

## MICRO SWITCH™ General Purpose Toggle Switches

TS Series

005427-3-EN

Issue 3

Datasheet



### 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

### FEATURES

- UL recognized, CSA certified, and CE certified
- 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

### POTENTIAL 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.

# MICRO SWITCH™ General-Purpose Toggle Switches, TS Series

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<br>0.4 A to 20 A @ 0.5 Vac to 125 Vac   |
| Approvals                          | UL, CSA, CE  |
| 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 and CSA Electrical Ratings

| Rating Code | Electrical Rating                                     |
|-------------|---|
| L311        | 10 A, 277 Vac; 20 A, 125 Vac; ¼ HP, 125 Vac / 250 Vac |
| L312        | 10 A, 277 Vac; 20 A, 125 Vac; ½ HP, 125 Vac / 250 Vac |



# MICRO SWITCH™ General-Purpose Toggle Switches, TS Series

Table 3. MICRO SWITCH™ TS Series 2-Position Order Guide

| No. of poles   | Circuits Made with Toggle at: |                 |                | Catalog Listing |                  |                         |
|--|-------------------------------|-----------------|----------------|-----------------|------------------|-------------------------|
|  | Keyway Position               | Opposite Keyway | UL Rating Code | Screw Terminals | Solder Terminals | Quick-Connect Terminals |
| <br>1 | 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        | –                       |
| <br>2 | 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

| No. of poles   | Circuits Made with Toggle at: |                 |                 | UL Rating Code | Catalog Listing |                  |                         |
|--|-------------------------------|-----------------|-----------------|----------------|-----------------|------------------|-------------------------|
|  | Keyway Position               | Center Position | Opposite Keyway |                | Screw Terminals | Solder Terminals | Quick-Connect Terminals |
| <br>1  | 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                |
| <br>2 | 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.

# MICRO SWITCH™ General-Purpose Toggle Switches, TS Series

## TS SERIES STANDARD ACTUATOR OPTIONS, TERMINALS, & DIMENSIONS

Note: Two and three-position switches shown.

