# **DRS-DRR**<sup>7000C</sup><sub>8000C</sub>

Washable

Hyper-Miniature Dip Rotary Switches (7.5mm sq.) (PC Mount)



**RoHS Compliant** 

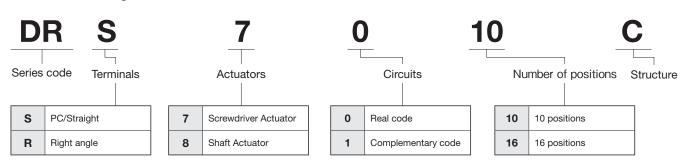
#### Features -

- **1. Hyper-miniature Size(7.5mm sq.)** Designed for high density mounting.
- 2. Process Sealed
- 3. Gold Plated Contacts
- 4. Clearly Visible Legends and Position Indicator

## ■ Specifications

|                             | Switching        |                           | 30mA 15VDC |  |  |  |
|-----------------------------|------------------|---------------------------|------------|--|--|--|
| Rating                      | Switching        | Min.                      | 1μA 20mVDC |  |  |  |
|                             | Non-switching    | 100m                      | A 50VDC    |  |  |  |
| Contac                      | t resistance     | 100m                      | Ω maximum  |  |  |  |
| Dielectric strength         |                  | 250VAC, 60s               |            |  |  |  |
| Insulation resistance       |                  | 1,000MΩ minimum(100VDC)   |            |  |  |  |
| Load life                   |                  | 20,000 steps 30mA 15VDC   |            |  |  |  |
| Operating torque            |                  | 49mN·m (500gf·cm) maximum |            |  |  |  |
| Operating temperature range |                  | −25~+85°C                 |            |  |  |  |
| Storage t                   | emperature range | -40∼+85°C                 |            |  |  |  |

## ■ Part Numbering



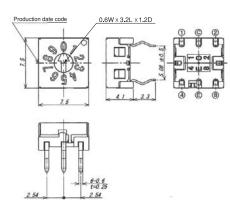
#### able of Part Numbers

|                         | Actuators                | Screwdriver Actuator |             | Shaft A        | Actuator    |
|-------------------------|--------------------------|----------------------|-------------|----------------|-------------|
| Circuit function        | Terminal style positions | PC<br>Straight       | Right-Angle | PC<br>Straight | Right Angle |
| Real code               | 10                       | DRS7010C             | DRR7010C    | DRS8010C       | ★ DRR8010C  |
| Real code               | 16                       | DRS7016C             | DRR7016C    | DRS8016C       | DRR8016C    |
| Complementary and       | 10                       | DRS7110C             | DRR7110C    | ★ DRS8110C     | ★ DRR8110C  |
| Complementary code 16 D |                          | DRS7116C             | DRR7116C    | DRS8116C       | ★ DRR8116C  |

# **DRS7010C DRS7110C**



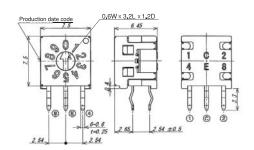
**Straight** 



Terminal numbers are shown on the bottom of the switch.

# **DRR7010C DRR7110C**





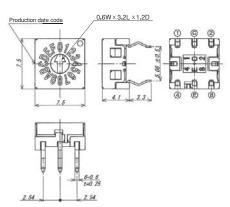
Right Angle

Terminal numbers are shown on the bottom of the switch.

# **DRS7016C DRS7116C**

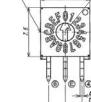


**Straight** 

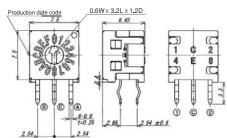


#### **DRR7016C DRR7116C**





Right Angle



Real code Actuator color: Yellow Terminal # Position Part No. 2 4 2 3 **DRS7010C** 4 **DRR7010C** • • 5 6 • 8 9

