# Communication, Control, and Industrial Cable

# Get control of demanding applications

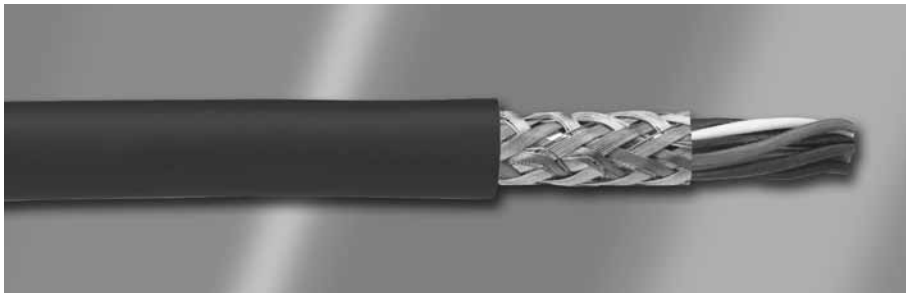
The broad range of communication and control cables from Alpha Wire means you can find the right cable for your application. Our cables meet special needs, such as low-capacitance cables for extended transmission of digital signals, such as the extra flexibility of rubber insulation and jackets, or excellent shielding for electrically noisy environments.

We combine a wide range of insulation materials, shielding variations, conductor counts and gauges, as well as other options to create cables suited to any application. From traditional RS-232 connections to high-speed telemetry and data recording to high-fidelity microphone systems, our experience in materials and expertise in manufacturing means cable built to perform electrically, mechanically, and environmentally.

**Our communication and control line includes six main categories:**

- **Solar cable:** a full range of solar cables for power and control.
- **Industrial automation cable:** cable for common automation protocols such as ControlNet, DeviceNet, and PROFIBUS.
- **Flexible motor supply cable:** four-conductor double-shielded cable suited for light-duty flexing.
- **Communication and control:** round multiconductor and multipair cable in configurations suited to nearly any application.
- **Low-smoke, zero-halogen cable:** minimizes the effects from smoke and harmful corrosive gases in the event of combustion.
- **Flat cable:** planar multiconductor cable used primarily inside cabinets or equipment.

# Solar Cable



From residential rooftops to solar farms harvesting energy, our solar cables and photovoltaic wire are designed for the harsh environments of solar energy applications—the hot and cold of climate extremes, ozone and UV radiation, moisture, oil, and direct burial. Our specially formulated PVC jackets provide years of reliable service by withstanding the potential environments without failing or degrading.

### A full range for power and control

No matter what your need in connecting solar power to the grid, we have wire and cable in a range of gauges and conductor counts to satisfy it.

Our cables meet regulatory and industry requirements for photovoltaic applications.

### Applications

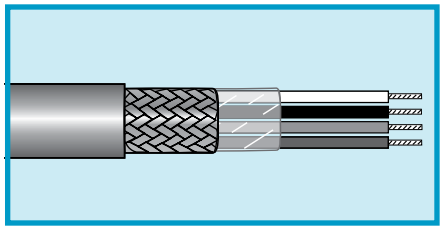
- **Panel monitoring and control**
- **Panel to junction box**
- **Panel to collector**
- **Collector to inverter**
- **Grounding**
- **Motor supply**

### Photovoltaic Wire

For single-conductor needs, see page 417 for our line of photovoltaic wires.

# Solar Cable

## 1000 V Braid Shield, Multiconductor, PVC/Nylon, PVC



**UL TC-ER**
**UL WTTC (1000 V)**
**UL MTW**
**CSA AWM I/II A/B FT1**

### Operating Temperature

- -40°C to +90°C (static)
- -30°C to +90°C (dynamic)
- +105°C (CSA)

### Conductor Color Coding

- Chart F (page 532)

### Materials

- Stranded bare copper conductors
- PVC/nylon insulation
- Clear polyester wrap
- Tinned copper braid shield, 85% coverage
- Green PVC jacket

### Features

- UL Sunlight Resistant
- UL Oil Res. I
- UL Direct Burial
- Suitable for use in Class I, Division 2 locations per Article 501 of the National Electric Code

### Availability

Bulk, cut to length

### FIT® Tubing Recommendations

- FIT-260: Cross-linked polyolefin for ground identification
- FIT-300: Dual-wall polyolefin with meltable inner wall
- FIT-750: Bonding adhesive-lined cross-linked polyolefin

**18 AWG (0.96 mm²)**

Stranding: 19/30 (19 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm) PVC/0.005 (0.12 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| SPM1803CY | 3 | 0.329 | 8.36 | 0.050 | 1.27 |
| SPM1804CY | 4 | 0.354 | 8.99 | 0.050 | 1.27 |
| SPM1805CY | 5 | 0.381 | 9.68 | 0.050 | 1.27 |
| SPM1807CY | 7 | 0.409 | 10.39 | 0.050 | 1.27 |
| SPM1809CY | 9 | 0.466 | 11.84 | 0.050 | 1.27 |

**16 AWG (1.32 mm²)**

Stranding: 26/30 (26 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm) PVC/0.005 (0.12 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| SPM1603CY | 3 | 0.351 | 8.92 | 0.050 | 1.27 |
| SPM1604CY | 4 | 0.378 | 9.60 | 0.050 | 1.27 |
| SPM1605CY | 5 | 0.408 | 10.36 | 0.050 | 1.27 |
| SPM1607CY | 7 | 0.439 | 11.15 | 0.050 | 1.27 |
| SPM1609CY | 9 | 0.509 | 12.93 | 0.050 | 1.27 |

**14 AWG (2.08 mm²)**

Stranding: 41/30 (41 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm) PVC/0.005 (0.12 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| SPM1403CY | 3 | 0.381 | 9.68 | 0.050 | 1.27 |
| SPM1404CY | 4 | 0.412 | 10.46 | 0.050 | 1.27 |
| SPM1405CY | 5 | 0.446 | 11.33 | 0.050 | 1.27 |
| SPM1407CY | 7 | 0.481 | 12.22 | 0.050 | 1.27 |
| SPM1409CY | 9 | 0.590 | 14.99 | 0.065 | 1.65 |

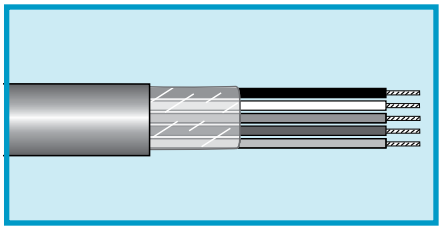
**12 AWG (3.29 mm²)**

Stranding: 65/30 (65 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm) PVC/0.005 (0.12 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| SPM1203CY | 3 | 0.422 | 10.72 | 0.050 | 1.27 |
| SPM1204CY | 4 | 0.458 | 11.63 | 0.050 | 1.27 |
| SPM1205CY | 5 | 0.497 | 12.62 | 0.050 | 1.27 |
| SPM1207CY | 7 | 0.574 | 14.58 | 0.065 | 1.65 |
| SPM1209CY | 9 | 0.659 | 16.74 | 0.065 | 1.65 |

# Solar Cable

## 1000 V Unshielded, Multiconductor, PVC/Nylon, PVC



**UL TC-ER**
**UL WTTC (1000 V)**
**UL MTW**
**CSA AWM I/II A/B FT1**

### Operating Temperature

- -40°C to +90°C (static)
- -30°C to +90°C (dynamic)
- +105°C (CSA)

### Conductor Color Coding

- Chart F (page 532)

### Materials

- Stranded bare copper conductors
- PVC/nylon insulation
- Clear polyester wrap
- Green PVC jacket

### Features

- UL Sunlight Resistant
- UL Oil Res. I
- UL Direct Burial
- Suitable for use in Class I, Division 2 locations per Article 501 of the National Electric Code

### Availability

Bulk, cut to length

### FIT® Tubing Recommendations

- FIT-260: Cross-linked polyolefin for ground identification
- FIT-300: Dual-wall polyolefin with meltable inner wall
- FIT-750: Bonding adhesive-lined cross-linked polyolefin

**18 AWG (0.96 mm²)**

Stranding: 19/30 (19 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm) PVC/0.005 (0.12 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **SPM1803** | 3 | 0.301 | 7.65 | 0.050 | 1.27 |
| **SPM1804** | 4 | 0.326 | 8.28 | 0.050 | 1.27 |
| **SPM1805** | 5 | 0.353 | 8.97 | 0.050 | 1.27 |
| **SPM1807** | 7 | 0.381 | 9.68 | 0.050 | 1.27 |
| **SPM1809** | 9 | 0.438 | 11.13 | 0.050 | 1.27 |

**16 AWG (1.32 mm²)**

Stranding: 26/30 (26 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm) PVC/0.005 (0.12 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **SPM1603** | 3 | 0.323 | 8.20 | 0.050 | 1.27 |
| **SPM1604** | 4 | 0.350 | 8.89 | 0.050 | 1.27 |
| **SPM1605** | 5 | 0.380 | 9.65 | 0.050 | 1.27 |
| **SPM1607** | 7 | 0.411 | 10.44 | 0.050 | 1.27 |
| **SPM1609** | 9 | 0.475 | 12.07 | 0.050 | 1.27 |

**14 AWG (2.08 mm²)**

Stranding: 41/30 (41 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm) PVC/0.005 (0.12 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **SPM1403** | 3 | 0.353 | 8.97 | 0.050 | 1.27 |
| **SPM1404** | 4 | 0.384 | 9.75 | 0.050 | 1.27 |
| **SPM1405** | 5 | 0.418 | 10.62 | 0.050 | 1.27 |
| **SPM1407** | 7 | 0.453 | 11.51 | 0.050 | 1.27 |
| **SPM1409** | 9 | 0.556 | 14.12 | 0.065 | 1.65 |

**12 AWG (3.29 mm²)**

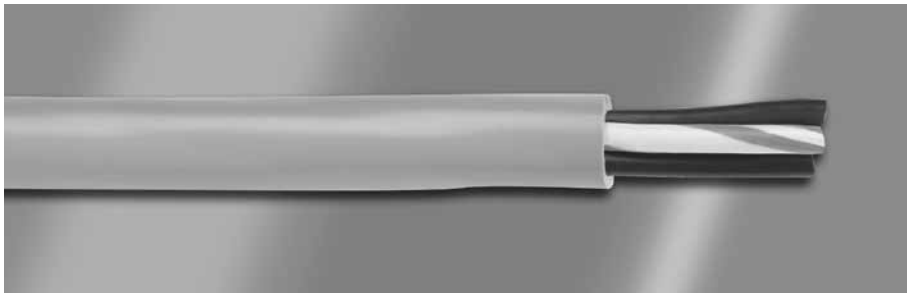
Stranding: 65/30 (65 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm) PVC/0.005 (0.12 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **SPM1203** | 3 | 0.394 | 10.01 | 0.050 | 1.27 |
| **SPM1204** | 4 | 0.430 | 10.92 | 0.050 | 1.27 |
| **SPM1205** | 5 | 0.469 | 11.91 | 0.050 | 1.27 |
| **SPM1207** | 7 | 0.510 | 12.95 | 0.050 | 1.27 |
| **SPM1209** | 9 | 0.625 | 15.88 | 0.065 | 1.65 |

RoHS Compliant

# Industrial Automation Cable

## Seamless communication for robust industrial environments



Whether you are designing a device for error proofing to increase quality or motion sensing to improve safety, trust Alpha Wire for all your Industrial Automation needs.

As industrial automation systems continue to increase in complexity, we understand the challenges that engineers and manufacturers face in designing and interconnecting system components from sensors to top-level controllers. Our range of industrial automation cables combines the industry-leading quality and exceptional reliability you expect with Alpha Wire with the performance to meet the rigorous requirements of the major automation communication architectures.

### ControlNet™

Low-loss RG-6/U coax designed to meet the high-speed, time-critical requirements of modern ControlNet factory-floor automation systems.

### RS-485

Bringing proven data transmission protocol to the factory floor, rugged RS-485 cables reduce electrical noise sensitivity to keep reliability and performance at world-class levels.

### DeviceNet™

Meeting ODVA thick and thin specifications, the cables comply with Allen-Bradley 1485 CPI-A and 1485 CPI-C, and support high data rates (500 kb/s at 100 m and 125 kb/s at 500 m).

### Fieldbus and PROFIBUS®

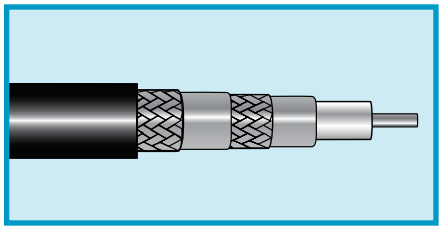
A complete family meets ruggedness, performance, and quality requirements of almost any fieldbus and PROFIBUS application environment.

### Industrial Twinax

A robust physical media for the transmission of PLC/DCS signals in real-time, high-throughput applications, including Allen-Bradley Data Highway networks. The cables may be installed in the same tray or conduit as 600-volt power cable.

# ControlNet

## 300 V, RG-6/U Coaxial Cable, Double Braid and Foil Shielded



| Part No. | Nominal Diameter | | Center Conductor | | Nominal Impedance (ohms) |
|---|---|---|---|---|---|
| | Inch | mm | AWG | mm² | |
| **6458** | 0.298 | 7.57 | 18 | 0.82 | 75 |

| Nominal Attenuation | | |
|---|---|---|
| Frequency (MHz) | Attenuation, Nom. | |
| | dB/100 ft | dB/100 m |
| 1 | 0.35 | 1.1 |
| 2 | 0.38 | 1.2 |
| 5 | 0.45 | 1.5 |
| 10 | 0.59 | 1.9 |
| 20 | 0.86 | 2.8 |
| 50 | 1.37 | 4.5 |
| 100 | 1.97 | 6.5 |
| 200 | 2.82 | 9.3 |
| 300 | 3.48 | 11.4 |
| 400 | 4.04 | 13.3 |

**UL CL2R**
**UL CMR**
**CSA CMG FT4**

### Operating Temperature

- -30°C to +75°C

### Materials

- Solid bare Copperweld conductor
- Foam polyethylene insulation
- Shielding: double braid and foil Foil +60% aluminum braid + foil +40% aluminum braid
- Black PVC jacket

### Features

- UL Sunlight Resistant
- 75-ohm nominal impedance
- 82% velocity of propagation
- 16.2 pF/ft (53.1 pF/m) nominal capacitance

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

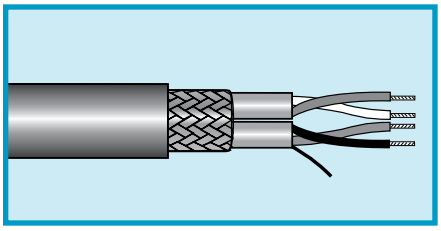
### FIT® Tubing Recommendations

- FIT-221: General-purpose, cross-linked polyolefin
- FIT-321: Medium-wall, adhesive-lined, cross-linked polyolefin

RoHS Compliant

# DeviceNet

## 300 V Power and Data, Class 2, ODVA Thick and Thin Trunks



| Part No. | Type | Pairs | Nominal Diameter | |
|---|---|---|---|---|
| | | | Inch | mm |
| **6451** | Thick | 1 Power: 15 AWG (1.75 mm²), 19/0.0135 (19 x 0.35 mm) stranding<br>1 Data: 18 AWG (0.96 mm²), 19/30 (19 x 0.25 mm) stranding | 0.480 | 12.19 |
| **6452** | Thin | 1 Power: 22 AWG (0.38 mm²), 19/34 (19 x 0.16 mm) stranding<br>1 Data: 24 AWG (0.24 mm²), 19/36 (19 x 0.13 mm) stranding | 0.280 | 7.11 |

**UL CMG**
**UL PLTC-ER (Thick)**
**UL CL2 (Thin)**
**CSA CMG FT4**
**CSA AWM I/II A/B FT4**

### Operating Temperature

- -20°C to +75°C (static)
- 0°C to +80°C (dynamic)

### Conductor Color Coding

- Black-red power
- Blue-white data

### Materials

- Tinned copper conductors
- Each pair individually foil shielded
- PVC insulation (power pair)
- Foam HDPE insulation (data pair)
- 65% tinned copper braid overall
- Slate PVC jacket

### Features

- Oil resistant
- UL Sunlight Resistant
- 120-ohm nominal impedance (data pair)
- Compliant with Allen-Bradley part numbers 1485 CPI-A and 1485 CPI-C

### Availability

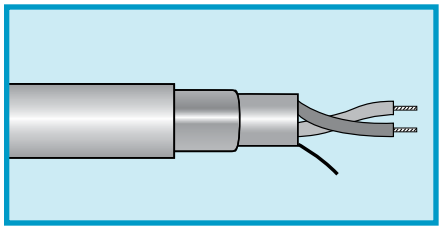
100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### FIT® Tubing Recommendations

- FIT-221: General-purpose, cross-linked polyolefin
- FIT-321: Medium-wall, adhesive-lined, cross-linked polyolefin

# Fieldbus

## 300 V Single-Pair Cable, Fieldbus Types A and B



| Part No. | Fieldbus Type | Pairs | Conductor | | Stranding | | Nominal Diameter | |
|---|---|---|---|---|---|---|---|---|
| | | | AWG | mm² | AWG | mm | Inch | mm |
| **6459** | A | 1 | 18 | 0.90 | 7/26 | 7 x 0.40 | 0.253 | 6.43 |
| **6460** | B | 1 | 22 | 0.33 | 7/0.0096 | 7 x 0.24 | 0.196 | 4.97 |

**UL PLTC-ER**
**UL CM**
**UL ITC**
**CSA CM**

### Operating Temperature

- -30°C to +105°C

### Conductor Color Coding

- Blue-orange

### Materials

- Tinned copper conductors
- Polyolefin insulation
- Foil shield
- Orange PVC jacket

### Features

- UL Sunlight Resistant
- 100-ohm nominal impedance

### Availability

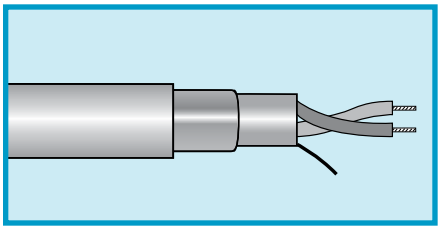
100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### FIT® Tubing Recommendations

- FIT-221: General-purpose, cross-linked polyolefin
- FIT-321: Medium-wall, adhesive-lined, cross-linked polyolefin

# High-Speed Fieldbus

## 300 V Single-Pair Cable



| Part No. | Pairs | Conductor | | Stranding | | Nominal Diameter | |
|---|---|---|---|---|---|---|---|
| | | AWG | mm² | AWG | mm | Inch | mm |
| **6461** | 1 | 22 | 0.35 | 7/30 | 7 x 0.25 | 0.351 | 8.92 |

**UL PLTC**
**UL CM**
**CSA CM**

### Operating Temperature

- -40°C to +75°C

### Conductor Color Coding

- Blue-orange

### Materials

- Tinned copper conductors
- Foam high-density polyethylene insulation
- Foil shield
- Orange PVC jacket

### Features

- UL Sunlight Resistant
- 150-ohm nominal impedance

### Availability

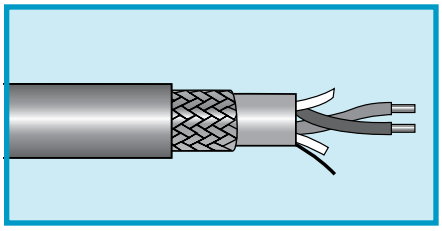
100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### FIT® Tubing Recommendations

- FIT-221: General-purpose, cross-linked polyolefin
- FIT-321: Medium-wall, adhesive-lined, cross-linked polyolefin

# PROFIBUS-DP

## 300 V Single-Pair Cable



| Part No. | Pairs | Conductor | | Stranding | | Nominal Diameter | |
|---|---|---|---|---|---|---|---|
| | | AWG | mm² | AWG | mm | Inch | mm |
| **6462** | 1 | 22 | 0.32 | Solid | | 0.315 | 8.00 |
| **6463** | 1 | 22 | 0.35 | 7/30 | 7 x 0.25 | 0.315 | 8.00 |

**UL AWM 20201 (6462 only)**
**UL PLTC**
**UL CMG**
**CSA CMG FT4**

### Operating Temperature

- -30°C to +75°C (PLTC, CMG)
- -30°C to +60°C (AWM)

### Conductor Color Coding

- Red-green

### Materials

- Tinned solid or stranded copper conductors
- Foam high-density polyethylene insulation
- Foil + 65% tinned copper braid shield
- Purple PVC jacket

### Features

- UL Sunlight Resistant
- 150-ohm nominal impedance

### Availability

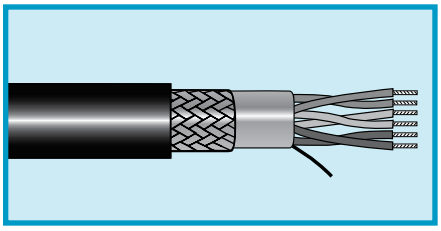
100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### FIT® Tubing Recommendations

- FIT-221: General-purpose, cross-linked polyolefin
- FIT-321: Medium-wall, adhesive-lined, cross-linked polyolefin

# RS-485 Cable

## 300 V Foil + Braid, Multipair



**UL CM, CMG**
**UL TC, PLTC**
**CSA CM, CMG FT1**

### Operating Temperature

- -20°C to +60°C

### Conductor Color Coding

- Chart M (page 530), except 6454

### Materials

- Tinned copper conductors
- Foam high-density polyethylene insulation
- Foil + 65% tinned copper braid shield
- Black PVC jacket

### Features

- UL Sunlight Resistant
- 120-ohm nominal impedance

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### FIT® Tubing Recommendations

- FIT-221: General-purpose, cross-linked polyolefin
- FIT-321: Medium-wall, adhesive-lined, cross-linked polyolefin

**22 AWG (0.35 mm²)**

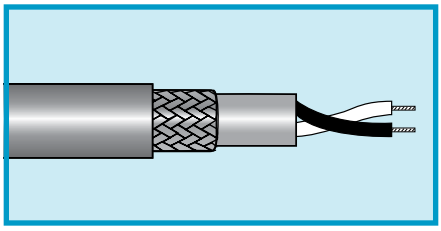
Stranding: 7/30 (7 x 0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Insulation Thickness | | Jacket Thickness | |
|---|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | Inch | mm |
| **6453** | 1 | 0.284 | 7.21 | 0.028 | 0.71 | 0.042 | 1.07 |
| **6454*** | 1.5 | 0.300 | 7.62 | 0.032 | 0.81 | 0.042 | 1.07 |
| **6455** | 2 | 0.408 | 10.36 | 0.024 | 0.61 | 0.053 | 1.35 |
| **6456** | 3 | 0.414 | 10.52 | 0.022 | 0.56 | 0.053 | 1.35 |
| **6457** | 4 | 0.448 | 11.38 | 0.022 | 0.56 | 0.053 | 1.35 |

*Conductor color coding: white/orange-orange/white pair, white-blue single conductor.

