Series - 8530, 8531, 8532

I

Econoswitch Sealed Toggle Switches

FEATURES **SPECIFICATIONS** Environmentally sealed Watertight seal per MIL-STD-108E • and designed to meet IP68 1, 2 and 4 pole Circuitry . One hole mounting for easy UL recognized and CSA certified installation Three standard types of terminals: Multi-circuits Screw 6-32 UNC-2A

- 2 & 3 position with maintained and momentary action
- Three types of termination offered as standard
- Solder lug .125 [3,17] dia. hole .250 [6,35] x .032 Spade
- [0,81] thick Life: 50,000 operations at rated load. • 100,000 operations mechanical life.
- Temperature Range: -50°F to +150°F (-46°C to + 66°C)

			C	UKKEN	IKAII	NGS			
	No. of	Catalog	Type of					115VAC	
	Poles	Number	Operation		28VDC			60 or 400H	z
				Lamp	Resistive	Inductive	Lamp	Resistive	Inductive
				Load	Load	Load	Load	Load	Load
	1	8530	Maintained	5	20	15	3	15	10
			Momentary	4	15	10	2	11	7
1	2	8531	Maintained	7	20	15	4	15	15
_			Momentary	5	18	10	2	11	8
1	4	8532	Maintained	5	20	12	4	15	15
			Momentary	4	18	10	2	11	8

For the UL/CSA ratings, see page A70.

STANDARD LEVER SELECTION TABLE

8530	
	00





	CIRCUIT WITH	LEVER IN	(CATALOG NUM	BER
Up Position	Center Position	Down Position (Keyway)			
L		1	Screw Terminals	Solder Lug Terminals	Spade Terminals
	ONE POLE				
011	ORE POLE		05001/4	0500//04	0500//01
ON ON ON ON	NONE NONE OFF OFF*	ON OFF ON NONE NONE	8530K1 K9 K4 K6 K8	8530K91 K99 K94 K96 K98	8530K31 K39 K34 K36 K38
ON ON* NONE ON OFF	NONE OFF OFF NONE NONE	ON* ON* OFF* ON* ON*	8530K5 K2 K7 K10 K11	8530K95 K92 K97 K910 K911	8530K35 K32 K37 K310 K311 8530K33
ON ON* ON	OFF ON ON	NONE NONE	8530K3 K12 K13	8530K93 K912 K913	K312 K313
	TWO POLE				
ON ON ON ON	OFF NONE NONE OFF OFF*	ON OFF ON NONE NONE	8531K1 K9 K4 K6 K8	8531K91 K99 K94 K96 K98	8531K31 K39 K34 K36 K38
ON	NONE	ON*	8531K5	8531K95	8531K35
ON*	OFF	ON*	K2	K92	K32
NONE	OFF	ON*	K7	K97 K910	K37
ON OFF	NONE NONE	OFF* ON*	K10 K11	K910 K911	K310 K311
ON	OFF	ON*	8531K3	8531K93	8531K33
ON*	ON	NONE	K12	K912	K312
ON	ON	NONE	K13	K913 K914	K313 K314
ON ON	ON ON	ON ON*	K14 K15	K914 K915	K315
ON*	ON	ON*	8531K16	8531K916	8531K316
ON	ON	ON	K17	K917	K317
ON ON*	ON ON	ON* ON*	K18 K19	K918 K919	K318 K319
UN."	FOUR POL		K19	1010	1010
ON	OFF		05001/1	8532K91	8532K31
ON	NONE	ON OFF	8532K1 K9	K99	K39
ON	NONE	ON	K4	K94	K34
ON	OFF	NONE	К6	K96	K36
ON ON	OFF*	NONE ON*	<u>K8</u> 8532K5	K98 8532K95	K38 8532K35
* ON	NONE OFF	ON*	8532K5 K2	K92	K32
NONE	OFF	ON*	K7	K97	K37
ON	NONE	OFF*	K10	K910	K310
OFF	NONE OFF	ON* ON*	<u>K11</u> 8532K3	K911 8532K93	K311 8532K33
ON * ON	OFF	NONE	8532K3 K12	8532K93 K912	K312
ON	ON	NONE	K12 K13	K913	K313
ON	ON	ON	K15	K915	K315
ON	ON	ON*	K16	K916	K316
* ON	ON	ON*	K17	K917	K317
* Momentary	/ contact.				

