

# MILITARY - ENVIRONMENTALLY SEALED SWITCHES

## Series - 8503, 8504, 8505

## MIL-S-3950 Lever Lock Switches

### FEATURES

- Environmentally sealed
- 1, 2 and 4 pole circuitry
- 2 & 3 position with maintained and momentary action
- Locking actuator for safety
- Molded-in terminal inserts and terminal numbers

### SPECIFICATIONS

- Environmentally sealed per MILS-3950
- MS approved and QPL'd per MILS-3950
- Thermoset molding materials meet flame retardant requirements
- Bushing: 15/32" - 32 thread
- Temperature Range: -85°F to +160°F (-65°C to +71°C)
- Life: 20,000 operations at rated load  
40,000 operations mechanical life

### CURRENT RATINGS

No. of Poles	Catalog Number	Type of Operation	28VDC			115 VAC 60 or 400Hz		
			Lamp Load	Resistive Load	Inductive Load	Lamp Load	Resistive Load	Inductive Load
1	8503	Maintained	5	20	15	3	15	10
		Momentary	4	15	10	2	15	7
2	8504	Maintained	7	20	15	4	15	15
		Momentary	5	18	10	2	11	8
4	8505	Maintained	5	20	12	4	15	15
		Momentary	4	18	10	2	11	8

Minimum Rating: "Intermediate Current" per MIL-S-3950.

### LEVER LOCK SELECTION TABLE



8503



8504



8505

CIRCUIT WITH LEVER IN . . .			Lever ① Lock Bushing Style	ONE POLE		TWO POLE		FOUR POLE	
Up Position	Center Position	Down Position (Keyway)		Flush Screw Terminals		Flush Screw Terminals		Flush Screw Terminals	
				MS Part Number	Catalog Number	MS Part Number	Catalog Number	MS Part Number	Catalog Number
ON →	← OFF →	← ON	A	MS24658-21A	8503K1	MS24659-21A	8504K1	MS24660-21A	8505K1
ON	← OFF →	← ON	B	-21B	K27	-21B	K27	-21B	K27
ON →	← OFF →	← ON	D	-21D	K5	-21D	K5	-21D	K5
ON	← OFF →	ON	E	-21E	K2	-21E	K2	-21E	K2
ON →	← OFF →	ON	F	-21F	K28	-21F	K28	-21F	K28
ON	← OFF →	← ON	G	MS24658-21G	8503K3	MS24659-21G	8504K3	MS24660-21G	8505K3
ON →	← OFF →	← ON	H	-21H	K29	-21H	K29	-21H	K29
ON	← OFF →	← ON	J	-21J	K30	-21J	K30	-21J	K30
ON →	← OFF →	ON	K	-21K	K31	-21K	K31	-21K	K31
ON	← OFF →	ON	L	-21L	K32	-21L	K32	-21L	K32
ON →	← OFF →	ON	M	MS24658-21M	8503K33	MS24659-21M	8504K33	MS24660-21M	8505K33
ON	← OFF →	ON	N	-21N	K4	-21N	K4	-21N	K4
ON	← OFF →	← ON	P	-21P	K34	-21P	K34	-21P	K34
ON →	NONE	← OFF	D	-22D	K10	-22D	K10	-22D	K10
ON →	NONE	← OFF	F	-22F	K35	-22F	K35	-22F	K35
ON	NONE	← OFF	G	MS24658-22G	8503K9	MS24659-22G	8504K9	MS24660-22G	8505K9
ON →	NONE	← ON	D	-23D	K6	-23D	K6	-23D	K6
ON →	NONE	ON	F	-23F	K36	-23F	K36	-23F	K36
ON	NONE	← ON	G	-23G	K7	-23G	K7	-23G	K7
ON	← OFF	NONE	E	-24E	K16	-24E	K16	-24E	K16
ON →	← OFF →	NONE	F	MS24658-24F	8503K37	MS24659-24F	8504K37	MS24660-24F	8505K37
ON →	← OFF →	NONE	K	-24K	K38	-24K	K38	-24K	K38
ON →	← OFF →	NONE	M	-24M	K11	-24M	K11	-24M	K11
ON →	← OFF *	NONE	F	-25F	K22	-25F	K22	-25F	K22
ON →	NONE	ON *	F	-26F	K20	-26F	K20	-26F	K20
* ON	← OFF →	ON *	E	MS24658-27E	8503K12	MS24659-27E	8504K12	MS24660-27E	8505K12
* ON	← OFF →	ON *	L	-27L	K39	-27L	K39	-27L	K39
* ON	← OFF →	ON *	N	-27N	K14	-27N	K14	-27N	K14
NONE	← OFF →	ON *	E	-28E	K15	-28E	K15	-28E	K15
ON →	NONE	← OFF *	F	-29F	K21	-29F	K21	-29F	K21
OFF →	NONE	ON *	F	MS24658-30F	8503K19	MS24659-30F	8504K19	MS24660-30F	8505K19
ON	← OFF →	ON *	E	-31E	K18	-31E	K18	-31E	K18
ON →	← OFF →	ON *	F	-31F	K40	-31F	K40	-31F	K40
ON →	← OFF →	ON *	K	-31K	K41	-31K	K41	-31K	K41
ON	← OFF →	ON *	L	-31L	K13	-31L	K13	-31L	K13

