



## MILITARY—ENVIRONMENTALLY SEALED SWITCHES

Series—8503, 8504, 8505

MIL-S-3950 Lever Lock Switches

FEATURES	SPECIFICATIONS	CURRENT RATINGS								
		No. of Poles	Catalog Number	Type of Operation	28VDC			115VAC 60 or 400Hz		
					Lamp Load	Resistive Load	Inductive Load	Lamp Load	Resistive Load	Inductive Load
<ul style="list-style-type: none"> <li>Environmentally sealed</li> <li>1, 2, and 4 pole circuitry</li> <li>2 &amp; 3 position with maintained and momentary action</li> <li>Locking actuator for safety</li> <li>Molded-in terminal inserts and terminal numbers</li> </ul>	<ul style="list-style-type: none"> <li>Environmentally sealed per MIL-S-3950</li> <li>MS approved and OPL'd per MIL-S-3950</li> <li>Thermoset molding materials meet flame retardant requirements of</li> <li>Bushing: 15/32" - 32 thread</li> <li>Temperature Range: -85°F to +160°F (-65°C to +71°C)</li> <li>Life: 20,000 operations at rated load 40,000 operations mechanical life</li> </ul>	1	8503	Maintained Momentary	5	20	15	3	15	10
					4	15	10	2	15	7
					7	20	15	4	15	15
		2	8504	Maintained Momentary	5	18	10	2	11	8
					4	18	10	2	11	8
		4	8505	Maintained Momentary	5	20	12	4	15	15
					4	18	10	2	11	8

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

TOGGLE SWITCHES

### LEVER LOCK SELECTION TABLE



CIRCUIT WITH LEVER IN...			ONE POLE		TWO POLE		FOUR POLE		
Up Position	Center Position	Down Position (Keyway)	Lever 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	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	-29E	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 73 for circuit diagrams.  
① Reference bushing styles on Page 34.

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MIL-S-3950 Lever Lock Switches

TOGGLE SWITCHES

### LEVER LOCK SELECTION TABLE, CONT.



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

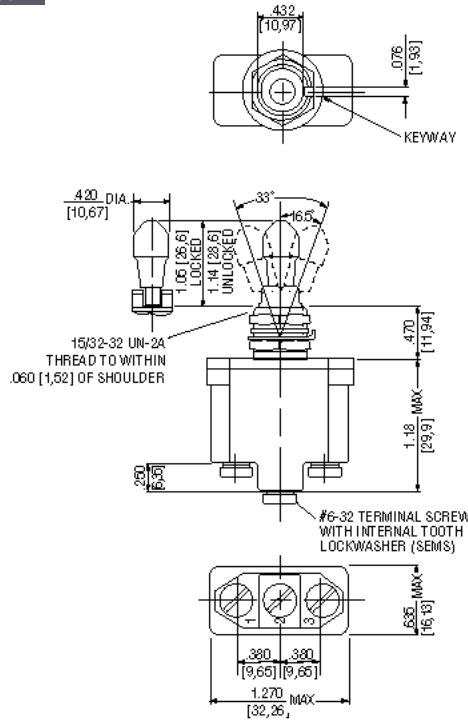
\*Momentary contact.  
 → Indicates direction against which lever is locked.  
 See page 73 for circuit diagrams.  
 ① Reference bushing styles on Page 34.

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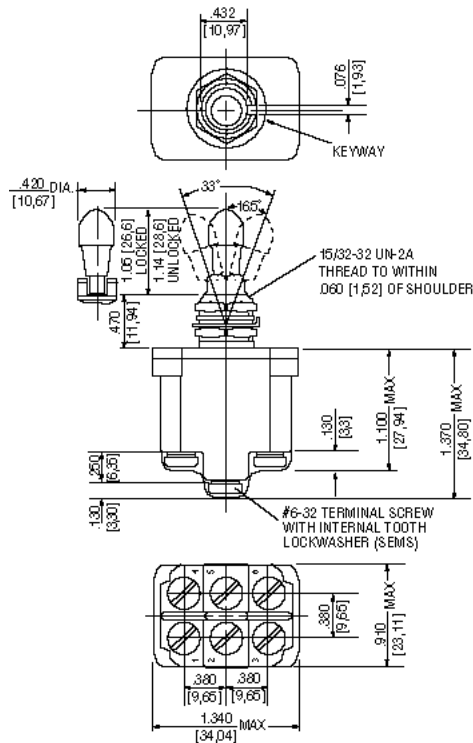
MIL-S-3950 Lever Lock Switches

