



# Electrical Spring Connector 412

## Data Sheet



### Application

The 3M™ Electrical Spring Connector 412 will electrically connect copper conductors in a pigtail application.

### Wire

#### AWG Range

Copper conductors only, No. 22 through 8 solid and/or stranded.  
(See wire matrix for specific combinations)

#### Metric Range

Copper conductors only, .5mm<sup>2</sup> thru 6mm<sup>2</sup> ridged (solid or stranded).

### Construction

**Spring** - Spring steel, corrosion-resistant coating  
**Insulator** - PVC

### Weight

0.0068 lbs (3,1 grams)

### Performance Test

The following tests were performed to the specifications of UL Standard 486C and CSA Standard C22.2 No. 188.

|                              |         |
|------------------------------|---------|
| Static Heating               | Pass    |
| Secureness                   | Pass    |
| Pullout                      | Pass    |
| Dielectric Voltage Withstand | Pass    |
| Secureness of Insulation     | Pass    |
| Flammability                 | V2 Min. |

### Engineering Specification

3M Spring Connector 412 is capable of a 1 conductor termination or a 2 or more conductor connection in a pigtail application. The connector shall be UL listed and CSA certified as a pressure wire connector. The connector shall be rated 600 volts maximum for building wire and 1000 volts maximum for lighting fixtures. The connector shall have a maximum operating temperature of 105°C (221°F).

### Installation Instructions

#### Caution

Turn power off before installing or removing terminal. All electrical work should be done according to appropriate electrical codes.

1. Strip wire insulation ½ inch.
2. Firmly grasp wires and ensure conductor ends are even. Conductors may be twisted or untwisted.
3. Place connector over the stripped conductor tips.
4. Turn connector on in a clockwise direction until secure.
5. To remove, turn connector counter-clockwise.

### Regulatory Agencies

**UL Listed** as a Wire Connector, tested per UL Standard 486C, UL File No. E23438  
Operating Temperature: 105°C (221°F)  
Voltage Rating: 600 volts max building wire, 1000 volts max signs and fixtures.

#### CSA Certified

CSA Standard C22.2 No. 188, CSA File No. LR15503  
Operating Temperature: 105°C (221°F)  
Voltage Rating: 600 volts max building wire, 1000 volts max signs and fixtures.

## Wire Matrix

**Other Combinations**

1 #16 w/1-2 #14 w/1 #12 or 10      1 #22 w/ 1 #18 w/ 1 #16  
 1 #22 w/ 1 #20 w/ 1-2 #16      1 #14 w/ 1-2 #12 w/ 1 #10  
 2 #14 w/ 1 #12 w/ 1 #10      1 #16 w/ 1 #12 w/ 1 #10  
 2 #16 w/ 2 #14 w/ 1 #12      2 #16 w/ 1 #12 w/ 1 #10  
 3 #16 w/ 1 #14 w 1 #12      4 #16 w/ 1 #12 w/ 1 #10  
 1#20sol w/ 1#22sol

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