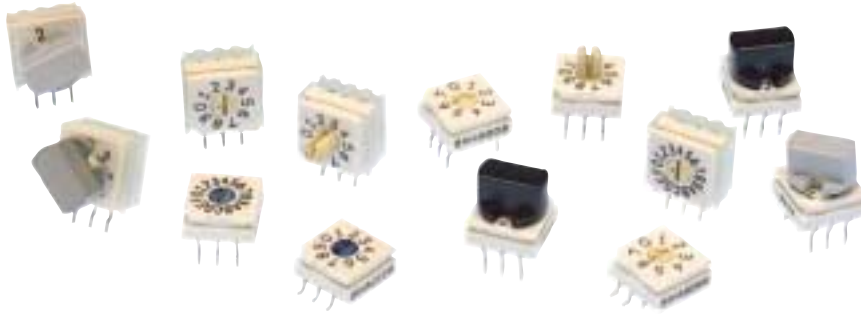


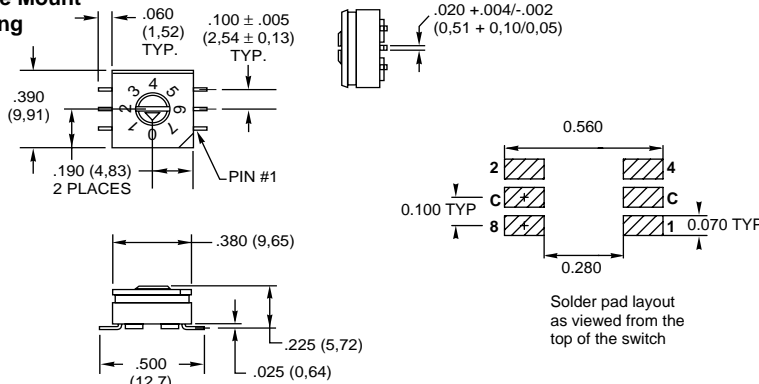
SERIES 94H Binary Coded



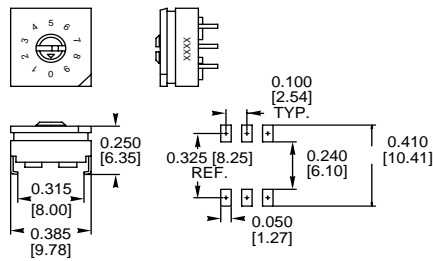
DIMENSIONS In inches (and millimeters)

Tolerances are $\pm .010$ inches unless specified otherwise.

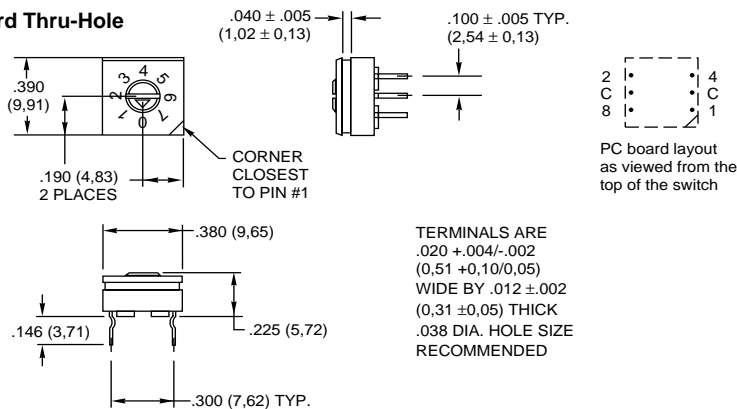
Surface Mount Gullwing



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

ACTUATOR STYLES



Octal-8 position



BCD-10 position



Hex-16 position



Figure 2
"F" style rotor

Figure 1
"A" style rotor

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.

