Pushbuttons

**keypad**

packaging of 10 pcs.

recommended accessories:

<table>
<thead>
<tr>
<th>marking</th>
<th>electrical switching</th>
<th>material of contacts</th>
<th>colour of key</th>
<th>colour of marking</th>
<th>part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>keypad plastic keys for internal use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 (telephone)</td>
<td>common point</td>
<td>carbon/Au</td>
<td>white</td>
<td>black</td>
<td>ECO.12100.06</td>
</tr>
<tr>
<td>matrix</td>
<td>carbon/Au</td>
<td>white</td>
<td>black</td>
<td>ECO.12150.06</td>
<td></td>
</tr>
<tr>
<td>16 (hexadecimal II)</td>
<td>common point</td>
<td>carbon/Au</td>
<td>white</td>
<td>black</td>
<td>ECO.16200.06</td>
</tr>
<tr>
<td>matrix</td>
<td>carbon/Au</td>
<td>white</td>
<td>black</td>
<td>ECO.16250.06</td>
<td></td>
</tr>
</tbody>
</table>

technical drawing as of page ECO.3, mounting dimensions ECO.3, components layouts as of page ECO.4
Technical Data

**ECO**

**electrical characteristics**

- **contact power rating**
  nominal: 0.5 W

- **contact resistance**
  < 20 Ω

- **current**
  nominal: 20 mA,
  minimum: 10 mA

- **ESD protection**
  5000 V

- **insulation resistance**
  at 100 Vcc: > 1000 MΩ

- **life time**
  at nominal rating: > $10^6$ operations

- **voltage**
  nominal: 24 V,
  maximum: 24 V,
  minimum: 500 mV

**mechanical characteristics**

- **actuating force**
  1.2 N +/- 35%

- **actuating travel**
  1.4 mm +/- 0.1

- **contacts**
  carbon/Au

- **marking height**
  3.5 mm

**climatic characteristics**

- **service temperature**
  -20°C + 60°C

- **storage temperature**
  -40°C + 65°C
Technical Drawing

1 keypad
page ECO.1

12 - BUTTON KEYPAD

2 keypad
page ECO.1

16 - Button Keypad

Mounting Dimension

1 keypad
page ECO.1

Flush mount
4 holes in the angles

12 Buttons 16 Buttons
## Components Layouts

1 keypad  
page ECO.1

12 KEYS - CONNECTOR  
(rear view)

<table>
<thead>
<tr>
<th>Matrix XY</th>
<th>Contacts</th>
<th>Common Point</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16</td>
</tr>
<tr>
<td></td>
<td>X1  X2  X3</td>
<td>*</td>
</tr>
</tbody>
</table>

Connection by female connector HE 14  
(not supplied)

2 keypad  
page ECO.1

16 KEYS - CONNECTOR  
(rear view)

<table>
<thead>
<tr>
<th>Matrix XY</th>
<th>Contacts</th>
<th>Common Point</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16</td>
</tr>
<tr>
<td></td>
<td>X1  X2  X3  X4</td>
<td>*</td>
</tr>
</tbody>
</table>

Connection by female connector HE14  
(not supplied)