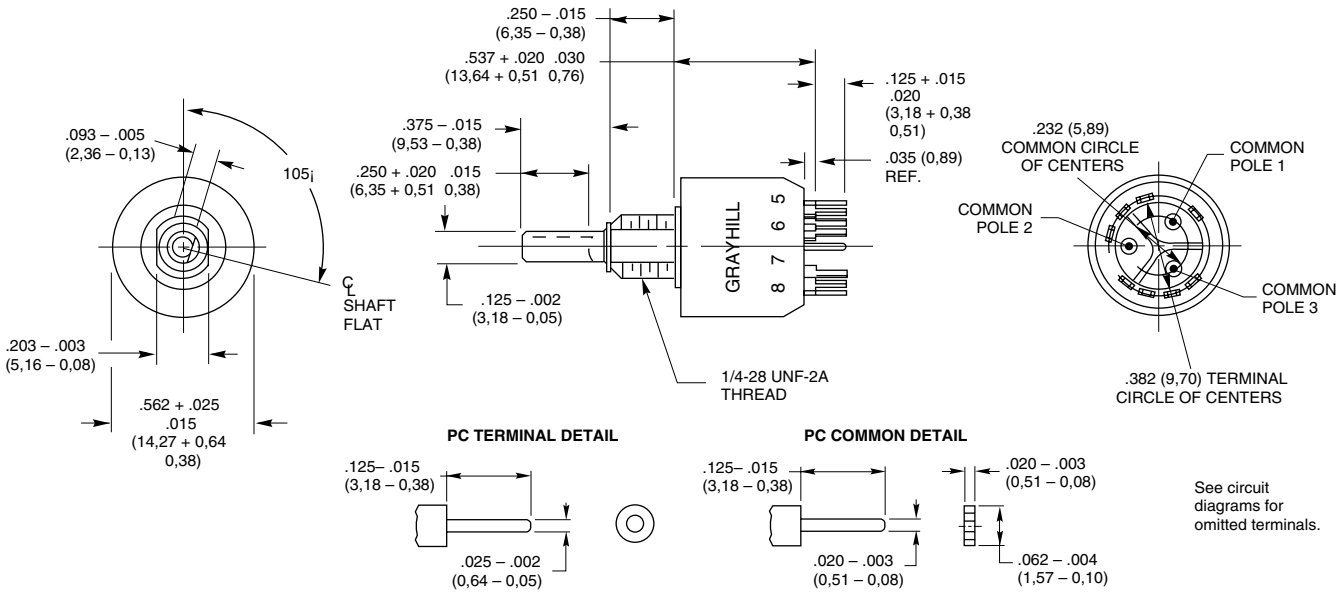
SERIES 51

Binary or Binary Complement Code

FEATURES

- PC Mount, 30° Angle of Throw
- 2 to 12 Positions
- .562" Diameter, 200 mA
- Shaft and Panel Seal
- Adjustable Stop Versions

DIMENSIONS in Inches (and millimeters)



All switches are provided with PC mount terminals.
Grayhill part number and date code marked on label. Customer part number marked on request.

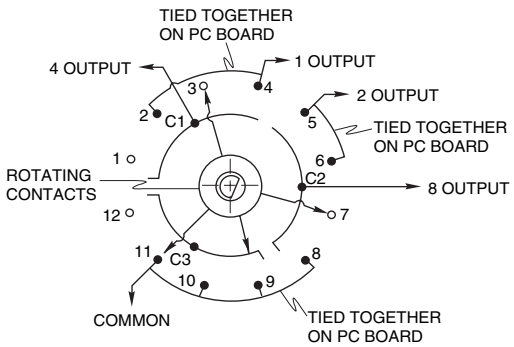
CIRCUIT DIAGRAMS

Switch is viewed from the shaft end and shown in switch position number 1, which is decimal number zero and BCD number zero.

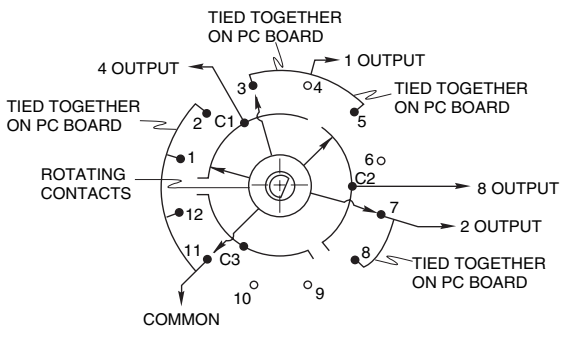
● Indicates Terminal is present.
○ Indicates Terminal is omitted.
Note: Connections must be made on PC board to generate code output.

Switch position numbers do not correspond to the decimal input or binary output.
See Truth Tables.

