

# 2 TOGGLE SWITCHES

## Military Purpose Toggle Switches

### DESCRIPTION

Eaton's Military Purpose switches are designed to meet the requirements of MIL-S-83731 or JAN-S-23. Sealed Switches have a silicone rubber lever seal assembled between the lever and the bushing to resist the entrance of contaminants such as dust, sand or water into the contact structure.

The switch mechanisms are completely enclosed to resist the entrance of contaminants into the switch. All metal parts are plated to resist corrosion. The Heavy Duty Switches are offered in both Standard Toggle Lever and Lever

Lock versions. Circuit designations are stamped on the side of each switch.

### SPECIFICATIONS

#### Ratings:

See selection table.

#### Circuits:

1PST, 1PDT, 2PST, 2PDT, 1P3T (ON-ON-ON), 4PST and 4PDT.

Maintained and momentary action.

#### Contact Action:

##### Heavy Duty

Slow-make/Slow-break butt contact.

##### Medium Duty

Quick-make/Quick break, wiping action.

#### Contact Material:

##### Heavy Duty




Movable — Silver plated copper with fine or coin silver contact face button.

Stationary — Copper with fine or coin silver contact face button.

##### Medium Duty

Movable — Copper silver plated.  
Stationary — Bronze silver plated.

AC/DC RATED (MEDIUM DUTY) MIL-S-83731 SWITCHES SELECTION TABLE (BOLD FACE TYPE INDICATES ITEMS NORMALLY IN DISTRIBUTOR STOCK)

Rating	Poles and Throw	Circuit with Toggle in			BASE CIRCUIT SEE PAGE 4.28	Dimension "A" mm (inches)	Dimension "B" mm (inches)	CATALOG NUMBERS	
		UP Position	CENTER Position	DOWN Position				Military or JAN (ST) Solder Lug Terminals	
				 (Keyway)				MIL-S-83731 With Sealed Lever	Catalog Number
<b>SINGLE POLE</b>									
<b>1</b>	1 P.S.T.	ON	NONE	OFF	A	—	23.01 (.906)	MS25098-22	<b>8261K22</b>
<b>1</b>		ON	NONE	OFF*				MS25098-29	8261K29
<b>1</b>		OFF	NONE	ON*				MS25098-30	8261K30
<b>1</b>	1 P.D.T.	ON	NONE	ON	B	23.80 (.937)	—	MS25098-23	<b>8261K23</b>
<b>1</b>		ON	NONE	ON*				MS25098-26	8261K26
<b>DOUBLE POLE</b>									
<b>2</b>	2 P.S.T.	ON	NONE	OFF	C	—	23.01 (.906)	MS25100-22	<b>8262K22</b>
<b>2</b>		ON	NONE	OFF*				MS25100-29	8262K29
<b>2</b>		OFF	NONE	ON*				MS25100-30	8262K30
<b>2</b>	2 P.D.T.	ON	NONE	ON	D	23.80 (.937)	—	MS25100-23	<b>8262K23</b>
<b>2</b>		ON	NONE	ON*				MS25100-26	8262K26

\* Momentary Contact.

### CURRENT RATINGS

Code From Selection Table	Part Number	CURRENT CAPACITY IN AMPERES PER POLE	
		125V ac, 60 Hz	
		Resistive Load	Inductive Load
<b>1</b>	All MS25098	3.0	1.5
<b>2</b>	MS25100-22, 29, 30	3.0	1.5
<b>2</b>	MS25100-23, 26	1.0	1.0

**Terminal Types:**

**Heavy Duty  
MIL-S-83731 Types**

Screw Terminals — Brass designed to accept #6-32 x 6.35mm (.250") pan head (Cat. No. 11-1893) screws and Si bronze #6 Helical lockwasher (Cat. No. 16-1096).  
Furnished unassembled.  
Terminal screws are tin dipped to facilitate soldering if required.

**Heavy Duty Jan-S-23 Types**

Screw Terminals — Brass designed to accept #6-32 x 4.78mm (.188") binding head (Cat. No. 811-2) screws.  
Furnished unassembled.

Solder Lug Terminals — Tintillate plated brass.

**Medium Duty  
MIL-S-83731 Types**

Solder Lugs — Brass silver plated furnished with 2.39mm (.094") dia. hole.

**Base Material:**

Thermoset molding material.

**Mounting Means:**

Threaded Bushing — 11.89mm (.468") dia., 32 threads/inch.

Keyway — 1.73 x .89mm deep (.068 x .035" deep) — provides anti-rotation feature.

**Hardware Supplied —**

**MIL-S-83731 Types:**

2 hexagon facenuts (Cat. No. 15-966-6), 1 locking ring (Cat. No. 29-761) and 1 internal tooth lockwasher (Cat. No. 16-886).  
Furnished unassembled.

