

**Honeywell**

THE POWER OF **CONNECTED**

## Basic, Toggle, and Rocker Switches

Product Range Guide





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With more than 50,000 products ranging from snap-action, limit, toggle, and pressure switches to position, speed, pressure, and airflow sensors, Honeywell has one of the broadest sensing and switching portfolios.

Honeywell sensor, switch, and control components are tailored to exact specifications for stronger performance, longer productivity, and increased safety. Enhanced accuracy and durability are built into every part, improving output and endurance. For our customers, this can reduce expenditures and operational costs. Our global footprint and channels help to competitively price such components for your chosen application and provide immediate technical support.

While Honeywell's switch and sensor solutions are suitable for a wide array of basic and complex applications, our custom-engineered solutions offer enhanced precision, repeatability, and ruggedness. We offer domain knowledge and technology resources, along with a close working relationship, to develop and deliver cost-effective, individually tailored solutions. Whether clean-slate development or simple modifications to an existing design are needed, our expertly engineered solutions help to meet the most stringent requirements with world-class product designs, technology integration, and customer-specific manufacturing.

Global service, sourcing, and manufacturing. Industry-leading engineers. Value-added assemblies and solutions. A one-stop, full-service, globally competitive supplier.



## Table of Contents

|   |     |
|---|-----|
| Premium and Standard V-Series Switches .....                | 3   |
| Premium and Standard Miniature and Subminiature Switches .. | 4-5 |
| Premium Large Switches and Accessories .....                | 6-7 |
| Sealed Switches .....                                       | 8   |

|  |       |
|--|-------|
| Lit and Unlit Pushbuttons.....               | 9     |
| Sealed and Standard Toggles and Rockers..... | 10-11 |
| Honeywell Core Industry Segments.....        | 12-13 |
| Honeywell Product Portfolio .....            | 14-15 |



# MICRO SWITCH Basic Series | Premium & Standard V-Series Switches

Simple or precision on/off, end of limit, presence/absence, pressure, temperature, and manual operator interface application needs. Potential uses include a variety of applications, including business equipment, valves, manually operated devices, vending machines, water heaters, appliances, and industrial controls.



| Series                      | V7   | V15  | V15W Watertight   | V15W2 Explosion-Proof  |
|-----------------------------|--|--|---|--|
| Type                        | premium  | standard   | watertight  | zone 2 hazardous area rated  |
| Amp rating                  | 0.1 A to 25 A  | 5 A to 26 A  | 0.1 A, 5 A, 10 A  | 5 A, 1/10 HP @ 125 Vac/250 Vac   |
| Circuitry                   | SPDT, SPNO, SPNC   | SPDT, SPNO, SPNC   | SPDT, SPNO, SPNC  | SPDT, SPNO, SPNC   |
| Operating force             | 0.7 oz max. to 14.6 oz max.  | US: ≥ 100 g (16 A to 26 A)<br>AP: 15 g to 400 g (5 A to 26 A)                                    | 15 g, 25 g, 50 g, 100 g, 200 g  | 100 g, 200 g   |
| Terminations                | quick connect, pc board, pcb straight angle left   | quick connect, screw, solder, RAST 5 & 7   | prelead; terminals: 4,8 mm x 0,8 mm or 4,8 mm x 0,5 mm  | quick connect: 4,8 mm x 0,5 mm   |
| Actuators/levers            | pin plunger, straight, roller, sim. roller   | pin plunger, straight, roller, sim. roller   | pin plunger, straight, roller, sim. roller  | pin plunger, roller plunger; other actuators/levers available for special order    |
| Voltage                     | 125 Vac, 250 Vac, 277 Vac  | 125 Vac, 250 Vac   | 125 Vac, 250 Vac, 30 Vdc, 48 Vdc  | 125 Vac, 250 Vac   |
| Approvals                   | UL, CSA, ENEC  | UL, cUL, ENEC, CQC   | UL, cUL, ENEC, CQC  | UL, cUL, ENEC, CQC, IEC Ex   |
| Operating temperature range | -40°C to 150°C [-40°F to 302°F]  | -25°C to 150°C [-13°F to 300°F]  | -40°C to 85°C [-40°F to 185°F]  | -25 °C to 85 °C [-13 °F to 185 °F]   |
| Contacts                    | silver, silver cadmium oxide, gold   | silver, silver cadmium oxide, gold-plated silver   | silver nickel, gold-plated option   | silver alloy, gold-plated thermal alloy  |
| Housing material            | PCT polyester thermo-plastic   | PBT polyester thermo-plastic   | PBT polyester thermo-plastic  | PBT polyester thermo-plastic   |
| Measurements                | 15,9 mm H x 10,2 mm W x 28,8 mm L [0.63 in H x 0.4 in W x 1.14 in L]                         | 15,9 mm H x 10,3 mm W x 27,8 mm L [0.63 in H x 0.41 in W x 1.09 in L]                            | 15,9 mm H x 10,3 mm W x 33 mm L [0.63 in H x 0.41 in W x 1.3 in L]                                    | 15,9 mm H x 10,3 mm W x 33 mm L [0.63 in H x 0.41 in W x 1.3 in L]                 |
| Features                    | extended mechanical and electrical life; wide temperature range; custom engineered solutions | broad range of electrical loads; wide temperature range; limited configuration options available | designed for harsh-duty, wash down areas; high sealing capability with an IP67 rating (pre-lead only) | approved for use in Zone 2 hazardous locations with an IP67 rating (pre-lead only) |



