TS SERIES

MICRO SWITCH General Purpose Toggle Switches



FEATURES

- UL recognized for the US and Canada
- 1- and 2-pole options
- 2- or 3-position; maintained and momentary action
- Electrical connections: screw, solder, quick connect (spade)
- Optional step-case design provides added space between terminals to prevent shorting

APPLICATIONS

- Agricultural equipment
- Construction equipment
- Controllers
- Factory floor machinery

PORTFOLIO



The TS Series is part of the MICRO SWITCH family of toggle switches that include the TL, NT, TW, AT, and ET

Series switches. To view the entire product portfolio, click here.

DESCRIPTION

MICRO SWITCH TS Series toggles may be used anywhere manual operation is desired. They are an entry-level solution for applications that do not require a sealed toggle switch. Special on-on-on circuitry can also be furnished. MICRO SWITCH TS Series switches feature broad circuitry and action availability considering 2- or 3-position options, momentary and maintained actions, and 1- and 2-pole circuitry. Switches are available with solder, screw, or quick-connect termination styles.

VALUE TO CUSTOMERS

- Low-cost toggle solution for applications without harsh environmental conditions or where third-party seal rating is not required
- Minimizes service costs while extending equipment life



TABLE 1. SPECIFICATIONS					
Characteristic	Parameter				
Description	general-purpose toggle switch				
Sealing	unsealed				
Operating temperature	-54 °C to 71 °C [-65 °F to 160 °F]				
Actuators	standard, lever				
Action	2- or 3- position; momentary and maintained				
Mounting	bushing 15/32 in (0.47 in) Ø				
Circuitry	SPDT, DPDT				
Terminations	screw, solder, quick connect				
Contacts	Silver tin oxide and indium oxide				
Electrical rating (resistive load)	0.4 A to 10 A @ 126 Vac to 277 Vac 0.4 A to 20 A @ 0.5 Vac to 125 Vac				
Approvals	UL, cUL				
Measurement	55,83 mm H x 28,58 mm W x 16,51 mm D [2.198 in H x 1.125 in W x 0.65 in D]				

TABLE 2. UL ELECTRICAL RATINGS				
Rating Code	Electrical Rating			
L311	10 A, 277 Vac; 20 A, 125 Vac; ³ / ₄ HP, 125 Vac / 250 Vac			
L312	10 A, 277 Vac; 20 A, 125 Vac; 1½ HP, 125 Vac / 250 Vac			

TABLE 3. MICRO SWITCH TS SERIES 2-POSITION ORDER GUIDE									
	Circuits Made		Catalog Listing						
No. of poles	Keyway Position	Opposite Keyway	UL Rating Code	Screw Terminals	Solder Terminals	Quick-Con- nect Terminals			
	OFF	2-3 ON	L311	11TS15-2	11TS115-2	11TS95-2			
	2-1 ON	2-3 ON	L311	11TS15-3	11TS115-3	11TS95-3			
	OFF*	2-3 ON	L312	11TS15-4	11TS115-4	11TS95-4			
	2-1 ON*	OFF	L312	11TS15-6	11TS115-6	11TS95-6			
	2-1 ON*	2-3 ON	L312	11TS15-8	11TS115-8	-			
OFF IN THE PARTY OF THE PARTY O	OFF	2-3 & 5-6 ON	L311	12TS15-2	12TS115-2	12TS95-2			
	2-1 ON & 5-4 ON	2-3 & 5-6 ON	L311	12TS15-3	12TS115-3	12TS95-3			
	OFF*	2-3 & 5-6 ON	L312	12TS15-4	_	-			
	2-1 ON & 5-4 ON*	OFF	L312	12TS15-6	-	-			
	2-1 ON & 5-4 ON*	2-3 & 5-6 ON	L312	12TS15-8	12TS115-8	_			

^{*} Marked toggle positions are momentary. All others are maintained.

TABLE 4. MICRO SWITCH TS SERIES 3-POSITION ORDER GUIDE										
	Circuits Made with Toggle at:				Catalog Listing					
No. of poles	Keyway Position	Center Position	Opposite Keyway	UL Rating Code	Screw Terminals	Solder Terminals	Quick- Connect Terminals			
	2-1 ON	OFF	2-3 ON	L311	11TS15-1	11TS115- 1	11TS95-1			
	2-1 ON*	OFF	2-3 ON	L312	11TS15-5	11TS115- 5	11TS95-5			
	2-1 ON*	OFF	2-3 ON*	L312	11TS15-7	11TS115- 7	11TS95-7			
2 IONI OFF ON 12TS15-8 1422	2-1 & 5-4 ON	OFF	2-3 & 5-6 ON	L311	12TS15-1	12TS115- 1	12TS95-1			
	2-1 & 5-4 ON*	OFF	2-3 & 5-6 ON	L312	12TS15-5	12TS115- 5	12TS95-5			
	2-1 & 5-4 ON*	OFF	2-3 & 5-6 ON*	L312	12TS15-7	-	12TS95-7			
	2-1 & 5-4 ON	2-1 & 5-6 ON	2-3 & 5-6 ON	L312	-	-	12TS95-10			

^{*} Marked toggle positions are momentary. All others are maintained.

