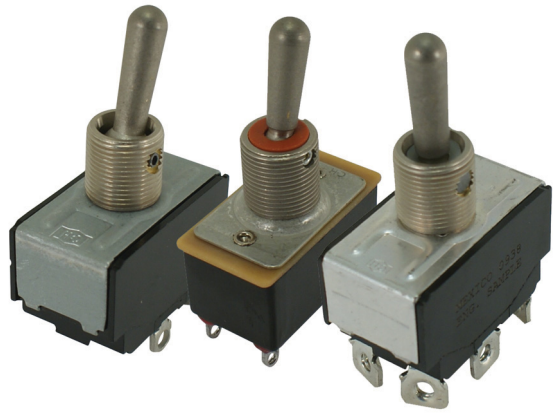
Military Purpose Toggles



Contents

Product Description

Eaton's military purpose switches are designed to meet the requirements of MIL-S-83731. 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.

Standards and Certifications

- MIL-S-83731

Product Selection

AC/DC Rated (Medium Duty) MIL-S-83731

Current Ratings	Poles and Throw	Circuit with Toggle in … UP Position	CENTER Position	DOWN Position (Keyway)	Base Circuit See PG07002001E, Tab 6	Dimension "A" Inches (mm)	Dimension "B" Inches (mm)	Military Solder Lug Terminals MIL-S-83731 with Sealed Lever	Catalog Number
Single-Pole									
See **A** below	1PST	ON ON OFF	NONE NONE NONE	OFF MOM. OFF MOM. ON	A	—	0.906 (23.01)	**MS25098-22** **MS25098-29** **MS25098-30**	**8261K22** **8261K29** **8261K30**
See **A** below	1PDT	ON ON	NONE NONE	ON MOM. ON	B	0.937 (23.80)	—	**MS25098-23** **MS25098-26**	**8261K23** **8261K26**
Two-Pole									
See **B** below	2PST	ON ON OFF	NONE NONE NONE	OFF MOM. OFF MOM. ON	C	—	0.906 (23.01)	**MS25100-22** **MS25100-29** **MS25100-30**	**8262K22** **8262K29** **8262K30**
See **C** below	2PDT	ON ON	NONE NONE	ON MOM. ON	D	0.937 (23.80)	—	**MS25100-23** **MS25100-26**	**8262K23** **8262K26**

Current Ratings

	Part Number	Current Capacity in Amperes per Pole = 125 Vac, 60 Hz: Resistive Load	Inductive Load
A	All MS25098	3.0	1.5
B	MS25100-22, 29, 30	3.0	1.5
C	MS25100-23, 26	1.0	1.0