Designed for high precision, presence and absence detection, where physical contact with an object is permissible and in simple on-and-off actions. These compact, highly reliable and rugged switches are used in potential applications including aerospace, HVAC, instrumentation, office equipment, medical/dental, valves, and vending machines.



| Series                      | SM  | SX  |
|-----------------------------|---|---|
| Type                        | premium   | premium   |
| Amp rating                  | 0.1 A to 11 A   | 1 A to 7 A  |
| Circuitry                   | SPDT  | SPDT, SPNO  |
| Operating force             | 0.04 oz to 2 oz   | 0.71 oz to 6 oz   |
| Terminations                | quick connect, solder, pcb  | quick connect, solder, pcb  |
| Actuators/levers            | pin plunger, straight, roller, sim. roller, paddle  | pin plunger, straight, roller, sim. roller, offset flag, crossed roller                         |
| Voltage                     | 115 Vac, 125 Vac, 250 Vac, 30 Vdc   | 125 Vac, 250 Vac, 28 Vdc  |
| Approvals                   | UL, CSA, ENEC, CE   | UL, CSA, ENEC, CE   |
| Operating temperature range | -55°C to 121°C [-67°F to 250°F]<br>high temperature options to 204°C [400°F]                    | -55°C to 121°C [-67°F to 250°F]<br>high temperature options to 204°C [400°F]                    |
| Contacts                    | silver, gold  | silver, gold  |
| Housing material            | phenolic  | phenolic  |
| Measurements                | 12,7 mm H x 6,35 mm W x 20,3 mm L<br>[0.5 in H x 0.25 in W x 0.8 in L]                          | 12,7 mm H x 6,35 mm W x 20,3 mm L<br>[0.5 in H x 0.25 in W x 0.8 in L]                          |
| Features                    | extended operating life; elongated mounting holes;<br>MIL-PRF-8805 qualified listings available | extended operating life; elongated mounting<br>holes; MIL-PRF-8805 qualified listings available |