TS SERIES STANDARD ACTUATOR OPTIONS, TERMINALS, & DIMENSIONS

Note: Two and three-position switches shown.

Figure 1. Single pole, standard lever, screw terminals

0.072 ±0.01 wide X ▼ 0.038 ±0.01 keyway

Bright nickel-plated lever

30° ±8°

15° ±4°

total travel

16,51 ±1,27

[0.65 ±0.05]

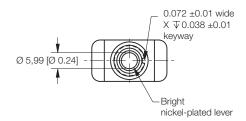
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11,94

[0.47]

27,38 [1.078]

Figure 2. Single pole, standard lever, quick-connect terminals



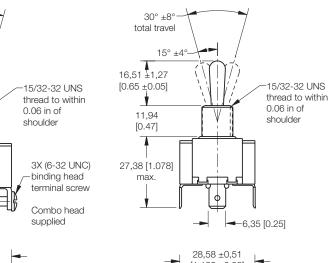
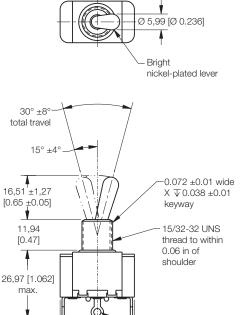


Figure 3. Single pole, standard lever, solder terminals



Ø 2.54

terminals

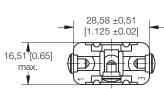
[Ø 0.10 hole]

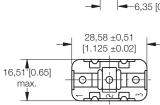
4,83 [0.19]

16,51 [0.65]

max.

28,58 ±0,51 [1.125 ±0.02]





TS SERIES STANDARD ACTUATOR OPTIONS, TERMINALS, & DIMENSIONS

Note: Two and three-position switches shown.

Figure 4. Double pole, standard lever, screw terminals

0.072 ±0.01 wide X ▼ 0.038 ±0.01 kevwav Ø 5,99 [Ø 0.236] Bright nickel-plated lever 30° +8° total travel 15° +4 16,51 ±1,27 15/32-32 LINS $[0.65 \pm 0.05]$ thread to within 0.06 in of 11.94 shoulder [0.47]6X (6-32 UNC) 28,45 [1.12] binding head max. terminal screw Φ Combo head supplied. 33.27 +0.51 $[1.31 \pm 0.02]$ 19,05 [0.75] max.

Figure 5. Double pole, standard lever, quick-connect terminals

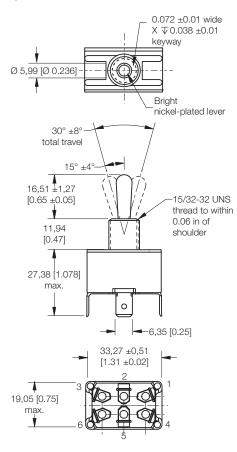


Figure 6. Double pole, standard lever, solder terminals

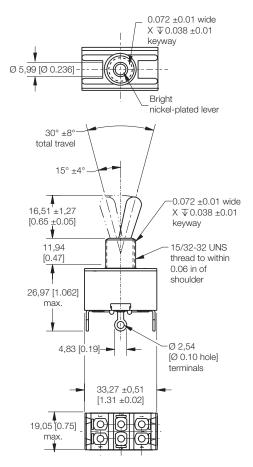
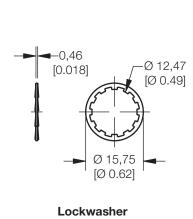
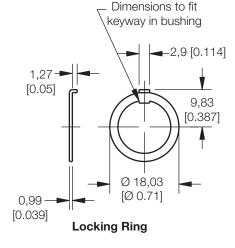
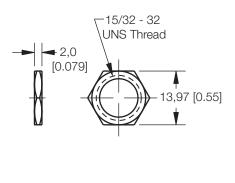


Figure 7. TS Series Hardware







2X Hex Nut

ADDITIONAL MATERIALS

The following associated literature is available at sps.honeywell.com/ast:

- Product range guide
- Product application-specific information
 - Sensors and switches in front loaders
 - Sensors and switches in mobile cranes
 - Sensors and switches in oil rig applications

FOR MORE INFORMATION

Honeywell Advanced Technologies services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing, or the nearest Authorized Distributor,

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 DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

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- The information presented in this product sheet is for reference only.
 Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

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