



**Product:** [189463](#)

Blue Hose®, 1 Pr #20 Str TC, PE Ins Blu, Clr, Foil+TC Braid Shld, PVC Jkt, CCA Armor, PVC Jkt, PLTC

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### Product Description

Blue Hose® for Data Highway Plus, 1 Pair 20AWG (7x28) Tinned Copper, PE Insulation Blue & Clear, Overall Beldfoil®+Tinned Copper Braid(55%) Shield, PVC Inner Jacket, CCA Interlock Armor, Blue PVC Outer Jacket, PLTC

### Technical Specifications

#### Product Overview

|                        |  |
|------------------------|--|
| Suitable Applications: | exposure to rodent, crush, or cut through force, harsh environment, Allen Bradley Data Highway communication interface between PLC processors, I/O devices, operator interfaces, computers and other intelligent devices, PLC processor interlocking, peer-to-peer messaging, remote programming, troubleshooting, I/O updates, etc. |
|------------------------|--|

#### Construction Details

##### Conductor

| Element | No. of Elements | Size   | Stranding | Material           |
|---------|-----------------|--------|-----------|--------------------|
| Pair(s) | 1               | 20 AWG | 7x28      | TC - Tinned Copper |

##### Insulation

| Element | Material          | Nom. Thickness     | Color Code   | Notes                   |
|---------|-------------------|--------------------|--------------|-------------------------|
| Pair(s) | PE - Polyethylene | 0.019 in (0.48 mm) | Clear & Blue | Twinax with rod fillers |

##### Outer Shield

| Shield Type | Material                | Coverage | Drainwire Type   |
|-------------|-------------------------|----------|------------------|
| Tape        | Bi-Laminate (Alum+Poly) | 100%     | 20 AWG (7x28) TC |
| Braid       | Tinned Copper (TC)      | 55%      |                  |

##### Inner Jacket

| Material                 | Nom. Diameter      |
|--------------------------|--------------------|
| PVC - Polyvinyl Chloride | 0.238 in (6.05 mm) |

##### Armor

| Armor Type & Material                         |
|---|
| CCAA - Continuously Corrugated Aluminum Armor |

##### Outer Jacket

| Material                 | Nom. Thickness    | Nom. Diameter      |
|--------------------------|-------------------|--------------------|
| PVC - Polyvinyl Chloride | 0.050 in (1.3 mm) | 0.515 in (13.1 mm) |

|                                   |                    |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.515 in (13.1 mm) |
|-----------------------------------|--------------------|

#### Electrical Characteristics

##### Electricals

| Element | Nom. Conductor DCR         | Nom. Capacitance Cond-to-Cond | Nom. Capacitance Cond-to-Shield | Nom. Capacitance Cond-to-Other (Conds + Shield) | Nom. Characteristic Impedance | Nom. Velocity of Prop. |
|---------|----------------------------|-------------------------------|---------------------------------|---|-------------------------------|------------------------|
| Pair(s) | 9.5 Ohm/1000ft (31 Ohm/km) | 19.7 pF/ft (64.6 pF/m)        | 37 pF/ft                        | 36 pF/ft  | 78 Ohm                        | 66%                    |

|                        |                            |
|------------------------|----------------------------|
| Nom. Outer Shield DCR: | 4.1 Ohm/1000ft (13 Ohm/km) |
|------------------------|----------------------------|

##### High Frequency (Nominal/Typical)

| Element | Frequency [MHz] | Nom. Insertion Loss (Attenuation) |
|---------|-----------------|-----------------------------------|
| Pair(s) | 1               | 0.6 dB/100ft                      |
|         | 10              | 2.1 dB/100ft                      |
|         | 50              | 5 dB/100ft                        |
|         | 100             | 7.5 dB/100ft                      |
|         | 200             | 11 dB/100ft                       |
|         | 400             | 16 dB/100ft                       |

#### Voltage

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

## Mechanical Characteristics

#### Temperature

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

#### Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 6 in (150 mm)   | 6 in              |

|                    |                            |
|--------------------|----------------------------|
| Max. Pull Tension: | 205 lbs (93.0 kg)          |
| Bulk Cable Weight: | 121 lbs/1000ft (180 kg/km) |

## Standards and Compliance

|                                  |   |
|----------------------------------|---|
| Environmental Suitability:       | Indoor, Outdoor, Sunlight Resistance, Burial  |
| Flammability / Reaction to Fire: | UL1685 UL Loading   |
| NEC / UL Compliance:             | Article 725, PLTC   |
| 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) |
| Other Standard Compliance(s):    | Allen Bradley Part No. 1770-CD  |

## History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.247 Revision Date: 05-31-2024 |
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