# Industrial Twinax

## 600 V Foil + Braid Shield, Single Pair



| Part No. | Pairs | Conductor | | Stranding | | Nominal Diameter | |
|---|---|---|---|---|---|---|---|
| | | AWG | mm² | AWG | mm | Inch | mm |
| **6450** | 1 | 18 | 0.90 | 7/26 | 7 x 0.40 | 0.324 | 8.23 |

**UL TC, PLTC, ITC**
**UL CMG**
**CSA CMG FT4**

### Operating Temperature

- -40°C to +75°C

### Conductor Color Coding

- Blue-white

### Materials

- Tinned stranded copper conductors
- Flame-resistant polypropylene insulation
- Foil + 55% tinned copper braid shield
- Blue PVC jacket

### Features

- UL Sunlight Resistant
- 78-ohm nominal impedance
- Meets the requirements of Allen-Bradley Data Highway Networks

### Availability

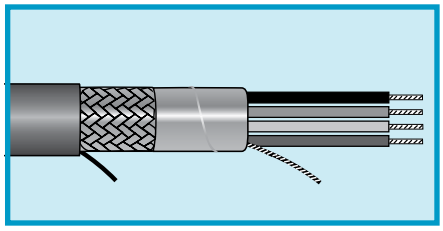
100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### FIT® Tubing Recommendations

- FIT-221: General-purpose, cross-linked polyolefin
- FIT-321: Medium-wall, adhesive-lined, cross-linked polyolefin

# Flexible Motor Supply Cable

## Light Duty Flexing
## 600 V Foil/Braid, Four Conductor



**UL TC-ER**
**UL MTW**
**UL WTTC**
**CSA AWM I/II A/B FT4**
**CE**

### Operating Temperature

- -5°C to +90°C (flexing)
- -20°C to +90°C (stationary)

### Conductor Color Coding

- One yellow/green and three numbered black

### Materials

- Finely stranded bare copper conductors
- PVC/nylon insulation
- Foil + braid shield Aluminum/polyester/aluminum foil shield, with 25% overlap and four tinned copper drain wires Tinned copper braid with 70% coverage
- Black PVC jacket

### Voltage

- 600 V (UL TC-ER, MTW)
- 1000 V (UL WTTC)

### Availability

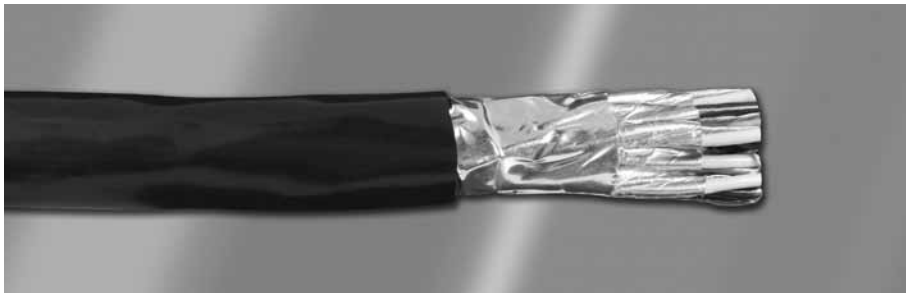
Bulk, cut to length

### FIT® Tubing Recommendations

- FIT-321: Medium-wall, adhesive-lined, cross-linked polyolefin
- FIT-600: Highly flexible, cross-linked elastomer

| 16 to 6 AWG (1.49 to 5.33 mm²) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Part No. | Conductors | Wire Size | | Stranding | | Nominal Diameter | | Jacket Thickness | | Insulation Thickness | |
| | | AWG | mm² | AWG | mm | Inch | mm | Inch | mm | Inch | mm |
| **5660** | 4 | 16 | 1.32 | 26/30 | 26 x 0.25 | 0.381 | 9.67 | 0.050 | 1.27 | 0.016 | 0.40 |
| **5661** | 4 | 14 | 2.08 | 41/30 | 41 x 0.25 | 0.418 | 10.61 | 0.050 | 1.27 | 0.016 | 0.40 |
| **5662** | 4 | 12 | 3.30 | 65/30 | 65 x 0.25 | 0.464 | 11.78 | 0.050 | 1.27 | 0.016 | 0.40 |
| **5663** | 4 | 10 | 5.32 | 105/30 | 105 x 0.25 | 0.579 | 14.70 | 0.063 | 1.60 | 0.022 | 0.55 |
| **5664** | 4 | 8 | 8.52 | 168/30 | 168 x 0.25 | 0.760 | 19.30 | 0.063 | 1.60 | 0.032 | 0.81 |
| **5665** | 4 | 6 | 13.49 | 266/30 | 266 x 0.25 | 0.901 | 22.88 | 0.083 | 2.10 | 0.032 | 0.81 |

# A Full Range of Communication and Control



Our line-up of standard communication and control cables gives you maximum choice and fewer tradeoffs. By offering you a comprehensive collection of insulation/jacketing materials, shielding options, and conductor counts, you can easily select the cable that meets your most demanding needs. We have cables that go beyond the ordinary to satisfy rigorous requirements of EMI performance, transmission distances, flexibility, and temperature extremes.

### Communication and control typical applications:

- Audio systems: speakers, microphones, intercoms
- Broadcast and studio
- Data transmission: RS-232, 422, 485
- CAD/CAM
- Computer peripherals
- Business machines
- Security systems: alarms, cameras, sensors
- Control systems
- Instrumentation systems
- Point-of-sale systems
- Banking systems

### Communication and control key features:

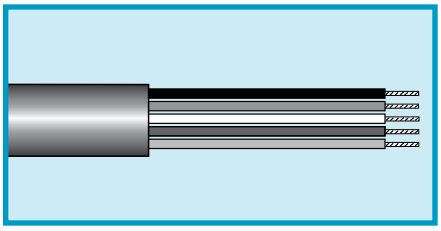
- 1 – 50 conductors, 1 – 50 pairs
- Wide range of insulation/jacket materials:
  - PVC
  - Irradiated PVC
  - Plenum-rated PVC
  - Semirigid PVC
  - Rubber
  - Polyethylene
  - Polypropylene
  - Foam PP and PE
  - PTFE/FEP
  - LSZH
- Low-capacitance cables for improved transmission distances and signal integrity

### Flexible shielding options:

- Unshielded
- Overall foil shield
- Overall foil/braid
- Individual foil-shielded pairs
- Individual foil-shielded pairs with overall foil/braid

# Communication and Control Cable

## 300 V Unshielded, Multiconductor, LSZH



Alpha Wire's LSZH communication and control cable combines LSZH-rated insulation and jackets with the rugged performance you expect from Alpha. The specially formulated LSZH material minimizes the effects from smoke and harmful corrosive gases in the event of combustion. Low smoke means easier visibility in exiting the area and reduced danger of smoke inhalation, while low toxicity means no harm to people from halogenated gases.

**UL CM VW-1**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +75°C

### Materials

- Stranded tinned copper conductors
- LSZH insulation
- Slate LSZH jacket

### LSZH Properties

- LSZH Flammability: Passes IEC 60332-1
- LSZH Acid Gas Generation: Passes IEC 60754-1 and 60754-2
- LSZH Smoke Emission: Passes IEC 61034-2

**LSZH Unshielded Multiconductor**
**Conductor Color Coding: Chart D**

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1172L** | 2 | 0.161 | 4.09 | 0.028 | 0.71 |
| **1173L** | 3 | 0.169 | 4.29 | 0.028 | 0.71 |
| **1174L** | 4 | 0.189 | 4.80 | 0.028 | 0.71 |
| **1175L** | 5 | 0.201 | 5.11 | 0.028 | 0.71 |
| **1176L** | 6 | 0.209 | 5.31 | 0.030 | 0.76 |
| **1177L** | 7 | 0.209 | 5.31 | 0.030 | 0.76 |
| **1178L** | 8 | 0.220 | 5.59 | 0.030 | 0.76 |
| **1179L** | 9 | 0.249 | 6.32 | 0.032 | 0.81 |
| **1180L** | 10 | 0.260 | 6.60 | 0.035 | 0.88 |

**20 AWG (0.56 mm²)**

Stranding: 7/28 (0.32 mm)
Insulation thickness: 0.016 (0.40 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1895L** | 2 | 0.181 | 4.60 | 0.018 | 0.45 |
| **1896L** | 3 | 0.189 | 4.80 | 0.020 | 0.50 |
| **1896/4L** | 4 | 0.209 | 5.31 | 0.020 | 0.50 |
| **1896/5L** | 5 | 0.232 | 5.89 | 0.020 | 0.50 |
| **1896/6L** | 6 | 0.276 | 7.01 | 0.020 | 0.50 |

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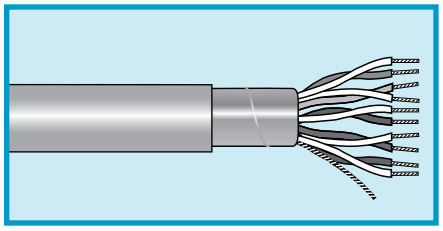
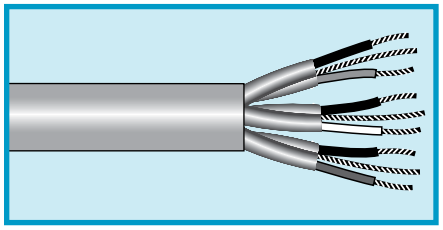
# Communication and Control Cable

## 300 V Foil Shielded, Multipair, LSZH





Alpha Wire's LSZH communication and control cable combines LSZH-rated insulation and jackets with the rugged performance you expect from Alpha. The specially formulated LSZH material minimizes the effects from smoke and harmful corrosive gases in the event of combustion. Low smoke means easier visibility in exiting the area and reduced danger of smoke inhalation, while low toxicity means no harm to people from halogenated gases.

**UL CM VW-1**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +75°C

### Materials

- Stranded tinned copper conductors
- LSZH insulation (Polypropylene insulation for individually foil shielded pairs)
- Aluminum/polyester shielding, with 25% overlap min.
  Foil facing inward
  Tinned copper drain wire sized the same as the conductors
- Slate LSZH jacket

### LSZH Properties

- LSZH Flammability: Passes IEC 60332-1
- LSZH Acid Gas Generation: Passes IEC 60754-1 and 60754-2
- LSZH Smoke Emission: Passes IEC 61034-2

**LSZH Overall Foil Shielded Multipair**
**Conductor Color Coding: Chart A**

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **5471L** | 1 | 0.161 | 4.09 | 0.028 | 0.71 |
| **5472L** | 2 | 0.209 | 5.31 | 0.028 | 0.71 |
| **5473L** | 3 | 0.228 | 5.79 | 0.028 | 0.71 |
| **5474L** | 4 | 0.240 | 6.10 | 0.028 | 0.71 |
| **5475L** | 5 | 0.272 | 6.91 | 0.030 | 0.76 |
| **5476L** | 6 | 0.299 | 7.59 | 0.030 | 0.76 |
| **5477L** | 7 | 0.299 | 7.59 | 0.030 | 0.76 |
| **5478L** | 8 | 0.319 | 8.10 | 0.032 | 0.81 |
| **5479L** | 9 | 0.339 | 8.61 | 0.032 | 0.81 |
| **5480L** | 10 | 0.378 | 9.60 | 0.032 | 0.81 |

**LSZH Individually Foil-Shielded Pair**
**Conductor Color Coding: Chart A**

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2466L*†** | 2 | 0.161 | 4.09 | 0.014 | 0.35 |
| **6010L** | 3 | 0.299 | 7.59 | 0.047 | 1.19 |
| **2463L*††** | 4 | 0.242 | 6.15 | 0.020 | 0.50 |
| **6012L** | 6 | 0.386 | 9.80 | 0.040 | 1.01 |
| **6014L** | 9 | 0.441 | 11.20 | 0.040 | 1.01 |
| **6017L** | 12 | 0.492 | 12.50 | 0.040 | 1.01 |

*Conductor color coding: 1 Red-Black, 2 Green-White, White/Red-White/Black, 4 White/Green-White/Yellow.
†0.009 (0.23) insulation thickness.
††0.008 (0.20) insulation thickness.

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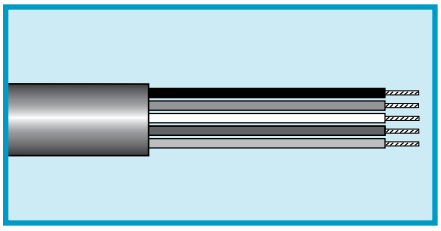
# Communication and Control

## 300 V Unshielded, Multiconductor, PVC, PVC



**UL AWM 2576 (150 V) VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart D (page 531)

### Materials

- Stranded or solid tinned copper conductors
- PVC insulation
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1172C** | 2 | 0.164 | 4.17 | 0.032 | 0.81 |
| **1173C** | 3 | 0.172 | 4.37 | 0.032 | 0.81 |
| **1174C** | 4 | 0.185 | 4.70 | 0.032 | 0.81 |
| **1175C** | 5 | 0.200 | 5.08 | 0.032 | 0.81 |
| **1176C** | 6 | 0.215 | 5.46 | 0.032 | 0.81 |
| **1177C** | 7 | 0.215 | 5.46 | 0.032 | 0.81 |
| **1178C** | 8 | 0.230 | 5.84 | 0.032 | 0.81 |
| **1179C** | 9 | 0.246 | 6.25 | 0.032 | 0.81 |
| **1180C** | 10 | 0.264 | 6.71 | 0.032 | 0.81 |
| **1181C** | 12 | 0.272 | 6.91 | 0.032 | 0.81 |
| **1181/15C** | 15 | 0.294 | 7.47 | 0.032 | 0.81 |
| **1181/20C** | 20 | 0.326 | 8.28 | 0.032 | 0.81 |
| **1181/25C** | 25 | 0.364 | 9.25 | 0.032 | 0.81 |
| **1181/30C** | 30 | 0.385 | 9.78 | 0.032 | 0.81 |
| **1181/40C** | 40 | 0.429 | 10.90 | 0.032 | 0.81 |
| **1181/50C** | 50 | 0.478 | 12.14 | 0.035 | 0.89 |
| **1181/60C** | 60 | 0.520 | 13.21 | 0.035 | 0.89 |

**22 AWG (0.32 mm²)**

Stranding: Solid
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1793C** | 2 | 0.157 | 3.99 | 0.032 | 0.81 |

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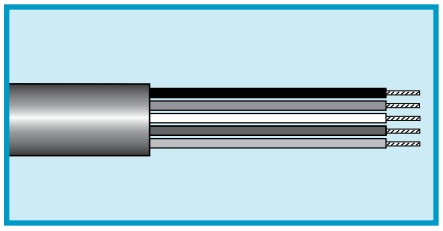
# Communication and Control

## 300 V Unshielded, Multiconductor, PVC, PVC



**UL AWM 2509 VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart D (page 531)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.32 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1895C** | 2 | 0.180 | 4.57 | 0.020 | 0.51 |
| **1896C** | 3 | 0.191 | 4.85 | 0.020 | 0.51 |
| **1896/4C** | 4 | 0.209 | 5.31 | 0.020 | 0.51 |
| **1896/5C** | 5 | 0.230 | 5.84 | 0.020 | 0.51 |
| **1896/6C** | 6 | 0.251 | 6.38 | 0.020 | 0.51 |
| **1896/7C** | 7 | 0.251 | 6.38 | 0.020 | 0.51 |
| **1896/8C** | 8 | 0.273 | 6.93 | 0.020 | 0.51 |
| **1896/9C** | 9 | 0.301 | 7.65 | 0.023 | 0.58 |
| **1896/10C** | 10 | 0.320 | 8.13 | 0.020 | 0.51 |
| **1896/12C** | 12 | 0.331 | 8.41 | 0.020 | 0.51 |
| **1896/15C** | 15 | 0.382 | 9.70 | 0.030 | 0.76 |

**18 AWG (0.81 mm²)**

Stranding: 16/30 (16 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1897C** | 2 | 0.198 | 5.03 | 0.020 | 0.51 |
| **1898C** | 3 | 0.210 | 5.33 | 0.020 | 0.51 |
| **1898/4C** | 4 | 0.231 | 5.87 | 0.020 | 0.51 |
| **1898/5C** | 5 | 0.254 | 6.45 | 0.020 | 0.51 |
| **1898/6C** | 6 | 0.278 | 7.06 | 0.020 | 0.51 |
| **1898/7C** | 7 | 0.278 | 7.06 | 0.020 | 0.51 |
| **1898/8C** | 8 | 0.313 | 7.95 | 0.025 | 0.64 |
| **1898/9C** | 9 | 0.337 | 8.56 | 0.025 | 0.64 |
| **1898/10C** | 10 | 0.366 | 9.30 | 0.025 | 0.64 |
| **1898/12C** | 12 | 0.378 | 9.60 | 0.025 | 0.64 |
| **1898/15C** | 15 | 0.423 | 10.74 | 0.030 | 0.76 |
| **1898/19C** | 19 | 0.455 | 11.56 | 0.030 | 0.76 |
| **1898/25C** | 25 | 0.544 | 13.82 | 0.035 | 0.89 |

**16 AWG (1.32 mm²)**

Stranding 19/0.0117 (19 x 0.29 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1899C** | 2 | 0.222 | 5.64 | 0.020 | 0.51 |
| **1899/3C** | 3 | 0.236 | 5.99 | 0.020 | 0.51 |
| **1899/4C** | 4 | 0.260 | 6.60 | 0.020 | 0.51 |

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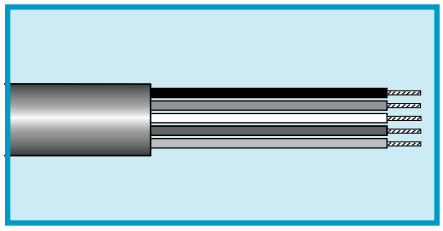
# Communication and Control

## 300 V Unshielded, Multiconductor, PVC, PVC



**UL CL2 VW-1**
**CSA AWM I/II A/B FT1**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CL2)

### Conductor Color Coding

- Chart D (page 531)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**14 AWG (2.09 mm²)**

Stranding: 41/30 (41 x 0.25 mm)
Insulation thickness: 0.020 (0.51 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1891C** | 2 | 0.268 | 6.81 | 0.020 | 0.51 |
| **1891/3C** | 3 | 0.286 | 7.26 | 0.020 | 0.51 |

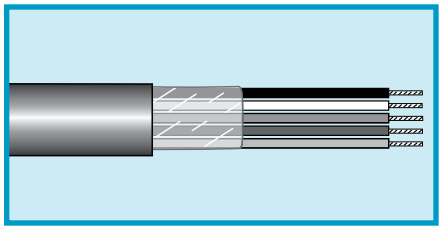
**12 AWG (3.31 mm²)**

Stranding: 65/30 (65 x 0.25 mm)
Insulation thickness: 0.020 (0.51 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1892C** | 2 | 0.312 | 7.92 | 0.023 | 0.58 |
| **1892/3C** | 3 | 0.333 | 8.46 | 0.023 | 0.58 |

# Communication and Control

## 600 V Unshielded, Multiconductor, PVC, PVC



### UL AWM 2463 VW-1

### Operating Temperature

- -20°C to +80°C

### Conductor Color Coding

- Chart F (page 532)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Clear polyester wrap
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**16 AWG (1.32 mm²)**

Stranding 19/0.0117 (19 x 0.29 mm)
Insulation Thickness 0.032 (0.81 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1064** | 4 | 0.395 | 10.03 | 0.047 | 1.19 |
| **1065** | 5 | 0.430 | 10.92 | 0.047 | 1.19 |
| **1067** | 7 | 0.468 | 11.89 | 0.047 | 1.19 |
| **1069** | 9 | 0.577 | 14.66 | 0.063 | 1.60 |
| **1072** | 12 | 0.640 | 16.26 | 0.063 | 1.60 |
| **1075** | 15 | 0.694 | 17.63 | 0.063 | 1.60 |
| **1079** | 19 | 0.749 | 19.02 | 0.065 | 1.65 |
| **1085** | 25 | 0.907 | 23.04 | 0.083 | 2.11 |

**14 AWG (2.08 mm²)**

Stranding (19 x 0.0147 (19 x 0.37 mm)
Insulation thickness: 0.047 (1.19 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1274** | 4 | 0.503 | 12.78 | 0.047 | 1.19 |
| **1275** | 5 | 0.584 | 14.83 | 0.063 | 1.60 |
| **1277** | 7 | 0.635 | 16.13 | 0.063 | 1.60 |
| **1279** | 9 | 0.744 | 18.90 | 0.065 | 1.60 |
| **1282** | 12 | 0.867 | 22.02 | 0.083 | 2.11 |

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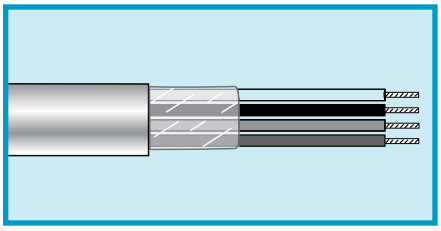
# Communication and Control

## 300 V Unshielded, Multiconductor, IRR PVC, PVC



**MIL-DTL-16878/1 (Type B)**
**UL AWM 2576 (150 V) VW-1**

### Operating Temperature

- -55°C to +105°C (MIL)
- -55°C to +80°C (AWM)

### Conductor Color Coding

- 1 White, 2 Black, 3 Red, 4 Green

### Materials

- Stranded tinned copper conductors
- Irradiated PVC insulation
- Clear polyester wrap
- White PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6622** | 2 | 0.155 | 3.94 | 0.032 | 0.81 |
| **6623** | 3 | 0.162 | 4.11 | 0.032 | 0.81 |
| **6624** | 4 | 0.173 | 4.39 | 0.032 | 0.81 |

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6632** | 2 | 0.167 | 4.24 | 0.032 | 0.81 |
| **6633** | 3 | 0.175 | 4.44 | 0.032 | 0.81 |
| **6634** | 4 | 0.188 | 4.78 | 0.032 | 0.81 |

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.32 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6642** | 2 | 0.183 | 4.65 | 0.032 | 0.81 |
| **6643** | 3 | 0.192 | 4.88 | 0.032 | 0.81 |
| **6644** | 4 | 0.207 | 5.26 | 0.032 | 0.81 |

**18 AWG (0.89 mm²)**

Stranding: 7/26 (7 x 0.40 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6652** | 2 | 0.203 | 5.16 | 0.032 | 0.81 |
| **6653** | 3 | 0.214 | 5.44 | 0.032 | 0.81 |
| **6654** | 4 | 0.232 | 5.89 | 0.032 | 0.81 |

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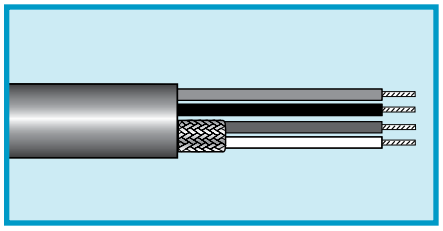
# Communication and Control

## 300 V Unshielded and Braid Shield, Multiconductor, PVC, PVC



**UL AWM 2785 VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +75°C (CM)
- -20°C to +60°C (AWM, CMG)

### Conductor Color Coding

See tables

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Tinned copper braid shield, 80% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)*
500 ft (152 m)*
1000 ft (305 m)
*Parts 1243, 1243/4, and 1243/5 only

### 22 AWG Composite Shielded and Unshielded, UL AWM 2785, UL CM, and CSA CMG

**22 AWG (0.35 mm²)**

Stranding 7/30 (7 x 0.25 mm)
Insulation Thickness 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | Configuration | |
|---|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | Shielded | Unshielded |
| **1243** | 3 | 0.190 | 4.83 | 0.020 | 0.51 | 1 | 2 |
| **1243/4** | 4 | 0.185 x 0.285 | 4.70 x 7.24 | 0.020 | 0.51 | 2 | 2 |
| **1243/5** | 5 | 0.195 x 0.300 | 4.95 x 7.62 | 0.020 | 0.51 | 3 | 2 |

Conductor Color Coding
Shielded: 1 White, 2 Black, 3 Red
Unshielded: 1 Black, 2 Red

### 22 and 18 AWG Unshielded, UL CM and CSA CMG Only

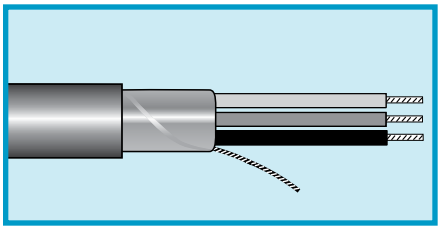
| 22 AWG (0.35 mm²) | 18 AWG (0.81 mm²) |
|---|---|
| Stranding: 7/30 (7 x 0.25 mm)<br>Insulation thickness: 0.010 (0.25 mm) | 16/30 (16 x 0.25 mm)<br>0.018 (0.45 mm) |

| Part No. | Conductors | | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|---|
| | 22 AWG | 18 AWG | Inch | mm | Inch | mm |
| **1826C** | 4 | 2 | 0.241 | 6.12 | 0.025 | 0.63 |
| **1827C** | 5 | 2 | 0.247 | 6.27 | 0.028 | 0.71 |
| **1828C** | 6 | 2 | 0.261 | 6.63 | 0.028 | 0.71 |

Conductor Color Coding
22 AWG: Chart I (page 533)
18 AWG: Chart D (page 531)

# Communication and Control

## 300 V Foil Shield, Multiconductor, PE, PVC



**UL AWM 2092, 2093, 2094 VW-1**
**UL CMG**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +75°C (CMG)
- -20°C to +60°C (AWM)

### Conductor Color Coding

- 1 Black, 2 Red, 3 Natural, 4 Green

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire (see table for sizes)
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m), spool or box
1000 ft (305 m), spool or box

**24 AWG (0.23 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.016 (0.41 mm)
24 AWG (0.22 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | AWM |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **2400C** | 2 | 0.156 | 3.96 | 0.020 | 0.51 | 2092 |

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)
22 AWG (0.35 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | AWM |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **2401C*** | 2 | 0.168 | 4.27 | 0.020 | 0.51 | 2092 |
| **2402C** | 2 | 0.168 | 4.27 | 0.020 | 0.51 | 2092 |
| **2403C** | 3 | 0.178 | 4.52 | 0.020 | 0.51 | 2093 |
| **2404C** | 4 | 0.194 | 4.93 | 0.020 | 0.51 | 2094 |

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.32 mm)
Insulation thickness: 0.016 (0.41 mm)
20 AWG (0.50 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | AWM |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **2411C*** | 2 | 0.184 | 4.67 | 0.020 | 0.51 | 2092 |
| **2412C** | 2 | 0.184 | 4.67 | 0.020 | 0.51 | 2092 |
| **2413C** | 3 | 0.195 | 4.95 | 0.020 | 0.51 | 2093 |
| **2414C** | 4 | 0.213 | 5.41 | 0.020 | 0.51 | 2094 |

**18 AWG (0.81 mm²)**

Stranding: 16/30 (16 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)
20 AWG (0.50 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | AWM |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **2421C*** | 2 | 0.202 | 5.13 | 0.020 | 0.51 | 2092 |
| **2422C** | 2 | 0.202 | 5.13 | 0.020 | 0.51 | 2092 |
| **2423C** | 3 | 0.214 | 5.44 | 0.020 | 0.51 | 2093 |
| **2424C** | 4 | 0.235 | 5.97 | 0.020 | 0.51 | 2094 |

**16 AWG (1.32 mm²)**

Stranding: 19/0.117 (19 x 0.30 mm)
Insulation thickness: 0.016 (0.41 mm)
18 AWG (0.81 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | AWM |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **2432C** | 2 | 0.226 | 5.74 | 0.020 | 0.51 | 2092 |
| **2433C** | 3 | 0.240 | 6.10 | 0.020 | 0.51 | 2093 |

*Color code: 1 black, 2 natural.

