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.

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 100 mA, 28 Vdc with gold-plated contacts
Electrical life	60K cycles (SPDT, silver alloy and gold-plated contacts) 25K cycles @ 5 A, 28 Vdc (DPDT, silver alloy contacts) 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]

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.

Figure 1. DImensions mm [in]

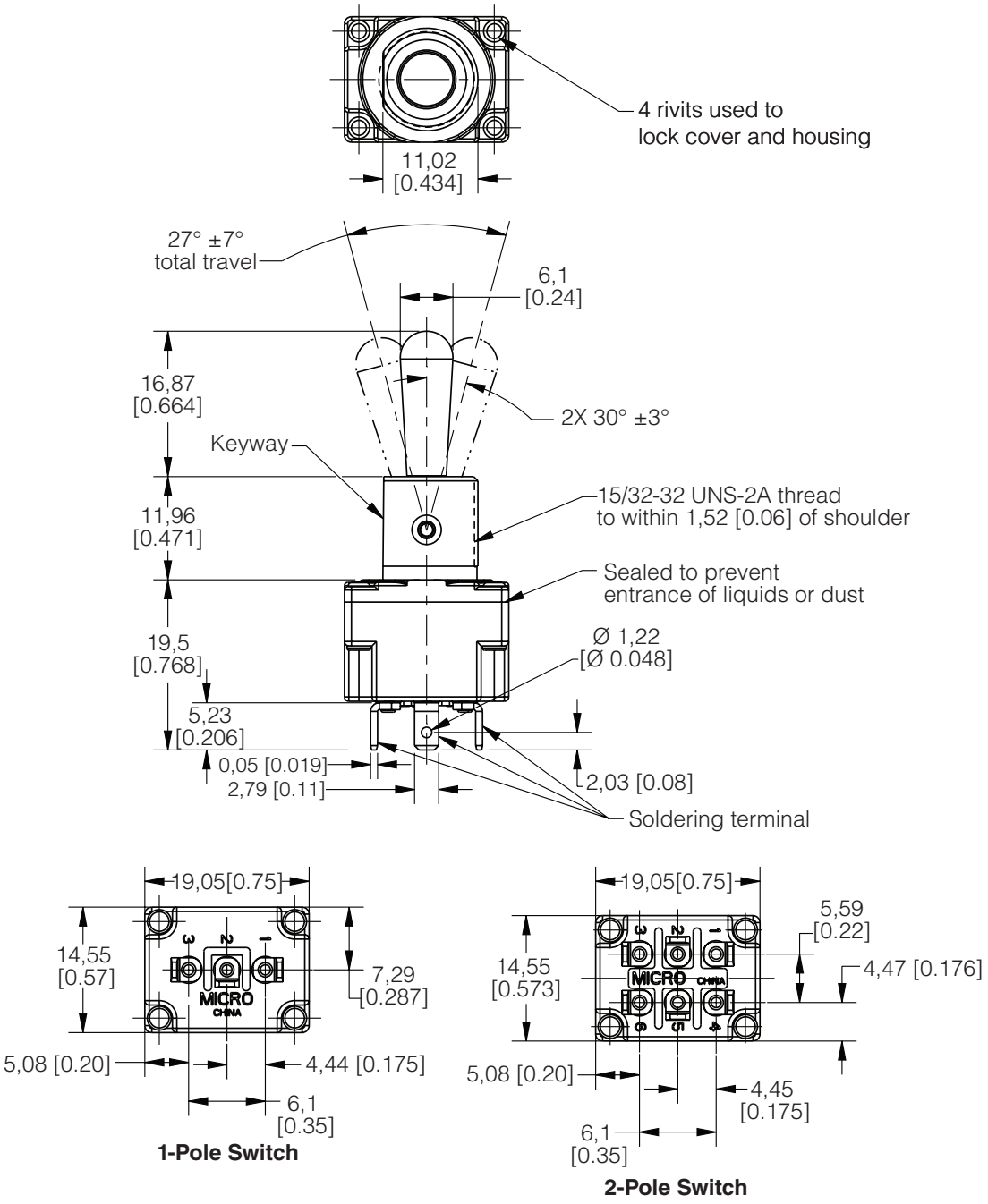
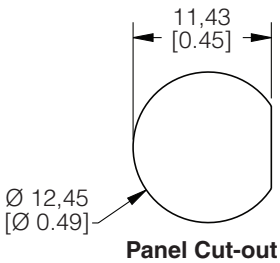


Figure 2. Panel Cutout



ADDITIONAL MATERIALS

The following associated literature is available on the Honeywell web site at sensing.honeywell.com:

- 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.

Warranty/Remedy

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. 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 that Honeywell, in its sole discretion, 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 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.

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,** or e-mail inquiries to **info.sc@honeywell.com**

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