# imall

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## **PT65 SERIES ROTARY DIP SWITCHES**

#### **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.

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





#### MATERIALS

|                                                                                                                                                     |                                                                                                   | MATERIALS                                                  |                                                                                           |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------|--|
| GENERAL SPECIFICATIONS                                                                                                                              | \$                                                                                                | Base<br>Cover<br>Actuator                                  | UL94V-O, high temperature thermoplastic<br>UL94V-O, high temperature thermoplastic<br>POM |  |
| Operating voltage<br>Contact rating, static<br>Contact rating, dynamic<br>Switching capacity<br>Initial contact resistance<br>Insulation resistance | 24 VDC max.<br>400 mA max.<br>150 mA max.<br>1.5 VA max.<br>< 80 milliohms<br>> 100 megohms       | Contacts<br>Terminals<br>Terminal sealing<br>Actuator seal | Gold over nickel plated bronze<br>Gold over nickel plated bronze<br>Molded-in<br>'O'-ring |  |
| MECHANICALS, THERMALS                                                                                                                               |                                                                                                   |                                                            |                                                                                           |  |
| Torque<br>Expected life<br>Contact force<br>Operating temperature range                                                                             | 7.0 inch-oz. min. (0.7 Ncm min.)<br>10,000 switching operations<br>15 grams min.<br>-20°C to 70°C |                                                            | CODE 05<br>GRAY CODE                                                                      |  |
| SOLDEDING DECOMMENDATI                                                                                                                              | ONG                                                                                               |                                                            | GRATCODE                                                                                  |  |

#### SOLDERING RECOMMENDATIONS

Hand soldering Wave soldering Solvent washing Aqueous cleaning

#### 340°C max. for 2 seconds max. (40 watt iron max.) 260°C max. for 10 seconds max. Freons or alcohol. (Do not use chlorinated solvents) Deionized water preferred

#### 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 1   | 1   | CODE 12   | 2  |   |
|----------|-----|-----------|----|---|
| ON/0FF   |     | BCD       |    |   |
| 4 Positi | ons | 4 Positio | ns |   |
| Dial No. | 1   | Dial No.  | 1  | 2 |
| 0        |     | 0         |    |   |
| 1        | •   | 1         | •  |   |
| 0        |     | 2         |    | • |
| 1        | ٠   | 3         | •  | • |

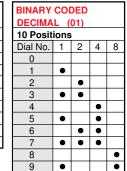
| CODE 21   |    |   |   |   |  |
|-----------|----|---|---|---|--|
| DECIMAL   | _  |   |   |   |  |
| 4 Positio | ns |   |   |   |  |
| Dial No.  | 1  | 2 | 3 | 4 |  |
| 1         | ٠  |   |   |   |  |
| 2         |    | ٠ |   |   |  |
| 3         |    |   | ٠ |   |  |
| 0         |    |   |   | • |  |

| CODES 2   | 4 & 2 | 25 E | <b>SCD</b> |
|-----------|-------|------|------------|
| 6 Positio | ns    |      |            |
| Dial No.  | 1     | 2    | 4          |
| 0         |       |      |            |
| 1         | ٠     |      |            |
| 2         |       | •    |            |
| 3         | •     | •    |            |
| 4         |       |      | •          |
| 5         | •     |      | •          |

| CODE 05          |     |   |             |   |  |
|------------------|-----|---|-------------|---|--|
| <b>GRAY C</b>    |     |   |             |   |  |
| 16 Positi        | ons | 5 |             |   |  |
| Dial No.         | 1   | 2 | 4           | 8 |  |
| 0                |     |   |             |   |  |
| 1                | •   |   |             |   |  |
| 2                | ٠   | • |             |   |  |
| 3                |     | • |             |   |  |
| 4                |     | ٠ | •           |   |  |
| 5                | ٠   | ٠ | ٠           |   |  |
| 6                | •   |   | •           |   |  |
| 7                |     |   | •           |   |  |
| 8                |     |   | •           | • |  |
| 9                | ٠   |   | • • • • • • | • |  |
| A                | ٠   | • | ٠           | • |  |
| В                |     | • | ٠           | • |  |
| C                |     | ٠ |             | • |  |
| D                | ٠   | ٠ |             | • |  |
| C<br>D<br>E<br>F | ٠   |   |             | • |  |
| F                |     |   |             | • |  |

| CODE 26   |    |   |   |  |
|-----------|----|---|---|--|
| OCTAL     |    |   |   |  |
| 8 Positio | ns |   |   |  |
| Dial No.  | 1  | 2 | 4 |  |
| 0         |    |   |   |  |
| 1         | •  |   |   |  |
| 2<br>3    |    | • |   |  |
|           | •  | • |   |  |
| 4         |    |   | ٠ |  |
| 5         | •  |   | • |  |
| 6         |    | • | • |  |
| 7         | ٠  | • | • |  |

