond-to-Other (Conds + Shield) | Nom. Characteristic Impedence | Nom. Velocity of Prop. | Max. Current                   |
|---------|--------------------|-------------------------------|-------------------------------------------------|-------------------------------|------------------------|--------------------------------|
| Pair(s) | 14.7 Ohm/1000ft    | 11 pF/ft (36 pF/m)            | 20.9 pF/ft                                      | 120 Ohm                       | 78%                    | 2.7 Amps per Conductor at 25°C |

|                        |                               |
|------------------------|-------------------------------|
| Nom. Outer Shield DCR: | 2.53 Ohm/1000ft (8.30 Ohm/km) |
|------------------------|-------------------------------|

High Frequency (Nominal/Typical)

| Element | Frequency [MHz] | Nom. Insertion Loss (Attenuation) |
|---------|-----------------|-----------------------------------|
| Pair(s) | 1               | 0.5 dB/100ft                      |

Voltage

| UL Voltage Rating |
|-------------------|
| 300 V (CM, PLTC)  |

Mechanical Characteristics

Temperature

| UL Temperature | Operating      |
|----------------|----------------|
| 60°C           | -20°C to +60°C |

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 5.5 in (140 mm) | 5.5 in (140 mm)   |

|                    |                 |
|--------------------|-----------------|
| Max. Pull Tension: | 100 lbs (45 kg) |
| Bulk Cable Weight: | 82 lbs/1000ft   |

Standards and Compliance

|                                  |                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability:       | Indoor, Outdoor, Sunlight Resistance, Oil Resistance                                                                      |
| Flammability / Reaction to Fire: | UL 1685 UL Loading, FT1, IEC 60332-1-2                                                                                    |
| CPR Compliance:                  | CPR Euroclass: Eca; CPR UKCA Class: Eca                                                                                   |
| NEC / UL Compliance:             | Article 725, Article 800, CM, PLTC                                                                                        |
| CEC / C(UL) Compliance:          | CM                                                                                                                        |
| European Directive Compliance:   | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE) |
| UK Regulation Compliance:        | UKCA Mark                                                                                                                 |
| APAC Compliance:                 | China RoHS II (GB/T 26572-2011)                                                                                           |

Product Notes

|        |                                                                                                             |
|--------|-------------------------------------------------------------------------------------------------------------|
| Notes: | Oil Resistance: Passes Oil Res II Per UL1277, Table 10.17, For CPE jacketed version order Part No. YR44768. |
|--------|-------------------------------------------------------------------------------------------------------------|

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.550 Revision Date: 02-03-2025 |
|----------------------|--------------------------------------------------|

Part Numbers

Variants

| Item #        | Color | Putup Type | Length   | UPC          | Footnote |
|---------------|-------|------------|----------|--------------|----------|
| 3109A 0101000 | Black | Reel       | 1,000 ft | 612825141808 | C        |
| 3109A 0102000 | Black | Reel       | 2,000 ft | 612825141815 | C        |
| 3109A 0105000 | Black | Reel       | 5,000 ft | 612825141822 |          |

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