# SMR－SMRR ${ }_{88000}^{7000}$ <br> Hyper－Miniature Dip Rotary Switches（7．5mm sq．）〔Surface Mount〕 <br> <br> Washable 

 <br> <br> Washable}


## Features

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

## $\square$ Specifications

| Rating | Switching | Max． 30 mA 15VDC |
| :--- | :--- | :--- |
|  |  | Min． $1 \mu \mathrm{~A} 20 \mathrm{mVDC}$ |
|  | Non－switching | 100 mA 50 VDC |
| Contact resistance | $100 \mathrm{~m} \Omega$ maximum |  |
| Dielectric strength | $250 \mathrm{VAC}, 60 \mathrm{~s}$ |  |
| Insulation resistance | $1,000 \mathrm{M} \Omega$. minimum（100VDC） |  |
| Load life | 20,000 steps 30mA 15VDC |  |
| Operating torque | $49 \mathrm{mN} \cdot \mathrm{m} 〔 500 \mathrm{gf} \cdot \mathrm{cm} 〕$ maximum |  |
| Operating temperature range | $-25 \sim+85^{\circ} \mathrm{C}$ |  |
| Storage temperature range | $-40 \sim+85^{\circ} \mathrm{C}$ |  |

Part Numberring


| None | Gull Wing |
| :---: | :---: |
| $\mathbf{R}$ | Right angle |


| 7 | Screwdriver Actuator |
| :---: | :---: |
| 8 | Shaft Actuator |



| $\mathbf{1 0}$ | 10 positions |
| :---: | :---: |
| $\mathbf{1 6}$ | 16 positions |
| $\mathbf{1}$ | Stick－Tube |
| $\mathbf{1 E}$ | Taping |

Table of Part Numbers

|  |  | Screwd | Actuator | Sha | ctuator |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Gull Wing | Right Angle | Gull Wing | Right Angle |
| Real code | 10 | SMR7010C－1 <br> SMR7010C－1E | SMRR7010C－1 SMRR7010C－1E | $\star$ SMR8010C－1 | $\star$ SMRR8010C－1 <br> $\star$ SMRR8010C－1E |
|  | 16 | SMR7016C－1 <br> SMR7016C－1E | SMRR7016C－1 SMRR7016C－1E | SMR8016C－1 | $\star$ SMRR8016C－1 <br> $\star$ SMRR8016C－1E |
| Complementary code | 10 | SMR7110C－1 <br> SMR7110C－1E | SMRR7110C－1 <br> SMRR7110C－1E | SMR8110C－1 | ＊SMRR8110C－1 <br> $\star$ SMRR8110C－1E |
|  | 16 | SMR7116C－1 <br> SMR7116C－1E | SMRR7116C－1 <br> SMRR7116C－1E | ＊SMR8116C－1 | $\star$ SMRR8116C－1 <br> $\star$ SMRR8116C－1E |

[^0]SMR7010C-1(E)

SMR7110C-1(E)

(Gull Wing )


Terminal numbers are shown on the bottom of the switch.

| - Real code | Actuator color: Yellow |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Part No. | Position | Terminal \# |  |  |  |
|  |  | 1 | 2 | 4 | 8 |
| SMR7010C-1(E) SMRR7010C1(E) | 0 |  |  |  |  |
|  | 1 | $\bigcirc$ |  |  |  |
|  | 2 |  | $\bigcirc$ |  |  |
|  | 3 | $\bigcirc$ | $\bigcirc$ |  |  |
|  | 4 |  |  | $\bigcirc$ |  |
|  | 5 | $\bigcirc$ |  | $\bigcirc$ |  |
|  | 6 |  | $\bigcirc$ | $\bigcirc$ |  |
|  | 7 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  |
|  | 8 |  |  |  | $\bigcirc$ |
|  | 9 | $\bigcirc$ |  |  | $\bigcirc$ |

## SMRR7010C-1(E) <br> SMRR7110C-1(E)


(Right Angle)


SMR7016C-1(E) SMR7116C-1(E)



Terminal numb
of the switch.


- Complementary code Actuator color: Red

| Part No. | Position | Terminal \# |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 4 | 8 |
| SMR7110C-1(E) SMRR7110C- <br> 1(E) | 0 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
|  | 1 |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |
|  | 2 | $\bigcirc$ |  | $\bigcirc$ | $\bigcirc$ |
|  | 3 |  |  | $\bigcirc$ | $\bigcirc$ |
|  | 4 | $\bigcirc$ | $\bigcirc$ |  | $\bigcirc$ |
|  | 5 |  | $\bigcirc$ |  | $\bigcirc$ |
|  | 6 | $\bigcirc$ |  |  | $\bigcirc$ |
|  | 7 |  |  |  | $\bigcirc$ |
|  | 8 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ |  |
|  | 9 |  | $\bigcirc$ | $\bigcirc$ |  |


| Real code | Actuator color : Yellow |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Position | Terminal \# |  |  |  |
|  |  | 1 | 2 | 4 | 8 |
| SMR7016C-1(E) SMRR7016C1(E) | 0 |  |  |  |  |
|  | 1 | $\bullet$ |  |  |  |
|  | 2 |  | $\bullet$ |  |  |
|  | 3 | $\bullet$ | $\bullet$ |  |  |
|  | 4 |  |  | $\bullet$ |  |
|  | 5 | - |  | $\bullet$ |  |
|  | 6 |  | $\bullet$ | $\bullet$ |  |
|  | 7 | - | $\bullet$ | $\bullet$ |  |
|  | 8 |  |  |  | $\bullet$ |
|  | 9 | $\bullet$ |  |  | $\bullet$ |
|  | A |  | $\bullet$ |  | $\bullet$ |
|  | B | $\bullet$ | $\bullet$ |  | $\bullet$ |
|  | C |  |  | - | $\bullet$ |
|  | D | $\bullet$ |  | - | $\bullet$ |
|  | E |  | $\bullet$ | - | $\bullet$ |
|  | F | $\bullet$ | $\bullet$ | - | $\bigcirc$ |

