

# PT65 SERIES ROTARY DIP SWITCHES

Outside the U.S. and the UK,  
this series is sold as the CR36  
series, with a blue case.

## FEATURES

- 3 + 3 terminal layout.
- Completely sealed for process compatibility.
- 4, 6, 8, 10 or 16 positions w/extensive codings.
- Precision designed detent action.
- Compact size.
- High reliability & long life.
- Clockwise or counterclockwise settable.
- Solder coated terminals.



## GENERAL SPECIFICATIONS

### ELECTRICALS

|                            |                |
|----------------------------|----------------|
| Operating voltage          | 24 VDC max.    |
| Contact rating, static     | 400 mA max.    |
| Contact rating, dynamic    | 150 mA max.    |
| Switching capacity         | 1.5 VA max.    |
| Initial contact resistance | < 80 milliohms |
| Insulation resistance      | > 100 megohms  |

### MECHANICALS, THERMALS

|                             |                                  |
|-----------------------------|----------------------------------|
| Torque                      | 7.0 inch-oz. min. (0.7 Ncm min.) |
| Expected life               | 10,000 switching operations      |
| Contact force               | 15 grams min.                    |
| Operating temperature range | -20°C to 70°C                    |

### SOLDERING RECOMMENDATIONS

|                  |                                                      |
|------------------|------------------------------------------------------|
| Hand soldering   | 340°C max. for 2 seconds max. (40 watt iron max.)    |
| Wave soldering   | 260°C max. for 10 seconds max.                       |
| Solvent washing  | Freons or alcohol. (Do not use chlorinated solvents) |
| Aqueous cleaning | Deionized water preferred                            |

## MATERIALS

|                  |                                         |
|------------------|-----------------------------------------|
| Base             | UL94V-O, high temperature thermoplastic |
| Cover            | UL94V-O, high temperature thermoplastic |
| Actuator         | POM                                     |
| Contacts         | Gold over nickel plated bronze          |
| Terminals        | Gold over nickel plated bronze          |
| Terminal sealing | Molded-in                               |
| Actuator seal    | 'O'-ring                                |

## CODE 05 GRAY CODE

### 16 Positions

| Dial No. | 1 | 2 | 4 | 8 |
|----------|---|---|---|---|
| 0        |   |   |   |   |
| 1        | • |   |   |   |
| 2        | • | • |   |   |
| 3        |   | • |   |   |
| 4        |   | • | • |   |
| 5        | • | • | • |   |
| 6        | • |   | • |   |
| 7        |   |   | • |   |
| 8        |   |   | • | • |
| 9        | • | • | • | • |
| A        | • | • | • | • |
| B        |   | • | • | • |
| C        |   | • |   | • |
| D        | • | • |   | • |
| E        | • |   |   | • |
| F        |   |   |   | • |

## CODES

NOTE: For each dial position in tables, Common terminal(s) (C) are connected to terminal number(s) indicated - i.e. - none or combinations of 1, 2, 3, 4 or 8. Each model in this series has 2 Common terminals except codes 11 and 24 which have one.

| CODE 11<br>ON/OFF |   |
|-------------------|---|
| 4 Positions       |   |
| Dial No.          | 1 |
| 0                 |   |
| 1                 | • |
| 0                 |   |
| 1                 | • |

| CODE 12<br>BCD |     |
|----------------|-----|
| 4 Positions    |     |
| Dial No.       | 1 2 |
| 0              |     |
| 1              | •   |
| 2              |     |
| 3              | •   |

| CODE 21<br>DECIMAL |         |
|--------------------|---------|
| 4 Positions        |         |
| Dial No.           | 1 2 3 4 |
| 1                  | •       |
| 2                  |         |
| 3                  | •       |
| 0                  |         |

| CODES 24 & 25 BCD |       |
|-------------------|-------|
| 6 Positions       |       |
| Dial No.          | 1 2 4 |
| 0                 |       |
| 1                 | •     |
| 2                 |       |
| 3                 | •     |
| 4                 |       |
| 5                 | •     |