AC Rated (Heavy Duty) MIL-S-83731 with Lever Seal

Current Ratings	Poles and Throw	Circuit with Toggle in … UP Position	CENTER Position	DOWN Position (Keyway)	Base Circuit See PG07002001E, Tab 6	Bushing Length "A" Inches (mm)	Lever Length "B" Inches (mm)	Screw Terminals with Sealed Lever MS Part Number	Catalog Number
Single-Pole									
See **A** below	1PST	ON	NONE	OFF	A	0.468 (11.89)	0.687 (17.45)	**MS35058-22**	**8801K22**
		ON	OFF	NONE				**MS35058-24**	**8801K23**
See **B** below		ON	NONE	MOM. OFF				**MS35058-29**	**8813K17**
		ON	MOM. OFF	NONE				**MS35058-25**	**8813K18**
		NONE	OFF	MOM. ON				**MS35058-28**	**8811K18**
		OFF	NONE	MOM. ON				**MS35058-30**	**8811K17**
See **A** below	1PDT	ON	OFF	ON	B	0.468 (11.89)	0.687 (17.45)	**MS35058-21**	**8800K16**
		ON	NONE	ON				**MS35058-23**	**8810K15**
See **B** below		ON	NONE	MOM. ON				**MS35058-26**	**8804K13**
		MOM. ON	OFF	MOM. ON				**MS35058-27**	**8812K14**
		ON	OFF	MOM. ON				**MS35058-31**	**8809K16**
Two-Pole									
See **C** below	2PST	ON	NONE	OFF	C	0.468 (11.89)	0.687 (17.45)	**MS35059-22**	**8822K20**
		ON	OFF	NONE				**MS35059-24**	**8822K21**
See **D** below		ON	NONE	MOM. OFF				**MS35059-29**	**8828K13**
		ON	MOM. OFF	NONE				**MS35059-25**	**8828K12**
		NONE	OFF	MOM. ON				**MS35059-28**	**8826K14**
		OFF	NONE	MOM. ON				**MS35059-30**	**8826K15**
See **C** below	2PDT	ON	OFF	ON	D	0.468 (11.89)	0.687 (17.45)	**MS35059-21**	**8820K16**
		ON	NONE	ON				**MS35059-23**	**8824K14**
See **D** below		ON	NONE	MOM. ON				**MS35059-26**	**8830K13**
		MOM. ON	OFF	MOM. ON				**MS35059-27**	**8834K5**
		ON	OFF	MOM. ON				**MS35059-31**	**8832K6**
See **E** below	1P3T in a 2P base	ON ①	ON ②	ON ④	See **PG07002001E, Tab 6**	0.468 (11.89)	0.687 (17.45)	**MS25201-4**	**8860K4**
		ON ①	ON ②	MOM. ON ④				**MS25201-5**	**8860K5**
		MOM. ON ①	ON ②	MOM. ON ④				**MS25201-6**	**8860K6**
		ON ①	ON ③	ON ④				**MS25201-7**	**8860K7** ⑤
		ON ①	ON ③	MOM. ON ④				**MS25201-8**	**8860K8** ⑤
		MOM. ON ①	ON ③	MOM. ON ④				**MS25201-9**	**8860K9** ⑤
Four-Pole									
See **F** below	4PST	ON	NONE	OFF	E	0.468 (11.89)	0.687 (17.45)	—	**7660K12**
		ON	OFF	NONE				**MS25068-24**	**7660K13**
See **G** below		ON	MOM. OFF	NONE				**MS25068-25**	**7668K7**
		NONE	OFF	MOM. ON				**MS25068-28**	**7666K9**
		OFF	NONE	MOM. ON				—	**7666K6**
See **F** below	4PDT	ON	OFF	ON	F	0.468 (11.89)	0.687 (17.45)	**MS25068-21**	**7662K7**
		ON	NONE	ON				**MS25068-23**	**7664K5**
See **G** below		ON	NONE	MOM. ON				**MS25068-26**	**7674K5**
		MOM. ON	OFF	MOM. ON				**MS25068-27**	**7672K5**
		ON	OFF	MOM. ON				**MS25068-31**	**7670K6**

Current Ratings

	Switch	Type of Operation	Current Capacity in Amperes per Pole 28 Vdc Lamp Load	28 Vdc Resistive Load	28 Vdc Inductive Load	115 Vac, 60 Hz Lamp Load	115 Vac, 60 Hz Resistive Load	115 Vac, 60 Hz Inductive Load	115 Vac, 400 Hz Lamp Load	115 Vac, 400 Hz Resistive Load	115 Vac, 400 Hz Inductive Load
A	MS35058	Maintained	7	25	15	—	10	10	3	10	10
B	MS35058	Momentary	5	20	10	—	10	7	—	—	—
C	MS35059	Maintained	7	20	15	—	20	—	4	20	15
D	MS35059	Momentary	5	18	10	—	11	—	—	—	—
E	MS25201	ON-ON-ON	5	18	10	2	11	8	2	11	8
F	MS25068	Maintained	5	20	12	—	—	—	4	20	15
G	MS25068	Momentary	4	18	10	—	—	—	2	11	5

Notes

① Across terminals 2-3 and 5-6.
② Across terminals 1-2 and 5-6.
③ Across terminals 2-3 and 4-5.
④ Across terminals 1-2 and 4-5.
⑤ For "INDEPENDENT ON-ON-ON" circuit arrangement, see **PG07002001E, Tab 6**.

