

## 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; ¾ HP, 125 Vac / 250 Vac  |
| L312        | 10 A, 277 Vac; 20 A, 125 Vac; 1½ 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 |
|  | 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                           | 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 |
|   | 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                |
|  | 2-1 & 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**

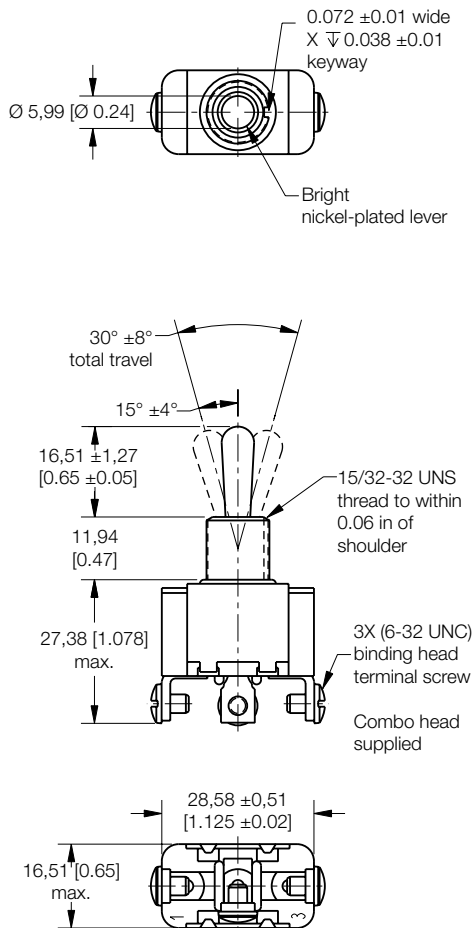


**Figure 2. Single pole, standard lever, quick-connect terminals**

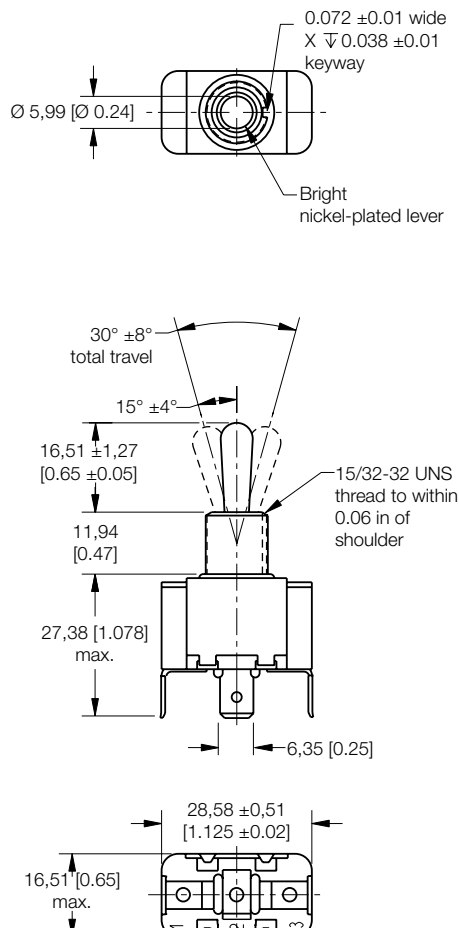
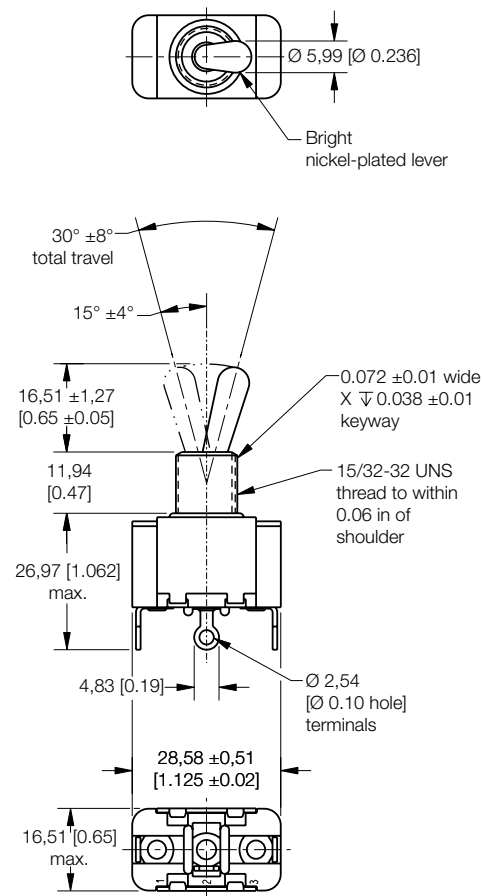


