SELECTOR SWITCH TYPE 01

MAIN FEATURES

COMPACT, UP TO 12 POSITIONS

- 25,000 switching cycles with up to 6 Ncm switching torque
- Gold plated contacts: 3 micron
- Robust metal bushing and shaft
- Operating temperature: up to -40° to +85°C
- Front panel sealing: up to IP68
- Various options and customizations

PRODUCT VARIETY

- Soldering eyelets or pins for PCB
- From 1 x 12 to 4 x 3 poles/positions per wafer
- Single or dual wafer
- Indexing angle: 30°, 36° or 60°
- Shorting or non-shorting
- Switching torque: 2, 4 or 6 Ncm
- Front panel sealing: IP60 or IP68
- Configurable End- Stops
- Shaft diameter: 3, 4 or 6 mm
- Shaft length

POSSIBLE CUSTOMIZATIONS

- Shaft dimension and shape
- Bushing dimensions
- Switching torque
- Hollow shaft, inner shaft
- Pull/push-to-turn
- Others

TYPICAL APPLICATIONS

- Industrial controls
- Avionics, instrumentation, test systems
- Medical and audio equipment
- Construction

NUT (SUPPLIED)

Wrench size 10 mm  
MB x 0.75

Spare Part
Part Number (10 pcs. bag)
- Brass nickel plated: 4024-81
### 1 Preference Types Selection Chart

#### Indexing Angle 30°, Shorting

<table>
<thead>
<tr>
<th>Contact Arrangement</th>
<th>Number of Wafers (Max 2 Wafers Available)</th>
<th>Function (Poles x Positions)</th>
<th>Part Number with Solder Eyelets</th>
<th>With Pins for PCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 12, endless rotating</td>
<td>1 x 12</td>
<td>01-1123</td>
<td>01-1123-20</td>
<td></td>
</tr>
<tr>
<td>2 x 12, endless rotating</td>
<td>2 x 12</td>
<td>01-2123</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1 x 12</td>
<td>1 x 12</td>
<td>01-1183</td>
<td>01-1183-20</td>
<td></td>
</tr>
<tr>
<td>2 x 12</td>
<td>2 x 12</td>
<td>01-2183</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>1 x 11</td>
<td>1 x 11</td>
<td>01-1113</td>
<td>01-1113-20</td>
<td></td>
</tr>
<tr>
<td>2 x 11</td>
<td>2 x 11</td>
<td>01-2113</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>2 x 6</td>
<td>2 x 6</td>
<td>01-1263</td>
<td>01-1263-20</td>
<td></td>
</tr>
<tr>
<td>4 x 6</td>
<td>4 x 6</td>
<td>01-2263</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>4 x 3</td>
<td>4 x 3</td>
<td>01-1433</td>
<td>01-1433-20</td>
<td></td>
</tr>
<tr>
<td>8 x 3</td>
<td>8 x 3</td>
<td>01-2433</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

#### Indexing Angle 30°, Non-Shorting

<table>
<thead>
<tr>
<th>Contact Arrangement</th>
<th>Number of Wafers (Max 1 Wafers Available)</th>
<th>Function (Poles x Positions)</th>
<th>Part Number with Solder Eyelets</th>
<th>With Pins for PCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 12, endless rotating</td>
<td>1 x 12</td>
<td>01-1124</td>
<td>01-1124-20</td>
<td></td>
</tr>
<tr>
<td>1 x 12</td>
<td>1 x 12</td>
<td>01-1184</td>
<td>01-1184-20</td>
<td></td>
</tr>
<tr>
<td>1 x 11</td>
<td>1 x 11</td>
<td>01-1114</td>
<td>01-1114-20</td>
<td></td>
</tr>
<tr>
<td>2 x 6</td>
<td>2 x 6</td>
<td>01-1264</td>
<td>01-1264-20</td>
<td></td>
</tr>
<tr>
<td>4 x 3</td>
<td>4 x 3</td>
<td>01-1434</td>
<td>01-1434-20</td>
<td></td>
</tr>
</tbody>
</table>

#### Indexing Angle 36°, Shorting

<table>
<thead>
<tr>
<th>Contact Arrangement</th>
<th>Number of Wafers (Max 2 Wafers Available)</th>
<th>Function (Poles x Positions)</th>
<th>Part Number with Solder Eyelets</th>
<th>With Pins for PCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 10, endless rotating</td>
<td>1 x 10</td>
<td>01-1103</td>
<td>01-1103-20</td>
<td></td>
</tr>
<tr>
<td>1 x 10</td>
<td>1 x 10</td>
<td>01-1193</td>
<td>01-1193-20</td>
<td></td>
</tr>
</tbody>
</table>

