

General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 3VA maximum @ 28V DC maximum
(Applicable Range 10mA ~ 125mA @ 0.1V ~ 28V)

Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

Note: See Supplement for further explanation of operating range.

Other Ratings

Contact Resistance: 100 milliohms maximum

Insulation Resistance: 100 megohms minimum @ 100V DC

Dielectric Strength: 250V AC minimum for 1 minute minimum between contacts & between contacts & case

Mechanical Life: 500,000 operations minimum

Electrical Life: 500,000 operations minimum

Nominal Operating Force: 1.60N

Total Travel: .008" (0.2mm)

Materials & Finishes

Actuator: Glass fiber reinforced polyamide (UL94V-0)

Case: Stainless steel

Base: Glass fiber reinforced polyamide (UL94V-0)

Movable Contacts: Stainless steel with silver or gold plating

Stationary Contacts: Brass with silver or gold plating

Terminals: Brass with silver or gold plating

Environmental Data

Operating Temperature Range: -20°C through +70°C (-4°F through +158°F)

Humidity: 90 ~ 95% humidity for 240 hours @ 40°C (104°F)

Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours

Shock: 100G (981m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Processing

Soldering: Reflow Soldering Recommended. See Profile A in Supplement section.

Manual Soldering: See Profile A in Supplement section.

Cleaning: These devices are not process sealed. Hand clean locally using alcohol based solution.

Standards & Certifications

Flammability Standards:

UL94V-0 actuator and base

These switches are designed for use in a low-voltage, low-current circuit.

When used as intended, the results do not produce hazardous energy.

Distinctive Characteristics

.244" (6.2mm) square body allows compact mounting.

Heat resistant resin body meets lead-free solder processing requirements and UL flammability rating of 94V-0.

Stick-tube and tape-reel packaging allow rapid automated placement of devices.

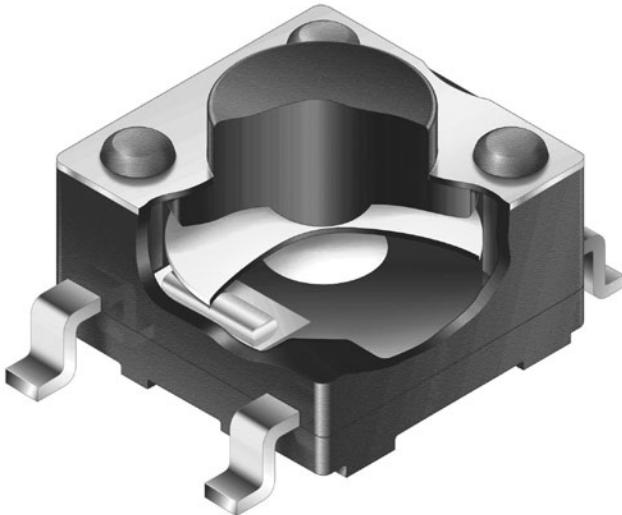
Gold plated contacts available for very low voltage/current applications offer advantages of little or no oxidization or sulfurization and stable contact resistance.

Gull-winged terminals ensure mechanical stability during soldering and simplified solder joint inspection.

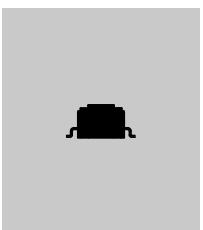
Insert molded terminals lock out flux, solvents, and other contaminants and allow automated soldering.

Tape-reel packaging meets EIA-481-D Standard.

Coplanarity: all considered surfaces must lie between two parallel planes that are a maximum distance apart of .0039" (0.10mm). (Additional coplanarity details in Terms and Acronyms in the Supplement section.)



Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

HP03

15A

F

K

P4

R

Pole & Circuit

15A SPST OFF (ON)

() = Momentary
Normally Open Contacts

Actuator Color

K Black

Packaging

S Stick-Tube
100 Pieces/
Tube

R Tape-Reel
1,000 Pieces/
Reel

Actuator

F Flat Button

Terminals & Contacts

P2 Gull Wing for Upright Mount;
Silver Contacts Rated 3VA max. DC

P4 Gull Wing for Upright Mount;
Gold Contacts Rated 0.4VA max. @
28V AC/DC max.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

HP0315AFKP4-R



POLE & CIRCUIT

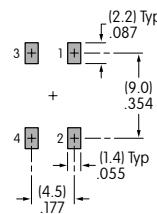
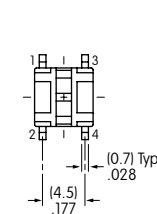
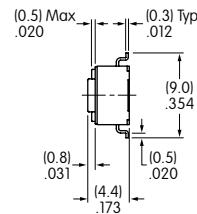
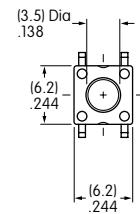
		Actuator Position () = Momentary		Switch Throw & Schematic	Note: Terminal numbers are not actually on the switch.	
Pole	Model	Normal	Down	SPST		
SP	HP0315A	OFF	(ON)			

TYPICAL SWITCH DIMENSIONS

Gull-winged



HP0315AFKP4



PACKAGING



Stick-Tube

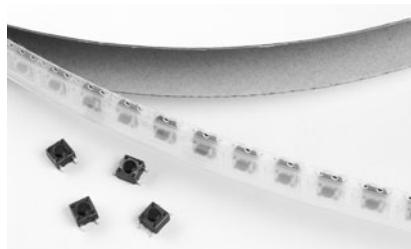
Switches must be ordered in 100-piece increments when stick-tube packaging is selected.



