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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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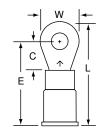




# **3M**

# **Specialty Terminals**

11-2S-P thru 13-500-P Ring Tongue, Vinyl Insulated, Butted Seam



# **Data Sheet**

Product Number	Wire Range (AWG)	Stud Size	W	С	L	E	Thickness	Barrel Length	Barrel I.D.	Maximum Insulation Diameter
11-2S-P	22-18	2	0.25	0.23	0.80	0.68	0.030	0.25	0.070	0.145
11-4S-P	22-18	4	0.25	0.22	0.80	0.67	0.030	0.25	0.070	0.145
11-6S-P	22-18	6	0.25	0.22	0.80	0.67	0.030	0.25	0.070	0.145
L-11-6-P	22-18	6	0.31	0.33	0.93	0.78	0.030	0.25	0.070	0.145
11-8S-P	22-18	8	0.25	0.22	0.80	0.67	0.030	0.25	0.070	0.145
11-8-P	22-18	8	0.33	0.29	0.90	0.74	0.030	0.25	0.070	0.145
L-11-8-P	22-18	8	0.31	0.33	0.93	0.78	0.030	0.25	0.070	0.145
11-10-P	22-18	10	0.33	0.29	0.90	0.74	0.030	0.25	0.070	0.145
L-11-10-P	22-18	10	0.31	0.33	0.93	0.78	0.030	0.25	0.070	0.145
11-14S-P	22-18	1/4	0.47	0.40	1.08	0.85	0.030	0.25	0.070	0.145
11-56S-P	22-18	5⁄16	0.47	0.40	1.08	0.85	0.030	0.25	0.070	0.145
11-38-P	22-18	3/8	0.56	0.40	1.13	0.85	0.030	0.25	0.070	0.145
12-2S-P	16-14	2	0.25	0.22	0.80	0.67	0.030	0.25	0.090	0.170
12-4S-P	16-14	4	0.25	0.22	0.80	0.67	0.030	0.25	0.090	0.170
12-6S-P	16-14	6	0.25	0.22	0.80	0.67	0.030	0.25	0.090	0.170
12-6-P	16-14	6	0.33	0.29	0.90	0.74	0.030	0.25	0.090	0.170
L-12-6-P	16-14	6	0.31	0.33	0.93	0.78	0.030	0.25	0.090	0.170
12-8S-P	16-14	8	0.25	0.22	0.80	0.67	0.030	0.25	0.090	0.170
12-8-P	16-14	8	0.33	0.29	0.90	0.74	0.030	0.25	0.090	0.170
L-12-8-P	16-14	8	0.31	0.33	0.93	0.78	0.030	0.25	0.090	0.170

Product Number	Wire Range (AWG)	Stud Size	w	С	L	E	Thickness	Barrel Length	Barrel I.D.	Maximum Insulation Diameter
12-10-P	16-14	10	0.33	0.29	0.90	0.74	0.030	0.25	0.090	0.170
L-12-10-P	16-14	10	0.31	0.33	0.93	0.78	0.030	0.25	0.090	0.170
12-14S-P	16-14	1/4	0.47	0.40	1.08	0.85	0.030	0.25	0.090	0.170
12-14-P	16-14	1/4	0.56	0.40	1.13	0.85	0.030	0.25	0.090	0.170
12-56S-P	16-14	5⁄16	0.47	0.40	1.08	0.85	0.030	0.25	0.090	0.170
12-56-P	16-14	5⁄16	0.56	0.40	1.13	0.85	0.030	0.25	0.090	0.170
12-38-P	16-14	3/8	0.56	0.40	1.13	0.85	0.030	0.25	0.090	0.170
13-4S-P	12-10	4	0.28	0.29	0.98	0.84	0.040	0.25	0.135	0.250
13-6S-P	12-10	6	0.28	0.29	0.98	0.84	0.040	0.25	0.135	0.250
13-6-P	12-10	6	0.38	0.29	1.03	0.84	0.040	0.25	0.135	0.250
13-8S-P	12-10	8	0.28	0.29	0.98	0.84	0.040	0.25	0.135	0.250
13-8-P	12-10	8	0.38	0.29	1.03	0.84	0.040	0.25	0.135	0.250
13-10-P	12-10	10	0.38	0.29	1.03	0.84	0.040	0.25	0.135	0.250
13-14S-P	12-10	1/4	0.53	0.44	1.26	0.99	0.040	0.25	0.135	0.250
13-14-P	12-10	1/4	0.59	0.44	1.29	0.99	0.040	0.25	0.135	0.250
13-56S-P	12-10	5⁄16	0.53	0.44	1.26	0.99	0.040	0.25	0.135	0.250
13-56-P	12-10	5⁄16	0.59	0.44	1.29	0.99	0.040	0.25	0.135	0.250
13-38S-P	12-10	3/8	0.54	0.44	1.26	0.99	0.040	0.25	0.135	0.250
13-38-P	12-10	3/8	0.59	0.44	1.29	0.99	0.040	0.25	0.135	0.250
13-716-P	12-10	7/16	0.75	0.57	1.49	1.12	0.040	0.25	0.135	0.250
13-500-P	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: See Table Above Barrel Seam: Butted

Max. Voltage Rating: 600 V Building Wire 1000 V Signs, Fixtures

and Luminaires 221°F (105°C)

Max. Temperature Rating: 221°F (105°C)
Max. Current: Same as Wire
Insulator Material: Vinyl
Terminal Material: ETP Copper

Terminal Plating: Tin

#### **Installation Information**

### **AWARNING**

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 vinyl-insulated, butted seam ring tongue terminal shall be tin-plated, annealed copper, with the tongue having a specified stud hole (size 2 thru 1/2 in.) and a butted seam barrel covered by a molded vinyl funnel entry 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).

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#### IMPORTANT NOTICE

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