Series GB2

Ultra-Thin Pushbuttons

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: 1.0N
Travel: Pretravel .020" (0.5mm); Overtravel .023 (0.6mm); Total Travel .043" (1.1mm)

Materials & Finishes

Actuator: Glass fiber reinforced polyamide (UL94V-0)
Case: Glass fiber reinforced polyamide (UL94V-0)
Movable Contacts: Phosphor bronze with gold plating
Stationary Contacts: Brass with gold plating
Base: Glass fiber reinforced polyamide (UL94V-0)
Mounting Bracket: Phosphor bronze with tin plating
Terminals: Brass with gold plating

Environmental Data

Operating Temperature Range: -25°C through +70°C (-13°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: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

PCB Processing

Soldering: Wave 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, case, & base
The GB2 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

Unique, off-center actuator allows high density setup and easy actuation while avoiding accidental operation in compact environments.

Side-by-side, block mounting can be achieved by use of bracket AT546 on straight PC mounting types.

Off-Momentary On Circuit.

Black, white, and red snap-on caps available.

Extremely thin size allows high density PCB mounting and makes these switches ideal for handheld equipment.

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.)

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

.100” x .100” (2.54mm x 2.54mm) terminal spacing conforms to standard PC board grid spacing for straight and angle mounting.
Series GB2  
Ultra-Thin Pushbuttons

**TYPICAL SWITCH ORDERING EXAMPLE**

GB2 1 5 A B

- **Pole**
  1 SPST

- **Circuit**
  5 OFF (ON)

- **Plunger**
  A Standard

- **PC Terminals**
  P Straight
  B Straight with Bracket
  H Right Angle 1 Switch
  2H Right Angle 2 Switches

- **Cap Colors**
  With P, B, or H Terminals for Single Switches
  - A Black
  - B White
  - C Red
  With Terminal Code 2H for 2 Right Angle Switches
  - Upper
    - A Black
    - B White
    - C Red
  - * Lower
    - A A
    - B B
    - C C

* Nearest to PC Board

**DESCRIPTION FOR TYPICAL ORDERING EXAMPLE**

GB215AB

- Standard Plunger
- SPST OFF-(ON) Circuit
- Straight PC Terminals with Bracket

**POLE & CIRCUIT**

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Normal</th>
<th>Down</th>
<th>Connected Terminals</th>
<th>Throw &amp; Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>GB215</td>
<td>OFF</td>
<td>(ON)</td>
<td>OPEN 1-2</td>
<td>SPST 1-2</td>
</tr>
</tbody>
</table>

Note: Terminal numbers are not actually on the switch.

**TYPICAL SWITCH DIMENSIONS**

* Straight PC

GB215AP

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**SUPPLEMENT**

- Switches
- Accessories
- Pushbuttons
- Rockers
- Keylocks
- Rotaries
- Slides
- Tactiles
- Tilts
- Touch
- Indicators

www.nkkswitches.com
Ultra-Thin Pushbuttons

Series GB2

TYPICAL SWITCH DIMENSIONS

Single Pole

Straight PC with Bracket

Single Pole with 1 Switch

Right Angle PC

Single Pole with 2 Switches

Right Angle PC

SNAP-ON CAP & MOUNTING BRACKET

A  AT4137 Rectangular Snap-on Cap
Black

B  AT4137 Rectangular Snap-on Cap
White

C  AT4137 Rectangular Snap-on Cap
Red

Material: PBT
Finish: Glossy

AT546
Mounting Bracket
for Block Mounting

Material: Phosphor Bronze
with Tin Plating

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