**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:** 100,000 operations minimum for On-None-On & On-Off-On
  - 50,000 operations minimum for other circuits
- **Electrical Life:** 100,000 operations minimum for On-None-On & On-Off-On
  - 50,000 operations minimum for other circuits
- **Nominal Operating Force:** 0.93N for momentary & 1.20N for maintained
- **Angle of Throw:** 28°

### Materials & Finishes

- **Actuator:** Glass fiber reinforced polyamide
- **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
- **Terminals:** Phosphor bronze with tin plating
- **Support Bracket:** Phosphor bronze with tin plating

### Environmental Data

- **Operating Temperature Range:** -25°C through +85°C (–13°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)

### PCB Processing

- **Soldering:** Wave Soldering recommended. See Profile A in Supplement section.
- **Cleaning:** Automated cleaning. See Cleaning specifications in Supplement section.

### Standards & Certifications

The G Series toggles 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.

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

Award-winning STC contact mechanism with benefits unavailable in conventional mechanisms: smooth, 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.
## TYPICAL SWITCH ORDERING EXAMPLE

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Toggle Position</th>
<th>Connected Terminals</th>
<th>Throw &amp; Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pole</td>
<td>Model</td>
<td>Up (ON)</td>
<td>Center (NONE)</td>
<td>Down (ON)</td>
</tr>
<tr>
<td>SP</td>
<td>G12</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>G13</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>G15</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>G18</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>G19</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td>DP</td>
<td>G22</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>G23</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
<tr>
<td></td>
<td>G25</td>
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<tr>
<td></td>
<td>G28</td>
<td>OFF</td>
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<td>ON</td>
</tr>
<tr>
<td></td>
<td>G29</td>
<td>OFF</td>
<td>OFF</td>
<td>ON</td>
</tr>
</tbody>
</table>

Note: Terminal numbers are not actually on the switch.

### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**G13AH**

SPDT ON-OFF-ON Circuit

Right Angle PC Terminals

### POLES & CIRCUITS

- **SPDT**
- 1-2 OPEN
- 3-4 SP
- 5-6 OPEN
- 7-8 (ON)
- 9-10 (ON)

### ACTUATOR

- **A** .150” (3.8mm) Column Toggle
**PC TERMINALS**

- **Straight**
- **Right Angle**
- **Vertical**

**TYPICAL SWITCH DIMENSIONS**

**Single & Double Pole**

- **Straight PC**
- **Right Angle PC**
- **Vertical PC**

On single pole models, locations 1 & 3 are for support pins.