| CODE 26<br>OCTAL |       |
|------------------|-------|
| 8 Positions      |       |
| Dial No.         | 1 2 4 |
| 0                |       |
| 1                | •     |
| 2                |       |
| 3                | •     |
| 4                |       |
| 5                | •     |
| 6                | •     |
| 7                | •     |

| CODE 27<br>OCTAL COMPLEMENT |         |
|-----------------------------|---------|
| 8 Positions                 |         |
| Dial No.                    | 1 2 4 8 |
| 0                           | •       |
| 1                           |         |
| 2                           | •       |
| 3                           |         |
| 4                           | •       |
| 5                           |         |
| 6                           | •       |
| 7                           |         |

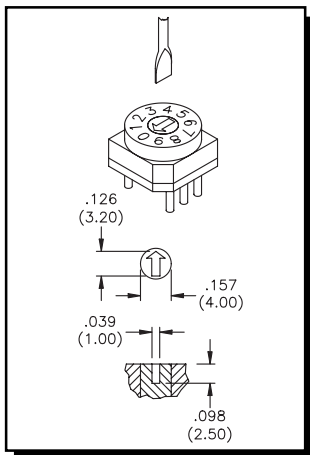
| BINARY CODED<br>DECIMAL (01) |         |
|------------------------------|---------|
| 10 Positions                 |         |
| Dial No.                     | 1 2 4 8 |
| 0                            |         |
| 1                            | •       |
| 2                            |         |
| 3                            | •       |
| 4                            |         |
| 5                            | •       |
| 6                            |         |
| 7                            | •       |
| 8                            |         |
| 9                            | •       |

| COMP. OF BINARY<br>CODED DECIMAL (02) |         |
|---------------------------------------|---------|
| 10 Positions                          |         |
| Dial No.                              | 1 2 4 8 |
| 0                                     | •       |
| 1                                     |         |
| 2                                     | •       |
| 3                                     |         |
| 4                                     | •       |
| 5                                     |         |
| 6                                     | •       |
| 7                                     |         |
| 8                                     | •       |
| 9                                     |         |

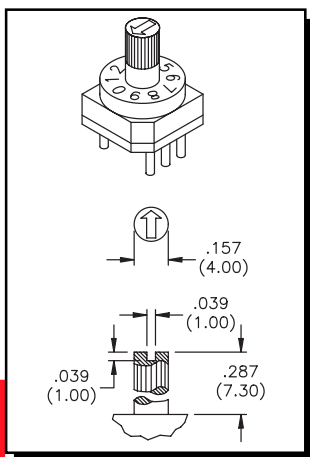
| BINARY CODED<br>HEXADECIMAL (03) |         |
|----------------------------------|---------|
| 16 Positions                     |         |
| Dial No.                         | 1 2 4 8 |
| 0                                |         |
| 1                                | •       |
| 2                                |         |
| 3                                | •       |
| 4                                |         |
| 5                                | •       |
| 6                                |         |
| 7                                | •       |
| 8                                |         |
| 9                                | •       |
| A                                |         |
| B                                | •       |
| C                                |         |
| D                                | •       |
| E                                |         |
| F                                | •       |

| COMP. OF BINARY<br>CODED HEXADEC. (06) |         |
|----------------------------------------|---------|
| 16 Positions                           |         |
| Dial No.                               | 1 2 4 8 |
| 0                                      | •       |
| 1                                      |         |
| 2                                      | •       |
| 3                                      |         |
| 4                                      | •       |
| 5                                      |         |
| 6                                      | •       |
| 7                                      |         |
| 8                                      | •       |
| 9                                      |         |
| A                                      | •       |
| B                                      |         |
| C                                      | •       |
| D                                      |         |
| E                                      | •       |
| F                                      |         |

