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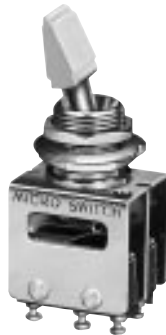


# Manual Switches

## Toggle Switch Assemblies



Standard lever



Tab lever



Pull-to-unlock lever

### FEATURES

- 2 or 3-position, momentary and maintained action.
- 2, 3 or 4 SPDT precision basic switches.
- Standard toggle, tab, or pull-to-unlock levers.
- Silver or gold contacts.
- <sup>15</sup>/<sub>32</sub>-inch bushing.
- UL recognized, CSA certified basic switches.
- Lever-to-bushing seal option.

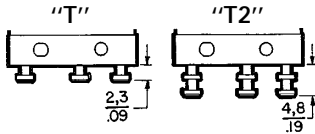
### ELECTRICAL RATINGS — Basic Switches

	UL/CSA Rating	Load	30 VDC Rating	
			Amps	
			Sea Level	50,000 ft.
Silver Contacts	5 amps, 125-250 VAC	Inductive Resistive Max. Inrush	3 5 24	2.5 5 24
Gold Contacts	1 amp, 125 VAC	Inductive Resistive Max. Inrush	0.5 1 2	0.5 1 2

### PULL-TO-UNLOCK TOGGLE LEVERS

As a guard against accidental operation, pull-to-unlock toggle levers must be pulled .090 inch/2,3 mm (approx.) to change positions. A chart showing the 13 locking configurations and their catalog listing suffix code letters is shown on the following page.

### TERMINALS



### AT 2-POSITION ORDER GUIDE

Toggle Lever Position		No. of Poles/ Switches	Type Contacts	Standard Lever "T"			Tab Lever "T2"	Pull-To-Unlock Lever Solder Terminals (Add locking letter to catalog listings below)			
Keyway	Opposite Keyway			Solder Terminals	Terminals	"T2" Terminals	Terminals				
Maint.	Maint.	2	Silver	23AT1	23AT1-T	23AT1-T2	23AT402-T2	23AT1-	Locking letters: D, F, or G		
			Gold	23AT11		23AT11-T2		23AT11-			
		3	Silver	23AT2	23AT2-T	23AT2-T2		23AT2-			
			Gold	23AT12		23AT12-T2		23AT12-			
		4	Silver	23AT3	23AT3-T	23AT3-T2		23AT3-			
			Gold	23AT8							
		Mom.	Maint.	2	Silver	23AT4	23AT4-T	23AT4-T2		23AT403-T2	
					Gold	23AT19					
3	Silver			23AT5							
	Gold										
4	Silver			23AT6		23AT6-T2					
	Gold										

### AT MIL-S-8805/26 VERSIONS ORDER GUIDE

Toggle Lever Position		No. of Poles/ Switches	Type Contacts	Standard Lever "T2" Terminals		Tab Lever "T2" Terminals	
Keyway	Opposite Keyway			Catalog Listing	Military No.	Catalog Listing	Military No.
Maint.	Maint.	2	Silver	23AT73-T2	M8805/26-001	23AT473-T2	M8805/26-003
		4	Silver	23AT74-T2	M8805/26-002	23AT474-T2	M8805/26-004

Manuals

# Manual Switches

## Toggle Switch Assemblies

13T Series

### AT 3-POSITION ORDER GUIDE

Toggle Lever Position			No. of Poles/ Switches	Type Contacts	Standard Lever			Tab Lever "T2" Terminals	Pull-To-Unlock Lever Solder Terminals (Add locking letter to cat. listings below)		
Keyway	Center	Opposite Keyway			Solder Terminals	"T" Terminals	"T2" Terminals				
Maint.	Maint.	Maint.	2	Silver	13AT2	13AT2-T	13AT2-T2	13AT402-T2	Locking letters: All types		
				Gold	13AT18	13AT18-T					
			3	Silver	13AT5			13AT5-			
				4	Silver	13AT9		13AT9-T2		13AT409-T2	13AT9-
					Gold	13AT29					
Mom.	Maint.	Mom.	2	Silver	13AT1	13AT1-T	13AT1-T2	13AT401-T2	Locking letters: E, L, or N		
				Gold	13AT26			13AT423-T2			
			3	Silver	13AT4			13AT413-T2			
				4	Silver	13AT8		13AT8-T2			13AT8-
					Gold						
Maint.	Maint.	Mom.	2	Silver	13AT3	13AT3-T	13AT3-T2	13AT403-T2	Locking letters: E, G, B, L, P or N		
				Gold							
			4	Silver	13AT10			13AT410-T2		13AT10-	

