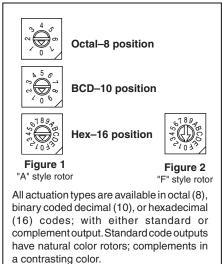


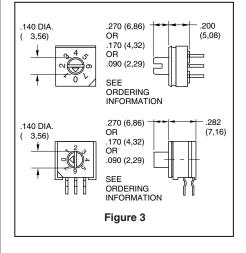
# FEATURES

- 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**



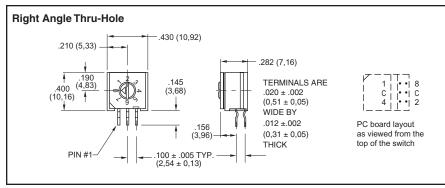
# **EXTENDED ACTUATOR TYPES**



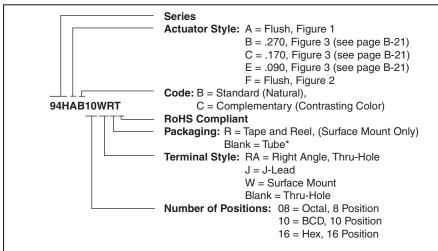
**DIP** Switches

### DIMENSIONS in inches (and millimeters)

rayhill

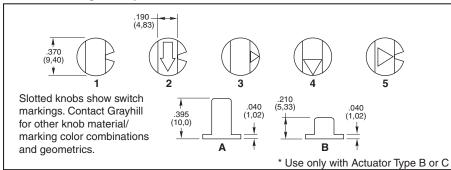


### **ORDERING INFORMATION: Series 94H**



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

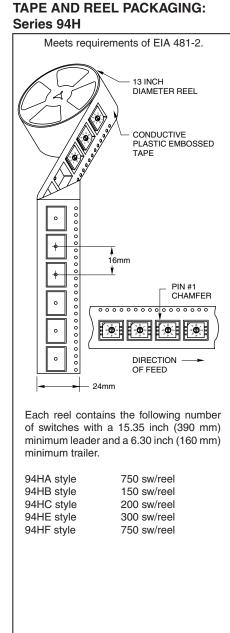
### SERIES 94 High Temperature Knobs: For Shaft Extensions



### **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. B = Standard (Natural), C = Complementary (Contrasting Color).





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



# **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, 0.5 mS, 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, 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 Trichlorenthane, 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. <ul> <li>CODE OUTPUT</li> <li>1</li> <li>2</li> <li>4</li> <li>0</li> <li>1</li> <li>2</li> <li>4</li> <li>0</li> <li>1</li> <li>2</li> <li>4</li> <li>0</li> <li>1</li> <li>2</li> <li>4</li> <li>0</li> <li>0</li> <li>1</li> <li>2</li> <li>4</li> <li>0</li> <li>0</li></ul>		Standard Output			Complement Output						
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.Complement outputs are 0 thru F positions.Standard codes have natural color rotors. 	All switches are continuous rotation.			CO				CC	1	OUTPUT	
Octal and Octal Complement outputs are 0 thru 7 positions.346BCD and BCD Complement outputs are 0 thru 9 positions.666Hexadecimal and Hexadecimal Complement outputs are 0 thru F positions.766Standard codes have natural color rotors. Complements have rotors in a contrasting066			0 1	1 •	2	4	8	1	2 •	4 •	8 •
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	Octal and Octal Complement outputs are		-	•	•			•		•	•
BCD and BCD Complement outputs are 0 thru 9 positions.	0 thru 7 positions.	OSITIO	4 5	•		•			•		•
Hexadecimal and Hexadecimal Complement outputs are 0 thru F positions. Standard codes have natural color rotors. Complements have rotors in a contrasting			6 7	•	•	•		•			•
Complement outputs are 0 thru F positions.AImage: Complement outputs are BImage: Complement outputs are BStandard codes have natural color rotors. Complements have rotors in a contrastingImage: Complement outputs are CImage: Complement outputs are C	•	lπ	8 9				•	•	•	•	
0 thru F positions.       C       C         Standard codes have natural color rotors.       C       C         Complements have rotors in a contrasting       C       C		Ī	A		•		•	•		•	
Complements have rotors in a contrasting	0 thru F positions.		C B	•	•	•	•	•	•	ľ	
			_	•	•	•	•	•	•	$\vdash$	
			F	•	•	•	•				

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