

# PT65 series

## Rotary code switches

Through-hole

Outside the US and the UK, this series is sold as the CR65 series with a blue case.



- ☐ 4 actuator types
- ☐ Save board space
- ☐ Highly reliable
- ☐ Solder and flux sealed, washable

| PT65          |                                                                                                                                    |                                                                                                                                                |                                                                                                                                                                 |
|---------------|------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SERIES</b> | <b>Actuators</b>                                                                                                                   | <b>Codes</b>                                                                                                                                   | <b>Terminals</b>                                                                                                                                                |
|               | <ul style="list-style-type: none"> <li>1 Screwdriver</li> <li>3 Spindle</li> <li>5 Segment wheel</li> <li>7 Accessories</li> </ul> | <ul style="list-style-type: none"> <li>01 BCD</li> <li>02 BCD complement</li> <li>03 Hexadecimal</li> <li>06 Hexadecimal complement</li> </ul> | <ul style="list-style-type: none"> <li>(none) Straight</li> <li>L254 Right angle, spacing 2,54 (.100)</li> <li>L508 Right angle, spacing 5,08 (.200)</li> </ul> |

### ELECTRICAL SPECIFICATIONS

- Operating voltage : 24 VDC max.
- Contact load, static : 400mA max.
- Contact load, dynamic : 150mA max.
- Initial contact resistance : 80 mΩ max.
- Insulation resistance : 100 MΩ min.

### MECHANICAL AND THERMAL SPECS

- Torque : 0,7 Ncm min.
- Expected life : 10.000 cycles min.
- Operating temperature : -20°C to +70°C

### MATERIALS

- Base : UL94-V0, high temperature thermoplastic
- Cover : UL94-V0, high temperature thermoplastic, grey
- Actuator : PA 4.6 nylon
- Contacts : gold over nickel plated phosphor bronze
- Terminals : tin plated

### SOLDER RECOMMENDATIONS

(DIN CEI 68-2-20)

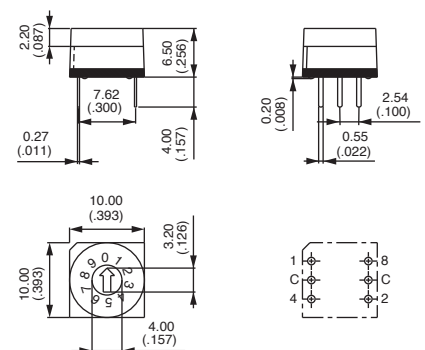
- Manual soldering : 340°C max. for 2 seconds max.
- Wave soldering : 260°C max. for 10 seconds max.

### PACKAGING

- Switches for screwdriver slot or accessory actuation (PT651 and PT657) : tubes of 50 pieces
- Switches with spindle (PT653) or segment wheel (PT655) : candy trays of 50 pieces
- Accessories : bags of 50 pieces

### DIMENSIONS

Screwdriver slot, straight terminals



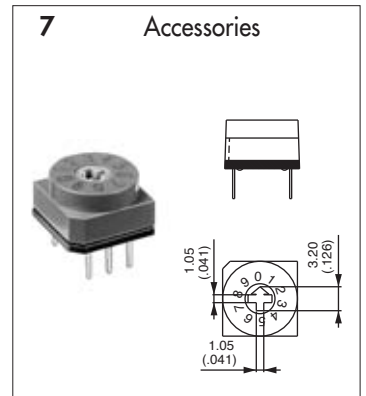
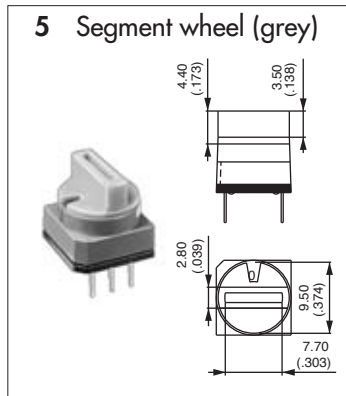
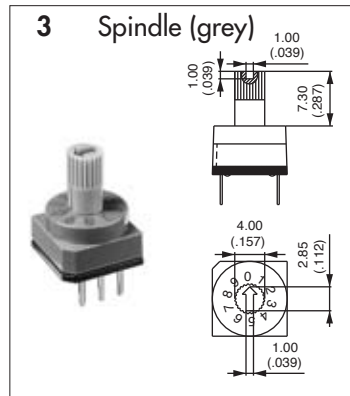
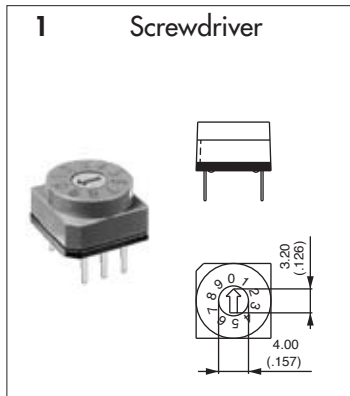
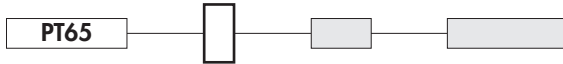
**Dimensions** : first dimensions are in mm while inches are shown as bracketed numbers.

