

## 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.

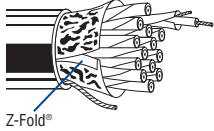
\*\*Capacitance may vary on some cables.

† Foam high density polyethylene.

**Overall Beldfoil® Shield**

Computer Cable for Synchronous EIA Interface

| Description  | Part No.    | UL NEC/<br>C(UL) CEC<br>Type | No.<br>of<br>Cond. | Standard Lengths |       | Standard<br>Unit Weight |      | Nominal OD |       | Nominal DCR           |  | Nom.<br>Imped.<br>(Ω) | Nom.<br>Vel.<br>of<br>Prop. | Nominal Capacitance |               |                  |                |  |  |
|--|-------------|------------------------------|--------------------|------------------|-------|-------------------------|------|------------|-------|-----------------------|--|-----------------------|-----------------------------|---------------------|---------------|------------------|----------------|--|--|
|  |             |                              |                    | Ft.              | m     | Lbs.                    | kg   | Inch       | mm    | Cond.                 | Shield   |                       |                             | *<br>pF/<br>Ft.     | *<br>pF/<br>m | **<br>pF/<br>Ft. | **<br>pF/<br>m |  |  |
| <b>28 AWG</b> Stranded (7x36) TC Conductors • Individually and Overall Beldfoil Shielded (100% Coverage) • 28 AWG Stranded TC Drain Wires<br><b>Datalene® Insulation • Gray PVC Jacket</b> |             |                              |                    |                  |       |                         |      |            |       |                       |  |                       |                             |                     |               |                  |                |  |  |
| UL AWM Style 2384<br>(30V 60°C)  | <b>9868</b> | NEC:<br>CM                   | 14                 | 1000             | 304.8 | 71.0                    | 32.2 | .394       | 10.01 | 64.9Ω/M'<br>212.9Ω/km | Individual:<br>44.0Ω/M'<br>144.4Ω/km<br><br>Overall:<br>18.2Ω/M'<br>59.7Ω/km | 65                    | 78%                         | —                   | —             | 20.5             | 67.3           |  |  |



Individually Beldfoil shielded conductors are isolated from adjacent shields and each has a 28 AWG stranded TC drain wire.

DCR = DC Resistance • TC = Tinned Copper

\*Capacitance between conductors.

\*\*Nominal capacitance conductor to conductor and shield.

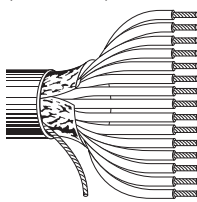
Datalene insulation features include a low dielectric constant and a low dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.

**Color Codes**

| Cond. No. | Color                  |
|-----------|------------------------|
| 1         | Black w/ Blue Shield   |
| 2         | Brown w/ Blue Shield   |
| 3         | Red w/ Blue Shield     |
| 4         | Orange w/ Blue Shield  |
| 5         | Blue w/ Blue Shield    |
| 6         | Yellow w/ Blue Shield  |
| 7         | Natural w/ Blue Shield |
| 8         | Black w/ Red Shield    |
| 9         | Brown w/ Red Shield    |
| 10        | Red w/ Red Shield      |
| 11        | Orange w/ Red Shield   |
| 12        | Blue w/ Red Shield     |
| 13        | Yellow w/ Red Shield   |
| 14        | Natural w/ Red Shield  |