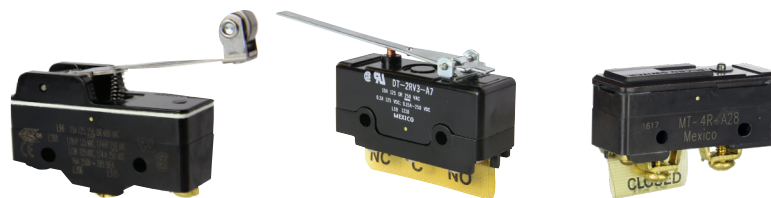


| ZD  | ZM  | ZM1   | ZW  | ZX  |                                    |
|---|---|---|---|---|------------------------------------|
| standard  | standard (coil internal spring)   | standard (flat internal spring)   | standard  | standard  | <b>Type</b>                        |
| 0.1 A, 3 A  | 0.1 A, 5 A, 10.1 A  | 0.1 A, 3 A, 6 A, 10.1 A, 16 A   | 0.1 A, 6 A  | 0.1 A, 3 A  | <b>Amp rating</b>                  |
| SPDT  | SPST, SPDT, SPNO  | SPDT, SPNO, SPNC  | SPDT, SPNO, SPNC  | SPDT  | <b>Circuitry</b>                   |
| 130 gf to 195 gf  | 0.18 oz to 8.78 oz  | 12 gf to 355 gf   | 1.94 oz to 7.16 oz  | 0.53 oz to 5.3 oz   | <b>Operating force</b>             |
| solder, pcb straight, pcb left angle, pcb right angle, pre-wired  | quick connect, solder, pcb  | quick connect, solder, pcb  | quick connect, solder, cable bottom/end, cable side exit  | solder, pcb snap-in, pcb left angle, pcb right angle  | <b>Terminations</b>                |
| pin plunger, straight, sim. roller  | pin plunger, straight, roller, sim. roller, L-shaped                        | pin plunger, straight, roller, sim. roller, L-shaped                        | pin plunger, straight, roller, sim. roller  | pin plunger, straight, sim. roller, special   | <b>Actuators/levers</b>            |
| 125 Vac, 12 Vdc   | 125 Vac, 250 Vac, 30 Vdc  | 125 Vac, 250 Vac  | 125 Vac, 250 Vac  | 125 Vac, 48 Vdc   | <b>Voltage</b>                     |
| UL, cUL, CE, ENEC   | UL, CSA, CE   | UL, cUL, ENEC   | UL, cUL, CE, ENEC   | UL, CSA   | <b>Approvals</b>                   |
| -40°C to 85°C<br>[-40°F to 185°F]   | -40°C to 120°C<br>[-40°F to 248°F]  | -40°C to 125°C<br>[-40°F to 257°F]  | -25°C to 70°C [-13°F to 158°F] (with wires)<br>-25°C to 120°C [-13°F to 248°F] (without wires)                              | -40°C to 65°C<br>[-40°F to 149°F]   | <b>Operating temperature range</b> |
| silver, gold-plated silver  | silver, gold-plated silver, silver-tin-indium oxide                         | silver, gold-plated silver, gold-plated brass, silver-tin-indium oxide      | silver, gold-plated silver  | silver, gold-plated silver  | <b>Contacts</b>                    |
| PBT polyester   | polyamide (nylon)   | polyamide (nylon)   | PBT (polyester)   | polyamide (nylon)   | <b>Housing material</b>            |
| 10,6 mm H x 6,35 mm W x 19,8 mm L [0.42 in H x 0.25 in W x 0.78 in L]                                       | 10,6 mm H x 6,4 mm W x 19,8 mm L [0.42 in H x 0.25 in W x 0.78 in L]        | 10,6 mm H x 6,4 mm W x 19,8 mm L [0.42 in H x 0.25 in W x 0.78 in L]        | 9,0 mm H x 6,4 mm W x 19,8 mm L [0.36 in H x 0.25 in W x 0.78 in L]   | 6,5 mm H x 5,7 mm W x 12,7 mm L [0.26 in H x 0.22 in W x 0.50 in L]   | <b>Measurements</b>                |
| low energy or power-duty electrical ratings; gold-plated or silver contacts; PBT polyester housing material | low energy or power-duty electrical ratings; gold-plated or silver contacts | low energy or power-duty electrical ratings; gold-plated or silver contacts | IP67 available; low energy or power-duty electrical ratings; gold-plated or silver contacts; PBT polyester housing material | low energy or power-duty electrical ratings; gold-plated or silver contacts; polybutylene terephthalate housing | <b>Features</b>                    |



# MICRO SWITCH Basic Series | Large Switches and Accessories

Often ideal for high cost-of-failure applications. Low operating force and differential travel. Current ratings from 10 A to 25 A. Designed to withstand 100K operations at full load or 10M for mechanical life. Have been used in a variety of applications including irrigation, transportation, medical/dental, valves, office equipment, presses, machine tools, and HVAC.



