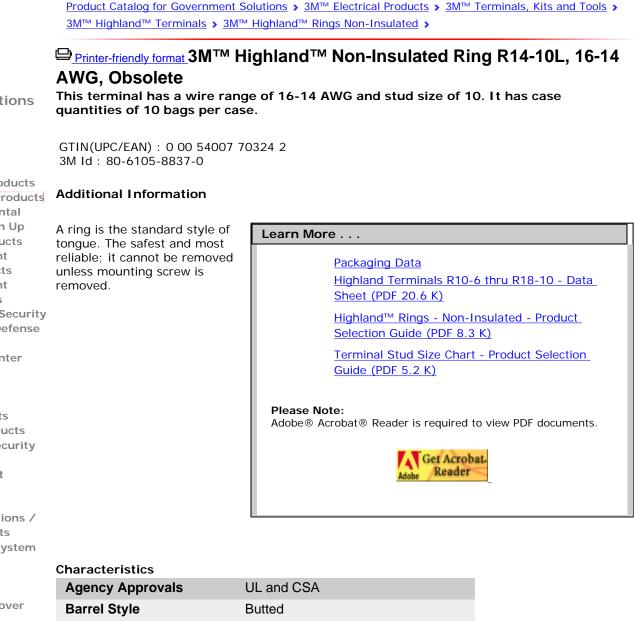
# **3M** United States

#### 3M Worldwide : United States : Government Solutions



- **Government Solutions** Catalogs
  - Product Catalog for Government Solutions
    - 3M<sup>™</sup> Electrical Products
    - 3M<sup>™</sup> Environmental
    - Protection, Clean Up and Safety Products
    - 3M™ Government Facilities Products
    - 3M<sup>™</sup> Government Vehicle Products
    - 3M<sup>™</sup> Homeland Security and Homeland Defense Products
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    - 3M<sup>™</sup> Weapons System Protection
    - Emergency Preparedness, Response & Recover

#### other Tools

- MSDS Search
- Government Contracts

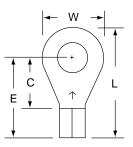
Characteristics	
Agency Approvals	UL and CSA
Barrel Style	Butted
CSA File Number	LR22190
Stud Size	10 American Wire Gauge (AWG)
Terminal Style	Standard
Terminal Type	Ring
UL File Number	E23438
Wire Gauge Range	14 to 16 American Wire Gauge (AWG)

• 3M<sup>™</sup> Aircraft Products

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# **3M** Highland<sup>™</sup> Terminals

# R10-6 thru R18-10 Ring Tongue, Non-Insulated, Butted Seam



# Data Sheet

Product Number	Wire Range (AWG)	Stud Size	w	С	L	E	Thickness	Barrel Length	Barrel I.D.
R10-6	12-10	6	0.38	0.29	0.73	0.54	0.040	0.25	0.135
R10-8	12-10	8	0.38	0.29	0.73	0.54	0.040	0.25	0.135
R10-10	12-10	10	0.38	0.29	0.73	0.54	0.040	0.25	0.135
R10-14	12-10	1⁄4	0.53	0.44	0.96	0.69	0.040	0.25	0.135
R14-4	16-14	4	0.25	0.22	0.60	0.47	0.030	0.25	0.090
R14-6	16-14	6	0.25	0.22	0.60	0.47	0.030	0.25	0.090
R14-8	16-14	8	0.25	0.22	0.74	0.58	0.030	0.25	0.090
R14-10	16-14	10	0.33	0.29	0.70	0.54	0.030	0.25	0.090
R18-4	22-18	4	0.25	0.22	0.60	0.47	0.030	0.25	0.070
R18-6	22-18	6	0.25	0.22	0.60	0.47	0.030	0.25	0.070
R18-8	22-18	8	0.31	0.33	0.74	0.58	0.030	0.25	0.070
R18-10	22-18	10	0.31	0.33	0.74	0.58	0.030	0.25	0.070



UNDERWRITERS LABORATORIES STANDARD NO. UL 486A 3M FILE NO. E23438

## Specifications

Wire Size: Barrel Seam: Max. Current: Terminal Material: Terminal Plating:



CANADIAN STANDARDS ASSOCIATION STANDARD NO. C22.2 NO. 0. 65 3M FILE NO. LR22190

See Table Above Butted Same as Wire ETP Copper Tin

# **Installation Information**

## **WARNING**

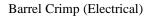
Turn power off before installing or removing terminal. All electrical work should be done according to appropriate electrical codes.

UL Listed and CSA Certified for use on stranded copper (AWG) wire only.

Strip away the end 3/8 inch of wire insulation.

Make the crimp in the proper station of a recommended 3M crimp tool: TH-440, TH-450 (scissor style), or TR-490 (ratchet style) hand tools.





## **Engineering Specification**

Crimp-type terminals shall, electrically and mechnically, connect to a pre-stripped end of a stranded copper wire: and have a flat tongue portion with a central opening for mounting around a screw or stud.

The terminal line shall offer tongue variations in hole (stud) size (6, 8 10, etc.) and configuration (ring, fork, block fork, flanged block fork, locking fork, etc.): and barrel variations in wire (AWG) size (22-18, 16-14, 12-10, etc.) and construction (non-insulated brazed seam, vinyl insulated butted seam, nylon insulated with insulation grip, etc.). The terminal line shall have regulatory agency coverage (UL Listing, CSA Certification). The terminal tongue shall be marked with the wire range and manufacturer's symbol ( $\uparrow$ ).

The non-insulated, butted seam ring tongue terminal shall be tin-plated, annealed copper, with the tongue having a specified stud hole (size 4 thru 1/4 in.) and a butted seam barrel with a beveled I.D. for ease of stranded wire entry, sized for a specified (AWG) wire range (22-18, 16-14, 12-10).

Non-insulated terminals shall be UL Listed and CSA Certified.

3M and Highland are trademarks of 3M

#### 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.

Warranty; Limited Remedy; Limited Liability. This product will be free from defects in material and manufacture as of the date of purchase. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated above, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.

### ЗМ

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