

## MICRO SWITCH Miniature Toggle Switches

MT Series

005437

Issue 1

Datasheet



### DESCRIPTION

Honeywell MICRO SWITCH MT Series miniature toggle switches are designed to meet the need for a rugged, cost-effective toggle switch. Quality construction features include a seal between the toggle lever and bushing, and between the cover and case. These switches are designed for use in applications in many demanding outdoor environments, where the panels are subjected to such things as vibration from equipment, temperature extremes, dust, splashing water, and/or hose directed water.

They are capable of withstanding exposure to heavy accumulations of early morning dew that may condense on the control panel in cabs of vehicles left outdoors overnight. The MT toggle switches with metal or plastic levers are well suited for gloved-hand operation.

The panel stand-off with O-ring feature available on some listings eliminates the need for behind-the-panel hardware, provides a uniform panel height, and a panel-to-cover seal.

### VALUE TO CUSTOMERS

- Spring-loaded mechanism provides enhanced tactile feedback for toggle switch lever
- High sealing level and electrical life cycle enable more uptime in field installations which helps in keeping machines working longer with less downtime
- Small size allows for smaller control box/panel size to reduce weight and operator fatigue

### FEATURES

- Miniature behind-panel size (case) enables overall control box or panel use
- IEC 60529-2001, IP67, IP68 (except terminal parts) sealing for harsh-duty applications
- Up to 60,000 electrical life that enhances the use time
- Available with 8 circuitry options
- 2- or 3- position maintained and momentary action to meet circuit and actuator requirements
- UL recognized, CE certified for global use

### POTENTIAL APPLICATIONS

Remote control box of

- Concrete pumping
- Cranes
- Material handling
- Boom trucks
- Any application with small panel constraints

### DIFFERENTIATION

- 60K life cycle offers an enhanced application life, keeping maintenance, replacement, and refurbishment at a minimum
- High seal rating (IP68) to protect the toggle from water ingress and support more equipment uptime

### PORTFOLIO

Honeywell offers an extensive line of MICRO SWITCH toggle switches, including the following Series: [TL](#), [NT](#), [TW](#), [TS](#), [AT](#), and [ET](#).

## MICRO SWITCH Miniature Toggle Switches, MT Series

**Table 1. Specifications**

| Characteristic              | Parameter  |
|-----------------------------|--|
| Description                 | miniature, commercial-grade toggle switch  |
| Sealing                     | IEC 60529-2001, IP67, IP68 (except terminal parts)   |
| Operating temperature       | -40 °C to 85 °C [-40 °F to 185 °F]   |
| Actuators                   | industry standard polished lever   |
| Action                      | 2- or 3-position; momentary and maintained   |
| Mounting                    | bushing 15/32 in (0.47 in) Ø   |
| Circuitry                   | UL 61058-1, SPST, SPDT, DPST, DPDT   |
| Terminations                | solder   |
| Contacts                    | silver alloy, gold plated  |
| Amp rating                  | 5 A, 28 Vdc with silver contacts<br>100 mA, 28 Vdc with gold-plated contacts   |
| Electrical life             | 60K cycles (SPDT, silver alloy and gold-plated contacts)<br>25K cycles @ 5 A, 28 Vdc (DPDT, silver alloy contacts)<br>60K cycles @ 100 mA, 28 Vdc (DPDT, gold-plated contacts) |
| Mechanical life             | 100 K cycles   |
| Initial dielectric strength | UL 61058-1, 500 Vdc, 10 mA/1 minute between open terminals   |
| Salt spray                  | SAE J1455, duration 96 hours without red rust  |
| Vibration                   | UL 60068-2-6, 10 Hz to 500 Hz, 10 G, duration two hours each direction   |
| Solder ability              | UL 61058-1, 350 °C ±10 °C, 3 seconds   |
| Approvals                   | UL, CE   |
| Measurement                 | 26,7 mm H x 20 mm W x 15 mm D [1.05 in H x 0.79 in W x 0.59 in D]  |