| Series                | BZ/BA/BM/BE  | DT   | MT   |
|-----------------------|--|--|--|
| Type                  | premium  | premium  | premium  |
| Amp rating            | 15 A (BZ), 22 A (BM), 20 A (BA), 25 A (BE)   | 10 A   | 10 A   |
| Circuitry             | SPDT   | DPDT   | SPDT   |
| Operating force       | 1.0 oz to 28 oz  | 7.0 oz to 10.0 oz  | 2.0 oz to 18 oz  |
| Terminations          | quick connect, solder, screw   | screw  | screw  |
| Actuators/levers      | pin plunger, overtravel plunger, straight, roller, flexible roller leaf, flexible leaf   | pin plunger, straight, roller  | pin plunger, straight, roller  |
| Voltage               | 115 Vac, 125 Vac, 250 Vac  | 250 Vac, 28 Vdc  | 125 Vac, 125 Vdc   |
| Approvals             | UL, CSA, ENEC, CE (varies by model)  | UL, CSA  | UL, CSA  |
| Operating temp. range | -55°C to 85°C [-67°F to 185°F]<br>121°C [250°F] and 204°C [400°F] options available  | -55°C to 85°C [-67°F to 185°F]   | -55°C to 82°C [-67°F to 180°F]   |
| Contacts              | silver, silver cadmium oxide   | silver   | silver   |
| Housing material      | general purpose phenolic   | general purpose phenolic   | arc resistant melamine   |
| Measurements          | 25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]   | 25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]                       | 25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]   |
| Features              | worldwide standard "large basic" switch; low operating force and travel; extended mechanical life; momentary or maintained actions | mounting interchangeability with BZ Series switches; permits several wiring combinations | mounting interchangeability with BZ/BA Series switches; arc-extinguishing design in contact area; arc-resistant case |

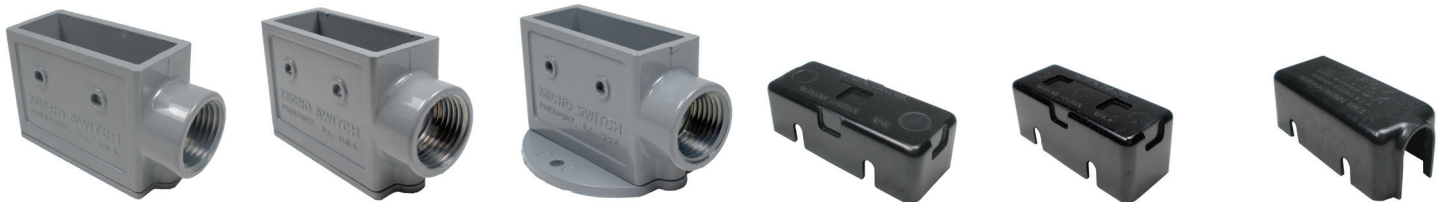


| Series           | 8MA1  | 8MA2   | 17MA1-B  |
|------------------|---|--|--|
| Type             | adjustable mounting bracket   | adjustable mounting bracket  | conversion mounting bracket  |
| Description      | adjustment slot on the left   | adjustment slot on the right   | -  |
| Housing material | steel   | steel  | corrosion-resistant metal  |
| Measurements     | 60,2 mm W x 21,3 mm H x 7,4 mm D [2.37 in W x 0.84 in H x 0.29 in D]  | 60,2 mm W x 21,3 mm H x 7,4 mm D [2.37 in W x 0.84 in H x 0.29 in D] | 66,8 mm W x 19,0 mm D [2.63 in W x 0.75 in D]  |
| Features         | sturdy plated steel construction; fast, easy screwdriver adjustment; can be used with all standard basic switches |  | converts standard basic switches from side to top mount; snaps into mounting holes without tools |





