

UP TO 3 POSITIONS WITH 3 OPTIONAL, INDEPENDENT LED LIGHT POSITIONS, 1.45 X .83 PANEL CUTOUT

Used in the heavy equipment, marine, process control and instrumentation markets the R2 rotary switch is an excellent replacement for rocker switches offering improved visual position indication, additional lighting options and different styling opportunities on front panels. The R2 series is a sealed, lighted rotary switch which snaps into a 1.45 x .83" industry standard rocker switch panel opening. The rotary knob snaps onto a shaft and can be installed by the panel builder for those desiring that flexibility. The R2 rotary switch provides up to 3 positions in all combinations of momentary and maintained action. It is capable of handling loads from logic level to 20 amps (resistive). Sealing is to IP68 (1 meter immersion) via a shaft o-ring seal in front and a potted base in the back. Termination options include .250" fast on, solder lug or a snap on modular connector. The R2 offers unique lighting options including up to three independent LED light positions which illuminate a lens on the rotary knob. This design provides more lighting options than traditional rocker switches, handles the full range of electrical loads and is robust enough to survive in the most demanding applications.



## Quality Features:

- Sealed watertight per IP68
- Snap-in panel mounting into industry standard 1.45 x .83 panel cutout
- Unique lighting options up to three independent LED light positions
- Plastic or "Soft Touch" knob options available
- 2 or 3 positions in all combinations of momentary and maintained action
- Termination options include .250" fast on, solder lug or a snap on modular connector

### Standard Characteristics/Ratings:

#### OPERATIONAL:

|                           |                    |
|---------------------------|--------------------|
| <b>Mechanical Life:</b>   | 100,000 cycles     |
| <b>Seal:</b>              | Watertight to IP68 |
| <b>Temperature Range:</b> | -40C to +85C       |

#### MATERIALS:

|                         |                                                      |
|-------------------------|------------------------------------------------------|
| <b>Case/Base:</b>       | Thermoplastic                                        |
| <b>Knob:</b>            | Thermoplastic                                        |
| <b>Terminals:</b>       | Copper alloy; silver plate; gold plate for low level |
| <b>Contacts:</b>        | Silver alloy; Gold plate for low level               |
| <b>Panel Thickness:</b> | .025 min to .187 max                                 |
| <b>Mounting:</b>        | Snap in from front<br>1.45 x .83 panel cutout        |

#### ELECTRICAL:

| LOAD Type          | Current Rating |                   | LIFE (Min.)   |
|--------------------|----------------|-------------------|---------------|
|                    | 12 & 28 VDC    | 110 VAC           |               |
| Resistive          | 20 amps        | 16 amps           | 25,000 cycles |
| Inductive          | 15 amps        | 15 amps           | 25,000 cycles |
| Lamp               | 4 amps         | 4 amps            | 25,000 cycles |
| <b>Motor Load:</b> |                | 1/2 HP at 110 vac |               |

# ROTARY SWITCH

R2  
LIGHTED  
ROTARY

UP TO 3 POSITIONS WITH 3 OPTIONAL, INDEPENDENT LED LIGHT POSITIONS, 1.45 X .83 PANEL CUTOUT



## ELECTRICAL SCHEMATICS



GENERIC SWITCH SCHEMATIC  
USE TERMINALS AS APPLICABLE  
TO PART NUMBER



SPT SCHEMATIC  
USE R2XXXX7XXXX FOR (8-9), (8-2), (8-4)  
USE R2XXXX7XXXX FOR (OFF), (8-2), (8-4)  
USE R2XXXX7XXXX FOR (8-9), (8-2), (OFF)



TERMINAL LOCATION AS VIEWED  
FROM THE BOTTOM OF THE SWITCH

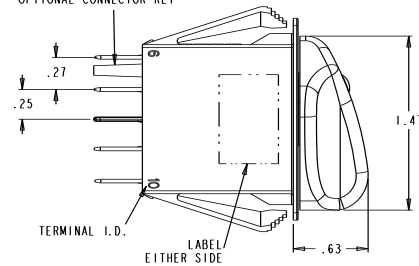


KNOB LOCATION DETAILS  
SCALE 1:1



PANEL THICKNESS: .025 MIN. TO .187 MAX.

## OPTIONAL CONNECTOR KEY



R2

X

X

X

X

X

X

X

X

X

X

X

X

X

X

| TERMINAL STYLE / SWITCH RATING<br>3RD CHARACTER                                |
|--------------------------------------------------------------------------------|
| A WITHOUT TERMINAL BARRIERS,<br>WITH CONNECTOR KEYING PIN,<br>STANDARD RATING  |
| B WITHOUT TERMINAL BARRIERS,<br>WITH CONNECTOR KEYING PIN,<br>STANDARD RATING  |
| C WITHOUT TERMINAL BARRIERS,<br>WITH CONNECTOR KEYING PIN,<br>LOW LEVEL RATING |
| D WITHOUT TERMINAL BARRIERS,<br>WITH CONNECTOR KEYING PIN,<br>LOW LEVEL RATING |

| KNOB COLOR AND TEXTURE<br>4TH CHARACTER |
|-----------------------------------------|
| A BLACK PLASTIC                         |
| B BLACK "SOFT TOUCH"                    |
| C WHITE PLASTIC                         |
| D WHITE "SOFT TOUCH"                    |

| LOCATION 'C' LIGHT SOURCE COLOR<br>12TH CHARACTER |
|---------------------------------------------------|
| N NONE                                            |
| 1 RED                                             |
| 2 GREEN                                           |
| 3 AMBER                                           |

| LOCATION 'B' LIGHT SOURCE COLOR<br>11TH CHARACTER |
|---------------------------------------------------|
| N NONE                                            |
| 1 RED                                             |
| 2 GREEN                                           |
| 3 AMBER                                           |

