

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.

TYPICAL SWITCH ORDERING EXAMPLE

G	1	2	J	H	C
Pole	Circuits		Actuator	PC Terminals	LEDS
1 SPDT	2 ON NONE ON	3 ON OFF ON	J Clear	P Straight H Right Angle V Vertical	Single Color C Red D Amber F Green ON-NONE-ON only Bicolor CF Red/Green ON-NONE-ON & ON-OFF-ON
Combiner with single color or bicolor LEDs		Combiner with bicolor LED only			

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE
G12JHC

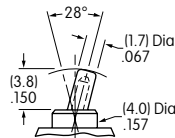
ON-NONE-ON Circuit
Clear Toggle, Red LED
SPDT
Right Angle PC Terminals

POLES & CIRCUITS

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

ACTUATOR

J Clear Toggle

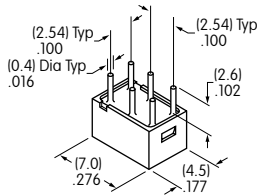


LED COLORS & SPECIFICATIONS

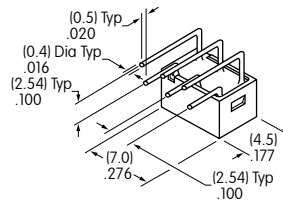
<p>LEDs are an integral part of the switch and not available separately. The electrical specifications shown are determined at a basic temperature of 25°C.</p> <p>If the source voltage exceeds the rated voltage, a ballast resistor is required.</p> <p>The resistor value can be calculated by using the formula in the Supplement; see Supplement Index.</p>	Colors	Single Color			Bicolor	
		C	D	F	CF	
		Red	Amber	Green	Red/Green	
	Forward Peak Current	I_{FM}	25mA	25mA	25mA	25mA/25mA
	Continuous Forward Current	I_F	20mA	20mA	20mA	20mA/20mA
	Forward Voltage	V_F	2.0V	2.1V	2.1V	2.0V/2.1V
	Reverse Peak Voltage	V_{RM}	4V	4V	4V	4V/4V
Current Reduction Rate Above 25°C	ΔI_F	0.33mA/°C				
Ambient Temperature Range		-25° ~ +55°C				

PC TERMINALS

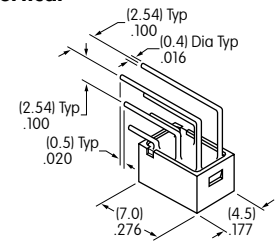
P Straight



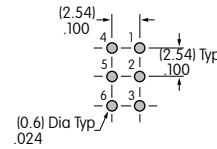
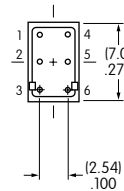
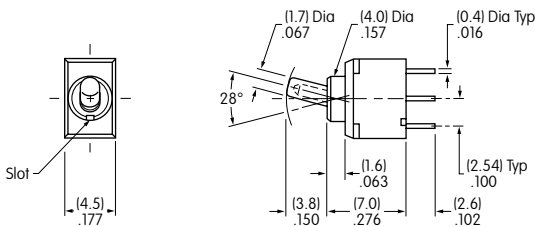
H Right Angle



V Vertical



TYPICAL SWITCH DIMENSIONS



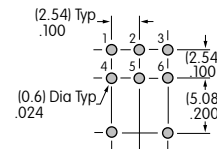
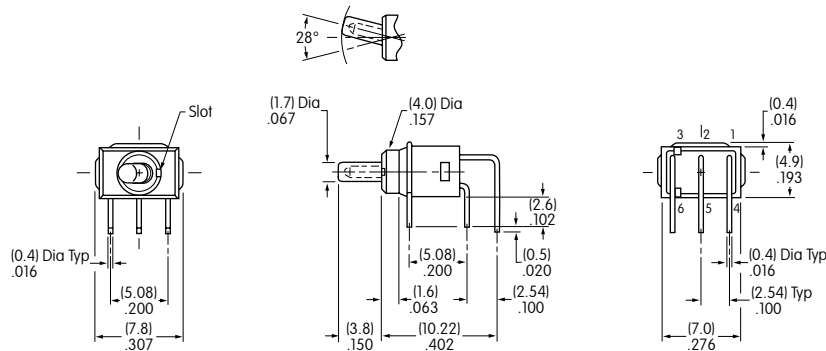
Straight PC



5 & 6 are LED terminals; 4 is a support pin on single color models & an LED terminal on bicolor models.

G12JPC

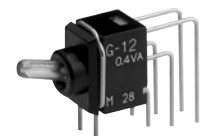
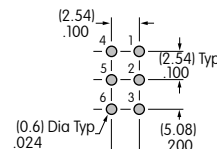
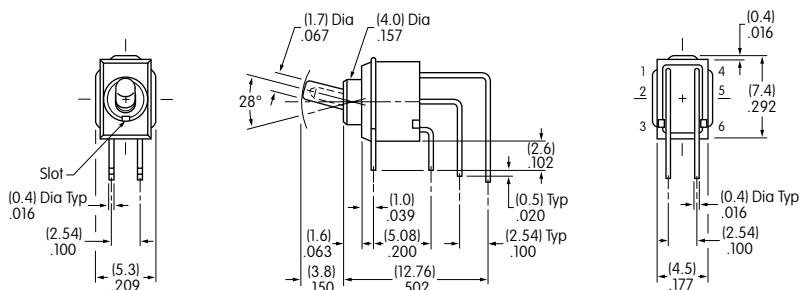
Right Angle PC



5 & 6 are LED terminals; 4 is a support pin on single color models & an LED terminal on bicolor models.

G12JHD

Vertical PC



5 & 6 are LED terminals; 4 is a support pin on single color models & an LED terminal on bicolor models.

G12JVC