**Overall Beldfoil® Shield**

Computer Cables for EIA RS-232 Applications

| 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 |
| <b>24 AWG Stranded (7x32) TC Conductors • Conductors Cabled • Overall Beldfoil Shield (100% Coverage) • 24 AWG Stranded TC Drain Wire</b> |                                  |                                |                                |   |   |  |  |                                     |                                     |                                    |                     |              |            |           |                     |               |                  |                |
| <b>Semi-rigid PVC Insulation • Chrome PVC Jacket</b>  |                                  |                                |                                |   |   |  |  |                                     |                                     |                                    |                     |              |            |           |                     |               |                  |                |
|    | UL AWM Style 2464<br>(300V 80°C) | <b>9533</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 3   | See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 2.7<br>9.5<br>9.0<br>18.0<br>18.0   | 1.2<br>4.3<br>4.1<br>8.2<br>8.2     | .010<br>.25<br>.032<br>.81<br>.162 | .032<br>.81<br>.162 | .162<br>4.11 | 33<br>108  | 65<br>213 |                     |               |                  |                |
|   |                                  | <b>9534</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 4   | See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 3.0<br>11.0<br>11.5<br>21.0<br>22.0 | 1.4<br>5.0<br>5.2<br>9.5<br>10.0    | .010<br>.25<br>.032<br>.81<br>.184 | .032<br>.81<br>.184 | .184<br>4.67 | 33<br>108  | 65<br>213 |                     |               |                  |                |
|   |                                  | <b>9535</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 5   | See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 3.2<br>12.0<br>11.0<br>23.0<br>22.0 | 1.5<br>5.4<br>5.0<br>10.4<br>10.0   | .010<br>.25<br>.032<br>.81<br>.189 | .032<br>.81<br>.189 | .189<br>4.80 | 33<br>108  | 65<br>213 |                     |               |                  |                |
|   |                                  | <b>9536</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 6   | See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 3.6<br>14.5<br>12.5<br>27.0<br>29.0 | 1.6<br>6.6<br>5.7<br>12.3<br>13.2   | .010<br>.25<br>.032<br>.81<br>.209 | .032<br>.81<br>.209 | .209<br>5.31 | 33<br>108  | 65<br>213 |                     |               |                  |                |
|   |                                  | <b>9537</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 7   | See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 3.7<br>15.0<br>13.5<br>29.0<br>30.0 | 1.7<br>6.8<br>6.2<br>13.2<br>13.7   | .010<br>.25<br>.032<br>.81<br>.209 | .032<br>.81<br>.209 | .209<br>5.31 | 33<br>108  | 65<br>213 |                     |               |                  |                |
|   |                                  | <b>9538</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 8   | See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 3.8<br>17.0<br>15.0<br>32.0<br>34.0 | 1.7<br>7.7<br>6.8<br>14.6<br>15.4   | .010<br>.25<br>.032<br>.81<br>.224 | .032<br>.81<br>.224 | .224<br>5.69 | 33<br>108  | 65<br>213 |                     |               |                  |                |
|   |                                  | <b>9539</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 9   | See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 4.2<br>20.0<br>17.0<br>37.0<br>38.0 | 1.9<br>9.1<br>7.8<br>16.9<br>17.3   | .010<br>.25<br>.032<br>.81<br>.244 | .032<br>.81<br>.244 | .244<br>6.20 | 30<br>98   | 55<br>180 |                     |               |                  |                |
|   |                                  | <b>9540</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 10  | See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 4.3<br>19.5<br>18.0<br>38.0<br>36.0 | 2.0<br>8.9<br>8.2<br>17.2<br>16.4   | .010<br>.25<br>.032<br>.81<br>.244 | .032<br>.81<br>.244 | .244<br>6.20 | 30<br>98   | 55<br>180 |                     |               |                  |                |
|   |                                  | <b>9541</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 15  | See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 5.9<br>27.5<br>28.0<br>54.0<br>56.0 | 2.7<br>12.5<br>12.7<br>24.5<br>25.4 | .010<br>.25<br>.032<br>.81<br>.284 | .032<br>.81<br>.284 | .284<br>7.21 | 30<br>98   | 55<br>180 |                     |               |                  |                |
|   |                                  | <b>9542</b>                    | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 20  | See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>U-500<br>500<br>U-1000<br>1000        | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 7.3<br>34.0<br>35.5<br>69.0<br>69.0 | 3.3<br>15.4<br>16.1<br>31.3<br>31.3 | .010<br>.25<br>.032<br>.81<br>.314 | .032<br>.81<br>.314 | .314<br>7.98 | 30<br>98   | 55<br>180 |                     |               |                  |                |
|   | <b>9543</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 25                             | See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>U-500<br>500<br>U-1000<br>1000     | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 8.7<br>44.0<br>44.0<br>86.0<br>86.0          | 4.0<br>20.0<br>20.0<br>39.0<br>39.0 | .010<br>.25<br>.032<br>.81<br>.339  | .032<br>.81<br>.339                | .339<br>8.61        | 30<br>98     | 55<br>180  |           |                     |               |                  |                |
|   | <b>9544</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 30                             | See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>U-500<br>500<br>U-1000<br>1000     | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 10.3<br>51.5<br>51.5<br>102.0<br>102.0       | 4.7<br>23.4<br>23.4<br>46.3<br>46.3 | .010<br>.25<br>.040<br>1.02<br>.380 | .040<br>1.02<br>.380               | .380<br>9.65        | 30<br>98     | 55<br>180  |           |                     |               |                  |                |
|   | <b>9545</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 40                             | See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>U-500<br>500<br>U-1000<br>1000     | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 13.5<br>65.0<br>65.0<br>130.0<br>130.0       | 6.1<br>29.5<br>29.5<br>59.0<br>59.0 | .010<br>.25<br>.040<br>1.02<br>.430 | .040<br>1.02<br>.430               | .430<br>10.92       | 30<br>98     | 55<br>180  |           |                     |               |                  |                |
|   | <b>9546</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4 | 50                             | See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>U-500<br>500<br>U-1000<br>1000     | 30.5<br>U-152.4<br>152.4<br>U-304.8<br>304.8 | 16.4<br>81.5<br>81.5<br>168.0<br>168.0       | 7.4<br>37.0<br>37.0<br>76.3<br>76.3 | .010<br>.25<br>.045<br>1.14<br>.490 | .045<br>1.14<br>.490               | .490<br>12.45       | 30<br>98     | 55<br>180  |           |                     |               |                  |                |

