512
Electrical Spring Connectors

Data Sheet

Application
Use a 512 connector to electrically connect two or more wire ends in a pigtail application and insulate the connection, or to insulate a single wire end.

Wire Range
AWG Range: Solid or stranded copper conductors only. No. 20 thru No. 8 (0,75 mm^2 thru 6,0 mm^2).

Construction
Spring - Spring Steel, Corrosion Resistant Coating
Insulator - Flame Retardant Nylon
Color - Red

Weight
.006 lb. (2,7 gm)

Engineering Specification
Electrical Spring Connector (as manufactured by 3M, part No. 512) shall be capable of connecting wires within the range of No. 20 thru No. 8 solid or stranded copper conductors in a pigtail application. The connector shall be constructed of an active (live) spring and covered by a polypropylene insulator. The spring shall have a corrosion resistant coating. The connector shall be UL Listed as a pressure cable connector and be CSA Certified. The connectors shall be voltage rated 600 volts maximum, building wire, 1000 volts maximum signs, fixtures, and luminaires. The connector shall have a maximum operating temperature of 105˚C.

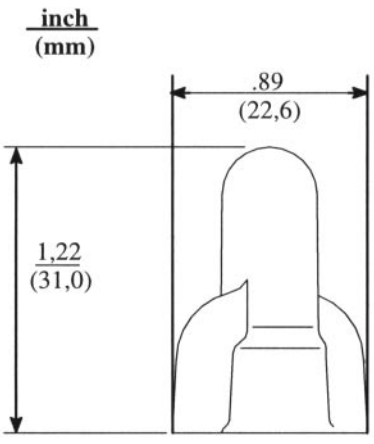
Regulatory Agencies
UL Listed as a Pressure Cable Connector
Tested per UL Standard 486C
UL File No. E23438

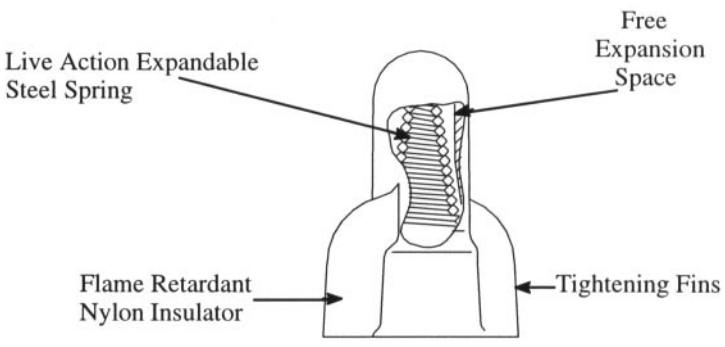
CSA Certified-CSA Standard C22.2 No. 0, 188-M1983
CSA File No. LR15503
Operating Temperature: 105˚C (221˚F)
Voltage Rating: 600 volts max. building wire
1000 volts max. signs and luminaires.
Flammability Rating: C22.2 No. 0.6 V-2

Classified in accordance with **IEC** (International Electrotechnical Commission) publications 685-1 and 685-2-4. UL-IEC file No. E95240.
Operating Temperature: 105˚C (221˚F)
Voltage Rating: 600 volts max. building wire; 1000 volts max. signs and fixtures
Flammability Rating: UL94 V-2

Federal Specification W-S-610:
"Commercial package only"

