More Precision.

capaNCĐT
High resolution capacitive displacement sensors and systems.
System structure

capaNCDT 6100 is a compact single-channel system consisting of the capacitive displacement sensor, the sensor cable and the controller. Using the 2-point linearisation, the user can also carry out compensation on-site which takes account of the individual installation conditions. With the possible power supply between 9 – 36 V, the system can also be operated in passenger cars or trucks. The capaNCDT 6100 provides an outstanding price/performance ratio and is very well suited for common measuring tasks. This system provides high flexibility as it can be operated with practically all capaNCDT sensors.

A measuring system consists of:
- capacitive displacement sensor
- sensor cable
- controller

Accessories:
- power supply cable
- power supply
- synchronisation cable

Block diagram

Power supply: 24 VDC, (9-36 VDC) ±15 VDC
Output: 0-10 V

- High temperature stability
- Nanometre repeatability
- Suitable for all conductive materials
- Can be synchronised for non-grounded targets
- 24V (9 – 36V) standard power supply for industrial applications
- Suitable for practically all sensors
**Controller type**: DT6100

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution static</td>
<td>0.01 % FSO</td>
</tr>
<tr>
<td>Resolution dynamic</td>
<td>0.015 % FSO (2kHz)</td>
</tr>
<tr>
<td>Bandwidth</td>
<td>2kHz</td>
</tr>
<tr>
<td>Bandwidth adjustable</td>
<td>10Hz / 2kHz</td>
</tr>
<tr>
<td>Linearity</td>
<td>±0.3 % FSO (all sensors interchangeable without calibration)</td>
</tr>
<tr>
<td>Max. sensitivity deviation</td>
<td>±0.1 % FSO</td>
</tr>
<tr>
<td>Long term stability</td>
<td>≤0.05% FSO / month</td>
</tr>
<tr>
<td>Synchronous operation</td>
<td>yes</td>
</tr>
<tr>
<td>Insulator measurement</td>
<td>no</td>
</tr>
<tr>
<td>Temperature stability</td>
<td>±0.03 % FSO / °C</td>
</tr>
<tr>
<td>Temperature range (operation)</td>
<td>+10 … +60°C</td>
</tr>
<tr>
<td>Temperature range (storage)</td>
<td>-10 … +75°C</td>
</tr>
<tr>
<td>Supply</td>
<td>24 VDC / 85mA (9...36 VDC)</td>
</tr>
<tr>
<td>Optional</td>
<td>±15 VDC / 85mA (9...36 VDC)</td>
</tr>
<tr>
<td>Output</td>
<td>0…10 V (resistance min. 1.2kΩ / capacitance max. 1 nF)</td>
</tr>
<tr>
<td>Optional</td>
<td>4…20mA (load max. 400Ω)</td>
</tr>
<tr>
<td>Suitable for sensors</td>
<td>all sensors except CS005</td>
</tr>
</tbody>
</table>

**Options**

- 2982001 Option DT6100, I current output 4 - 20 mA
- 2982005 Option DT6100 power supply ±15 V DC
- 2982006 EMR2C DT6100 extended measuring range (factor 2)
- 2982007 LC option DT6100
- 4105012.01 DT6100(01) single-channel controller, 2 m sensor cable length
- 4105012.02 DT6100(02) single-channel controller, 3 m sensor cable length
- 2982031 Option DT6100 Ethernet port for configuration and data output

**capaNCDT 6100 controller**

![Diagram of the controller](image-url)

- **Mounting holes** for M4 or 3/16" screws
- **Weight**: appr 380 g
- **Output / supply**: 8 pin socket
- **Sensor**
- **Sync out**
- **Sync in**
High performance sensors made by Micro-Epsilon

Sensors and systems for displacement and position

Sensors and measurement devices for non-contact temperature measurement

2D/3D profile sensors (laser scanner)

Measurement and inspection systems for quality assurance

Optical micrometers and optical fibers

Color recognition sensors and LED analyzers