TC = Tinned Copper

\*Capacitance between conductors. \*\*Capacitance between one conductor and other conductors connected to shield.

**BELDEN**For more information, contact **Belden Technical Support: 1-800-BELDEN-1 • www.belden.com****Belden114@CableCon.kr / 0707-434-7704 / Fax. 02-744-0909 / www.CableCon.co.kr**

## Overall Foil/Braid Shield

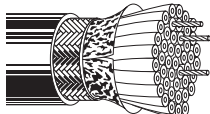
Computer Cables for EIA RS-232 Applications and IEEE 488 Interface,  
Low-Capacitance Computer Cables for EIA RS-232 and EIA RS-423 Applications

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

**28 AWG** Stranded (7x36) Tinned Copper Conductors • Overall Beldfoil® (100% Coverage) + Tinned Copper Braid Shield (65% Coverage)

### Semi-rigid PVC Insulation • Chrome PVC Jacket

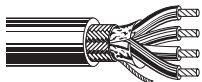
|                                  |             |             |    |   |      |       |      |      |      |      |           |          |     |    |    |    |     |
|----------------------------------|-------------|-------------|----|---|------|-------|------|------|------|------|-----------|----------|-----|----|----|----|-----|
| UL AWM Style 2464<br>(300V 80°C) | <b>9637</b> | NEC:<br>CL2 | 25 | See<br>Chart 2R<br>(Tech Info<br>Section) | 100  | 30.5  | 6.2  | 2.8  | .305 | 7.75 | 64.9Ω/M'  | 4.5Ω/M'  | 66% | 30 | 98 | 50 | 164 |
| CSA AWM I B FT4                  |             |             |    |   | 500  | 152.4 | 30.0 | 13.6 |      |      | 212.9Ω/km | 14.8Ω/km |     |    |    |    |     |
|                                  |             |             |    |   | 1000 | 304.8 | 59.0 | 26.8 |      |      |           |          |     |    |    |    |     |



**Low Cap 28 AWG** Stranded (7x36) TC Conductors • Overall Beldfoil (100% Coverage) + TC Braid Shield (65% Coverage) • Drain Wire†

### Datalene® Insulation • Chrome PVC Jacket

|                                 |             |             |   |  |      |       |      |      |      |      |           |          |     |    |      |    |      |
|---------------------------------|-------------|-------------|---|--|------|-------|------|------|------|------|-----------|----------|-----|----|------|----|------|
| UL AWM Style 2919<br>(30V 80°C) | <b>9791</b> | NEC:<br>CL2 | 6 | See<br>Chart 1<br>(Tech Info<br>Section) | 500  | 152.4 | 13.0 | 6.0  | .225 | 5.72 | 64.9Ω/M'  | 6.15Ω/M' | 78% | 12 | 39.4 | 22 | 72.2 |
| VW-1                            |             |             |   |  | 1000 | 304.8 | 29.0 | 13.2 |      |      | 212.9Ω/km | 20.2Ω/km |     |    |      |    |      |

