

## Introduction

Belden® multi-conductor cables are manufactured in a wide variety of gage sizes, dimensions, insulation materials, shielding configurations, and jacketing materials including Plenum and High-Temperature versions. These cables meet the technical requirements of many different types of systems. In fact, Belden offers one of the broadest lines of UL Listed, NEC and CEC multi-conductor cables available from any single source.

Applications for multi-conductor cables include computers, communications, instrumentation, sound, control, audio, and data transmission. Each of these cables is designed to protect signal integrity under critical conditions by reducing hum, noise, and crosstalk.

To assist you in selecting the proper cable for your application, both the suggested working voltages and the maximum temperature ratings are indicated for each applicable product in this section.

Most of our multi-conductor cables are available from stock. Many of these are available off the shelf from distributors. If you have a new or unusual application or you cannot find a multi-conductor cable in this catalog section that meets your technical requirements, contact Technical Support at 1-800-BELDEN-1.

### Multi-Conductor Cables Packaging

Belden's unique UnReel® cable dispenser is available for many of the multi-conductor products listed in this section. The letter "U" before the specified put-up length denotes UnReel packaging.

## Selection Guide

### Shielded Multi-Conductor Computer Cables for RS-232 Applications

| Specifications                  |                    | Cable Series* |      |      |      |
|---------------------------------|--------------------|---------------|------|------|------|
|                                 |                    | 9925          | 9608 | 9533 | 9939 |
| <b>Conductor Size:</b><br>(AWG) | 28                 |               |      |      |      |
|                                 | 24                 | ✓             | ✓    | ✓    |      |
|                                 | 22                 |               |      |      | ✓    |
|                                 | 20                 |               |      |      |      |
|                                 | 18                 |               |      |      |      |
| Page No.                        |                    | 4.18          | 4.17 | 4.11 | 4.19 |
| <b>Insulation:</b>              | S-R PVC            |               | ✓    | ✓    | ✓    |
|                                 | Polyethylene       |               |      |      |      |
|                                 | Polypropylene      |               |      |      |      |
|                                 | Datalene®†         | ✓             |      |      |      |
| <b>Shield:</b>                  | Overall Foil       |               |      | ✓    |      |
|                                 | Drain Wire         | ✓             |      | ✓    |      |
|                                 | Overall Foil/Braid | ✓             | ✓    |      | ✓    |
|                                 | Braid Coverage     | 65%           | 65%  |      | 65%  |
| <b>Drain Wire Overall:</b>      |                    | Yes           | No   | Yes  | No   |
| <b>No. of Cond. Available:</b>  | 1                  |               |      |      |      |
|                                 | 2                  |               |      |      |      |
|                                 | 3                  | ✓             | ✓    | ✓    | ✓    |
|                                 | 4                  | ✓             | ✓    | ✓    | ✓    |
|                                 | 5                  | ✓             | ✓    | ✓    | ✓    |
|                                 | 6                  | ✓             | ✓    | ✓    | ✓    |
|                                 | 7                  | ✓             | ✓    | ✓    | ✓    |
|                                 | 8                  | ✓             | ✓    | ✓    | ✓    |
|                                 | 9                  | ✓             | ✓    | ✓    | ✓    |
|                                 | 10                 | ✓             | ✓    | ✓    | ✓    |
|                                 | 11                 |               |      |      |      |
|                                 | 12                 |               |      |      |      |
|                                 | 13                 |               |      |      |      |
|                                 | 15                 | ✓             | ✓    | ✓    | ✓    |
|                                 | 17                 |               |      |      |      |
|                                 | 18                 |               |      |      |      |
|                                 | 19                 |               |      |      |      |
|                                 | 20                 |               |      | ✓    |      |
|                                 | 25                 | ✓             | ✓    | ✓    | ✓    |
|                                 | 27                 |               |      |      |      |
| 30                              |                    |               | ✓    |      |      |
| 31                              |                    |               |      |      |      |
| 37                              | ✓                  | ✓             |      | ✓    |      |
| 40                              |                    |               | ✓    |      |      |
| 50                              |                    | ✓             | ✓    | ✓    |      |
| <b>Capacitance ** (pF/ft.)</b>  |                    | 12.0          | 30.0 | 30.0 | 35.0 |

\*All cables are UL-listed.

\*\*Capacitance may vary on some cables.

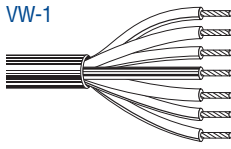
† Foam high density polyethylene.

# Unshielded

Audio, Control, Communication and Instrumentation Cables  
Non-Plenum


| Description | Part No. | UL NEC/<br>C(UL) CEC<br>Type | No.<br>of<br>Cond. | Color<br>Code | Standard Lengths |   | Standard<br>Unit Weight |    | Insulation<br>Thickness |    | Jacket<br>Thickness |    | Nominal OD |    |
|-------------|----------|------------------------------|--------------------|---------------|------------------|---|-------------------------|----|-------------------------|----|---------------------|----|------------|----|
|             |          |                              |                    |               | Ft.              | m | Lbs.                    | kg | Inch                    | mm | Inch                | mm | Inch       | mm |

