3M™ Wire Connector O/B+

Data Sheet **September 2013**

Product Description

Use a 3M™ Wire Connector O/B+ to electrically connect two or more conductor ends in a pigtail application and insulate the connection.

Agency Approvals & Self Certifications

LISTED WIRE CONNECTOR 314R

Underwriters Laboratories
Standard NO. UL 486C
3M File NO. E23438

Canadian Standards Association
Standard NO. 22.2
NO. 188-M1983
3M File NO. LR15503

IEC Publications
685-1 and 685-2-4
3M File NO. E95240

UL Listed

As a Pressure 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 lighting fixtures (luminaries)

Flammability Rating: UL94 V-2

CSA Certified

CSA Standard C22.2 No. 188-M1983, CSA File No. LR15503

Operating Temperature: 105°C (221°F) Voltage Rating: 600 volts max. Building wire 1000 volts max. signs and lighting fixtures (luminaries)

Flammability Rating: C22.2 No. 0.6 V-2

Federal Specification W-S-610

"Commercial Package Only"

Type	Class	Kind	Style
1	1	cu	G

Applications

AWG Range: COPPER conductors only, No. 22 thru No. 12 solid and/or stranded.

METRIC Range: COPPER conductors only, 0,5 mm 2 thru 2,5 mm2, ridged (solid or stranded) and flexible (See wire matrix for specific wire combinations.)

3M™ Wire Connector O/B+

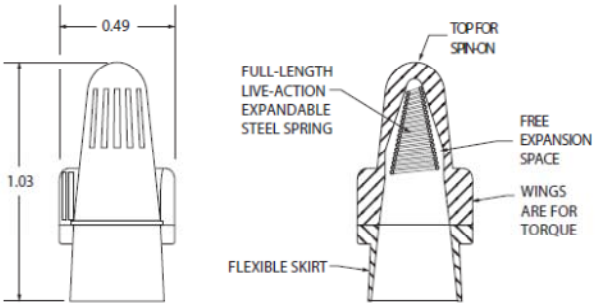
Specifications - Product

Weight: 0.0025 lbs. (1,13 gm)

Construction:

Spring: Spring steel, corrosion-resistant coating

Insulator: Flame retardant, polypropylene and thermoplastic elastomer, color coded; orange/blue



Specifications – Engineering/ Architectural

3M™ Wire Connector O/B+ is capable of connecting two or more wires in a pigtail application, in the wire range of No. 22 thru No. 12 AWG solid and/or stranded copper conductors. The connector shall be constructed with an active (live) spring with a corrosion resistant coating.

3M™ Wire Connector O/B+

Typical Physical and Electrical Properties

Performance Test (The following tests were performed to the specifications of UL Standard 486C and CSA Standard C22.2 No. 188-M1983.) unless stated	
Test	Typical Value
Static -Heathing	Pass
Secureness	Pass
Pullout	Pass
Dielectric Voltage Withstand	Pass
Secureness-Of-Insulation	Pass
Flammability	Pass
Salt Spray (Per MIL-STS-1344A Method 1001.1)	Pass
Vibration (Per MIL-STS-1344A Method 2005.1)	Pass
UV Exposure (Per ASTM G-53-77)	Pass

Fluid Immersion Test

Typical Reagents and Materials From ASTM D 543-87 and MIL-STD-1344A (Connectors were immersed in the following chemicals for seven days at 23°C ±2°C.	
Acetic Acid	Pass
Acetone	Pass
Detergent Solution, Heavy Duty	Pass
Ethyl Alcohol (95%)	Pass
Ethyl Alcohol (50%)	Pass
Heptane	Pass
Hydrogen Peroxide Solution 28%	Pass
Methyl Alcohol	Pass
Sodium Hydroxide Solution	Pass
Mineral Sprit	Pass
Lubricating Oil	Pass