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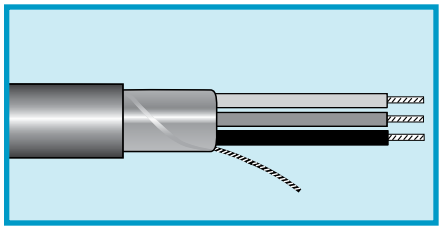
# Communication and Control

## 300 V Foil Shield, Multiconductor, PE, PVC



**UL CL2**
**CSA AWM I/II A/B FT4**

### Operating Temperature

- -20°C to +75°C (CL2)
- -20°C to +60°C (AWM)

### Conductor Color Coding

- 1 Black, 2 Red, 3 Natural, 4 Green

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire (see table for sizes)
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m), spool or box
1000 ft (305 m), spool or box

**14 AWG (2.08 mm²)**

Stranding: 41/30 (41 x 0.25 mm)
Insulation thickness: 0.020 (0.51 mm)
16 AWG (1.32 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | UL |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **2442C** | 2 | 0.292 | 7.42 | 0.030 | 0.76 | CL2 |

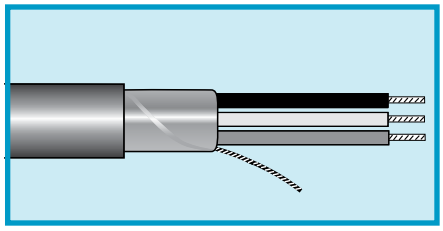
**12 AWG (3.29 mm²)**

Stranding: 65/30 (65 x 0.25 mm)
Insulation thickness: 0.020 (0.51 mm)
14 AWG (2.08 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | UL |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **2444C** | 2 | 0.330 | 8.38 | 0.030 | 0.76 | CL2 |

# Communication and Control

## 300 V Foil Shield, Multiconductor, PP, PE, PVC/PVC



**UL CM**
**VW-1**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- 1 White, 2 Black, 3 Red, 4 Green
- 1 Black, 2 Red, 3 White, 4 Green

### Materials

- Stranded tinned copper conductors (except 2460C)
- PP, PE, or PVC insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  1243/3C: foil facing inward
  Stranded tinned copper drain wire (except 2460C)
- Slate PVC jacket
  2461C: slate or black

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### Polypropylene Insulation

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm) or solid
Insulation Thickness: 0.008 (0.20 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | Configuration | |
|---|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | Shielded | Unshielded |
| **2460C** | 2 (solid) | 0.126 | 3.20 | 0.020 | 0.51 | 2 | 0 |
| **2461C** | 2 | 0.136 | 3.45 | 0.020 | 0.51 | 2 | 0 |

### Polyethylene Insulation

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.32 mm)
Insulation Thickness: 0.014 (0.36 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | Configuration | |
|---|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | Shielded | Unshielded |
| **1243/3C** | 3 | 0.210 | 5.33 | 0.030 | 0.76 | 2 | 1 |
| **2464C** | 4 | 0.165 | 4.19 | 0.020 | 0.51 | 2 | 2 |

### PVC Insulation

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.32 mm)
Insulation Thickness: 0.015 (0.38 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | | Configuration | |
|---|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | Shielded | Unshielded |
| **2465C** | 4 | 0.240 | 6.10 | 0.030 | 0.76 | 2 | 2 |

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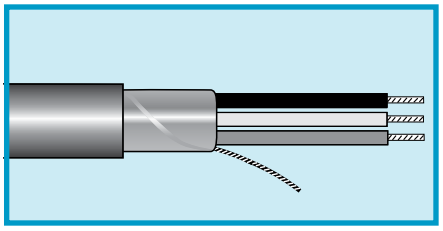
# Communication and Control

## 300 V Foil Shield, Multiconductor, PVC, PVC



**UL AWM 2576 (150 V) VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart D (page 531)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.23 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1212C** | 2 | 0.156 | 3.96 | 0.032 | 0.81 |
| **1213C** | 3 | 0.163 | 4.14 | 0.032 | 0.81 |
| **1214C** | 4 | 0.174 | 4.42 | 0.032 | 0.81 |
| **1215C** | 5 | 0.187 | 4.75 | 0.032 | 0.81 |
| **1216C** | 6 | 0.201 | 5.11 | 0.032 | 0.81 |
| **1217C** | 7 | 0.201 | 5.11 | 0.032 | 0.81 |
| **1218C** | 8 | 0.214 | 5.44 | 0.032 | 0.81 |
| **1219C** | 9 | 0.228 | 5.79 | 0.032 | 0.81 |
| **1219/10C** | 10 | 0.244 | 6.20 | 0.032 | 0.81 |
| **1219/12C** | 12 | 0.251 | 6.38 | 0.032 | 0.81 |
| **1219/15C** | 15 | 0.270 | 6.86 | 0.032 | 0.81 |
| **1219/20C** | 20 | 0.298 | 7.57 | 0.032 | 0.81 |
| **1219/25C** | 25 | 0.332 | 8.43 | 0.032 | 0.81 |
| **1219/37C** | 37 | 0.376 | 9.55 | 0.032 | 0.81 |
| **1219/40C** | 40 | 0.390 | 9.91 | 0.032 | 0.81 |
| **1219/50C** | 50 | 0.427 | 10.85 | 0.032 | 0.81 |

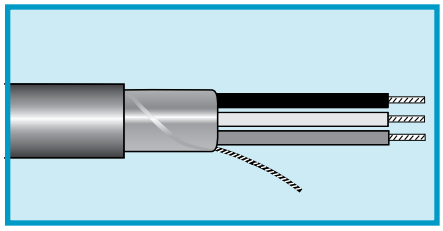
**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1292C** | 2 | 0.168 | 4.27 | 0.032 | 0.81 |
| **1293C** | 3 | 0.176 | 4.47 | 0.032 | 0.81 |
| **1294C** | 4 | 0.189 | 4.80 | 0.032 | 0.81 |
| **1295C** | 5 | 0.204 | 5.18 | 0.032 | 0.81 |
| **1296C** | 6 | 0.219 | 5.56 | 0.032 | 0.81 |
| **1297C** | 7 | 0.219 | 5.56 | 0.032 | 0.81 |
| **1298C** | 8 | 0.234 | 5.94 | 0.032 | 0.81 |
| **1299C** | 9 | 0.250 | 6.35 | 0.032 | 0.81 |
| **1299/10C** | 10 | 0.268 | 6.81 | 0.032 | 0.81 |
| **1299/12C** | 12 | 0.276 | 7.01 | 0.032 | 0.81 |
| **1299/15C** | 15 | 0.298 | 7.57 | 0.032 | 0.81 |
| **1299/20C** | 20 | 0.330 | 8.38 | 0.032 | 0.81 |
| **1299/25C** | 25 | 0.368 | 9.35 | 0.032 | 0.81 |
| **1299/30C** | 30 | 0.389 | 9.88 | 0.032 | 0.81 |
| **1299/37C** | 37 | 0.418 | 10.62 | 0.032 | 0.81 |
| **1299/40C** | 40 | 0.433 | 11.00 | 0.032 | 0.81 |
| **1299/50C** | 50 | 0.482 | 12.24 | 0.035 | 0.89 |

# Communication and Control

## 300 V Foil Shield, Multiconductor, SR-PVC, PVC



**UL AWM 2464 VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart F (page 532)

### Materials

- Stranded tinned copper conductors
- Semirigid PVC insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

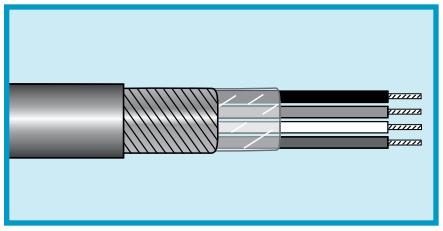
| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6300/3*** | 3 | 0.163 | 4.14 | 0.032 | 0.81 |
| **6300/4*** | 4 | 0.174 | 5.44 | 0.032 | 0.81 |
| **6305** | 5 | 0.187 | 4.75 | 0.032 | 0.81 |
| **6306*** | 6 | 0.201 | 5.11 | 0.032 | 0.81 |
| **6300/8*** | 8 | 0.214 | 5.44 | 0.032 | 0.81 |
| **6300/10*** | 10 | 0.244 | 6.20 | 0.032 | 0.81 |
| **6307** | 15 | 0.270 | 6.86 | 0.032 | 0.81 |
| **6308** | 20 | 0.298 | 7.57 | 0.032 | 0.81 |
| **6309** | 25 | 0.332 | 8.43 | 0.032 | 0.81 |
| **6310** | 30 | 0.366 | 9.30 | 0.040 | 1.02 |
| **6311** | 40 | 0.406 | 10.31 | 0.040 | 1.02 |
| **6312** | 50 | 0.453 | 11.51 | 0.045 | 1.14 |

Mutual capacitance: 32 pF/ft (105 pF/m)
Ground capacitance: 58 pF/ft (190 pF/m)

*Color coding: 1 Black, 2 White, 3 Red, 4 Green, 5 Brown, 6 Blue, 7 Orange, 8 Yellow, 9 Violet, 10 Slate.

# Communication and Control

## 300 V Spiral Shield, Multiconductor, PVC, PVC



**AWM 2095**
**AWM 1108 (Single-conductor cables)**

### Operating Temperature

- -20°C to +80°C

### Conductor Color Coding

- 1 Black, 2 Red, 3 White, 4 Green, 5 Yellow, 6 Blue

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Clear polyester wrap (multiconductor only)
- Bare copper spiral shield, 95% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2254/1** | 1 | 0.112 | 2.84 | 0.020 | 0.51 |
| **2254** | 2 | 0.177 | 4.50 | 0.020 | 0.51 |
| **2254/3** | 3 | 0.187 | 4.75 | 0.020 | 0.51 |
| **2254/4** | 4 | 0.206 | 5.23 | 0.020 | 0.51 |
| **2254/6** | 6 | 0.243 | 6.17 | 0.020 | 0.51 |

**20 AWG (0.56 mm²)**

Stranding: 10/30 (10 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2256/1** | 1 | 0.119 | 3.02 | 0.020 | 0.51 |
| **2256** | 2 | 0.191 | 4.85 | 0.020 | 0.51 |
| **2256/3** | 3 | 0.202 | 5.13 | 0.020 | 0.51 |
| **2256/4** | 4 | 0.223 | 5.66 | 0.020 | 0.51 |
| **2256/6** | 6 | 0.264 | 6.71 | 0.020 | 0.51 |

**18 AWG (0.81 mm²)**

Stranding: 16/30 (16 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2258/1** | 1 | 0.129 | 3.28 | 0.020 | 0.51 |
| **2258** | 2 | 0.214 | 5.44 | 0.020 | 0.51 |
| **2258/3** | 3 | 0.226 | 5.74 | 0.020 | 0.51 |
| **2258/4** | 4 | 0.247 | 6.27 | 0.020 | 0.51 |

**16 AWG (1.32 mm²)**

Stranding: 26/30 (26 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2260** | 2 | 0.240 | 6.10 | 0.020 | 0.51 |
| **2260/3** | 3 | 0.254 | 6.45 | 0.020 | 0.51 |

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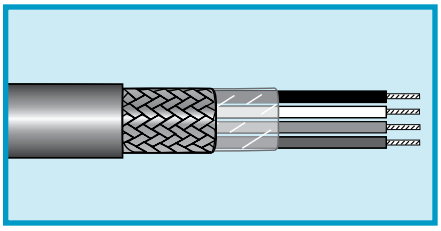
# Communication and Control

## 600 V Braid Shield, Multiconductor, PVC, PVC



**MIL-DTL-16878/1 (Type B)**

### Operating Temperature

- -55°C to +105°C

### Conductor Color Coding

- Chart F (page 532)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Clear polyester wrap
- Tinned copper braid shield, 90% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
1000 ft (305 m)

**28 AWG (0.09 mm²)**

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3302** | 2 | 0.119 | 3.02 | 0.012 | 0.30 |
| **3303** | 3 | 0.124 | 3.15 | 0.012 | 0.30 |
| **3304** | 4 | 0.134 | 3.40 | 0.012 | 0.30 |
| **3306** | 6 | 0.161 | 4.09 | 0.015 | 0.38 |
| **3308** | 8 | 0.171 | 4.34 | 0.015 | 0.38 |
| **3310** | 10 | 0.201 | 5.11 | 0.018 | 0.46 |
| **3312** | 12 | 0.206 | 5.23 | 0.018 | 0.46 |
| **3315** | 15 | 0.236 | 5.99 | 0.020 | 0.51 |
| **3320** | 20 | 0.261 | 6.63 | 0.022 | 0.56 |

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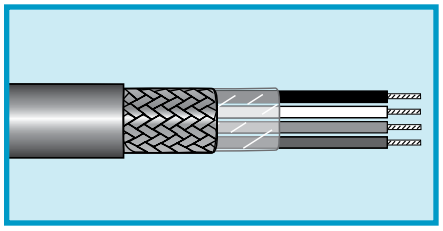
# Communication and Control

## 600 V Braid Shield, Multiconductor, PVC/Nylon, PVC



**MIL-DTL-16878/17 (Type B/N)**

### Operating Temperature

- -55°C to +105°C

### Conductor Color Coding

- 1 White, 2 Black, 3 Red, 4 Green (unless otherwise noted)

### Materials

- Stranded tinned copper conductors
- PVC/nylon insulation
- Clear polyester wrap (multiconductor only)
- Tinned copper braid shield, 90% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**26 AWG (0.14 mm²)**

Stranding: 7/34 (7 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm) PVC/0.003 (0.08 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3200** | 1 | 0.087 | 2.21 | 0.010 | 0.25 |
| **3201** | 2 | 0.143 | 3.63 | 0.014 | 0.36 |
| **3202** | 3 | 0.150 | 3.81 | 0.014 | 0.36 |
| **3203** | 4 | 0.166 | 4.22 | 0.016 | 0.41 |

**24 AWG (0.24 mm²)**

Stranding: 19/36 (19 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm) PVC/0.003 (0.08 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3210** | 1 | 0.093 | 2.36 | 0.010 | 0.25 |
| **3211** | 2 | 0.159 | 4.04 | 0.016 | 0.41 |
| **3212** | 3 | 0.167 | 4.24 | 0.016 | 0.41 |
| **3213** | 4 | 0.182 | 4.62 | 0.017 | 0.43 |

**22 AWG (0.38 mm²)**

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.010 (0.25 mm) PVC/0.003 (0.08 mm) nylon

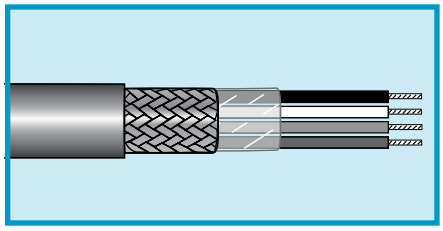
| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3220** | 1 | 0.100 | 2.54 | 0.010 | 0.25 |
| **3221** | 2 | 0.173 | 4.39 | 0.016 | 0.41 |
| **3222** | 3 | 0.184 | 4.67 | 0.017 | 0.43 |
| **3223** | 4 | 0.203 | 5.16 | 0.019 | 0.49 |
| **3335*** | 5 | 0.228 | 5.79 | 0.020 | 0.51 |
| **3336*** | 6 | 0.246 | 6.25 | 0.020 | 0.64 |
| **3337*** | 8 | 0.274 | 6.96 | 0.025 | 0.64 |

*Color code chart F.

CA PROP 65 RoHS Compliant

# Communication and Control

## 600 V Braid Shield, Multipair, PVC/Nylon, PVC



**MIL-DTL-16878/17 (Type B/N)**

### Operating Temperature

- -55°C to +105°C

### Conductor Color Coding

- 1 White, 2 Black, 3 Red, 4 Green (unless otherwise noted)

### Materials

- Stranded tinned copper conductors
- PVC/nylon insulation
- Clear polyester wrap (multiconductor only)
- Tinned copper braid shield, 90% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**20 AWG (0.61 mm²)**

Stranding: 19/32 (19 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm) PVC/0.003 (0.08 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3230** | 1 | 0.108 | 2.74 | 0.010 | 0.25 |
| **3231** | 2 | 0.195 | 4.95 | 0.019 | 0.49 |
| **3232** | 3 | 0.205 | 5.21 | 0.019 | 0.49 |
| **3233** | 4 | 0.227 | 5.77 | 0.021 | 0.53 |

**18 AWG (0.96 mm²)**

Stranding: 19/30 (19 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm) PVC/0.003 (0.08 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3240** | 1 | 0.122 | 3.10 | 0.012 | 0.30 |
| **3241** | 2 | 0.219 | 5.56 | 0.021 | 0.53 |
| **3242** | 3 | 0.233 | 5.92 | 0.022 | 0.56 |
| **3243** | 4 | 0.261 | 6.63 | 0.023 | 0.58 |

**16 AWG (1.23 mm²)**

Stranding: 19/29 (19 x 0.29 mm)
Insulation thickness: 0.010 (0.25 mm) PVC/0.003 (0.08 mm) nylon

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3245** | 1 | 0.136 | 0.136 | 0.016 | 0.41 |
| **3246** | 2 | 0.241 | 0.241 | 0.023 | 0.58 |
| **3247** | 3 | 0.254 | 0.254 | 0.023 | 0.58 |
| **3248** | 4 | 0.279 | 0.279 | 0.025 | 0.64 |

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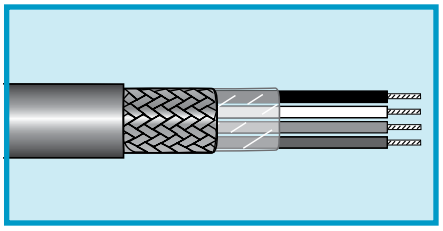
# Communication and Control

## 300 V Braid Shield, Multiconductor, PVC, PVC



**UL AWM 2095 VW-1**
**UL AWM 1108**
**(Single-Conductor Cables)**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart D (page 531)

### Materials

- Stranded or solid tinned copper conductors
- PVC insulation
- Clear polyester wrap (multiconductor only)
- Bare copper braid shield, 75% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**22 AWG (0.32 mm²)**

Stranding: Solid
Insulation thickness: 0.020 (0.51 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1775C** | 2 | 0.195 | 4.95 | 0.020 | 0.51 |

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1735** | 1 | 0.124 | 3.15 | 0.020 | 0.51 |
| **1736C** | 2 | 0.189 | 4.80 | 0.020 | 0.51 |
| **1737C** | 3 | 0.199 | 5.05 | 0.020 | 0.51 |
| **1738C** | 4 | 0.215 | 5.46 | 0.020 | 0.51 |

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.32 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1741C** | 2 | 0.205 | 5.21 | 0.020 | 0.51 |
| **1742C** | 3 | 0.216 | 5.49 | 0.020 | 0.51 |
| **1743C** | 4 | 0.234 | 5.94 | 0.020 | 0.51 |

**18 AWG (0.81 mm²)**

Stranding: 16/30 (16 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1745** | 1 | 0.141 | 3.58 | 0.020 | 0.51 |
| **1746C** | 2 | 0.223 | 5.66 | 0.020 | 0.51 |
| **1747C** | 3 | 0.235 | 5.97 | 0.020 | 0.51 |
| **1747/4C** | 4 | 0.256 | 6.50 | 0.020 | 0.51 |

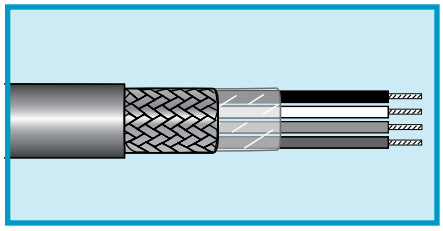
**16 AWG (1.32 mm²)**

Stranding: 19/0.0117 (19 x 0.30 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1748C** | 2 | 0.247 | 6.27 | 0.020 | 0.51 |
| **1749C** | 3 | 0.261 | 6.63 | 0.020 | 0.51 |

# Communication and Control

## 450 V Braid Shield, Multiconductor, PVC, PVC



### Operating Temperature

- -20°C to +80°C

### Conductor Color Coding

- Chart D (page 531)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Clear polyester wrap
- Bare copper braid shield, 75% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**14 AWG (2.08 mm²)**

Stranding: 41/30 (41 x 0.25 mm)
Insulation thickness: 0.020 (0.51 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1750** | 2 | 0.299 | 7.59 | 0.020 | 0.51 |
| **1751** | 3 | 0.317 | 8.05 | 0.020 | 0.51 |

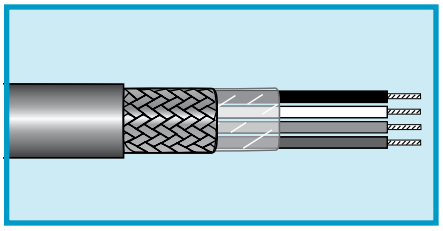
**12 AWG (3.29 mm²)**

Stranding: 65/30 (65 x 0.25 mm)
Insulation thickness: 0.020 (0.51 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1760** | 2 | 0.337 | 8.56 | 0.020 | 0.51 |
| **1761** | 3 | 0.358 | 9.09 | 0.020 | 0.51 |

# Communication and Control

## 600 V Braid Shield, Multiconductor, IRR PVC, PVC



**MIL-DTL-16878/1 (Type B)**

### Operating Temperature

- -55°C to +105°C

### Conductor Color Coding

- Chart G (page 532)

### Materials

- Stranded tinned copper conductors
- Irradiated PVC insulation
- Clear polyester wrap
- Tinned copper braid shield, 90% coverage
- White PVC jacket