### AT MIL-S-8805/26 VERSIONS ORDER GUIDE

Toggle Lever Position			No. of Poles/ Switches	Type Contacts	Standard Lever "T2" Terminals		Tab Lever "T2" Terminals	
Keyway	Center	Opposite Keyway			Catalog Listing	Military No.	Catalog Listing	Military No.
Mom.	Maint.	Mom.	2	Silver	13AT271-T2	M8805/26-005	13AT471-T2	M8805/26-006
			3	Silver			13AT474-T2	M8805/26-012
Maint.	Maint.	Maint.	2	Silver	13AT272-T2	M8805/26-007	13AT472-T2	M8805/26-008
			3	Silver	13AT275-T2	M8805/26-013		
Maint.	Maint.	Mom.	2	Silver	13AT273-T2	M8805/26-009	13AT473-T2	M8805/26-010

#### LEVER-TO-BUSHING SEAL OPTION

A splash type lever-to-bushing seal can be provided to help prevent the entrance of moisture and dust behind the panel, or into the contact area.

#### HERMETICALLY SEALED BASIC SWITCH OPTION














AT's with <sup>15</sup>/<sub>32</sub>" bushings can be furnished with HM or HS hermetically sealed basic switches, which have metal-to-metal fusion around the cover, actuator base and mounting holes. Terminals are sealed glass-to-metal. For more information, contact your MICRO SWITCH Sales Office.



Shown with HM basic switches

#### LOCKING CONFIGURATIONS

When ordering pull-to-unlock toggle listings, add the suffix letter shown in this chart to the standard toggle catalog listing and the Military Approval number.

<b>A</b>  Locked In Three Positions	<b>B</b>  Locked In Center and Extreme Position (Keyway Side)	<b>D</b>  Locked Out Of Center Position	<b>E</b>  Locked In Center Position	<b>F</b>  Locked In Extreme Position (Opposite Keyway)	<b>G</b>  Locked In Extreme Position (Keyway Side)	<b>H</b>  Locked Out Of Center And Extreme Position (Keyway Side)
<b>J</b>  Locked Out Of Center And Extreme Position (Opposite Keyway)	<b>K</b>  Locked In Center And Extreme Position (Opposite Keyway)	<b>L</b>  Locked Out Of Extreme Position (Keyway Side)	<b>M</b>  Locked Out Of And Into Extreme Position (Opposite Keyway)	<b>N</b>  Locked Out Of Extreme Position (Opposite Keyway)	<b>P</b>  Locked Out Of And Into Extreme Position (Keyway Side)	

# Manual Switches

## Toggle Switch Assemblies

60AT Series



Standard lever



Pull-to-unlock lever

### FEATURES

- Compact multi-pole design conserves space and weight
- 2, 4, 6, or 8 SPDT precision basic switches
- 2 or 3-position, momentary and maintained action
- 15/32" bushing
- Standard or pull-to-unlock toggle levers
- MIL-S-8805/98 qualified versions

### PULL-TO-UNLOCK OPTION

As a guard against accidental operation, pull-to-unlock levers must be pulled .090 in./2,3 mm (approx.) to change positions. See chart on facing page which shows locking configurations and locking letter suffix codes which are referred to in the order guides.

Note: To order replacements for the resilient white caps which are screwed onto 60AT locking levers, specify Catalog Listing **15PA90-6W**.

**C** = common, **NC** = normally closed, **NO** = normally open.  
**Numbers** = basic switch designations.

### ELECTRICAL RATINGS — Basic Switches (in amperes)

Load	Sea Level			50,000 Ft.		
	28 VDC	115 VAC* 400 Hz	250 VAC 60 Hz	28 VDC	115 VAC* 400 Hz	250 VAC 60 Hz
Resistive	7	7	7	7	7	7
Inductive	4**	7	7	2.5**	7	7
Motor	4	3.3	3.3	4	3.3	3.3
Lamp	2.5	2	2	2.5	2	2

Inrush: 20 amps

\* 75% power factor.

