

**Description:**

22 AWG stranded (7x30) tinned copper conductor, polypropylene insulation, twisted pairs individually shielded with Beldfoil® (100% coverage), overall PVC jacket and 22 AWG stranded tinned copper drain wire.

**Physical Characteristics (Overall)****Conductor****AWG:**

| # Pairs | AWG | Stranding | Conductor Material | Dia. (in.) |
|---------|-----|-----------|--------------------|------------|
| 12      | 22  | 7x30      | TC - Tinned Copper | .030       |

**Insulation****Insulation Material:**

| Insulation Material | Dia. (in.) |
|---------------------|------------|
| PP - Polypropylene  | .050       |

**Inner Shield****Inner Shield Material:**

| Inner Shield Trade Name | Type | Inner Shield Material        | Coverage (%) |
|-------------------------|------|------------------------------|--------------|
| Beldfoil® (Z-Fold®)     | Tape | Aluminum Foil-Polyester Tape | 100          |

**Inner Shield Drain Wire AWG:**

| AWG |
|-----|
| 22  |

Inner Shield Drain Wire Stranding: Stranded

Inner Shield Drain Wire Conductor Material: TC - Tinned Copper

**Outer Shield****Outer Shield Material:**

| Outer Shield Material |
|-----------------------|
| Unshielded            |

**Outer Jacket****Outer Jacket Material:**

| Outer Jacket Material    |
|--------------------------|
| PVC - Polyvinyl Chloride |

**Overall Cabling**

Overall Nominal Diameter: 0.464 in.

**Pair****Pair Color Code Chart:**

| Number | Color          |
|--------|----------------|
| 1      | Black & Red    |
| 2      | Black & White  |
| 3      | Black & Green  |
| 4      | Black & Blue   |
| 5      | Black & Yellow |
| 6      | Black & Brown  |
| 7      | Black & Orange |
| 8      | Red & White    |

|    |              |
|----|--------------|
| 9  | Red & Green  |
| 10 | Red & Blue   |
| 11 | Red & Yellow |
| 12 | Red & Brown  |

**Pair Lay Length & Direction:**

| Lay Length (in.) | Twists/ft. (twist/ft) |
|------------------|-----------------------|
| 1.750            | 6.850                 |

**Mechanical Characteristics (Overall)**

|                                        |                          |
|----------------------------------------|--------------------------|
| Operating Temperature Range:           | -20°C To +80°C           |
| UL Temperature Rating:                 | 80°C (UL AWM Style 2919) |
| Bulk Cable Weight:                     | 136.200 lbs/1000 ft.     |
| Max. Recommended Pulling Tension:      | 320 lbs.                 |
| Min. Bend Radius (Install)/Minor Axis: | 4.600 in.                |

**Applicable Specifications and Agency Compliance (Overall)****Applicable Standards & Environmental Programs**

|                                       |                           |
|---------------------------------------|---------------------------|
| NEC/(UL) Specification:               | CM                        |
| CEC/C(UL) Specification:              | CM                        |
| AWM Specification:                    | UL Style 2919 (30 V 80°C) |
| 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): | 01/01/2004                |
| 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 |
|---------------|----|

**Electrical Characteristics (Overall)****Nom. Characteristic Impedance:**

| Impedance (Ohm) |
|-----------------|
| 50              |

**Nom. Capacitance Conductor to Conductor:**

| Capacitance (pF/ft) |
|---------------------|
| 30                  |

**Nom. Capacitance Cond. to Other Conductor & Shield:**

| Capacitance (pF/ft) |
|---------------------|
| 55                  |

**Nominal Velocity of Propagation:**

| VP (%) |
|--------|
| 66     |

**Nom. Conductor DC Resistance:**

| DCR @ 20°C (Ohm/1000 ft) |
|--------------------------|
| 15                       |

## 9768 Multi-Conductor - CM Rated Cable

Ind. Pair Nominal Shield DC Resistance @ 20 Deg. C: 10.600 Ohm/1000 ft

## Max. Operating Voltage - UL:

| Voltage                      |
|------------------------------|
| 30 V RMS (UL AWM Style 2919) |
| 300 V RMS (CM)               |

## Max. Recommended Current:

| Current                       |
|-------------------------------|
| 1.4 Amps per conductor @ 25°C |