| CODE 27<br>OCTAL COMPLEMENT |   |   |   |   |  |  |
|-----------------------------|---|---|---|---|--|--|
| 8 Positio                   |   |   |   |   |  |  |
| Dial No. 1 2 4 8            |   |   |   |   |  |  |
| 0                           | • | • | • | • |  |  |
| 1                           |   | ٠ | ٠ | • |  |  |
| 2                           | • |   | ٠ | • |  |  |
| 3                           |   |   | • | • |  |  |
| 4                           | • | • |   | • |  |  |
| 5                           |   | ٠ |   | • |  |  |
| 6                           | ٠ |   |   | • |  |  |
| 7                           |   |   |   |   |  |  |

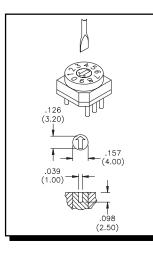


|                 |      |      |      |     |   | _ |  |
|-----------------|------|------|------|-----|---|---|--|
| COMP. OF BINARY |      |      |      |     |   |   |  |
| CODED           | DEC  | CIMA | L (( | )2) |   |   |  |
| 10 Posit        | ions | ;    |      |     |   | Γ |  |
| Dial No.        | 1    | 2    | 4    | 8   |   |   |  |
| 0               | •    | ٠    | •    | ٠   |   |   |  |
| 1               |      | ٠    | •    | ٠   |   |   |  |
| 2               | •    |      | •    | ٠   |   | Γ |  |
| 3               |      |      | •    | ٠   |   |   |  |
| 4               | ٠    | ٠    |      | ٠   |   |   |  |
| 5               |      | •    |      | ٠   |   | L |  |
| 6               | •    |      |      | ٠   |   | L |  |
| 7               |      |      |      | ٠   |   |   |  |
| 8               | •    | ٠    | •    |     |   |   |  |
| 9               |      | ٠    | •    |     |   | L |  |
|                 |      |      |      |     | I | L |  |
|                 |      |      |      |     |   | Ĺ |  |
|                 |      |      |      |     |   |   |  |

| BINAR            |      |   |     |   |
|------------------|------|---|-----|---|
| HEXAD            |      |   | (03 | ) |
| 16 Posit         | ions |   |     |   |
| Dial No.         | 1    | 2 | 4   | 8 |
| 0                |      |   |     |   |
| 1                | ٠    |   |     |   |
| 2                |      | ٠ |     |   |
| 3                | ٠    | • |     |   |
| 4                |      |   | •   |   |
| 5                | ٠    |   | •   |   |
| 6                |      | ٠ | •   |   |
| 7                | •    | • | •   |   |
| 8                |      |   |     | ۲ |
| 9                | ٠    |   |     | • |
| Α                |      | ٠ |     | • |
| В                | •    | • |     | • |
| C                |      |   | •   | • |
| D                | •    |   | •   | • |
| C<br>D<br>E<br>F |      | ۲ | ٠   | ٠ |
| F                | ٠    | ٠ | ٠   | ٠ |

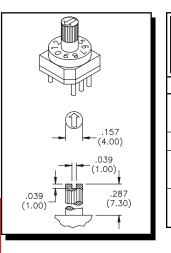
| COMP. C     |     |   |       |     |  |  |  |
|-------------|-----|---|-------|-----|--|--|--|
| CODED       |     |   | EC. ( | 06) |  |  |  |
| 16 Positi   | ons | ; |       |     |  |  |  |
| Dial No.    | 1   | 2 | 4     | 8   |  |  |  |
| 0           | •   | • | •     | •   |  |  |  |
| 1           |     | ٠ | •     | •   |  |  |  |
| 2           | ٠   |   | •     | •   |  |  |  |
| 3           |     |   | •     | ٠   |  |  |  |
| 4           | •   | • |       | •   |  |  |  |
| 5<br>6<br>7 |     | • |       | •   |  |  |  |
| 6           | •   |   |       | •   |  |  |  |
| 7           |     |   |       | •   |  |  |  |
| 8           | ٠   | • | •     |     |  |  |  |
| 9           |     | • | •     |     |  |  |  |
| A           | ٠   |   | •     |     |  |  |  |
| В           |     |   | •     |     |  |  |  |
| С           | ٠   | ٠ |       |     |  |  |  |
| D           |     | ٠ |       |     |  |  |  |
| E           | ٠   |   |       |     |  |  |  |
| F           |     |   |       |     |  |  |  |