\*\* Use AN31796 inductor.

### AT 2-POSITION ORDER GUIDE

No. of Poles/ Switches	Circuits Made With Toggle At:				Standard Lever Catalog Listing		Pull-To-Unlock Lever Suffix (Add locking letter to cat. listings)
	Keyway Position		Opposite Keyway		With MIL-S-6743 Basic Switches	With MIL-S-8805/4 Basic Switches	
	C-NC	C-NO	C-NC	C-NO			
2	1, 2 1, 2*	— —	— —	1, 2 1, 2*	62AT11-3 62AT11-8 62AT11-82	62AT22-3 62AT22-8 62AT22-82	D, G F G
4	1, 2	3, 4	3, 4	1, 2	64AT11-3	64AT22-3	D, F, G
6	1, 2, 3	4, 5, 6	4, 5, 6	1, 2, 3	66AT11-3	66AT22-3	D, F, G
8	1, 2, 3, 4	5, 6, 7, 8	5, 6, 7, 8	1, 2, 3, 4	68AT11-3	68AT22-3	D, F, G

### AT MIL-S-8805/98 VERSIONS (WITH BUSHING AND PANEL SEALS) ORDER GUIDE

No. of Poles/ Switches	Circuits Made With Toggle At:				Standard Lever Version	
	Keyway Position		Opposite Keyway		Catalog Listing	Military No.
	C-NC	C-NO	C-NC	C-NO		
4	1, 2	3, 4	3, 4	1, 2	64AT300-3	M8805/98-015
6	1, 2, 3	4, 5, 6	4, 5, 6	1, 2, 3	66AT300-3	M8805/98-046
8	1, 2, 3, 4	5, 6, 7, 8	5, 6, 7, 8	1, 2, 3, 4	68AT300-3	M8805/98/077

\* Momentary positions. All others are maintained.

Manuals

# Manual Switches

## Toggle Switch Assemblies

60AT Series

### 60AT SERIES 3-POSITION ORDER GUIDE

C = common, NC = normally closed, NO = normally open.  
Numbers = basic switch designations.

No. of Poles/ Switches	Circuits Made With Toggle At:						Standard Lever Catalog Listing		Pull-To-Unlock Lever Suffix (Add locking letter to cat. listings)
	Keyway Position		Center Position		Opposite Keyway		With MIL-S-6743 Basic Switches	With MIL-S-8805/4 Basic Switches	
	C-NC	C-NO	C-NC	C-NO	C-NC	C-NO			
2	1	2	1, 2	—	2	1	62AT11-1	62AT22-1	All Types
4	1, 2	3, 4	All	—	3, 4	1, 2	64AT11-1	64AT22-1	All Types
	1, 2	3, 4	All	—	3, 4*	1, 2*	64AT11-514	64AT22-514	B, E, G, L, N, P
	1, 2*	3, 4*	All	—	3, 4	1, 2	64AT11-5	64AT22-5	E, F, K, L, M, N
	1, 2*	3, 4*	All	—	3, 4*	1, 2*	64AT11-7	64AT22-7	E, L, N
6	1, 2, 3	4, 5, 6	All	—	4, 5, 6	1, 2, 3	66AT11-1	66AT22-1	All Types
	1, 2, 3*	4, 5, 6*	All	—	4, 5, 6	1, 2, 3	66AT11-5	66AT22-5	E, F, K, L, M, N
	1, 2, 3*	4, 5, 6*	All	—	4, 5, 6*	1, 2, 3*	66AT11-7	66AT22-7	E, L, N
	1, 2, 3	4, 5, 6	All	—	4, 5, 6*	1, 2, 3*	66AT22-514	66AT22-514	B, E, G, L, N, P
8	1, 2, 3, 4	5, 6, 7, 8	All	—	5, 6, 7, 8	1, 2, 3, 4	68AT11-1	68AT22-1	All Types
	1, 2, 3, 4*	5, 6, 7, 8*	All	—	5, 6, 7, 8	1, 2, 3, 4	68AT11-5	68AT22-5	E, F, K, L, M, N
	1, 2, 3, 4*	5, 6, 7, 8*	All	—	5, 6, 7, 8*	1, 2, 3, 4*	68AT11-7	68AT22-7	E, L, N
	1, 2, 3, 4	5, 6, 7, 8	All	—	5, 6, 7, 8*	1, 2, 3, 4*	68AT11-514	68AT22-514	B, E, G, L, N, P

