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**Sensing and Control** Honeywell Inc.

11 West Spring Street Freeport, IL 61032



### **ELECTRICAL RATINGS**

(In amperes)

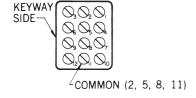
Elec. Rating	28 VDC			28 VDC 115 VDC 250 VDC				115 VAC 60 & 400 Hz		
Code	Ind.	Res.	Lamp	Res.	Res.	Ind.	Res.	Lamp	Res.	
1	15	20	5	0.75	0.5	10	15	3	6	
2	10	15	4	0.75	0.5	7	15	2	6	
3	15	20	7	0.75	0.5	15	15	4	6	
4	10	18	5	0.75	0.5	8	11	2	6	
5	12	20	5	0.75	0.5	15	15	4	6	
6	10	18	4	0.75	0.5	8	11	2	6	

UL/CSA Rating Code	Electrical Rating
L192	10 amps-125, 250, 277 VAC; 1/4 Hp-125 VAC; 1/2 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.

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.



#### **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.



### -70 CIRCUITRY

No. of Poles	Keyway Side Mom. Position	Center Maint. Position	Opposite Keyway Mom. Position
2	3 2 1	3 2 1 6 5 4	3 2 1
4	22 4 4 5 6 6 7 10	2 4 4 6 7 7 10 10	3 2 1 6 6 7 7 12 11 10

#### **ACCESSORIES**

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

	7-8, 10-11*	OFF	0	L192	41L1-0	W324323-30	Г	IVI32400U-3U
TIP	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

<sup>\*</sup> These positions only are momentary. All others are maintained. \*\* Also add the appropriate suffix letter to the Military number.

#### Also add the appropriate same letter to the Military Humber.

#### **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

А		В		D	ı	Ξ	F		G	Н
								)		
Locked In Three Positions	Locked In Center and Extreme Position (Keyway Side)		Locked Out Of Center Locked In Position Center Position			Locked In Extreme Position (Opposite Keyway)		Locked In Extreme Positio (Keyway Side)		
J		K		L			M		N	Р
					Ē	<b>\$</b>				
Extreme Position Ex		Locked In Center And Extreme Posit (Opposite Key	ion	Locked ( Extreme P (Keyway	osition	Ar Extrem	ed Out Of nd Into ne Position ite Keyway)	Ext	ocked Out Of reme Position posite Keyway)	Locked Out Of And Into Extreme Position (Keyway Side)

None**	7-8, 10-11	2-3, 5-6 8-9, 11-12	5	L191	41L1-31	IVIS24525-33	E, F, K, IVI	IVIS24660-33
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

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

<sup>\*</sup> 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.

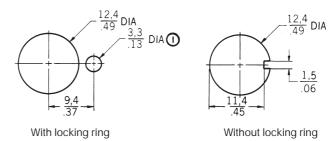
Note:

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

Key: 
$$\frac{0.00 = mm}{0.00 = inches}$$

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

#### Panel cutout



Note:

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

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