Type	Class	Kind	Style
1	1	cu	G





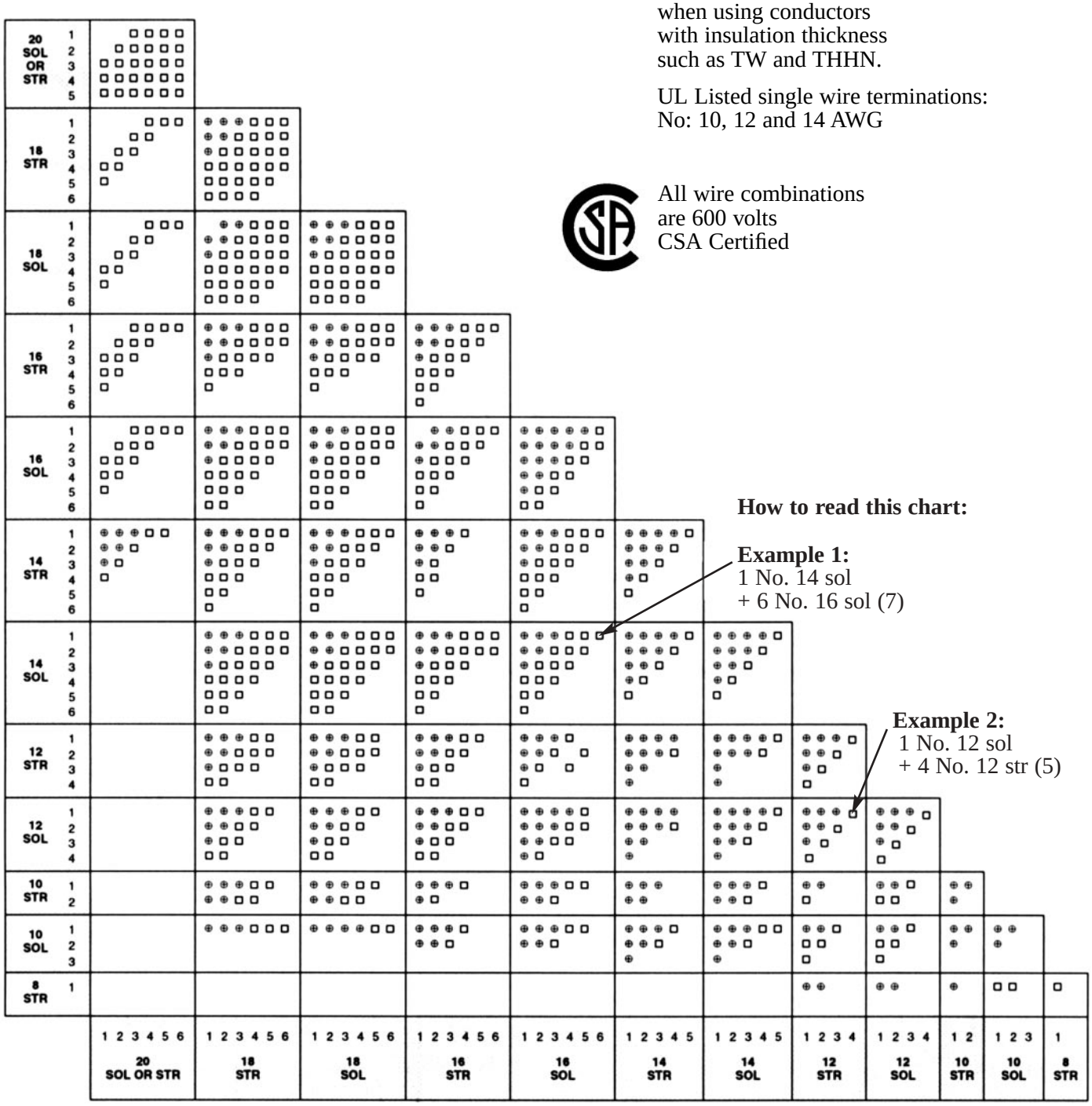
AWG Wire Combinations
Copper to Copper Conductors

□ = 300 volts
● = 600 volts

All wire combinations are 600 volt UL Listed when using conductors with insulation thickness such as TW and THHN.

UL Listed single wire terminations:
No: 10, 12 and 14 AWG

All wire combinations are 600 volts CSA Certified



How to read this chart:

Example 1:
1 No. 14 sol
+ 6 No. 16 sol (7)

Example 2:
1 No. 12 sol
+ 4 No. 12 str (5)

Installation Instructions

⚠WARNING

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

1. Strip wire insulation to length specified in chart to the right, according to conductor size.
2. Firmly grasp wires, making sure insulation ends are even and tightly bundled. (wires may be twisted or untwisted). Slip connector over wire tips.
3. Turn connector onto wires in a clockwise direction until secure.
4. To remove, turn connector counter-clockwise.

Conductor Size	Strip Length
20-16 AWG (0,75-1,5 mm^2)	3/4" (19,0 mm)
14-8 AWG (2,5-4,0 mm^2)	5/8" (15,9 mm)

Metric Wire Combinations

International Electrotechnical Commission

Rated Capacity: 2,0-16,0 mm^2
Voltage Rating: 600 volts maximum
Reusability: Reusable for same capacity or larger
Wire Type: Copper only

See installation instructions for conductor strip lengths.

I.E.C. Metric Wire Matrix:
Twist-on connecting devices for the combination of rigid (solid or stranded) and flexible conductors.

Conductor Size	Quantity
0.75 mm^2	3-6
1,0 mm^2	2-6
1,5 mm^2	2-6
2,5 mm^2	2-6
4,0 mm^2	2-4
6,0 mm^2	2

Only AWG combinations are UL Listed or CSA Certified.

IMPORTANT NOTICE

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

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