

SERIES 56

0.5" Diameter, 200 mA, .355" Behind Panel

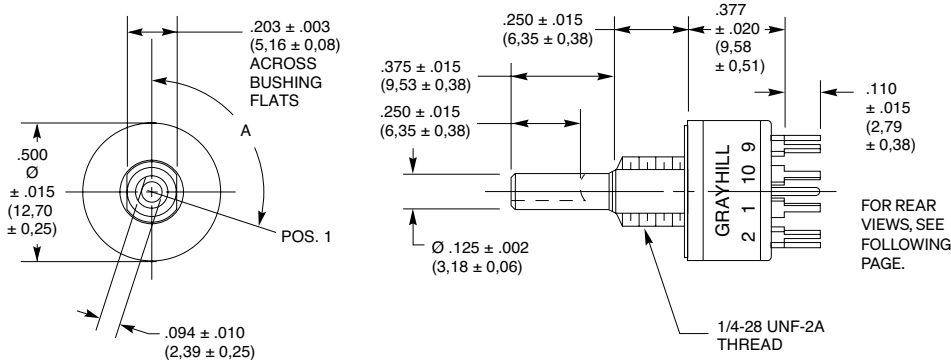
FEATURES

- Requires minimum distance behind the panel
- Adjustable stop types provide prototypes immediately
- Industrial quality, economically priced
- RoHS compliant



DIMENSIONS in inches (and millimeters)

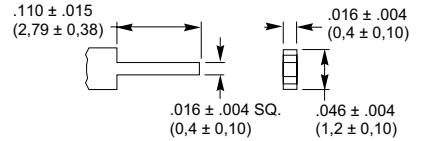
PC Mount Style



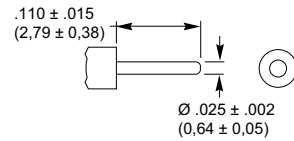
Angle of Throw	Angle A
30°	105°
36°	108°

Grayhill part number and date code marked on label.
Customer part number marked on request.

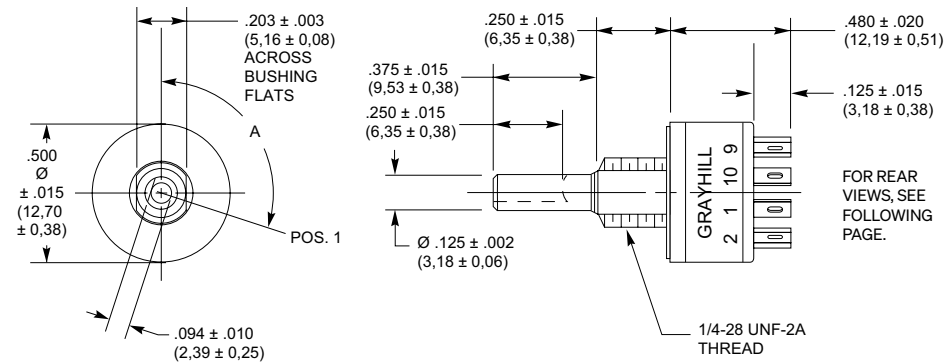
PC Terminal Detail



PC Common



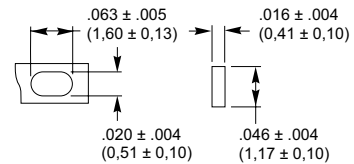
Solder Lug Style



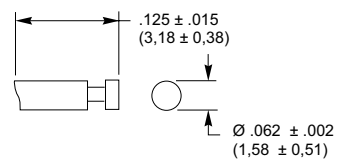
Angle of Throw	Angle A
30°	105°
36°	108°

Grayhill part number and date code marked on label.
Customer part number marked on request.

Solder Lug Terminal Detail

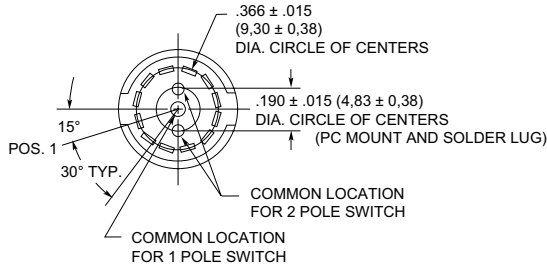


Solder Lug Common

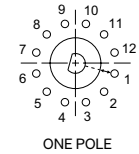
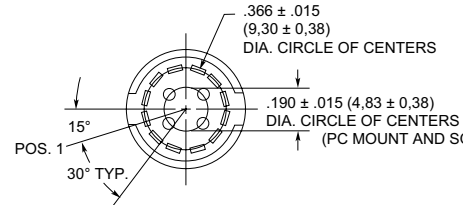