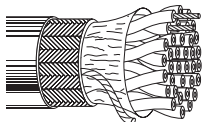


†28 AWG Stranded TC Drain Wire

**IEEE 488 • 26 AWG & 24 AWG** Stranded (7x34 & 7x32) TC Cond. • Overall Beldfoil (100% Coverage) + TC Braid Shield (90% Coverage) • Drain Wire

### Semi-rigid PVC Insulation • Gray PVC Jacket

|                                  |             |                 |  |  |      |       |      |      |      |      |                     |          |     |   |   |   |   |
|----------------------------------|-------------|-----------------|--|--|------|-------|------|------|------|------|---------------------|----------|-----|---|---|---|---|
| UL AWM Style 2464<br>(300V 80°C) | <b>9641</b> | NEC:<br>CMG     | 23:<br>(6)   | See<br>Chart 1<br>(Tech Info<br>Section) | 1000 | 304.8 | 82.0 | 37.4 | .350 | 8.89 | 26 AWG:<br>2.6Ω/M'  | 2.6Ω/M'  | 66% | — | — | — | — |
| CSA AWM I A                      |             | CEC:<br>CMG FT4 | 26 AWG<br>Pairs<br>(10)<br>26 AWG<br>Cond.<br>(1)<br>24 AWG<br>Cond. |  |      |       |      |      |      |      | 37.3Ω/M'            | 8.5Ω/km  |     |   |   |   |   |
|                                  |             |                 |  |  |      |       |      |      |      |      | 122.4Ω/km           |          |     |   |   |   |   |
|                                  |             |                 |  |  |      |       |      |      |      |      | 24 AWG:<br>23.3Ω/M' | 76.4Ω/km |     |   |   |   |   |



TC = Tinned Copper

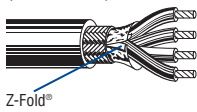
\*Capacitance between conductors.

\*\*Capacitance between one conductor and other conductors connected to ground.

Datalene insulation features include a low dielectric constant and a low dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.

