IS series

Sealed pushbutton switches • threaded bushing Ø 12 mm • momentary

DISTINCTIVE FEATURES

Threaded bushing models
Compact, lightweight
Tactile feedback
Sealed to IP67

ENVIRONMENTAL SPECIFICATIONS

• Front panel sealing according to IEC 60529: IP67
• Shock resistance: 100 g according to IEC 512-4, test 6c
• Vibration resistance: 10-500 Hz - 10 g according to IEC 512-4, test 6d
• Salt spray: IEC 512-6, test 11f
• Operating temperature: -40 °C to +85 °C (-40 °F to +185 °F)

ELECTRICAL SPECIFICATIONS

• Max. current/voltage rating with resistive load:
  400 mA 32 VAC - 100 mA 48 VDC
• Initial contact resistance: 50 mΩ max.
• Insulation resistance: 1 GΩ min. at 500 VDC
• Dielectric strength: 1,000 Vrms
• Electrical life at full load: 500,000 cycles

GENERAL SPECIFICATIONS

• Panel thickness: 1.5 mm (.059) min. - 4 mm (.157) max.
• Total travel: 1.7 mm (.066) ± 0.3 mm
• Typical operating force: 4 N ± 3 N
• Low level or mechanical life: 1,000,000 cycles
• Torque (applied to nut): 1 Nm max. with metal nut U166
  1.5 Nm max. with plastic nut U4248
• Soldering: 300 °C (572 °F) max. for 3 seconds

The company reserves the right to change specifications without notice.
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MATERIALS

- Case : thermoplastic UL94-V0
- Actuator : polyamide 6/6
- Bushing/bezel : polyamide 6/6
- Contacts : silver, gold plated
- Terminal seal : epoxy

APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

AGENCY APPROVAL

2 A 125 VAC/250 VAC
File E83438

Availability : consult factory for details of approved models.
Marking : to order switches marked UL, complete appropriate box of ordering format.

TERMINALS

Solder lug S

Straight P

Quick-connect Z

ELECTRICAL FUNCTIONS

Function 3 (NO)

AGENCY APPROVAL

MOUNTING STANDARD BEZEL

PANEL CUT-OUT

MATRIX MOUNTING

O-ring

MOUNTING REDUCED MODEL

PANEL CUT-OUT

MATRIX MOUNTING

O-ring
### BUILD YOUR PART NUMBER

#### ACTUATOR COLORS

<table>
<thead>
<tr>
<th>Code</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Blue</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>4</td>
<td>Grey</td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
</tr>
<tr>
<td>B</td>
<td>Dark blue</td>
</tr>
<tr>
<td>6</td>
<td>Red</td>
</tr>
<tr>
<td>7/1</td>
<td>White</td>
</tr>
<tr>
<td>8</td>
<td>Bright chrome</td>
</tr>
<tr>
<td>9</td>
<td>Orange</td>
</tr>
<tr>
<td>A</td>
<td>Satin chrome</td>
</tr>
</tbody>
</table>

#### ACTUATOR SHAPES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Round, curved</td>
</tr>
<tr>
<td>P</td>
<td>Round, flat</td>
</tr>
</tbody>
</table>

Actuator marking available on round flat models (symbol 10 mm max.). On request.

#### ELECTRICAL FUNCTION TERMINALS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Normally open (NO)</td>
</tr>
<tr>
<td>S</td>
<td>Solder lugs</td>
</tr>
<tr>
<td>P</td>
<td>Straight PC</td>
</tr>
<tr>
<td>Z1</td>
<td>Quick-connect 2.8 x 0.5 mm</td>
</tr>
</tbody>
</table>

#### BUSHING AND BEZEL

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>Black (std)</td>
</tr>
<tr>
<td>08</td>
<td>Bright chrome</td>
</tr>
<tr>
<td>10</td>
<td>White</td>
</tr>
<tr>
<td>20</td>
<td>Satin chrome</td>
</tr>
</tbody>
</table>

#### OPTIONS

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>104</td>
<td>High actuator</td>
</tr>
<tr>
<td>075</td>
<td>Dia. 15 (.590) reduced bezel, frontal mounting</td>
</tr>
<tr>
<td>234</td>
<td>Dia. 15 (.590) reduced bezel, standard mounting</td>
</tr>
</tbody>
</table>

#### APPROVAL

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>UL</td>
<td>Consult factory for detail of approved models</td>
</tr>
</tbody>
</table>

### ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

**Notice**: please note that not all combinations of above numbers are available. Refer to the following pages for further information.

**A sealing boot** is available to protect the switches against frost and sand (P/N US125). See "Sealing Boots" section of website.

**Mounting accessories**: Standard hardware supplied: 1 flat seal. Plastic nut 17 mm (.669) across flats, thickness 4 mm (.157) available on request. Part number U4248.
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SOLDER LUG TERMINALS

Also available with straight PC terminals : IS•3PAD
or quick-connect terminals : IS•3Z1AD

Curved actuator
ISR3SAD Normally Open

Flat actuator
ISP3SAD Normally Open

ACTUATOR COLORS

1     Blue
B     Dark blue
2     Black
3     Green
4     Grey
5     Yellow
6     Red
7/1   White
8     Bright chrome
9     Orange
A     Satin chrome

BUSHING AND BEZEL

00    Black (standard)
08    Bright chrome
10    White
20    Satin chrome
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Options

<table>
<thead>
<tr>
<th>BASIC P/N</th>
<th>OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>104</td>
<td>High actuator</td>
</tr>
<tr>
<td>075</td>
<td>Dia. 15 (.590) reduced bezel, mounting of the switch from the front into a threaded panel cut-out</td>
</tr>
<tr>
<td>234</td>
<td>Dia. 15 (.590) reduced bezel, standard mounting</td>
</tr>
</tbody>
</table>

Agency Approval

UL
Availability: consult factory for details of approved models.
Marking: to order switches marked UL, complete appropriate box of ordering format.

Example of Custom Switch

- Painted bushing and actuator, soft feel
- Flying leads (55 mm) + connector
- Overmolded rear part