### 60AT MIL-S-8805/98 Versions (With bushing and panel seals)

No. of Poles/ Switches	Circuits Made With Toggle At:						Standard Lever Version (Pull-to-unlocks listed below order guide)	
	Keyway Position		Center Position		Opposite Keyway		Catalog Listing	Military No.
	C-NC	C-NO	C-NC	C-NO	C-NC	C-NO		
4	1, 2	3, 4	All	—	3, 4	1, 2	64AT300-1	M8805/98-001
	1, 2*	3, 4*	All	—	3, 4	1, 2	64AT300-5	M8805/98-019
	1, 2*	3, 4*	All	—	3, 4*	1, 2*	64AT300-7	M8805/98-026
6	1, 2, 3	4, 5, 6	All	—	4, 5, 6	1, 2, 3	66AT300-1	M8805/98-032
	1, 2, 3*	4, 5, 6*	All	—	4, 5, 6	1, 2, 3	66AT300-5	M8805/98-050
	1, 2, 3*	4, 5, 6*	All	—	4, 5, 6*	1, 2, 3*	66AT300-7	M8805/98-057
8	1, 2, 3, 4	5, 6, 7, 8	All	—	5, 6, 7, 8	1, 2, 3, 4	68AT300-1	M8805/98-063
	1, 2, 3, 4*	5, 6, 7, 8*	All	—	5, 6, 7, 8	1, 2, 3, 4	68AT300-5	M8805/98-081
	1, 2, 3, 4*	5, 6, 7, 8*	All	—	5, 6, 7, 8*	1, 2, 3, 4*	68AT300-7	M8805/98-092

\* Momentary positions. All others are maintained.

### 60AT MIL-S-8805/98 Pull-to-Unlock Versions (With bushing and panel seals)

These switches have the same circuitry as their companion standard lever catalog listings in the MIL-S-8805/98 order guides. Example: 64AT300-1 has the same circuitry as 64AT300-1A. (Refer to locking chart on page 53.) Note: It is not necessary to add locking letter suffixes to M8805/98 military numbers.

Cat. Listing	Military No.	Cat. Listing	Military No.	Cat. Listing	Military No.	Cat. Listing	Military No.
64AT300-1A	M8805/98-002	64AT300-5M	M8805/98-024	66AT300-3F	M8805/98-048	68AT300-1K	M8805/98-072
-1B	-003	-5N	-025	-3G	-049	-1L	-073
-1D	-004	64AT300-7E	M8805/98-027	66AT300-5E	-051	-1M	-074
-1E	-005	-7L	-028	-5F	-052	-AN	-075
-1F	-006	-7N	-029	-5K	-053	-1P	-076
-1G	-007			-5L	-054	68AT300-3D	M8805/98-078
-1H	-008	66AT300-1A	M8805/98-033	-5M	-055	-3F	-079
-1J	-009	-1B	-034	-5N	-056	-3G	-080
-1K	-010	-1D	-035	66AT300-7E	M8805/98-058	68AT300-5E	-082
-1L	-011	-1E	-036	-7L	-059	-5F	-083
-1M	-012	-1F	-037	-7N	-060	-5K	-084
-1N	-013	-1G	-038			-5L	-085
-1P	-014	-1H	-039	68AT300-1A	M8805/98-064	-5M	-086
64AT300-3D	M8805/98-016	-1J	-040	-1B	-065	-5N	-087
-3F	-017	-1K	-041	-1D	-066	68AT300-7E	-089
-3G	-018	-1L	-042	-1E	-067	-7L	-090
64AT300-5E	M8805/98-020	-1M	-043	-1F	-068	-7N	-091
-5F	-021	-1N	-044	-1G	-069		
-5K	-022	-1P	-045	-1H	-070		
-5L	-023	66AT300-3D	M8805/98-047	-1J	-071		