### Availability

1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **7622** | 2 | 0.163 | 4.14 | 0.025 | 0.64 |
| **7623** | 3 | 0.170 | 4.32 | 0.025 | 0.64 |
| **7624** | 4 | 0.181 | 4.60 | 0.025 | 0.64 |

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **7631** | 1 | 0.122 | 3.10 | 0.025 | 0.64 |
| **7632** | 2 | 0.175 | 4.45 | 0.025 | 0.64 |
| **7633** | 3 | 0.183 | 4.65 | 0.025 | 0.64 |
| **7634** | 4 | 0.196 | 4.98 | 0.025 | 0.64 |

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.32 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **7661** | 1 | 0.130 | 3.30 | 0.025 | 0.64 |
| **7662** | 2 | 0.191 | 4.85 | 0.025 | 0.64 |
| **7663** | 3 | 0.200 | 5.08 | 0.025 | 0.64 |
| **7664** | 4 | 0.215 | 5.46 | 0.025 | 0.64 |

**18 AWG (0.89 mm²)**

Stranding: 7/26 (7 x 0.40 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **7671** | 1 | 0.140 | 3.56 | 0.025 | 0.64 |
| **7672** | 2 | 0.211 | 5.35 | 0.025 | 0.64 |
| **7673** | 3 | 0.222 | 5.64 | 0.025 | 0.64 |
| **7674** | 4 | 0.240 | 6.09 | 0.025 | 0.64 |

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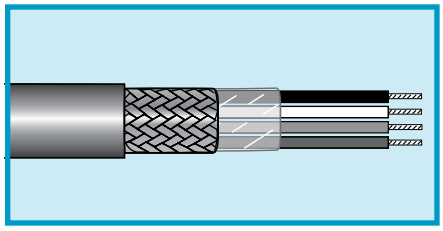
# Communication and Control

## 1000 V Braid Shield, Multiconductor, PVC, PVC



**MIL-DTL-16878/2 (Type C)**

### Operating Temperature

- -55°C to +105°C

### Conductor Color Coding

- Chart F (page 532)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Clear polyester wrap
- Tinned copper braid shield, 90% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
1000 ft (305 m)

**18 AWG (0.96 mm²)**

Stranding: 19/30 (19 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3405** | 5 | 0.303 | 7.70 | 0.025 | 0.64 |
| **3408** | 8 | 0.364 | 9.25 | 0.030 | 0.76 |
| **3410** | 10 | 0.429 | 10.90 | 0.035 | 0.89 |
| **3412** | 12 | 0.442 | 11.23 | 0.035 | 0.89 |
| **3415** | 15 | 0.488 | 12.40 | 0.040 | 1.02 |
| **3420** | 20 | 0.550 | 13.97 | 0.045 | 1.14 |
| **3430** | 30 | 0.667 | 16.94 | 0.055 | 1.40 |

**16 AWG (1.23 mm²)**

Stranding: 19/29 (19 x 0.29 mm)
Insulation thickness: 0.018 (0.45 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3444** | 4 | 0.316 | 8.03 | 0.031 | 0.79 |
| **3446** | 6 | 0.376 | 9.55 | 0.034 | 0.86 |
| **3450** | 10 | 0.487 | 12.37 | 0.044 | 1.12 |
| **3452** | 12 | 0.509 | 12.93 | 0.048 | 1.22 |

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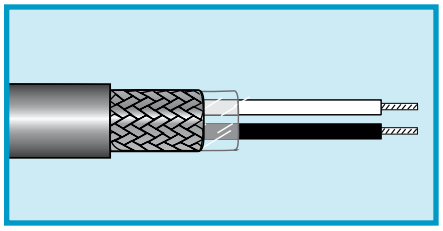
# Communication and Control

## Braid or Spiral Shield, Multiconductor, PE, PVC Microphone Cable



### Operating Temperature

- -20°C to +60°C

### Conductor Color Coding

- 1-White, 2-Black

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Clear polyester wrap (multiconductor only)
- Braided tinned copper or spiral wrapped tinned copper shield, 90% coverage (85% for part no. 1712)
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**1-Conductor Cable for High-Impedance Microphones**

| Part No. | Voltage Rating | Wire Size | | Stranding | | Nominal Diameter | | Shield | Jacket Thickness | | Insulation Thickness | | Capacitance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AWG | mm² | AWG | mm | Inch | mm | | Inch | mm | Inch | mm | pF/ft | pF/m |
| **1706*** | 4000 | 20 | 0.52 | 26/34 | 26 x 0.16 | 0.182 | 4.62 | Braid | 0.030 | 0.76 | 0.031 | 0.79 | 38 | 125 |
| **1703** | 3500 | 24 | 0.20 | 10/34 | 10 x 0.16 | 0.146 | 3.71 | Braid | 0.030 | 0.76 | 0.020 | 0.50 | 36 | 118 |
| **1702**** | 1000 | 26 | 0.14 | 7/34 | 7 x 0.16 | 0.101 | 2.57 | Spiral | 0.020 | 0.51 | 0.016 | 0.41 | 35 | 115 |
| **1705** | 1000 | 24 | 0.20 | 10/34 | 10 x 0.16 | 0.106 | 2.69 | Spiral | 0.020 | 0.51 | 0.016 | 0.41 | 41 | 135 |

*UL AWM 1150, 300 V.
**1702 has 3 strands of tinned copper and 4 strands of tinned Copperweld.

**2-Conductor Cable for Low-Impedance Microphones**

| Part No. | Voltage Rating | Wire Size | | Stranding | | Nominal Diameter | | Shield | Jacket Thickness | | Insulation Thickness | | Capacitance* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AWG | mm² | AWG | mm | Inch | mm | | Inch | mm | Inch | mm | pF/ft | pF/m |
| **1709** | 1000 | 24 | 0.20 | 10/34 | 10 x 0.16 | 0.185 | 4.70 | Spiral | 0.030 | 0.76 | 0.016 | 0.41 | 32 | 105 |
| **1710** | 1000 | 22 | 0.38 | 19/34 | 19 x 0.16 | 0.239 | 6.07 | Braid | 0.025 | 0.64 | 0.025 | 0.63 | 30 | 98 |
| **1712** | 600 | 20 | 0.52 | 26/34 | 26 x 0.16 | 0.221 | 5.61 | Braid | 0.030 | 0.76 | 0.015 | 0.38 | 44 | 144 |

*Capacitance between one conductor and remaining conductors connected to shield.

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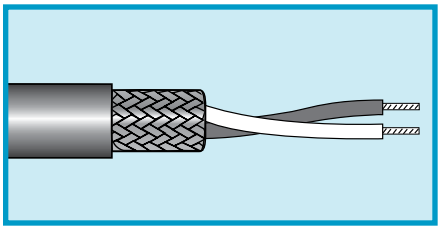
# Communication and Control

## 600 V Braid Shield, Multiconductor, PE, PVC Audio Cable



### Materials

- Bare copper conductors
- Polyethylene insulation
- Tinned copper braid shield, 95% coverage
- PVC jacket

### Availability

100 ft (30.5 m)
1000 ft (305 m)

### Operating Temperature

- -20°C to +60°C

### Conductor Color Coding

- 1771: White, blue
  Black, red, or orange jacket
- 1772: White, blue, white, blue
  Black, brown, slate, or yellow jacket

| Part No. | Conductors | Wire Size | | Stranding | | Nominal Diameter | | Shield | Jacket Thickness | | Insulation Thickness | | Capacitance | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AWG | mm² | AWG | mm | Inch | mm | | Inch | mm | Inch | mm | pF/ft | pF/m |
| **1771** | 2 | 23 | 0.29 | 60/40 | 60 x 0.08 | 0.243 | 6.17 | Braid | 0.040 | 1.01 | 0.020 | 0.51 | 17.9 | 58.7 |
| **1772** | 4 | 25 | 0.20 | 40/40 | 40 x 0.08 | 0.239 | 6.07 | Braid | 0.044 | 1.11 | 0.014 | 0.35 | 18 | 69.1 |

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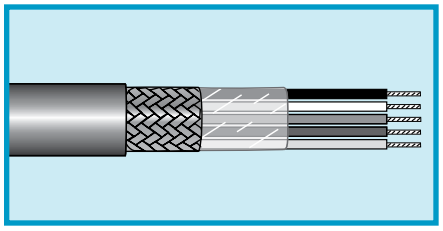
# Communication and Control

## 600 V Multiconductor, PE, PVC
## Braid Shield



### Operating Temperature

- -20°C to +60°C

### Conductor Color Coding

- Chart H (page 533)

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Clear polyester wrap
- Braided tinned copper shield, 85% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**20 AWG (0.52 mm²)**

Stranding: 26/34 (26 x 0.16 mm)
Insulation thickness: 0.015 (0.38 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1712** | 2 | 0.221 | 5.61 | 0.030 | 0.76 |
| **1713** | 3 | 0.248 | 6.30 | 0.035 | 0.88 |
| **1715** | 4 | 0.266 | 6.76 | 0.035 | 0.88 |
| **1716** | 5 | 0.285 | 7.24 | 0.035 | 0.88 |
| **1717** | 6 | 0.306 | 7.77 | 0.035 | 0.88 |
| **1719** | 8 | 0.327 | 8.31 | 0.035 | 0.88 |
| **1721** | 10 | 0.373 | 9.47 | 0.035 | 0.88 |
| **1723** | 12 | 0.384 | 9.75 | 0.035 | 0.88 |
| **1726** | 15 | 0.421 | 10.69 | 0.035 | 0.88 |
| **1728** | 20 | 0.462 | 11.73 | 0.035 | 0.88 |

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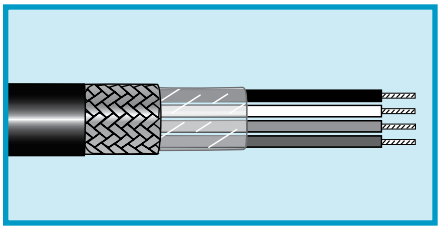
# Communication and Control

## 600 V Multiconductor, Rubber, Polychloroprene Braid Shield



### Operating Temperature

- -20°C to +60°C

### Conductor Color Coding

- Chart H (page 533)

### Materials

- Stranded tinned copper conductors
- EPDM rubber insulation
- Clear polyester wrap
- Tinned copper braid shield, 85% coverage
- Black polychloroprene jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**18 AWG (0.82 mm²)**

Stranding: 41/34 (41 x 0.16 mm)
Insulation thickness: 0.020 (0.51 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1450** | 2 | 0.298 | 7.57 | 0.045 | 1.14 |
| **1454** | 6 | 0.392 | 9.96 | 0.045 | 1.14 |

**16AWG (1.31 mm²)**

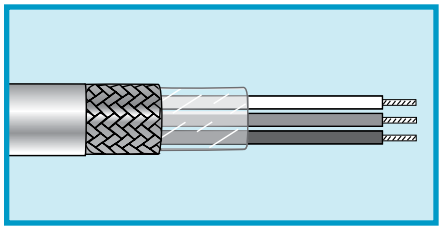
Stranding: 65/34 (65 x 0.16 mm)
Insulation thickness: 0.026 (0.65 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1450/16** | 2 | 0.327 | 8.31 | 0.036 | 0.91 |
| **1451/16** | 3 | 0.350 | 8.89 | 0.037 | 0.94 |

CA PROP 65 RoHS Compliant

# Communication and Control

## 600 V Multiconductor, PTFE, FEP Braid Shield



**MIL-DTL-16878/4 (Type E)**
**NEMA HP3-EXBEE**

### Operating Temperature

- -55°C to +200°C

### Conductor Color Coding

- Chart G (page 532)

### Materials

- Stranded silver-plated copper conductors
- PTFE insulation
- Clear polyester wrap
- Silver-plated copper braid shield, 90% coverage
- White FEP jacket

### Availability

100 ft (30.5 m)
1000 ft (305 m)*
*May contain multiple lengths

**24 AWG (0.24 mm²)**

Stranding: 19/36 (19 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2831** | 1 | 0.087 | 2.21 | 0.010 | 0.25 |
| **2831/2** | 2 | 0.132 | 3.35 | 0.010 | 0.25 |
| **2831/3** | 3 | 0.139 | 3.53 | 0.010 | 0.25 |

**22 AWG (0.38 mm²)**

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.009 (0.23 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2834** | 1 | 0.092 | 2.34 | 0.010 | 0.25 |
| **2834/2** | 2 | 0.142 | 3.61 | 0.010 | 0.25 |
| **2834/3** | 3 | 0.154 | 3.91 | 0.012 | 0.30 |

**20 AWG (0.62 mm²)**

Stranding: 19/32 (19 x 0.20 mm)
Insulation thickness: 0.009 (0.23 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2837/2** | 2 | 0.162 | 4.11 | 0.012 | 0.30 |
| **2837/3** | 3 | 0.171 | 4.34 | 0.012 | 0.30 |

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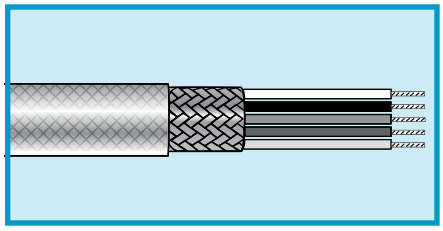
# Communication and Control

## 600 V Multiconductor, TFE, Fiberglass Braid Shield



**MIL-DTL-16878/4 (Type E)**
**NEMA HP3-EXBEE**

### Operating Temperature

- -55°C to +200°C

### Conductor Color Coding

- Chart G (page 532)

### Materials

- Stranded silver-plated copper conductors
- TFE insulation
- Silver-plated copper braid shield, 90% coverage
- White PTFE-impregnated fiberglass jacket

### Availability

100 ft (30.5 m)
1000 ft (305 m)*
*May contain multiple lengths

**24 AWG (0.24 mm²)**

Stranding: 19/36 (19 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2811** | 1 | 0.100 | 2.54 | 0.012 | 0.30 |
| **2811/2** | 2 | 0.145 | 3.68 | 0.012 | 0.30 |
| **2811/3** | 3 | 0.152 | 3.86 | 0.012 | 0.30 |
| **2811/4** | 4 | 0.164 | 4.17 | 0.012 | 0.30 |
| **2811/5** | 5 | 0.177 | 4.50 | 0.012 | 0.30 |
| **2811/7** | 7 | 0.191 | 4.85 | 0.012 | 0.30 |

**22 AWG (0.38 mm²)**

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.009 (0.23 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2814/2** | 2 | 0.155 | 3.94 | 0.012 | 0.30 |
| **2814/4** | 4 | 0.176 | 4.47 | 0.012 | 0.30 |
| **2814/6** | 6 | 0.206 | 5.23 | 0.012 | 0.30 |

**20 AWG (0.62 mm²)**

Stranding: 19/32 (19 x 0.20 mm)
Insulation thickness: 0.009 (0.23 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2817/2** | 2 | 0.171 | 4.34 | 0.012 | 0.30 |
| **2817/3** | 3 | 0.180 | 4.57 | 0.012 | 0.30 |
| **2817/4** | 4 | 0.195 | 4.95 | 0.012 | 0.30 |
| **2817/5** | 5 | 0.212 | 5.38 | 0.012 | 0.30 |
| **2817/6** | 6 | 0.230 | 5.84 | 0.012 | 0.30 |

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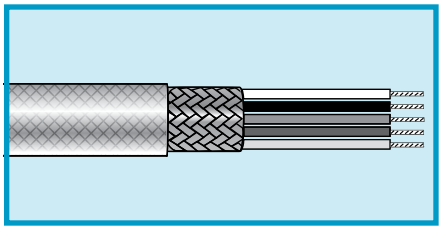
# Communication and Control

## 600 V Multiconductor, TFE, Fiberglass Braid Shield



**MIL-DTL-16878/4 (Type E)**
**NEMA HP3**

### Operating Temperature

- -55°C to +200°C

### Conductor Color Coding

- Chart G (page 532)

### Materials

- Stranded silver-plated copper conductors
- TFE insulation
- Silver-plated copper braid shield, 90% coverage
- White PTFE-impregnated fiberglass jacket

### Availability

100 ft (30.5 m)
1000 ft (305 m)*
*May contain multiple lengths

**18 AWG (0.96 mm²)**

Stranding: 19/30 (19 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2819** | 1 | 0.125 | 3.18 | 0.012 | 0.30 |
| **2819/2** | 2 | 0.195 | 4.95 | 0.012 | 0.30 |
| **2819/3** | 3 | 0.206 | 5.23 | 0.012 | 0.30 |
| **2819/4** | 4 | 0.224 | 5.69 | 0.012 | 0.30 |
| **2819/5** | 5 | 0.245 | 6.22 | 0.012 | 0.30 |

**16 AWG (1.32 mm²)**

Stranding: 19/29 (19 x 0.29 mm)
Insulation thickness: 0.012 (0.30 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2820** | 1 | 0.135 | 3.43 | 0.012 | 0.30 |
| **2820/2** | 2 | 0.215 | 5.46 | 0.012 | 0.30 |
| **2820/3** | 3 | 0.228 | 5.79 | 0.012 | 0.30 |
| **2820/4** | 4 | 0.249 | 6.32 | 0.012 | 0.30 |

**14 AWG (1.23 mm²)**

Stranding: 19/27 (19 x 0.36 mm)
Insulation thickness: 0.012 (0.30 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2804/2** | 1 | 0.245 | 6.22 | 0.012 | 0.30 |
| **2804/3** | 2 | 0.260 | 6.60 | 0.012 | 0.30 |

**12 AWG (3.08 mm²)**

Stranding: 19/25 (19 x 0.46 mm)
Insulation thickness: 0.012 (0.30 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2803/2** | 2 | 0.283 | 7.19 | 0.012 | 0.30 |

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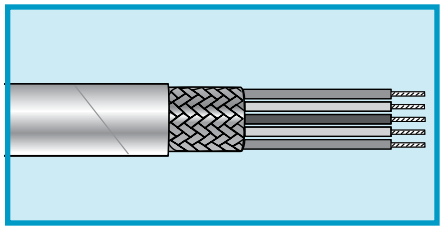
# Communication and Control

## 600 V Multiconductor, PTFE, PTFE Tape Braid Shield



**MIL-DTL-16878/4 (Type E)**
**NEMA HP3-EXBEE**

### Operating Temperature

- -55°C to +200°C

### Conductor Color Coding

- Chart G (page 532)

### Materials

- Stranded silver-plated copper conductors
- PTFE insulation
- Silver-plated copper braid shield, 90% coverage
- White PTFE tape jacket

### Availability

100 ft (30.5 m)
1000 ft (305 m)*
*May contain multiple lengths

**24 AWG (0.24 mm²)**

Stranding: 19/36 (19 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2821** | 1 | 0.087 | 2.21 | 0.010 | 0.25 |
| **2821/2** | 2 | 0.136 | 3.45 | 0.012 | 0.30 |
| **2821/3** | 3 | 0.143 | 3.63 | 0.012 | 0.30 |
| **2821/4** | 4 | 0.155 | 3.94 | 0.012 | 0.30 |
| **2821/5** | 5 | 0.168 | 4.27 | 0.012 | 0.30 |
| **2821/6** | 6 | 0.182 | 4.62 | 0.012 | 0.30 |

**22 AWG (0.38 mm²)**

Stranding: 19/34 (19 x 0.16 mm)
Insulation thickness: 0.009 (0.23 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2824** | 1 | 0.092 | 2.34 | 0.010 | 0.25 |
| **2824/2** | 2 | 0.146 | 3.71 | 0.012 | 0.30 |
| **2824/3** | 3 | 0.154 | 3.91 | 0.012 | 0.30 |
| **2824/4** | 4 | 0.167 | 4.24 | 0.012 | 0.30 |
| **2824/5** | 5 | 0.182 | 4.62 | 0.012 | 0.30 |
| **2824/6** | 6 | 0.193 | 4.90 | 0.012 | 0.30 |

**20 AWG (0.62 mm²)**

Stranding: 19/32 (19 x 0.20 mm)
Insulation thickness: 0.009 (0.23 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2827** | 1 | 0.100 | 2.54 | 0.010 | 0.25 |
| **2827/2** | 2 | 0.158 | 4.01 | 0.012 | 0.30 |
| **2827/3** | 3 | 0.171 | 4.34 | 0.012 | 0.30 |
| **2827/4** | 4 | 0.186 | 4.72 | 0.012 | 0.30 |
| **2827/5** | 5 | 0.203 | 5.16 | 0.012 | 0.30 |
| **2827/6** | 6 | 0.221 | 5.61 | 0.012 | 0.30 |

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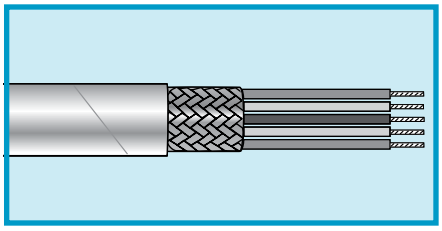
# Communication and Control

## 600 V Multiconductor, PTFE, PTFE Tape Braid Shield



**MIL-DTL-16878/4 (Type E)**
**NEMA HP3-EXBEE**

### Operating Temperature

- -55°C to +200°C

### Conductor Color Coding

- Chart G (page 532)

### Materials

- Stranded silver-plated copper conductors
- PTFE insulation
- Silver-plated copper braid shield, 90% coverage
- White PTFE tape jacket

### Availability

100 ft (30.5 m)
1000 ft (305 m)*
*May contain multiple lengths

**18 AWG (0.96 mm²)**

Stranding: 19/30 (19 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2829/2** | 2 | 0.186 | 4.72 | 0.012 | 0.30 |
| **2829/3** | 3 | 0.197 | 5.00 | 0.012 | 0.30 |
| **2829/4** | 4 | 0.215 | 5.46 | 0.012 | 0.30 |

**16 AWG (1.23 mm²)**

Stranding: 19/29 (19 x 0.29 mm)
Insulation thickness: 0.012 (0.30 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2826** | 1 | 0.122 | 3.10 | 0.010 | 0.25 |
| **2826/2** | 2 | 0.206 | 5.23 | 0.012 | 0.30 |
| **2826/3** | 3 | 0.219 | 5.56 | 0.012 | 0.30 |
| **2826/4** | 4 | 0.240 | 6.10 | 0.012 | 0.30 |

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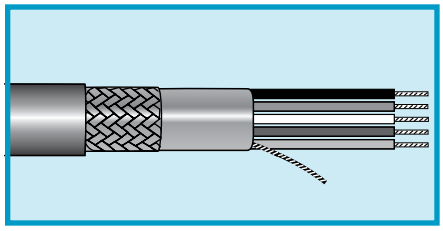
# Communication and Control

## 300 V Multiconductor, SR-PVC, PVC Foil/Braid Shield



**UL AWM 2464 VW-1**
**UL CL2**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CL2)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart D (page 531)

### Materials

- Stranded tinned copper conductors
- Semirigid PVC insulation
- Foil + braid shield
  Aluminum/polyester/aluminum foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to the conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**28 AWG (0.08 mm²)**

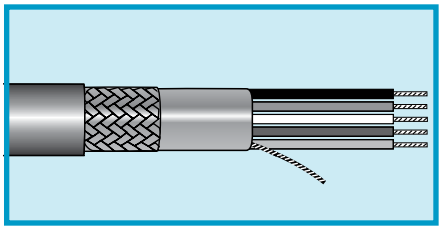
Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3463*** | 3 | 0.171 | 4.34 | 0.035 | 0.89 |
| **3464C** | 4 | 0.181 | 4.60 | 0.035 | 0.89 |
| **3465C** | 5 | 0.191 | 4.85 | 0.035 | 0.89 |
| **3466C** | 6 | 0.202 | 5.13 | 0.035 | 0.89 |
| **3467C** | 7 | 0.202 | 5.13 | 0.035 | 0.89 |
| **3468C** | 8 | 0.212 | 5.38 | 0.035 | 0.89 |
| **3469C** | 9 | 0.223 | 5.66 | 0.035 | 0.89 |
| **3470C** | 10 | 0.236 | 5.99 | 0.035 | 0.89 |
| **3470/15C** | 15 | 0.267 | 6.78 | 0.035 | 0.89 |
| **3470/25C** | 25 | 0.312 | 7.92 | 0.035 | 0.89 |
| **3470/37C** | 37 | 0.347 | 8.81 | 0.035 | 0.89 |
| **3470/50C** | 50 | 0.397 | 10.08 | 0.035 | 0.89 |

*UL AWM 2464/CSA CMG only.