\* Momentary contact.

→ Indicates direction against which lever is locked.  
See page A71 for circuit diagrams.

① Reference bushing styles on page A26.

# MILITARY - ENVIRONMENTALLY SEALED SWITCHES

Series - 8503, 8504, 8505

MIL-S-3950 Lever Lock Switches

## LEVER LOCK SELECTION TABLE, CONT'D



8503



8504



8505

CIRCUIT WITH LEVER IN . . .				ONE POLE		TWO POLE		FOUR POLE	
Up Position	Center Position	Down Position (Keyway)	Lever ① Lock Bushing Style	Flush Screw Terminals		Flush Screw Terminals		Flush Screw Terminals	
				MS Part Number	Catalog Number	MS Part Number	Catalog Number	MS Part Number	Catalog Number
ON →	← OFF	ON *	M	MS24658-31M	8503K17	MS24659-31M	8504K17	MS24660-31M	8505K17
ON	← OFF	ON *	N	-31N	K8	-31N	K8	-31N	K8
* ON	← ON	NONE	E	-32E	K23	-32E	K23	-32E	K23
ON	← ON	NONE	E	-33E	K24	-33E	K24	-33E	K24
ON →	ON	NONE	F	-33F	K25	-33F	K25	-33F	K25
ON →	← ON	NONE	K	MS24658-33K	8503K26	MS24659-33K	8504K26	MS24660-33K	8505K26
ON →	← ON	NONE	M	-33M	K42	-33M	K42	-33M	K42
ON →	← ON →	← ON	A	—	—	MS27408-1A	K43	MS27409-1A	K43
ON	← ON →	← ON	B	—	—	-1B	K44	-1B	K44
ON →	ON	← ON	D	—	—	-1D	K45	-1D	K45
ON	← ON →	ON	E	—	—	MS27408-1E	8504K46	MS27409-1E	8505K46
ON →	ON	ON	F	—	—	-1F	K47	-1F	K47
ON	ON	← ON	G	—	—	-1G	K48	-1G	K48
ON →	ON →	ON	H	—	—	-1H	K49	-1H	K49
ON	← ON	← ON	J	—	—	-1J	K50	-1J	K50
ON →	← ON →	ON	K	—	—	MS27408-1K	8504K51	MS27409-1K	8505K51
ON	ON →	ON	L	—	—	-1L	K52	-1L	K52
ON →	← ON	ON	M	—	—	-1M	K53	-1M	K53
ON	← ON	ON	N	—	—	-1N	K54	-1N	K54
ON	ON →	← ON	P	—	—	-1P	K55	-1P	K55
ON	← ON →	ON*	E	—	—	MS27408-2E	8504K56	MS27409-2E	8505K56
ON →	ON	ON*	F	—	—	-2F	K57	-2F	K57
ON →	← ON →	ON*	K	—	—	-2K	K58	-2K	K58
ON	ON →	ON*	L	—	—	-2L	K59	-2L	K59
ON →	← ON	ON*	M	—	—	-2M	K60	-2M	K60
ON	← ON	ON*	N	—	—	MS27408-2N	8504K61	MS27409-2N	8505K61
* ON	← ON →	ON*	E	—	—	-3E	K62	-3E	K62
* ON	ON →	ON*	L	—	—	-3L	K63	-3L	K63
* ON	← ON	ON*	N	—	—	-3N	K64	-3N	K64
ON →	← ON →	← ON	A	—	—	-4A	K65	—	—
ON	← ON →	← ON	B	—	—	MS27408-4B	8504K66	—	—
ON →	ON	← ON	D	—	—	-4D	K67	—	—
ON	← ON →	ON	E	—	—	-4E	K68	—	—
ON →	ON	ON	F	—	—	-4F	K69	—	—
ON	ON	← ON	G	—	—	-4G	K70	—	—
ON →	ON →	ON	H	—	—	MS27408-4H	8504K71	—	—
ON	← ON	← ON	J	—	—	-4J	K72	—	—
ON →	← ON →	ON	K	—	—	-4K	K73	—	—
ON	ON →	ON	L	—	—	-4L	K74	—	—
ON →	← ON	ON	M	—	—	-4M	K75	—	—
ON	← ON	ON	N	—	—	MS27408-4N	8504K76	—	—
ON	ON →	← ON	P	—	—	-4P	K77	—	—
ON	← ON →	ON*	E	—	—	-5E	K78	—	—
ON →	ON	ON*	F	—	—	-5F	K79	—	—
ON →	← ON →	ON*	K	—	—	-5K	K80	—	—
ON	ON →	ON*	L	—	—	MS27408-5L	8504K81	—	—
ON →	← ON	ON*	M	—	—	-5M	K82	—	—
ON	← ON	ON*	N	—	—	-5N	K83	—	—
* ON	← ON →	ON*	E	—	—	-6E	K84	—	—
* ON	ON →	ON*	L	—	—	-6L	K85	—	—
* ON	← ON	ON*	N	—	—	-6N	K86	—	—
ON	← ON-OFF →	← ON	B	—	—	-7B	K87	—	—