Installation Techniques

⚠ CAUTION

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

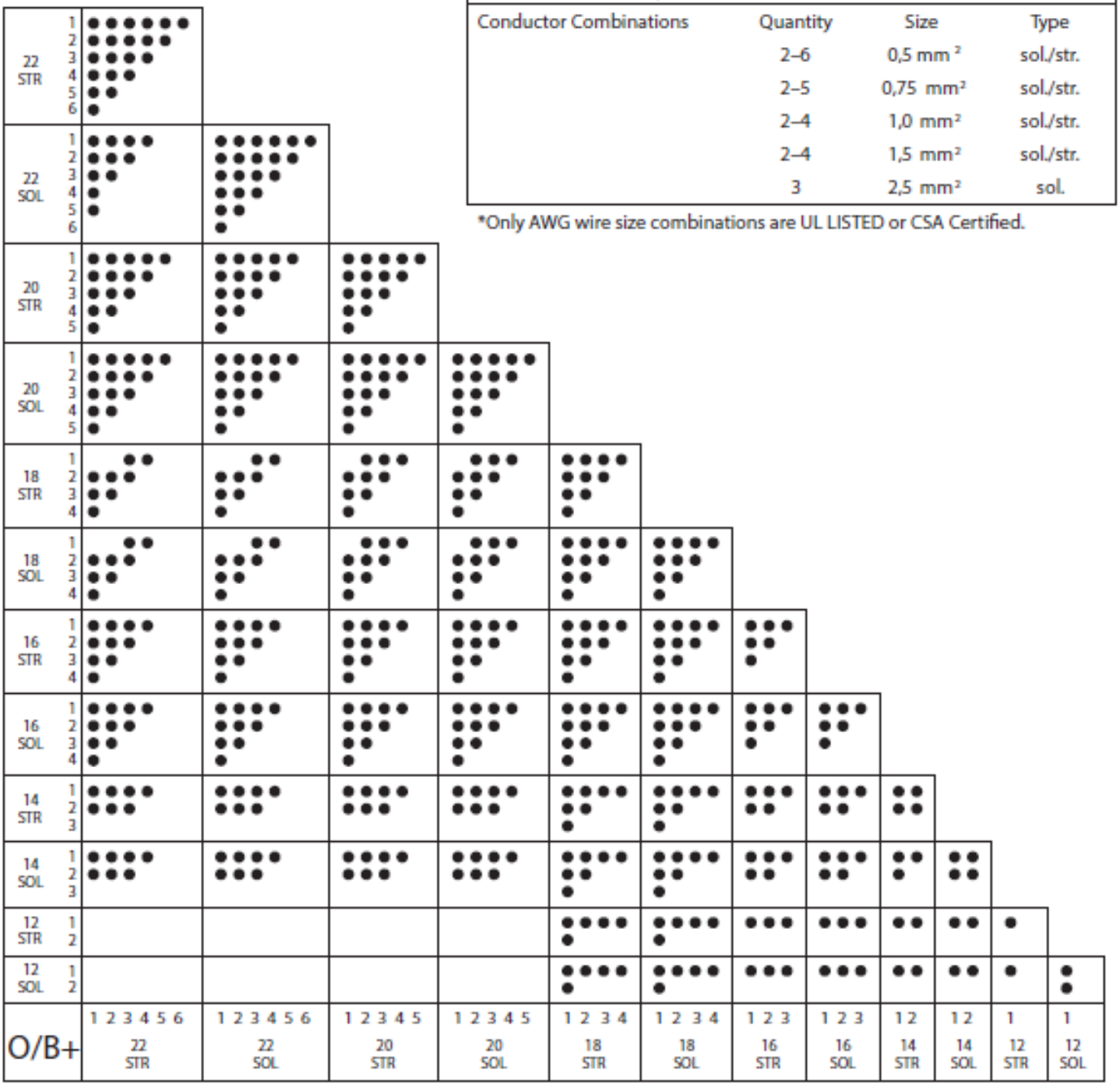
1. Strip wire insulation:
   22–16 AWG = 5/8" 14–12 AWG = 1/2"
2. Firmly grasp wires, making sure insulation ends are even and tightly bundled. (Wires may be twisted or untwisted.) Lead stranded wires slightly. Slip the connector over wire tips.
3. Turn connector onto wires in clockwise direction until secure.
4. To remove, turn connector counter-clockwise.

3M™ Wire Connector O/B+

Wire Matrix

Metric Wire Combination			
Cross Section Capacity	1,0 mm² through 5,0 mm²		
Conductor Combinations	Quantity	Size	Type
	2–6	0,5 mm²	sol./str.
	2–5	0,75 mm²	sol./str.
	2–4	1,0 mm²	sol./str.
	2–4	1,5 mm²	sol./str.
	3	2,5 mm²	sol.

*Only AWG wire size combinations are UL LISTED or CSA Certified.



Shelf-Life & Storage	This product has a 5-year shelf life from date of manufacture when stored in a humidity controlled storage (10°C/50°F to 27°C/80°F and <75% relative humidity).
Availability	Please contact your local distributor; available from 3M.com/electrical {Where to Buy} or call 1-800-245-3573.