Figure 1. Single pole, standard lever, screw terminals

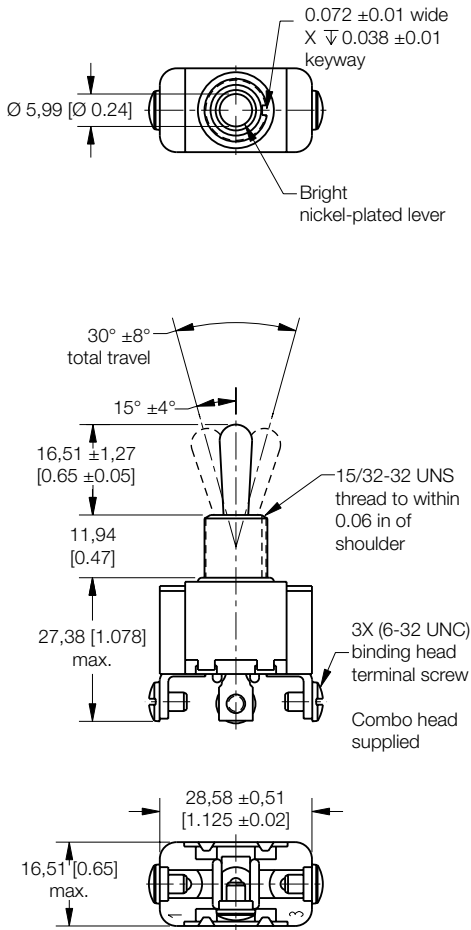


Figure 2. Single pole, standard lever, quick-connect terminals

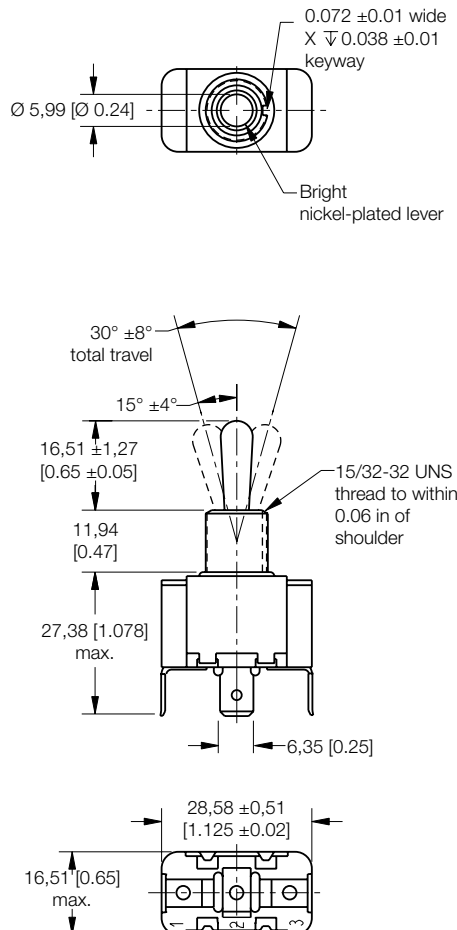
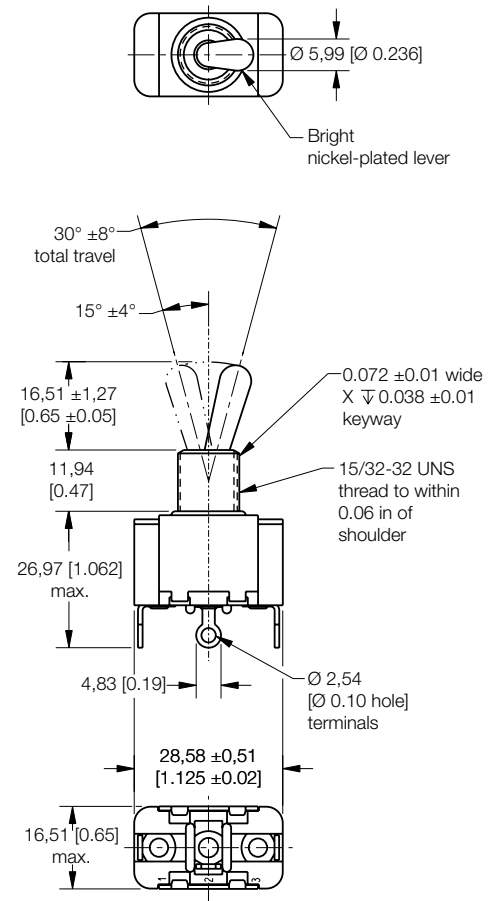


Figure 3. Single pole, standard lever, solder terminals



# MICRO SWITCH™ General-Purpose Toggle Switches, TS Series

## TS SERIES STANDARD ACTUATOR OPTIONS, TERMINALS, & DIMENSIONS

Note: Two and three-position switches shown.