Complementary code Actuator color: Red

| Position  | Terminal #                      |                         |  |   |  |
|-----------|---------------------------------|-------------------------|--|---|--|
| FUSILIOIT | 1                               | 2                       | 4  | 8   |  |
| 0         |                                 |                         |  |   |  |
| 1         |                                 |                         |  |   |  |
| 2         |                                 |                         |  |   |  |
| 3         |                                 |                         |  |   |  |
| 4         |                                 |                         |  |   |  |
| 5         |                                 |                         |  |   |  |
| 6         |                                 |                         |  |   |  |
| 7         |                                 |                         |  |   |  |
| 8         |                                 |                         |  |   |  |
| 9         |                                 |                         |  |   |  |
|           | 1<br>2<br>3<br>4<br>5<br>6<br>7 | 1 0 1 2 3 4 5 6 7 8 • • | Position 1 2 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 | 1 2 4 0 • • • 1 2 4 1 2 4 0 5 6 6 7 8 • • • |  |

Real code Actuator color: Yellow

| Part No. | Position   | Terminal # |   |   |   |  |
|----------|------------|------------|---|---|---|--|
| Taitino. | 1 03111011 | 1          | 2 | 4 | 8 |  |
|          | 0          |            |   |   |   |  |
|          | 1          |            |   |   |   |  |
|          | 2          |            |   |   |   |  |
|          | 3          |            |   |   |   |  |
|          | 4          |            |   |   |   |  |
|          | 5          |            |   |   |   |  |
|          | 6          |            |   |   |   |  |
| DRS7016C | 7          |            |   |   |   |  |
| DRR7016C | 8          |            |   |   |   |  |
|          | 9          |            |   |   |   |  |
|          | Α          |            |   |   |   |  |
|          | В          |            |   |   |   |  |
|          | С          |            |   |   |   |  |
|          | D          |            |   |   |   |  |
|          | E          |            |   |   |   |  |
|          | F          |            |   |   |   |  |

 Complementary code Actuator color: Red

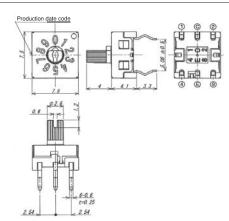
| Part No. | Position | Terminal # |   |   |   |  |
|----------|----------|------------|---|---|---|--|
| rait No. |          | 1          | 2 | 4 | 8 |  |
|          | 0        |            |   |   |   |  |
|          | 1        |            |   |   |   |  |
|          | 2        |            |   |   |   |  |
|          | 3        |            |   |   |   |  |
|          | 4        |            |   |   |   |  |
|          | 5        |            |   |   |   |  |
|          | 6        |            |   |   |   |  |
| DRS7116C | 7        |            |   |   |   |  |
| DRR7116C | 8        |            |   | • |   |  |
|          | 9        |            |   |   |   |  |
|          | Α        |            |   | • |   |  |
|          | В        |            |   |   |   |  |
|          | С        |            |   |   |   |  |
|          | D        |            |   |   |   |  |
|          | Е        | •          |   |   |   |  |
|          | F        |            |   |   |   |  |

Terminal numbers are shown on the bottom of the switch.

# **DRS8010C DRS8110C**



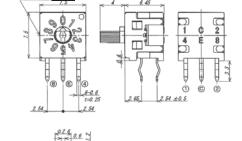




#### Terminal numbers are shown on the bottom of the switch.

## **DRR8010C DRR8110C**





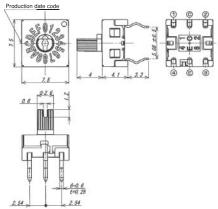
**Right Angle** 



# **DRS8016C DRS8116C**



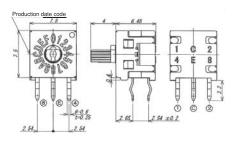
**Straight** 



# **DRR8016C DRR8116C**









Terminal numbers are shown on the bottom of the switch.

