

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

Electrical Life: 100,000 operations minimum

10,000 operations minimum @ 0.1A @ 28V AC/DC

Nominal Operating Force: 1.30N

Angle of Throw: 28°

Materials & Finishes

Actuator: 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

Power Terminals: Phosphor bronze with gold plating

Lamp Terminals: Phosphor bronze with gold plating

Environmental Data

Operating Temperature Range: -25°C through +55°C (-13°F through +131°F)

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

Vibration: 10 ~ 500Hz 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: 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

Fully illuminated toggle for highly visible status indication with LED in red, green, or amber for single color and red/green for bicolor.

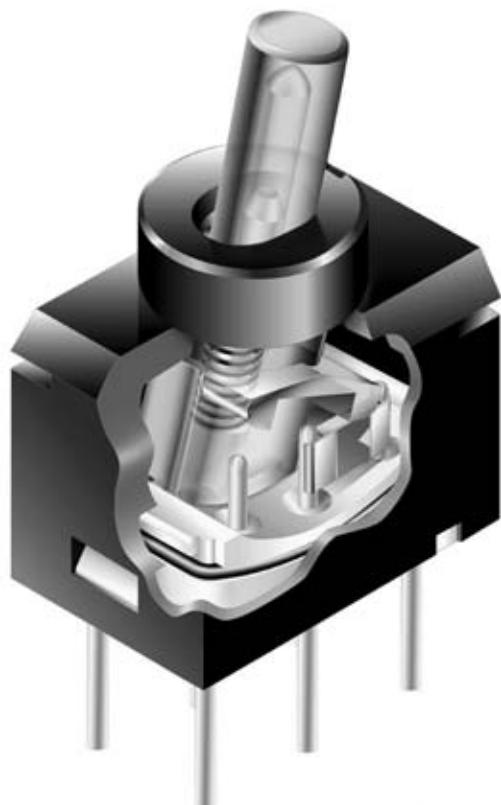
Ultra-miniature size allows high density mounting, and extremely light weight makes these switches ideal for handheld equipment.

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

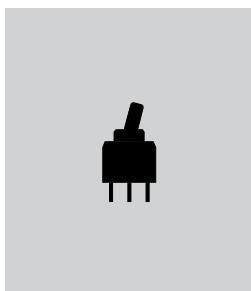
Molded-in, epoxy sealed terminals lock out flux, solvents, and other contaminants.

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.



Actual Size



Supplement	Accessories	Indicators	Touch	Tilt	Slides	Rotaries	Keylocks	Programmable	Illuminated PB	Pushbuttons	Rockers	Toggle
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Series G

Fully Illuminated Ultra-Miniature Toggles

Toggles
A

Rockers

Pushbuttons

Illuminated PB

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

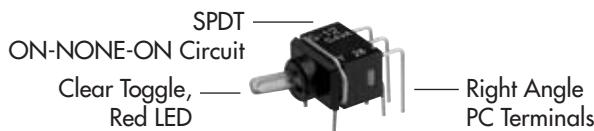
Indicators

Accessories

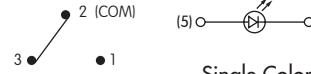
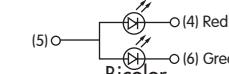
Supplement

TYPICAL SWITCH ORDERING EXAMPLE

G	1	2	J	H	C
Pole	Circuits		Actuator	PC Terminals	
1 SPDT	2 ON	NONE	ON	J Clear	P Straight
	Combines with single color or bicolor LEDs				H Right Angle
	3 ON	OFF	ON		V Vertical
	Combines with bicolor LED only				
DESCRIPTION FOR TYPICAL ORDERING EXAMPLE	G12JHC		SPDT ON-NONE-ON Circuit Clear Toggle, Red LED	Right Angle PC Terminals	



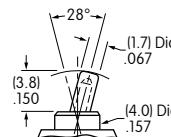
POLES & CIRCUITS

Pole Throw	Model	Toggle Position			Connected Terminals			Schematics	
		Up	Center	Down	Up	Center	Down	Note: Terminal numbers are not actually on the switch. LED circuit is isolated and requires an external power source.	
SPDT	G12	ON	NONE	ON	2-3	NONE	2-1		
	G13	ON	OFF	ON	2-3	OPEN	2-1		

ACTUATOR



Clear Toggle



LED COLORS & SPECIFICATIONS

LEDs are an integral part of the switch and not available separately. The electrical specifications shown are determined at a basic temperature of 25°C.

If the source voltage exceeds the rated voltage, a ballast resistor is required.

The resistor value can be calculated by using the formula in the Supplement; see Supplement Index.

Colors	Single Color		Bicolor	
	C	D	F	CF
Maximum Forward Current I_{FM}	30mA	30mA	25mA	30mA/25mA
Typical Forward Current I_F	20mA	20mA	20mA	20mA/20mA
Forward Voltage V_F	2.0V	2.0V	2.1V	2.0V/2.1V
Maximum Reverse Voltage V_{RM}	5V	5V	5V	5V/5V
Current Reduction Rate Above 25°C ΔI_F	0 - No current Reduction Rate within Ambient Temperature Range			
Ambient Temperature Range	-25° ~ +55°C			

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