| 3MN  | 6AS  | AC   | DM  | Type                         |
|--|--|--|---|------------------------------|
| premium  | premium  | special application  | special application   |                              |
| 15 A   | 10 A, 15 A, 20 A   | 5 A to 25 A  | 10 A, 16 A  | <b>Amp rating</b>            |
| two circuit, double break (2 CKT DB)   | SPDT   | SPDT   | SPDT, DPDT  | <b>Circuitry</b>             |
| 7.0 oz to 20 oz  | 8 oz to 14 oz  | –  | 4,17 N [15 oz] max.   | <b>Operating force</b>       |
| screw  | solder, screw, A2, T   | turret-solder, screw, flying leads   | quick connect   | <b>Terminations</b>          |
| pin plunger  | straight, roller, leaf   | rod  | bullet nose, concave, pull-to-cheat plungers  | <b>Actuators/levers</b>      |
| 480 Vac  | 125 Vac, 250 Vac, 480 Vac  | 125 Vac, 250 Vac, 480 Vac, 30 Vdc  | 125 Vac, 250 Vac, 277 Vac   | <b>Voltage</b>               |
| UL, CSA  | UL   | UL versions available  | UL, CSA   | <b>Approvals</b>             |
| -55°C to 85°C<br>[-67°F to 185°F]  | -55°C to 85°C<br>[-67°F to 185°F]  | -54°C to 121°C<br>[-65°F to 250°F]   | -37°C to 82°C<br>[-35°F to 180°F]   | <b>Operating temp. range</b> |
| silver   | silver   | silver   | silver  | <b>Contacts</b>              |
| general purpose phenolic   | general purpose phenolic   | die-cast stainless steel bracket, stainless steel or polyester rod   | polyester   | <b>Housing material</b>      |
| 25,4 mm H x 17,8 mm W x 50,8 mm L<br>[1.0 in H x 0.7 in W x 2.0 in L]  | 20,1 mm H x 35,1 mm W x 49,3 mm L<br>[0.79 in H x 1.38 in W x 1.94 in L]               | varies by model  | 48,8 mm H x 31,8 mm W x 14,0 mm D [1.93 in H x 1.25 in W x 0.55 in D]   | <b>Measurements</b>          |
| double-break circuitry; extended mechanical life; space between terminals reduces possibility of shorting; arc-resistant plastic | tandem switch assembly; field adjustable operating point on one or both basic switches | cuts power when door/drawer is opened; momentary, maintained, or pull-to-cheat actuation; one or two SPDT switches | easy installation; momentary, alternate push-pull, or pull-to-cheat operation; expected mechanical life: 1 million operations | <b>Features</b>              |



| 3PA1   | 3PA28   | 3PA2   | 5PA1   | 5PA2  | 5PA3  | Type                    |
|--|---|--|--|---|---|-------------------------|
| die-cast zinc enclosure (side mount)   | die-cast zinc enclosure (side mount)  | die-cast zinc enclosure (flange mount)   | plastic terminal enclosure   | plastic terminal enclosure  | plastic terminal enclosure  |                         |
| mounted from either side through 3,55 mm [0.140 in] dia. holes on 25,4 mm [1.0 in] centers | mounted from either side through 3,55 mm [0.140 in] dia. holes on 25,4 mm [1.0 in] centers. 1/2-14 NPSM internal thread conduit hub | switch secured in enclosure; two 4,37 mm [0.172 in] dia. holes in flange accept #8 screws for mounting on 41,3 mm [1.625 in] centers | used with solder terminal switches   | use with screw terminal switches                                      | used with either solder or screw terminal switches with auxiliary actuators assembled | <b>Description</b>      |
| die-cast zinc  | die-cast zinc   | die-cast zinc  | plastic  | plastic   | plastic   | <b>Housing material</b> |
| 74,8 mm W x 42,9 mm H x 25,4 mm D [2.95 in W x 1.69 in H x 1.00 in D]                      | 74,8 mm W x 42,9 mm H x 25,4 mm D [2.95 in W x 1.69 in H x 1.00 in D]   | 74,8 mm W x 42,9 mm H x 25,4 mm D [2.95 in W x 1.69 in H x 1.00 in D]  | 52,8 mm W x 16,1 mm H [2.08 in W x 0.64 in H]  | 52,8 mm W x 20,2 mm H x 21,0 mm D [2.08 in W x 0.80 in H x 0.83 in D] | 52,8 mm W x 20,2 mm H x 21,0 mm D [2.08 in W x 0.80 in H x 0.83 in D]                 | <b>Measurements</b>     |
| protects the switch from physical abuse and personnel from contact with exposed terminals  |   |  | easy to use; screw and solder terminal versions; protect personnel from contact with exposed terminals |   |   | <b>Features</b>         |



## MICRO SWITCH Basic Series | Sealed Switches

Sealed switches are snap-action precision switches enclosed within a corrosion-resistant housing that seals the switch contacts from contamination. These sealed switches have often been used in aerospace, ordnance, industrial, marine, and transportation applications.



