

INCH-POUND

MIL-DTL-83739/1D
 2 December 2013
 SUPERSEDING
 MIL-DTL-83739/1C
 19 November 2009

DETAIL SPECIFICATION SHEET

SWITCH, ANTENNA, RADIO FREQUENCY, SOLID-STATE,
 SA-1474A/A

This specification is approved for use by all Departments
 and Agencies of the Department of Defense.

The requirements for acquiring the switch described herein
 shall consist of this specification sheet and MIL-DTL-83739.

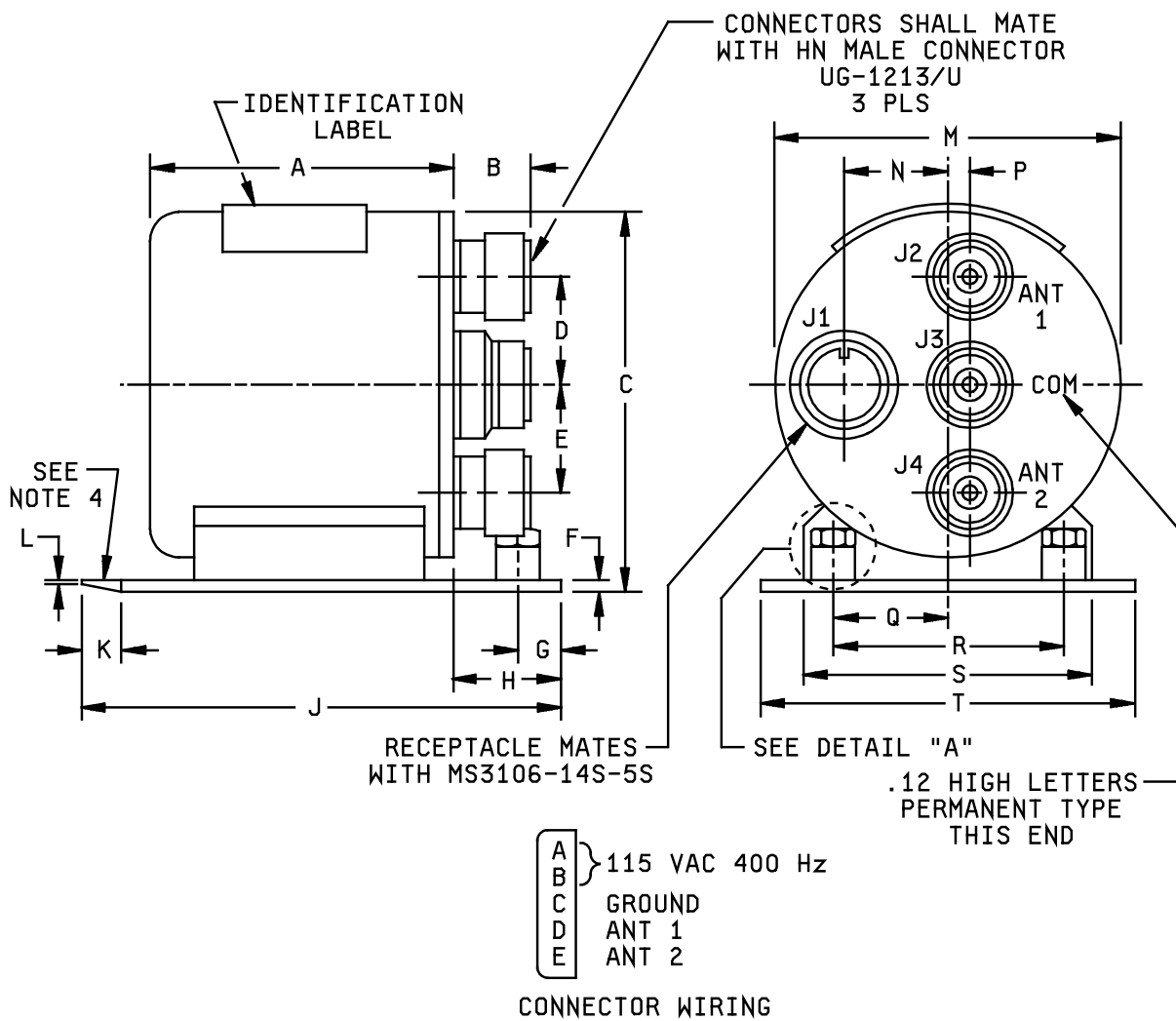
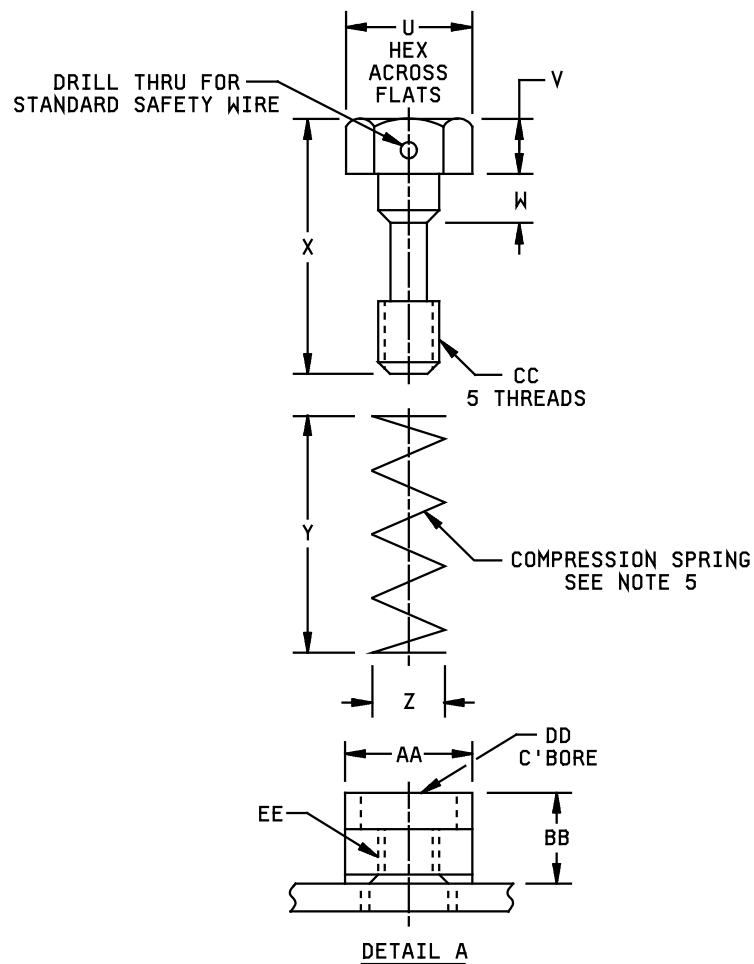


