# Rotary DIP Switches, Low Profile, Process Sealed, 7MM, Through Hole and Surface Mount

## FEATURES:

- 40% PCB area space savings over standard rotary dips
- 50% Lower in profile than standard rotary dips
- Hexadecimal or binary code, complement available
- Deflection temperature of 250ºC for SMT reflow soldering
- Gold contacts, tin/lead terminals
- Sealed "O" ring design

## MATERIAL SPECIFICATIONS:

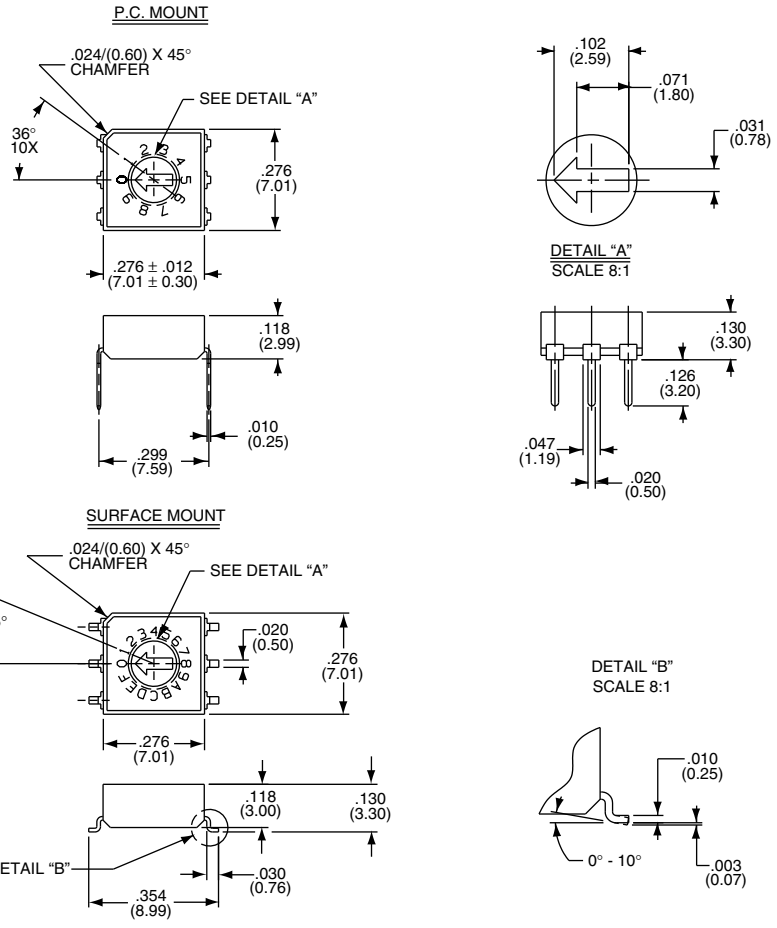
Fixed Contacts/Terminals.....Brass, gold plated / tin/lead
Moving Contacts.....BeCu, gold plated
Case Material .....PPS UL94V-0
Rotor .....Nylon UL94V-O
Cover Material .....PPS UL94V-0
O-Ring .....Fluoro Rubber

## ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature.....-10°C to +85°C
Storage Temperature.....-45°C to +100°C
Solder Heat Resistance .....MIL-STD 202F, Method 210
IR Process Capability .....EIA-364-56 Level II (250°C peak)

## TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating .....0.4 VA Max. @ 20 VDC
Initial Contact Resistance.....50m Max. @ 2 VDC 10mA
Insulation Resistance .....1,000 Megohms max.
Dielectric Strength .....300 VAC for 1 minute
Actuator Travel.....36° 10 Position, 22.5° 16 position
Operating Force .....200 Grams avg.
Life Expectancy .....20,000 Steps, mechanical





MRD10


MRD10S


MRD16C


MRD16S



Catalog 1308390
Issued 9-04
www.tycoelectronics.com

Dimensions are in inches and millimeters unless otherwise specified. Values in parentheses or brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-5-729-0425
South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

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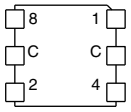
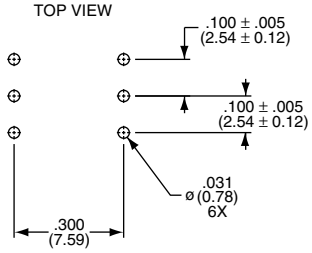
TERMINAL IDENTIFICATION

VIEWED FROM BOTTOM SWITCH



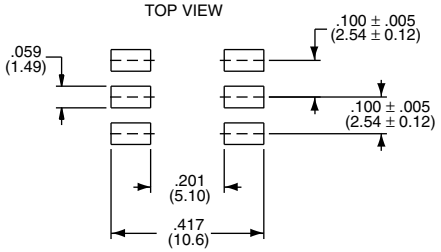

P.C. LAYOUT (THRU HOLE)

TOP VIEW




P.C. LAYOUT (SURFACE MOUNT)

TOP VIEW




## TRUTH TABLES

**10-Position, BCD (red actuator)**

| Pos. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| C | X | X | X | X | X | X | X | X | X | X |
| 1 | | X | | X | | X | | X | | X |
| 2 | | | X | X | | | X | X | | |
| 4 | | | | | X | X | X | X | | |
| 8 | | | | | | | | | X | X |

**16-Position, Hexadecimal (green actuator)**

| Pos. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 1 | | X | | X | | X | | X | | X | | X | | X | | X |
| 2 | | | X | X | | | X | X | | | X | X | | | X | X |
| 4 | | | | | X | X | X | X | | | | | X | X | X | X |
| 8 | | | | | | | | | X | X | X | X | X | X | X | X |

**10-Position, BCD Complement (orange actuator)**

| Pos. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| C | X | X | X | X | X | X | X | X | X | X |
| 1 | X | | X | | X | | X | | X | |
| 2 | X | X | | | X | X | | | X | X |
| 4 | X | X | X | X | | | | | X | X |
| 8 | X | X | X | X | X | X | X | X | | |

**16-Position Hexadecimal Complement (white actuator)**

| Pos. | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\overline{C}$ | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| $\overline{1}$ | X | | X | | X | | X | | X | | X | | X | | X | |
| $\overline{2}$ | X | X | | | X | X | | | X | X | | | X | X | | |
| $\overline{4}$ | X | X | X | X | | | | | X | X | X | X | | | | |
| $\overline{8}$ | X | X | X | X | X | X | X | X | | | | | | | | |

## HOW TO ORDER

**MRD** [ ] [ ] [ ]

**Circuit Types**
10 - BCD
10C = BCD complement
16 = Hexadecimal
16C = Hexadecimal complement

**Terminations**
Blank = PC
S = Outside L. surface mount

**Packaging**
TR = Tape & reel
(surface mount only)

| Color Code | |
|---|---|
| Circuit Type | Actuator Color |
| 10 | Red |
| 10C | Orange |
| 16 | Green |
| 16C | White |



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