AC Rated (Heavy Duty) MIL-S-83731 Lever Lock with Lever Seal

Current Ratings	Poles and Throw	Circuit with Toggle in … UP Position	CENTER Position	DOWN Position (Keyway)	Base Circuit See PG07002001E, Tab 6	Lever Lock Bushing Style ①	Bushing Length "A" Inches (mm)	Lever Lock Length "B" Inches (mm)	Screw Terminals with Sealed Lever MS Part Number	Catalog Number
Single-Pole										
See **A** below	1PST	ON	NONE	⟵ OFF	A	3	0.562 (14.27)	1.000 (25.40)	**MS25125-C2**	**8857K47**
		ON ⟶	NONE	⟵ OFF		4			**MS25125-E2**	**8857K48**
		ON ⟶	⟵ OFF	NONE		5			**MS25125-J4**	**8857K49**
See **A** below	1PDT	ON	⟵ OFF ⟶	ON	B	2	0.562 (14.27)	1.000 (25.40)	**MS25125-B1**	**8857K40**
		ON	NONE	⟵ ON		3			**MS25125-C3**	**8857K45**
		ON ⟶	NONE	⟵ ON		4			**MS25125-E3**	**8857K44**
Two-Pole										
See **B** below	2PDT	ON ⟶	⟵ OFF ⟶	⟵ ON	C	1	0.562 (14.27)	1.000 (25.40)	**MS25126-A1**	**8858K39**
		ON	⟵ OFF ⟶	ON		2			**MS25126-B1**	**8858K40**
		ON ⟶	NONE	⟵ ON		4			**MS25126-E3**	**8858K44**
Four-Pole										
See **C** below	4PDT	ON ⟶	NONE	⟵ ON	F	4	0.562 (14.27)	1.000 (25.40)	**MS25127-E3**	**8859K44**

⟵ Indicates direction against which lever is locked.

Current Ratings

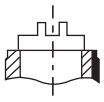
	Switch	Type of Operation	Current Capacity in Amperes per Pole 28 Vdc Lamp Load	28 Vdc Resistive Load	28 Vdc Inductive Load	115 Vac, 60 Hz Lamp Load	115 Vac, 60 Hz Resistive Load	115 Vac, 60 Hz Inductive Load	115 Vac, 400 Hz Lamp Load	115 Vac, 400 Hz Resistive Load	115 Vac, 400 Hz Inductive Load
A	MS25125	Maintained	5	20	15	—	—	—	3	10	10
B	MS25126	Maintained	7	20	15	—	—	—	4	20	15
C	MS25127	Maintained	5	20	15	—	—	—	4	20	15

Note

① See illustrations below for lever lock bushing styles.

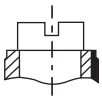
Lever Lock Bushing Styles

Style 1



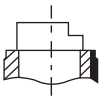
Locked in Three Positions

Style 2



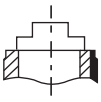
Locked in Center Positions

Style 3



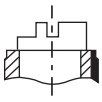
Locked in Keyway Side

Style 4



Locked out of Center Position

Style 5



Locked in Center and Side Opposite Keyway

These illustrations are for pictoral representation only—keyway on right-hand side.

AC Rated (Heavy Duty) Military with Unsealed Lever

Current Ratings	Poles and Throw	Circuit with Toggle in … UP Position	CENTER Position	DOWN Position (Keyway)	Base Circuit See PG07002001E, Tab 6	Bushing Length "A" Inches (mm)	Lever Length "B" Inches (mm)	Solder Lug Terminals Catalog Number	Screw Terminals Catalog Number
Single-Pole									
See **A** below	1PST	ON	NONE	OFF	A	0.468 (11.89)	0.688 (17.45)	**7300K38**	**7300K36**
See **B** below		ON	NONE	MOM. OFF				**7304K38**	**7304K36**
		OFF	NONE	MOM. ON				**7303K38**	**7303K36**
See **A** below	1PDT	ON	OFF	ON	B	0.468 (11.89)	0.688 (17.45)	**7301K38**	**7301K36**
		ON	NONE	ON				**7302K38**	**7302K36**
See **B** below		ON	NONE	MOM. ON				**7307K38**	**7307K36**
		MOM. ON	OFF	MOM. ON				**7306K38**	**7306K36**
		ON	OFF	MOM. ON				**7305K38**	**7305K36**
Two-Pole									
See **C** below	2PST	ON	NONE	OFF	C	0.468 (11.89)	0.688 (17.45)	**7310K38**	**7310K36**
See **D** below		ON	NONE	MOM. OFF				**7314K38**	**7314K36**
		OFF	NONE	MOM. ON				**7313K38**	**7313K36**
See **C** below	2PDT	ON	OFF	ON	D	0.468 (11.89)	0.688 (17.45)	**7311K38**	**7311K36**
		ON	NONE	ON				**7312K38**	**7312K36**
See **D** below		ON	NONE	MOM. ON				**7317K38**	**7317K36**
		MOM. ON	OFF	MOM. ON				**7316K38**	**7316K36**
		ON	OFF	MOM. ON				**7315K38**	**7315K36**