EXTENDED ACTUATOR TYPES

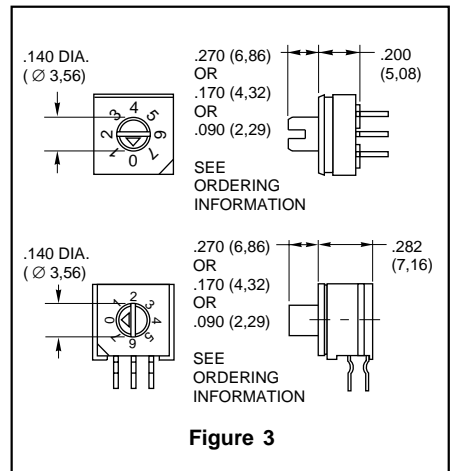
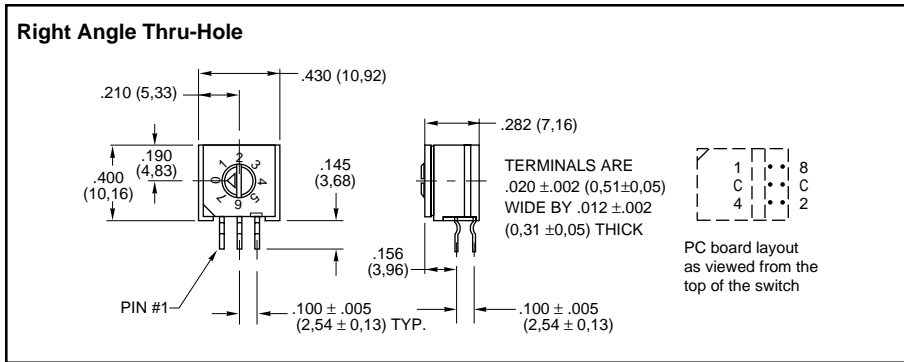
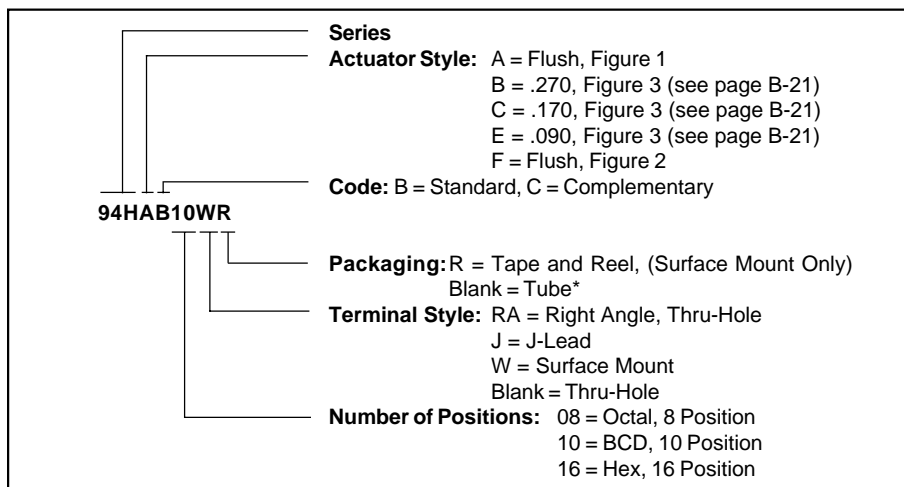


Figure 3

DIMENSIONS In inches (and millimeters)