**Overall Foil/Braid Shield**

Computer Cables for EIA RS-232 Applications

| 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 |      | Nominal OD |       | Nominal DCR |          | Nominal Capacitance |               |                  |                |  |
|--|-------------|------------------------------|--------------------|---|------------------|-------|-------------------------|------|------------|-------|-------------|----------|---------------------|---------------|------------------|----------------|--|
|  |             |                              |                    |   | Ft.              | m     | Lbs.                    | kg   | Inch       | mm    | Cond.       | Shield   | *<br>pF/<br>Ft.     | *<br>pF/<br>m | **<br>pF/<br>Ft. | **<br>pF/<br>m |  |
| <b>24 AWG Stranded (7x32) TC Conductors • Overall Beldfoil® (100% Coverage) + TC Braid Shield (65% Coverage)</b> |             |                              |                    |   |                  |       |                         |      |            |       |             |          |                     |               |                  |                |  |
| <b>Semi-rigid PVC Insulation • Chrome PVC Jacket</b>   |             |                              |                    |   |                  |       |                         |      |            |       |             |          |                     |               |                  |                |  |
| UL AWM Style 2464<br>(300V 80°C)   | <b>9608</b> | NEC:                         | 3                  | See<br>Chart 1<br>(Tech Info<br>Section)  | 100              | 30.5  | 3.1                     | 1.4  | .190       | 4.83  | 25.0Ω/M'    | 9.8Ω/M'  | 35                  | 115           | 65               | 213            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 12.0                    | 5.4  |            |       | 82.0Ω/km    | 32.2Ω/km |                     |               |                  |                |  |
|                                 | <b>9609</b> | CEC:                         | 4                  | See<br>Chart 1<br>(Tech Info<br>Section)  | 100              | 30.5  | 3.5                     | 1.6  | .200       | 5.08  | 25.0Ω/M'    | 9.8Ω/M'  | 35                  | 115           | 65               | 213            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 13.5                    | 6.1  |            |       | 82.0Ω/km    | 32.2Ω/km |                     |               |                  |                |  |
|  | <b>9610</b> | CEC:                         | 5                  | See<br>Chart 1<br>(Tech Info<br>Section)  | 100              | 30.5  | 4.0                     | 1.8  | .215       | 5.46  | 25.0Ω/M'    | 6.5Ω/M'  | 35                  | 115           | 65               | 213            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 16.0                    | 7.3  |            |       | 82.0Ω/km    | 21.3Ω/km |                     |               |                  |                |  |
|  | <b>9611</b> | CEC:                         | 6                  | See<br>Chart 1<br>(Tech Info<br>Section)  | 100              | 30.5  | 4.2                     | 1.9  | .225       | 5.72  | 25.0Ω/M'    | 7.0Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 17.0                    | 7.7  |            |       | 82.0Ω/km    | 23.0Ω/km |                     |               |                  |                |  |
|  | <b>9612</b> | CEC:                         | 7                  | See<br>Chart 1<br>(Tech Info<br>Section)  | 100              | 30.5  | 4.2                     | 1.9  | .225       | 5.72  | 25.0Ω/M'    | 6.9Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 18.5                    | 8.4  |            |       | 82.0Ω/km    | 22.6Ω/km |                     |               |                  |                |  |
|  | <b>9613</b> | CEC:                         | 8                  | See<br>Chart 1<br>(Tech Info<br>Section)  | 100              | 30.5  | 4.5                     | 2.0  | .240       | 6.10  | 25.0Ω/M'    | 7.3Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 21.0                    | 9.5  |            |       | 82.0Ω/km    | 23.9Ω/km |                     |               |                  |                |  |
|  | <b>9614</b> | CEC:                         | 9                  | See<br>Chart 1<br>(Tech Info<br>Section)  | 100              | 30.5  | 4.8                     | 2.2  | .253       | 6.43  | 25.0Ω/M'    | 7.5Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 22.0                    | 10.0 |            |       | 82.0Ω/km    | 24.6Ω/km |                     |               |                  |                |  |
|  | <b>9615</b> | CEC:                         | 10                 | See<br>Chart 1<br>(Tech Info<br>Section)  | 100              | 30.5  | 5.4                     | 2.5  | .270       | 6.86  | 25.0Ω/M'    | 6.9Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 25.0                    | 11.4 |            |       | 82.0Ω/km    | 22.6Ω/km |                     |               |                  |                |  |
|  | <b>9616</b> | CEC:                         | 15                 | See<br>Chart 2R<br>(Tech Info<br>Section) | 100              | 30.5  | 6.6                     | 3.0  | .300       | 7.62  | 25.0Ω/M'    | 6.9Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 31.5                    | 14.3 |            |       | 82.0Ω/km    | 22.6Ω/km |                     |               |                  |                |  |
|  | <b>9617</b> | CEC:                         | 25                 | See<br>Chart 2R<br>(Tech Info<br>Section) | 100              | 30.5  | 10.1                    | 4.6  | .370       | 9.40  | 25.0Ω/M'    | 5.1Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 49.5                    | 22.5 |            |       | 82.0Ω/km    | 16.7Ω/km |                     |               |                  |                |  |
|  | <b>9618</b> | CEC:                         | 37                 | See<br>Chart 2R<br>(Tech Info<br>Section) | 100              | 30.5  | 13.7                    | 6.2  | .411       | 10.43 | 25.0Ω/M'    | 4.4Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 66.5                    | 30.2 |            |       | 82.0Ω/km    | 14.4Ω/km |                     |               |                  |                |  |
|  | <b>9619</b> | CEC:                         | 50                 | See<br>Chart 2R<br>(Tech Info<br>Section) | 100              | 30.5  | 17.2                    | 7.8  | .485       | 12.32 | 25.0Ω/M'    | 4.3Ω/M'  | 30                  | 98.4          | 55               | 180            |  |
|  |             | CMG:                         |                    |   | 500              | 152.4 | 93.0                    | 42.2 |            |       | 82.0Ω/km    | 14.1Ω/km |                     |               |                  |                |  |
|  |             | CEC:                         |                    |   | 1000             | 304.8 | 182.0                   | 82.6 |            |       |             |          |                     |               |                  |                |  |

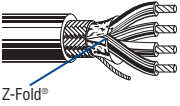
DCR = DC Resistance • TC = Tinned Copper

\* Capacitance between conductors.