Current Ratings

Type of Operation	Current Capacity in Amperes per Pole: 30 Vdc Lamp Load	30 Vdc Resistive Load	30 Vdc Inductive Load	125 Vac, 60 Hz Resistive Load	125 Vac, 60 Hz Inductive Load	125 Vac, 60 Hz Horsepower	250 Vac, 60 Hz Resistive Load	250 Vac, 60 Hz Inductive Load	250 Vac, 60 Hz Horsepower
Single-Pole									
A Maintained	5	20	15	15	—	—	6	—	—
B Momentary	4	15	10	15	—	—	6	—	—
Two-Pole									
C Maintained	7	30	15	25	—	—	9	—	—
D Momentary	5	20	10	15	—	—	6	—	—

Technical Data and Specifications

Military Purpose Switches

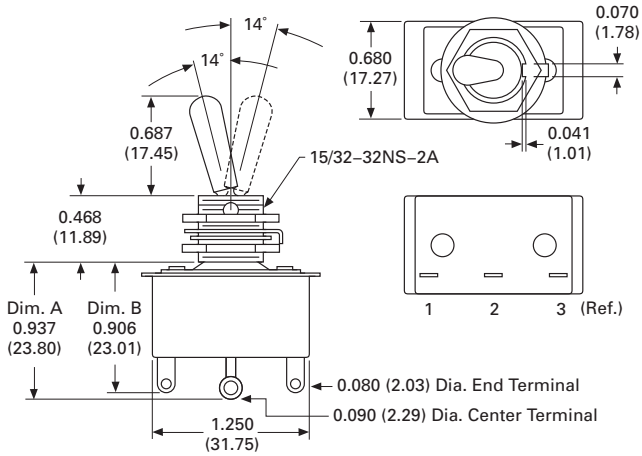
Description	Specification
Ratings	See Product Selection tables
Circuits	1PST, 1PDT, 2PST, 2PDT, 1P3T (ON-ON-ON), 4PST and 4PDT; maintained and momentary action
Contact action	Heavy duty—Slow-make/slow-break butt contact Medium duty—Quick-make/quick-break, wiping action
Contact material	Heavy duty: Movable—silver-plated 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
Terminal types	Heavy duty MIL-S-83731 types: Screw terminals—brass designed to accept #6-32 x 6.35 mm (0.250 in) pan head (Catalog Number 11-1893) screws and Si bronze #6 helical lockwasher (Catalog Number 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 4.78 mm (0.188 in) binding head (Catalog Number 811-2) screws. Furnished unassembled Solder lug terminals—tintillate plated brass Medium duty MIL-S-83731 types: Solder lugs—brass silver-plated furnished with 0.094 in (2.39 mm) dia. hole
Base material	Thermoset molding material
Mounting means	Threaded bushing—0.468 in (11.89 mm) dia., 32 threads/inch Keyway—0.068 x 0.035 in (1.73 x 0.89 mm) deep; provides anti-rotation feature Hardware supplied: MIL-S-83731 types— 2 hexagon facenuts (Catalog Number 15-966-6), 1 locking ring (Catalog Number 29-761) and 1 internal tooth lockwasher (Catalog Number 16-886). Furnished unassembled JAN-S-23 types—2 hexagon facenuts (Catalog Number 15-966-6). Furnished unassembled
Dielectric	1000V minimum
Operating temperature range	0° to 150°F (–17.8° to 65.6°C)