* Momentary contact. See page A71 for circuit diagrams.

ECONOSWITCH - ENVIRONMENTALLY SEALED SWITCHES

SPECIFICATIONS

Series - 8536, 8537, 8538

Econoswitch Sealed Leverlock Toggle Switches

CURRENT RATINGS

115VAC

FEATURES

- Environmentally sealed ٠
- 1, 2 and 4 pole circuitry
- Locking actuator for safety
- One hole mounting for easy installation Over 25 standard locking configura-
- tions
- 2 & 3 position with maintained and momentary action
- Multi-circuits
- Three types of termination offered as standard
- Also available with toggle and Designerline Actuator. For details see page A11 for toggles and page A17 for Designerline.

•	Watertight seal per MIL-STD-108E and designed to meet IP68	No. of Poles
	and designed to meet in oo	
٠	UL recognized and CSA certified	
	Temperature range: -50°E to +150°E	-

- Temperature range: -50°F to + (-46°C to +
- Life: 50,000 operations at rate 100,000 operations mechanical life
- Bushing: 15/32" 32 thread

08F	Poles	Number	Operation		28VDC			60 or 400Hz	z
ied				Lamp	Resistive	Inductive	Lamp	Resistive	Inductive
				Load	Load	Load	Load	Load	Load
-150°F	1	8536	Maintained	5	20	15	3	15	10
- 66°C)			Momentary	4	15	10	2	15	7
ed load	2	8537	Maintained	7	20	15	4	15	15
			Momentary	5	18	10	2	11	8
	4	8538	Maintained	5	20	12	4	15	15
			Momentary	4	18	10	2	11	8
	For the UL/	CSA ratings,	see page A70.						

Type of

Catalog

LEVER LOCK SELECTION TABLE

8537

		CIRCUIT	WITH LEVER IN		CATALOG NUMBER			
	Up Position	Center Position	Down Position (Keyway)	Screw Terminals	Solder Lug Terminals	Spade Terminals	Available Locking Configurations	
8536	ON ON ON ON *ON NONE ON OFF ON *ON ON	OFF NONE OFF OFF NONE OFF OFF NONE NONE	ON OFF ON NONE ON* ON* ON* OFF* ON* ON* NONE NONE	8536K1 Δ K9 Δ K4 Δ K6 Δ K8 Δ 8536K5 Δ K7 Δ K10 Δ K11 Δ 8536K3 Δ K12 Δ K13 Δ	8536K91 Δ K99 Δ K94 Δ K96 Δ K98 Δ 8536K95 Δ K97 Δ K97 Δ K910 Δ K911 Δ 8536K93 Δ K912 Δ K913 Δ	8536K31 A K39 A K34 A K36 A K38 A 8536K35 A K32 A K310 A K311 A 8536K33 A K312 A K313 A	ALL D, F, G E, F, G E, F, K, M F E, L, N E F E, F, K, L, M, N E, F, K, L, M, N E, F, K, M	
537	ON ON ON ON ON *ON ON ON ON ON ON ON ON ON ON ON ON ON O	TWO POLE OFF NONE OFF OFF* NONE OFF NONE NONE NONE OFF ON ON ON ON ON	ON OFF ON NONE ON* ON* ON* ON* ON* ON* ON* ON* ON* ON*	8537K1 Δ K9 Δ K4 Δ K6 Δ K8 Δ 8537K5 Δ K7 Δ K10 Δ K11 Δ 8537K3 Δ K12 Δ K13 Δ 8537K14 Δ K15 Δ K16 Δ K19 Δ	8537K91 A K99 A K94 A K96 A K98 A 8537K95 A K92 A K97 A K910A K910A K911A 8537K93 A K912A K913A 8537K914A K916A K919A	8537K31 Δ K39 Δ K34 Δ K36 Δ K38 Δ 8537K35 Δ K32 Δ K37 Δ K310 Δ K311 Δ 8537K33 Δ K312 Δ K312 Δ K312 Δ K315 Δ K316 Δ K319 Δ	ALL D, F, G D, F, G E, F, K, M F E, L, N E F F E, F, K, L, M, N E, F, K, L, M, N E, F, K, L, M, N E, L, N E, L, N E, L, N	
8538	ON ON ON ON ON ON ON ON ON ON ON ON ON O	FOUR POLE OFF NONE OFF OFF* NONE OFF OFF OFF NONE NONE OFF ON ON ON ON ON ON		8538K1 Δ K9 Δ K4 Δ K6 Δ 8538K5 Δ K10Δ K11Δ 8538K3 Δ K12Δ K13Δ 8538K15 Δ K16Δ K17Δ K19Δ	8538K91 Δ K99 Δ K94 Δ K96 Δ K98 Δ 8538K95 Δ K92 Δ K97 Δ K910Δ K911Δ 8538K93 Δ K912Δ K913Δ 8538K915Δ K916Δ K917Δ	8532K31 Δ K39 Δ K34 Δ K36 Δ K38 Δ 8532K35 Δ K32 Δ K310 Δ K310 Δ K311 Δ 8532K33 Δ K312 Δ K315 Δ K315 Δ K317 Δ 8537K319 Δ	ALL D, F, G D, F, G E, F, K, M F E, L, N E E, F, K, L, M, N E, F, K, L, M, N E, F, K, L, M, N E, I, N E, L, N	