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### ACTUATORS



See next page

### CODES / TRUTH TABLES



**01** BCD

|   | C | 1 | 2 | 4 | 8 |   |
|---|---|---|---|---|---|---|
| 0 | ● |   |   |   |   | 0 |
| 1 | ● | ● |   |   |   | 1 |
| 2 | ● |   | ● |   |   | 2 |
| 3 | ● | ● | ● |   |   | 3 |
| 4 | ● |   |   | ● |   | 4 |
| 5 | ● | ● |   | ● |   | 5 |
| 6 | ● |   | ● |   |   | 6 |
| 7 | ● | ● | ● | ● |   | 7 |
| 8 | ● |   |   |   | ● | 8 |
| 9 | ● | ● |   |   | ● | 9 |

▲ Position      ▲ Marking

**02** BCD complement

|   | C | 1 | 2 | 4 | 8 |   |
|---|---|---|---|---|---|---|
| 0 | ● | ● | ● | ● | ● | 0 |
| 1 | ● | ● | ● | ● | ● | 1 |
| 2 | ● | ● | ● | ● | ● | 2 |
| 3 | ● | ● | ● | ● | ● | 3 |
| 4 | ● | ● | ● | ● | ● | 4 |
| 5 | ● | ● | ● | ● | ● | 5 |
| 6 | ● | ● | ● | ● | ● | 6 |
| 7 | ● | ● | ● | ● | ● | 7 |
| 8 | ● | ● | ● | ● | ● | 8 |
| 9 | ● | ● | ● | ● | ● | 9 |

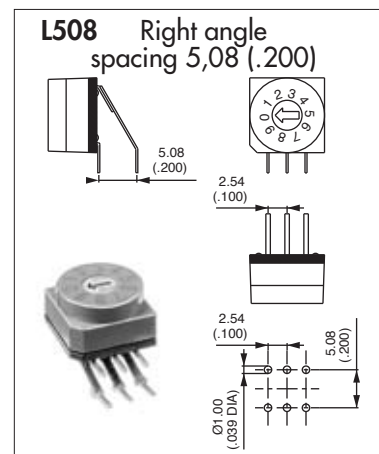
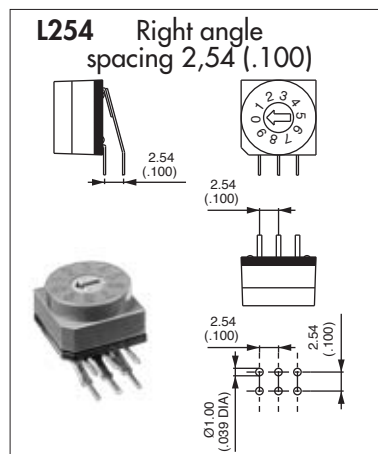
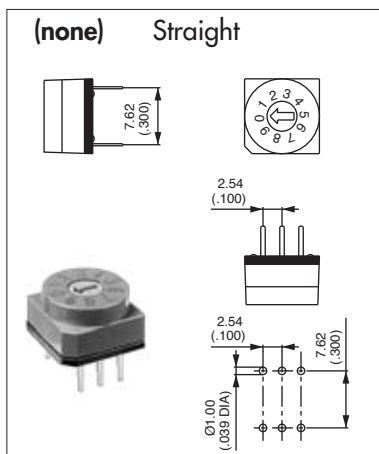
**03** Hexadecimal

|    | C | 1 | 2 | 4 | 8 |   |
|----|---|---|---|---|---|---|
| 0  | ● |   |   |   |   | 0 |
| 1  | ● | ● |   |   |   | 1 |
| 2  | ● |   | ● |   |   | 2 |
| 3  | ● | ● | ● |   |   | 3 |
| 4  | ● |   |   | ● |   | 4 |
| 5  | ● | ● |   | ● |   | 5 |
| 6  | ● |   | ● |   |   | 6 |
| 7  | ● | ● | ● | ● |   | 7 |
| 8  | ● |   |   |   | ● | 8 |
| 9  | ● | ● |   |   | ● | 9 |
| 10 | ● |   | ● |   | ● | A |
| 11 | ● | ● |   |   | ● | B |
| 12 | ● |   | ● | ● | ● | C |
| 13 | ● | ● |   | ● | ● | D |
| 14 | ● |   | ● | ● | ● | E |
| 15 | ● | ● | ● | ● | ● | F |

