## Distinctive Characteristics

Compact front panel design with 9 mm square or round bezel.
Rear panel threaded mounting. Behind panel depth of less than one inch. 8 mm body diameter fits common size panel cutout.

Latchdown feature gives indication of circuit status. Audible and tactile feedback with smooth and responsive operation.

Dual, sliding contacts with self-cleaning action provide contact stability, high reliability, and increased operating life.

Solder lug terminals have spacing of $100^{\prime \prime}(2.54 \mathrm{~mm})$ for choice of mounting.

Longer normally closed terminal facilitates wiring and soldering.

Molded-in terminals lock out flux, dust, and other contaminants.

Illuminated models available and shown in the Illuminated Pushbutton section.


Matching indicators available and shown at the end of Section M.

Actual Size


# General Specifications 

## Electrical Capacity (Resistive Load) <br> Power Level (code W): 0.1 A maximum @ 30 V AC/DC

## Other Ratings

Contact Resistance: 50 milliohms maximum
Insulation Resistance: 100 megohms minimum @ 500V DC
Dielectric Strength: 500 V AC minimum for 1 minute minimum
Mechanical Life: 100,000 operations minimum
Electrical Life: $\quad 50,000$ operations minimum
Nominal Operating Force:
3.43 N

Contact Timing: Nonshorting (break before make)
Travel: Pretravel .087" (2.2mm); Overtravel .031" (0.8mm); Total Travel . $118^{\prime \prime \prime}(3.0 \mathrm{~mm})$

## Materials \& Finishes

Housing: Glass fiber reinforced polyamide
Base: Glass fiber reinforced polyamide
Movable Contact: Phosphor bronze with silver plating
Stationary Contacts: Phosphor bronze with silver plating
Terminals: Phosphor bronze with silver plating

## Environmental Data

Operating Temp Range:
Humidity:
$-25^{\circ} \mathrm{C}$ through $+70^{\circ} \mathrm{C}\left(-13^{\circ} \mathrm{F}\right.$ through $\left.+158^{\circ} \mathrm{F}\right)$
90 ~ $95 \%$ humidity for 96 hours @ $40^{\circ} \mathrm{C}\left(104^{\circ} \mathrm{F}\right)$
Vibration: $\quad 10 \sim 55 \mathrm{~Hz}$ with peak-to-peak amplitude of 1.5 mm traversing the frequency range \& returning in 1 minute; 3 right angled directions for 2 hours
Shock: $50 \mathrm{G}\left(490 \mathrm{~m} / \mathrm{s}^{2}\right)$ acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

## Installation

| Mounting Torque: | $0.49 \mathrm{Nm}(4.34 \mathrm{lb} \cdot \mathrm{in})$ maximum for round mounting nut |
| ---: | :--- |
| Cap Installation Force: | $9.8 \mathrm{~N}(2.2 \mathrm{lbf})$ maximum downward force on cap |
| Soldering Time \& Temperature: | Manual Soldering: See Profile A in Supplement section. |

## Standards \& Certifications

UL \& C-UL All models recognized at $0.1 \mathrm{~A} @ 30 \mathrm{~V}$ AC/DC;
M
Recognized: UL File No. WOYR2.E44145;
add " $/ \mathrm{U}$ " to end of part number to order UL mark on switch.
C-UL File No. WOYR8.E44145;
add "/C-UL" to end of part number to order C-UL mark on switch.

## TYPICAL SWITCH ORDERING EXAMPLE



## DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

HB15SKW01-A


| POLES \& CIRCUITS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Plunger Position ( ) = Momentary |  | Connected Terminals |  | Throw \& Schematic |  |
| Pole | Model | Normal | Down | Normal $\square$ | Down | Note | Switch is marked with NO, NC, C, L. |
| SP | $\begin{array}{r} \text { HB15 } \\ \text { * HB16 } \end{array}$ | $\begin{aligned} & \mathrm{ON} \\ & \mathrm{ON} \end{aligned}$ | (ON) ON | 1-3 | 1-2 |  | $\text { SPDT } \underbrace{\text { ! (COM) }}_{\bullet 2}$ |

[^0]
## SHAPES \& PANEL CUTOUT



The bezel is an integral part of the switch body.

Recommended Panel Thickness: . 020 ~ . 197" ( 0.5 ~ 5.0 mm )


Socket wrench AT1 10 may be used for mounting. Overtightening the mounting nut AT073 may damage the switch housing.

## K Housing available in black only.

## CONTACT MATERIALS, RATINGS, \& TERMINALS



Power Level

## PCB Mounting

Solder lug terminals are spaced $.100^{\prime \prime} \times .200^{\prime \prime}(2.54 \mathrm{~mm} \times 5.08 \mathrm{~mm})$. This enables PCB mounting which can be accomplished by elongating PC board holes to $.080^{\prime \prime}$ ( 2.03 mm ).

## CAP TYPES \& COLORS



## TYPICAL SWITCH DIMENSIONS

## Square



HB15SKW01-C

## Round



HB16CKWOI-C

## Single Pole



## Single Pole





[^0]:    *When in latchdown position for the alternate circuit, cap position is $.051^{\prime \prime}(1.3 \mathrm{~mm})$ above the built-in bezel.