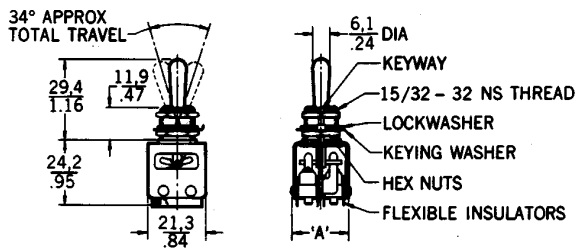
# Manual Switches

## Toggle Switch Assemblies

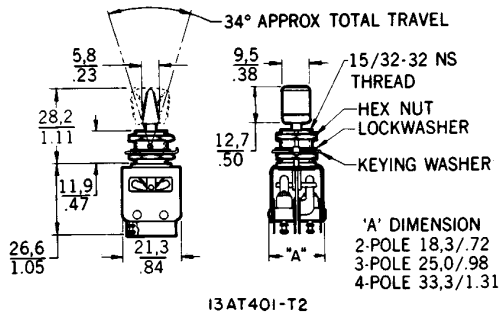
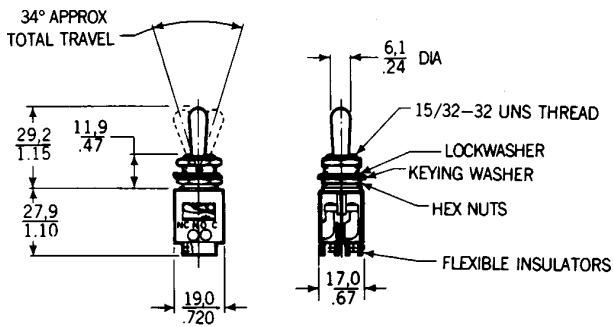
AT Series

### MOUNTING DIMENSIONS (For reference only)

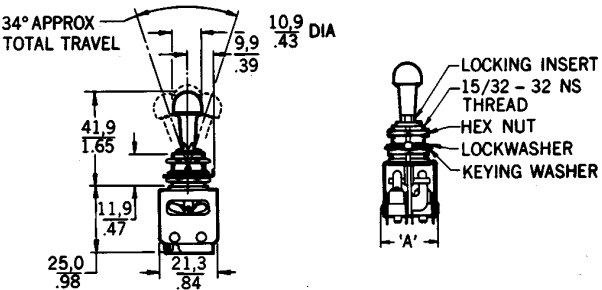
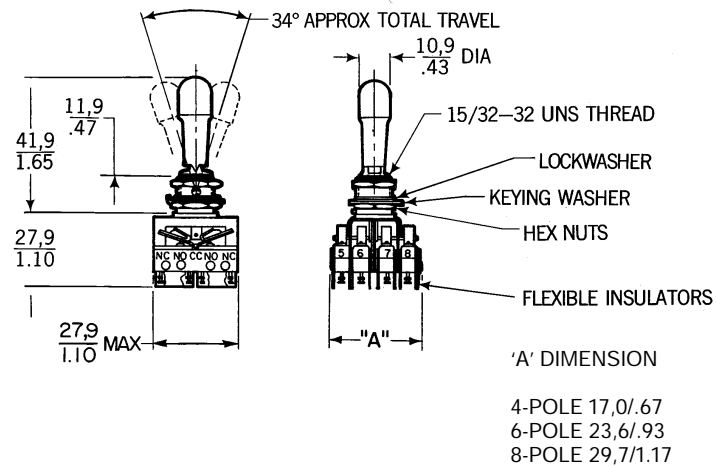
13/23AT



62AT

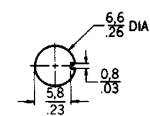


64/66/68AT

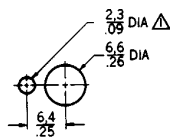


### PANEL CUTOUTS

1/4" Bushing



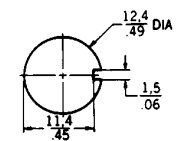
Without Locking Ring



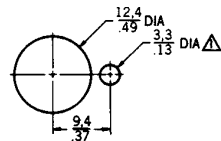
With Locking Ring

NOTE—  
△ 1.1/.05 MIN DEEP TO ACCOMMODATE LOCKING RING

1/2" Bushing



Without Locking Ring



With Locking Ring

NOTE—  
△ 1.4/.06 MIN DEEP TO ACCOMMODATE LOCKING RING

NOTE—  
64AT300, 66AT300, and 68AT300 (M8805/98) listings have a bushing seal and MS25196 panel seal.

Manuals