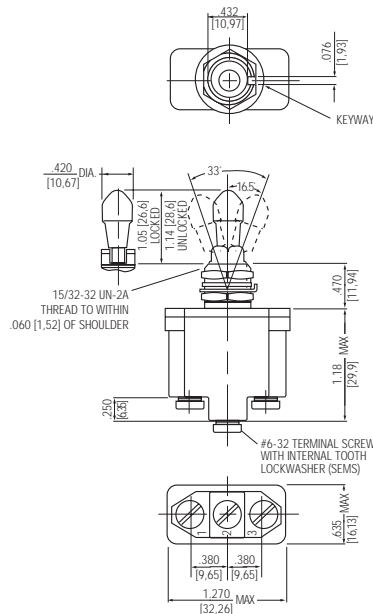
\* Momentary contact.

→ Indicates direction against which lever is locked.

See page A71 for circuit diagrams.

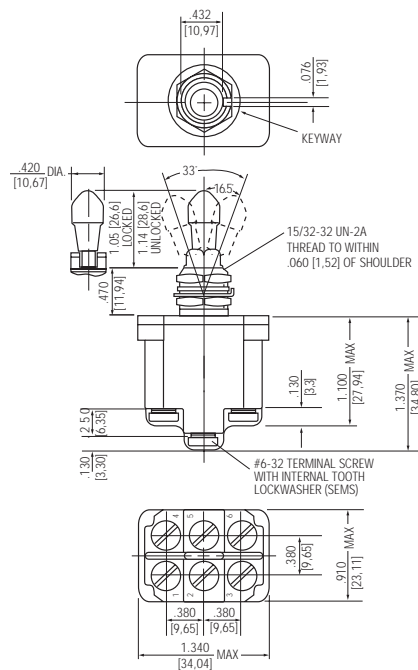
① Reference bushing styles on page A26.

