## Capacitive sensor

**KI-3200NFPKP2TUS**

### Product characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical design</td>
<td>PNP</td>
</tr>
<tr>
<td>Output function</td>
<td>normally open / closed; (selectable)</td>
</tr>
<tr>
<td>Sensing range [mm]</td>
<td>20</td>
</tr>
<tr>
<td>Communication interface</td>
<td>IO-Link</td>
</tr>
<tr>
<td>Housing</td>
<td>Threaded type</td>
</tr>
<tr>
<td>Dimensions [mm]</td>
<td>M30 x 1.5 / L = 90</td>
</tr>
</tbody>
</table>

### Electrical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage [V]</td>
<td>10...36 DC</td>
</tr>
<tr>
<td>Current consumption [mA]</td>
<td>&lt; 20</td>
</tr>
<tr>
<td>Protection class</td>
<td>II</td>
</tr>
<tr>
<td>Reverse polarity protection</td>
<td>yes</td>
</tr>
</tbody>
</table>

### Outputs

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrical design</td>
<td>PNP</td>
</tr>
<tr>
<td>Output function</td>
<td>normally open / closed; (selectable)</td>
</tr>
<tr>
<td>Max. voltage drop switching output DC [V]</td>
<td>2.5</td>
</tr>
<tr>
<td>Permanent current rating of switching output DC [mA]</td>
<td>200</td>
</tr>
<tr>
<td>Switching frequency DC [Hz]</td>
<td>10</td>
</tr>
<tr>
<td>Short-circuit proof</td>
<td>yes</td>
</tr>
<tr>
<td>Overload protection</td>
<td>yes</td>
</tr>
</tbody>
</table>

### Monitoring range

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensing range [mm]</td>
<td>20</td>
</tr>
</tbody>
</table>

### Accuracy / deviations

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hysteresis [% of Sr]</td>
<td>1...15</td>
</tr>
<tr>
<td>Switch-point drift [% of Sr]</td>
<td>-20...20</td>
</tr>
</tbody>
</table>
## Capacitive sensor

**KI-3200NFPKGP2T/US**

### Interfaces

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication interface</td>
<td>IO-Link</td>
</tr>
<tr>
<td>Transmission type</td>
<td>COM1 (4,8 kBaud)</td>
</tr>
<tr>
<td>IO-Link revision</td>
<td>1.1</td>
</tr>
<tr>
<td>SDCI standard</td>
<td>IEC 61131-9 CDV</td>
</tr>
<tr>
<td>Profiles</td>
<td>Smart Sensor</td>
</tr>
<tr>
<td>SIO mode</td>
<td>yes</td>
</tr>
<tr>
<td>Min. process cycle time</td>
<td>101</td>
</tr>
<tr>
<td>Supported DeviceIDs</td>
<td></td>
</tr>
<tr>
<td>Type of operation</td>
<td>default</td>
</tr>
<tr>
<td>DeviceID</td>
<td>388</td>
</tr>
</tbody>
</table>

### Operating conditions

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient temperature</td>
<td>-25...80 °C</td>
</tr>
<tr>
<td>Note on ambient temperature</td>
<td>temperature of the sensing face: -25...110 °C</td>
</tr>
<tr>
<td>Protection</td>
<td>IP 65; IP 67</td>
</tr>
</tbody>
</table>

### Tests / approvals

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>EMC</td>
<td></td>
</tr>
<tr>
<td>EN 61000-4-2 ESD</td>
<td>8 kV AD</td>
</tr>
<tr>
<td>EN 61000-4-3 HF radiated</td>
<td>10 V/m</td>
</tr>
<tr>
<td>EN 61000-4-4 Burst</td>
<td>2 kV</td>
</tr>
<tr>
<td>EN 61000-4-6 HF conducted</td>
<td>3 V</td>
</tr>
<tr>
<td>EN 55011</td>
<td>class B</td>
</tr>
<tr>
<td>Vibration resistance</td>
<td></td>
</tr>
<tr>
<td>EN 60068-2-6 Fc</td>
<td>(10...55 Hz) / 1 mm amplitude, vibration duration 5 min., 30 min. per axis with resonance or 55 Hz</td>
</tr>
<tr>
<td>Shock resistance</td>
<td></td>
</tr>
<tr>
<td>EN 60068-2-27 Ea</td>
<td>30 g 6 shocks / 11 ms half-sine (x, y, z)</td>
</tr>
<tr>
<td>MTTF</td>
<td>663</td>
</tr>
</tbody>
</table>

### Mechanical data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>88</td>
</tr>
<tr>
<td>Housing</td>
<td>Threaded type</td>
</tr>
<tr>
<td>Mounting</td>
<td>non-flush mountable</td>
</tr>
<tr>
<td>Dimensions [mm]</td>
<td>M30 x 1.5 / L = 90</td>
</tr>
<tr>
<td>Thread designation</td>
<td>M30 x 1.5</td>
</tr>
<tr>
<td>Material</td>
<td>housing: PBT; plug: PC; Pushbuttons: TPE-U</td>
</tr>
</tbody>
</table>

### Displays / operating elements

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>Switching status 1 x LED, yellow</td>
</tr>
<tr>
<td>Teach function</td>
<td>yes</td>
</tr>
<tr>
<td>Electronic lock</td>
<td>yes</td>
</tr>
</tbody>
</table>

### Accessories

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessories (supplied)</td>
<td>lock nuts: 2</td>
</tr>
</tbody>
</table>

### Remarks

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pack quantity</td>
<td>1 pcs.</td>
</tr>
</tbody>
</table>

### Electrical connection - plug

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connector</td>
<td>1 x M12</td>
</tr>
</tbody>
</table>
Connection

4: OUT / IO-Link