CIRCUIT DIAGRAMS AND REAR VIEWS: PC Mountable and Solder Lug Terminals

Rear View

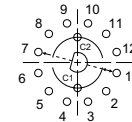


Circuit as Viewed from Shaft End

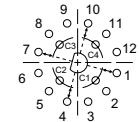


30° Angle of Throw

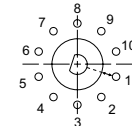
ONE POLE



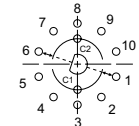
TWO POLES



FOUR POLES



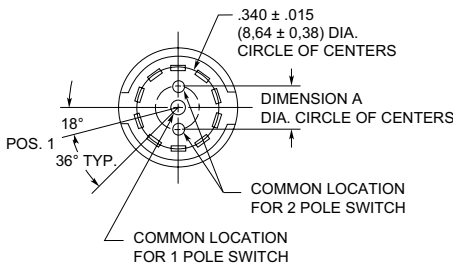
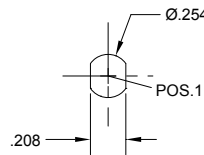
ONE POLE



TWO POLES

36° Angle of Throw

Recommended Panel Cutout



Dimension	PC Mount Terminals	Solder Lug Terminals
A	.184 ± .015 (4,67 ± 0,38)	.126 ± .015 (3,20 ± 0,38)

SPECIFICATIONS

Electrical Ratings

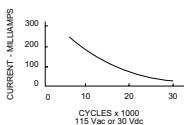


Chart shown for non-shorting (break before make) contacts, resistive load.

One cycle is 360° rotation clockwise and 360° return. The data for the curve was measured at sea level, 25 °C and 68% relative humidity with the life limiting criteria which follows.

Contact Resistance	100 milliohms maximum, (15 milliohms initially)
Insulation Resistance	10,000 Mohms minimum between mutually insulated parts (50,000 Mohms initially)
Voltage Breakdown	600 Vac minimum between mutually insulated parts at standard atmospheric pressure
Life Expectancy	As determined from the load-life curve for the current to be switched. Contact Grayhill for more information if any of the following is true: the life limiting criteria are more critical than those listed; longer operation is required; a larger make and break current is required; the operating environment includes elevated temperatures or reduced pressures.
Contact Carry Rating	Switch will carry 6 amperes continuously with a maximum contact temperature rise of 20°C.

Additional Characteristics

Contact Type and Forces	Shorting or non-shorting wiping contacts with over 25 grams of contact force
Shaft Flat Orientation	Flat opposite contacting position of pole number one (see circuit diagrams)
Terminals	Switches have the full circle of terminals, regardless of number of active positions
Stop Strength	7.5 lb-in. minimum
Rotational Torque	3.5 to 9 oz-in. (21-53 mN-m), depending on the number of poles
Bushing Mounting	Required for switches with stops, and recommended for switches without stops
Meets MIL-DTL-3786 for:	High and medium shock; Vibration (10 to 2,000 Hz); Thermal shock (-65° to 85 ° C); Salt spray; Explosion; Stop strength (7.5 in-lbs. minimum (.85 N-m); Terminal strength; Sealed styles withstand water pressure of 15 PSI minimum (103 KPa) without leakage.

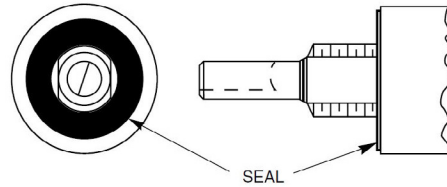
Materials and Finishes

Housing	Zinc die cast. Tin zinc or sulfamate nickel plated
Mounting Nut	Brass. Tin zinc or sulfamate nickel plated
Lockwasher	Spring steel, zinc plated
Panel Seal	Silicone rubber
Shaft and Stop Arm	Machined, 303 stainless steel, or cold formed, 430 stainless steel
Retaining Ring	Stainless steel
Shaft Seal	Fluorosilicone rubber
Stop Pins	Stainless steel
Detent Rotor	Molded thermoplastic
Detent Spring	Music wire
Detent Balls	Steel, nickel-plated
Contact Spring	Stainless steel
Rotor Contact	Brass or zinc alloy, silver over nickel plate
Common Ring	Brass, gold over silver over nickel plate
Terminals	Brass, gold over silver over nickel plate
Switch Base	Molded thermoset plastic
Mounting Hardware	One mounting nut .089" thick by .375" across flats and one internal tooth lockwasher are supplied with the switch

Specifications are subject to change.