**Jan-S-23 Types:**

2 hexagon facenuts (Cat. No. 15-966-6).  
Furnished unassembled.

**Dielectric:**

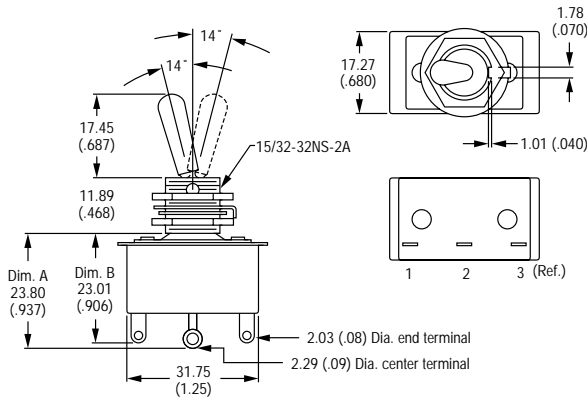
1000V RMS minimum.

**Operating Temperature Range:**

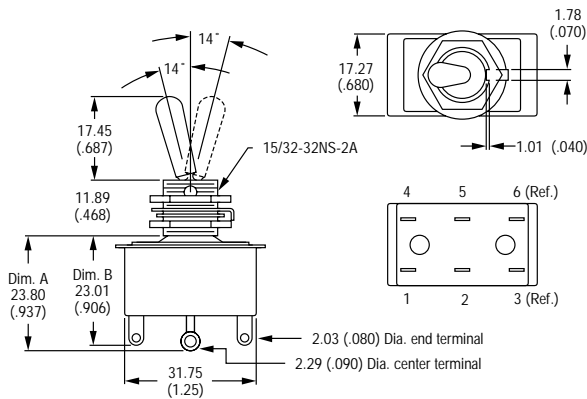
-17.8°C to +65.6°C (0°F to 150°F).

**DIMENSIONS** APPROXIMATE IN MM (INCHES)

**1PDT MAINTAINED ACTION (SOLDER LUG)**



**2PDT MAINTAINED ACTION (SOLDER LUG)**



8261K22  
Medium Duty



8262K22  
Medium Duty



8801K22  
Heavy Duty






8820K16  
Heavy Duty

# 2 TOGGLE SWITCHES

## Military Purpose Toggle Switches (continued) AC Rated (Heavy Duty) MIL-S-83731 Switches with Lever Seal

AC RATED (HEAVY DUTY) MIL-S-83731 SWITCHES SELECTION TABLE (BOLD FACE TYPE INDICATES ITEMS NORMALLY IN DISTRIBUTOR STOCK)

Rating	Poles and Throw	Circuit with Toggle in			BASE CIRCUIT SEE PAGE 4.28	Bushing Length "A" mm (inches)	Lever Length "B" mm (inches)	CATALOG NUMBERS	
		UP Position	CENTER Position	DOWN Position				Screw Terminals with Sealed Lever	
				 (Keyway)				MS Part Number	Catalog Number
<b>ONE POLE</b>									
<b>1</b> <b>1</b> <b>2</b> <b>2</b> <b>2</b>	1 P.S.T.	ON ON ON ON NONE OFF	NONE OFF NONE OFF* OFF NONE	OFF NONE OFF* NONE ON* ON*	A	11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468)	17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687)	MS35058-22 MS35058-24 MS35058-29 MS35058-25 MS35058-28 MS35058-30	8801K22 8801K23 8813K17 8813K18 8811K18 8811K17
<b>1</b> <b>1</b> <b>2</b> <b>2</b> <b>2</b>	1 P.D.T.	ON ON ON ON*	OFF NONE NONE OFF	ON ON ON* ON*	B	11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468)	17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687)	MS35058-21 MS35058-23 MS35058-26 MS35058-27 MS35058-31	8800K16 8810K15 8804K13 8812K14 8809K16
<b>TWO POLE</b>									
<b>3</b> <b>3</b> <b>4</b> <b>4</b> <b>4</b>	2 P.S.T.	ON ON ON ON NONE OFF	NONE OFF NONE OFF* OFF NONE	OFF NONE OFF* NONE ON* ON*	C	11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468)	17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687)	MS35059-22 MS35059-24 MS35059-29 MS35059-25 MS35059-28 MS35059-30	8822K20 8822K21 8828K13 8828K12 8826K14 8826K15
<b>3</b> <b>3</b> <b>4</b> <b>4</b> <b>4</b>	2 P.D.T.	ON ON ON ON*	OFF NONE NONE OFF	ON ON ON* ON*	D	11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468)	17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687)	MS35059-21 MS35059-23 MS35059-26 MS35059-27 MS35059-31	8820K16 8824K14 8830K13 8834K5 8832K6
<b>5</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b> <b>5</b>	1 P.3.T in a 2P Base	ON <b>3</b> ON <b>3</b> ON* <b>3</b> ON <b>3</b> ON <b>3</b> ON* <b>3</b>	ON <b>3</b> ON <b>3</b> ON <b>3</b> ON <b>3</b> ON <b>3</b> ON <b>3</b>	ON <b>10</b> ON* <b>10</b> ON* <b>10</b> ON* <b>10</b> ON* <b>10</b> ON* <b>10</b>	See Diagram On Page 4.28	11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468)	17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687)	MS25201-4 MS25201-5 MS25201-6 MS25201-7 MS25201-8 MS25201-9	8860K4 8860K5 8860K6 8860K7 <b>12</b> 8860K8 <b>12</b> 8860K9 <b>12</b>
<b>FOUR POLE</b>									
<b>6</b> <b>6</b> <b>7</b> <b>7</b> <b>7</b>	4 P.S.T.	ON ON ON NONE OFF	NONE OFF OFF* OFF NONE	OFF NONE NONE ON* ON*	E	11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468)	17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687)	— MS25068-24 MS25068-25 MS25068-28 —	7660K12 7660K13 7668K7 7666K9 7666K6
<b>6</b> <b>6</b> <b>7</b> <b>7</b> <b>7</b>	4 P.D.T.	ON ON ON ON*	OFF NONE NONE OFF	ON ON ON* ON*	F	11.89 (.468) 11.89 (.468) 11.89 (.468) 11.89 (.468)	17.45 (.687) 17.45 (.687) 17.45 (.687) 17.45 (.687)	MS25068-21 MS25068-23 MS25068-26 MS25068-27 MS25068-31	7662K7 7664K5 7674K5 7672K5 7670K6

