

# Basic Switches

## Miniature and Subminiature

# Product Selection Guide



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|                                      | SUBMINIATURE                               |                        |                           |                          |                          | MINIATURE                |                       |
|--------------------------------------|--|------------------------|---------------------------|--------------------------|--------------------------|--------------------------|-----------------------|
|                                      | US   | UX                     | UM                        | SX                       | SM                       | V3                       | V7                    |
| <b>PHYSICAL DESCRIPTION</b>          |  |                        |                           |                          |                          |                          |                       |
| Package Size (inches)                | .177H<br>.098W<br>.295L                    | .197H<br>.236W<br>.50L | .43H<br>.25W<br>.78L      | .35H<br>.20W<br>.50L     | .49H<br>.25W<br>.78L     | .63H<br>.40W<br>1.09L    | .63H<br>.40W<br>1.09L |
| Actuators                            | Pin or integral levers                     | Pin or levers          | Pin or levers             | Pin, leaf or levers      | Pin, leaf or levers      | Pin, leaf or levers      | Pin, leaf or levers   |
| Mounting Centers (inches)            | .158                                       | .256                   | .38                       | .19                      | .38                      | .88                      | .88                   |
| <b>CHARACTERISTICS</b>               |  |                        |                           |                          |                          |                          |                       |
| Electrical Data (Maximum available)  | .5A-30 VDC                                 | 3A-125 VAC             | 5A-30 VDC, 250 VAC        | 7A-28 VDC, 250 VAC       | 11A-125, 250 VAC         | 25A 125, 250 VAC         | 15.1A 125, 250 VAC    |
| Low Energy (Gold) Circuitry          | .1A SPDT                                   | .1A SPDT               | .1A SPDT                  | 2 mA SPDT                | .1A SPDT                 | 1A SPDT                  | .1A SPDT              |
| Minimum Operating Force              | 25g.                                       | 25g.                   | 8g.                       | 2g.                      | 6g.                      | 15g.                     | 15g.                  |
| Minimum Differential Travel (inches) | .004                                       | .005                   | .004                      | .001 max.                | .001 max.                | .002 max.                | .002 max.             |
| <b>ENVIRONMENT</b>                   |  |                        |                           |                          |                          |                          |                       |
| Std. Temperature Range (°F)          | 176°<br>Hi Temp.<br>Upper<br>Lower<br>-13° | 185°<br>-13°           | 185°<br>-13°              | 400° F<br>250°<br>-65°   | 400° F<br>180°<br>-65°   | 400° F<br>180°<br>-65°   | 180°<br>-40°          |
| Housing Material                     | Thermoplastic                              | Thermoplastic          | Thermoplastic             | General purpose phenolic | General purpose phenolic | General purpose phenolic | Polyester             |
| <b>APPROVAL</b>                      |  |                        |                           |                          |                          |                          |                       |
| Agency Recognized Agency Certified   |  | UL<br>CSA              | VDE<br>UL<br>CSA<br>SEMKO | UL<br>CSA<br>MIL-S-8805  | UL<br>CSA<br>MIL-S-8805  | UL<br>CSA<br>MIL-S-8805  | UL<br>CSA<br>VDE      |

\* Other temperature ranges available

# Basic Switches

## Standard



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Selection

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| .95H<br>.69W<br>1.94L<br><br>Pin, integral or auxiliary leaf and lever, overtravel plunger | .95H<br>.69W<br>1.94L<br><br>Pin, integral or auxiliary leaf and lever, overtravel plunger | 1.28H<br>.69W<br>1.94L<br><br>Pin, integral or auxiliary lever | 1.30H<br>.69W<br>1.94L<br><br>Pin, integral or auxiliary leaf or lever | 1.20H<br>.68W<br>2.50L<br><br>Pin                | .93<br>1.38W<br>1.94L<br><br>Integral leaf or lever  |
| 1  | 1  | 1  | 1  | 2.13   | 1  |
| 15A-22A<br>125, 250,<br>480 VAC<br>½ A 125VDC<br>SPDT<br>Specials                          | 20A-25A<br>125, 250,<br>480 VAC<br><br>SPDT  | 10A-<br>125,<br>250 VAC<br><br>DPDT                            | 10A-<br>125 VAC<br>or VDC<br><br>SPDT                                  | 15A-125,<br>240, 480,<br>600 VAC<br><br>2 CKT DB | 15A-<br>125, 250,<br>480 VAC<br><br>SPDT<br>2 CKT DB |
| 1 oz.<br>.0002   | 2.5 oz.<br>.002  | 3.5 oz.<br>.020  | 2 oz.<br>.004  | 7 oz.<br>.015                                    | 8 oz.<br>.109  |
| 180°<br>-65°<br><br>Neoprene or Elastomer sealed plunger<br><br>General purpose phenolic   | 180°<br>-65°<br><br>General purpose phenolic   | 180°<br>—<br><br>General purpose phenolic                      | 180°<br>—<br><br>Arc resistant melamine                                | 180°<br>—<br><br>General purpose phenolic        | 180°<br>—<br><br>General purpose phenolic            |
| UL<br>CSA<br>MIL-S-8805  | UL<br>CSA<br>MIL-S-8805  | UL<br>CSA<br>MIL-S-8805  | UL   | UL<br>CSA  | UL   |