| Series                      | SE/XE  | HM  |
|-----------------------------|--|---|
| Type                        | anodized aluminum  | stainless steel   |
| Sealing                     | MIL-PRF-8805, symbol 3, watertight   | MIL-PRF-8805, symbol 5, hermetic  |
| Operating temperature range | -53°C to 105°C [-65°F to 221°F]  | -65°C to 121°C [-85°F to 250°F]<br>high temp available: 500°F   |
| Actuators/levers            | auxiliary actuators available  | integral lever; aux. actuators: leaf, roller leaf, straight, roller lever   |
| Termination                 | solder, leadwire   | solder, leadwire  |
| Circuitry                   | SPDT   | SPDT  |
| Contacts                    | silver, gold, bifurcated gold  | silver, gold, bifurcated gold   |
| Amp rating                  | 0.5 A to 7 A   | 0.5 A to 3 A  |
| Approvals                   | CE, UL/CSA, MIL-PRF-8805 (selected listings)   | MIL-PRF-8805 (select listings qualified)  |
| Measurements                | SE: 19,05 mm H x 8,64 mm W x 22,35 mm L<br>[0.75 in H x 0.34 in W x 0.88 in L]<br>XE: 19,05 mm H x 8,13 mm W x 15,75 mm L<br>[0.75 in H x 0.32 in W x 0.62 in L] | 12,7 mm H x 6,35 mm W x 20,3 mm L<br>[0.5 in H x 0.25 in W x 0.8 in L]  |
| Features                    | watertight and military standard construction per MIL-PRF-8805; corrosion-resistant aluminum housing   | hermetically sealed per MIL-PRF-8805; high temperature construction; reduced sensitivity to changes in altitude or pressure |



| Series                | HS  |
|-----------------------|---|
| Type                  | stainless steel, phenolic   |
| Sealing               | MIL-PRF-8805, symbol 5, hermetic  |
| Operating temperature | -54°C to 121°C [-65°F to 250°F]   |
| Actuators/levers      | integral lever  |
| Termination           | screw, leadwire   |
| Circuitry             | SPDT  |
| Contacts              | silver  |
| Amp rating            | 1 A to 25 A   |
| Approvals             | UL, CSA, MIL-PRF-8805 (select listings qualified)   |
| Measurements          | 25,4 mm H x 17,8 mm W x 50,8 mm L [1.0 in H x 0.7 in W x 2.0 in L]  |
| Features              | hermetically sealed per MIL-PRF-8805; high temperature construction; reduced sensitivity to changes in altitude or pressure |



# MICRO SWITCH Pushbutton Switches | Lit and Unlit Pushbuttons

Lighted or unlighted, pushbuttons are designed to enhance manual operation with a flexible and attractive interface. Snap-in surface products are easy to apply, operate, and maintain.

Potential applications include control boards and panels found in industrial machinery, instrumentation, flight decks, and test equipment.



| Series          | PB  |
|-----------------|---|
| Panel area      | 20,32 mm x 35,56 mm [0.8 in x 1.4 in] max. (behind panel) |
| Display         | 8,1 mm [0.32 in] and other button sizes                   |
| Colored buttons | available   |
| Mounting        | threaded bushing  |
| Termination     | solder, H58, quick connect                                |
| Sealing         | panel-sealed and hermetic-sealed switches available       |
| Electrical      | 0.5 A to 5 A; 125/250 Vac, 28 Vdc                         |
| Approvals       | UL, CSA, some meet MIL-PRF-8805/23                        |
| Features        | up to four poles - double throw; compact size             |



| Series       | AML   | MML   |
|--------------|---|---|
| Panel area   | 20,5 mm [0.80 in] square;<br>20,5 mm x 30,5 mm [0.80 in x 1.20 in] rectangular                                  | 15 mm x 9,9 mm [0.59 in x 0.39 in] rectangular;<br>17,8 mm x 12,7 mm [0.70 in x 0.50 in] rectangular;<br>9,9 mm [0.39 in] square                                      |
| Display      | 15,0 mm [0.59 in] square;<br>15 mm x 25 mm [0.59 in x 0.99 in] buttons  | 13 mm x 6,6 mm [0.51 in x 0.26 in] rectangular;<br>6,8 mm [0.27 in] square  |
| Illumination | incandescent T-1-3/4 lamps – 6 V, 14 V, 28 V;<br>LEDs – 2 V, 4 V, 5 V, 10 V, 15 V;<br>neon lamps – 125 V, 250 V | T-1 – 5 V, 28 V;<br>incandescent T-1-3/4 LEDs – 2 V, 2.5 V, 3 V   |
| Behind panel | 43,1 mm [1.7 in]  | 17,0 mm [0.67 in]   |
| Mounting     | snap-in individual, strip, matrix, sub-panel, pcb   | snap-in individual, strip, sub-panel, pcb, bezel  |
| Termination  | solder, quick connect, pc board, push-on  | solder, quick connect, printed wiring board   |
| Sealing      | optional panel seal   | –   |
| Electrical   | electronic control: up to 3 A, 125 Vac  | silver contacts: up to 1 A, 125 Vac; 6 A @ 125 Vac, 250 Vac; 2 A @ 30 Vdc; 1 A @ 125 Vdc;<br>1/10 hp @ 125 Vac; gold contacts: up to 0.25 A, 30 Vdc; UL rating 0.10 A |
| Approvals    | UL, CSA, VDE, CE (selected products)  | UL, CSA   |
| Features     | silver or gold contacts; full guard bezel option;<br>lamp circuit independent of switch circuit                 | silver or gold contacts; pwb or panel-mount switches; multi-unit strip mounting available   |



