# NextGen Capacitive Level Sensor Prototype

![Diagram of sensor and container wall]

## Continuous Level Measurement vs. Limit Level Detection

<table>
<thead>
<tr>
<th>Measurement method</th>
<th>Continuous Level Measurement</th>
<th>Limit Level Detection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement method</td>
<td>Capacitive measuring method / Non-contact to fluid</td>
<td></td>
</tr>
<tr>
<td>Temperature range</td>
<td>0 °C up to 60 °C</td>
<td>-25 °C up to 80°C</td>
</tr>
<tr>
<td>Output signal</td>
<td>Switching points / 4-20 mA / 0-10 V</td>
<td>Switching points</td>
</tr>
<tr>
<td>Input signal</td>
<td>10...40 V</td>
<td></td>
</tr>
<tr>
<td>Connection type</td>
<td>Wires / M12 / Other plugs possible</td>
<td></td>
</tr>
<tr>
<td>Compatible materials of container wall</td>
<td>Plastic / Glass</td>
<td>Material influences the sensitivity. Measurement through metal not possible!</td>
</tr>
<tr>
<td>Max. wall thickness</td>
<td>Dependent on the fluid and the material of container. See examples below...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 mm (with water)</td>
<td>6 mm (with water)</td>
</tr>
<tr>
<td></td>
<td>1.5 mm (with oils)</td>
<td>2 mm (with oils)</td>
</tr>
<tr>
<td>Resolution</td>
<td>+1 up to +10 % dependent on fluid, material of container wall and container wall thickness</td>
<td></td>
</tr>
<tr>
<td>Compatible media</td>
<td>Dependent on specific constant $\varepsilon_r$ of media/fluid. Higher = better</td>
<td>Fluids, such as water / oils / fuels / alcohols/ ...</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bulk materials</td>
</tr>
<tr>
<td>Protection class</td>
<td>Up to IP69K possible</td>
<td></td>
</tr>
<tr>
<td>Housing size</td>
<td>Dependent on application.</td>
<td></td>
</tr>
<tr>
<td>Max. sensing length</td>
<td>Up to 2 m</td>
<td>-</td>
</tr>
</tbody>
</table>

Please note: Fact sheet shows possibilities. Depicted values are approximated values. Values based on preliminary studies. Values are strongly dependent on factors, such as, wall thickness, materials, fluids, specific requirements / application ... Concrete description of application necessary!