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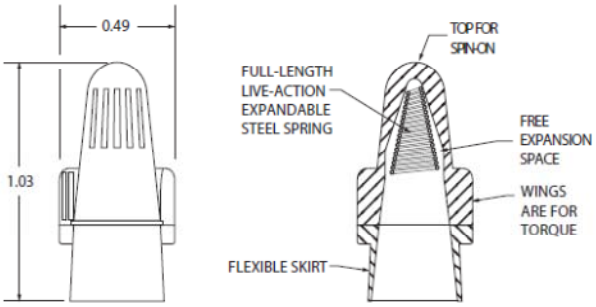

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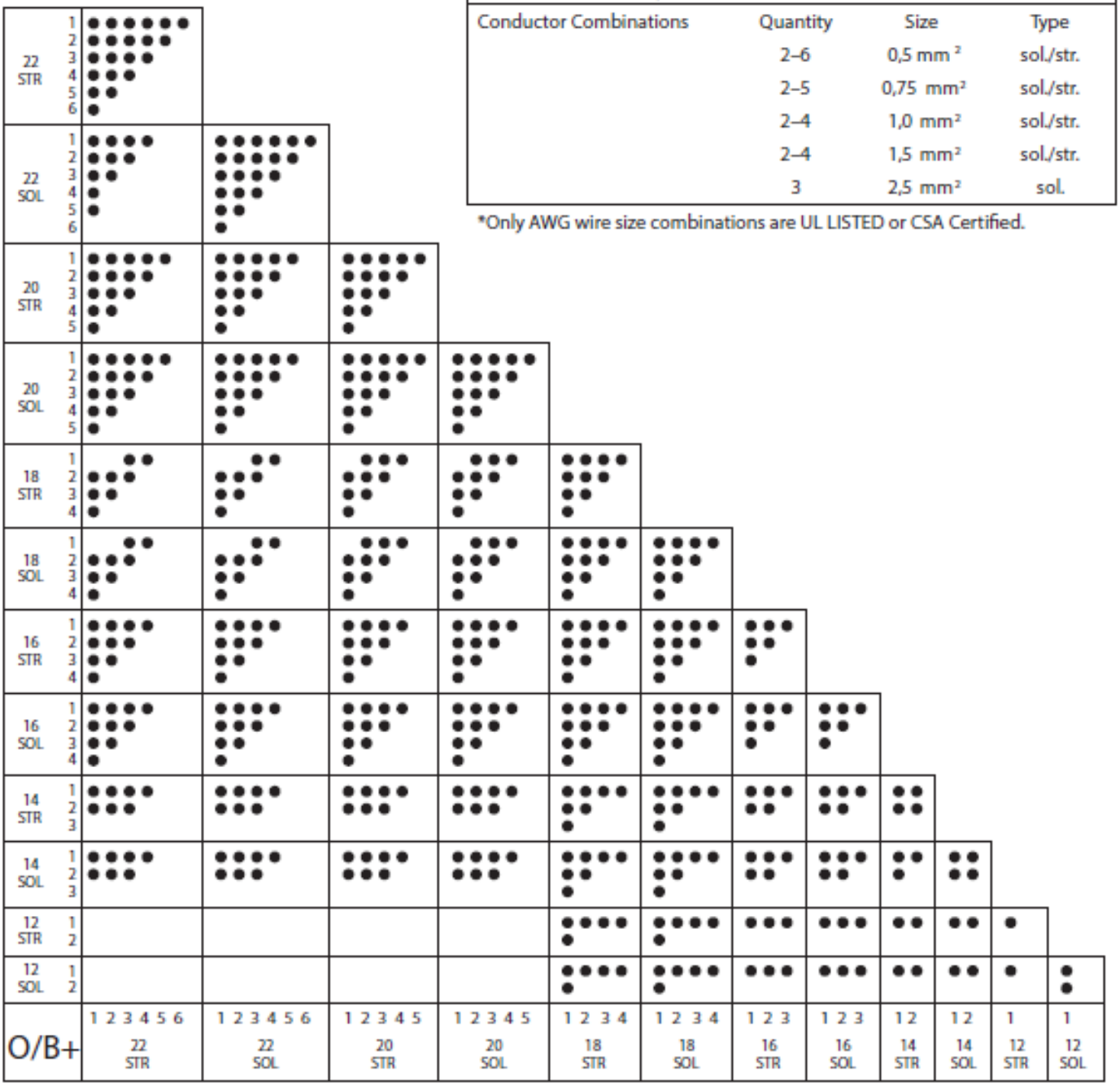

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