**06** Hexadecimal complement

|    | C | 1 | 2 | 4 | 8 |   |
|----|---|---|---|---|---|---|
| 0  | ● | ● | ● | ● | ● | 0 |
| 1  | ● | ● | ● | ● | ● | 1 |
| 2  | ● | ● | ● | ● | ● | 2 |
| 3  | ● | ● | ● | ● | ● | 3 |
| 4  | ● | ● | ● | ● | ● | 4 |
| 5  | ● | ● | ● | ● | ● | 5 |
| 6  | ● | ● | ● | ● | ● | 6 |
| 7  | ● | ● | ● | ● | ● | 7 |
| 8  | ● | ● | ● | ● | ● | 8 |
| 9  | ● | ● | ● | ● | ● | 9 |
| 10 | ● | ● | ● | ● | ● | A |
| 11 | ● | ● | ● | ● | ● | B |
| 12 | ● | ● | ● | ● | ● | C |
| 13 | ● | ● | ● | ● | ● | D |
| 14 | ● | ● | ● | ● | ● | E |
| 15 | ● | ● | ● | ● | ● | F |

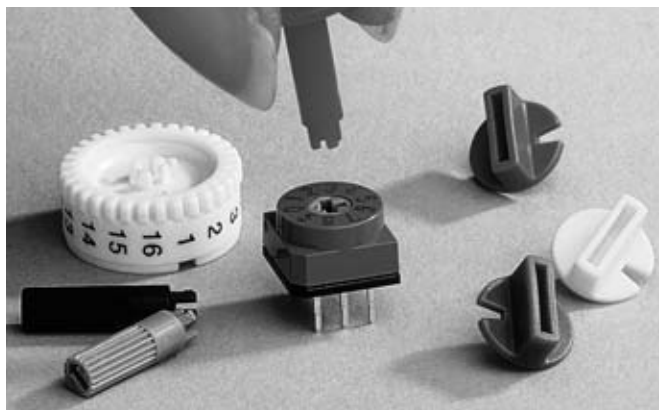
### TERMINALS



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### ACCESSORIES ADAPTED TO YOUR APPLICATIONS

Basic model PT657 has been designed to accept different actuators with snap-in connection.

According to your application, you can choose between spindles or plastic knobs in two different lengths and a Ø 17 mm (.669) knurled wheel for lateral marking.

Standard colours are shown below. Special colours are also available on request.

|                                                                                                                                |                                                                                                                                |                                                                                |  |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|--|
| <b>SPINDLES</b><br>Length 11,6 mm (standard)<br><br>Length 13,3 mm                                                             | <b>P/N</b><br><b>U4822</b><br><b>U4824</b><br><b>U4832</b>                                                                     | <b>COLOURS</b><br>black<br>grey<br>black                                       |  |
| <b>PLASTIC KNOBS</b><br><br>Length 5,3 mm (standard)<br>Length 15,7 mm<br><br>( )<br>( )<br>Length 4,4 mm<br>( )<br>( )<br>( ) | <b>P/N</b><br><b>U4906</b><br><b>U4916</b><br><br><b>U4941</b><br><b>U4943</b><br><b>U4944</b><br><b>U4945</b><br><b>U4946</b> | <b>COLOURS</b><br><br>red<br>red<br><br>blue<br>green<br>grey<br>yellow<br>red |  |
| <b>KNURLED WHEEL</b><br><br>(unmarked - marking<br>on request)                                                                 | <b>P/N</b><br><b>U4847/1</b>                                                                                                   | <b>COLOUR</b><br><br>white/black                                               |  |

### STANDARD PRODUCTS

| MODELS<br>CODES      | FOR SCREWDRIVER |                    | WITH SPINDLE    | WITH SEGMENT WHEEL |                    | FOR ACCESS.     |
|----------------------|-----------------|--------------------|-----------------|--------------------|--------------------|-----------------|
|                      | Upper actuation | Side actuation     | Upper actuation | Upper actuation    | Side actuation     | Upper actuation |
| BCD                  | <b>PT65101</b>  | <b>PT65101L254</b> | <b>PT65301</b>  | <b>PT65501</b>     | -                  | <b>PT65701</b>  |
| BCD complement       | <b>PT65102</b>  | -                  | -               | <b>PT65502</b>     | -                  | -               |
| Hexadecimal          | <b>PT65103</b>  | <b>PT65103L254</b> | <b>PT65303</b>  | <b>PT65503</b>     | <b>PT65303L254</b> | -               |
| Hexadecimal complem. | <b>PT65106</b>  | -                  | -               | -                  | -                  | -               |