# **Detailed Specifications & Technical Data**



METRIC MEASUREMENT VERSION

## 8641 Multi-Conductor - Single-Pair Cable

For more Information please call

1-800-Belden1



### **General Description:**

24 AWG stranded (7x32) TC conductors, polyethylene insulation, twisted pair, overall Beldfoil shield (100% coverage), 24 AWG stranded TC drain wire, PVC jacket.

| Physical Characteristics (Overall)   | ·  |
|--|--|
| Conductor  |  |
| AWG:   |  |
| # Pairs         AWG         Stranding         Conductor Material           1         24         7x32         TC - Tinned Copper  |  |
| Total Number of Conductors:  | 2  |
| Insulation<br>Insulation Material:   |  |
| Insulation Material Wall Thickness (mm)  |  |
| PE - Polyethylene 0.432  |  |
| Outer Shield<br>Outer Shield Material:   |  |
| Outer Shield Trade Name Type Outer Shield Material   | Coverage (%)   |
| Beldfoil® Tape Aluminum Foil-Polyester Tape  | e 100  |
| Outer Shield Drain Wire AWG:   |  |
| AWG         Stranding         Drain Wire Conductor Material           24         7x32         TC - Tinned Copper   |  |
| Outer Jacket<br>Outer Jacket Material:   |  |
| Outer Jacket Material Nom. Wall Thickness (mm)   |  |
| PVC - Polyvinyl Chloride 0.635   |  |
| Overall Cable  |  |
|  |  |
| Overall Nominal Diameter:  | 4.267 mm   |
| Overall Nominal Diameter: Pair Pair Color Code Chart:           Number         Color           1         Black & Clear   | 4.267 mm   |
| Pair<br>Pair Color Code Chart:<br>Number Color<br>1 Black & Clear  | 4.267 mm   |
| Pair<br>Pair Color Code Chart:<br>Number Color   | 4.267 mm<br>-20°C To +80°C   |
| Pair<br>Pair Color Code Chart:<br>Number Color<br>1 Black & Clear<br>Mechanical Characteristics (Overall)  |  |
| Pair<br>Pair Color Code Chart:<br>Number Color<br>1 Black & Clear<br>Mechanical Characteristics (Overall)<br>Operating Temperature Range:  | -20°C To +80°C   |
| Pair<br>Pair Color Code Chart:<br>Number Color<br>1 Black & Clear<br>Mechanical Characteristics (Overall)<br>Operating Temperature Range:<br>UL Temperature Rating:  | -20°C To +80°C<br>60°C (UL AWM Style 2092)   |
| Pair Pair Color Code Chart:          Number       Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:  | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km   |
| Pair Pair Color Code Chart:          Number       Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:         Max. Recommended Pulling Tension:         Min. Bend Radius/Minor Axis:   | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km<br>48.930 N<br>44.450 mm  |
| Pair Pair Color Code Chart:          Number       Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:         Max. Recommended Pulling Tension:  | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km<br>48.930 N<br>44.450 mm  |
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| Pair Pair Color Code Chart:          Number       Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:         Max. Recommended Pulling Tension:         Min. Bend Radius/Minor Axis:         Applicable Specifications and Agency Compliance         Applicable Standards & Environmental Programs   | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km<br>48.930 N<br>44.450 mm<br>e (Overall)   |
| Pair Pair Color Code Chart:          Number       Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:         Max. Recommended Pulling Tension:         Min. Bend Radius/Minor Axis:         Applicable Specifications and Agency Compliance         Applicable Standards & Environmental Programs         NEC/(UL) Specification:   | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km<br>48.930 N<br>44.450 mm<br>e (Overall)<br>CM   |
| Pair Pair Color Code Chart:          Number       Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:         Max. Recommended Pulling Tension:         Min. Bend Radius/Minor Axis:         Applicable Specifications and Agency Compliance         Applicable Standards & Environmental Programs         NEC/(UL) Specification:         CEC/C(UL) Specification:  | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km<br>48.930 N<br>44.450 mm<br>e (Overall)<br>CM<br>CM   |
| Pair Pair Color Code Chart:          Number       Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:         Max. Recommended Pulling Tension:         Min. Bend Radius/Minor Axis:         Applicable Specifications and Agency Compliance         Applicable Standards & Environmental Programs         NEC/(UL) Specification:         CEC/C(UL) Specification:         AWM Specification:   | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km<br>48.930 N<br>44.450 mm<br>e (Overall)<br>CM<br>CM<br>CM<br>UL Style 2092 (300 V 60°C)                     |
| Pair         Pair Color Code Chart:         Number Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:         Max. Recommended Pulling Tension:         Min. Bend Radius/Minor Axis:         Applicable Specifications and Agency Compliance         Applicable Standards & Environmental Programs         NEC/(UL) Specification:         CEC/C(UL) Specification:         AWM Specification:         EU Directive 2011/65/EU (ROHS II): | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km<br>48.930 N<br>44.450 mm<br>e (Overall)<br>CM<br>CM<br>CM<br>UL Style 2092 (300 V 60°C)<br>Yes              |
| Pair         Pair Color Code Chart:         Number       Color         1       Black & Clear         Mechanical Characteristics (Overall)         Operating Temperature Range:         UL Temperature Rating:         Bulk Cable Weight:         Max. Recommended Pulling Tension:         Min. Bend Radius/Minor Axis:         Applicable Specifications and Agency Compliance         Applicable Standards & Environmental Programs         NEC/(UL) Specification:         CEC/C(UL) Specification:         EU Directive 2011/65/EU (ROHS II):         EU CE Mark:  | -20°C To +80°C<br>60°C (UL AWM Style 2092)<br>17.858 Kg/Km<br>48.930 N<br>44.450 mm<br>e (Overall)<br>CM<br>CM<br>CM<br>CM<br>UL Style 2092 (300 V 60°C)<br>Yes<br>Yes |

