## 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
- RoHS Compliant


DIMENSIONS in inches (and millimeters)


## 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 $10 \mathrm{~mA}, 50 \mathrm{mVdc}$ ). 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: 1000 g 's, 0.5 mS , halfsine per MIL-STD-202F, Method 213, Test Condition E. Vibration Resistance: $10-2000 \mathrm{~Hz}$ at 15 G 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: $-40^{\circ}$ to $+85^{\circ} \mathrm{C}$.
Storage Temperature Range: $-40^{\circ}$ to $+85^{\circ} \mathrm{C}$. 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.

ORDERING INFORMATION: Series 94R

CODE \& TRUTH TABLES:

Standard
Output Output


Complement Output

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.

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: $260^{\circ} \mathrm{C}$ maximum.
Cleaning: Acceptable solutions include 1-1-1 Trichlorenthane, Freon (TF, TE, or TMS), Isopropyl Alcohol and detergent ( $140^{\circ} \mathrm{F}$ maximum). Solutions which are not recommended include Acetone, Methylene Chloride, and Freon TMC.

| Continuous Rotation Versions |  |  |  |
| :--- | :---: | :---: | :---: |
| Code | No. of <br> Positions | Standard Code <br> Part Number | Complement <br> Part Number |
| Octal | 8 | 94RB08CT | 94RC08CT |
| BCD |  |  |  |
| Hexadecimal | 10 | 94RB10CT | 94RC10CT <br> 94RC16CT |
| Rotational Stop Versions* |  |  |  |
| Code | No. of <br> Positions | Standard Code <br> Part Number | Complement <br> Part Number |
| Hexadecimal | 16 | 94RB16FT | 94RC16FT |

* Consult Grayhill for 8 or 10 position


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