\*\* Nominal capacitance conductor to conductor and shield.

**Overall Foil/Braid Shield**

Low-Capacitance Computer Cables for EIA RS-232 and EIA RS-423 Applications

| Description   | Part No. | UL NEC/<br>C(UL) CEC<br>Type | No. of<br>Cond. | Color<br>Code   | Standard Lengths |       | Standard<br>Unit Weight |      | Nominal OD |       | Nominal DCR |          | Nom.<br>Vel.<br>of<br>Prop. | Nominal Capacitance |               |                  |                |
|---|----------|------------------------------|-----------------|-----------------|------------------|-------|-------------------------|------|------------|-------|-------------|----------|-----------------------------|---------------------|---------------|------------------|----------------|
|   |          |                              |                 |                 | Ft.              | m     | Lbs.                    | kg   | Inch       | mm    | Cond.       | Shield   |                             | *<br>pF/<br>Ft.     | *<br>pF/<br>m | **<br>pF/<br>Ft. | **<br>pF/<br>m |
| <b>24 AWG Stranded (7x32) TC Conductors • Overall Beldfoil® (100% Coverage) + TC Braid Shield (65% Coverage) • Drain Wire††</b> |          |                              |                 |                 |                  |       |                         |      |            |       |             |          |                             |                     |               |                  |                |
| <b>Datalene® Insulation • Chrome PVC Jacket</b>   |          |                              |                 |                 |                  |       |                         |      |            |       |             |          |                             |                     |               |                  |                |
| UL AWM Style 2919<br>(30V 80°C)   | 9925     | NEC:                         | 3               | See<br>Chart 1  | 100              | 30.5  | 3.5                     | 1.6  | .215       | 5.46  | 24.0Ω/M'    | 5.2Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 12.0                    | 5.5  |            |       | 78.7Ω/km    | 17.0Ω/km |                             |                     |               |                  |                |
|   | 9927     | CEC:                         | 4               | See<br>Chart 1  | 100              | 30.5  | 3.6                     | 1.6  | .230       | 5.84  | 24.0Ω/M'    | 5.3Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 14.5                    | 6.6  |            |       | 78.7Ω/km    | 17.4Ω/km |                             |                     |               |                  |                |
|   | 9929     | CEC:                         | 5               | See<br>Chart 1  | 100              | 30.5  | 4.0                     | 1.8  | .246       | 6.25  | 24.0Ω/M'    | 4.2Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 16.0                    | 7.3  |            |       | 78.7Ω/km    | 13.9Ω/km |                             |                     |               |                  |                |
|   | 9931     | CEC:                         | 6               | See<br>Chart 1  | 100              | 30.5  | 4.2                     | 1.9  | .265       | 6.73  | 24.0Ω/M'    | 4.4Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 17.5                    | 8.0  |            |       | 78.7Ω/km    | 14.4Ω/km |                             |                     |               |                  |                |
|   | 9932     | CEC:                         | 7               | See<br>Chart 1  | 100              | 30.5  | 4.5                     | 2.0  | .265       | 6.73  | 24.0Ω/M'    | 4.4Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 18.5                    | 8.4  |            |       | 78.7Ω/km    | 14.4Ω/km |                             |                     |               |                  |                |
|   | 9933     | CEC:                         | 8               | See<br>Chart 1  | 100              | 30.5  | 4.9                     | 2.2  | .280       | 7.11  | 24.0Ω/M'    | 4.4Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 21.0                    | 9.6  |            |       | 78.7Ω/km    | 14.4Ω/km |                             |                     |               |                  |                |
|   | 9934     | CEC:                         | 9               | See<br>Chart 1  | 100              | 30.5  | 5.2                     | 2.4  | .300       | 7.62  | 24.0Ω/M'    | 3.9Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 22.0                    | 10.0 |            |       | 78.7Ω/km    | 12.6Ω/km |                             |                     |               |                  |                |
|   | 9935     | CEC:                         | 10              | See<br>Chart 1  | 100              | 30.5  | 5.7                     | 2.6  | .306       | 7.77  | 24.0Ω/M'    | 3.2Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 28.0                    | 12.7 |            |       | 78.7Ω/km    | 10.4Ω/km |                             |                     |               |                  |                |
|   | 9936     | CEC:                         | 15              | See<br>Chart 2R | 100              | 30.5  | 7.2                     | 3.3  | .350       | 8.89  | 24.0Ω/M'    | 3.6Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 35.0                    | 15.9 |            |       | 78.7Ω/km    | 11.7Ω/km |                             |                     |               |                  |                |
|   | 9937     | CEC:                         | 25              | See<br>Chart 2R | 100              | 30.5  | 9.9                     | 4.5  | .445       | 11.30 | 24.0Ω/M'    | 2.8Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 54.5                    | 24.8 |            |       | 78.7Ω/km    | 9.1Ω/km  |                             |                     |               |                  |                |
|   | 9938     | CEC:                         | 37              | See<br>Chart 2R | 100              | 30.5  | 12.9                    | 5.9  | .500       | 12.7  | 24.0Ω/M'    | 2.4Ω/M'  | 78%                         | 12                  | 39.4          | 22               | 72.2           |
|   |          | CM:                          |                 |                 | 500              | 152.4 | 71.5                    | 32.5 |            |       | 78.7Ω/km    | 7.8Ω/km  |                             |                     |               |                  |                |
|   |          | CEC:                         |                 |                 | 1000             | 304.8 | 139.0                   | 63.1 |            |       |             |          |                             |                     |               |                  |                |
|   |          | CM:                          |                 |                 |                  |       |                         |      |            |       |             |          |                             |                     |               |                  |                |