Dimensions

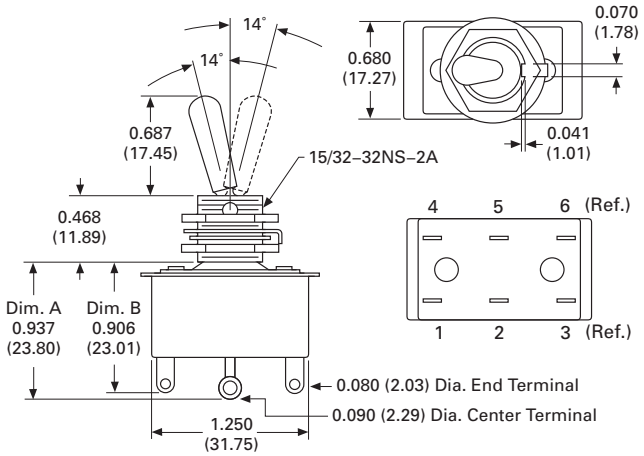
Approximate Dimensions in Inches (mm)

AC/DC Rated (Medium Duty) MIL-83731 Switches

1PDT Maintained Action (Solder Lug)

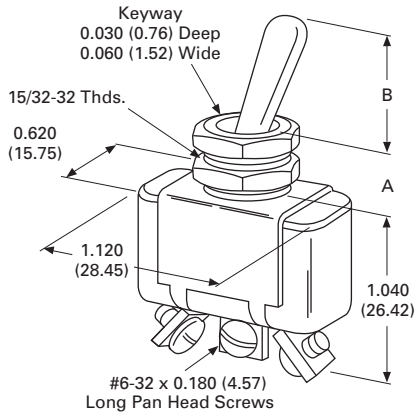


2PDT Maintained Action (Solder Lug)

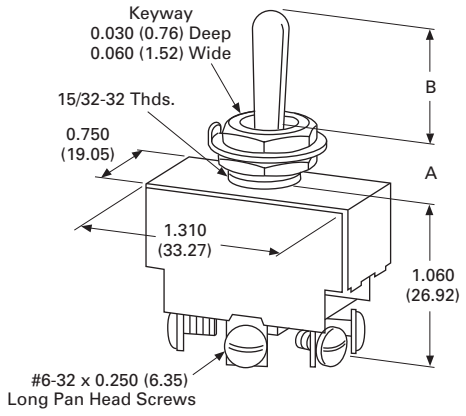


AC Rated (Heavy Duty) MIL-83731 Switches with Lever Seal

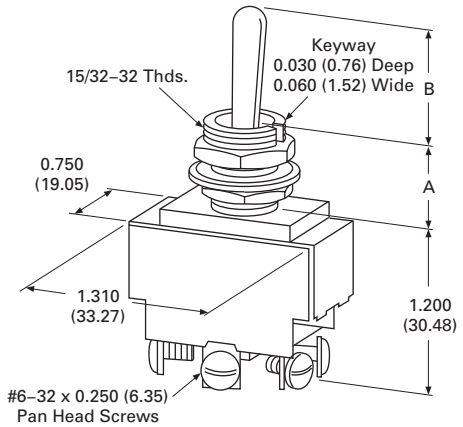
Single-Pole Maintained and Momentary Action