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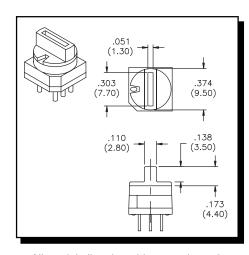
| Arrow shaped slot          |           | Complete | e Model No. by 1 | erminal Style |
|----------------------------|-----------|----------|------------------|---------------|
| Actuator Models            |           |          | Right Ar         | ngle          |
|                            |           | Straight | Pitch            | ו             |
| 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   |

|       | L |
|-------|---|
| Style |   |
|       |   |
|       |   |
|       |   |
| (80   |   |
| L508  |   |
| L508  |   |



Ρ

| Spindle                    |           | Complete Model No. by Terminal Style |              |             |
|----------------------------|-----------|--------------------------------------|--------------|-------------|
| Actuator Models            |           |                                      | Right Angle  |             |
|                            |           | Straight                             | pht 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              |           | Complete Model No. by Terminal Style |              |             |
|----------------------------|-----------|--------------------------------------|--------------|-------------|
| Actuator Models            |           |                                      | Right Angle  |             |
|                            |           | Straight                             | 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.

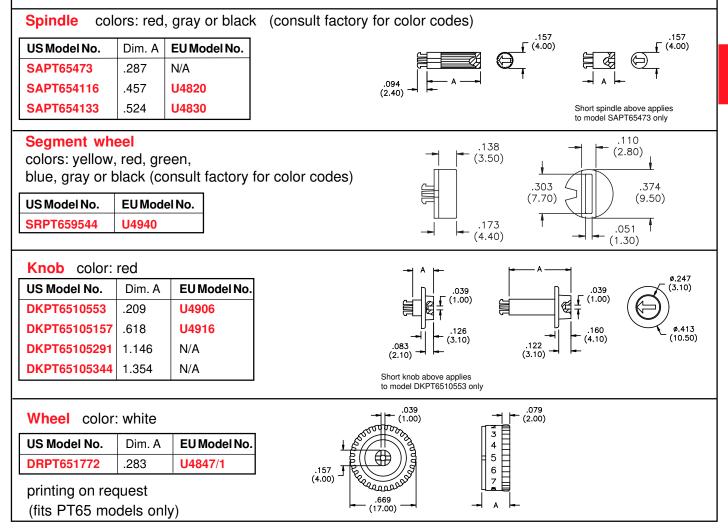
|                            | Cross shaped slot          |           | Complete | Model No. by T | erminal Style |
|----------------------------|----------------------------|-----------|----------|----------------|---------------|
| PT65 SERIES                | Actuator Models            |           |          | Right A        | Ingle         |
|                            |                            |           | Straight | Pito           | ch            |
|                            | Code (see truth tables)    | Positions |          | .100" (2,54)   | .200"(5,08)   |
|                            | Binary Coded Decimal       | 10        | PT65701  | PT65701L254    | PT65701L508   |
|                            | Comp. of Binary Coded Dec. | 10        | PT65702  | PT65702L254    | PT65702L508   |
| Charles and the second     | Binary Coded Hexadecimal   | 16        | PT65703  | PT65703L254    | PT65703L508   |
|                            | Code 05, Gray Code         | 16        | PT65705  | PT65705L254    | PT65705L508   |
|                            | Comp. of Binary Coded Hex. | 16        | PT65706  | PT65706L254    | PT65706L508   |
|                            | Code 11, ON/OFF            | 4         | PT65711  | PT65711L254    | PT65711L508   |
| .126                       | Code 12, Hexadecimal       | 4         | PT65712  | PT65712L254    | PT65712L508   |
| (3.20)                     | Code 21, Decimal           | 4         | PT65721  | PT65721L254    | PT65721L508   |
|                            | Code 24, Binary Coded Dec. | 6         | PT65724  | PT65724L254    | PT65724L508   |
| (1.05)041<br>041<br>(1.05) | Code 25, Binary Coded Dec. | 6         | PT65725  | PT65725L254    | PT65725L508   |
| (1.05)                     | Code 26, Octal             | 8         | PT65726  | PT65726L254    | PT65726L508   |
|                            | Code 27, Octal complement  | 8         | PT65727  | PT65727L254    | PT65727L508   |
|                            |                            |           |          |                |               |

**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.



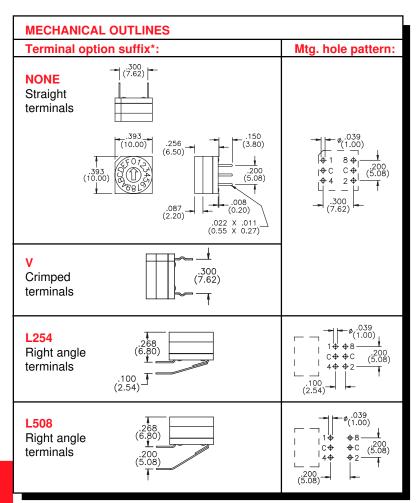






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#### **PT65 SERIES**



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:



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

