The new DPS5000 from Druck, part of the UNIK5000 family, offers integrated digital electronics to enhance the performance level of the UNIK 5000 Pressure Sensing Platform to levels unmatched by traditional analogue sensors. It features an I2C digital interface, over which fully compensated readings of Pressure and Temperature are sent, as well as control of many functions of the device.

**High Quality**
With 40 years of pressure measurement experience, our field-proven Druck technology is at the heart of the new platform, resulting in a range of high quality, high stability pressure sensors.

**Bespoke as Standard**
Custom-built from standard components, manufacturing sensors to your requirements is fast and simple; each UNIK 5000 is a “bespoke” pressure sensing solution, but with the short lead times and competitive pricing you would expect from standard products.

**Expertise**
We have the people and the knowledge to support your needs for accurate and reliable product performance; our team of experts can help you make the right sensor selection, guiding you and providing the help and tools you need. It is important that you ensure that the sensor materials and performance selected are suitable for your application.

**Features**
- Ranges from 70 mbar to 100 bar
- Total accuracy to ±0.1 % FS
- Stainless steel construction
- 3 V supply voltage
- Low power
- I2C digital output
- Sleep mode
- Hazardous area certifications
- Excellent long-term stability

druck.com
DPS5000 Specifications

Operating Pressure Ranges

Gauge Ranges

Zero-based ranges:
- 70 mbar
- 200 mbar
- 350 mbar
- 700 mbar
- 1 bar
- 2 bar
- 3.5 bar
- 7 bar
- 10 bar
- 20 bar
- 28 bar
- 35 bar
- 70 bar
- 100 bar

Absolute Ranges
- 0.8 to 3 bar
- 1 to 7 bar
- 2 to 12 bar
- 3 to 28 bar
- 5 to 40 bar
- 10 to 70 bar
- 18 to 90 bar
- 15 to 100 bar

Over Pressure
2 × pressure range for absolute ranges
4 × pressure range for gauge ranges

Containment Pressure
6 × pressure range for gauge ranges (200 bar maximum)
200 bar for absolute ranges

Supply
Supply voltage
2.7 to 3.6 Vdc
Current consumption
<50 μA Standby
<2 mA average during acquisition

Output/Communications
I2C Slave Device, 100 kHz maximum data rate

Power-on Time
30 ms to acquisition from standby

Insulation Resistance
500 Vdc ≥ 100 MΩ

Performance

Pressure Performance
Calibrated accuracy over the calibrated temperature range including zero and span setting and the effects of non-linearity, hysteresis and repeatability

Gauge Reference
±0.1 % FS
Increases pro-rata for pressure ranges below 700 mbar

Absolute Reference
±0.2 % of reading (RDG)

Temperature Performance
Accuracy over the calibrated temperature range ±3°C

Long Term Stability
±0.05 % FS/year typical
±0.1 % FS maximum at reference conditions
Increases pro-rata for pressure ranges below 700 mbar

Physical Specifications

Environmental Protection
Internal version – Not applicable
External version – IP68 to 700 mH₂O

Operating Temperature Range
-40°C to +85°C (-40°F to +185°F)

Pressure Media
Fluids compatible with stainless steel 316L and Hastelloy C276

Statement in accordance with the European Pressure Equipment Directive
Refer to document K0581 for product classification and regulatory information

Enclosure Materials
Stainless steel (body)

Pressure Connectors
PA  G1/4 female
PB  G1/4 male flat
PE  1/4 NPT female
PF  1/4 NPT male
PG  1/8 NPT male

Other connectors may be available. Contact Druck to discuss your requirement.
### Electrical Connector

<table>
<thead>
<tr>
<th>Option Code</th>
<th>Description</th>
<th>IP rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Internal</td>
<td>None (flying leads)</td>
<td>-</td>
</tr>
<tr>
<td>3 External</td>
<td>Polyurethane cable</td>
<td>IP68 to 700 mH</td>
</tr>
</tbody>
</table>

### Wiring Details

<table>
<thead>
<tr>
<th>Pin</th>
<th>Colour</th>
<th>Option 0 Internal</th>
<th>Option 3 External</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Red</td>
<td>Red</td>
<td>Red</td>
<td>Supply +ve</td>
</tr>
<tr>
<td>2</td>
<td>Yellow</td>
<td>Orange</td>
<td>Red</td>
<td>I2C SDA</td>
</tr>
<tr>
<td>3</td>
<td>Green</td>
<td>Black</td>
<td>Black</td>
<td>I2C SCL</td>
</tr>
<tr>
<td>4</td>
<td>Blue</td>
<td>White</td>
<td>Blue</td>
<td>0 V</td>
</tr>
<tr>
<td>5</td>
<td>Orange</td>
<td>Yellow</td>
<td>Blue</td>
<td>Do not Connect</td>
</tr>
<tr>
<td>6</td>
<td>Black</td>
<td>Blue</td>
<td>Do not Connect</td>
<td>Screen</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td></td>
<td>Case</td>
</tr>
</tbody>
</table>

### General Certifications

- RoHS 2011/65/EU
- CRN Certified OF 13650.513467890YTN for pressure ranges up to and including 100 bar

### Ordering Information

1) Select part number

- **Main Product Family**
  - DPS

- **Product Diameter and Material**
  - 50 25mm Stainless Steel

- **Electrical Connection**
  - 0 None (flying leads)
  - 3 Polyurethane cable

- **Electronics Option**
  - D Digital I2C bus

- **Compensated Temperature Range**
  - TC -40°C to +85°C (-40°F to +185°F)

- **Accuracy**
  - A3 Premium

- **Calibration**
  - CC Full Thermal

- **Hazardous Area Certification**
  - H0 None
  - H1 IECEx/ATEX Intrinsically Safe ‘ia’ Group IIC

### Pressure Connector

- PA G1/4 Female
- PB G1/4 Male Flat
- PE 1/4 NPT Female
- PF 1/4 NPT Male
- PG 1/8 NPT Male

### Ordering Notes

- Note 1: Cable length 3 m

### Typical Order Example:

DPS503D-TC-A3-CC-H1-PF 20 bar gauge
Internal Version

GAUGE SENSOR WITH PB PRESSURE CONNECTOR SHOWN

External Version

MARKING DETAILS

Notes:
(1) All dimensions in millimetres.