# MICRO SWITCH Toggle & Rocker Switches | Sealed & Standard Toggles and P

Hermetic and environmentally sealed toggle switches offer enhanced reliability with MICRO SWITCH technology. Can be used in a variety of applications where a panel-mount switch with an environment-proof rating is needed, including industrial equipment, military and commercial aviation, agriculture, process control, and medical.



| Series                 | AT   | TS   | TW   |
|------------------------|--|--|--|
| <b>Type</b>            | stainless steel toggle                                 | stainless steel, phenolic toggle   | miniature stainless steel toggle   |
| <b>Sealing</b>         | MIL-PRF-8805/26/98                                     | –  | qualified to MIL-DTL-83781   |
| <b>Operating temp.</b> | various  | -54°C to 71°C [-65°F to 160°F]   | -65°C to 71°C [-85°F to 160°F]   |
| <b>Actuator/lever</b>  | standard, locking, tab, special design                 | standard   | standard, locking, special design, tab                                     |
| <b>Action</b>          | 2-position, momentary & main-tained                    | 2- or 3-position, momentary & maintained   | 2- or 3-position, momentary & maintained                                   |
| <b>Mounting</b>        | 15/32 in bushing, 1/4 in bushing, 3-hole, above panel  | 15/32 in bushing   | bushing 15/32 in or 1/4 in   |
| <b>Termination</b>     | solder, solder T2, screw, quick connect, leadwire, H58 | solder, screw, quick connect   | IWTS, solder, screw, quick connect, H58, T2                                |
| <b>Circuitry</b>       | SPDT, DPDT, DPNO, 3PDT, 4PDT, 6PDT, 8PDT, 10PDT        | SPDT, DPDT   | SPST, SPDT, DPST, DPDT   |
| <b>Contacts</b>        | silver, gold, bifurcated gold                          | silver tin oxide and indium oxide  | fine silver, gold-plated   |
| <b>Amp rating</b>      | 0.01 A to 5 A (resistive)                              | 0.4 A to 10 A @ 126 Vac to 277 Vac<br>0.4 A to 20 A @ 0.5 Vac to 125 Vac             | 0.1 A to 5.0 A @ 0.5 Vdc to 28 Vdc;<br>0.1 A to 5.0 A @ 0.5 Vac to 115 Vac |
| <b>Measurements</b>    | various  | various  | 49,78 mm H x 14,61 mm W x 14,61 mm D [1.96 in H x 0.575 in W x 0.575 in D] |
| <b>Approvals</b>       | qualified to MIL-PRF-8805/26/98                        | UL, CSA, CE  | UL, qualified to MIL-DTL-83781   |
| <b>Features</b>        | choice of sealed bushing; short behind panel depth     | optional step-case design provides added space between terminals to prevent shorting | saves space and weight; sealed bushing versions                            |



