

## MICRO SWITCH™ Toggle Switch Line Guide



**Full-Scale Offering. Clean Slate Engineering.** Plus equal parts common sense and creativity. Each part in Honeywell Sensing and Control's (S&C) robust offering of toggle switches comes complete with the amenities you'd expect from the industry leader: superior assembly techniques for stronger performance, longer productivity, full-line flexibility and increased safety.

Honeywell S&C delivers optimal operator interface features and value-added qualities for aerospace, air transport, armored fighting vehicles and self-propelled transportation systems, as well as manufacturing companies. For example, only Honeywell drives in a center pendulum for ultimate stabilization. This rubber-bonded steel pin is then sealed to withstand most of the highest and lowest temperature challenges in the wettest and most parched environs.

### FEATURES

#### TOGGLE SWITCHES

##### NT Series.

**Features:** Completely sealed switching chamber • IP67/IP68 • NEMA 3, 3R, 4, and 13 • Step-design case provides added space between terminals to prevent shorting • 2- and 3-position, maintained and momentary toggle action • Spring-loaded mechanism provides excellent tactile feedback • Features an "easy-start" threaded bushing and thermoplastic case • High impact strength, non-tracking case enhances electrical stability

**Benefits:** Meets a variety of electrical load requirements. Switching chamber is completely sealed in a Thermoset case. Option for integral o-ring that eliminates need for separate panel-seal accessory. Used in a wide variety of industrial and commercial settings. Potential applications include aerial lifts, scissor lifts, truck mounted tele-handlers/cranes, construction equipment, agriculture equipment, material-handling equipment, factory-floor control units, and machine tool equipment manufacturers.

##### TL Series.

**Features:** Environment-proof sealing • Qualified to MIL-DTL-3950 • 1-, 2-, and 4-pole circuitry • Standard and pull-to-unlock levers • Silver alloy or gold-plated contacts • 2- and 3-position, maintained and momentary toggle action • Temperature range: -65 °C to 71 °C [-85 °F to 160 °F] • Completely sealed switching chamber • Step-design case provides added space between terminals to help prevent shorting • Available with IWTS (Integrated Wire Termination System), a wired, plug-in connection method

**Benefits:** Meets a variety of electrical load requirements. Switching chamber is completely sealed in a Thermoset case. Used in military or commercial aviation application where a sealed toggle switch is required. Potential applications include industrial machinery and equipment, military and commercial aviation, construction equipment, test instruments, agricultural machinery, process control, and medical instrumentation.

##### TS Series.

**Features:** 2- or 3-position, momentary and maintained action • 1- and 2-pole circuitry • Special on-on-on circuitry can be furnished • Solder, screw, or quick-connect terminals • Rated up to 20 A • Lever-to-bushing seal

**Benefits:** Generally used in low-cost commercial applications. Not recommended for use where sealing is critical. Potential applications include industrial machinery and equipment, military and commercial aviation, construction equipment, test instruments, agricultural machinery, process control, and medical instrumentation.

##### TW Series.

**Features:** Qualified to MIL-DTL-83731 • IWTS (Integrated Wire Termination System) • Saves space and weight • SPDT and DPDT circuitry • Temperature range: -65 °C to 71 °C [-85 °F to 160 °F] • Silver alloy or gold-plated contacts • Sealed bushing versions • Choice of 1/4 in or 15/32 in bushing • Color tab available on 15/32 in bushing

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### The most powerful part: Possibilities.

Honeywell S&C offers one-stop convenience for every toggle switch need:

**NT Series:** Cost-effective, industrial-grade design meets NEMA and IP requirements. Features an “easy-start” threading bushing, plus optional panel stand off with O-ring seal, eliminating additional behind-the-panel hardware and seal.

**TL Series:** Military-grade design, environmentally sealed and qualified to MIL-DTL-3950. Featuring a large selection of circuitries, lever designs and electrical terminations, with silver or gold contacts.

**TS Series:** Used for manual operation, with special on-on circuitry available. TS series switches have 2- or 3-position, momentary and maintained action switches with 1- and 2-pole circuitry.

**TW Series:** Miniature military-grade design and environmentally sealed switches. A large selection of circuitries, electrical terminations, levers and bushing designs, with silver or gold contacts.



### Toggle Switches

|                    | NT Series                                                                                                          | TL Series                                           |
|--------------------|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| <b>Type</b>        | industrial-grade toggle                                                                                            | military-grade toggle                               |
| <b>Action</b>      | 2- or 3-position<br>momentary and maintained action                                                                | 2- or 3-position<br>momentary and maintained action |
| <b>Levers</b>      | standard, locking, special design, tab                                                                             | standard, special design, tab, paddle, no lever     |
| <b>Mounting</b>    | bushing 15/32 in with option for integral o-ring (as shown) that eliminates need for separate panel-seal accessory | bushing 15/32 in                                    |
| <b>Termination</b> | solder, screw, quick-connect                                                                                       | IWTS, solder, screw, quick-connect, leadwire        |
| <b>Approvals</b>   | UL, CSA, CE                                                                                                        | UL, CSA, CE, qualified to MIL-DTL-3950              |
| <b>Circuitry</b>   | SPST, SPDT, DPST, DPDT<br>4PST, 4PDT                                                                               | SPST, SPDT, DPST, DPDT<br>3PST, 3PDT, 4PST, 4PDT    |
| <b>Contacts</b>    | silver alloy                                                                                                       | silver alloy, gold-plated                           |



### Toggle Switches

|                    | TS Series                                           | TW Series                                           |
|--------------------|-----------------------------------------------------|-----------------------------------------------------|
| <b>Type</b>        | commercial grade toggle                             | miniature toggle                                    |
| <b>Action</b>      | 2- or 3-position<br>momentary and maintained action | 2- or 3-position<br>momentary and maintained action |
| <b>Levers</b>      | standard                                            | standard, locking, special design, tab              |
| <b>Mounting</b>    | bushing 15/32 in                                    | bushing 15/32 in or 1/4 in                          |
| <b>Termination</b> | solder, screw, quick-connect                        | IWTS, solder, screw, quick-connect, H58, T2         |
| <b>Approvals</b>   | UL, CSA                                             | UL, qualified to MIL-DTL-83781                      |
| <b>Circuitry</b>   | SPST, SPDT, DPST, DPDT                              | SPST, SPDT, DPST, DPDT                              |
| <b>Contacts</b>    | silver cadmium oxide                                | silver alloy, gold-plated                           |

**Benefits:** Low profile switches and generally used where space behind the panel is limited. Used in control panel or equipment operation applications where a panel-mount switch with an environment-proof sealing rating is needed. Potential applications include industrial machinery and equipment, military and commercial aviation, construction equipment, test instruments, agricultural machinery, process control, and medical instrumentation.

**Warranty.** 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 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.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. However, we assume no responsibility for its use.

For more information about Sensing and Control products, visit [www.honeywell.com/sensing](http://www.honeywell.com/sensing) or call +1-815-235-6847. Email inquiries to [info.sc@honeywell.com](mailto:info.sc@honeywell.com)

 **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 catalogue is for reference only. DO NOT USE this document as product installation information.
- 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.**

## Данный компонент на территории Российской Федерации

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<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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