#### Indexing Angle 60°, Non-Shorting

<table>
<thead>
<tr>
<th>Contact Arrangement</th>
<th>Number of Wafers (Max 2 Wafers Available)</th>
<th>Function (Poles x Positions)</th>
<th>Part Number with Solder Eyelets</th>
<th>With Pins for PCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 6, endless rotating</td>
<td>1 x 6</td>
<td>01-1104</td>
<td>01-1104-20</td>
<td></td>
</tr>
<tr>
<td>1 x 6</td>
<td>1 x 6</td>
<td>01-1164</td>
<td>01-1164-20</td>
<td></td>
</tr>
<tr>
<td>2 x 3</td>
<td>2 x 3</td>
<td>01-1234</td>
<td>01-1234-20</td>
<td></td>
</tr>
<tr>
<td>4 x 2</td>
<td>4 x 2</td>
<td>01-1424</td>
<td>01-1424-20</td>
<td></td>
</tr>
</tbody>
</table>

#### Stop Pins

<table>
<thead>
<tr>
<th>Packaging Unit</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 pcs.</td>
<td>4007-36</td>
</tr>
<tr>
<td>50 pcs.</td>
<td>4007-35</td>
</tr>
</tbody>
</table>

*For other types/options, see type key.*

On switches with fixed end-stop, additional stops can be set, by means of a plastic pin, on any position between 2 and the maximum (stop pins to be ordered separately).
SPECIFICATIONS

MECHANICAL DATA

Resolution:
- 12 positions max. (30° indexing); shorting or non-shorting
- 10 positions max. (36° indexing); shorting
- 6 positions max. (60° indexing); non-shorting

Switching torque (new condition):
- 2, 4 or 6 Ncm (±25%), additional wafers may increase switching torque

Rotational life:
- 25,000 cycles min.

End-stop strength:
- 100 Ncm for 30° indexing angle
- 150 Ncm for 36° and 60° indexing angle

Acceptable shaft load:
- Max. allowable pull or munch load 4 mm shaft > 500 N
- Max. allowable side load 4 mm shaft <= 100 N (20 mm above fixation of switch)

Fastening torque of nut:
- 300 Ncm max.

ELECTRICAL DATA

Functions:
- From 1 x 12 to 4 x 3 poles/positions per wafer (max. 2 wafers)

Switching mode:
- Shorting (for 30° and 36° indexing)
- Non-shorting (for 30° and 60° indexing)

Load current:
- 2 A max. (resistive load)

Switching voltage:
- 42 VDC max.

Contact resistance (new condition):
- 10 mΩ max.

Insulation resistance:
- 10^11 Ω min. (contact to contact / housing)

Switching capacity:
- 1 pF max. (contact to contact)

Dielectric withstanding voltage:
- 500 VDC during 60 seconds (pin to pin, pin to housing)

MATERIAL DATA

Shaft:
- Stainless steel 1.4305

Bushing:
- Nickel silver

Housing:
- Fiber enforced plastic

Nut:
- Brass with glossy nickel plating

Contact plating:
- Gold; 3 µm

Insulation material:
- Wafer: PEEK, rotor: Polybutylene

Soldering leads:
- Alloy copper, gold plated

ENVIRONMENTAL DATA

Operating/storage temperature range:
- -40 to +85°C max.

IP sealing:
- IP60, optional IP68 (2 bar, 1 h) shaft / front panel sealing

Vibration:
- 10 G rms max. @ 10 to 2000 Hz

Flammability:
- UL94-HB

PACKAGING QUANTITY

Tray:
- 10 pcs.

SOLDERING CONDITIONS

Hand soldering:
- 340°C max. during 2 sec max.

Wave soldering:
- 280°C max. peak temperature during 5 sec max.

SWITCHING MODES

For information about switching mode please see technical explanations at the end of the catalog
SELCTOR SWITCHES TYPE 01

DRAWINGS WITH SOLDER EYELETS

1 WAFFER

2 WAFFER

SW = key spanner

WITH PINS FOR PCB

FRONT PANEL CUT OUT

SPECIAL SHAFT DIAMETER

TYPE 01 switches are also available with the following shaft diameters:

<table>
<thead>
<tr>
<th>ø</th>
<th>AL (STANDARD)</th>
<th>BUSHING</th>
<th>NUT SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 mm</td>
<td>59 mm</td>
<td>M6 x 0.75 x 6.0 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td>6 mm</td>
<td>28 mm</td>
<td>M10 x 0.75 x 8.0 mm</td>
<td>14 mm</td>
</tr>
</tbody>
</table>

HOLLOW SHAFT SYSTEM (CUSTOMIZED SOLUTION)

HOLLOW SHAFT

Hollow shaft to allow concentric operation of either two switches or, for example, a switch and a potentiometer. The inner shaft (ø 3 mm) must be ordered separately.

INNER SHAFT

Must be ordered separately for switches with hollow shaft.

SWITCHES WITH CONCENTRIC SHAFTS

It is possible for two switches to be operated individually by concentric shafts on the same mounting. When ordering, the type number of each switch must be given and specified. IP 60.