\* Momentary Contact.

### CURRENT RATINGS

Code From Selection Table	Switch	Type of Operation	CURRENT CAPACITY IN AMPERES PER POLE								
			28V dc			115V ac, 60 Hz			115V ac, 400 Hz		
			Lamp Load	Resistive Load	Inductive Load	Lamp Load	Resistive Load	Inductive Load	Lamp Load	Resistive Load	Inductive Load
<b>1</b> <b>2</b>	MS35058	Maintained Momentary	7 5	25 20	15 10	— —	10 10	10 7	3 —	10 —	10 —
<b>3</b> <b>4</b>	MS35059	Maintained Momentary	7 5	20 18	15 10	— —	20 11	— —	4 —	20 —	15 —
<b>5</b>	MS25201	ON-ON-ON	5	18	10	2	11	8	2	11	8
<b>6</b> <b>7</b>	MS25068	Maintained Momentary	5 4	20 18	12 10	— —	— —	— —	4 2	20 11	15 5

- 3** Across terminals 2-3 and 5-6.
- 4** Across terminals 1-2 and 5-6.
- 10** Across terminals 1-2 and 4-5.
- 11** Across terminals 2-3 and 4-5.
- 12** For "INDEPENDENT ON-ON-ON" circuit arrangement see page 4.28.

**DIMENSIONS** APPROXIMATE IN MM (INCHES)

ONE POLE MAINTAINED & MOMENTARY ACTION	TWO POLE MAINTAINED ACTION
<p>Keyway 0.76 (.030) Deep 1.52 (.060) Wide</p> <p>15/32-32 Thds.</p> <p>15.75 (.620)</p> <p>28.45 (1.120)</p> <p>26.42 (1.040)</p> <p>#6-32 x 4.57 (.180) Long Pan Head Screws</p>	<p>Keyway 0.76 (.030) Deep 1.52 (.060) Wide</p> <p>15/32-32 Thds.</p> <p>19.05 (.750)</p> <p>33.27 (1.310)</p> <p>26.92 (1.060)</p> <p>#6-32 X 6.35 (.250) Pan Head Screws</p>
TWO POLE MOMENTARY ACTION & 3 "ON" CIRCUITS	FOUR POLE MAINTAINED & MOMENTARY ACTION
<p>Keyway 0.76 (.030) Deep 1.52 (.060) Wide</p> <p>15/32-32 Thds.</p> <p>19.05 (.750)</p> <p>33.27 (1.310)</p> <p>30.48 (1.200)</p> <p>#6-32 X 6.35 (.250) Pan Head Screws</p>	<p>Keyway 0.76 (.030) Deep 1.52 (.060) Wide</p> <p>15/32-32 Thds.</p> <p>36.32 (1.430)</p> <p>33.53 (1.320)</p> <p>31.75 (1.250)</p> <p>#6-32 X 6.35 (.250) Long Pan Head Screws</p>



**8858K39**  
Heavy Duty



**8859K44**  
Heavy Duty



**7301K36**  
Heavy Duty



**7310K38**  
Heavy Duty