BCD



BCD Complement



TRUTH TABLES

Binary Code Decimal

Dec. No.	Switch Pos'n.*	2nd Pin**	Output Terminal 1	2	4	8
0	1	4-5				
1	2	5-6	●			
2	3	6-7		●		
3	4	7-8	●	●		
4	5	8-9			●	
5	6	9-10	●		●	
6	7	10-11		●	●	
7	8	11-12	●	●	●	
8	9	12-1				●
9	10	1-2	●			●
10	11	2-3		●		●
11	12	3-4	●	●		●

Binary Code Decimal Complement

Dec. No.	Switch Pos'n.*	2nd Pin**	Output Terminal 1	2	4	8
0	1	12-1	●	●	●	●
1	2	1-2		●	●	●
2	3	2-3	●		●	●
3	4	3-4			●	●
4	5	4-5	●	●		●
5	6	5-6		●		●
6	7	6-7	●			●
7	8	7-8				●
8	9	8-9	●	●	●	
9	10	9-10		●	●	
10	11	10-11	●		●	
11	12	11-12			●	

● Indicates contact made to common
* The switch position number is the terminal location opposite the shaft flat; it is not the same as the decimal number.
** To limit an adjustable stop switch to the decimal number shown, insert the second pin in the hole lying between the 2 switch positions indicated.

OPTIONS

Adjustable Stops

Set and reset stops to limit rotation. All dimensions are the same as for fixed stop switches. Switches are shipped with the stop blades located to limit rotation to 11 switch positions. For continuous rotation, remove both blades. For limited rotation, remove the 2nd (clockwise) blade and move it to the hole located between the positions shown in the Truth Tables. Removal of a plastic washer provides access to the blades and slots. Adjustable stop versions are available in unsealed styles only.

Shaft and Panel Seal

Switches are available in sealed or unsealed styles. For sealed style, the panel is sealed by an o-ring at the base of the bushing. The shaft is sealed by an o-ring inside of bushing. After the switch is mounted, seals do not alter the dimensions of the unsealed style.

SPECIFICATIONS

Electrical Rating

Rated: To make and break 125 mA 30 Vdc resistive load for 25,000 cycles of operation.
Cycle: (1 cycle = 360° rotation and return) Test conditions are standard atmospheric pressure, 25°C and 68% relative humidity.
Contact Resistance: 20 milliohms initially, 300 milliohms maximum after life
Insulation Resistance: 50,000 megohms initially, 10,000 megohms after life
Voltage Breakdown: 500 Vac between mutually insulated parts

Materials and Finishes

Bases: Thermoset plastic
Detent Rotor: Nylon
Shaft, Stop Blades, Stop Arm, Thrust Washer And Retaining Ring: Stainless steel
Detent Balls: Steel, nickel-plated
Bushing: Zinc, Tin-zinc-plated
Detent Spring: Stainless steel
Common Terminals and Rings: Brass, gold plate .00003" minimum over silver plate .0003" minimum
Terminals: Brass with silver contact surface, gold-plated .00003"
Rotor Contact: Berillium copper with silver contact surface
Shaft And Panel Seal: Silicone rubber
Mounting Hardware: One mounting nut, .089" thick by .375" across flats, and one internal tooth lockwasher are supplied with the switch.

Additional Characteristics

Contact Type: Wiping contacts
Shaft Flat Orientation: Switch position is defined as that position that is opposite the shaft flat. The location of the contacts in relation to the shaft flat is shown on the circuit diagram.
Terminals: Only the active position terminals, as shown in the circuit diagram are supplied with the switch. All common terminals are supplied.
Stop Strength: 7.5 in-lbs minimum
Rotational Torque: 8 to16 in-oz
Bushing Mounting: Required for these switches
Maximum Mounting Torque: 15 in-lbs.

ORDERING INFORMATION

Type Of Switch	Maximum No. Of Positions	BCD Output Unsealed	BCD Output Sealed	BCD Complement Unsealed	BCD Complement Sealed
Fixed Stop	7	513360-7	513374-7	513361-7	513375-7
	8	513360-8	513374-8	513361-8	513375-8
	9	513360-9	513374-9	513361-9	513375-9
	10	513360-10	513374-10	513361-10	513375-10
	11	513360-11	513374-11	513361-11	513375-11
	12	513360-12-F	513374-12-F	513361-12-F	513375-12-F
Continuous Rotation	12	513360-12-C	513374-12-C	513361-12-C	513375-12-C
Adjustable Stop	12	513385	———	513384	———

The -C suffix indicates continuous rotation. The -F suffix indicates a fixed stop between positions 1 and 12.

For prices and discounts, contact a local Sales Office, an authorized local Distributor or Grayhill.

Общество с ограниченной ответственностью «МосЧип» ИНН 7719860671 / КПП 771901001
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Данный компонент на территории Российской Федерации

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http://moschip.ru/get-element

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Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

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