†24 AWG Stranded TC Drain Wire

DCR = DC Resistance • TC = Tinned Copper

\*Capacitance between conductors.

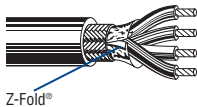
\*\*Nominal capacitance conductor to conductor and shield.

††Final put-up may vary -10% to +20%. May contain two pieces, minimum length of any one piece is 1500 ft.

Datalene insulation features include a low dielectric constant and a low dissipation factor for high-speed, low-distortion data handling. Physical properties include good crush resistance and light weight.

**Overall Foil/Braid Shield**

Computer Cables for EIA RS-232 Applications

| 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                     |   | Nominal OD             |    | Nominal DCR |        | Nominal Capacitance |               |                  |                |
|--|----------------------------------|---|---|---|--|--|---|---|------------------------|----|-------------|--------|---------------------|---------------|------------------|----------------|
|  |                                  |   |   |   | Ft.  | m  | Lbs.  | kg  | Inch                   | mm | Cond.       | Shield | *<br>pF/<br>Ft.     | *<br>pF/<br>m | **<br>pF/<br>Ft. | **<br>pF/<br>m |
| <b>22 AWG Stranded (7x30) Tinned Copper Conductors • Overall Beldfoil® (100% Coverage) + Tinned Copper Braid Shield (65% Coverage)</b> |                                  |   |   |   |  |  |   |   |                        |    |             |        |                     |               |                  |                |
| <b>Semi-rigid PVC Insulation • Chrome PVC Jacket</b>   |                                  |   |   |   |  |  |   |   |                        |    |             |        |                     |               |                  |                |
|   | UL AWM Style 2464<br>(300V 80°C) | <b>9939</b>                                     | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 3<br>See<br>Chart 1<br>(Tech Info<br>Section)   | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8 | 3.6<br>1.6<br>14.0<br>6.4<br>27.0<br>12.3  | .202<br>5.13                                | 14.7Ω/M'<br>6.2Ω/M'<br>48.2Ω/km<br>20.3Ω/km | 37<br>121<br>67<br>220 |    |             |        |                     |               |                  |                |
|  | <b>9940</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 4<br>See<br>Chart 1<br>(Tech Info<br>Section)   | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 4.0<br>1.8<br>16.5<br>7.5<br>32.0<br>14.5    | .215<br>5.46                               | 14.7Ω/M'<br>5.0Ω/M'<br>48.2Ω/km<br>16.4Ω/km | 37<br>121<br>67<br>220                      |                        |    |             |        |                     |               |                  |                |
|  | <b>9941</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 5<br>See<br>Chart 1<br>(Tech Info<br>Section)   | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 4.2<br>1.8<br>19.0<br>8.6<br>38.0<br>17.3    | .230<br>5.84                               | 14.7Ω/M'<br>7.1Ω/M'<br>48.2Ω/km<br>23.3Ω/km | 37<br>121<br>67<br>220                      |                        |    |             |        |                     |               |                  |                |
|  | <b>9942</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 6<br>See<br>Chart 1<br>(Tech Info<br>Section)   | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 4.7<br>2.1<br>22.0<br>10.0<br>43.0<br>19.5   | .245<br>6.22                               | 14.7Ω/M'<br>7.9Ω/M'<br>48.2Ω/km<br>25.9Ω/km | 35<br>115<br>63<br>207                      |                        |    |             |        |                     |               |                  |                |