FIGURE 1. Dimensions and configuration.

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Ltr	Dimensions			
	Inches		Millimeters	
	Min	Max	Min	Max
A	2.57	2.69	65.3	68.3
B	.64	.70	16.3	17.8
C	---	3.44	---	87.4
D	.927	.947	23.55	24.05
E	.927	.947	23.55	24.05
F	.090	.110	2.29	2.79
G	.365	.385	9.27	9.78
H	.925	.945	23.50	24.00
J	4.13	4.19	104.9	106.4
K	.334	.354	8.48	8.99
L	.006	.026	0.15	0.66
M	2.97	3.03	75.4	77.0
N	.87	.93	22.1	23.6
P	.16	.22	4.1	5.6
Q	.97	1.03	24.6	26.2
R	1.97	2.03	50.0	51.6
S	2.47	2.53	62.7	64.3
T	3.22	3.28	81.8	83.3
U	.425	.445	10.80	11.30
V	.178	.198	4.52	5.03
W	.115	.135	2.92	3.43
X	.865	.885	21.97	22.48
Y	.615	.635	15.62	16.13
Z	.240	.260	6.10	6.60
AA	.428	.448	10.87	11.38
BB	.302	.322	7.67	8.18
CC	.190-24 UNC 2A		4.83-24 UNC-2A	
DD	.312 DIA x .125 DEEP		7.92 DIA x 3.18 DEEP	
EE	.190-24 UNC 2B		4.83-24 UNC-2B	

NOTES:

1. Dimensions are in inches.
2. Metric equivalents (to the nearest 0.01 mm) are given for general information only and are based upon 1 inch = 25.4 mm.
3. Unless otherwise specified, tolerances are $\pm .03$ inch (0.76 mm) for two place decimals and $\pm .010$ inch (0.25 mm) for three place decimals.
4. The upper and lower surface of this area is not to be painted.
5. The spring shall be strong enough to hold the bolt free when disengaged from mounting plate.

FIGURE 1. Dimensions and configuration - Continued.

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REQUIREMENTS:

Dimensions and configuration: See figure 1.

Weight: 2 pounds maximum.

Finish: Black paint.

Mounting: Mounting provisions and mounting holes shall be provided that will interface with mounting plate MT-1948/U covered by AF Drawing 59C12539, NSN 5985-00-788-6960.

Configuration: Single pole double throw (1P2T).

Sequence: Make-before-break.

Remote control: Provision shall be provided to remotely select either RF output on a full time basis by grounding pins on the power connector. Pin D shall be grounded for remote selection of Ant 1. Pin E shall be grounded for remote selection of Ant 2. No damage shall be caused if pins D and E are grounded simultaneously.

Nominal impedance: 50 ohms.

Frequency range: 1.02 GHz to 1.1 GHz.

Housing: Type E.

Switching rate: 38 Hz \pm 5 percent.

Primary input power: 10 watts max, with the input voltage and frequency at 115 ± 7 volts and 400 ± 20 Hz, respectively.

Transition time: Less than 25 microseconds.

Voltage standing wave ratio (VSWR):

Either output to common terminal: 1.2:1.

Transition time: 2.5:1.

Isolation (crosstalk): 30 dB minimum between output.

Insertion loss: 0.5 dB maximum.

RF power handling capability: 1 kilowatt peak pulse power with 1 percent duty cycle into a mismatched load with a VSWR rating of 2:1.

MTBF: Design for 10,000 hours, with a guaranteed minimum of 5,000 hours.

Temperatures:

Operating: -55°C to $+121^{\circ}\text{C}$.

Shock: -40°C to $+121^{\circ}\text{C}$.

Part or Identifying Number (PIN): M83739/1-01.

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NOTE: The switch covered by this specification sheet is substitutable for the following commercial types:

<u>Manufacturer's code</u>	<u>Commercial type</u>	<u>NSN 5985-</u>
82152	70D10100	00-932-4257
74868	351-12010	00-932-4257
96412	DODA1MS66-358	-----
80058	SA1474/A	00-932-4257
22887	001-1012858	00-932-4257

Referenced documents. In addition to MIL-DTL-83739, this document references the following:
AF DWG 59C12539

Marginal notations are not used on this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5985-2014-008)

Review activities:
Army - MI
Navy - OS, SH
Air Force - 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil/>.