




Manual Switches

Toggle Switches

TL Series

2-POSITION ORDER GUIDE














	No. of Poles	Circuit(s) Made With Toggle At:		Electrical Rating Code	UL/CSA Rating Code	Standard Toggle		Pull-to-Unlock Toggle	
		Keyway Position	Opposite Keyway			Catalog Listing	Military Number	Add Suffix to Standard Toggle Listing	Military Number **
	1	OFF OFF* 1-2* 1-2 1-2*	2-3 2-3 OFF 2-3 2-3	1 2 2 1 2	L191 L192 L192 L191 L192	1TL1-2 1TL1-4 1TL1-6 1TL1-3 1TL1-8	MS24523-22 MS24523-29 MS24523-30 MS24523-23 MS24523-26	D, F, G F F D, F, G F	MS24658-22 MS24658-29 MS24658-30 MS24658-23 MS24658-26
	2	OFF OFF* 1-2, 4-5* 1-2, 4-5 1-2, 4-5*	2-3, 5-6 2-3, 5-6 OFF 2-3, 5-6 2-3, 5-6	3 4 4 3 4	L191 L192 L192 L191 L192	2TL1-2 2TL1-4 2TL1-6 2TL1-3 2TL1-8	MS24524-22 MS24524-29 MS24524-30 MS24524-23 MS24524-26	D, F, G F F D, F, G F	MS24659-22 MS24659-29 MS24659-30 MS24659-23 MS24659-26
	4	OFF OFF* 1-2, 4-5 7-8, 10-11* 1-2, 4-5 7-8, 10-11 1-2, 4-5* 7-8, 10-11	2-3, 5-6 8-9, 11-12 2-3, 5-6 8-9, 11-12 OFF 2-3, 5-6 8-9, 11-12 2-3, 5-6 8-9, 11-12 2-3, 5-6 8-9, 11-12	5 6 6 5 6	L191 L192 L192 L191 L192	4TL1-2 4TL1-4 4TL1-6 4TL1-3 4TL1-8	MS24525-22 MS24525-29 MS24525-30 MS24525-23 MS24525-26	D, F, G F F D, F, G F	MS24660-22 MS24660-29 MS24660-30 MS24660-23 MS24660-26

* These positions only are momentary. All others are maintained.
 ** Also add the appropriate suffix letter to the Military number.

PULL-TO-UNLOCK OPTION

When ordering pull-to-unlock toggle listings, add the suffix letter shown in the chart below to the standard toggle listing and the MS number. For example, to order a 1TL1-1 pull-to-unlock toggle switch with the lever locked in the center position, add the letter **E**; i.e., 1TL1-1**E**, MS-24658-21**E**.

LOCKING CONFIGURATIONS




 Locked In Three Positions	 Locked In Center and Extreme Position (Keyway Side)	 Locked Out Of Center Position	 Locked In Center Position	 Locked In Extreme Position (Opposite Keyway)	 Locked In Extreme Position (Keyway Side)	 Locked Out Of Center And Extreme Position (Keyway Side)
 Locked Out Of Center And Extreme Position (Opposite Keyway)	 Locked In Center And Extreme Position (Opposite Keyway)	 Locked Out Of Extreme Position (Keyway Side)	 Locked Out Of And Into Extreme Position (Opposite Keyway)	 Locked Out Of Extreme Position (Opposite Keyway)	 Locked Out Of And Into Extreme Position (Keyway Side)	