**Figure 3. Single pole, standard lever, solder terminals**



# 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

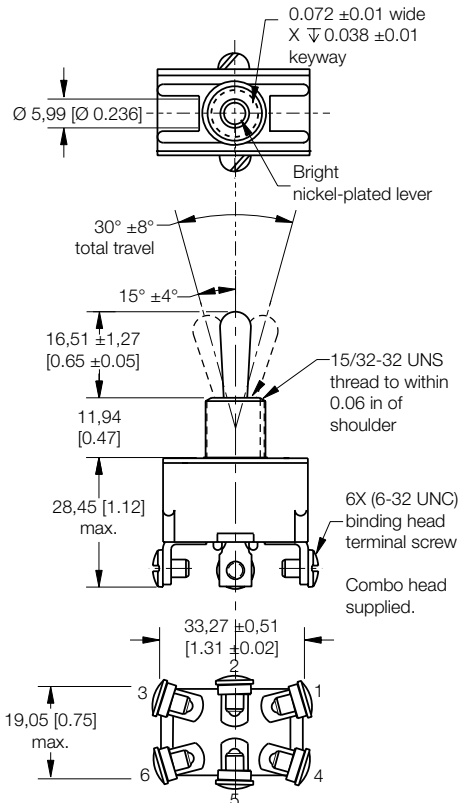


Figure 5. Double pole, standard lever, quick-connect terminals

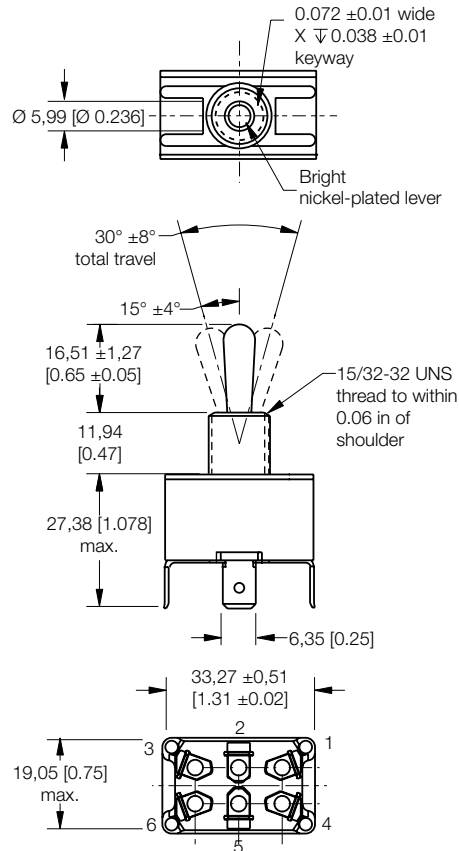


Figure 6. Double pole, standard lever, solder terminals

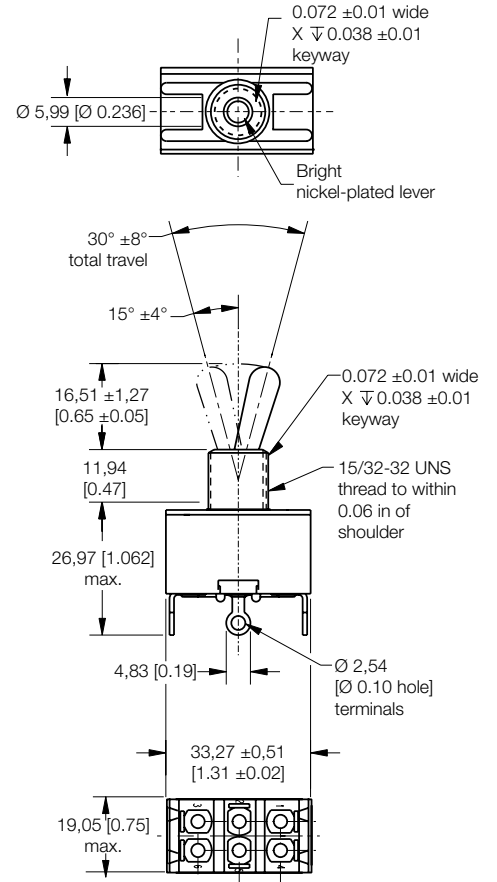
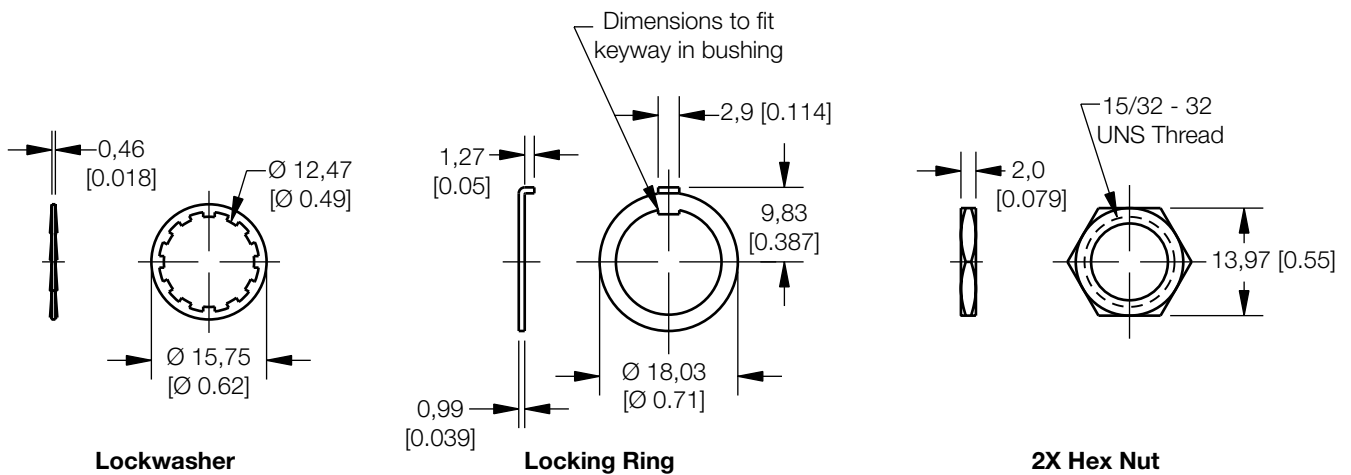


Figure 7. TS Series Hardware



## 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

### Find out more

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office. To learn more about Honeywell's sensing and switching products, call **+1-815-235-6847** or **1-800-537-6945**, visit **[sensing.honeywell.com](http://sensing.honeywell.com)**, or e-mail inquiries to **[info.sc@honeywell.com](mailto:info.sc@honeywell.com)**

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## **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.**

### Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application.

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