MOUNTING DIMENSIONS - ONE POLE / 8503



Terminal Identification

MOUNTING DIMENSIONS - TWO POLE / 8504



Terminal Identification

**STANDARD**

0.00 = inches

[0,0] = mm

Mounting dimensions for reference only.

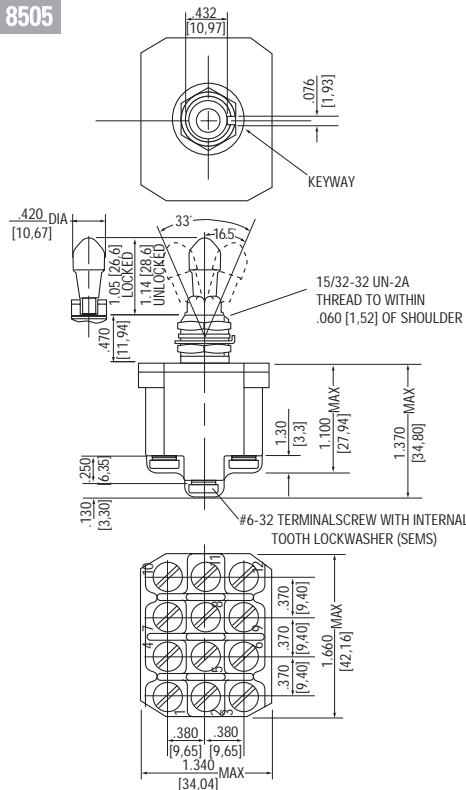
Non-functional terminals not supplied.

# MILITARY - ENVIRONMENTALLY SEALED SWITCHES

Series - 8503, 8504, 8505

MIL-S-3950 Lever Lock Switches

## MOUNTING DIMENSIONS - FOUR POLE / 8505



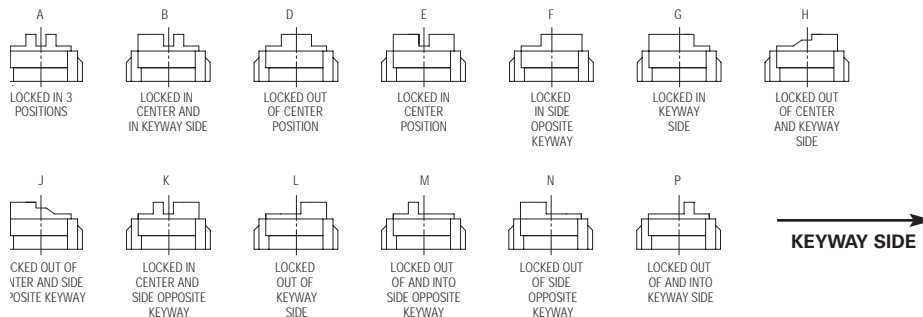
### Terminal Identification

Non-functional terminals not supplied.

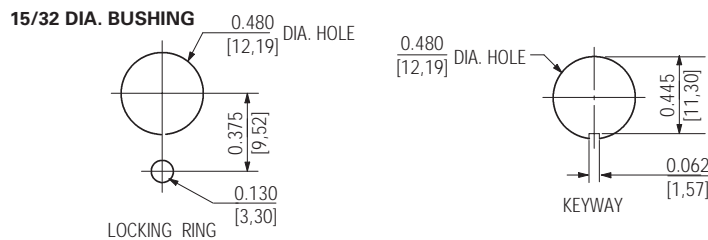
## OPTIONS/ACCESSORIES

- Special mounting hardware
- Mounting hardware furnished assembled
- Terminal screws furnished assembled
- Substitute SEMS screws
- Special circuits
- Panel seal, part number 32-341 (See Accessories and Custom Components section)
- Special shaped caps available
- Custom wiring harnesses

## LEVER LOCK - BUSHING STYLES



## PANEL CUTOUT DIMENSIONS



**STANDARD**  
0.00 = inches  
[0,0] = mm

Mounting dimensions for reference only.