CAPACITIVE DRIVER

CPL590
Capacitive Driver

• Digital Outputs
• USB, SPI and EtherCAT
• Small 2U Size
• Up to 4 Selectable Ranges on 1 Probe
• Best Linearity
• Higher Stability
• Digital Adjustment

Specifications

Resolution:
- 0.0005% @ 100 Hz
- 0.003% @ 15 kHz

Selectable Bandwidth: 100Hz, 1, 10, 15kHz

Linearity: <0.1% F.S. typical

Probe Drift: 0.04% F.S./°C

Operating Temp: 4-50°C

Output: ±10V, 0Ω 10mA max

Rear-Panel: SPI, EtherCAT

1. Dependent on probe, range, and bandwidth. See next page for details.
2. Dependent on probe and range. See next page for details.

Export License
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### Selecting the Right Technology

#### CPL590 Probes and Ranges

<table>
<thead>
<tr>
<th>Sensing Area Diameter mm</th>
<th>Measurement Range</th>
<th>Resolution @ Bandwidth</th>
<th>Available Body Sizes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range μm mils</td>
<td>Near Gap μm mils</td>
<td>1 kHz nm μin</td>
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<tr>
<td>0.5</td>
<td>Fine</td>
<td>10 0.4</td>
<td>20 0.8</td>
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<tr>
<td></td>
<td>Standard</td>
<td>50 2.0</td>
<td>50 2.0</td>
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<tr>
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<td>Extended</td>
<td>80 3.0</td>
<td>60 2.4</td>
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<tr>
<td>0.8</td>
<td>Fine</td>
<td>25 1.0</td>
<td>75 3.0</td>
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<td>100 4.0</td>
<td>100 4.0</td>
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<tr>
<td>2.0</td>
<td>Ultrafine</td>
<td>10 0.4</td>
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<td>75 3.0</td>
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<td>Standard</td>
<td>250 10.0</td>
<td>125 5.0</td>
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<td>Extended</td>
<td>500 20.0</td>
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<td>3.2</td>
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<td>250 10</td>
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<tr>
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<td>250 10</td>
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<td>225 9.9</td>
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<td>500 5.0</td>
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<td></td>
<td>Extended</td>
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<td>250 10</td>
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<td>Fine</td>
<td>2000 80</td>
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<tr>
<td></td>
<td>Extended</td>
<td>12500 500</td>
<td>5000 200</td>
</tr>
</tbody>
</table>

Resolution values are RMS. Peak-to-peak values are typically 8-10 times greater than the RMS values.
In high EMI conditions (10 V/m) output DC level may shift and noise may rise to 0.2 VRMS (1.3% resolution).