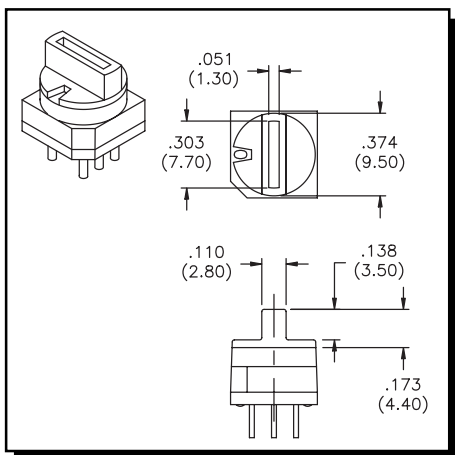
## PT65 SERIES



| Arrow shaped slot<br>Actuator Models |           | Complete Model No. by Terminal Style |              |              |
|--------------------------------------|-----------|--------------------------------------|--------------|--------------|
|                                      |           | Straight                             | Right Angle  |              |
|                                      |           |                                      | Pitch        |              |
| Code (see truth tables)              | Positions |                                      | .100" (2,54) | .200" (5,08) |
| Binary Coded Decimal                 | 10        | PT65101                              | PT65101L254  | PT65101L508  |
| Comp. of Binary Coded Dec.           | 10        | PT65102                              | PT65102L254  | PT65102L508  |
| Binary Coded Hexadecimal             | 16        | PT65103                              | PT65103L254  | PT65103L508  |
| Comp. of Binary Coded Hex.           | 16        | PT65106                              | PT65106L254  | PT65106L508  |
| Code 12, Binary Coded Dec.           | 4         | PT65112                              | PT65112L254  | PT65112L508  |
| Code 21, Decimal                     | 4         | PT65121                              | PT65121L254  | PT65121L508  |
| Code 25, Binary Coded Dec.           | 6         | PT65125                              | PT65125L254  | PT65125L508  |
| Code 26, Octal                       | 8         | PT65126                              | PT65126L254  | PT65126L508  |
| Code 27, Octal complement            | 8         | PT65127                              | PT65127L254  | PT65127L508  |



| Spindle<br>Actuator Models |           | Complete Model No. by Terminal Style |              |              |
|----------------------------|-----------|--------------------------------------|--------------|--------------|
|                            |           | Straight                             | Right Angle  |              |
|                            |           |                                      | Pitch        |              |
| Code (see truth tables)    | Positions |                                      | .100" (2,54) | .200" (5,08) |
| Binary Coded Decimal       | 10        | PT65301                              | PT65301L254  | PT65301L508  |
| Comp. of Binary Coded Dec. | 10        | PT65302                              | PT65302L254  | PT65302L508  |
| Binary Coded Hexadecimal   | 16        | PT65303                              | PT65303L254  | PT65303L508  |
| Code 12, Binary Coded Dec. | 4         | PT65312                              | PT65312L254  | PT65312L508  |
| Code 21, Decimal           | 4         | PT65321                              | PT65321L254  | PT65321L508  |
| Code 26, Octal             | 8         | PT65326                              | PT65326L254  | PT65326L508  |
| Code 27, Octal complement  | 8         | PT65327                              | PT65327L254  | PT65327L508  |

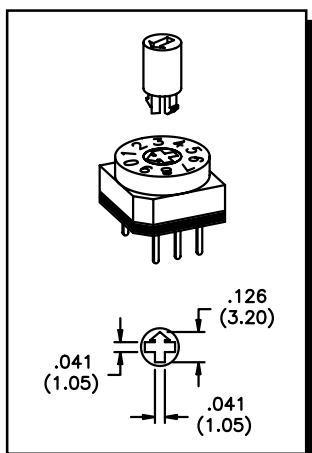


| Segment Wheel<br>Actuator Models |           | Complete Model No. by Terminal Style |              |              |
|----------------------------------|-----------|--------------------------------------|--------------|--------------|
|                                  |           | Straight                             | Right Angle  |              |
|                                  |           |                                      | Pitch        |              |
| Code (see truth tables)          | Positions |                                      | .100" (2,54) | .200" (5,08) |
| Binary Coded Decimal             | 10        | PT65501                              | PT65501L254  | PT65501L508  |
| Comp. of Binary Coded Dec.       | 10        | PT65502                              | PT65502L254  | PT65502L508  |
| Binary Coded Hexadecimal         | 16        | PT65503                              | PT65503L254  | PT65503L508  |
| Code 21, Decimal                 | 4         | PT65521                              | PT65521L254  | PT65521L508  |
| Code 26, Octal                   | 8         | PT65526                              | PT65526L254  | PT65526L508  |

All models listed on this page have 2 Common terminals except Code 11 and Code 24 which have one.