Manual Switches

Toggle Switches

TL Series

3-POSITION ORDER GUIDE

	No. of Poles	Circuit(s) Made With Toggle At:			Elec. Rating Code	UL/CSA Rating Code	Standard Toggle		Pull-to-Unlock Toggle			
		Keyway Position	Center Position	Opposite Keyway			Catalog Listing	Military Number***	Add Suffix to Standard Toggle Listing	Military Number***		
	1	1-2	OFF	2-3	1	L191	1TL1-1	MS24523-21	ALL TYPES	MS24658-21		
		1-2*	OFF	2-3	2	L192	1TL1-5	MS24523-31	E, F, K, L, M, N	MS24658-31		
		1-2*	OFF	2-3*	2	L192	1TL1-7	MS24523-27	E, L, N	MS24658-27		
		None**	OFF	2-3	1	L191	1TL1-21	MS24523-24	E, F, K, M	MS24658-24		
		None**	1-2	2-3	1	L192	1TL1-31	MS24523-33	E, F, K, M	MS24658-33		
		None**	1-2	2-3*	2	L192	1TL1-51	MS24523-32	E	MS24658-32		
		1-2*	OFF	None**	2	L192	1TL1-61	MS24523-28	E	MS24658-28		
	2	1-2, 4-5	OFF	2-3, 5-6	3	L191	2TL1-1	MS24524-21	ALL TYPES	MS24659-21		
		1-2, 4-5*	OFF	2-3, 5-6	4	L192	2TL1-5	MS24524-31	E, F, K, L, M, N	MS24659-31		
		1-2, 4-5*	OFF	2-3, 5-6*	4	L192	2TL1-7	MS24524-27	E, L, N	MS24659-27		
		None**	OFF	2-3, 5-6	3	L191	2TL1-21	MS24524-24	E, F, K, M	MS24659-24		
		None**	1-2, 4-5	2-3, 5-6	3	L191	2TL1-31	MS24524-33	E, F, K, M	MS24659-33		
		None**	1-2, 4-5	2-3, 5-6*	4	L192	2TL1-51	MS24524-32	E	MS24659-32		
		1-2, 4-5*	OFF	None**	4	L192	2TL1-61	MS24524-28	E	MS24659-28		
		1-2, 4-5	1-2, 5-6	2-3, 5-6	3	L191	2TL1-10	MS27407-4	ALL TYPES	MS27408-4		
		1-2, 4-5*	1-2, 5-6	2-3, 5-6	4	L192	2TL1-50	MS27407-5	E, F, K, L, M, N	MS27408-5		
		1-2, 4-5*	1-2, 5-6	2-3, 5-6*	4	L192	2TL1-70	MS27407-6	E, L, N	MS27408-6		
			4	1-2, 4-5 7-8, 10-11	OFF	2-3, 5-6 8-9, 11-12	5	L191	4TL1-1	MS24525-21	ALL TYPES	MS24660-21
				1-2, 4-5 7-8, 10-11*	OFF	2-3, 5-6 8-9, 11-12	6	L192	4TL1-5	MS24525-31	E, F, K, L, M, N	MS24660-31
1-2, 4-5 7-8, 10-11*	OFF			2-3, 5-6 8-9, 11-12*	6	L192	4TL1-7	MS24525-27	E, L, N	MS24660-27		
None**	OFF			2-3, 5-6 8-9, 11-12	5	L191	4TL1-21	MS24525-24	E, F, K, M	MS24660-24		
None**	1-2, 4-5 7-8, 10-11			2-3, 5-6 8-9, 11-12	5	L191	4TL1-31	MS24525-33	E, F, K, M	MS24660-33		
None**	1-2, 4-5 7-8, 10-11			2-3, 5-6 8-9, 11-12*	6	L192	4TL1-51	MS24525-32	E	MS24660-32		
1-2, 4-5 7-8, 10-11*	OFF			None**	6	L192	4TL1-61	MS24525-38	E	MS24660-28		
1-2, 4-5 7-8, 10-11	2-3, 4-5			2-3, 5-6 8-9, 11-12	5	L191	4TL1-10	—	ALL TYPES	—		
1-2, 4-5 7-8, 10-11*	2-3, 4-5 7-8, 11-12			2-3, 5-6 8-9, 11-12	6	L192	4TL1-50	MS27406-2	E, F, K, L, M, N	MS27409-2		
1-2, 4-5 7-8, 10-11*	2-3, 4-5			2-3, 5-6 8-9, 11-12*	6	L192	4TL1-70	—	E, L, N	—		
1-2, 4-5 7-8, 10-11	2-3, 4-5 7-8, 11-12			2-3, 5-6 8-9, 11-12	5	L191	4TL1-12	MS27406-1	ALL TYPES	MS27409-1		
1-2, 4-5 7-8, 10-11*	2-3, 4-5 7-8, 11-12			2-3, 5-6 8-9, 11-12*	6	L192	4TL1-72	MS27406-3	E, L, N	MS27409-3		

* These positions only are momentary. All others are maintained.

** Toggle lever is blocked from these positions. Toggle becomes two position, with center being one extreme position.

***Also add appropriate suffix letter to the Military Number.

SOLDER TURRET TERMINAL VERSION



HOW TO ORDER

11TL, 12TL, and 14TL type switches with solder turret terminals are qualified to MIL-S-3950. They have the same circuitry and electrical ratings as their 1TL, 2TL, and 4TL counterparts. For example, 11TL1-2 is the same as 1TL1-2, except it has solder turret terminals instead of screw terminals. The complete MS drawing numbers are shown in data sheet 204.

Circuitry	Type	Std. Lever	Lever Lock
One Pole	11TL	MS27734	MS27737
Two Pole	612TL	MS27735	MS27738
Four Pole	14TL	MS27736	MS27739

Toggle/Rockers