* Momentary contact.

Δ Complete part number requires this symbol to be replaced with a locking configuration letter - selected from page A16.

Example:	8536K31∆	E	8536K31E
	Basic Switch	Locking Style	Complete Part Number
See Page /	A71 for circuit o	diagrams.	

SWITCH GUARDS & SHIELDS Switch Guard Application Table

Switch	Switch Guard	Switch	Switch Guard
Catalog Number①	Code Number	Catalog Number®	Code Number
8200K7	1, 3, 6, 17	8837K4 & K94	Code Number 10, 11, 15, 16, 20, 21, 24, 25 10, 11, 15, 16, 21, 25 13, 15, 16, 19, 23, 26-29 7, 9, 13, 15, 16 11, 15, 16
8201K6, K14	2, 4, 5, 6	K5 & K95	
8209K6	3, 6	K6 & K96	
8210K7	6	K7 & K97	
8211K7	2, 6	K8 & K98	
8212K6	3, 6	8837K9 & K99	10, 12, 15, 16, 21, 25
8500K1	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29	K10 & K910	10, 11, 15, 16, 21, 25
K2	13, 14, 15, 16, 18, 19, 22, 26-29	K11 & K911	10, 11, 15, 16, 21, 25
K3	13, 14, 15, 16, 18, 19, 22, 26-29	8838K1 & K91	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29
K4	10, 11, 15, 16, 20, 21, 24, 25	K2 & K92	13, 14, 15, 16, 18, 19, 22, 26-29
8500K5	10, 11, 15, 16, 21, 25	8838K3 & K93	13, 14, 15, 16, 18, 19, 22, 26-29
K6	13, 15, 16, 19, 23, 26-29	K4 & K94	10, 11, 15, 16, 20, 21, 24, 25
K7	7, 9, 13, 15, 16	K5 & K95	10, 11, 15, 16, 21, 25
K8	11, 15, 16	K6 & K96	13, 15, 16, 19, 23, 26-29
K9	10, 12, 15, 16, 21, 25	K7 & K97	7, 9, 13, 15, 16
8500K10	10, 11, 15, 16, 21, 25	8838K8 & K98	11, 15, 16
K11	10, 11, 15, 16, 21, 25	K9 & K99	10, 12, 15, 16, 21, 25
K12	15, 16	K10 & K910	10, 11, 15, 16, 21, 25
K13	13, 15, 16, 19, 23	K11 & K911	10, 11, 15, 16, 21, 25
8501K1	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29	8868K1, K51, K61	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29
8501 K2	13, 14, 15, 16, 18, 19, 22, 26-29	8868K2, K52, K62	13, 14, 15, 16, 18, 19, 22, 26-29
K3	13, 14, 15, 16, 18, 19, 22, 26-29	K3, K53, K63	13, 14, 15, 16, 18, 19, 22, 26-29
K4	10, 11, 15, 16, 20, 21, 24, 25	K4, K54, K64	10, 11, 15, 16, 20, 21, 24, 25
K5	10, 11, 15, 16, 21, 25	K5, K55, K65	10, 11, 15, 16, 21, 25
K6	13, 15, 16, 19, 23, 26-29	K6, K56, K66	9, 13, 15, 16
8501 K7	7, 9, 13, 15, 16	8868K7, K57, K67	10, 12, 15, 16, 21, 25
K8	11, 15, 16	K8, K58, K68	10, 12, 15, 16, 21, 25
K9	10, 12, 15, 16, 21, 25	8869K1, K1X, K51, K51X, K61, K61X	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29
K10	10, 11, 15, 16, 21, 25	K2, K2X, K52, K52X, K62, K62X	13, 14, 15, 16, 18, 19, 22, 26-29
K11	10, 11, 15, 16, 21, 25	K3, K3X, K53, K53X, K63, K63X	13, 14, 15, 16, 18, 19, 22, 26-29
8501 K12	15, 16	8869K4, K4X, K54, K54X, K64, K64X	10, 11, 15, 16, 20, 21, 24, 25
K13	13, 15, 16, 19, 23	K5, K5X, K55, K55X, K65, K65X	10, 11, 15, 16, 21, 25