Other codes are available - consult factory.

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**PT65 SERIES**

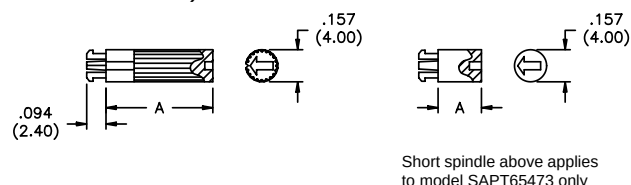
| Cross shaped slot<br>Actuator Models |           | Complete Model No. by Terminal Style |                    |                    |
|--------------------------------------|-----------|--------------------------------------|--------------------|--------------------|
|                                      |           | Straight                             | Right Angle        |                    |
|                                      |           |                                      | Pitch              |                    |
| Code (see truth tables)              | Positions |                                      | .100" (2,54)       | .200" (5,08)       |
| Binary Coded Decimal                 | 10        | <b>PT65701</b>                       | <b>PT65701L254</b> | <b>PT65701L508</b> |
| Comp. of Binary Coded Dec.           | 10        | <b>PT65702</b>                       | <b>PT65702L254</b> | <b>PT65702L508</b> |
| Binary Coded Hexadecimal             | 16        | <b>PT65703</b>                       | <b>PT65703L254</b> | <b>PT65703L508</b> |
| Code 05, Gray Code                   | 16        | <b>PT65705</b>                       | <b>PT65705L254</b> | <b>PT65705L508</b> |
| Comp. of Binary Coded Hex.           | 16        | <b>PT65706</b>                       | <b>PT65706L254</b> | <b>PT65706L508</b> |
| Code 11, ON/OFF                      | 4         | <b>PT65711</b>                       | <b>PT65711L254</b> | <b>PT65711L508</b> |
| Code 12, Hexadecimal                 | 4         | <b>PT65712</b>                       | <b>PT65712L254</b> | <b>PT65712L508</b> |
| Code 21, Decimal                     | 4         | <b>PT65721</b>                       | <b>PT65721L254</b> | <b>PT65721L508</b> |
| Code 24, Binary Coded Dec.           | 6         | <b>PT65724</b>                       | <b>PT65724L254</b> | <b>PT65724L508</b> |
| Code 25, Binary Coded Dec.           | 6         | <b>PT65725</b>                       | <b>PT65725L254</b> | <b>PT65725L508</b> |
| Code 26, Octal                       | 8         | <b>PT65726</b>                       | <b>PT65726L254</b> | <b>PT65726L508</b> |
| Code 27, Octal complement            | 8         | <b>PT65727</b>                       | <b>PT65727L254</b> | <b>PT65727L508</b> |

**Operating Elements** snap-fit securely into PT65 (& P60A) Series switch models with cross shaped slot actuators. Order separately by Model number shown below and indicate color.



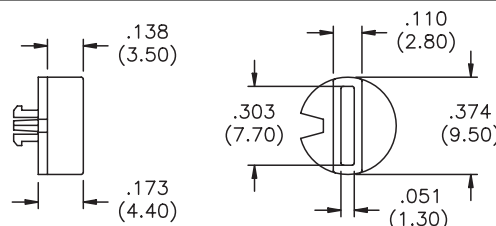
**Spindle** colors: red, gray or black (consult factory for color codes)

| US Model No.      | Dim. A | EU Model No. |
|-------------------|--------|--------------|
| <b>SAPT65473</b>  | .287   | N/A          |
| <b>SAPT654116</b> | .457   | <b>U4820</b> |
| <b>SAPT654133</b> | .524   | <b>U4830</b> |