## Put Ups and Colors:

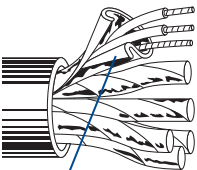
| Item #       | Putup    | Ship Weight | Color  | Notes | Item Desc             |
|--------------|----------|-------------|--------|-------|-----------------------|
| 9768 060100  | 100 FT   | 13.900 LB   | CHROME | C     | 12 FS PR #22 HDPE PVC |
| 9768 0601000 | 1,000 FT | 135.000 LB  | CHROME | C     | 12 FS PR #22 HDPE PVC |
| 9768 060250  | 250 FT   | 34.500 LB   | CHROME |       | 12 FS PR #22 HDPE PVC |
| 9768 060500  | 500 FT   | 69.500 LB   | CHROME | C     | 12 FS PR #22 HDPE PVC |

## Notes:

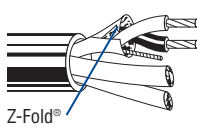
C = CRATE REEL PUT-UP.

## Individually Shielded

Audio, Control and Instrumentation Cables

| Description                                                                                                                              | Part No. | UL NEC/<br>C(UL) CEC<br>Type | No.<br>of Pairs | Color<br>Code                            | Standard<br>Lengths |         | Standard<br>Unit Weight |       | Nom. DCR |          | Nominal<br>OD |       | Nom.<br>Imp.<br>(Ω) | Nom.<br>Vel.<br>of Prop. | Nom. Capacitance |               |                  |                |
|------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------|-----------------|------------------------------------------|---------------------|---------|-------------------------|-------|----------|----------|---------------|-------|---------------------|--------------------------|------------------|---------------|------------------|----------------|
|                                                                                                                                          |          |                              |                 |                                          | Ft.                 | m       | Lbs.                    | kg    | Cond.    | Shield   | Inch          | mm    |                     |                          | *<br>pF/<br>Ft.  | *<br>pF/<br>m | **<br>pF/<br>Ft. | **<br>pF/<br>m |
| 22 AWG Stranded (7x30) TC Conductors • Twisted Pairs • Individually Shielded w/Beldfoil® (100% Coverage) • 22 AWG Stranded TC Drain Wire |          |                              |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |
| Polypropylene Insulation • Chrome PVC Jacket                                                                                             |          |                              |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |
| <br>Z-Fold®                                              | 8777     | NEC:                         | 3               | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 4.7                     | 2.1   | 15.0Ω/M' | 10.6Ω/M' | .273          | 6.93  | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 250                 | 76.2    | 10.0                    | 4.5   | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | U-500               | U-152.4 | 21.0                    | 9.5   |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          | 500                 | 152.4   | 20.0                    | 9.1   |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          |                              |                 |                                          | U-1000              | U-304.8 | 41.0                    | 18.6  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          |                              |                 |                                          | 1000                | 304.8   | 44.0                    | 20.0  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          |                              |                 |                                          | 1640                | 499.9   | 70.5                    | 32.0  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          |                              |                 |                                          | 3280                | 999.7   | 141.0                   | 64.0  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          |                              |                 |                                          | 5000                | 1524.0  | 215.0                   | 97.6  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          |                              |                 |                                          | 10000 ††            | 3048.0  | 460.0                   | 208.8 |          |          |               |       |                     |                          |                  |               |                  |                |
| For Plenum versions of 8777, see 88777, 87777 or 82777.                                                                                  |          |                              |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 8778     | NEC:                         | 6               | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 8.4                     | 3.8   | 15.0Ω/M' | 10.6Ω/M' | .362          | 9.19  | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 250                 | 76.2    | 19.0                    | 8.6   | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | 500                 | 152.4   | 43.0                    | 19.5  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          | 1000                | 304.8   | 83.0                    | 37.7  |          |          |               |       |                     |                          |                  |               |                  |                |
| For Plenum versions of 8778, see 88778, 87778 or 82778.                                                                                  |          |                              |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 8774     | NEC:                         | 9               | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 11.5                    | 5.2   | 15.0Ω/M' | 10.6Ω/M' | .417          | 10.59 | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 250                 | 76.2    | 29.5                    | 13.4  | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | 500                 | 152.4   | 57.5                    | 26.1  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          | 1000                | 304.8   | 113.0                   | 51.3  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 8775     | NEC:                         | 11              | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 12.1                    | 5.5   | 15.0Ω/M' | 10.6Ω/M' | .464          | 11.79 | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 500                 | 152.4   | 65.5                    | 29.7  | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | 1000                | 304.8   | 130.0                   | 59.0  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 9768     | NEC:                         | 12              | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 13.2                    | 6.0   | 15.0Ω/M' | 10.6Ω/M' | .464          | 11.79 | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 250                 | 76.2    | 36.5                    | 16.5  | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | 500                 | 152.4   | 73.5                    | 33.4  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          | 1000                | 304.8   | 143.0                   | 65.0  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 8776     | NEC:                         | 15              | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 17.8                    | 8.1   | 15.0Ω/M' | 10.6Ω/M' | .548          | 13.92 | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 250                 | 76.2    | 49.5                    | 22.5  | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | 500                 | 152.4   | 98.0                    | 44.5  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          | 1000                | 304.8   | 197.0                   | 89.5  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 9769     | NEC:                         | 17              | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 20.0                    | 9.1   | 15.0Ω/M' | 10.6Ω/M' | .577          | 14.66 | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 500                 | 152.4   | 109.0                   | 49.5  | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | 1000                | 304.8   | 215.0                   | 97.7  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 8769     | NEC:                         | 19              | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 22.9                    | 10.4  | 15.0Ω/M' | 10.6Ω/M' | .603          | 15.32 | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 500                 | 152.4   | 123.0                   | 55.8  | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | 1000                | 304.8   | 244.0                   | 110.8 |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 8773     | NEC:                         | 27              | See<br>Chart 3<br>(Tech Info<br>Section) | 100                 | 30.5    | 33.9                    | 15.4  | 15.0Ω/M' | 10.6Ω/M' | .709          | 18.00 | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 250 †               | 76.2    | 83.8                    | 38.0  | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          | 500                 | 152.4   | 163.0                   | 74.0  |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          | 1000                | 304.8   | 341.0                   | 154.8 |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          | 9767     | NEC:                         | 37              | See<br>Chart 3<br>(Tech Info<br>Section) | 500 †               | 152.4   | 224.0                   | 101.8 | 15.0Ω/M' | 10.6Ω/M' | .800          | 20.32 | 50                  | 66%                      | 30               | 98            | 55               | 180            |
|                                                                                                                                          |          | CM                           |                 |                                          | 1000 †              | 304.8   | 481.0                   | 218.6 | 49.2Ω/km | 34.8Ω/km |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CEC:                         |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |
|                                                                                                                                          |          | CM                           |                 |                                          |                     |         |                         |       |          |          |               |       |                     |                          |                  |               |                  |                |

