



O/B⁺ Wire Connector



LISTED
314R

Data Sheet

Application

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

Wire

AWG Range

COPPER conductors only, No. 22 thru No. 12 sol. and/or str.

METRIC Range

COPPER conductors only, 0,5 mm² thru 2,5 mm² ridged (solid or stranded) and flexible.

(see wire matrix for specific wire combinations)

Construction

Spring

Spring steel, corrosion resistant coating

Insulator

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

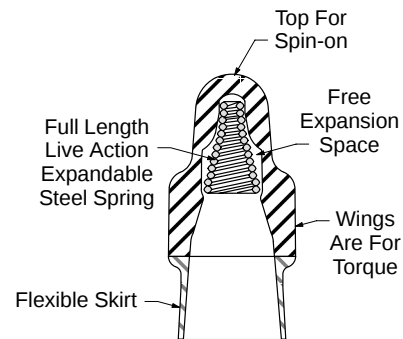
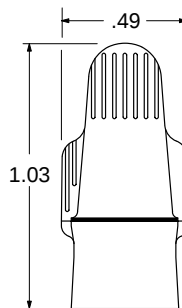
Weight

.0025 lbs. (1,13 gm)

Performance Test

The following tests were performed to the specification of UL Standard 486C and CSA Standard C22.2 No. 188-M1983.

Static-Heating	Pass
Secureness	Pass
Pullout	Pass
Dielectric Voltage Withstand	Pass
Secureness-Of-Insulation	Pass
Flammability	Pass



Other Test

Salt Spray	Pass
Per MIL-STD-1344A Method 1001.1	
Vibration	Pass
Per MIL-STD-1344A Method 2005.1	
UV Exposure	Pass
Per ASTM G-53-77	

Fluid Immersion Test

Connectors were immersed in the following chemicals for seven days at 23°C ± 2°C with no affect on appearance or loss of material strength.

Typical Reagents and Materials From ASTM D 543-87 and MIL-STD-1344A

Acetic Acid
Acetone
Detergent Solution, Heavy Duty
Ethyl Alcohol (95%)
Ethyl Alcohol (50%)
Heptane
Hydrogen Peroxide Solution 28%
Methyl Alcohol
Sodium Hydroxide Solution
Mineral Spirit
Lubricating Oil

Engineering Specification

3M O/B⁺ wire connector 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. The connector shall be UL LISTED and CSA Certified as a pressure wire connector. The connector shall be voltage rated 600 volts maximum, building wire, 1000 volts maximum, signs and lighting fixtures (luminaries). The connector shall have a maximum operating temperature of 105°C (221°F).

Regulatory Agencies

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 lighting fixtures
and 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

Metric Wire Combination			
Cross section capacity		1,0 mm ² through 5,0 mm ²	
Conductor combinations	Quantity	Size	Type
	2 – 6	0,5 mm ²	sol./str.
	2 – 5	0,75 mm ²	sol./str.
	2 – 4	1,0 mm ²	sol./str.
	2 – 3	1,5 mm ²	sol./str.
	2	2,5 mm ²	sol./str.
* Only AWG wire size combinations are UL LISTED or CSA Certified.			

Installation Instructions

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

- Strip wire insulation 22–16 AWG = 5/8" 14–12 AWG = 1/2".
- 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.
- Turn connector onto wires in clockwise direction until secure.
- To remove, turn connector counter-clockwise.

UL LISTED as a Pressure Wire Connector. CSA Certified. Copper conductors only.

Operating Temperature: 105°C maximum

Voltage Rating 600 volts maximum in building wire
1000 volts maximum in signs, and lighting fixtures (luminaries)

22 STR	1												
	2												
	3												
	4												
	5												
	6												
22 SOL	1												
	2												
	3												
	4												
	5												
	6												
20 STR	1												
	2												
	3												
	4												
	5												
20 SOL	1												
	2												
	3												
	4												
	5												
18 STR	1												
	2												
	3												
	4												
18 SOL	1												
	2												
	3												
	4												
16 STR	1												
	2												
	3												
	4												
16 SOL	1												
	2												
	3												
	4												
14 STR	1												
	2												
	3												
14 SOL	1												
	2												
	3												
12 STR	1												
	2												
12 SOL	1												
	2												
O/B+	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5	1 2 3 4 5	1 2 3 4	1 2 3 4	1 2 3	1 2 3	1 2	1 2	1	1	
	22 STR	22 SOL	20 STR	20 SOL	18 STR	18 SOL	16 STR	16 SOL	14 STR	14 SOL	12 STR	12 SOL	



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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



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Austin, TX 78726-9000
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78-8121-1125-6