| Series                       | AML   |
|------------------------------|---|
| <b>Housing type</b>          | non-lighted, rectangle; 1 lamp circuit, rectangle; 2 lamp circuits, rectangle   |
| <b>Circuitry</b>             | SPST, SPDT, DPST, DPST, 4PDT  |
| <b>Action</b>                | 2 position, 3 position  |
| <b>Mounting</b>              | snap-in panel   |
| <b>Termination</b>           | solder, quick connect, printed circuit, push-on   |
| <b>Ampere/voltage range</b>  | 0.4 A to 2 A @ 0.5 Vdc to 30 Vdc; 0.4 A to 3 A @ 0.5 Vac to 125 Vac; 0.4 A to 2 A @ 0.5 Vac to 250 Vac                    |
| <b>Light (if applicable)</b> | no lamp installed; incandescent 6 V, 14 V, 28 V; neon   |
| <b>LED/neon color</b>        | red, yellow, green  |
| <b>Measurements</b>          | various   |
| <b>Approvals</b>             | –   |
| <b>Features</b>              | silver and gold contacts; available with or without diode protection for LEDs; lamp circuit independent of switch circuit |







| ET  | MT  | NT  | TL  |                        |
|---|---|---|---|------------------------|
| magnetically held toggle  | miniature toggle  | commercial-grade toggle   | military-grade toggle   | <b>Type</b>            |
| most listings qualified to MIL-S-5594   | IEC 60529-2001, IP67, IP68  | IP67/68; NEMA 3, 3R, 4 and 13   | qualified to MIL-DTL-3950   | <b>Sealing</b>         |
| -65°C to 71°C [-85°F to 160°F]  | -40°C to 85°C [-40°F to 185°F]  | -40°C to 71°C [-40°F to 160°F]  | -65°C to 71°C [-85°F to 160°F]  | <b>Operating temp.</b> |
| standard, pull/push-to-unlock, tab  | standard  | standard, locking, special design, tab                                  | standard, special design, tab, paddle, none                             | <b>Actuator/lever</b>  |
| 2- or 3-position, momentary & maintained  | 2- or 3-position, momentary & maintained  | 2- or 3-position, momentary & maintained                                | 2- or 3-position, momentary & maintained                                | <b>Action</b>          |
| bushing 15/32 in  | bushing 15/32 in  | bushing 15/32 in  | bushing 15/32 in  | <b>Mounting</b>        |
| screw, leadwire, turret   | solder  | solder, screw, quick connect  | IWTS, solder, screw, quick connect, leadwire                            | <b>Termination</b>     |
| SPDT, DPDT, 4PDT  | SPST, SPDT, DPST, DPDT  | SPST, SPDT, DPST, DPDT, 4PST, 4PDT                                      | SPST, SPDT, DPST, DPDT, 3PST, 3PDT, 4PST, 4PDT                          | <b>Circuitry</b>       |
| fine silver   | silver, gold-plated   | silver alloy, gold-plated   | silver alloy, gold-plated   | <b>Contacts</b>        |
| 7 A max. (resistive)  | 5 A, 28 Vdc (silver contacts)<br>100 mA, 28 Vdc (gold-plated contacts)                          | up to 20 A (resistive)  | up to 20 A (resistive)  | <b>Amp rating</b>      |
| 51,56 mm H x 25,4 mm W x 25,4 mm D<br>[2.03 in H x 1.0 in W x 1.0 in D]           | 43,1 mm H x 19,05 mm W x 14,55 mm D<br>[1.697 in H x 0.75 in W x 0.573 in D]                    | 58,4 mm H x 33,5 mm W x 22,6 mm D<br>[2.3 in H x 1.32 in W x 0.89 in D] | 58,4 mm H x 33,5 mm W x 22,6 mm D<br>[2.3 in H x 1.32 in W x 0.89 in D] | <b>Measurements</b>    |
| qualified to MIL-S-5594   | UL, CE  | UL, CSA, CE   | UL, CSA, CE, qualified to MIL-DTL-3950                                  | <b>Approvals</b>       |
| holding coil replaces mechanical holding mechanisms to maintain toggle in operate | high seal rating to protect from water ingress, 60k life cycle offers enhanced application life | completely sealed switching chamber; enhanced tactile feedback          | environment-proof sealing; qualified to MIL-DTL-3950                    | <b>Features</b>        |



| TP  |
|---|
| non-lighted, rectangle  |
| SPST, SPDT, DPDT, 4PDT  |
| 2 position, 3 position  |
| flush mount; above panel mount  |
| screw   |
| silver alloy  |
| -   |
| -   |
| various   |
| UL recognized, CSA certified, CE approved   |
| 2- or- 3-position operating action; various button colors; dust and splash-proof sealed; silver or gold contacts available; can be provided with or without buttons |



## 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 acknowledgment 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.**

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