# Low Capacitance Data Cable

## 300 V Multiconductor, FPP, PVC
## Foil/Braid Shield



**UL AWM 2919 (30 V) VW-1**
**UL CL2**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CL2)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart D (page 531) for 3-conductor to 9-conductor cables
- Chart F (page 532) for 25-conductor cables

### Materials

- Stranded tinned copper conductors
- Foam polypropylene insulation
- Foil + braid shield
  Aluminum/polyester/aluminum foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
  Tinned copper braid shield, 65% coverage
- Slate PVC jacket

### Availability

1000 ft (305 m)

**28 AWG (0.08 mm²)**

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.013 (0.33 mm)

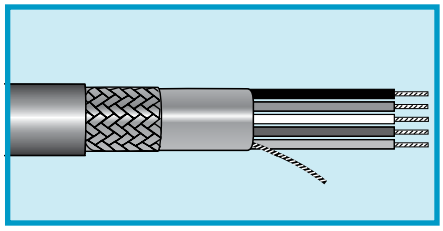
| Part No.* | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3483** | 3 | 0.184 | 4.67 | 0.035 | 0.89 |
| **3484C** | 4 | 0.195 | 4.95 | 0.035 | 0.89 |
| **3488C** | 8 | 0.232 | 5.89 | 0.035 | 0.89 |
| **3489C** | 9 | 0.245 | 6.22 | 0.035 | 0.89 |
| **3490/25C** | 25 | 0.348 | 8.84 | 0.035 | 0.89 |

Mutual capacitance: 12 pF/ft (39.4 pF/m)
Ground capacitance: 20 pF/ft (65.6 pF/m)

*C suffix part no. are CL2 approved.

# Communication and Control

## 300 V Multiconductor, SR-PVC, PVC Overall Foil/Braid Shield



**UL AWM 2464 VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart F (page 532) for 15-conductor through 50-condcutor cables
- See table below for 3-conductor through 10-conductor cables

### Materials

- Stranded tinned copper conductors
- Semirigid PVC insulation
- Foil + braid shield
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire, 24 AWG (0.22 mm²), 7/32 (7 x 0.22 mm)
  Tinned copper braid, 65% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6327** | 3 | 0.185 | 4.70 | 0.032 | 0.81 |
| **6328** | 4 | 0.196 | 4.98 | 0.032 | 0.81 |
| **6329** | 5 | 0.209 | 5.31 | 0.032 | 0.81 |
| **6330** | 6 | 0.223 | 5.66 | 0.032 | 0.81 |
| **6331** | 7 | 0.223 | 5.66 | 0.032 | 0.81 |
| **6332** | 8 | 0.236 | 5.99 | 0.032 | 0.81 |
| **6333** | 9 | 0.250 | 6.35 | 0.032 | 0.81 |
| **6334** | 10 | 0.266 | 6.76 | 0.032 | 0.81 |
| **6335** | 15 | 0.292 | 7.42 | 0.032 | 0.81 |
| **6336** | 25 | 0.354 | 8.99 | 0.032 | 0.81 |
| **6337** | 37 | 0.398 | 10.11 | 0.032 | 0.81 |
| **6338** | 50 | 0.449 | 11.40 | 0.032 | 0.81 |

Mutual capacitance: 32 pF/ft (105 pF/m)
Ground capacitance: 58 pF/ft (190 pF/m)

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6339** | 3 | 0.198 | 5.03 | 0.032 | 0.81 |
| **6340** | 4 | 0.211 | 5.36 | 0.032 | 0.81 |
| **6341** | 5 | 0.226 | 5.74 | 0.032 | 0.81 |
| **6342** | 6 | 0.241 | 6.12 | 0.032 | 0.81 |
| **6343** | 7 | 0.241 | 6.12 | 0.032 | 0.81 |
| **6344** | 8 | 0.256 | 6.50 | 0.032 | 0.81 |
| **6345** | 9 | 0.272 | 6.91 | 0.032 | 0.81 |
| **6346** | 10 | 0.290 | 7.37 | 0.032 | 0.81 |
| **6347** | 15 | 0.320 | 8.13 | 0.032 | 0.81 |
| **6348** | 25 | 0.390 | 9.91 | 0.032 | 0.81 |
| **6349** | 37 | 0.440 | 11.18 | 0.032 | 0.81 |
| **6350** | 50 | 0.540 | 13.72 | 0.053 | 1.35 |

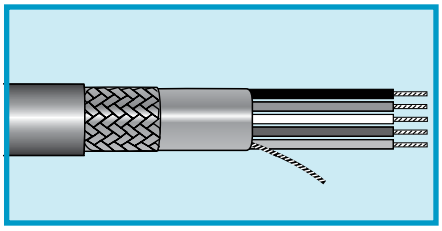
Mutual capacitance: 36 pF/ft (118 pF/m)
Ground capacitance: 65 pF/ft (213 pF/m)

**Color Coding:** 3 through 10 Conductors

| | |
|---|---|
| 1 Black | 6 Blue |
| 2 White | 7 Orange |
| 3 Red | 8 Yellow |
| 4 Green | 9 Violet |
| 5 Brown | 10 Slate |

# Communication and Control

## 300 V Foil/Braid Shield, Multiconductor, FPE, PVC Low Capacitance Data Cable



**UL AWM 2919 (30 V) VW-1**
**UL CM**
**CSA CMH FT1**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMH)

### Conductor Color Coding

- Chart F (page 532) for 15 through 37 conductors. Other parts, see table at right.

### Materials

- Stranded tinned copper conductors
- Foam polyethylene insulation
- Foil + braid shield
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
  Tinned copper braid, 65% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6351** | 3 | 0.217 | 5.51 | 0.035 | 0.89 |
| **6352** | 4 | 0.231 | 5.87 | 0.035 | 0.89 |
| **6353** | 5 | 0.248 | 6.30 | 0.035 | 0.89 |
| **6354** | 6 | 0.265 | 6.73 | 0.035 | 0.89 |
| **6355** | 7 | 0.265 | 6.73 | 0.035 | 0.89 |
| **6356** | 8 | 0.282 | 7.16 | 0.035 | 0.89 |
| **6357** | 9 | 0.300 | 7.62 | 0.035 | 0.89 |
| **6358** | 10 | 0.320 | 8.13 | 0.035 | 0.89 |
| **6359** | 15 | 0.353 | 8.97 | 0.035 | 0.89 |
| **6360** | 25 | 0.432 | 10.97 | 0.035 | 0.89 |
| **6361** | 37 | 0.514 | 13.06 | 0.048 | 1.22 |

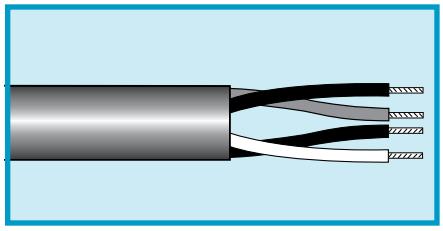
Mutual capacitance: 12 pF/ft (39.4 pF/m)
Ground capacitance: 22 pF/ft (72.2 pF/m)

**Color Coding**

| | | |
|---|---|---|
| 1 Black | 5 Brown | 9 Violet |
| 2 White | 6 Blue | 10 Slate |
| 3 Red | 7 Orange | |
| 4 Green | 8 Yellow | |

# Communication and Control

## 300 V Unshielded, Multipair, PVC, PVC



**UL AWM 2464, 2576 VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart A (page 528)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Slate PVC jacket

### Availability

1000 ft (305 m)

**22 AWG (0.32 mm²)**

Stranding: Solid
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1300C** | 1 | 0.157 | 3.99 | 0.032 | 0.81 |
| **1302C** | 2 | 0.215 | 5.46 | 0.032 | 0.81 |
| **1304C** | 3 | 0.226 | 5.74 | 0.032 | 0.81 |
| **1305C** | 4 | 0.246 | 6.25 | 0.032 | 0.81 |
| **1306C** | 5 | 0.267 | 6.78 | 0.032 | 0.81 |
| **1307C** | 6 | 0.289 | 7.34 | 0.032 | 0.81 |
| **1308/11C** | 11 | 0.362 | 9.19 | 0.032 | 0.81 |
| **1309C** | 13 | 0.382 | 9.70 | 0.032 | 0.81 |
| **1310C** | 16 | 0.414 | 10.52 | 0.032 | 0.81 |
| **1313C** | 27 | 0.537 | 13.64 | 0.040 | 1.02 |

### UL AWM 2576

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1317C** | 2 | 0.231 | 5.87 | 0.032 | 0.81 |
| **1318C** | 3 | 0.244 | 6.20 | 0.032 | 0.81 |
| **1319C** | 4 | 0.265 | 6.73 | 0.032 | 0.81 |
| **1320C** | 5 | 0.289 | 7.34 | 0.032 | 0.81 |
| **1322C** | 6 | 0.320 | 8.13 | 0.035 | 0.89 |
| **1323C** | 9 | 0.371 | 9.42 | 0.035 | 0.89 |
| **1324C** | 11 | 0.401 | 10.19 | 0.035 | 0.89 |
| **1325C** | 12 | 0.414 | 10.52 | 0.035 | 0.89 |
| **1327C** | 15 | 0.460 | 11.68 | 0.040 | 1.02 |
| **1327/19C** | 19 | 0.493 | 12.52 | 0.040 | 1.02 |

### UL AWM 2464

**18AWG (0.81 mm²)**

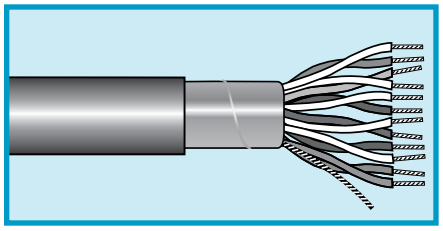
Stranding: 16/30 (16 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1131C** | 1 | 0.225 | 5.72 | 0.032 | 0.81 |
| **1132C** | 2 | 0.332 | 8.43 | 0.035 | 0.89 |
| **1133C** | 3 | 0.356 | 9.04 | 0.037 | 0.94 |
| **1134C** | 4 | 0.396 | 10.06 | 0.040 | 1.02 |
| **1135C** | 5 | 0.444 | 11.28 | 0.045 | 1.14 |
| **1136C** | 6 | 0.484 | 12.29 | 0.045 | 1.14 |
| **1138C** | 8 | 0.534 | 13.56 | 0.050 | 1.27 |
| **1139C** | 9 | 0.584 | 14.83 | 0.055 | 1.40 |
| **1149C** | 19 | 0.791 | 20.09 | 0.070 | 1.78 |

UL LISTED CSA CA PROP 65 RoHS Compliant

# Communication and Control

## 300 V Overall Foil Shield, Multipair, SR-PVC, PVC



**UL AWM 2464**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart K (page 529)

### Materials

- Stranded tinned copper conductors
- Semirigid PVC insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing inward
  Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.23 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **5471C** | 1 | 0.156 | 3.96 | 0.032 | 0.81 |
| **5472C** | 2 | 0.212 | 5.38 | 0.032 | 0.81 |
| **5473C** | 3 | 0.224 | 5.69 | 0.032 | 0.81 |
| **5474C** | 4 | 0.243 | 6.17 | 0.032 | 0.81 |
| **5475C** | 5 | 0.270 | 6.86 | 0.035 | 0.89 |
| **5476C** | 6 | 0.292 | 7.42 | 0.035 | 0.89 |
| **5477C** | 7 | 0.292 | 7.42 | 0.035 | 0.89 |
| **5478C** | 8 | 0.316 | 8.03 | 0.035 | 0.89 |
| **5479C** | 9 | 0.343 | 8.71 | 0.037 | 0.83 |
| **5480C** | 10 | 0.373 | 9.47 | 0.040 | 1.02 |
| **5480/15C** | 15 | 0.415 | 10.54 | 0.040 | 1.02 |
| **5480/19C** | 19 | 0.445 | 11.30 | 0.040 | 1.02 |
| **5480/25C** | 25 | 0.527 | 13.39 | 0.045 | 1.14 |
| **5480/50C *** | 50 | 0.699 | 17.75 | 0.053 | 1.35 |

*Color code chart C.

**Individually Shielded, 22 AWG (0.35 mm²), 7/30 (7 x .025) Tinned Copper Drain Wire UL VW-1**

**20 AWG (0.56 mm²)**

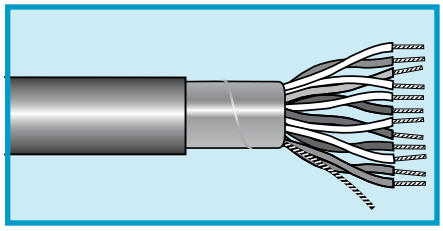
Stranding: 7/28 (7 x 0.33 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6416** | 2 | 0.295 | 7.49 | 0.041 | 1.04 |

Mutual capacitance: 55 pF/ft (180 pF/m)
Ground capacitance: 95 pF/ft (312 pF/m)

# Communication and Control

## 300 V Overall Foil Shield, Multipair, PVC, PVC



**UL AWM 2464 VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart K (page 529)

### Materials

- Solid tinned copper conductors
- PVC insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing inward
  Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

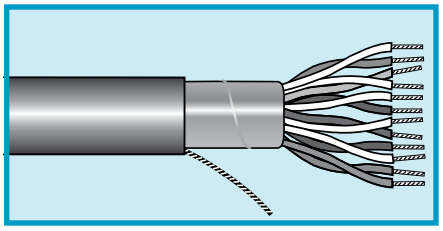
**22 AWG (0.32 mm²)**

Stranding: Solid
Insulation thickness: 0.013 (0.33 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **5902C** | 2 | 0.238 | 6.05 | 0.032 | 0.81 |
| **5905C** | 4 | 0.273 | 6.93 | 0.032 | 0.81 |
| **5906C** | 6 | 0.329 | 8.36 | 0.035 | 0.89 |
| **5909C** | 9 | 0.385 | 9.78 | 0.037 | 0.94 |
| **5909/15C** | 15 | 0.471 | 11.96 | 0.040 | 1.02 |
| **5909/19C** | 19 | 0.506 | 12.85 | 0.040 | 1.02 |

# Communication and Control

## 150 and 300 V Overall Foil Shield, Multipair, PVC, PVC



**UL AWM 2576 VW-1 (150 V)**
**UL AWM 2464 VW-1 (300 V)**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart A (page 528)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### 150 V, AWM 2576

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2211C** | 1 | 0.168 | 4.27 | 0.032 | 0.81 |
| **2212C** | 2 | 0.232 | 5.89 | 0.032 | 0.81 |
| **2213C** | 3 | 0.245 | 6.22 | 0.032 | 0.81 |
| **2214C** | 4 | 0.266 | 6.76 | 0.032 | 0.81 |
| **2215C** | 5 | 0.290 | 7.37 | 0.032 | 0.81 |
| **2216C** | 6 | 0.315 | 8.00 | 0.032 | 0.81 |
| **2219C** | 9 | 0.372 | 9.45 | 0.035 | 0.89 |
| **2219/12C** | 12 | 0.415 | 10.54 | 0.035 | 0.89 |
| **2219/15C** | 15 | 0.451 | 11.46 | 0.035 | 0.89 |
| **2219/19C** | 19 | 0.494 | 12.55 | 0.040 | 1.02 |
| **2219/23C** | 23 | 0.545 | 13.84 | 0.040 | 1.02 |
| **2219/27C** | 27 | 0.589 | 14.96 | 0.040 | 1.02 |

### 300 V, AWM 2464

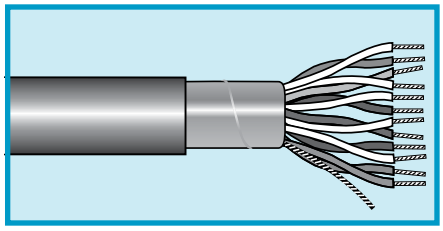
**18 AWG (0.81 mm²)**

Stranding: 16/30 (16 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2241C** | 1 | 0.226 | 5.74 | 0.032 | 0.81 |
| **2242C** | 2 | 0.333 | 8.46 | 0.035 | 0.89 |
| **2243C** | 3 | 0.357 | 9.07 | 0.037 | 0.94 |
| **2244C** | 4 | 0.397 | 10.08 | 0.040 | 1.02 |
| **2245C** | 5 | 0.445 | 11.30 | 0.045 | 1.14 |
| **2246C** | 6 | 0.485 | 12.32 | 0.045 | 1.14 |
| **2249C** | 9 | 0.585 | 14.86 | 0.055 | 1.40 |
| **2249/12C** | 12 | 0.652 | 16.56 | 0.055 | 1.40 |
| **2249/19C** | 19 | 0.792 | 20.12 | 0.070 | 1.78 |

# Communication and Control

## 300 V Overall Foil Shield, Multipair, PVC, PVC



**UL PLTC/CM**
**UL VW-1**
**UL Sunlight Resistant**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +105°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Black and red pairs, numbered

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing inward
  Stranded tinned copper drain wire, 24 AWG (0.22 mm²), 7/32 (7 x 0.20)
- Slate PVC jacket

### Availability

500 ft (152 m)
1000 ft (305 m)

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.013 (0.33 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6417** | 2 | 0.267 | 6.78 | 0.038 | 0.97 |
| **6418** | 3 | 0.291 | 7.39 | 0.043 | 1.09 |
| **6419** | 4 | 0.315 | 8.00 | 0.043 | 1.09 |
| **6420** | 6 | 0.370 | 9.40 | 0.043 | 1.09 |
| **6421** | 9 | 0.447 | 11.35 | 0.053 | 1.35 |
| **6422** | 11 | 0.480 | 12.19 | 0.053 | 1.35 |
| **6423** | 15 | 0.545 | 13.84 | 0.053 | 1.35 |
| **6424** | 19 | 0.593 | 15.06 | 0.063 | 1.60 |
| **6425** | 27 | 0.698 | 17.73 | 0.063 | 1.60 |
| **6426** | 51 | 0.914 | 23.22 | 0.075 | 1.91 |

**18 AWG (0.96 mm²)**

Stranding: 19/30 (19 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6427** | 2 | 0.362 | 9.19 | 0.043 | 1.09 |
| **6428** | 3 | 0.403 | 10.24 | 0.053 | 1.35 |
| **6429** | 4 | 0.438 | 11.13 | 0.053 | 1.35 |
| **6430** | 6 | 0.518 | 13.16 | 0.053 | 1.35 |
| **6431** | 9 | 0.622 | 15.80 | 0.063 | 1.60 |
| **6432** | 11 | 0.671 | 17.04 | 0.063 | 1.60 |
| **6433** | 15 | 0.751 | 19.08 | 0.063 | 1.60 |

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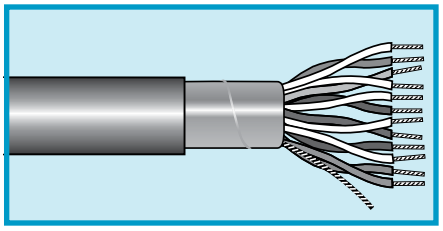
# Communication and Control

## 300 V Overall Foil Shield, Multipair, HDPE, PVC Low Capacitance, Extended Distance Cable



**UL AWM 2919 (30 V) VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart M (page 530)

### Materials

- Stranded tinned copper conductors
- High-density polyethylene insulation
- Aluminum/polyester/aluminum foil shield, 25% overlap min. Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

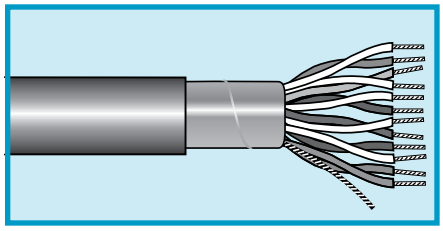
Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6083C** | 3 | 0.235 | 5.97 | 0.035 | 0.89 |
| **6084C** | 4 | 0.254 | 6.45 | 0.035 | 0.89 |
| **6087C** | 7 | 0.297 | 7.54 | 0.035 | 0.89 |
| **6089C** | 9 | 0.342 | 8.69 | 0.035 | 0.89 |
| **6089/18C** | 18 | 0.440 | 11.18 | 0.035 | 0.89 |

Characteristic impedance: 100 ohms
Mutual capacitance: 15 pF/ft (49.2 pF/m)
Ground capacitance: 27 pF/ft (88.6 pF/m)

# Communication and Control

## 300 V Overall Foil Shield, Multipair, PE, PVC Low Capacitance Data Cable



**UL AWM 2919 (30 V) VW-1**
**UL CM**
**CSA CMH FT1**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMH)

### Conductor Color Coding

- Chart M (page 530)

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.016 (0.41 mm)

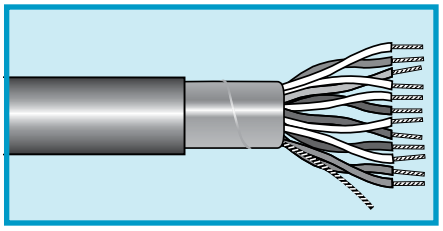
| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6301** | 6 | 0.351 | 8.92 | 0.035 | 0.89 |
| **6304** | 12.5 | 0.455 | 11.56 | 0.035 | 0.89 |

Characteristic impedance: 120 ohms
Mutual capacitance: 12.8 pF/ft (42 pF/m)
Ground capacitance: 23 pF/ft (75.4 pF/m)

UL LISTED CSA CA PROP 65 RoHS Compliant

# Communication and Control

## 300 V Overall Foil Shield, Multipair, FPP, PVC Low Capacitance Data Cable



**UL AWM 2919 (30 V) VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart A (page 528)

### Materials

- Stranded tinned copper conductors
- Foam polypropylene insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6202C** | 2 | 0.258 | 6.55 | 0.035 | 0.89 |
| **6203C** | 3 | 0.272 | 6.91 | 0.035 | 0.89 |
| **6204C** | 4.5* | 0.304 | 7.72 | 0.035 | 0.89 |
| **6205C** | 5 | 0.323 | 8.20 | 0.035 | 0.89 |
| **6206C** | 6 | 0.351 | 8.92 | 0.035 | 0.89 |
| **6207C** | 7 | 0.351 | 8.92 | 0.035 | 0.89 |
| **6208C** | 8 | 0.379 | 9.63 | 0.035 | 0.89 |
| **6209C** | 9 | 0.408 | 10.36 | 0.035 | 0.89 |
| **6210C** | 10 | 0.441 | 11.20 | 0.035 | 0.89 |
| **6210/12C** | 12.5* | 0.455 | 11.56 | 0.035 | 0.89 |
| **6210/15C** | 15 | 0.496 | 12.60 | 0.035 | 0.89 |
| **6210/18C** | 18.5* | 0.554 | 14.07 | 0.050 | 1.27 |
| **6210/25C** | 25 | 0.655 | 16.64 | 0.050 | 1.27 |

*Single conductor colors: 4.5 = black, 12.5 = red, 18.5 = white

Characteristic impedance: 105 ohms
Mutual capacitance: 12.5 pF/ft (41 pF/m)
Ground capacitance: 22 pF/ft (72 pF/m)

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.020 (0.51 mm)

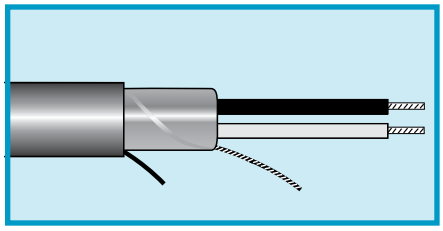
| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6212C** | 2 | 0.304 | 7.72 | 0.035 | 0.89 |
| **6213C** | 3 | 0.322 | 8.18 | 0.035 | 0.89 |
| **6216C** | 6 | 0.420 | 10.67 | 0.035 | 0.89 |
| **6217C** | 7 | 0.420 | 10.67 | 0.035 | 0.89 |
| **6218C** | 8 | 0.456 | 11.58 | 0.035 | 0.89 |
| **6220C** | 10 | 0.563 | 14.30 | 0.050 | 1.27 |
| **6220/12C** | 12.5* | 0.580 | 14.73 | 0.050 | 1.27 |
| **6220/15C** | 15 | 0.631 | 16.03 | 0.050 | 1.27 |
| **6220/18C** | 18.5* | 0.667 | 16.94 | 0.050 | 1.27 |
| **6220/25C** | 25 | 0.793 | 20.14 | 0.050 | 1.27 |

