

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	Clear			P Straight	Single Color
	Combines with single color or bicolor LEDs				H Right Angle	C Red
	3 ON OFF ON				V Vertical	D Amber
	Combines with bicolor LED only					F Green
						ON-NONE-ON only
						Bicolor
						CF Red/Green
						ON-NONE-ON & ON-OFF-ON

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

G12JHC

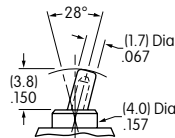


POLES & CIRCUITS

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

ACTUATOR

J Clear Toggle



LED COLORS & SPECIFICATIONS

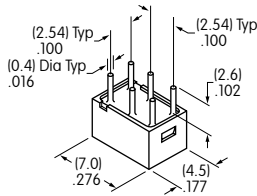
LEDs are an integral part of the switch and not available separately. The electrical specifications shown are determined at a basic temperature of 25°C.	Colors	Single Color			Bicolor
		C Red	D Amber	F Green	CF Red/Green
Forward Peak Current	I_{FM}	25mA	25mA	25mA	25mA/25mA
Continuous Forward Current	I_F	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			

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

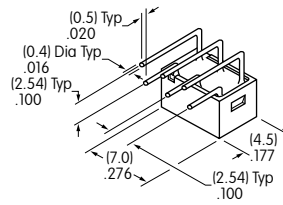
The resistor value can be calculated by using the formula in the Supplement; see Supplement Index.

PC TERMINALS

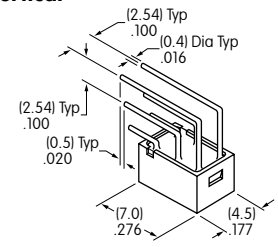
P Straight



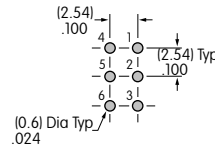
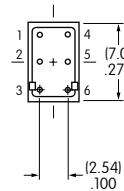
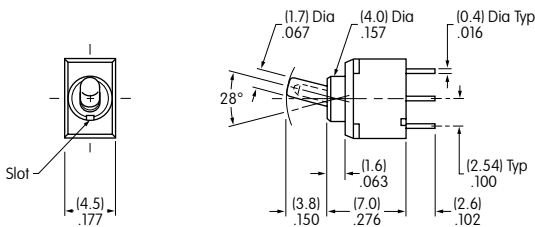
H Right Angle



V Vertical



TYPICAL SWITCH DIMENSIONS



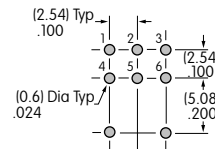
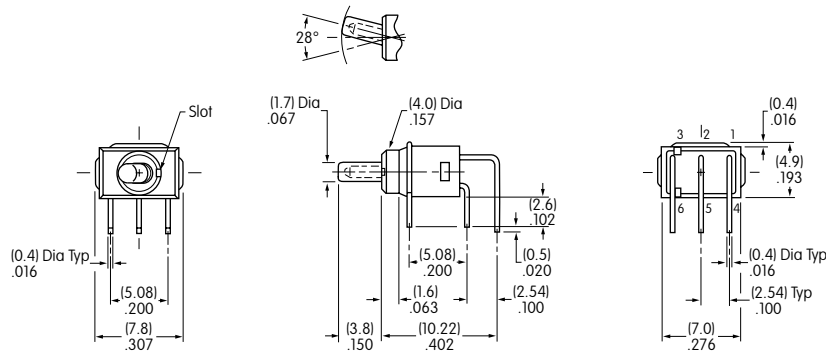
Straight PC



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

G12JPC

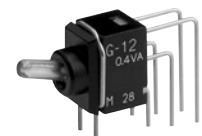
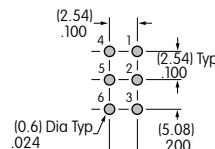
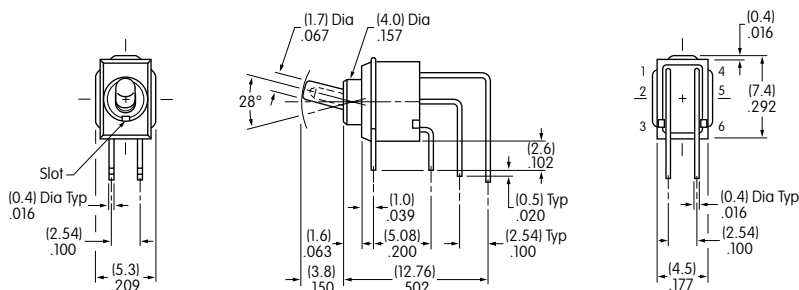
Right Angle PC



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