Figure 4. Double pole, standard lever, screw terminals

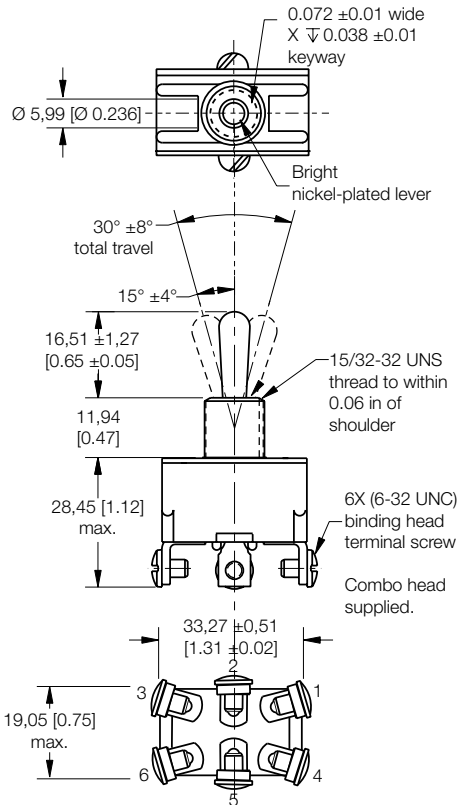


Figure 5. Double pole, standard lever, quick-connect terminals

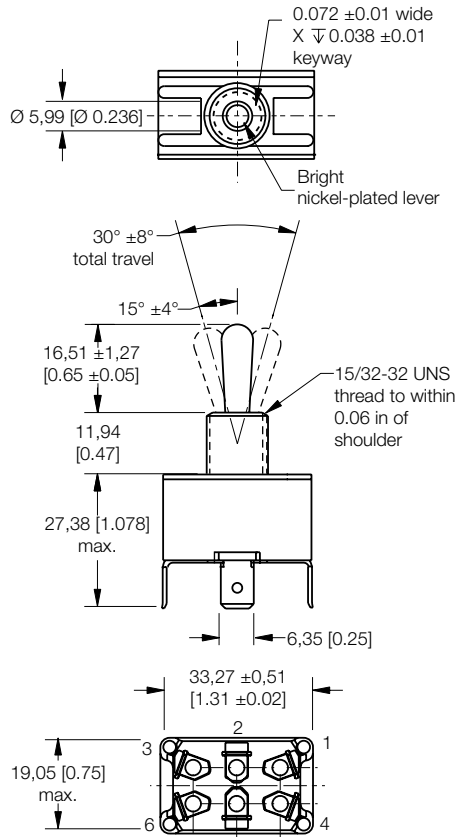


Figure 6. Double pole, standard lever, solder terminals

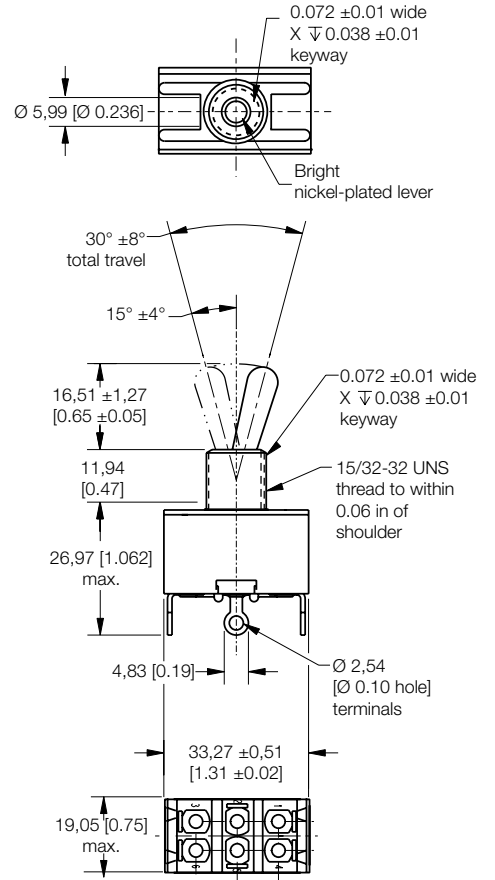
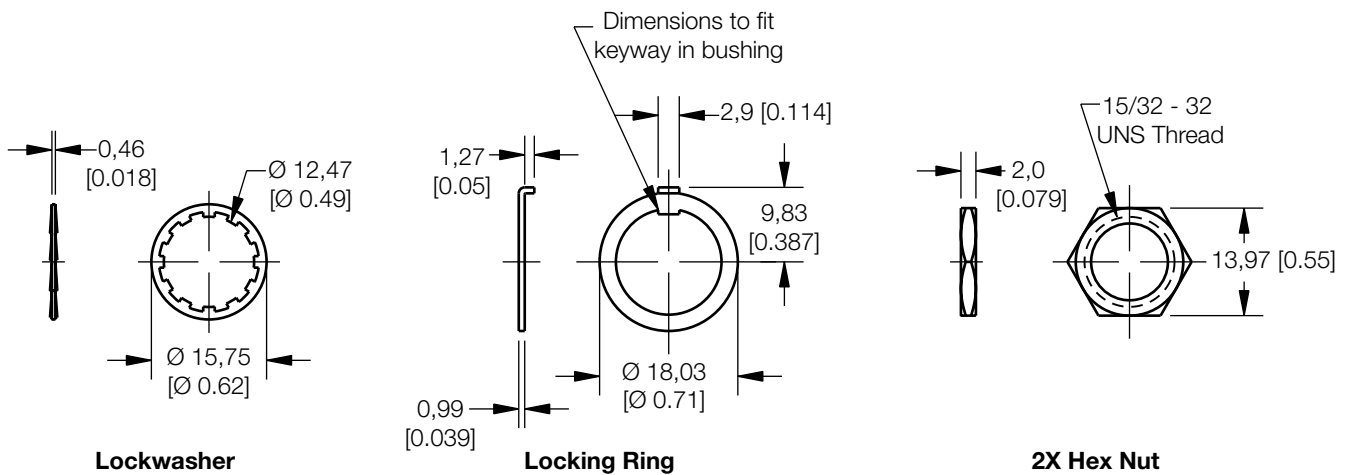


Figure 7. TS Series Hardware



## ADDITIONAL MATERIALS

The following associated literature is available at [sensing.honeywell.com](http://sensing.honeywell.com):

- 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

### **⚠ WARNING** **PERSONAL INJURY**

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.**

### **⚠ WARNING** **MISUSE OF DOCUMENTATION**

- 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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