- Complementary code Actuator color: Red

| Part No. | Position | Terminal \# |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 4 | 8 |
| SMR7116C-1(E) SMRR7116C1(E) | 0 | $\bullet$ | - | - | $\bullet$ |
|  | 1 |  | - | - | $\bullet$ |
|  | 2 | $\bullet$ |  | - | $\bullet$ |
|  | 3 |  |  | - | $\bullet$ |
|  | 4 | - | - |  | $\bullet$ |
|  | 5 |  | - |  | $\bullet$ |
|  | 6 | $\bullet$ |  |  | $\bullet$ |
|  | 7 |  |  |  | $\bullet$ |
|  | 8 | $\bullet$ | - | $\bullet$ |  |
|  | 9 |  | - | $\bullet$ |  |
|  | A | $\bullet$ |  | $\bullet$ |  |
|  | B |  |  | - |  |
|  | C | $\bullet$ | $\bullet$ |  |  |
|  | D |  | $\bullet$ |  |  |
|  | E | $\bullet$ |  |  |  |
|  | F |  |  |  |  |

SMR8010C-1 SMR8110C-1

(Gull Wing )

SMRR8010C-1(E)


Terminal numbers are shown on the bottom of the switch.

SMRR8110C-1(E)

(Right Angle)

SMR8016C-1
SMR8116C-1

(Gull Wing )


Terminal numbers are shown on the bottom f the switch.

SMRR8016C-1(E)
SMRR8116C-1(E)

(Right Angle)


| Real code | Actuator color : Yellow |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Part No. | Position | Terminal \# |  |  |  |
|  |  | 1 | 2 | 4 | 8 |
| SMR8010C-1 <br> SMRR8010C- <br> 1(E) | 0 |  |  |  |  |
|  | 1 | - |  |  |  |
|  | 2 |  | $\bullet$ |  |  |
|  | 3 | - | - |  |  |
|  | 4 |  |  | $\bullet$ |  |
|  | 5 | - |  | $\bullet$ |  |
|  | 6 |  | $\bullet$ | $\bullet$ |  |
|  | 7 | - | $\bullet$ | - |  |
|  | 8 |  |  |  | $\bullet$ |
|  | 9 | - |  |  | $\bullet$ |

- Complementary code Actuator color: Red

| Part No. | Position | Terminal \# |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 | 2 | 4 | 8 |
| SMR8110C-1 <br> SMRR8110C- <br> 1(E) | 0 | - | $\bullet$ | - | $\bullet$ |
|  | 1 |  | $\bullet$ | - | - |
|  | 2 | $\bullet$ |  | - | - |
|  | 3 |  |  | - | - |
|  | 4 | - | $\bullet$ |  | $\bullet$ |
|  | 5 |  | $\bullet$ |  | - |
|  | 6 | - |  |  | $\bullet$ |
|  | 7 |  |  |  | - |
|  | 8 | - | $\bullet$ | $\bullet$ |  |
|  | 9 |  | $\bullet$ | $\bullet$ |  |


| eal code | Actuator color: Yellow |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Position | Terminal \# |  |  |  |
| Part No. | Position | 1 | 2 | 4 | 8 |
| SMR8016C-1 <br> SMRR8016C- <br> 1(E) | 0 |  |  |  |  |
|  | 1 | $\bullet$ |  |  |  |
|  | 2 |  | $\bullet$ |  |  |
|  | 3 | $\bullet$ | - |  |  |
|  | 4 |  |  | $\bullet$ |  |
|  | 5 | $\bullet$ |  | $\bullet$ |  |
|  | 6 |  | $\bullet$ | $\bullet$ |  |
|  | 7 | - | - | $\bullet$ |  |
|  | 8 |  |  |  | $\bullet$ |
|  | 9 | $\bullet$ |  |  | $\bullet$ |
|  | A |  | $\bullet$ |  | $\bullet$ |
|  | B | - | $\bullet$ |  | $\bullet$ |
|  | C |  |  | $\bullet$ | $\bullet$ |
|  | D | - |  | $\bullet$ | $\bullet$ |
|  | E |  | $\bullet$ | $\bullet$ | $\bullet$ |
|  | F | - | $\bullet$ | - | $\bigcirc$ |

## PCB Footprints

Terminal style $\quad$ Gull Wing

## Soldering Specifications

(1) Manual Soldering $350^{\circ} \mathrm{C}, 3 \mathrm{sec}$. Max.
(2) Reflow

Peak temperature $255^{\circ} \mathrm{C}$ (Please refer to the profile below.)

■ Flux Cleaning
After soldering, wait until the switches cool down to room temperature $\left(30^{\circ} \mathrm{C}\right.$ or below) before washing. If the switches are cleaned while still above $30^{\circ} \mathrm{C}$, a vacuum will occur which will cause the cleaning solution to be sucked into the switches.


Reflow soldering: 2 times max.

Packaging Specifications
Series

Taping quantity: SMR series 1,000pcs / reel, SMRR series 500pcs/reel.
Each reel is packed in a cardboard box.
Minimum packaging quantity: Stick-Tube 50pcs, Taping 500pcs or 1,000pcs (refer to Packaging Specifications)

## X-ON Electronics

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[^0]:    ：Made－to－order products．

