SERIES 94H
Binary Coded

DIMENSIONS  in inches (and millimeters)

Tolerances are ± .010 inches unless specified otherwise.

Surface Mount
Gullwing

Surface Mount J-Lead

Standard Thru-Hole

FEATURES
- Sealed Construction; No Tape Seal Required
- Surface Mount or Thru-Hole Style
- Tube or Tape and Reel Packaging
- Octal, BCD, and Hexadecimal Code
- In Standard or Complement
- Standard and Right Angle Mount
- Flush or Extended Actuators
- Gold-Plated Contacts
- RoHS Compliant

ACTUATOR STYLES

EXTENDED ACTUATOR TYPES

All actuation types are available in octal (8), binary coded decimal (10), or hexadecimal (16) codes; with either standard or complement output. Standard code outputs have natural color rotors; complements in a contrasting color.
Rotary DIP Switches

Tape and Reel Packaging: Series 94H

Meets requirements of EIA 481-2.

13 Inch Diameter Reel

Conductive Plastic Embossed Tape

Each reel contains the following number of switches with a 15.35 inch (390 mm) minimum leader and a 6.30 inch (160 mm) minimum trailer.

- 94HA style: 750 sw/reel
- 94HB style: 150 sw/reel
- 94HC style: 200 sw/reel
- 94HE style: 300 sw/reel
- 94HF style: 750 sw/reel

ORDERING INFORMATION: Series 94H

<table>
<thead>
<tr>
<th>Series</th>
<th>Actuator Style:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Flush, Figure 1</td>
</tr>
<tr>
<td>B</td>
<td>.270, Figure 3 (see page B-21)</td>
</tr>
<tr>
<td>C</td>
<td>.170, Figure 3 (see page B-21)</td>
</tr>
<tr>
<td>E</td>
<td>.090, Figure 3 (see page B-21)</td>
</tr>
<tr>
<td>F</td>
<td>Flush, Figure 2</td>
</tr>
</tbody>
</table>

Code: B = Standard (Natural),
      C = Complementary (Contrasting Color)

RoHS Compliant

Packaging: R = Tape and Reel, (Surface Mount Only)
          Blank = Tube*

Terminal Style:
- RA = Right Angle, Thru-Hole
- J = J-Lead
- W = Surface Mount
- Blank = Thru-Hole

Number of Positions:
- 08 = Octal, 8 Position
- 10 = BCD, 10 Position
- 16 = Hex, 16 Position

* 27 Pieces per tube for surface mount and thru-hole, 24 pieces per tube for right angle switches.

SERIES 94 High Temperature Knobs: For Shaft Extensions

Slotted knobs show switch markings. Contact Grayhill for other knob material/ marking color combinations and geometrics.

ORDERING INFORMATION: Series 94 High Temperature Knobs*

<table>
<thead>
<tr>
<th>Knob Style and Height</th>
<th>Knob Color</th>
<th>Arrow Color</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A</td>
<td>Gray</td>
<td>N/A</td>
<td>947706-001</td>
</tr>
<tr>
<td>5A</td>
<td>Gray</td>
<td>Black</td>
<td>947706-005</td>
</tr>
<tr>
<td>1B</td>
<td>Black</td>
<td>N/A</td>
<td>947705-001</td>
</tr>
<tr>
<td>1B</td>
<td>Gray</td>
<td>N/A</td>
<td>947705-012</td>
</tr>
<tr>
<td>2B</td>
<td>Gray</td>
<td>White</td>
<td>947705-004</td>
</tr>
<tr>
<td>3B</td>
<td>Gray</td>
<td>Black</td>
<td>947705-017</td>
</tr>
<tr>
<td>4B</td>
<td>Gray</td>
<td>Black</td>
<td>947705-018</td>
</tr>
<tr>
<td>1B</td>
<td>Natural</td>
<td>N/A</td>
<td>947705-009</td>
</tr>
<tr>
<td>4B</td>
<td>Black</td>
<td>White</td>
<td>947705-010</td>
</tr>
<tr>
<td>5B</td>
<td>Gray</td>
<td>Black</td>
<td>947705-019</td>
</tr>
</tbody>
</table>

*Use only with Actuator Type B or C

Available from your local Grayhill Distributor.

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

*Ordered as a separate item. B = Standard (Natural), C = Complementary (Contrasting Color).
SPECIFICATIONS

Electrical Ratings

- Make-and-break Current Rating: 30 mA at 30 Vdc for 10,000 cycles of operation.
- Carrying Current Rating: 100 mA at 50 Vdc
- Contact Resistance: 50 mohms maximum initially (measured at 10 mA, 50 mVdc). 150 mohms maximum after life.
- Insulation Resistance: (measured at 100 Vdc across open switch contacts) Initial: 5000 Mohms minimum. After Life: 1000 Mohms minimum.
- Dielectric Strength: (measured across open switch contacts) Initial: 500 Vac RMS minimum. After Life: 250 Vac RMS

Mechanical Ratings

- Mechanical Life: 10,000 cycles of operation. One cycle is a rotation through all positions and a complete return through all positions.
- Mechanical Shock: 1000g's, 0.5mS, half sine per MIL-STD-202F, Method 213, Test Condition E.
- Vibration Resistance: 10-2000 Hz at 15G or 0.060° double amplitude per MIL-STD-202F, Method 204, Test Condition B.
- Operational Torque: 2 to 6 inch-ounces initially and 1.2 inch-ounces minimum after life.

Environmental Ratings

- Operating Temperature Range: -40° to +85°C.
- Storage Temperature Range: -40° to +85°C.

Materials and Finishes

- Rotor and Switch Body: Plastic (UL94 V-O)
- Contact Material: Copper alloy plated. 30 microinches minimum gold over 50 microinches minimum nickel.
- Shorting Member: Copper alloy plated. 30 microinches minimum gold over 50 microinches minimum nickel.
- Terminals: Copper alloy, matte tin plated over nickel barrier.
- Internal O-ring: Rubber BUNA-N

Soldering Information

*For the most current soldering & cleaning processing guidelines, reference Grayhill Dip Switch Processing Information, Bulletin 1234

- Soldering Temperature: 260° C maximum.
- Cleaning: Acceptable solutions include 1-1-1 Trichlorethene, Freon (TF, TE, or TMS), Isopropyl Alcohol and detergent (140°F maximum). Solutions which are not recommended include Acetone, Methylene Chloride, and Freon TMC.

CODE & TRUTH TABLES

All switches are continuous rotation.

Dot indicates terminal to common connection.

Octal and Octal Complement outputs are 0 thru 7 positions.

BCD and BCD Complement outputs are 0 thru 9 positions.

Hexadecimal and Hexadecimal Complement outputs are 0 thru F positions.

Standard codes have natural color rotors. Complements have rotors in a contrasting color.