### Polypropylene Insulation • Black Low-Smoke, Zero-Halogen Jacket

|                                                                                                              |                                     |                             |   |                                          |        |         |      |      |          |          |      |      |    |     |    |    |    |     |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------|-----------------------------|---|------------------------------------------|--------|---------|------|------|----------|----------|------|------|----|-----|----|----|----|-----|
| U300V RMS, Non-conduit<br> | <b>8777SB</b><br><small>new</small> | NEC:                        | 3 | See<br>Chart 3<br>(Tech Info<br>Section) | U-500† | U-152.4 | 19.5 | 8.9  | 15.0Ω/M' | 10.6Ω/M' | .273 | 6.93 | 50 | 66% | 30 | 98 | 55 | 180 |
|                                                                                                              |                                     | CMG-LS                      |   |                                          | U-1000 | U-304.8 | 38.0 | 17.3 | 49.2Ω/km | 34.8Ω/km |      |      |    |     |    |    |    |     |
|                                                                                                              |                                     | CEC:                        |   |                                          | 1000†  | 304.8   | 39.0 | 17.7 |          |          |      |      |    |     |    |    |    |     |
|                                                                                                              |                                     | CMG-LS FT4<br>Limited Smoke |   |                                          |        |         |      |      |          |          |      |      |    |     |    |    |    |     |

DCR = DC Resistance • TC = Tinned Copper

\*Capacitance between conductors.

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

† Spools are one piece, but length may vary -0 to +20% from length shown.

†† Final put-up length may vary -10% to +20% from length shown. May contain 2 pieces. Minimum length of any one piece is 1500 ft.