# MICRO SWITCH Miniature Toggle Switches, MT Series

**Table 2. MT Series: Single Pole Order Guide**

| No. of Poles | Circuits Made with Toggle At: |                       |                       | Catalog Listing                     | Catalog Listing                       |
|--------------|-------------------------------|-----------------------|-----------------------|-------------------------------------|---------------------------------------|
|              | Keyway Side (1-2)             | Center Position (1-2) | Opposite Keyway (2-3) | Silver Alloy Contacts (5 A, 28 Vdc) | Gold-Plated Contacts (100 mA, 28 Vdc) |
| 1            | ON                            | OFF                   | ON                    | 1MT1-1                              | 1MT2-1                                |
|              | OFF                           | –                     | ON                    | 1MT1-2                              | 1MT2-2                                |
|              | ON                            | –                     | ON                    | 1MT1-3                              | 1MT2-3                                |
|              | OFF*                          | –                     | ON                    | 1MT1-4                              | 1MT2-4                                |
|              | ON*                           | OFF                   | ON                    | 1MT1-5                              | 1MT2-5                                |
|              | ON*                           | –                     | OFF                   | 1MT1-6                              | 1MT2-6                                |
|              | ON*                           | OFF                   | ON*                   | 1MT1-7                              | 1MT2-7                                |
|              | ON*                           | –                     | ON                    | 1MT1-8                              | 1MT2-8                                |

\* These positions are momentary. All others are maintained.

**Table 3. MT Series: Double Pole Order Guide**

| No. of Poles | Circuits Made with Toggle At: |                            |                            | Catalog Listing                     | Catalog Listing                       |
|--------------|-------------------------------|----------------------------|----------------------------|-------------------------------------|---------------------------------------|
|              | Keyway Side (1-2, 4-5)        | Center Position (1-2, 4-5) | Opposite Keyway (2-3, 5-6) | Silver Alloy Contacts (5 A, 28 Vdc) | Gold-Plated Contacts (100 mA, 28 Vdc) |
| 2            | ON                            | OFF                        | ON                         | 2MT1-1                              | 2MT2-1                                |
|              | OFF                           | –                          | ON                         | 2MT1-2                              | 2MT2-2                                |
|              | ON                            | –                          | ON                         | 2MT1-3                              | 2MT2-3                                |
|              | OFF*                          | –                          | ON                         | 2MT1-4                              | 2MT2-4                                |
|              | ON*                           | OFF                        | ON                         | 2MT1-5                              | 2MT2-5                                |
|              | ON*                           | –                          | OFF                        | 2MT1-6                              | 2MT2-6                                |
|              | ON*                           | OFF                        | ON*                        | 2MT1-7                              | 2MT2-7                                |
|              | ON*                           | –                          | ON                         | 2MT1-8                              | 2MT2-8                                |

\* These positions are momentary. All others are maintained.

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Figure 1. Dimensions mm [in]

