

INCH-POUND

MIL-DTL-83739/1B  
15 November 1999  
SUPERSEDING  
MIL-S-83739/1A  
3 November 1975

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 document and the latest issue of MIL-DTL-83739.

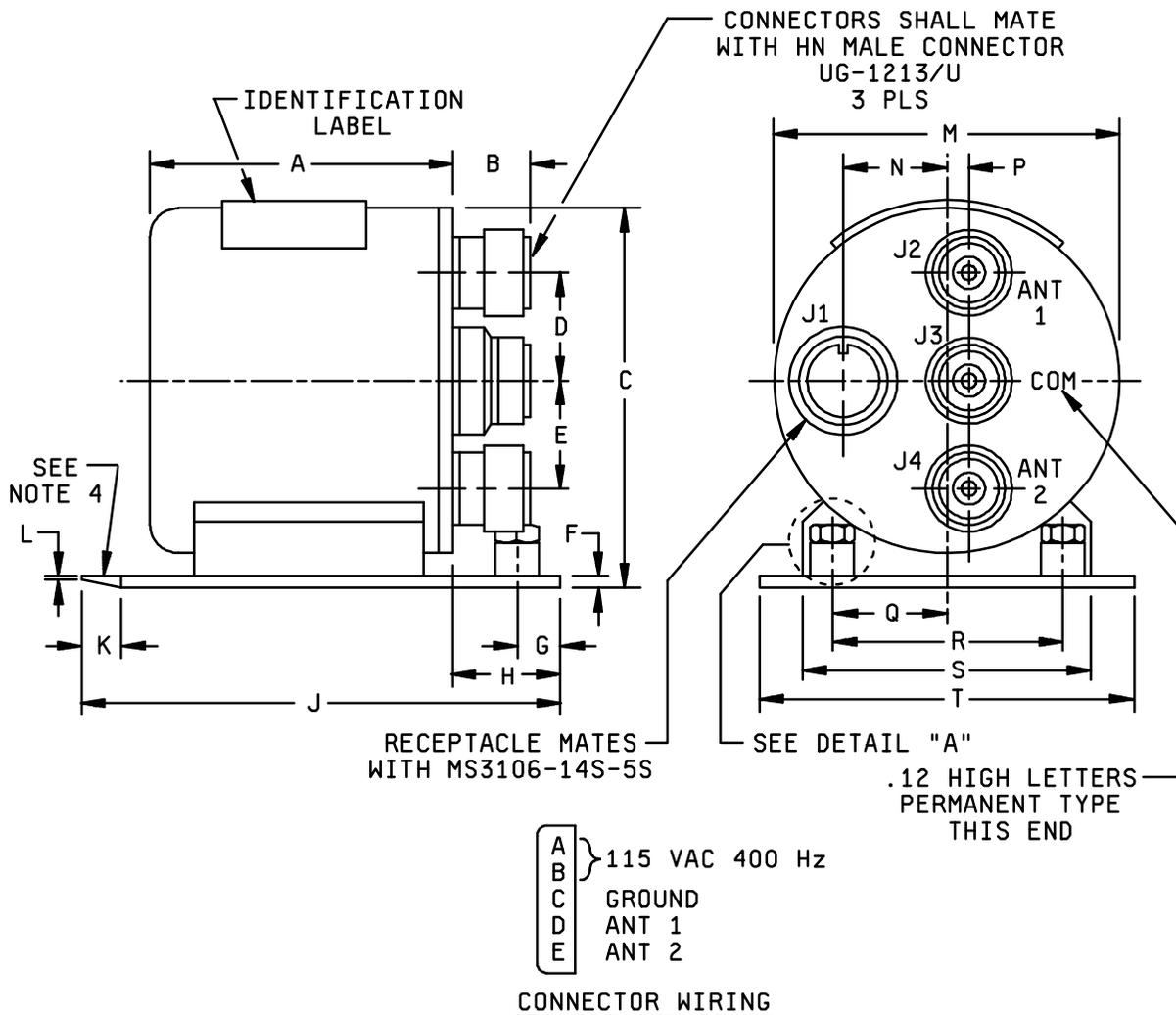
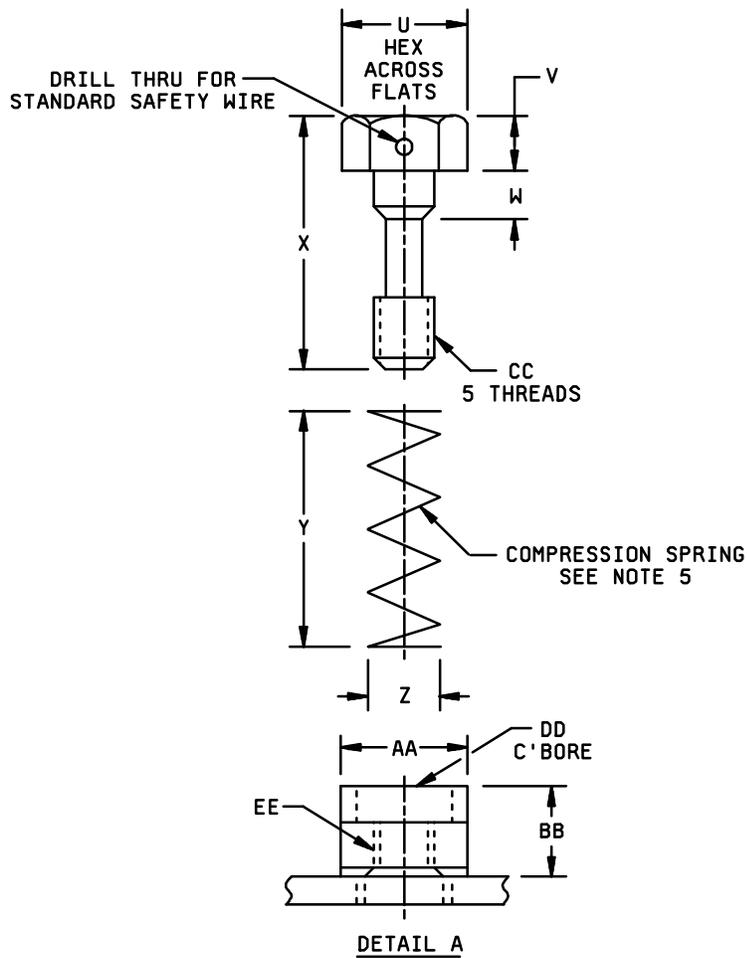


FIGURE 1. Dimensions and configuration.



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  $\pm 0.03$  inch (0.76 mm) for two place decimals and  $\pm 0.010$  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.

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 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  $\pm$  7 volts and 400  $\pm$  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°C.

Shock: -40°C to +121°C.

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

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>FSN 5985-</u>
82152	70D10100	932-4257
74868	351-12010	
96412	DODA1MS66-358	932-4257
80058	SA1474/A	932-4257
22887	001-1012858	932-4257

Custodians:

Army - CR  
Navy - EC  
Air Force - 11  
DLA - CC

Preparing activity:

DLA - CC  
  
(Project 5985-1205-01)

Review activities:

Army - MI  
Navy - OS, SH  
Air Force - 99