**14 AWG** Stranded (19x27) Tinned Copper Conductors • Conductors Cabled

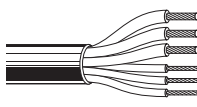
| PVC Insulation • Chrome PVC Jacket  |      |   |    |  |      |       |       |       |      |      |      |      |      |       |
|---|------|---|----|--|------|-------|-------|-------|------|------|------|------|------|-------|
|  | 8627 | — | 4  | See<br>Chart 2<br>(Tech Info<br>Section) | 100  | 30.5  | 13.8  | 6.3   | .045 | 1.14 | .045 | 1.14 | .490 | 12.45 |
|   |      |   |    |  | 500  | 152.4 | 76.5  | 34.7  |      |      |      |      |      |       |
|   |      |   |    |  | 1000 | 304.8 | 149.0 | 67.6  |      |      |      |      |      |       |
|   |      |   |    |  |      |       |       |       |      |      |      |      |      |       |
|   | 9623 | — | 5  | See<br>Chart 2<br>(Tech Info<br>Section) | 100  | 30.5  | 18.1  | 8.3   | .045 | 1.14 | .060 | 1.52 | .573 | 14.55 |
|   |      |   |    |  | 500  | 152.4 | 99.5  | 45.1  |      |      |      |      |      |       |
|   |      |   |    |  | 1000 | 304.8 | 197.0 | 89.4  |      |      |      |      |      |       |
|   |      |   |    |  |      |       |       |       |      |      |      |      |      |       |
|   | 8628 | — | 7  | See<br>Chart 2<br>(Tech Info<br>Section) | 100  | 30.5  | 23.9  | 11.0  | .045 | 1.14 | .060 | 1.52 | .623 | 15.82 |
|   |      |   |    |  | 500  | 152.4 | 128.0 | 58.1  |      |      |      |      |      |       |
|   |      |   |    |  | 1000 | 304.8 | 255.0 | 115.8 |      |      |      |      |      |       |
|   |      |   |    |  |      |       |       |       |      |      |      |      |      |       |
|   | 8629 | — | 12 | See<br>Chart 2<br>(Tech Info<br>Section) | 100  | 30.5  | 44.6  | 20.2  | .045 | 1.14 | .065 | 1.65 | .824 | 20.93 |
|   |      |   |    |  | 500  | 152.4 | 222.0 | 100.8 |      |      |      |      |      |       |
|   |      |   |    |  | 1000 | 304.8 | 454.0 | 206.1 |      |      |      |      |      |       |
|   |      |   |    |  |      |       |       |       |      |      |      |      |      |       |

| Description | Part No. | UL NEC/<br>C(UL) CEC<br>Type | No.<br>of<br>Cond. | Color<br>Code | Standard Lengths |   | Standard<br>Unit Weight |    | Insulation<br>Thickness |    | Jacket<br>Thickness |    | Nominal OD |    | Nominal Capacitance |               |                  |                |
|-------------|----------|------------------------------|--------------------|---------------|------------------|---|-------------------------|----|-------------------------|----|---------------------|----|------------|----|---------------------|---------------|------------------|----------------|
|             |          |                              |                    |               | Ft.              | m | Lbs.                    | kg | Inch                    | mm | Inch                | mm | Inch       | mm | *<br>pF/<br>Ft.     | *<br>pF/<br>m | **<br>pF/<br>Ft. | **<br>pF/<br>m |

**22 and 18 AWG** Stranded (7x30 and 16x30) Tinned Copper Conductors • Conductors Cabled

| PVC Insulation • Chrome PVC Jacket  |      |                                |   |  |        |         |      |      |      |     |      |     |      |      |    |    |    |     |  |  |  |
|---|------|--------------------------------|---|--|--------|---------|------|------|------|-----|------|-----|------|------|----|----|----|-----|--|--|--|
|  | 8446 | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 6:<br>4 Unshld<br>22 (7x30)<br>2 Unshld<br>18 (16x30) | Red, Green,<br>Brown,<br>Blue<br>Black,<br>White | 100    | 30.5    | 4.7  | 2.1  | .010 | .25 | .032 | .81 | .236 | 5.99 | 30 | 98 | 54 | 177 |  |  |  |
|   |      |                                |   |  | U-500  | U-152.4 | 21.5 | 9.8  |      |     |      |     |      |      |    |    |    |     |  |  |  |
|   |      |                                |   |  | 500    | 152.4   | 21.5 | 9.8  |      |     |      |     |      |      |    |    |    |     |  |  |  |
|   |      |                                |   |  | U-1000 | U-304.8 | 41.0 | 18.6 | .019 | .48 |      |     |      |      |    |    |    |     |  |  |  |
|   |      |                                |   |  | 1000   | 304.8   | 43.0 | 19.5 |      |     |      |     |      |      |    |    |    |     |  |  |  |

**20 and 16 AWG** Stranded (7x28 and 19x28) Tinned Copper Conductors • Conductors Cabled

| PVC Insulation • Chrome PVC Jacket  |      |            |   |   |       |         |      |      |      |     |      |     |      |      |    |    |    |     |    |    |    |     |
|---|------|------------|---|---|-------|---------|------|------|------|-----|------|-----|------|------|----|----|----|-----|----|----|----|-----|
|  | 9686 | NEC:<br>CM | 6:<br>3 Unshld<br>20 (7x28)<br>3 Unshld<br>16 (19x28) | Green,<br>Blue,<br>Purple<br>Black,<br>Red,<br>Yellow | U-500 | U-152.4 | 32.5 | 14.7 | .012 | .30 | .032 | .81 | .295 | 7.49 | 20 | 66 | 36 | 118 |    |    |    |     |
|   |      |            |   |   |       |         |      |      |      |     |      |     |      |      |    |    |    |     |    |    |    |     |
|   |      |            |   |   |       |         |      |      |      |     |      |     | .013 | .33  |    |    |    |     | 30 | 98 | 54 | 177 |
|   |      |            |   |   |       |         |      |      |      |     |      |     |      |      |    |    |    |     |    |    |    |     |

\*Capacitance between conductors.  
\*\*Nominal capacitance conductor to conductor and shield.