*Single conductor colors: 12.5 = red, 18.5 = white

Characteristic impedance: 105 ohms
Mutual capacitance: 12.5 pF/ft (41 pF/m)
Ground capacitance: 22 pF/ft (72 pF/m)

# Communication and Control

## 600 V Overall Foil Shield, Multipair, PE, PVC



**UL AWM 2106 VW-1**

### Operating Temperature

- -20°C to +60°C

### Conductor Color Coding

- Black, clear

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire one even AWG size smaller than conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**16 AWG (1.32 mm²)**

Stranding: 19/0.0117 (19 x 0.30 mm)
Insulation thickness: 0.032 (0.81 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2471** | 1 | 0.314 | 7.98 | 0.035 | 0.89 |

Mutual capacitance: 20.5 pF/ft (67.3 pF/m)
Ground capacitance: 37 pF/ft (121.4 pF/m)

**14 AWG (1.94 mm²)**

Stranding: 19/27 (19 x 0.36 mm)
Insulation thickness: 0.032 (0.81 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2472** | 1 | 0.344 | 8.74 | 0.035 | 0.89 |

Mutual capacitance: 22.7 pF/ft (74.5 pF/m)
Ground capacitance: 41 pF/ft (134.5 pF/m)

**12 AWG (3.08 mm²)**

Stranding: 19/25 (19 x 0.45 mm)
Insulation thickness: 0.037 (0.94 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2473** | 1 | 0.412 | 10.46 | 0.040 | 1.02 |

Mutual capacitance: 23.9 pF/ft (78.4 pF/m)
Ground capacitance: 43 pF/ft (141.1 pF/m)

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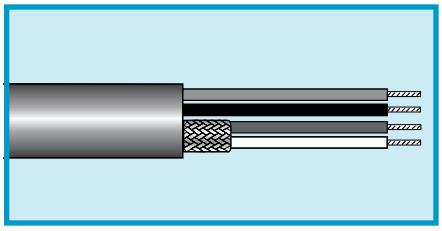
# Communication and Control

## 400 V Multiconductor, Multipair, PE, PVC Foil Shielded Pairs and Overall Foil Shield



**25 AWG (0.18 mm²)**

Stranding: 3/33 TC +4/33 TCW (3 x 0.18 +4 x 0.18 mm)
Insulation thickness: 0.013 (0.33 mm)

| Part No. | Conductors | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|---|
| | | | Inch | mm | Inch | mm |
| **2468** | 2 | 1 | 0.165 | 4.19 | 0.020 | 0.51 |

### Operating Temperature

- -20°C to +60°C

### Conductor Color Coding

- Conductors: 1 White, 2 Green
  Pair: Black-Red

### Materials

- Stranded tinned and steel-coated copper conductors
- Polyethylene insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire, 25 AWG (0.18 mm²), 7/33 (7 x 0.18 mm)
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

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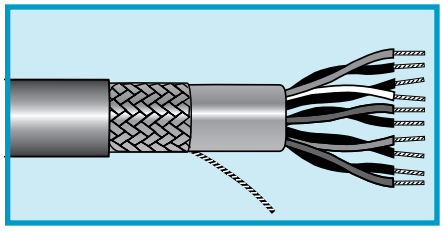
# Communication and Control

## 300 V Overall Foil/Braid Shield, Multipair, SR-PVC, PVC



**UL AWM 2464 VW-1**
**UL CL2**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CL2)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart A (page 528)

### Materials

- Stranded tinned copper conductors
- Semirigid PVC insulation
- Foil + braid shield
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
  Tinned copper braid, 65% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**28 AWG (0.09 mm²)**

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | Availability |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | Ft |
| **3472C** | 2 | 0.211 | 5.36 | 0.035 | 0.89 | 100 |
| **3474C** | 4 | 0.235 | 5.97 | 0.035 | 0.89 | 100 |
| **3475C** | 5 | 0.258 | 6.55 | 0.035 | 0.89 | 100, 1000 |
| **3476C** | 6 | 0.275 | 6.99 | 0.035 | 0.89 | 100 |
| **3477C** | 7 | 0.275 | 6.99 | 0.035 | 0.89 | 100 |
| **3480C** | 10 | 0.332 | 8.43 | 0.035 | 0.89 | 100, 500, 1000 |
| **3480/12C** | 12.5 | 0.342 | 8.69 | 0.035 | 0.89 | 100, 500, 1000 |
| **3480/18C** | 18 | 0.389 | 9.88 | 0.035 | 0.89 | 100, 500, 1000 |
| **3480/25C** | 25 | 0.446 | 11.33 | 0.035 | 0.89 | 100, 500, 1000 |

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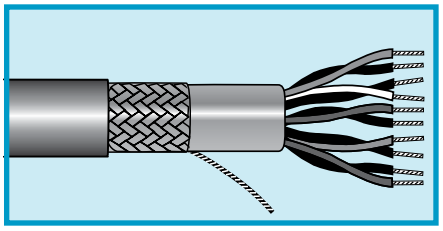
# Communication and Control

## 300 V Overall Foil/Braid Shield, Multipair, SR-PVC, PVC



**UL AWM 2464 VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- See tables

### Materials

- Stranded tinned copper conductors
- Semirigid PVC insulation
- Foil + braid shield
  Aluminum/polyester foil, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire, 24 AWG (0.23 mm²), 7/32 (7 x 0.20 mm)
  Tinned copper braid, 65% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.23 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | Color Code |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **6362** | 2 | 0.234 | 5.94 | 0.032 | 0.81 | M |
| **6363** | 3 | 0.246 | 6.25 | 0.032 | 0.81 | M |
| **6364** | 4 | 0.265 | 6.73 | 0.032 | 0.81 | M |
| **6365** | 5 | 0.286 | 7.26 | 0.032 | 0.81 | M |
| **6366** | 6 | 0.308 | 7.82 | 0.032 | 0.81 | M |
| **6367** | 7 | 0.308 | 7.82 | 0.032 | 0.81 | M |
| **6368** | 10 | 0.379 | 9.63 | 0.032 | 0.81 | M |
| **6369** | 12.5 | 0.389 | 9.62 | 0.032 | 0.81 | M |
| **6370** | 15 | 0.421 | 10.69 | 0.032 | 0.81 | M |
| **6371** | 18 | 0.451 | 11.46 | 0.032 | 0.81 | M |
| **6372** | 25 | 0.523 | 13.28 | 0.032 | 0.81 | M |

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25mm)
Insulation thickness: 0.010 (0.25 mm)

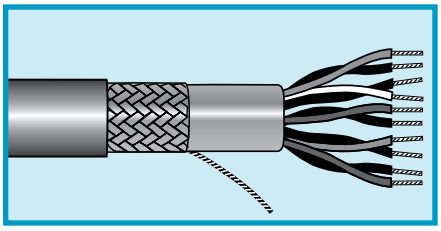
| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | Color Code |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **6373** | 2 | 0.254 | 6.45 | 0.032 | 0.81 | A |
| **6374** | 3 | 0.267 | 6.78 | 0.032 | 0.81 | A |
| **6375** | 4 | 0.288 | 7.32 | 0.032 | 0.81 | A |
| **6376** | 5 | 0.312 | 7.92 | 0.032 | 0.81 | Chart below |
| **6377** | 6 | 0.337 | 8.56 | 0.032 | 0.81 | A |
| **6378** | 7 | 0.337 | 8.56 | 0.032 | 0.81 | A |
| **6379** | 8 | 0.363 | 9.22 | 0.032 | 0.81 | Chart below |
| **6380** | 10 | 0.418 | 10.62 | 0.032 | 0.81 | A |
| **6381** | 12.5 | 0.430 | 10.92 | 0.032 | 0.81 | A |
| **6382** | 15 | 0.467 | 11.86 | 0.032 | 0.81 | A |
| **6383** | 18 | 0.500 | 12.70 | 0.032 | 0.81 | A |
| **6384** | 25 | 0.595 | 15.11 | 0.032 | 0.81 | A |

**Color Code Chart** (Part No. 6376 and 6379)

| Pair No. | Color | Pair No. | Color |
|---|---|---|---|
| 1 | Black, Red | 5 | Black, Yellow |
| 2 | Black, White | 6 | Black, Brown |
| 3 | Black, Green | 7 | Black, Orange |
| 4 | Black, Blue | 8 | Red, White |

# Communication and Control

## 300 V Overall Foil/Braid Shield, Multipair, PE, PVC Low Capacitance Data Cable



**UL AWM 2960 VW-1**
**UL CL2**
**CSA CMH FT1**

### Operating Temperature

- -20°C to +75°C (CL2)
- -20°C to +60°C (AWM, CMH)

### Conductor Color Coding

- Chart K (page 529)

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Foil + braid shielding
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
  Tinned copper braid, 90% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**28 AWG (0.089 mm²)**

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6390** | 2 | 0.211 | 5.36 | 0.035 | 0.89 |
| **6391** | 3 | 0.220 | 5.59 | 0.035 | 0.89 |
| **6392** | 4 | 0.235 | 5.97 | 0.035 | 0.89 |
| **6393** | 5 | 0.252 | 6.40 | 0.035 | 0.89 |
| **6394** | 7 | 0.269 | 6.83 | 0.035 | 0.89 |
| **6395** | 9 | 0.305 | 7.75 | 0.035 | 0.89 |
| **6396** | 12 | 0.335 | 8.51 | 0.035 | 0.89 |
| **6397** | 13 | 0.341 | 8.66 | 0.035 | 0.89 |
| **6398** | 18 | 0.383 | 9.73 | 0.035 | 0.89 |
| **6399** | 25 | 0.440 | 11.18 | 0.035 | 0.89 |
| **6400** | 31 | 0.470 | 11.94 | 0.035 | 0.89 |

Characteristic impedance: 100 ohms
Mutual capacitance: 15.5 pF/ft (50.9 pF/m)
Ground capacitance: 27.5 pF/ft (90.2 pF/m)

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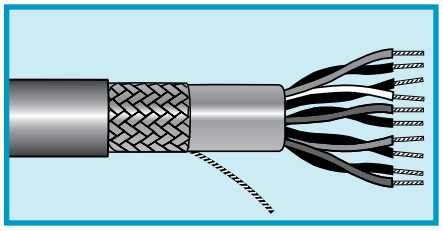
# Communication and Control

## 300 V Overall Foil/Braid Shield, Multipair, PE, PVC Low Capacitance Data Cable



**UL AWM 2919 VW-1**
**UL CM**
**CSA CM FT1**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)

### Conductor Color Coding

- Chart M (page 530)

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Foil + braid shielding
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
  Tinned copper braid, 65% or 90% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.23 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.016 (0.41 mm)
65% braid coverage

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6401** | 2 | 0.280 | 7.11 | 0.035 | 0.89 |
| **6402** | 3 | 0.294 | 7.47 | 0.035 | 0.89 |
| **6403** | 4 | 0.318 | 8.08 | 0.035 | 0.89 |
| **6404** | 5 | 0.345 | 8.76 | 0.035 | 0.89 |
| **6405** | 6 | 0.373 | 9.47 | 0.035 | 0.89 |
| **6406** | 7 | 0.373 | 9.47 | 0.035 | 0.89 |
| **6407** | 9 | 0.430 | 10.92 | 0.035 | 0.89 |
| **6408** | 10 | 0.463 | 11.76 | 0.035 | 0.89 |
| **6409** | 12 | 0.478 | 12.14 | 0.035 | 0.89 |
| **6410** | 18 | 0.580 | 14.73 | 0.047 | 1.19 |
| **6411** | 25 | 0.671 | 17.04 | 0.047 | 1.19 |

Characteristic impedance: 100 ohms
Mutual capacitance: 15.5 pF/ft (50.9 pF/m)
Ground capacitance: 27.5 pF/ft (90.2 pF/m)

**24 AWG (0.23 mm²)**

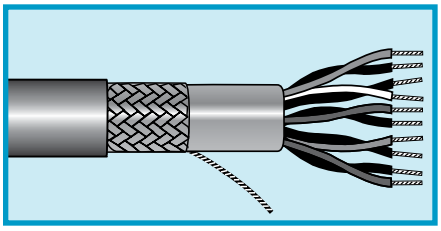
Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.016 (0.41 mm)
90% braid coverage

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6412** | 1 | 0.208 | 5.28 | 0.035 | 0.89 |
| **6413** | 2 | 0.280 | 7.11 | 0.035 | 0.89 |
| **6414** | 3 | 0.294 | 7.47 | 0.035 | 0.89 |
| **6415** | 4 | 0.318 | 8.08 | 0.035 | 0.89 |

Characteristic impedance: 120 ohms
Mutual capacitance: 12.8 pF/ft (42 pF/m)
Ground capacitance: 23 pF/ft (75.5 pF/m)

# Communication and Control

## 300 V Overall Foil/Braid Shield, Multipair, FPP, PVC Low Capacitance Data Cable



**UL AWM 2919 (30 V) VW-1**
**UL CL2**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CL2)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart M (page 530)

### Materials

- Stranded tinned copper conductors
- Foam polypropylene insulation
- Foil + braid shielding
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
  Tinned copper braid, 65% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**28 AWG (0.089 mm²)**

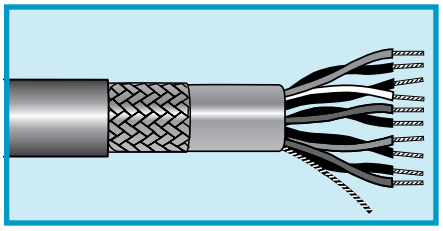
Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.013 (0.33 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3492C** | 2 | 0.230 | 5.84 | 0.035 | 0.89 |
| **3493C** | 3 | 0.241 | 6.12 | 0.035 | 0.89 |
| **3494C** | 4 | 0.265 | 6.73 | 0.035 | 0.89 |
| **3495C** | 5 | 0.284 | 7.21 | 0.035 | 0.89 |
| **3496C** | 6 | 0.305 | 7.75 | 0.035 | 0.89 |
| **3498C** | 8 | 0.326 | 8.28 | 0.035 | 0.89 |
| **3500/12C** | 12.5 | 0.381 | 9.67 | 0.035 | 0.89 |
| **3500/18C** | 18 | 0.439 | 11.15 | 0.035 | 0.89 |
| **3500/25C** | 25 | 0.531 | 13.49 | 0.048 | 1.22 |

Mutual capacitance: 12 pF/ft (39.3 pF/m)
Ground capacitance: 20 pF/ft (65.5 pF/m)

# Communication and Control

## 300 V Overall Foil/Braid Shield, Multipair, FPP, PVC Low Capacitance Data Cable



**UL AWM 2919 (30 V) VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart M (page 530)

### Materials

- Stranded tinned copper conductors
- Foam polypropylene insulation
- Foil + braid shielding
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
  Tinned copper braid, 65% coverage
- Slate PVC jacket

### Availability

500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.23 mm²)**

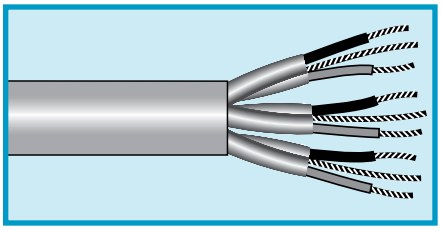
Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.016 (0.41 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6222C** | 2 | 0.280 | 7.11 | 0.035 | 0.89 |
| **6223C** | 3 | 0.294 | 7.47 | 0.035 | 0.89 |
| **6224C** | 4 | 0.318 | 8.08 | 0.035 | 0.89 |
| **6225C** | 5 | 0.345 | 8.76 | 0.035 | 0.89 |
| **6226C** | 6 | 0.373 | 9.47 | 0.035 | 0.89 |
| **6227C** | 7 | 0.373 | 9.47 | 0.035 | 0.89 |
| **6228C** | 8 | 0.401 | 10.19 | 0.035 | 0.89 |
| **6230C** | 10 | 0.463 | 11.76 | 0.035 | 0.89 |
| **6230/12C** | 12.5 | 0.477 | 12.12 | 0.035 | 0.89 |
| **6230/15C** | 15 | 0.518 | 13.16 | 0.035 | 0.89 |
| **6230/18C** | 18 | 0.586 | 14.88 | 0.050 | 1.27 |
| **6230/25C** | 25 | 0.677 | 17.20 | 0.050 | 1.27 |

Characteristic impedance: 105 ohms
Mutual capacitance: 12.5 pF/ft (41 pF/m)
Ground capacitance: 22 pF/ft (72 pF/m)

# Communication and Control

## 300 V Individually Foil Shielded Pairs, Multipair, PVC, PVC



**UL AWM 2919 (30 V) VW-1**
**UL CL2**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart A (page 528)

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Individual aluminum/polyester foil shield, 25% overlap min. Foil facing inward Stranded tinned copper drain wire
- PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)
22 AWG (0.35 mm²) drain wire

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6052C** | 2 | 0.316 | 8.03 | 0.043 | 1.09 |
| **6053C** | 3 | 0.334 | 8.48 | 0.043 | 1.09 |
| **6054C** | 4 | 0.364 | 9.25 | 0.043 | 1.09 |
| **6056C** | 6 | 0.451 | 11.46 | 0.053 | 1.35 |
| **6059C** | 9 | 0.522 | 13.26 | 0.053 | 1.35 |
| **6059/11C** | 11 | 0.581 | 14.76 | 0.053 | 1.35 |
| **6059/15C** | 15 | 0.644 | 16.36 | 0.053 | 1.35 |
| **6059/19C** | 19 | 0.698 | 17.73 | 0.063 | 1.60 |
| **6059/27C** | 27 | 0.828 | 21.03 | 0.063 | 1.60 |

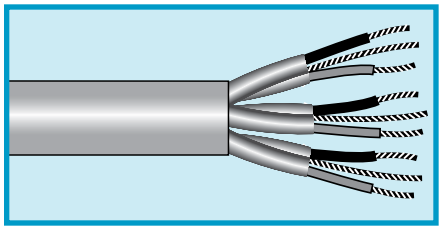
**18 AWG (0.81 mm²)**

Stranding: 16/30 (16 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)
20 AWG (0.51 mm²) drain wire

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6062C** | 2 | 0.376 | 9.55 | 0.043 | 1.09 |
| **6063C** | 3 | 0.418 | 10.62 | 0.053 | 1.35 |
| **6064C** | 4 | 0.456 | 11.58 | 0.053 | 1.35 |
| **6066C** | 6 | 0.541 | 13.74 | 0.053 | 1.35 |
| **6069C** | 9 | 0.650 | 16.51 | 0.063 | 1.60 |
| **6069/15C** | 15 | 0.804 | 20.42 | 0.063 | 1.60 |

# Communication and Control

## 300 V Individually Foil Shielded Pairs, Multipair, PP, PVC



**UL 2493 VW-1**
**UL CM, CMG**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +75°C (CM)
- -20°C to +60°C (AWM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart A (page 528)

### Materials

- Solid or stranded tinned copper conductors
- Polypropylene insulation
- Individual aluminum/polyester foil shield, 25% overlap min. Foil facing inward
  Solid or stranded tinned copper drain wire, 22 AWG (0.35 mm²), 7/30 (7 x 0.25 mm)
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**22 AWG (0.32 mm²)**

Stranding: Solid
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | UL |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **6000C** | 3 | 0.278 | 7.06 | 0.047 | 1.19 | CM |
| **6008C** | 15 | 0.492 | 12.50 | 0.047 | 1.19 | CM |

Characteristic impedance: 62 ohms
Mutual capacitance: 25 pF/ft (82 pF/m)
Ground capacitance: 45 pF/ft (147 pF/m)

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | UL |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **6010C** | 3 | 0.298 | 7.57 | 0.048 | 1.22 | CMG |
| **6012C** | 6 | 0.378 | 9.60 | 0.048 | 1.22 | CMG |
| **6014C** | 9 | 0.436 | 11.07 | 0.048 | 1.22 | CMG |
| **6016C** | 11 | 0.483 | 12.27 | 0.048 | 1.22 | CMG |
| **6017C** | 12 | 0.483 | 12.27 | 0.048 | 1.22 | CMG |
| **6018C** | 15 | 0.565 | 14.35 | 0.063 | 1.60 | CM |
| **6019C** | 17 | 0.593 | 15.06 | 0.063 | 1.60 | CM |
| **6020C** | 19 | 0.593 | 15.06 | 0.063 | 1.60 | CM |
| **6022C** | 27 | 0.698 | 17.73 | 0.063 | 1.60 | CM |

Characteristic impedance: 55 ohms
Mutual capacitance: 28 pF/ft (91.9 pF/m)
Ground capacitance: 50 pF/ft (164 pF/m)

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.33 mm)
Insulation thickness: 0.013 (0.33 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | UL |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **6032C** | 2 | 0.331 | 8.41 | 0.047 | 1.19 | CMG |
| **6033C** | 3 | 0.349 | 8.86 | 0.047 | 1.19 | CMG |
| **6036C** | 6 | 0.450 | 11.43 | 0.047 | 1.19 | CMG |
| **6039C** | 9 | 0.555 | 14.10 | 0.063 | 1.60 | CMG |
| **6042C** | 12 | 0.615 | 15.62 | 0.063 | 1.60 | CMG |

Characteristic impedance: 61 ohms
Mutual capacitance: 25 pF/ft (82 pF/m)
Ground capacitance: 45 pF/ft (147.6 pF/m)

**18 AWG (0.81 mm²)**

Stranding: 16/30 (16 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)

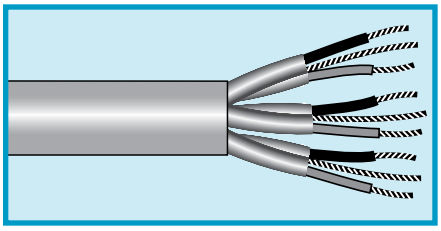
| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | UL |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **6023C** | 3 | 0.406 | 10.31 | 0.047 | 1.19 | CM |
| **6024C** | 6 | 0.561 | 14.25 | 0.063 | 1.60 | CM |
| **6025C** | 9 | 0.650 | 16.51 | 0.063 | 1.60 | CM |

Characteristic impedance: 59 ohms
Mutual capacitance: 26 pF/ft 85.3 pF/m)
Ground capacitance: 47 pF/ft (154.2 pF/m)

UL LISTED CSA CA PROP 65 RoHS Compliant

# Communication and Control

## 300 V Individually Foil Shielded Pairs, Multipair, PVC, PVC



**UL PLTC**
**UL CM**
**UL VW-1**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +105°C (PLTC, CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Black and red pairs, numbered

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Individual aluminum/polyester foil shield, 25% overlap min. Foil facing inward Stranded tinned copper drain wire
- Slate PVC jacket

### Availability

500 ft (152 m)
1000 ft (305 m)

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.013 (0.33 mm)
24 AWG (0.23 mm²) drain wire

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6434** | 2 | 0.295 | 7.49 | 0.043 | 1.09 |
| **6435** | 3 | 0. 311 | 7.89 | 0.043 | 1.09 |
| **6436** | 4 | 0.338 | 8.58 | 0.043 | 1.35 |
| **6437** | 6 | 0.420 | 10.66 | 0.053 | 1.35 |
| **6438** | 9 | 0.484 | 12.29 | 0.053 | 1.35 |
| **6439** | 11 | 0.537 | 13.63 | 0.053 | 1.35 |
| **6440** | 19 | 0.646 | 16.40 | 0.063 | 1.60 |
| **6441** | 51 | 1.020 | 25.90 | 0.075 | 1.91 |

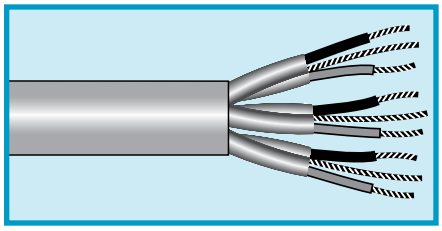
**18 AWG (0.96 mm²)**

Stranding: 19/30 (19 x 0.25 mm)
Insulation thickness: 0.016 (0.41 mm)
20 AWG (0.56 mm²) drain wire

