

General Specifications

Electrical Capacity (Resistive Load)

Logic Level: 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Note: Find additional explanation of operating range in Supplement section.

Other Ratings

Contact Resistance: 80 milliohms maximum
Insulation Resistance: 500 megohms minimum @ 500V DC
Dielectric Strength: 500V AC minimum for 1 minute minimum
Mechanical Life: 50,000 operations minimum
Electrical Life: 50,000 operations minimum
Nominal Operating Force: 1.70N
Travel: Pretravel .035" (0.9mm); Overtravel .008" (0.2mm); Total Travel .043" (1.1mm)

Materials & Finishes

Actuator: Polyacetal
Case: Glass fiber reinforced polyamide
Sealing Rings: Nitrile butadiene rubber
Movable Contacts: Phosphor bronze with gold plating
Stationary Contacts: Phosphor bronze with gold plating
Base: Glass fiber reinforced polyamide
Mounting Bracket: Phosphor bronze with tin plating
Terminals: Phosphor bronze with gold plating

Environmental Data

Operating Temp Range: -30°C through +85°C (-22°F through +185°F)
Humidity: 90 ~ 95% humidity for 96 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: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

Cap Installation Force: 39.1N (8.8 lbf) maximum downward force on actuator

PCB Processing

Soldering: Wave Soldering Recommended: See Profile A in Supplement section.
Manual Soldering: See Profile A in Supplement section.
Cleaning: Automated cleaning. See Cleaning specifications in Supplement section.

Standards & Certifications

The GB Series pushbuttons have not been tested for UL recognition or CSA certification. These switches are designed for use in a low-voltage, low-current, logic-level circuit. When used as intended in a logic-level circuit, the results do not produce hazardous energy.

Distinctive Characteristics

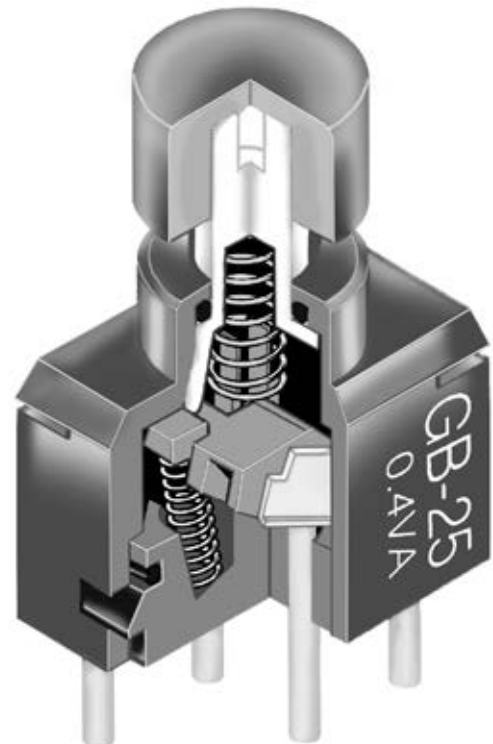
Ultra-miniature size allows high density mounting, and extremely light weight of 0.25 gram makes these switches ideal for handheld equipment.

Totally sealed body construction prevents contact contamination and allows time- and money-saving automated soldering and cleaning.

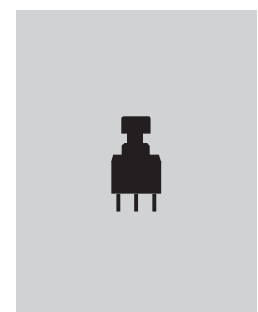
Award-winning STC contact mechanism with benefits unavailable in conventional mechanisms: smoother, positive detent actuation, increased contact stability and unparalleled logic-level reliability. (Additional STC details in Terms & Acronyms; see Supplement section.)

.100" x .100" (2.54mm x 2.54mm) terminal spacing conforms to standard PC board grid-spacing. Round terminals facilitate easier through-hole mounting on PC boards.

Matching indicators available.



Actual Size



TYPICAL SWITCH ORDERING EXAMPLE

GB **1** **5** **A** **H** — **X** **C**

Poles	
1	SPDT
2	DPDT

Circuits		
5	ON	(ON)
() = Momentary		

PC Terminals	
P	Straight
H	Right Angle
V	Vertical

Cap Colors	
A	Black
B	White
C	Red

Plunger	
A	.130" (3.3mm) Long

Slip-on Cap	
X	.157" (4.0mm) Diameter

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

GB15AH-XC

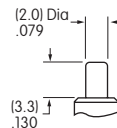
.130" (3.3mm) Long Plunger with
 .157" (4.0mm) Diameter Red Cap —  SPDT
 ON-(ON) Circuit — Right Angle PC Terminals

POLES & CIRCUITS

		Plunger Position () = Momentary		Connected Terminals		Throw & Schematics
Pole	Model	Normal 	Down 	Normal 	Down 	Note: Terminal numbers are not actually on the switch. SPDT  DPDT 
SP	GB15	ON	(ON)	5-6	5-4	
DP	GB25	ON	(ON)	5-6 2-3	5-4 2-1	

