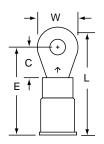
## **3M**

# **Specialty Terminals**

11-2S-NB thru 13-500-NB Ring Tongue, Nylon Insulated with Insulation Grip



## **Data Sheet**

Product Number	Wire Range (AWG)	Stud Size	w	С	L	E	Thickness	Barrel Length	Barrel I.D.	Maximum Insulation Diameter
11-2S-NB	22-18	2	0.25	0.23	0.79	0.67	0.030	0.25	0.070	0.145
11-4S-NB	22-18	4	0.25	0.22	0.79	0.66	0.030	0.25	0.070	0.145
11-6S-NB	22-18	6	0.25	0.22	0.79	0.66	0.030	0.25	0.070	0.145
L-11-6-NB	22-18	6	0.31	0.33	0.92	0.77	0.030	0.25	0.070	0.145
11-8S-NB	22-18	8	0.25	0.22	0.79	0.66	0.030	0.25	0.070	0.145
11-8-NB	22-18	8	0.33	0.29	0.89	0.73	0.030	0.25	0.070	0.145
L-11-8-NB	22-18	8	0.31	0.33	0.92	0.77	0.030	0.25	0.070	0.145
11-10-NB	22-18	10	0.33	0.29	0.89	0.73	0.030	0.25	0.070	0.145
L-11-10-NB	22-18	10	0.31	0.33	0.92	0.77	0.030	0.25	0.070	0.145
11-14S-NB	22-18	1/4	0.47	0.40	1.07	0.84	0.030	0.25	0.070	0.145
11-56S-NB	22-18	5⁄16	0.47	0.40	1.07	0.84	0.030	0.25	0.070	0.145
11-38-NB	22-18	3/8	0.56	0.40	1.12	0.84	0.030	0.25	0.070	0.145
12-2S-NB	16-14	2	0.25	0.22	0.81	0.68	0.030	0.25	0.090	0.170
12-4S-NB	16-14	4	0.25	0.22	0.81	0.68	0.030	0.25	0.090	0.170
12-6S-NB	16-14	6	0.25	0.22	0.81	0.68	0.030	0.25	0.090	0.170
12-6-NB	16-14	6	0.33	0.29	0.91	0.75	0.030	0.25	0.090	0.170
L-12-6-NB	16-14	6	0.31	0.33	0.94	0.79	0.030	0.25	0.090	0.170
12-8S-NB	16-14	8	0.25	0.22	0.81	0.68	0.030	0.25	0.090	0.170
12-8-NB	16-14	8	0.33	0.29	0.91	0.75	0.030	0.25	0.090	0.170
L-12-8-NB	16-14	8	0.31	0.33	0.94	0.79	0.030	0.25	0.090	0.170

(continued on next page)

Product Number	Wire Range (AWG)	Stud Size	w	С	L	E	Thickness	Barrel Length	Barrel I.D.	Maximum Insulation Diameter
12-10-NB	16-14	10	0.33	0.29	0.89	0.75	0.030	0.25	0.090	0.170
L-12-10-NB	16-14	10	0.31	0.33	0.92	0.79	0.030	0.25	0.090	0.170
12-14S-NB	16-14	1/4	0.47	0.40	1.09	0.86	0.030	0.25	0.090	0.170
12-14-NB	16-14	1/4	0.56	0.40	1.14	0.86	0.030	0.25	0.090	0.170
12-56S-NB	16-14	5⁄16	0.47	0.40	1.09	0.86	0.030	0.25	0.090	0.170
12-56-NB	16-14	5/16	0.56	0.40	1.14	0.86	0.030	0.25	0.090	0.170
12-38-NB	16-14	3/8	0.56	0.40	1.14	0.86	0.030	0.25	0.090	0.170
13-4S-NB	12-10	4	0.28	0.29	0.98	0.84	0.040	0.25	0.135	0.250
13-6S-NB	12-10	6	0.28	0.29	0.98	0.84	0.040	0.25	0.135	0.250
13-6-NB	12-10	6	0.38	0.29	1.03	0.84	0.040	0.25	0.135	0.250
13-8S-NB	12-10	8	0.28	0.29	0.98	0.84	0.040	0.25	0.135	0.250
13-8-NB	12-10	8	0.38	0.29	1.03	0.84	0.040	0.25	0.135	0.250
13-10-NB	12-10	10	0.38	0.29	1.03	0.84	0.040	0.25	0.135	0.250
13-14S-NB	12-10	1/4	0.53	0.44	1.26	0.99	0.040	0.25	0.135	0.250
13-14-NB	12-10	1/4	0.59	0.44	1.29	0.99	0.040	0.25	0.135	0.250
13-56S-NB	12-10	5/16	0.53	0.44	1.26	0.99	0.040	0.25	0.135	0.250
13-56-NB	12-10	5/16	0.59	0.44	1.29	0.99	0.040	0.25	0.135	0.250
13-38S-NB	12-10	3/8	0.54	0.44	1.26	0.99	0.040	0.25	0.135	0.250
13-38-NB	12-10	3/8	0.59	0.44	1.29	0.99	0.040	0.25	0.135	0.250
13-716-NB	12-10	7/16	0.75	0.57	1.49	1.12	0.040	0.25	0.135	0.250
13-500-NB	12-10	1/2	0.75	0.57	1.50	1.12	0.040	0.25	0.135	0.250



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



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

### **Specifications**

Wire Size: Barrel Seam: Max. Voltage Rating: See Table Above Butted with Insulation Grip 600 V Building Wire 1000 V Signs, Fixtures and Luminaires

Max. Temperature Rating: Max. Current: Insulator Material: Terminal Material: Insulation Grip Material: Terminal Plating: 221°F (105°C) Same as Wire Nylon ETP Copper Brass Tin

#### **Installation Information**

#### $\triangle$ 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-482, TR-490 (ratchet style) hand tools.





Barrel Crimp (Electrical)

**Insulation Support Crimp** (Mechanical)

#### **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 nylon-insulated, ring tongue terminal with insulation grip shall be tin-plated, annealed copper, with the tongue having a specified stud hole (size 4 thru 1/2 in.) and a butted seam barrel with a tin plated brass, funnel entry insulation grip, covered by a molded nylon sleeve, color coded and sized for a specified (AWG) wire range (22-18, 16-14, 12-10).

Insulated terminals shall be UL Listed and CSA Certified for 600 Volts maximum building wire: 1000 Volts maximum in signs, fixtures and luminaries and have a maximum operating temperature of 221°F (105°C).

3M is a trademark of 3M.



is a trademark of Underwriters Laboratories.



is a trademark of Canadian Standards Association.

#### **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.



**Electrical Products Division** 

6801 River Place Blvd. Austin, TX 78726-9000 http://www.3M.com/elpd