### MOUNTING DIMENSIONS—ONE POLE / 8503



Terminal Identification

### MOUNTING DIMENSIONS—TWO POLE / 8504



Terminal Identification

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

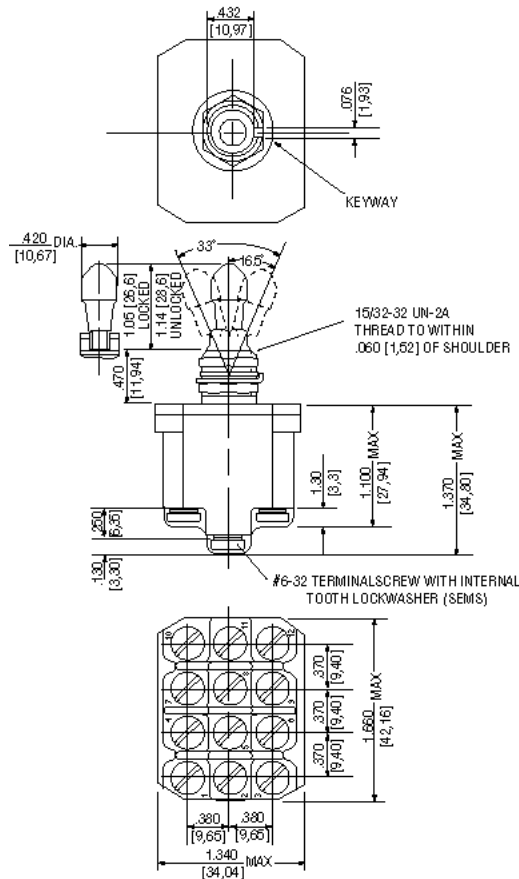
Mounting dimensions for reference only.  
Non-functional terminals not supplied.

## MILITARY—ENVIRONMENTALLY SEALED SWITCHES

Series—8503, 8504, 8505

MIL-S-3950 Lever Lock Switches

### MOUNTING DIMENSIONS—FOUR POLE / 8505



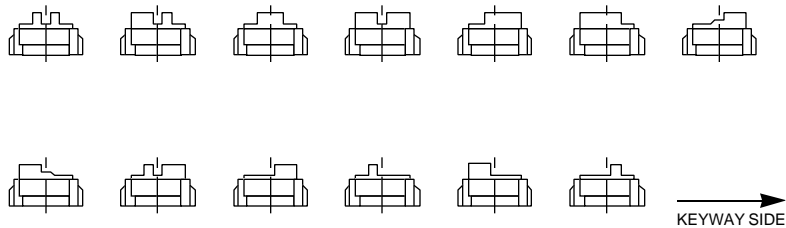
#### Terminal Identification

Non-functional terminals not supplied.

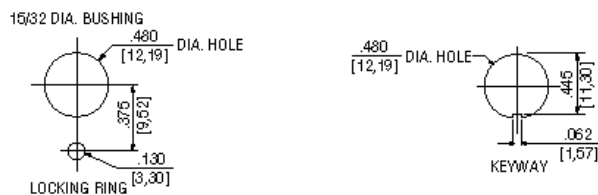
### OPTIONS/ACCESSORIES

### LEVER LOCK – BUSHING STYLES

- 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



### PANEL CUTOUT DIMENSIONS



**STANDARD**  
0.00 = inches  
[0.0] = mm

Mounting dimensions for reference only.