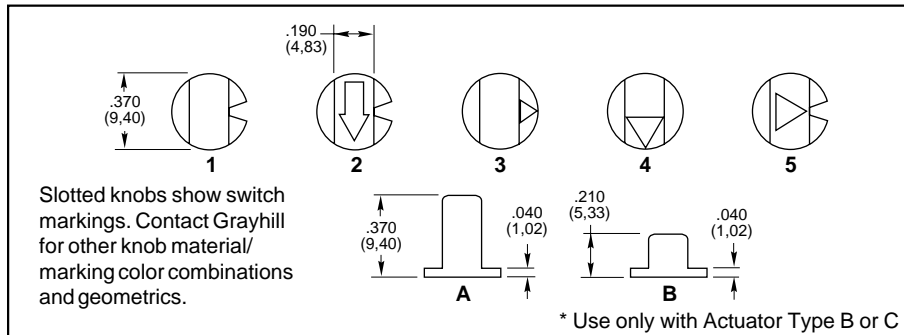


ORDERING INFORMATION: Series 94H



* 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

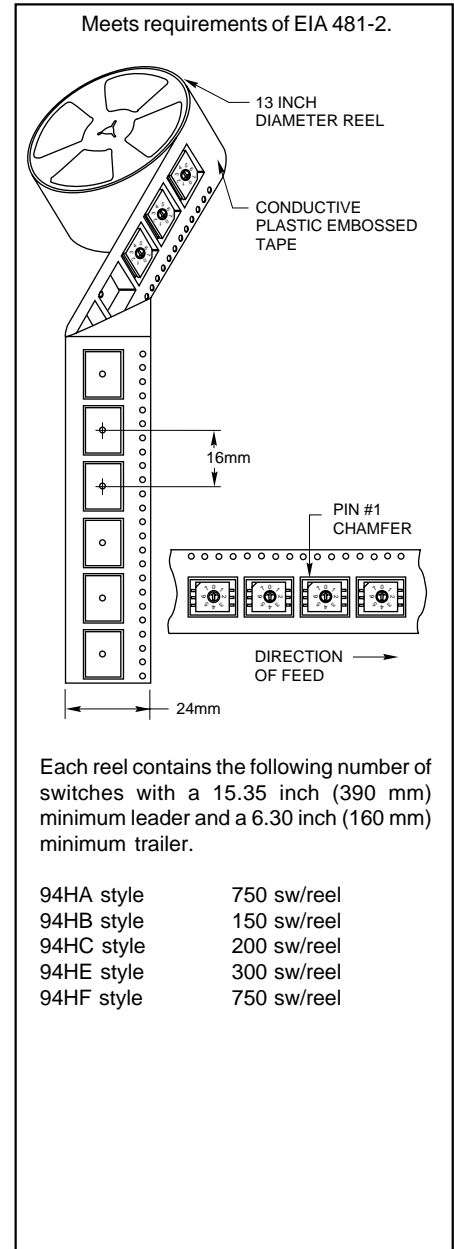


ORDERING INFORMATION: Series 94 High Temperature Knobs*

| Knob Style and Height | Knob Color | Arrow Color | Part Number |
|-----------------------|------------|-------------|-------------|
| 1A | Gray | N/A | 947706-001 |
| 5A | Gray | Black | 947706-005 |
| 1B | Black | N/A | 947705-001 |
| 1B | Gray | N/A | 947705-012 |
| 2B | Gray | White | 947705-004 |
| 3B | Gray | Black | 947705-017 |
| 4B | Gray | Black | 947705-018 |
| 1B | Natural | N/A | 947705-009 |
| 4B | Black | White | 947705-010 |
| 5B | Gray | Black | 947705-019 |

*Ordered as a separate item.

TAPE AND REEL PACKAGING: Series 94H



| | |
|------------|-------------|
| 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 |