K14 thru K19	7, 9, 13, 15, 16, 18, 19, 22, 23, 26-29	K6, K6X, K56, K56X, K66, K66X	7, 9, 13, 15, 16
8502K1	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29	K7, K7X, K57, K57X, K67, K67X	10, 12, 15, 16, 21, 25
K2	13, 14, 15, 16, 18, 19, 22, 26-29	8867K8, K8X, K58, K58X, K68, K68X	10, 12, 15, 16, 21, 25
8502K3	13, 14, 15, 16, 18, 19, 22, 23, 26-29	8869K9, K9X, K59, K59X, K69, K69X	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29
K4	10, 11, 15, 16, 20, 21, 24, 25	K10, K10X, K510, K510X, K610, K610X	13, 14, 15, 16, 18, 19, 22, 26-29
K5	10, 11, 15, 16, 21, 25	K11, K11X, K511, K511X, K611, K611X	13, 14, 15, 16, 18, 19, 22, 26-29
K6	13, 15, 16, 19, 23, 26-29	8854K1	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29
K7	7, 9, 13, 15, 16	8854K2	13, 14, 15, 16, 18, 19, 22, 26-29
8502K8	11, 15, 16	8854K3	13, 14, 15, 16, 18, 19, 22, 26-29
K9	10, 12, 15, 16, 21, 25	K4	10, 11, 15, 16, 20, 21, 24, 25
K10	10, 11, 15, 16, 21, 25	K5	10, 11, 15, 16, 21, 25
K11	10, 11, 15, 16, 21, 25	K6	7, 9, 13, 15, 16
K12	15, 16	K7	10, 12, 15, 16, 21, 25
8502K13 K15 thru K17 8700K15 8701K14 8709K15	13, 15, 16, 19, 23 7, 9, 13,15, 16, 18, 19, 22, 23, 26-29 1, 3, 6, 17 4, 5, 6 3, 6	8854K8 K9 K10 K11	10, 12, 15, 16, 21, 25 7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29 13, 14, 15, 16, 18, 19, 22, 26-29 13, 14, 15, 16, 18, 19, 22, 26-29
8718K5	3, 6	8570K1-16, -20	7, 9, 13, 14, 16, 18, 19, 22, 23, 26-29
8740K12	2, 6	K2-16, -20	13, 14, 16, 18, 19, 22, 26-29
8742K10	3, 6, 17	K3-16, -20	13, 14, 16, 18, 19, 22, 26-29
8744K10	2, 6	K4-16, -20	10, 11, 16, 20, 21, 24, 25
8790K4	6	K5-16, -20	10, 11, 16, 21, 25
8792K3	6	8570K6-16, -20	13, 16, 19, 23, 26-29
8836K1 & K91	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29	K7-16, -20	7, 9, 13, 16
K2 & K92	13, 14, 15, 16, 18, 19, 22, 26-29	K8-16, -20	11, 16
K3 & K93	13, 14, 15, 16, 18, 19, 22, 26-29	K9-16, -20	10, 12, 16, 21, 25
K4 & K94	10, 11, 15, 16, 20, 21, 24, 25	K10-16, -20	10, 11, 16, 21, 25
8836K5 & K95	10, 11, 15, 16, 21, 25	8570K11-16, -20	10, 11, 16, 21,25
K6 & K96	13, 15, 16, 19, 23, 26-29	K12-16, -20	16
K7 & K97	7, 9, 13, 15, 16	K13-16, -20	13, 16, 19, 23
K8 & K98	11, 15, 16	8571K1-16, -20	7, 9, 13, 14, 16, 18, 19, 22, 23, 26-29
K9 & K99	10, 12, 15, 16, 21, 25	K2-16, -20	13, 14, 16, 18, 19, 20, 26-29
8836K10 & K910	10, 11, 15, 16, 21, 25	8571K3-16, -20	13, 14, 16, 18, 19, 22, 26-29
K11 & K911	10, 11, 15, 16, 21, 25	K4-16, -20	10, 11, 16, 20, 21, 24, 25
8837K1 & K91	7, 9, 13, 14, 15, 16, 18, 19, 22, 23, 26-29	K5-16, -20	10, 11, 16, 21, 25
K2 & K92	13, 14, 15, 16, 18, 19, 22, 26-29	K6-16, -20	13, 16, 19, 23, 26-29
K3 & K93	13, 14, 15, 16, 18, 19, 22, 26-29	K7-16, -20	7, 9, 13, 16