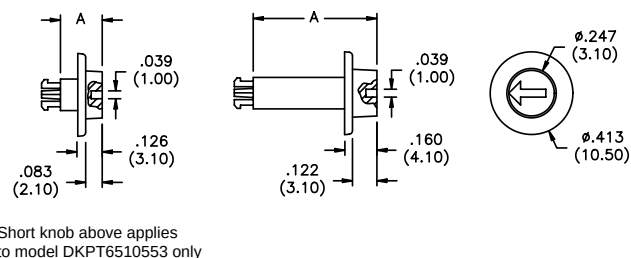
**Segment wheel**  
colors: yellow, red, green, blue, gray or black (consult factory for color codes)

| US Model No.      | EU Model No. |
|-------------------|--------------|
| <b>SRPT659544</b> | <b>U4940</b> |



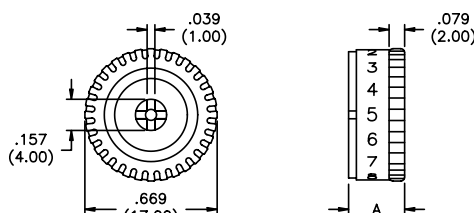
**Knob** color: red

| US Model No.        | Dim. A | EU Model No. |
|---------------------|--------|--------------|
| <b>DKPT6510553</b>  | .209   | <b>U4906</b> |
| <b>DKPT65105157</b> | .618   | <b>U4916</b> |
| <b>DKPT65105291</b> | 1.146  | N/A          |
| <b>DKPT65105344</b> | 1.354  | N/A          |



**Wheel** color: white

| US Model No.      | Dim. A | EU Model No.   |
|-------------------|--------|----------------|
| <b>DRPT651772</b> | .283   | <b>U4847/1</b> |



printing on request  
(fits PT65 models only)

## PT65 SERIES

| MECHANICAL OUTLINES                      |                    |
|------------------------------------------|--------------------|
| Terminal option suffix*:                 | Mtg. hole pattern: |
| <b>NONE</b><br>Straight terminals<br>    |                    |
| <b>V</b><br>Crimped terminals<br>        |                    |
| <b>L254</b><br>Right angle terminals<br> |                    |
| <b>L508</b><br>Right angle terminals<br> |                    |

\* 'None' indicates no option suffix is required.

### PT65 SERIES STANDARD OPTIONS :

#### Actuators

- 1 Arrow shaped slot
- 3 Spindle
- 5 Segment wheel
- 7 Cross shaped slot

#### Codes

- 01 BCD
- 02 BCD complement
- 03 Hexadecimal
- 06 Hexadecimal Comp.

See other available codes on page G17

#### Terminals

- None Straight
- V Crimped
- L254 Rt. angle 2.54 (.100")
- L508 Rt. angle 5.08 (.200")

#### ORDER GUIDE:

Make selections from the above table in sequence to specify a complete model number.

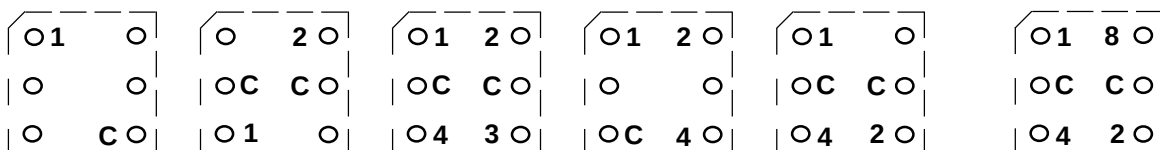
Note that 'None' indicates that no option suffix is required.

Example; **PT65101V**  
 Series Actuator Terminals Code

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

### TERMINAL IDENTIFICATION FOR ALL MODELS (viewed from top of switch inserted into printed circuit board).

Refer to TRUTH TABLES on page G17.



Code 11

Code 12

Code 21

Code 24

Codes 25 & 26

Code 27 and  
10 & 16 pos. models