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

SERIES 94R

Economical, Binary Coded

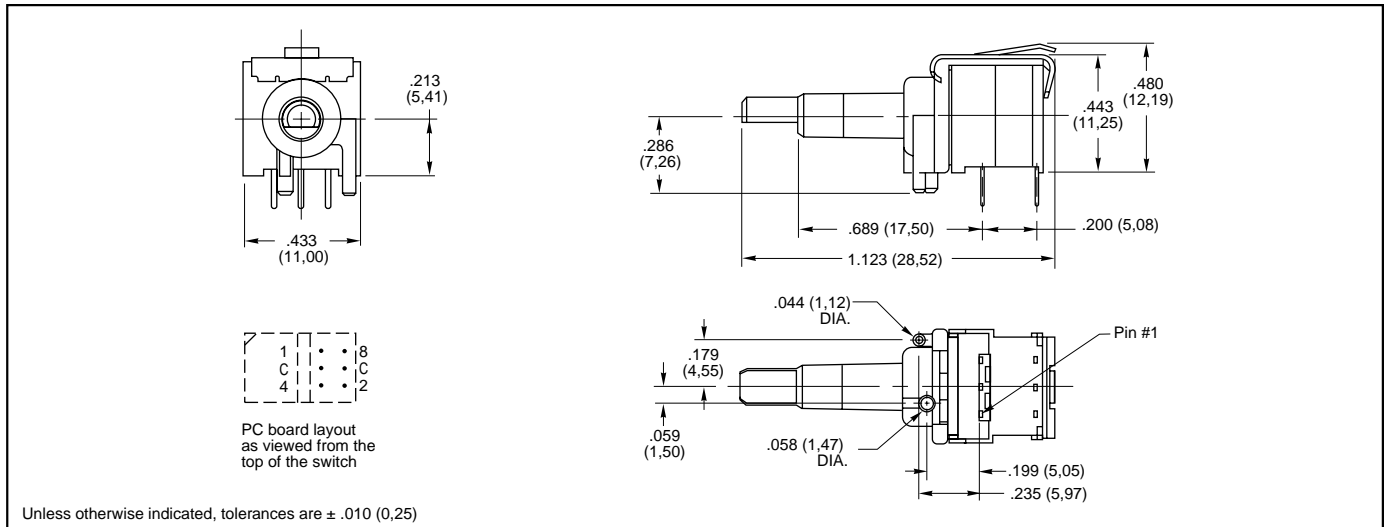
FEATURES

- 10,000 Cycles of Operation
- Gold-Plated Contacts
- Sealed Contact System
- Right Angle Mount
- Octal, BCD & Hexadecimal Codes
- Standard or Complement



DIMENSIONS

In inches (and millimeters)



SPECIFICATIONS: Series 94H and 94R

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.

Moisture Resistance: 240 hours with temperature cycling and polarization. Passes insulation resistance and dielectric strength per MIL-STD-202F, Method 106 following exposure.

Materials and Finishes

Rotor and Switch Body: Plastic (UL94V-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 plated. 100 microinches minimum 90/10 tin lead solder over 50 microinches minimum nickel.

Internal O-ring: Rubber BUNA-N

Soldering Information

Soldering Temperature: 250° C for 10 seconds maximum.

Cleaning: Acceptable solutions include 1-1-1 Trichlorethane, 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:

Series 94H and 94R

| Standard Output | CODE OUTPUT | | | | CODE OUTPUT | | | | Complement Output |
|-----------------|-------------|---|---|---|-------------|---|---|---|-------------------|
| | 1 | 2 | 4 | 8 | 1 | 2 | 4 | 8 | |
| 0 | | | | | • | • | • | • | |
| 1 | • | | | | • | • | • | • | |
| 2 | | • | | | • | • | • | • | |
| 3 | • | • | | | • | • | • | • | |
| 4 | | | • | | • | • | • | • | |
| 5 | | | | • | • | • | • | • | |
| 6 | • | • | • | | • | • | • | • | |
| 7 | | • | • | • | • | • | • | • | |
| 8 | | | | • | • | • | • | • | |
| 9 | • | • | • | • | • | • | • | • | |
| A | • | • | • | | • | • | • | • | |
| B | • | • | • | • | • | • | • | • | |
| C | | | | • | • | • | • | • | |
| D | • | • | • | • | • | • | • | • | |
| E | • | • | • | | • | • | • | • | |
| F | • | • | • | • | • | • | • | • | |

Dot indicates terminal to common connection. All switches are continuous rotation.

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.

ORDERING INFORMATION: Series 94R

| Continuous Rotation Versions | | | |
|-------------------------------------|-------------------------|----------------------------------|-------------------------------|
| Code | No. of Positions | Standard Code Part Number | Complement Part Number |
| Octal | 8 | 94RB08C | 94RC08C |
| BCD | 10 | 94RB10C | 94RC10C |
| Hexadecimal | 16 | 94RB16C | 94RC16C |
| Rotational Stop Versions* | | | |
| Code | No. of Positions | Standard Code Part Number | Complement Part Number |
| Hexadecimal | 16 | 94RB16F | 94RC16F |

* Consult Grayhill for 8 or 10 position

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