# Basic Switches

## Sealed and High-Temperature

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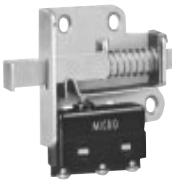
**HT**  
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|  |  |                                |                                |   |                         |                          |
|--|--|--------------------------------|--------------------------------|---|-------------------------|--------------------------|
| <b>PHYSICAL DESCRIPTION</b>            |  |                                |                                |   |                         |                          |
| Package Size (inches)                  |  | .75H<br>.32W<br>.62L           | .75H<br>.34W<br>.88L           | .72H<br>.25W<br>.79L                    | 1.18H<br>.67W<br>1.96L  | 1.25H<br>.70W<br>1.96L   |
| Actuators                              |  | Pin, auxiliary leaf            | Pin, auxiliary leaf or lever   | Integral lever, auxiliary leaf or lever | Integral lever          | Pin, over-travel plunger |
| Mounting Centers (inches)              |  | .19                            | .38                            | .37                                     | 1                       | 1                        |
| <b>CHARACTERISTICS</b>                 |  |                                |                                |   |                         |                          |
| Electrical Data<br>(Maximum available) |  | 7A-<br>28 VDC,<br>115, 250 VAC | 5A-<br>28 VDC,<br>125, 250 VAC | 4A-<br>28 VDC<br>115 VAC, 600 Hz        | 25A-<br>28 VDC          | 3A-<br>125, 250 VAC      |
| Circuitry                              |  | SPST<br>SPDT                   | SPST<br>SPDT                   | SPDT                                    | SPDT                    | SPDT                     |
| Minimum Operating Force                |  | 4 oz.                          | 4 oz.                          | 1.5 oz.                                 | 4 oz.                   | 10 oz.                   |
| Minimum Differential Travel (inches)   |  | .005 max.                      | .004 max.                      | .006 max.                               | .020                    |                          |
| <b>ENVIRONMENT</b>                     |  |                                |                                |   |                         |                          |
| Temperature Range (°F)*                |  | Upper<br>230°<br>Lower<br>—    | 221°<br>—                      | 250°<br>-85°                            | 180°<br>-67°            | 1000°<br>—               |
| Sealing                                |  | Environment                    | Environment                    | Hermetic                                | Hermetic                |                          |
| Housing Material                       |  | Aluminum                       | Aluminum                       | Stainless steel                         | Monel                   | Stainless steel or monel |
| <b>APPROVAL</b>                        |  |                                |                                |   |                         |                          |
| Agency Recognized<br>Agency Certified  |  | UL<br>CSA<br>MIL-S-8805        | UL<br>CSA<br>MIL-S-8805        | MIL-S-8805                              | UL<br>CSA<br>MIL-S-8805 | UL<br>CSA                |

\*Other temperature ranges available.

# Basic Switches

## Door



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Selection

|   |  |                        |
|---|--|------------------------|
| Varied  | 1.25 or 1.6H<br>.68W<br>1.95L                    | 1.93H<br>.54W<br>1.58L |
| Rod   | Plunger  | Plunger                |
| Varied  | Snap-in mount                                    | Snap-in mount          |
| 5A-15A<br>125, 250,<br>480 VAC                            | 10A, 125, 250, 277 VAC<br>16A, 125, 250, 277 VAC | 16A, 125<br>250 VAC    |
| 2 SPDT<br>4 SPDT  | SPDT<br>DPDT                                     | 1, 2 or 3<br>CKT       |
| —<br>—  | 15 oz.<br>—                                      | 15 oz.                 |
| 180°<br>-65°  | 180°<br>-35°                                     | 185°<br>-40°           |
| Version with SE basic switch                              | —  | —                      |
| Stainless steel bracket, stainless steel or polyester rod | Polyester  | Polyester              |
| Some are MIL-qualified                                    | UL<br>CSA  | UL<br>CSA              |