# **Detailed Specifications & Technical Data**

METRIC MEASUREMENT VERSION



### 3084A Multi-Conductor - DeviceBus® for ODVA DeviceNet™



For more Information please call

1-800-Belden1



# **Description:**

22 and 24 AWG stranded tinned copper conductors, PVC insulation (power), FPE insulation (Data), individually foil shielded (100% coverage) and an overall tinned copper braid (65% coverage), sunlight/oil-resistant PVC jacket.

# **Physical Characteristics (Overall)**

### Conductor

### AWG:

| # Conductor | rs # Pairs | AWG | Stranding | <b>Conductor Material</b> |
|-------------|------------|-----|-----------|---------------------------|
| 4           | 1          | 22  | 19x34     | TC - Tinned Copper        |
|             | 1          | 24  | 19x36     | TC - Tinned Copper        |

### Insulation

### Insulation Material:

| Insulation Material      | AWG |
|--------------------------|-----|
| PVC - Polyvinyl Chloride | 22  |
| FPE - Foam Polyethylene  | 24  |

### **Inner Shield**

### Inner Shield Material:

| Layer #     | Type | Inner Shield Material        | Coverage (%) |
|-------------|------|------------------------------|--------------|
| 22 AWG Pair | Tape | Aluminum Foil-Polyester Tape | 100          |
| 24 AWG Pair | Tape | Aluminum Foil-Polyester Tape | 100          |

### Inner Shield Drain Wire AWG:

AWG 22

Inner Shield Drain Wire Stranding: 19x34

Inner Shield Drain Wire Conductor Material: TC - Tinned Copper

### **Outer Shield**

### **Outer Shield Material:**

| Type  | Outer Shield Material | Coverage (%) |
|-------|-----------------------|--------------|
| Braid | TC - Tinned Copper    | 65           |

### **Outer Jacket**

### Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

### **Overall Cable**

Overall Nominal Diameter: 7.112 mm

# Pair

## Pair Color Code Chart:

| Number      | Color        |
|-------------|--------------|
| 22 AWG Pair | Red & Black  |
| 24 AWG Pair | Blue & White |

# **Mechanical Characteristics (Overall)**

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| Operating Temperature Range:      | -20°C To +75°C |
|-----------------------------------|----------------|
| UL Temperature Rating:            | 75°C           |
| Bulk Cable Weight:                | 61.016 Kg/Km   |
| Max. Recommended Pulling Tension: | 289.133 N      |
| Min. Bend Radius/Minor Axis:      | 69.850 mm      |

# **Applicable Specifications and Agency Compliance (Overall)**

# **Applicable Standards & Environmental Programs**

| NEC/(UL) Specification:               | CMG, CL2           |
|---------------------------------------|--------------------|
| CEC/C(UL) Specification:              | CMG                |
| CSA Specification:                    | I/II A             |
| EU CE Mark:                           | Yes                |
| EU Directive 2000/53/EC (ELV):        | Yes                |
| EU Directive 2002/95/EC (RoHS):       | Yes                |
| EU RoHS Compliance Date (mm/dd/yyyy): | 04/01/2005         |
| EU Directive 2002/96/EC (WEEE):       | Yes                |
| EU Directive 2003/11/EC (BFR):        | Yes                |
| CA Prop 65 (CJ for Wire & Cable):     | Yes                |
| MII Order #39 (China RoHS):           | Yes                |
| Other Specification:                  | ODVA Class 2 Thin  |
| Flame Test                            |                    |
| UL Flame Test:                        | UL1685 FT4 Loading |
| CSA Flame Test:                       | FT4                |
| Suitability                           |                    |
| Sunlight Resistance:                  | Yes                |
| Oil Resistance:                       | Yes                |
| Plenum/Non-Plenum                     |                    |

# Plenum/Non-Plenum

Plenum (Y/N): No

# **Electrical Characteristics (Overall)**

## Nom. Characteristic Impedance:

| Description | Impedance (Ohm) |  |
|-------------|-----------------|--|
| 24 AWG Pair | 120             |  |

### Nom. Inductance:

|             | Inductance (µH/m) |
|-------------|-------------------|
| 22 AWG Pair |                   |
| 24 AWG Pair | 0.823531          |

### Nom. Capacitance Conductor to Conductor:

| Description | Freq. (MHz) | Start Freq. (MHz) | Stop Freq. (MHz) | Capacitance (pF/m) |
|-------------|-------------|-------------------|------------------|--------------------|
| 24 AWG Pair | 1           |                   |                  | 39.372             |

# Nominal Velocity of Propagation:

| Description | VP (%) |
|-------------|--------|
| 24 AWG Pair | 75     |

# Maximum Delay:

| Description | Freq. (MHz) | Start Freq. (MHz) | Stop Freq. (MHz) | Delay (ns/m) |
|-------------|-------------|-------------------|------------------|--------------|
| 24 AWG Pair |             |                   |                  | 4.46216      |

# **Maximum Conductor DC Resistance:**

Description DCR @ 20°C (Ohm/100 m)

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| 22 AWG | 57.4175 |
|--------|---------|
| 24 AWG | 91.868  |

### **Nominal Outer Shield DC Resistance:**

| DCR @ 20°C | (Ohm/km) |
|------------|----------|
| 10.4992    |          |

### Max. Attenuation:

| 0       | Description      | Freq. (MHz) |
|---------|------------------|-------------|
| 0.95149 | 24 AWG Pair Only | .125        |
| 1.6405  |                  | .500        |
| 2.2967  |                  | 1.000       |

### Max. Operating Voltage - UL:

| Voltage   | Description |  |  |
|-----------|-------------|--|--|
| 300 V RMS | CL2, CMG    |  |  |
| 300 V RMS | C(UL) AWM   |  |  |
| 600 V RMS | UL AWM      |  |  |

### Max. Recommended Current:

| Current   |  |  |  |
|---|--|--|--|
| 1.7 Amps per conductor @ 25°C (24 AWG)            |  |  |  |
| 4 Amps per conductor @ 24 V per NEC CL2 (Power Pa |  |  |  |

### **Notes (Overall)**

Notes: Flex Life: +/- 90 Degree Flex Test, 2" Diameter, 2 lbs. tension: 2000 Cycles minimum. Meter marks on jacket to aid users in installation. ODVA DevaiceNet is an Open DeviceNet Vendor Association, Inc. trademark.

## **Put Ups and Colors:**

| Item #        | Putup    | Ship Weight | Color    | Notes | Item Desc             |
|---------------|----------|-------------|----------|-------|-----------------------|
| 3084A T5U1000 | 305 MT   | 21.319 KG   | GRAY T5U | С     | 2 #22, 2 #24 SHLD PVC |
| 3084A T5U2000 | 610 MT   | 43.545 KG   | GRAY T5U | CZ    | 2 #22, 2 #24 SHLD PVC |
| 3084A T5U500  | 152 MT   | 10.659 KG   | GRAY T5U | С     | 2 #22, 2 #24 SHLD PVC |
| 3084A T5U5000 | 1,524 MT | 106.595 KG  | GRAY T5U | С     | 2 #22, 2 #24 SHLD PVC |
| 3084A 0021000 | 305 MT   | 21.319 KG   | RED      | С     | 2 #22, 2 #24 SH PVC   |

### Notes:

C = CRATE REEL PUT-UP.

Z = FINAL PUT-UP LENGTH MAY VARY (+ OR -) 10% FOR SPOOLS OR REELS AND (+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

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