#### Real code

#### Actuator color: Yellow

| Part No. | Position  | Terminal # |   |   |   |  |
|----------|-----------|------------|---|---|---|--|
| rait No. | FUSILIOIT | 1          | 2 | 4 | 8 |  |
|          | 0         |            |   |   |   |  |
|          | 1         |            |   |   |   |  |
|          | 2         |            |   |   |   |  |
|          | 3         |            |   |   |   |  |
| DRS8010C | 4         |            |   | • |   |  |
| DRR8010C | 5         |            |   |   |   |  |
|          | 6         |            |   |   |   |  |
|          | 7         | •          |   | • |   |  |
|          | 8         |            |   |   | • |  |
|          | 9         | •          |   |   | • |  |

#### Actuator color: Red Complementary code

| Part No.   | Position   | Terminal # |   |   |   |  |
|------------|------------|------------|---|---|---|--|
| i ait ivo. | 1 OSILIOI1 | 1          | 2 | 4 | 8 |  |
|            | 0          |            |   |   |   |  |
|            | 1          |            |   |   |   |  |
|            | 2          |            |   |   |   |  |
|            | 3          |            |   | • | • |  |
| DRS8110C   | 4          | •          | • |   | • |  |
| DRR8110C   | 5          |            | • |   |   |  |
|            | 6          | •          |   |   | • |  |
|            | 7          |            |   |   |   |  |
|            | 8          |            | • | • |   |  |
|            | 9          |            | • | • |   |  |

#### Real code

#### Actuator color: Yellow

| Part No. | Position |   | Term | inal # |   |
|----------|----------|---|------|--------|---|
| Part No. | Position | 1 | 2    | 4      | 8 |
|          | 0        |   |      |        |   |
|          | 1        |   |      |        |   |
|          | 2        |   |      |        |   |
|          | 3        |   |      |        |   |
|          | 4        |   |      |        |   |
|          | 5        |   |      |        |   |
|          | 6        |   |      |        |   |
| DRS8016C | 7        |   |      |        |   |
| DRR8016C | 8        |   |      |        | • |
|          | 9        |   |      |        |   |
|          | Α        |   |      |        | • |
|          | В        |   |      |        |   |
|          | С        |   |      |        |   |
|          | D        |   |      |        | • |
|          | Е        |   |      |        | • |
|          | F        | • |      |        |   |

#### Complementary code Actuator color: Red

| Part No. | Position |   | Terminal # |   |   |  |
|----------|----------|---|------------|---|---|--|
|          |          | 1 | 2          | 4 | 8 |  |
|          | 0        |   |            | • |   |  |
|          | 1        |   |            |   |   |  |
|          | 2        |   |            | • |   |  |
|          | 3        |   |            | • |   |  |
|          | 4        |   |            |   |   |  |
|          | 5        |   |            |   |   |  |
|          | 6        | • |            |   | • |  |
| DRS8116C | 7        |   |            |   |   |  |
| DRR8116C | 8        | • |            |   |   |  |
|          | 9        |   |            | • |   |  |
|          | Α        | • |            | • |   |  |
|          | В        |   |            | • |   |  |
|          | С        | • |            |   |   |  |
|          | D        |   |            |   |   |  |
|          | Е        | • |            |   |   |  |
|          | F        |   |            |   |   |  |

#### ■ PCB Footprints

(Top view)

| Terminal style       | PC<br>Straight      | Right Angle |
|----------------------|---------------------|-------------|
| Footprint dimensions | 2.54 ±0.1 6-61 hole | 2.54 ±0.1   |

# ■ Packaging Specifications -

| Series                    | DRS7000C/8000C    | DRR7000C/8000C |
|---------------------------|-------------------|----------------|
| Stick-Tube Specifications | 11. 9 50pcs/stick | 50pcs/stick    |

\* Order in 50 piece increments.

## ■ Soldering Specifications

- (1) Manual Soldering 350°C, 3 sec. Max
- (2) Wave Soldering Immerse the switch two times for the portion from the front end of terminal to the back side of PCB for 5 to 6 seconds in the 260±3°C soldering pot.

#### Switch Operation –

Use a screwdriver for setting position of the actuator.

# ■ Flux Cleaning

After soldering, wait until the switches cool down to room temperature (30°C or below) before washing. If the switches are cleaned while still above 30°C, a vacuum will occur which will cause the cleaning solution to be sucked into the switches.