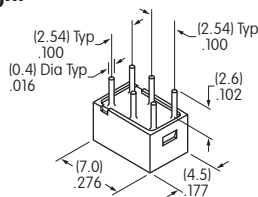
PLUNGER

A .130" (3.3mm) Long Plunger

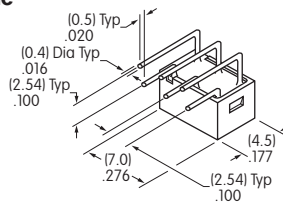


PC TERMINALS

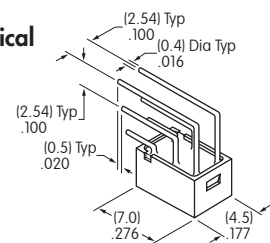
P Straight



H Right Angle



V Vertical



SLIP-ON CAP & COLORS

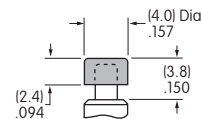
X **AT4063**
.157" (4.0mm) Diameter Slip-on Cap

Material: Polyamide

Finish: Glossy



Actual Size



Cap Colors Available:



Black



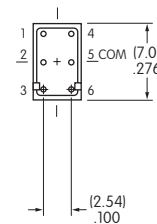
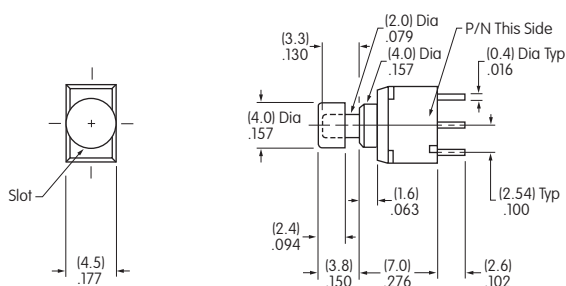
White



Red

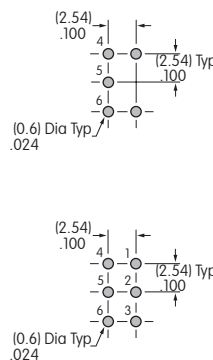
TYPICAL SWITCH DIMENSIONS

Single & Double Pole



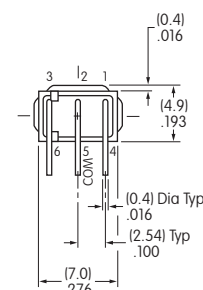
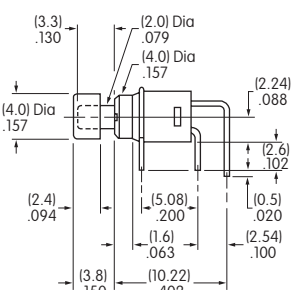
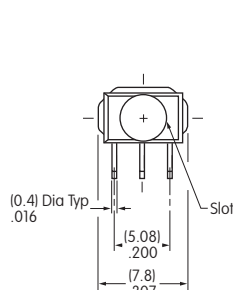
On single pole switches terminals 1 & 3 are support pins.

Straight PC

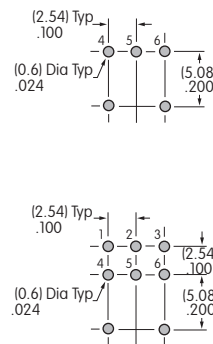


GB25AP-XC

Single & Double Pole

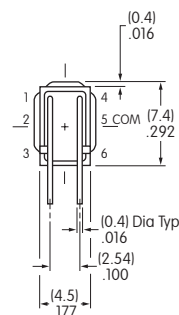
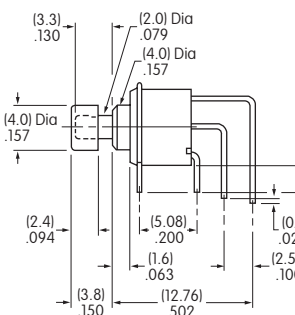
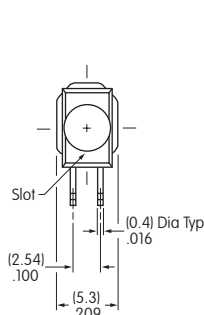


Right Angle PC

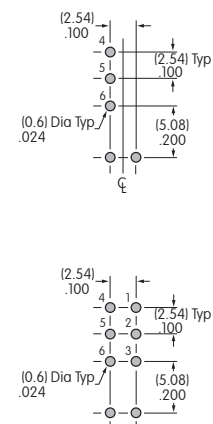


GB25AH-XC

Single & Double Pole



Vertical PC



GB25AV-XC

Mouser Electronics

Authorized Distributor

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

NKK Switches:

[GB15AH](#) [GB25AP](#) [GB25AP-XA](#) [GB25AP-XC](#) [GB15AV-XG](#) [GB15AP-XA](#) [GB15AP-XB](#) [GB25AP-XB](#) [GB25AV-XA](#)
[GB25AH-XB](#) [GB25AH-XC](#) [GB15AV-XB](#) [GB15AH-XC](#) [GB15AH-XA](#) [GB25AH](#) [GB15AP](#) [GB15AV-XA](#) [GB15AH-XB](#)
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