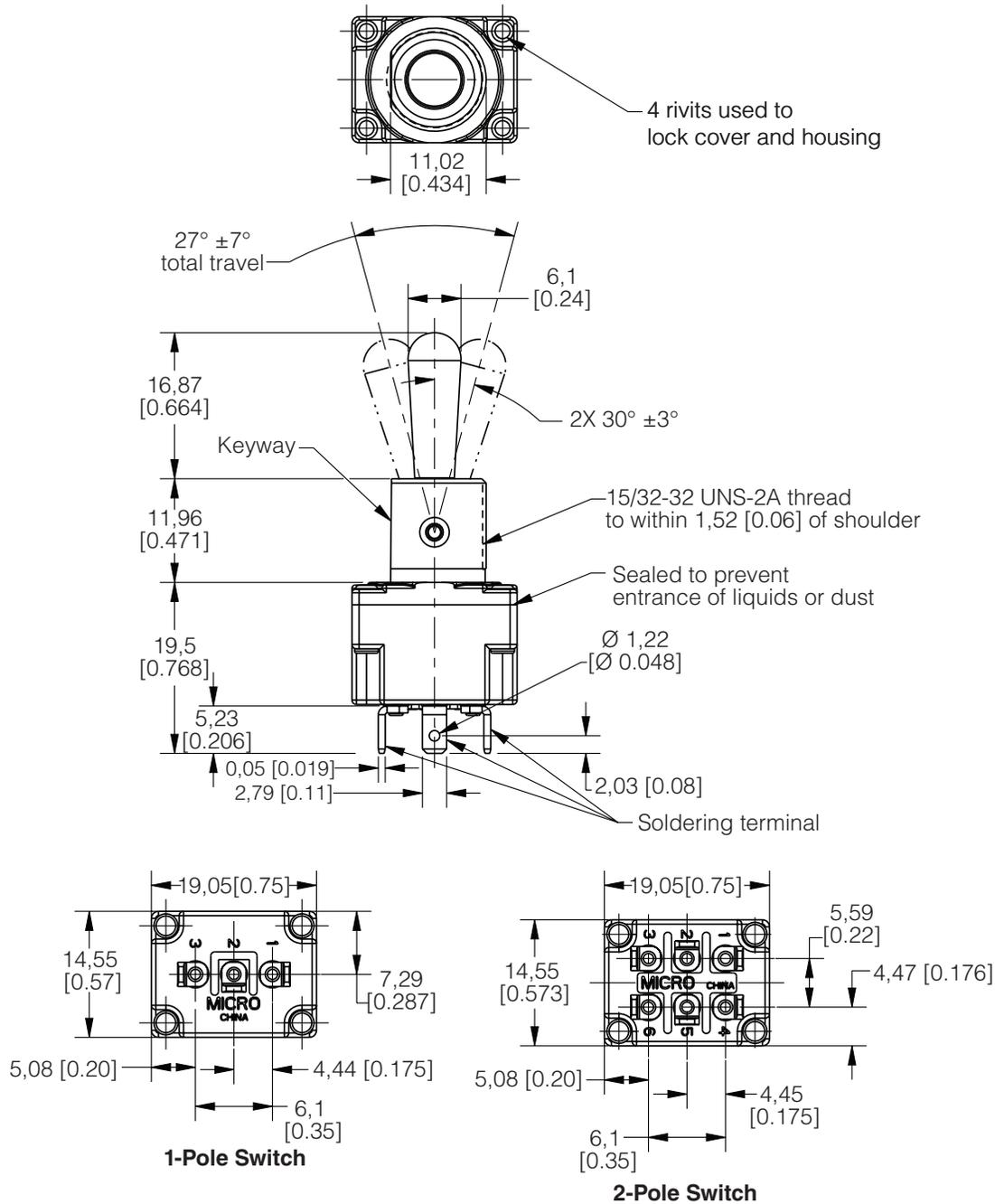
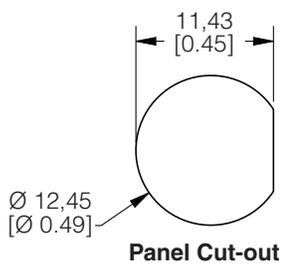


Figure 2. Panel Cutout



## ADDITIONAL MATERIALS

The following associated literature is available on the Honeywell web site at [sensing.honeywell.com](http://sensing.honeywell.com):

- Product installation instructions
- Product range guide
- Product application-specific information

### **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.**

### 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)

### Honeywell Sensing and Internet of Things

9680 Old Bailes Road  
Fort Mill, SC 29707  
[honeywell.com](http://honeywell.com)

### Warranty/Remedy

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While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer's sole responsibility 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 writing. However, Honeywell assumes no responsibility for its use.

# Honeywell

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- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А