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6442** | 2 | 0.406 | 10.31 | 0.053 | 1.35 |
| **6443** | 3 | 0.429 | 10.90 | 0.053 | 1.35 |
| **6444** | 4 | 0.468 | 11.89 | 0.053 | 1.35 |
| **6445** | 6 | 0.557 | 14.15 | 0.053 | 1.35 |
| **6446** | 9 | 0.669 | 16.99 | 0.063 | 1.60 |
| **6447** | 11 | 0.746 | 18.95 | 0.063 | 1.60 |
| **6448** | 15 | 0.829 | 21.06 | 0.063 | 1.60 |

# Communication and Control

## 350 V Individually Foil Shielded Pairs, Multipair, PP, PE Direct Burial



| 20 AWG (0.51 mm²) | | | | | |
|---|---|---|---|---|---|
| Stranding: 10/30 (10 x 0.25 mm)<br>Insulation thickness: 0.008 (0.20 mm) | | | | | |
| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
| | | Inch | mm | Inch | mm |
| **6314** | 3 | 0.291 | 7.39 | 0.040 | 1.02 |
| **6315** | 6 | 0.385 | 9.78 | 0.045 | 1.14 |

Characteristic impedance: 48 ohms
Mutual capacitance: 31 pF/ft (101.7 pF/m)
Ground capacitance: 56 pF/ft (183.7 pF/m)

### Operating Temperature

- -20°C to +80°C

### Conductor Color Coding

- Chart A (page 528)

### Materials

- Stranded tinned copper conductors
- Polypropylene insulation
- Individual aluminum/polyester foil shield, 25% overlap min. Foil facing inward
  Stranded tinned copper drain wire, 22 AWG (0.35 mm²), 7/30 (7 x 0.25 mm)
- Black polyethylene jacket

### Availability

1000 ft (305 m)
500 ft (152 m)

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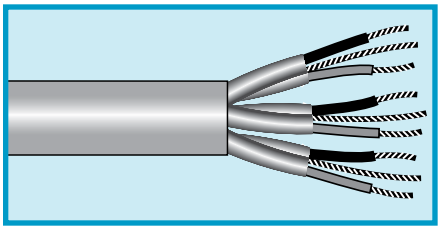
# Communication and Control

## 300 V Individually Foil Shielded Pairs, Multipair, PE, PVC



**UL AWM 2919 (30 V) VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +80°C (AWM)
- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

- Chart A (page 528)

### Materials

- Stranded tinned copper conductors
- Polyethylene insulation
- Individual aluminum/polyester foil shield, 25% overlap min. Foil facing inward
  Stranded tinned copper drain wire equal in size to conductor
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

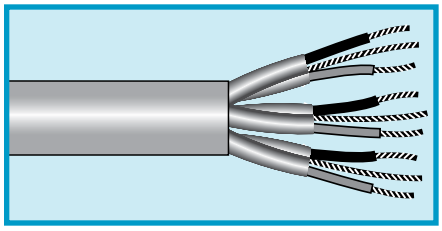
Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6385** | 3 | 0.247 | 6.27 | 0.035 | 0.89 |
| **6386** | 6 | 0.317 | 8.05 | 0.035 | 0.89 |
| **6387** | 9 | 0.368 | 9.35 | 0.035 | 0.89 |
| **6388** | 12 | 0.411 | 10.44 | 0.035 | 0.89 |
| **6389** | 25 | 0.599 | 15.21 | 0.047 | 1.19 |

Characteristic impedance: 60 ohms
Mutual capacitance: 25 pF/ft (82 pF/m)
Ground capacitance: 47 pF/ft (154.2 pF/m)

# Communication and Control

## 300 V Individually Foil Shielded Pairs, Multipair, PP, PVC



**UL CMG**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +75°C (CM)
- -20°C to +60°C (CMG)

### Conductor Color Coding

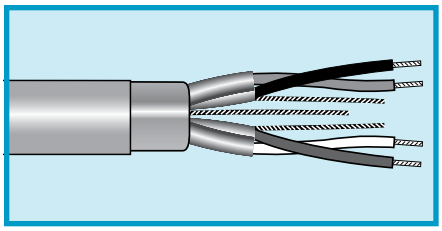
- See tables

### Materials

- Stranded tinned copper conductors
- Polypropylene insulation
- Individual aluminum/polyester foil shield, 25% overlap min. Stranded tinned copper drain wire (see tables for sizes)
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)



### Individually Shielded Pairs

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.010 (0.25 mm)
24 AWG (0.22 mm²) drain wire
Foil facing outward

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2466C** | 2 | 0.170 | 4.32 | 0.020 | 0.51 |

Characteristic impedance: 60 ohms
Mutual capacitance: 25 pF/ft (82 pF/m)
Ground capacitance: 45 pF/ft (147.6 pF/m)

Color code: 1 Red-Black, 2 Green-White.

### Individually Shielded Pairs, UL CM

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.008 (0.20 mm)
24 AWG (0.22 mm²) drain wire
Foil facing outward

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2463C** | 4 | 0.230 | 5.84 | 0.020 | 0.51 |

Characteristic impedance: 53 ohms
Mutual capacitance: 29 pF/ft (95.1 pF/m)
Ground capacitance: 52 pF/ft (170.6 pF/m)

Color code: 1 Red-Black, 2 Green-White, 3 White/Red-White/Black, 4 White/Green-White/Yellow.

### Individually Shielded Pairs

**20 AWG (0.56 mm²)**

Stranding: 7/28 (7 x 0.32 mm)
Insulation thickness: 0.015 (0.38 mm)
22 AWG (0.35 mm²) drain wire
Foil facing inward

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **2467C** | 4 | 0.340 | 8.64 | 0.030 | 0.76 |

Characteristic impedance: 66 ohms
Mutual capacitance: 23 pF/ft (75.5 pF/m)
Ground capacitance: 41 pF/ft (134.5 pF/m)

Color code: 1 Red-Black, 2 Green-White, 3 White/Red-White/Black, 4 White/Green-White/Yellow.

### Individually Shielded Pairs +Overall Shield, AWM 2717

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.009 (0.23 mm)
22 AWG (0.35 mm²) drain wire
Foil facing inward

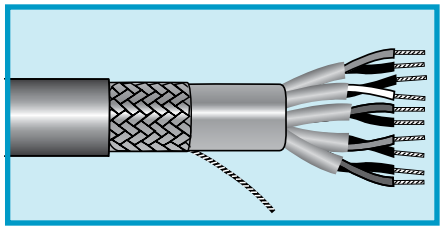
| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1243/2C** | 2 | 0.245 | 6.22 | 0.030 | 0.76 |

Characteristic impedance: 57 ohms
Mutual capacitance: 27 pF/ft (88.6 pF/m)
Ground capacitance: 49 pF/ft (160.7 pF/m)

Color code: 1 Red-Black, 2 Green-White.

# Communication and Control

## 300 V Individually Foil Shielded Pairs and Overall Foil/Braid, Multipair, FPE, PVC, Low Capacitance Data Cable



**UL AWM 2493 VW-1**
**UL CM**
**CSA CM FT1**

### Operating Temperature

- -20°C to +75°C (CM)
- -20°C to +60°C (AWM, CMG)

### Conductor Color Coding

- Chart A (page 528)
- (See table at right for Part No. 6319 and 6322)

### Materials

- Stranded tinned copper conductors
- Foam polyethylene insulation
- Individual aluminum/polyester foil shield, 25% overlap min.
  Foil facing inward
  Stranded tinned copper drain wire, 24 AWG (0.23 mm²), 7/32 (7 x 0.20 mm)
- Overall foil + braid shielding
  Aluminum/polyester foil, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire equal in size to conductor
  Tinned copper braid, 65% coverage
- Slate PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.019 (0.49 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **6316** | 2 | 0.349 | 8.86 | 0.048 | 1.22 |
| **6317** | 3 | 0.353 | 8.97 | 0.048 | 1.22 |
| **6318** | 4 | 0.397 | 10.08 | 0.048 | 1.22 |
| **6319*** | 5 | 0.430 | 10.92 | 0.048 | 1.22 |
| **6320** | 6 | 0.464 | 11.79 | 0.048 | 1.22 |
| **6321** | 7 | 0.464 | 11.79 | 0.048 | 1.22 |
| **6322*** | 8 | 0.499 | 12.67 | 0.048 | 1.22 |
| **6323** | 10 | 0.606 | 15.39 | 0.063 | 1.60 |
| **6324** | 15 | 0.687 | 17.45 | 0.063 | 1.60 |
| **6325** | 18 | 0.721 | 18.31 | 0.063 | 1.60 |
| **6326** | 25 | 0.901 | 22.89 | 0.085 | 2.16 |

Characteristic impedance: 100 ohms
Mutual capacitance: 12.5 pF/ft (41 pF/m)
Ground capacitance: 22 pF/ft (72.2 pF/m)

***Color Code**

| Pair No. | Color | Pair No. | Color |
|---|---|---|---|
| 1 | Black, Red | 5 | Black, Yellow |
| 2 | Black, White | 6 | Black, Brown |
| 3 | Black, Green | 7 | Black, Orange |
| 4 | Black, Blue | 8 | Red, White |

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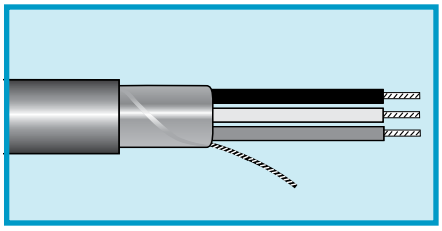
# Communication and Control

## 300 V Foil Shield, Multiconductor, PVC, PVC Plenum Rated



**UL CL2P**
**UL CMP**
**CSA CMP FT6**

### Operating Temperature

- -5°C to +75°C

### Conductor Color Coding

- Chart D2 (page 531)

### Materials

- Stranded bare copper conductors
- Plenum-rated PVC insulation
- Foil shield
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire (see tables for size)
- Slate plenum-rated PVC jacket

### Availability

500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.008 (0.020 mm)
24 AWG (0.22 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58401** | 2 | 0.120 | 3.05 | 0.015 | 0.39 |
| **57003** | 3 | 0.120 | 3.05 | 0.015 | 0.39 |
| **57004** | 4 | 0.131 | 3.33 | 0.015 | 0.39 |
| **57006** | 6 | 0.154 | 3.91 | 0.015 | 0.39 |
| **57008** | 8 | 0.167 | 4.24 | 0.015 | 0.39 |
| **57010** | 10 | 0.194 | 4.93 | 0.015 | 0.39 |
| **57015** | 15 | 0.217 | 5.51 | 0.015 | 0.39 |
| **58110/25** | 25 | 0.262 | 6.65 | 0.015 | 0.39 |

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.008 (0.020 mm)
24 AWG (0.22 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58411** | 2 | 0.126 | 3.20 | 0.015 | 0.39 |
| **58113** | 3 | 0.133 | 3.38 | 0.015 | 0.39 |
| **58114** | 4 | 0.145 | 3.68 | 0.015 | 0.39 |
| **58116** | 6 | 0.172 | 4.37 | 0.015 | 0.39 |
| **58117** | 7 | 0.172 | 4.37 | 0.015 | 0.39 |
| **58118** | 8 | 0.187 | 4.75 | 0.015 | 0.39 |
| **58119** | 9 | 0.201 | 5.11 | 0.015 | 0.39 |
| **58120** | 10 | 0.218 | 5.54 | 0.015 | 0.39 |
| **58120/12** | 12 | 0.225 | 5.72 | 0.015 | 0.39 |
| **58120/15** | 15 | 0.245 | 6.22 | 0.015 | 0.39 |
| **58120/25** | 25 | 0.314 | 7.98 | 0.017 | 0.43 |

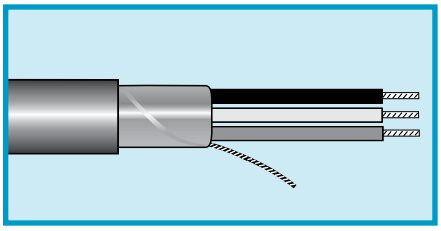
**20 AWG (0.35 mm²)**

Stranding: 7/0.0121 (7 x 0.31 mm)
Insulation thickness: 0.008 (0.020 mm)
22 AWG (0.35 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58421** | 2 | 0.138 | 3.51 | 0.015 | 0.39 |
| **58124** | 4 | 0.160 | 4.06 | 0.015 | 0.39 |
| **58126** | 6 | 0.191 | 4.85 | 0.015 | 0.39 |

# Communication and Control

## 300 V Foil Shield, Multiconductor, PVC, PVC Plenum Rated



**UL CL2P**
**UL CMP**
**CSA CMP FT6**

### Operating Temperature

- -5°C to +75°C

### Conductor Color Coding

- Chart D2 (page 531)

### Materials

- Stranded bare copper conductors
- Plenum-rated PVC insulation
- Foil shield
  Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire (see tables for size)
- Slate plenum-rated PVC jacket

### Availability

500 ft (152 m)
1000 ft (305 m)

**18 AWG (0.82 mm²)**

Stranding: 7/0.0152 (7 x 0.39 mm)
Insulation thickness: 0.009 (0.023 mm)
22 AWG (0.35 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58431** | 2 | 0.162 | 4.11 | 0.015 | 0.39 |
| **58133** | 3 | 0.172 | 4.37 | 0.015 | 0.39 |
| **58134** | 4 | 0.189 | 4.80 | 0.015 | 0.39 |
| **58136** | 6 | 0.227 | 5.77 | 0.015 | 0.39 |

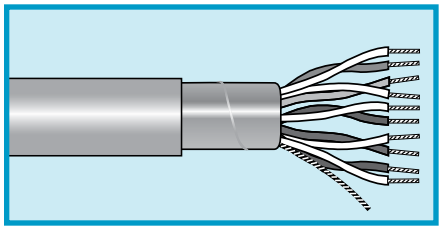
**16 AWG (1.31 mm²)**

Stranding: 7/0.0192 (7 x 0.49 mm)
Insulation thickness: 0.009 (0.023 mm)
18 AWG (0.82 mm²) drain wire

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58142** | 2 | 0.186 | 4.72 | 0.015 | 0.39 |
| **58144** | 4 | 0.218 | 5.54 | 0.015 | 0.39 |

# Communication and Control

## 300/150 V Foil Shield, Multipair, PVC, PVC Plenum Rated



**UL CL2P**
**UL CMP**
**CSA CMP FT6**

### Operating Temperature

- -5°C to +75°C

### Conductor Color Coding

- Chart A1 (page 528)

### Materials

- Stranded bare copper conductors
- Plenum-rated PVC insulation
- Foil shield
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing outward
  Stranded tinned copper drain wire (see tables for size)
- Slate plenum-rated PVC jacket

### Availability

500 ft (152 m)
1000 ft (305 m)

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.008 (0.020 mm)
24 AWG (0.22 mm²) drain wire

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **57602** | 2 | 0.165 | 4.19 | 0.015 | 0.39 |
| **57603** | 3 | 0.175 | 4.45 | 0.015 | 0.39 |
| **57604** | 4 | 0.193 | 4.90 | 0.015 | 0.39 |
| **57605** | 5 | 0.212 | 5.38 | 0.015 | 0.39 |
| **57606** | 6 | 0.231 | 5.87 | 0.015 | 0.39 |

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.008 (0.020 mm)
24 AWG (0.22 mm²) drain wire

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58412** | 2 | 0.185 | 4.70 | 0.015 | 0.39 |
| **58413** | 3 | 0.197 | 5.00 | 0.015 | 0.39 |
| **58414** | 4 | 0.217 | 5.51 | 0.015 | 0.39 |
| **58415** | 5 | 0.239 | 6.07 | 0.015 | 0.39 |
| **58416** | 6 | 0.261 | 6.63 | 0.015 | 0.39 |
| **57628** | 8 | 0.285 | 7.24 | 0.015 | 0.39 |
| **58419** | 9 | 0.311 | 7.90 | 0.016 | 0.41 |
| **58420/19** | 19 | 0.418 | 10.62 | 0.018 | 0.46 |

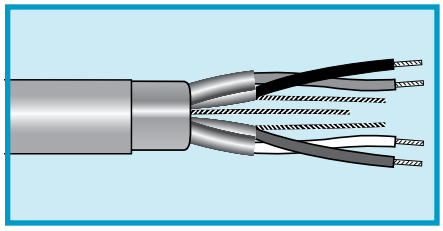
**20 AWG (0.35 mm²)**

Stranding: 7/0.0121 (7 x 0.31 mm)
Insulation thickness: 0.008 (0.020 mm)
22 AWG (0.35 mm²) drain wire

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **57632** | 2 | 0.205 | 5.21 | 0.015 | 0.39 |
| **57634** | 4 | 0.240 | 6.10 | 0.015 | 0.39 |
| **57636** | 6 | 0.291 | 7.39 | 0.015 | 0.39 |

# Communication and Control

## 150 V Foil Shield, Multipair, FEP, PVDF
## Plenum Rated, Low- and Mid-Capacitance



**UL CL2P**
**UL CMP**
**CSA CMP FT6**

### Operating Temperature

- -25°C to +125°C

### Conductor Color Coding

- Chart A1 (page 528)

### Materials

- Stranded tinned copper conductors
- FEP insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing inward
  Stranded tinned copper drain wire, 24 AWG (0.22 mm²), 7/32 (7 x 0.20 mm)
- Slate PVDF jacket

### Availability

500 ft (152 m)
1000 ft (305 m)*
*May contain multiple lengths

### Individually Shielded Pairs

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.007 (0.18 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58602** | 2 | 0.164 | 4.17 | 0.009 | 0.23 |
| **58603** | 3 | 0.175 | 4.45 | 0.009 | 0.23 |
| **58604** | 4 | 0.194 | 4.93 | 0.009 | 0.23 |

Mutual capacitance: 25 pF/ft (82 pF/m)
Ground capacitance: 45 pF/ft (147.6 pF/m)

### Overall Shield

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.007 (0.18 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58802** | 2 | 0.154 | 3.91 | 0.011 | 0.28 |
| **58803** | 3 | 0.163 | 4.14 | 0.011 | 0.28 |
| **58804** | 4 | 0.180 | 4.57 | 0.011 | 0.28 |
| **58806** | 6 | 0.217 | 5.51 | 0.011 | 0.28 |
| **58809** | 9 | 0.256 | 6.50 | 0.011 | 0.28 |
| **58812** | 12.5 | 0.294 | 7.47 | 0.011 | 0.28 |

Mutual capacitance: 20 pF/ft (65.6 pF/m)
Ground capacitance: 36 pF/ft (118.1 pF/m)

### Overall Shield

**24 AWG (0.22 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.012 (0.30 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58902** | 2 | 0.186 | 4.72 | 0.011 | 0.28 |
| **58903** | 3 | 0.199 | 5.05 | 0.011 | 0.28 |
| **58904** | 4 | 0.219 | 5.56 | 0.011 | 0.28 |
| **58906** | 6 | 0.266 | 6.76 | 0.011 | 0.28 |
| **58909** | 9 | 0.315 | 8.00 | 0.011 | 0.28 |
| **58912** | 12.5 | 0.367 | 9.32 | 0.011 | 0.28 |

Mutual capacitance: 12.5 pF/ft (41 pF/m)
Ground capacitance: 23 pF/ft (75.5 pF/m)

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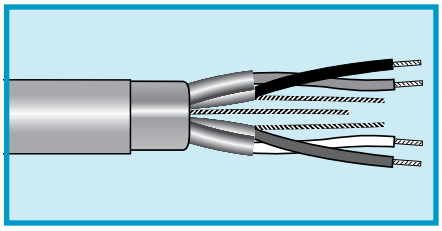
# Communication and Control

## 150 V Foil Shield, Multipair, FEP, PVDF
## Plenum Rated, Low- and Mid-Capacitance



**UL CL2P**
**UL CMP**
**CSA CMP FT6**

### Operating Temperature

- -55°C to +125°C

### Conductor Color Coding

- Chart A1 (page 528)

### Materials

- Stranded tinned copper conductors
- FEP insulation
- Aluminum/polyester foil shield, 25% overlap min.
  Foil facing inward
  Stranded tinned copper drain wire, 24 AWG (0.22 mm²), 7/32 (7 x 0.20 mm)
- Slate PVDF jacket

### Availability

500 ft (152 m)
1000 ft (305 m)*
*May contain multiple lengths

### Overall Foil Shield, Individually Shielded Pairs

**22 AWG (0.35 mm²)**

Stranding: 7/30 (7 x 0.25 mm)
Insulation thickness: 0.007 (0.18 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58612** | 2 | 0.189 | 4.80 | 0.009 | 0.23 |
| **58613** | 3 | 0.202 | 5.13 | 0.009 | 0.23 |
| **58616** | 6 | 0.272 | 6.91 | 0.009 | 0.23 |

Mutual capacitance: 29 pF/ft (95.1 pF/m)
Ground capacitance: 51 pF/ft (167.3 pF/m)

### Individually Shielded Pairs, Overall Shield

**18 AWG (0.82 mm²)**

Stranding: 7/0.0152 (7 x 0.39 mm)
Insulation thickness: 0.007 (0.18 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58632** | 2 | 0.247 | 6.27 | 0.010 | 0.25 |
| **58633** | 3 | 0.264 | 6.71 | 0.012 | 0.30 |

Mutual capacitance: 35 pF/ft (114.8 pF/m)
Ground capacitance: 63 pF/ft (206.7 pF/m)

### Individually Shielded Pairs

**16 AWG (0.35 mm²)**

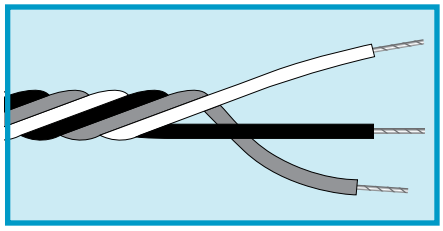
Stranding: 7/0.0192 (7 x 0.49 mm)
Insulation thickness: 0.007 (0.18 mm)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **58642** | 2 | 0.289 | 7.34 | 0.012 | 0.30 |
| **58643** | 3 | 0.309 | 7.85 | 0.012 | 0.30 |

Mutual capacitance: 39 pF/ft (128 pF/m)
Ground capacitance: 69 pF/ft (226.4 pF/m)

# Communication and Control

## 200 V Unshielded and Shielded, Multiconductor PVC, PVC Hi-Fi and Stereo Cable



### Operating Temperature

- -20°C to +80°C

### Conductor Color Coding

- 1 Black, 2 Red, 3 White, 4 Green

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Conductors twisted in an extra tight lay

### Availability

100 ft (30.5 m)
1000 ft (305 m)

**32 AWG (0.03 mm²)**

Stranding: 7/40 (7 x 0.08 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | |
|---|---|---|---|
| | | Inch | mm |
| **1101** | 3 | 0.063 | 1.60 |
| **1102** | 4 | 0.072 | 1.83 |

**30 AWG (0.05 mm²)**

Stranding: 7/38 (7 x 0.10 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | |
|---|---|---|---|
| | | Inch | mm |
| **1115** | 2 | 0.064 | 1.63 |
| **1116** | 3 | 0.070 | 1.78 |

## Miniature Shielded Cable

### Conductor Color Coding

- 1 Black, 2 Red, 3 White, 4 Green

### Materials

- Stranded tinned copper conductors
- Color-coded PVC insulation
- Tinned copper braid shield, 80% coverage
- Clear PVC jacket

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

**28 AWG (0.09 mm²)**

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1120** | 2 | 0.115 | 2.92 | 0.010 | 0.25 |
| **1121** | 3 | 0.120 | 3.05 | 0.010 | 0.25 |
| **1122** | 4 | 0.130 | 3.30 | 0.010 | 0.25 |

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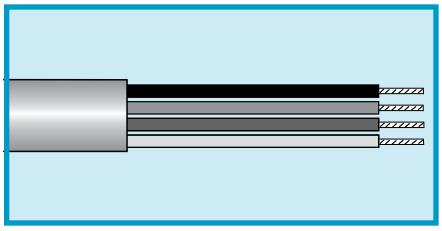
# Communication and Control