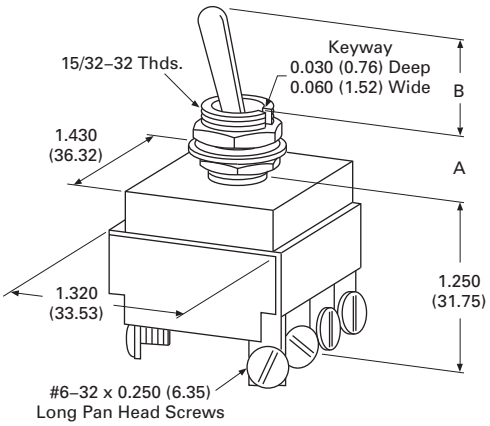
Two-Pole Maintained Action



Two-Pole Momentary Action and 3 ON Circuits



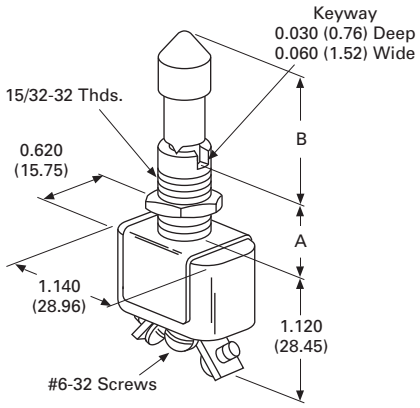
Four-Pole Maintained and Momentary Action



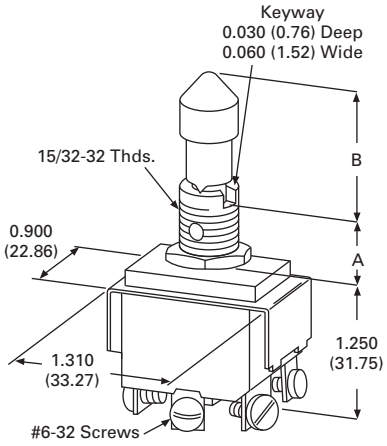
Approximate Dimensions in Inches (mm)

AC Rated (Heavy Duty) MIL-83731 Lever Lock Switches with Lever Seal

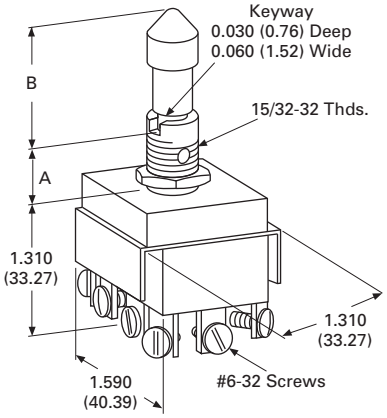
Single-Pole



Two-Pole

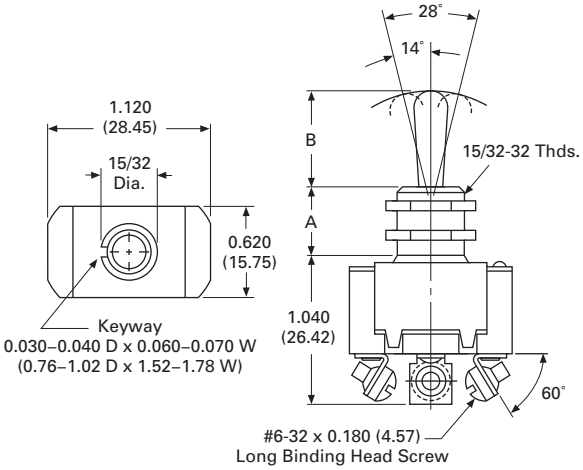


Four-Pole

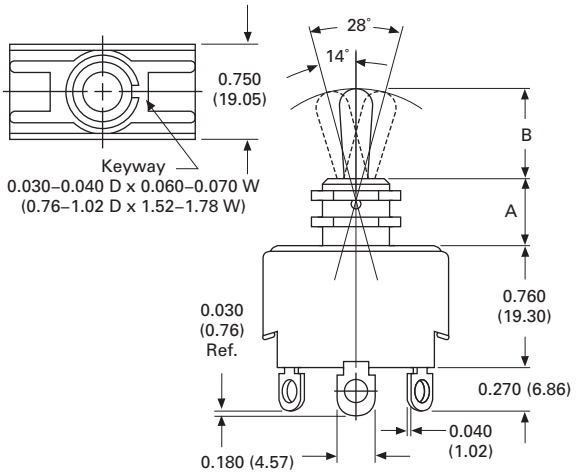


AC Rated (Heavy Duty)

1PDT Maintained Action



2PDT Maintained Action



2PDT Momentary Action