|  | <b>9943</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 7<br>See<br>Chart 1<br>(Tech Info<br>Section)   | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 5.0<br>2.3<br>23.5<br>10.8<br>46.0<br>20.9   | .245<br>6.22                               | 14.7Ω/M'<br>7.0Ω/M'<br>48.2Ω/km<br>23.0Ω/km | 35<br>115<br>63<br>207                      |                        |    |             |        |                     |               |                  |                |
|  | <b>9944</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 8<br>See<br>Chart 1<br>(Tech Info<br>Section)   | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 5.5<br>2.5<br>26.0<br>11.8<br>52.0<br>23.6   | .260<br>6.60                               | 14.7Ω/M'<br>6.0Ω/M'<br>48.2Ω/km<br>19.7Ω/km | 35<br>115<br>63<br>207                      |                        |    |             |        |                     |               |                  |                |
|  | <b>9945</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 9<br>See<br>Chart 1<br>(Tech Info<br>Section)   | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 6.1<br>2.8<br>28.5<br>12.9<br>57.0<br>25.9   | .280<br>7.11                               | 14.7Ω/M'<br>5.1Ω/M'<br>48.2Ω/km<br>16.7Ω/km | 35<br>115<br>63<br>207                      |                        |    |             |        |                     |               |                  |                |
|  | <b>9946</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 10<br>See<br>Chart 1<br>(Tech Info<br>Section)  | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 6.6<br>3.0<br>31.5<br>14.3<br>62.0<br>28.1   | .300<br>7.62                               | 14.7Ω/M'<br>4.6Ω/M'<br>48.2Ω/km<br>15.1Ω/km | 35<br>115<br>63<br>207                      |                        |    |             |        |                     |               |                  |                |
|  | <b>9947</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 15<br>See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 8.7<br>4.0<br>42.5<br>19.3<br>83.0<br>37.7   | .340<br>8.64                               | 14.7Ω/M'<br>4.1Ω/M'<br>48.2Ω/km<br>13.5Ω/km | 35<br>115<br>63<br>207                      |                        |    |             |        |                     |               |                  |                |
|  | <b>9948</b>                      | NEC:<br>CMG<br>CEC:<br>CMG FT4                  | 25<br>See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 13.3<br>6.0<br>66.5<br>30.2<br>132.0<br>59.9 | .410<br>10.41                              | 14.7Ω/M'<br>3.1Ω/M'<br>48.2Ω/km<br>10.2Ω/km | 35<br>115<br>63<br>207                      |                        |    |             |        |                     |               |                  |                |
| <b>9949</b>  | NEC:<br>CMG<br>CEC:<br>CMG FT4   | 37<br>See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 16.1<br>7.3<br>87.5<br>39.7<br>180.0<br>81.7    | .460<br>11.68                                | 14.7Ω/M'<br>2.7Ω/M'<br>48.2Ω/km<br>8.9Ω/km | 35<br>115<br>63<br>207                      |   |                        |    |             |        |                     |               |                  |                |
| <b>9950</b>  | NEC:<br>CMG<br>CEC:<br>CMG FT4   | 50<br>See<br>Chart 2R<br>(Tech Info<br>Section) | 100<br>30.5<br>500<br>152.4<br>1000<br>304.8    | 25.2<br>11.4<br>118.0<br>53.6<br>238.0<br>108.1 | .555<br>14.10                                | 14.7Ω/M'<br>2.3Ω/M'<br>48.2Ω/km<br>7.5Ω/km | 35<br>115<br>63<br>207                      |   |                        |    |             |        |                     |               |                  |                |

DCR = DC Resistance

\*Capacitance between conductors.

\*\*Nominal capacitance conductor to conductor and shield.