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## 8641 Multi-Conductor - Single-Pair Cable

| 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               |  |  |  |  |
| Flame Test  |                   |  |  |  |  |
| UL Flame Test:                                      | UL1685 UL Loading |  |  |  |  |
| Plenum/Non-Plenum                                   |                   |  |  |  |  |
| Plenum (Y/N):                                       | No                |  |  |  |  |
| Plenum Number:                                      | 88641, 82641      |  |  |  |  |
| ectrical Characteristics (Overall)                  |                   |  |  |  |  |
| Nom. Characteristic Impedance:                      |                   |  |  |  |  |
| Impedance (Ohm)<br>80                               |                   |  |  |  |  |
| Nom. Inductance:                                    |                   |  |  |  |  |
| Inductance (µH/m)<br>0.72182                        |                   |  |  |  |  |
| Nom. Capacitance Conductor to Conductor:            |                   |  |  |  |  |
| Capacitance (pF/m)                                  |                   |  |  |  |  |
| 72.182  |                   |  |  |  |  |
| Nom. Capacitance Cond. to Other Conductor & Shield: |                   |  |  |  |  |
| Capacitance (pF/m)<br>137.802                       |                   |  |  |  |  |
| Nom. Conductor DC Resistance:                       |                   |  |  |  |  |
| DCR @ 20°C (Ohm/km)<br>82.025                       |                   |  |  |  |  |
| Nominal Outer Shield DC Resistance:                 |                   |  |  |  |  |
| DCR @ 20°C (Ohm/km)<br>47.9026                      |                   |  |  |  |  |
| Max. Operating Voltage - UL:                        |                   |  |  |  |  |
| Voltage<br>300 V RMS (UL AWM Style 2092)            |                   |  |  |  |  |
| Max. Recommended Current:                           |                   |  |  |  |  |
| Current<br>2.2 Amps per conductor @ 25°C            |                   |  |  |  |  |
| hit line and Calara                                 |                   |  |  |  |  |

#### **Put Ups and Colors:**

| Item #        | Putup    | Ship Weight | Color  | Notes | Item Desc          |
|---------------|----------|-------------|--------|-------|--------------------|
| 8641 060U1000 | 305 MT   | 6.350 KG    | CHROME |       | 1 #24 FS PR PE PVC |
| 8641 060U500  | 152 MT   | 3.402 KG    | CHROME |       | 1 #24 FS PR PE PVC |
| 8641 060100   | 30 MT    | 0.907 KG    | CHROME |       | 1 #24 FS PR PE PVC |
| 8641 0601000  | 305 MT   | 6.350 KG    | CHROME | С     | 1 #24 FS PR PE PVC |
| 8641 060500   | 152 MT   | 3.175 KG    | CHROME |       | 1 #24 FS PR PE PVC |
| 8641 0605000  | 1,524 MT | 29.484 KG   | CHROME |       | 1 #24 FS PR PE PVC |

Notes: C = CRATE REEL PUT-UP.

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product. Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.