



Product: [3106DB](#)

RS-485, 1 Pr, 22AWG, Str TC, PE Ins, with OS, 1 c #22AWG Str, PVC Ins, OA TC Brd, CPE Jkt, CM, PLTC, Sun Res, Dir Bur, Oil Resistant

Product Description

RS-485, 120 Ohm, 1 pair 22AWG (7x30) tinned copper Datalene® insulaton and a Foil Tape Shield, and 1conductor 22AWG (7x30) Tinned Copper, PVC Insulated conductor, Overall 65% Tinned Copper Braid, CPE jacket, CM, PLTC, SUN RES DIR BUR and oil-resistant

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Suitable Applications: | direct burial, serial communication (RS-485 standard) comprising of PLCs, VFDs, HMIs, motors, RTU, SCADA, etc. within noisy environments over long distance, outdoor such as solar, lighting, etc. |
|------------------------|--|

Construction Details

Conductor

| Element | No. of Elements | Size | Stranding | Material |
|--------------|-----------------|--------|-----------|--------------------|
| Pair(s) | 1 | 22 AWG | 7x30 | TC - Tinned Copper |
| Conductor(s) | 1 | 22 AWG | 7x30 | TC - Tinned Copper |

Insulation

| Element | Material | Nom. Thickness | Nom. Insulation Diameter | Color Code | Notes |
|--------------|--------------------------|--------------------|--------------------------|---|-------|
| Pair(s) | PE - Polyethylene (Foam) | 0.033 in (0.84 mm) | 0.095 in (2.4 mm) | White/Orange Stripe & Orange/White Stripe | HDPE |
| Conductor(s) | PVC - Polyvinyl Chloride | 0.017 in (0.43 mm) | 0.062 in (1.6 mm) | Blue/White Stripe | |

Outer Shield

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

| | |
|----------------|-----------------|
| Waterblocking: | Waterblock Tape |
|----------------|-----------------|

Outer Jacket

| Material | Nom. Thickness | Nom. Diameter |
|--------------------------------|-------------------|--------------------|
| CPE - Chlorinated Polyethylene | 0.055 in (1.4 mm) | 0.359 in (9.12 mm) |

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|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.359 in (9.12 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) | 18.2 Ohm/1000ft | 11 pF/ft (36 pF/m) | 20.9 pF/ft | 120 Ohm | 78% | 6 Amps per Conductor at 30°C |
| Conductor(s) | 18.2 Ohm/1000ft (59.7 Ohm/km) | | | | | 6 Amps per Conductor at 30°C |

| | |
|------------------------|---------------------------------|
| Nom. Outer Shield DCR: | 4.544 Ohm/1000ft (14.91 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. |
|---------------------|---------------------|
| 4.308 in (109.4 mm) | 4.308 in (109.4 mm) |

| | |
|--------------------|----------------------|
| Max. Pull Tension: | 75.26 lbs (34.14 kg) |
| Bulk Cable Weight: | 62 lbs/1000ft |

Standards and Compliance

| | |
|----------------------------------|---|
| Environmental Suitability: | Indoor, Outdoor, Sunlight Resistance, Oil Resistance |
| Flammability / Reaction to Fire: | UL 1685 UL Loading, IEC 60332-1-2 |
| 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) |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |

Product Notes

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| Notes: | Oil Resistance: Passes Oil Res I & II Per UL1277, Table 10.17 |
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History

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| Update and Revision: | Revision Number: 0.296 Revision Date: 12-22-2023 |
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