Tape-Reel

Switches must be ordered in 1,000-piece increments when tape-reel packaging is selected.

Packaging meets EIA-481-D Standard.



Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

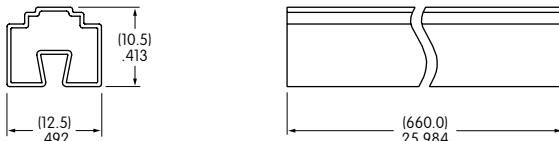
Indicators

Accessories

Supplement

Each stick-tube contains 100 switches

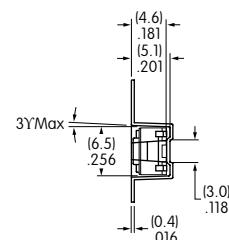
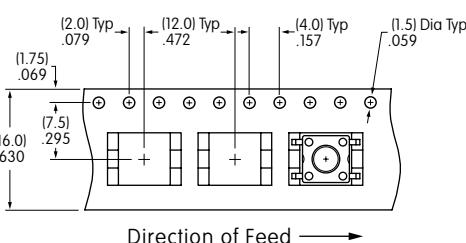
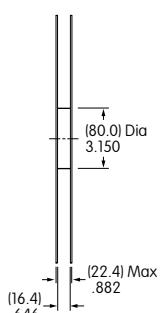
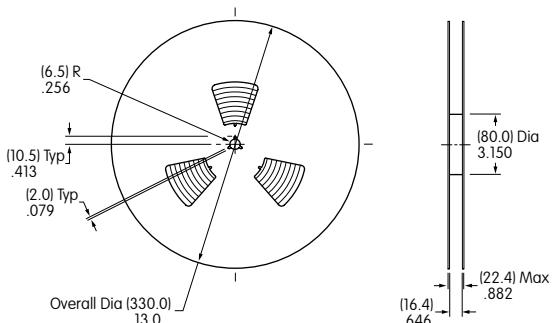
Stick-Tube Dimensions



Tape-Reel Dimensions

Each tape-reel of 1,100 pockets contains 1,000 switches.

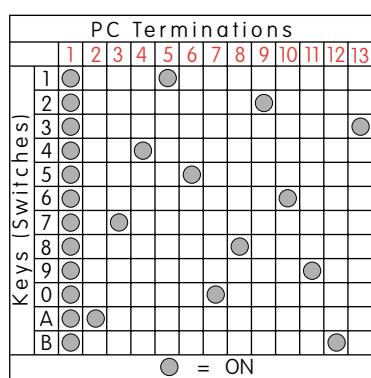
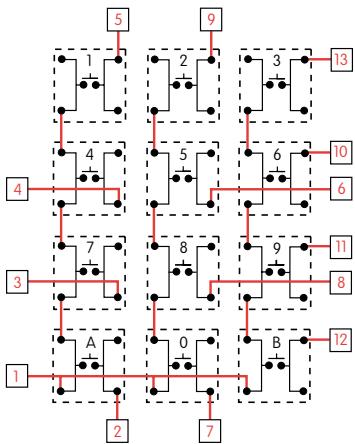
Minimum Leader Length: 15.748" (400mm). Minimum Trailer Length: 6.299" (160mm).



KEYBOARD MATRIX

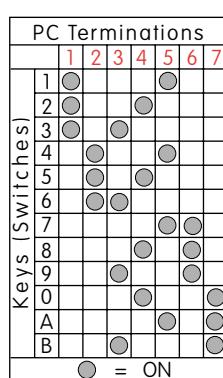
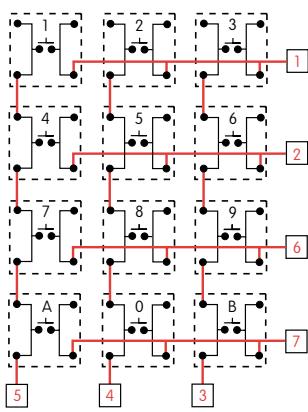
Common Bus Matrix

These single pole, single throw switches can be used in a keyboard matrix and, using strapped terminals, achieve a common bus electrical configuration on a single-sided PC board.



X-Y Matrix

These single pole, single throw switches can be arranged on a single-sided PC board matrix with strapped terminals to achieve an X-Y type electrical interconnection.



Red = PCB Trace Black = Switch Circuit

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

NKK Switches:

[HP0315AFKP2-S](#) [HP0315AFKP4-S](#) [HP0315AFKP2-R](#) [HP0315AFKP4-R](#)