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Sensing and Control
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Sensing and Control

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SEAL AROUND
TERMINALS

has a non-glare matte nickel finish.

Colored tab levers (not shown) can also be furnished. They have the same appearance as the tab lever shown in the TW photo on page 119. Call the 800 number.

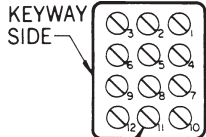
ELECTRICAL RATINGS

(In amperes)

Elec. Rating Code	28 VDC			115 VDC	250 VDC	115 VAC 60 & 400 Hz			230 VAC
	Ind.	Res.	Lamp	Res.	Res.	Ind.	Res.	Lamp	Res.
1	15	20	5	0.75	0.5	10	15	3	6
2	10	15	4	0.75	0.5	7	15	2	6
3	15	20	7	0.75	0.5	15	15	4	6
4	10	18	5	0.75	0.5	8	11	2	6
5	12	20	5	0.75	0.5	15	15	4	6
6	10	18	4	0.75	0.5	8	11	2	6

UL/CSA Rating Code	Electrical Rating
L192	10 amps-125, 250, 277 VAC; ¼ Hp-125 VAC; ½ Hp-250, 277 VAC 3 amps-125 VAC "L"
L191	15 amps-125, 250, 277 VAC; ½ Hp-125 VAC; 1 Hp-250, 277 VAC 5 amps-120 VAC "L"

Application Note: Honeywell MICRO SWITCH does *not* recommend the use of silver cadmium oxide switch contacts in non-arcing loads. Non-arcing loads are generally loads less than 12 volts and/or 0.5 amp. TL switches use silver cadmium oxide contacts. For other options, contact the MICRO SWITCH Application Center at 1-800-537-6945.



COMMON (2, 5, 8, 11)



-70 CIRCUITRY

No. of Poles	Keyway Side Mom. Position	Center Maint. Position	Opposite Keyway Mom. Position
2			
4			

TERMINALS

In addition to the screw terminal switches listed in the order guides, IWTS Integrated Wire Termination System versions (covered in MICRO SWITCH Catalog 80) and solder turret terminals are available. Contact the 800 number.

ACCESSORIES

Colored lever sleeves, decorative mounting hardware, and panel seal accessories are shown on page 135.

Toggle/Rockers



1-2, 4-5 7-8, 10-11*	OFF	6	L192	4TL1-6	MS24525-30	F	MS24660-30
1-2, 4-5 7-8, 10-11	2-3, 5-6 8-9, 11-12	5	L191	4TL1-3	MS24525-23	D, F, G	MS24660-23
1-2, 4-5* 7-8, 10-11	2-3, 5-6 8-9, 11-12	6	L192	4TL1-8	MS24525-26	F	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., 1TL1-1E, MS-24658-21E.

LOCKING CONFIGURATIONS

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

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

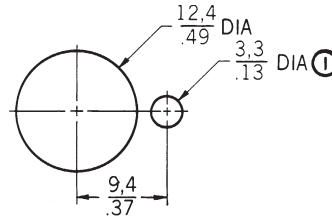
Note:

Terminal screws, and mounting hardware (locking ring, lockwasher, and two hexnuts) are furnished unassembled.

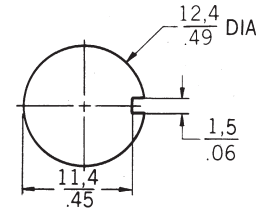
Key: $\frac{0,0}{0.00} = \frac{\text{mm}}{\text{inches}}$

Bushing mounting torque is 10–15 in./lbs.
Terminal screw mounting torque is 5 in./lbs. max.

Panel cutout



With locking ring



Without locking ring

Note:

① 1,4 / .06 MIN DEEP TO ACCOMMODATE LOCKING RING. 15PA87 PANEL SEAL REQUIRES BLIND HOLE TO INSURE SEAL INTEGRITY

COMMON (2,5,8,11)