| LOCATION 'A' LIGHT SOURCE COLOR<br>10TH CHARACTER |
|---------------------------------------------------|
| N NONE                                            |
| 1 RED                                             |
| 2 GREEN                                           |
| 3 AMBER                                           |

| LIGHT SOURCE VOLTAGE<br>9TH CHARACTER |
|---------------------------------------|
| N NONE                                |
| A 2 V                                 |
| B 6 V                                 |
| C 12 V                                |
| D 24 V                                |

| SWITCH CONFIGURATIONS<br>5TH AND 6TH CHARACTERS |                |                 |                 |                 |
|-------------------------------------------------|----------------|-----------------|-----------------|-----------------|
|                                                 | KNOB LOCATIONS | SWITCH ACTIONS  |                 |                 |
|                                                 |                | KNOB LOCATION A | KNOB LOCATION B | KNOB LOCATION C |
| 11                                              | 2 POSITION     | A/B             | MAINTAIN        | MAINTAIN        |
| 12                                              | 2 POSITION     | A/B             | MAINTAIN        | MOMENTARY       |
| 13                                              | 2 POSITION     | A/B             | MOMENTARY       | MAINTAIN        |
| 21                                              | 2 POSITION     | A/C             | MAINTAIN        | MAINTAIN        |
| 22                                              | 2 POSITION     | A/C             | MAINTAIN        | MOMENTARY       |
| 23                                              | 2 POSITION     | A/C             | MOMENTARY       | MAINTAIN        |
| 31                                              | 2 POSITION     | B/C             | MAINTAIN        | MAINTAIN        |
| 32                                              | 2 POSITION     | B/C             | MAINTAIN        | MOMENTARY       |
| 33                                              | 2 POSITION     | B/C             | MOMENTARY       | MAINTAIN        |
| 44                                              | 3 POSITION     | A/B/C           | MAINTAIN        | MAINTAIN        |
| 45                                              | 3 POSITION     | A/B/C           | MOMENTARY       | MAINTAIN        |
| 46                                              | 3 POSITION     | A/B/C           | MAINTAIN        | MOMENTARY       |
| 47                                              | 3 POSITION     | A/B/C           | MOMENTARY       | MAINTAIN        |

| SWITCH CIRCUIT 1 - TERMINALS 2, 3, 4<br>7TH CHARACTER |                 |                 |                 |
|-------------------------------------------------------|-----------------|-----------------|-----------------|
|                                                       | KNOB LOCATION A | KNOB LOCATION B | KNOB LOCATION C |
| 2 POSITION SWITCH (KNOB LOCATIONS A/B)                |                 |                 |                 |
| 1                                                     | 3-2             | OFF             | ----            |
| 2                                                     | OFF             | 3-4             | ----            |
| 3                                                     | 3-2             | 3-4             | ----            |
| 2 POSITION SWITCH (KNOB LOCATIONS A/C)                |                 |                 |                 |
| 1                                                     | 3-2             | ----            | OFF             |
| 2                                                     | OFF             | ----            | 3-4             |
| 3                                                     | 3-2             | ----            | 3-4             |
| 2 POSITION SWITCH (KNOB LOCATIONS B/C)                |                 |                 |                 |
| 1                                                     | ----            | 3-2             | OFF             |
| 2                                                     | ----            | OFF             | 3-4             |
| 3                                                     | ----            | 3-2             | 3-4             |
| 3-POSITION SWITCH                                     |                 |                 |                 |
| 4                                                     | OFF             | 3-4             | 3-4             |
| 5                                                     | 3-2             | OFF             | 3-4             |
| 6                                                     | 3-2             | 3-2             | OFF             |
| 7                                                     | 3-2             | 3-2             | 3-4             |
| 8                                                     | 3-2             | OFF             | OFF             |
| 9                                                     | OFF             | OFF             | 3-4             |

| SWITCH CIRCUIT 2 - TERMINALS 7, 8, 9<br>8TH CHARACTER |                 |                 |                 |
|-------------------------------------------------------|-----------------|-----------------|-----------------|
|                                                       | KNOB LOCATION A | KNOB LOCATION B | KNOB LOCATION C |
| NONE (SINGLE POLE SWITCH)                             |                 |                 |                 |
| N                                                     | ----            | ----            | ----            |
| 2 POSITION SWITCH (KNOB LOCATIONS A/B)                |                 |                 |                 |
| 1                                                     | 8-9             | OFF             | ----            |
| 2                                                     | OFF             | 8-7             | ----            |
| 3                                                     | 8-9             | 8-7             | ----            |
| 2 POSITION SWITCH (KNOB LOCATIONS A/C)                |                 |                 |                 |
| 1                                                     | 8-9             | ----            | OFF             |
| 2                                                     | OFF             | ----            | 8-7             |
| 3                                                     | 8-9             | ----            | 8-7             |
| 2 POSITION SWITCH (KNOB LOCATIONS B/C)                |                 |                 |                 |
| 1                                                     | ----            | 8-9             | OFF             |
| 2                                                     | ----            | OFF             | 8-7             |
| 3                                                     | ----            | 8-9             | 8-7             |
| 3-POSITION SWITCH                                     |                 |                 |                 |
| 4                                                     | OFF             | 8-7             | 8-7             |
| 5                                                     | 8-9             | OFF             | 8-7             |
| 6                                                     | 8-9             | 8-9             | OFF             |
| 7                                                     | 8-9             | 8-7             | 8-7             |
| 8                                                     | 8-9             | OFF             | OFF             |
| 9                                                     | OFF             | OFF             | 8-7             |

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