## 150 V Unshielded Multiconductor PP, PVC Silver Satin Oval Telephone Cable



### Temperature Rating

- -20°C to +60°C

### Conductor Color Coding

- See table

### Materials

- Stranded bare copper conductors
- Polypropylene insulation
- Silver PVC jacket

### Availability

328 ft (100 m), box
1000 ft (305 m), box

**26 AWG (0.14 mm²)**

Stranding: 7/34 (7 x 0.16 mm)
Insulation thickness: 0.009 (0.23 mm)

| Part No. | Conductors | Nominal Outer Dimension | | Jacket Thickness | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **1604** | 4 | 0.090 x 0.190 | 2.28 x 4.83 | 0.020 | 0.51 |
| **1606** | 6 | 0.090 x 0.270 | 2.28 x 6.85 | 0.024 | 0.61 |
| **1608** | 8 | 0.090 x 0.350 | 2.28 x 8.89 | 0.024 | 0.61 |

### Conductor Color Coding

| Conductor No. | 1604 | 1606 | 1608 |
|---|---|---|---|
| 1 | Black | White | Slate |
| 2 | Red | Black | Orange |
| 3 | Green | Red | Black |
| 4 | Yellow | Green | Red |
| 5 | | Yellow | Green |
| 6 | | Blue | Yellow |
| 7 | | | Blue |
| 8 | | | Brown |

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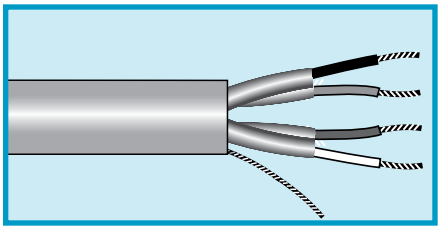
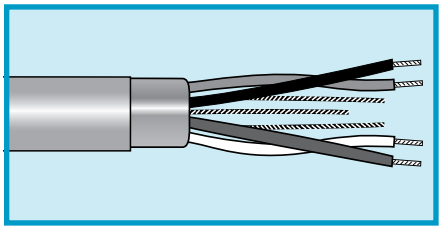
# Communication and Control

## 300 V Individually Foil Shielded Pairs or Overall Foil Shielded, Multipair, FPP, PVC





**UL AWM 2490, 2493, 2668**
**VW-1**
**UL CM**
**CSA CMG FT4**

### Operating Temperature

- -20°C to +75°C (CM)
- -20°C to +60 (AWM, CMG)

### Conductor Color Coding

- Chart K (page 529)

### Materials

- Solid or stranded tinned copper conductors
- Foam polypropylene insulation
- Individual aluminum/polyester foil shield, 25% overlap min. Foil facing inward
  Stranded tinned copper drain wire, 24 AWG (0.23 mm²), 7/32 (7 x 0.20 mm)
- Slate PVC jacket (unless otherwise noted)

### Availability

100 ft (30.5 m)
500 ft (152 m)
1000 ft (305 m)

### Individually Foil Shielded Pairs

**24 AWG (0.23 mm²)**

Stranding: 7/32 (7 x 0.20 mm)
Insulation thickness: 0.023 (0.58)

| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | AWM |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **6073C** | 3 | 0.374 | 9.50 | 0.048 | 1.22 | 2493 |
| **6076C** | 6 | 0.483 | 12.27 | 0.048 | 1.22 | 2493 |
| **6079C** | 9 | 0.597 | 15.16 | 0.065 | 1.65 | 2493 |
| **6079/11C** | 11 | 0.643 | 16.33 | 0.065 | 1.65 | 2493 |
| **6079/12C** | 12 | 0.663 | 16.84 | 0.065 | 1.65 | 2493 |
| **6079/15C** | 15 | 0.719 | 18.26 | 0.065 | 1.65 | 2493 |
| **6079/27C** | 27 | 0.962 | 24.43 | 0.087 | 2.21 | 2490 |

Characteristic impedance: 115 ohms
Mutual capacitance: 12 pF/ft (41 pF/m)

### Overall Foil Shield

**22 AWG (0.32 mm²)**

Stranding: Solid
Insulation thickness: 0.023 (0.58)

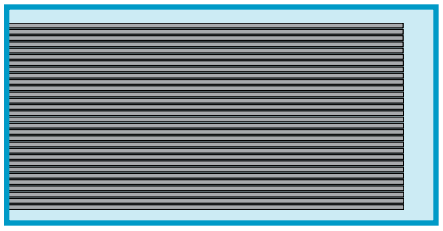
| Part No. | Pairs | Nominal Diameter | | Jacket Thickness | | AWM |
|---|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm | |
| **6072C*** | 2 | 0.42 | 9.50 | 0.035 | 0.89 | 2668 |

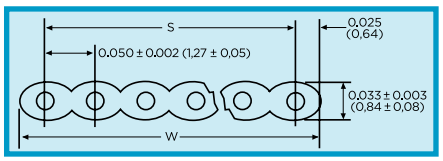
Characteristic impedance: 150 ohms
Mutual capacitance: 8.8 pF/ft (28.9 pF/m)

*Black jacket.

# Communication and Control

## 300 V Unshielded, Flat Cable, 0.050 (1.27 mm) Centerline






### UL AWM 2651, 20932 VW-1

### Operating Temperature

- -20°C to +105°C

### Materials

- Stranded tinned copper conductors
- Extruded PVC insulation (slate cable)
- Thermally bonded PVC with clear PVC covering (color-coded cable)

### Color

- AWM 2651: slate cable, with red polarity stripe on leading edge
- AWM 20932: color-coded cable: brown, red, orange, yellow, green, blue, violet, slate, white, black . . . repeats

### Electrical Characteristics

- Capacitance: 14 pF/ft (45.9 pF/m) nom. at 1 MHz
- Propagation delay: 1.4 ns/ft (4.6 ns/m) @ 0.18 ns risetime
- Impedance: 105 ohms (G-S-G configuration)
- Near-end crosstalk: 3.2%
- Far-end crosstalk: 11.5%
- Crosstalk measured on adjacent lines, 1 ns risetime, 10 ft (3.05 m) length

### Availability

100 ft (30.5 m)

May contain multiple lengths

**28 AWG (0.09 mm²)**

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | | Conductors | Width (W) | | Span (S) | |
|---|---|---|---|---|---|---|
| Slate (AWM 2651) | Color Coded (AWM 20932) | | Inch | mm | Inch | mm |
| **3580/9** | **3583/9** | 9 | 0.45 | 11.43 | 0.40 | 10.16 |
| **3580/10** | **3583/10** | 10 | 0.50 | 12.70 | 0.45 | 11.43 |
| **3580/14** | **3583/14** | 14 | 0.70 | 17.78 | 0.65 | 16.51 |
| **3580/15** | **3583/15** | 15 | 0.75 | 19.05 | 0.70 | 17.78 |
| **3580/16** | **3583/16** | 16 | 0.80 | 20.32 | 0.75 | 19.05 |
| **3580/20** | **3583/20** | 20 | 1.00 | 25.40 | 0.95 | 24.13 |
| **3580/24** | **3583/24** | 24 | 1.20 | 30.48 | 1.15 | 29.21 |
| **3580/25** | **3583/25** | 25 | 1.25 | 31.75 | 1.20 | 30.48 |
| **3580/26** | **3583/26** | 26 | 1.30 | 33.02 | 1.25 | 31.75 |
| **3580/34** | **3583/34** | 34 | 1.70 | 43.18 | 1.65 | 41.91 |
| **3580/37** | **3583/37** | 37 | 1.85 | 46.99 | 1.80 | 45.72 |
| **3580/40** | **3583/40** | 40 | 2.00 | 50.80 | 1.95 | 49.53 |
| **3580/50** | **3583/50** | 50 | 2.50 | 63.50 | 2.45 | 62.23 |
| **3580/60** | **3583/60** | 60 | 3.00 | 76.20 | 2.95 | 74.93 |
| **3580/64** | **3583/64** | 64 | 3.20 | 81.28 | 3.15 | 80.01 |

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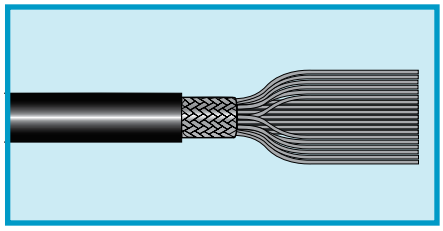
# Communication and Control

## 300 V Foil + Braid Shield, Round to Flat Flat Cable, 0.050 (1.27 mm) Centerline



**UL AWM 20381 (300 V)**
**UL CL2 (150 V)**

### Operating Temperature

- -20°C to +105°C

### Materials

- Stranded tinned copper conductors
- PVC insulation
- Foil + braid shield Aluminum/polyester Tinned copper braid (90% coverage)
- Black PVC jacket, 0.030 (0.08 mm) thick

### Configuration

- Flat cable termination area is 0.75 (19 mm) long and occurs every 1.5 (38 mm)

### Electrical Characteristics

- Capacitance: 24 pF/ft (78.7 pF/m) nom at 1 MHz
- Impedance: 70 ohms

### Availability

100 ft (30.5 m)
May contain multiple lengths

**28 AWG (0.09 mm²)**

Stranding: 7/36 (7 x 0.13 mm)
Insulation thickness: 0.010 (0.25 mm)

| Part No. | Conductors | Nominal Diameter | | Nominal Width | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3585/25** | 25 | 0.34 | 8.64 | 1.20 | 30.48 |
| **3585/26** | 26 | 0.35 | 8.89 | 1.65 | 41.91 |
| **3585/40** | 40 | 0.40 | 10.20 | 1.95 | 49.53 |
| **3585/50** | 50 | 0.46 | 11.70 | 2.45 | 62.23 |

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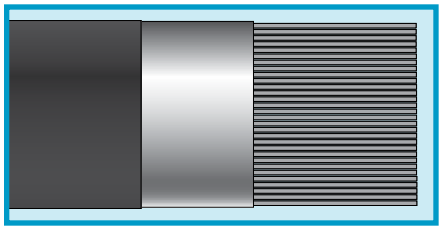
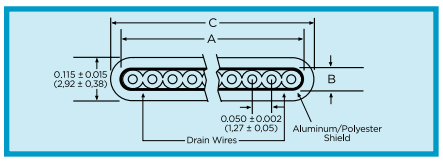
# Communication and Control

## 150 V, Jacketed, Foil Shield, Flat Cable, 0.050 (1.27 mm) Centerline






| 28 AWG (0.09 mm²) | | | | | |
|---|---|---|---|---|---|
| Stranding: 7/36 (7 x 0.13 mm)<br>Insulation thickness: 0.010 (0.25 mm) | | | | | |
| **Part No.** | **Conductors** | **Nom. Core Width (A)** | | **Nom. Jacket Width (C)** | |
| | | Inch | mm | Inch | mm |
| **3590/10** | 10 | 0.50 | 12.70 | 0.57 | 14.48 |
| **3590/14** | 14 | 0.70 | 17.78 | 0.77 | 19.56 |
| **3590/16** | 16 | 0.80 | 20.32 | 0.87 | 22.10 |
| **3590/26** | 26 | 1.30 | 33.02 | 1.37 | 34.80 |

**UL AWM 2912**
**UL Type CL2**

### Operating Temperature

- -20°C to +105°C

### Materials

- Stranded tinned copper conductors
- Extruded slate PVC insulation with red polarity stripe
- Aluminum/polyester/aluminum foil shield
  Two 28 AWG (0.09 mm²) stranded tinned copper drain wires
- Slate PVC jacket, 0.030 (0.08 mm) thick

### Electrical Characteristics

- Capacitance: 20 pF/ft (65.6 pF/m) nom. at 1 MHz
- Propagation delay: 1.45 ns/ft (4.8 ns/m) at 0.18 ns risetime
- Impedance: 70 ohms
- Near-end crosstalk: 5.5%
- Far-end crosstalk: 1.6%
- Crosstalk measured on adjacent lines, 3.5 ns risetime

### Availability

100 ft (30.5 m)
May contain multiple lengths

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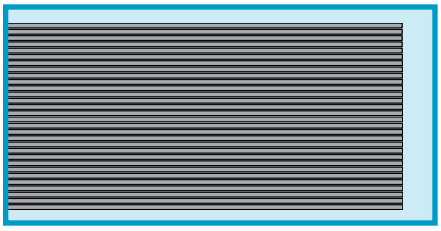
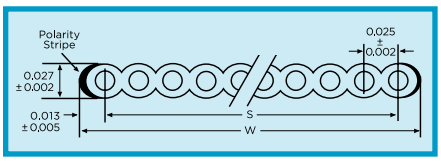
# Communication and Control

## 150 V Unshielded, Flat Cable, 0.025 (0.64 mm) Centerline






**30 AWG (0.05 mm²)**

Stranding: Solid
Insulation thickness: 0.013 (0.33 mm)

| Part No. | Conductors | Width (W) | | Span (S) | |
|---|---|---|---|---|---|
| | | Inch | mm | Inch | mm |
| **3582/26** | 26 | 0.65 | 16.51 | 0.625 | 15.88 |
| **3582/40** | 40 | 1.00 | 25.40 | 0.975 | 24.76 |
| **3582/50** | 50 | 1.25 | 31.75 | 1.225 | 31.15 |
| **3582/60** | 60 | 1.50 | 38.10 | 1.475 | 37.46 |

### UL AWM 2678 VW-1

### Operating Temperature

- -20°C to +105°C

### Color

- Slate, with red polarity stripe on leading edge

### Materials

- Solid bare copper conductors
- PVC insulation

### Electrical Characteristics

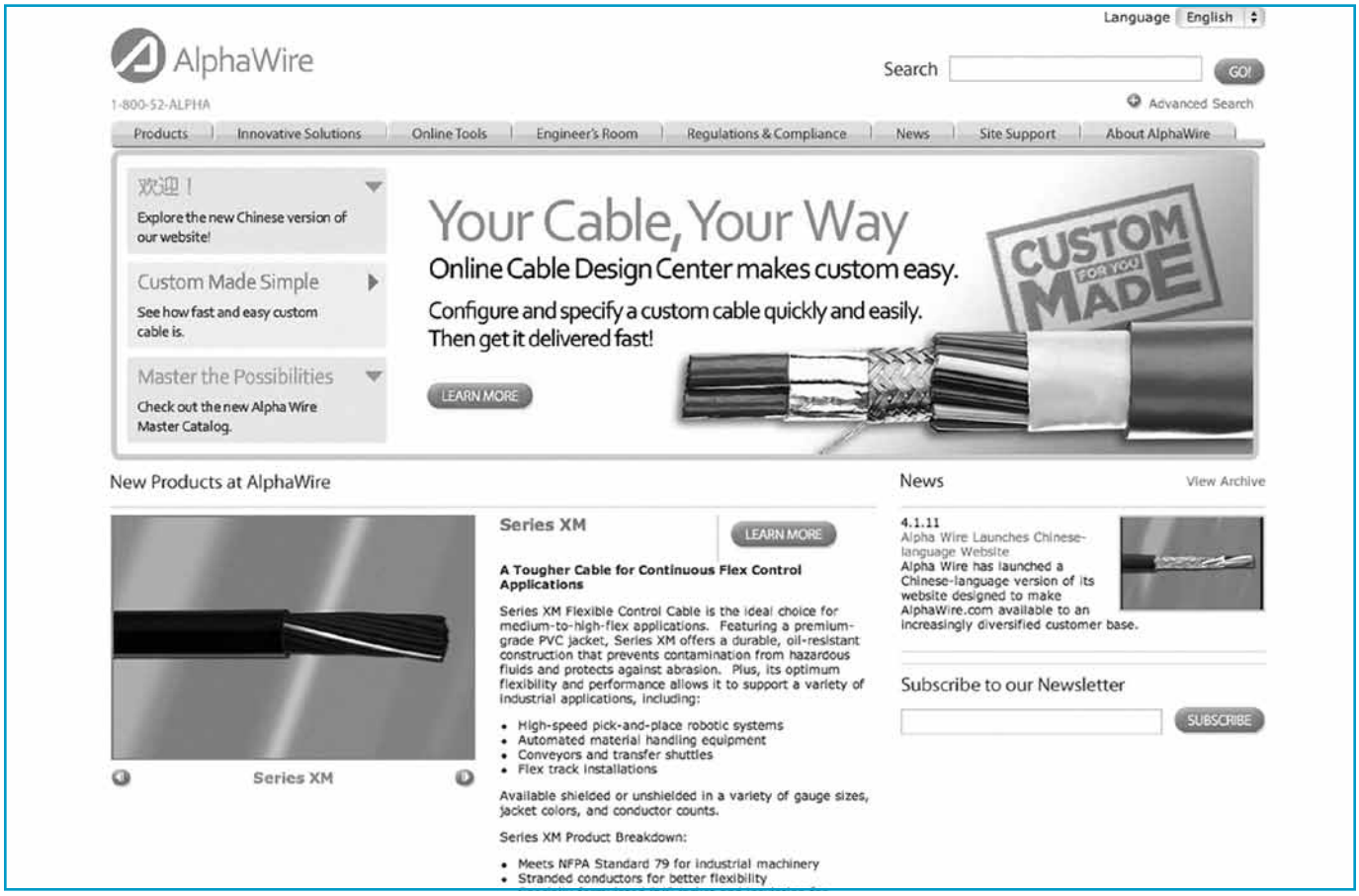
- Capacitance:
  24.9 pF/ft (82 pF/m) nom.
  (G-S-G) at 1 kHz
  14.3 pF/ft (47 pF/m) nom.
  (G-S) at 1 kHz
- Propagation delay: 1.52 ns/ft (4.9 ns/m)
- Impedance:
  78 ohms (G-S-G single-ended configuration)
  131 ohms nom. (G-S differential configuration)
- Skew: 0.036 ns/ft (0.12 ns/m) max

### Availability

100 ft (30.5 m)
May contain multiple lengths

RoHS Compliant

# Make AlphaWire.com your destination for all your cabling needs!



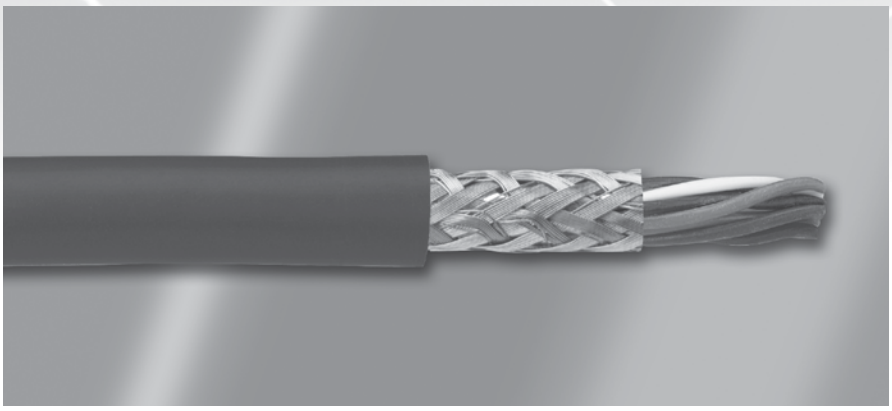

Easy to use, full of information, and designed to make the selection of wire, cable, tubing, and wire management fast and easy—the Alpha Wire website is the only source you need.

- **Search products by parameters**
- **View complete product listing**
- **Download specs**
- **Read white papers written by our industry experts**
- **Request a sample (or two!)**
- **Learn about our market-specific solution sets**
- **Download literature**
- **Look around our "Engineer's Room"**
- **Build your own cable with our powerful Cable Design Center™**

{ CONFESSION }

# We've taken a shine to working down on the farm

## (Our Solar Solution Set is a 24-hour per day workhorse)



For reliable, high-performance solar farms, Alpha Wire's Solar Solution Set helps engineers and installers create reliable, durable solar systems. Our solar cables and photovoltaic wire are designed for the harsh environments of solar energy applications—the hot and cold of climate extremes, ozone and UV radiation, moisture, oil, and direct burial. Our specially formulated PVC jackets provide years of reliable service by withstanding the potential environments without failing or degrading.

Regardless of your panel-to-grid needs, we have the product to satisfy it. With wire and cable in a range of gauges and conductor counts, Alpha has the solar solution. Alpha also has the accessories, from flexible conduit to heat-shrink tubing, to help you manage the system for faster installation, easier maintenance, and reliable operation.

### Proven Performance, Superior Support

Alpha Wire's solar cables and photovoltaic wire are proven throughout the industry. Better still, we offer the fastest delivery so you can order what you need from our large in-stock inventory today and receive it tomorrow. To find the ideal solar cable and wire for your application, and to download our new Solar Power brochure, visit **www.alphawire.com**.

### A Full Range for Power and Control

**Solar Power Solution Set**

- Photovoltaic wire
- Multiconductor solar cable
- Series M and Series P control cables
- Solid bus bar wires
- FIT® heat-shrink tubing
- Slit-loom and PVC flex tubing

**Typical Applications**

- Panel monitoring and control
- Panel to junction box
- Panel to collector
- Collector to inverter
- Grounding
- Motor supply

AlphaWire

*Cables you trust. Service you deserve.*

Toll Free: 1-800-52 ALPHA | www.alphawire.com

CABLE | WIRE | ACCESSORIES

## О компании

ООО "ТрейдЭлектроникс" - это оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов. Реализуемая нашей компанией продукция насчитывает более полумиллиона наименований.

Благодаря этому наша компания предлагает к поставке практически не ограниченный ассортимент компонентов как оптовыми, мелкооптовыми партиями, так и в розницу.

Наличие собственной эффективной системы логистики обеспечивает надежную поставку продукции по конкурентным ценам в точно указанные сроки.

Срок поставки со стоков в **Европе и Америке – от 3 до 14 дней.**

Срок поставки из **Азии – от 10 дней.**

Благодаря развитой сети поставщиков, помогаем в поиске и приобретении экзотичных или снятых с производства компонентов.

Предоставляем спец цены на элементы для создания инженерных сэмплов.

**Упорный труд, качественный результат дают нам право быть уверенными в себе и надежными для наших клиентов.**

## Наша компания это:

- Гарантия качества поставляемой продукции
- Широкий ассортимент
- Минимальные сроки поставок
- Техническая поддержка
- Подбор комплектации
- Индивидуальный подход
- Гибкое ценообразование

Наша организация особенно сильна в поставках модулей, микросхем, пассивных компонентов, ксайленсах (XC), EPF, EPM и силовой электроники.

Большой выбор предлагаемой продукции, различные виды оплаты и доставки, позволят Вам сэкономить время и получить максимум выгоды от сотрудничества с нами!

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гарантия бесперебойности производства и качества выпускаемой продукции

**Перечень производителей, продукцию которых мы поставляем на российский рынок**

AMD
ANALOG DEVICES
BOURNS
Coilcraft
élantec Semiconductor, Inc.
HARRIS
Infineon
JRC
MICREL
MOTOROLA
nichicon
PHILIPS
ROHM
SGS-THOMSON
Sipex
TAIYO YUDEN
TOKO
ZILOG
Winbond
Allegro
ATMEL
BURR - BROWN
EXAR
HITACHI
intel
Lattice
muRata
OKI
QUALCOMM
SAMSUNG
SHARP
SONY
TDK
TOSHIBA
KYOCERA
ALTERA
AVX
CITILYST
CYPRESS
FAIRCHILD SEMICONDUCTOR
HOLTEK
International IOR Rectifier
LINEAR TECHNOLOGY
MITSUBISHI
National Semiconductor
ON Semiconductor
REALTEK
SANYO
SHINDENGEN
SGS
TECCOR
TUNDRA
XILINX
Amphenol
Bay Linear
CIRRUS LOGIC
DALLAS
FUJITSU
IDT
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NEC
Panasonic
RENESAS
SII
SIEMENS
ST
Texas Instruments
VISHAY
ZETEX SEMICONDUCTORS

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гарантия бесперебойности производства и качества выпускаемой продукции

С удовольствием будем прорабатывать для Вас поставки всех необходимых компонентов по текущим запросам для скорейшего выявления групп элементов, по которым сотрудничество именно с нашей компанией будет для Вас максимально выгодным!

С уважением,

Менеджер отдела продаж ООО

«Трейд Электроникс»

Шишлаков Евгений

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