SHAFT AND PANEL SEAL: Style S

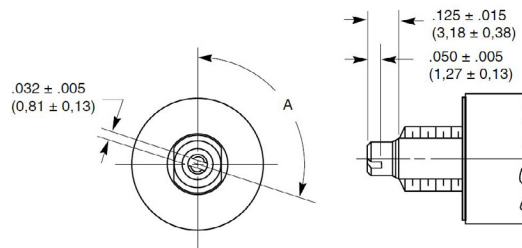
Panel is sealed by a flat rubber seal washer at the base of bushing. Shaft is sealed by an O-ring inside the bushing. After the switch is mounted, seals do not alter the dimensions of the unsealed style.



Shaft and Panel Seal

SCREWDRIVER SLOTTED SHAFT: Option

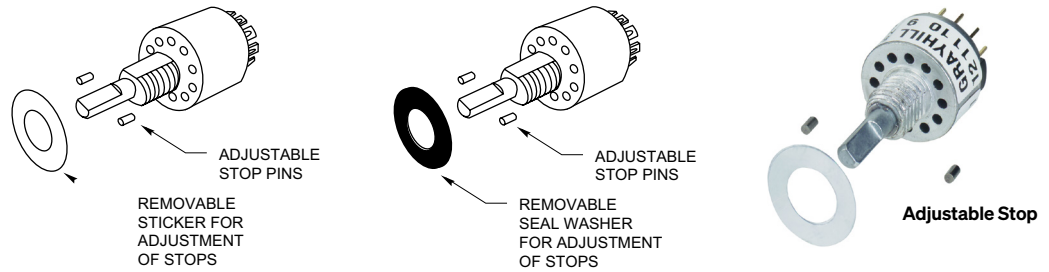
Series 56 rotary switches are available with a screwdriver slotted shaft with dimensions as shown. Available in the styles, angles of throw and pole/positions combinations shown in the choice and limitations chart.



Screwdriver Slotted Shaft

ADJUSTABLE STOP SWITCHES

Two stop pins and an adhesive backed sticker or seal washer are provided. Sticker is temporarily removed to locate stop pins as desired to limit the shaft rotation. All dimensions are identical to the fixed stop switch counterpart.



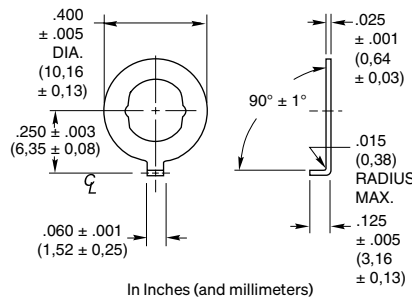
Suggested Adjustable Stop Substitution Guide

Fixed Stop Style	Adjustable Stop Style Equivalent	Fixed Stop Style	Adjustable Stop Style Equivalent
56A	56D	56B	56BD
56S	56SD	56BS	56BSD
56P	56DP	56BP	56BDP
56SP	56SDP	56BSP	56BSDP

ACCESSORY: Non-Turn Washer

Part No. 50J1066

Cut round hole for the bushing and for the non-turn tab. Washer fits the double D bushing flats. Washer is sold only when accompanied by an order for a like number of switches. Washer is 302 stainless steel.



In Inches (and millimeters)

Specifications are subject to change.

CHOICES AND LIMITATIONS

A = Standard, 1/8" Shaft
B = Screwdriver Slot Shaft
D = Adjustable Stop (Adj. Stop)
P = PC Mount Terminals
S = Shaft/Panel Seal (S/P Seal)

Style Designation	FEATURES				Screwdriver Slotted Shaft Equivalent	Angle of Throw	Number of Poles	Number of Positions per Pole	Shorting or Non-Shorting Contacts
	Solder Lug Terminals	PC Mount Terminals	Shaft/Panel Seal	Adjustable Stops ¹					
A	X				B	30°	1 2 4	02 through 12 02 through 06 02 or 03	N or S N or S N or S
S	X		X		BS				
P		X			BP				
SP		X	X		BSPD				
D	X			X	BD	36°	1 2	02 through 10 02 through 05	N or S N or S
SD	X		X	X	BSD				
DP		X		X	BDP				
SDP		X	X	X	BSDP				

¹ Adjustable stop versions allow selection of 2 positions to the maximum number of positions per pole.

ORDERING INFORMATION

Standard Options

Available from your local Grayhill Distributor. For prices and discounts, contact a local Sales Office, an authorized local Distributor, or Grayhill. Not available thru Distributors when Intermixing of shorting and non-shorting contacts. Contact Grayhill.