① Listing covers only those switches that can be used with a switch guard.

MILITARY - ENVIRONMENTALLY SEALED SWITCHES

Series - 8500, 8501, 8502

MIL-S-3950 Toggle Switches

FEATURES

SPECIFICATIONS

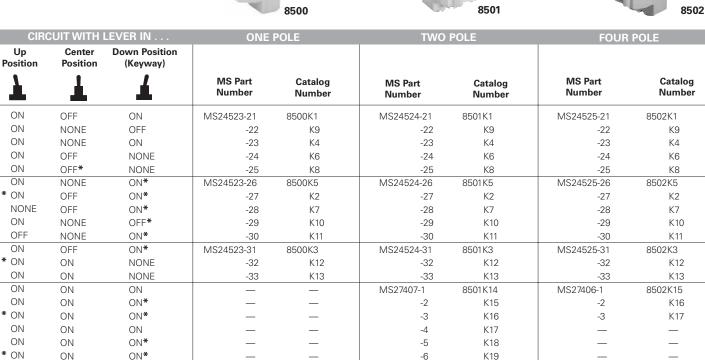
- Environmentally sealed
- 1, 2 and 4 pole circuitry2 & 3 position with maintained and
- Molded-in terminal inserts and terminal numbers
- Environmentally sealed per MILS-3950
 MS approved and QPL'd per MILS-3950
 Thermoset molding materials meet
- flame retardant requirements • Bushing: 15/32" - 32 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	Catalog	Type of		115 VAC							
Poles	Number	Operation		28VDC			60 or 400Hz	Z			
			Lamp	Resistive	Inductive	Lamp	Resistive	Inductive			
			Load	Load	Load	Load	Load	Load			
1	8500	Maintained	5	20	15	3	15	10			
		Momentary	4	15	10	2	15	7			
2	8501	Maintained	7	20	15	4	15	15			
		Momentary	5	18	10	2	11	8			
4	8502	Maintained	5	20	12	4	15	15			
		Momentary	4	18	10	2	11	8			

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

STANDARD LEVER SELECTION TABLE





* Momentary contact.

See page A71 for circuit diagrams.

Series - 8503, 8504, 8505

MILITARY - ENVIRONMENTALLY SEALED SWITCHES 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

- ٠ Environmentally sealed per MIL-S-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 Catalog Type of 115 VAC											
Pole	s Number	Operation		28VDC			60 or 400Hz	z			
			Lamp	Resistive	Inductive	Lamp	Resistive	Inductive			
			Load	Load	Load	Load	Load	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





8505

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

*

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

1 Reference bushing styles on page A26.