The new DPS5000 SDI-12 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 uses SDI-12 protocol, over which fully compensated readings of Pressure and Temperature are sent, as well as control of many functions of the device.

**High Quality**

With 45 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.

**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 350 mbar to 70 bar
- Total accuracy to ±0.1 % FS
- Stainless steel or Titanium construction
- Wide temperature range -40 °C to +80°C
- Low power
- Customer set filter setting
- Excellent long-term stability
Operating Pressure Ranges

**Gauge Ranges**
Any zero based range from 350 mbar to 70 bar (6 to 1000 psi)

**Absolute Ranges**
Any zero based range from 350 mbar to 70 bar (6 to 1000 psi)

**Barometric Ranges**
Any upper range limit (URL) with a minimum span of 350 mbar (5 psi) between 700 mbar to 1300 mbar (10 to 18 psi)

**Over Pressure**
2 × Pressure range for barometric range
4 × Pressure range for all other ranges

**Containment Pressure**
6 × Pressure range (200 bar (3000 psi) maximum)

**Supply**
Voltage: 6 Vdc to 30 Vdc
Current: <10 mA measure at 25 °C
       15 mA peak
       <50 μA stand by

**Output/Communications**
SDI-12 V1.3

**Power on Time**
1000 ms to acquisition from power on

**Insulation Resistance**
>100 MQ at 500 Vdc

**Performance**

**Pressure Performance**
Accuracy over the calibrated temperature range including zero and span setting and the effects of non-linearity, hysteresis and repeatability
A3 Premium: ±0.1 % FS over -10 to 50 °C (14 to 122 °F)
A2 Improved: ±0.2 % FS over -40 to 80 °C (~40 to 176 °F)
For barometric ranges FS is the URL
Accuracy effects increase pro-rate for pressure ranges below 700 mbar

**Temperature Performance**
Accuracy over the calibrated temperature range
±3 °C (6 °F) with 0.1 °C (0.2 °F) Resolution

**Long Term Stability**
±0.05 % FS /year Typical
±0.1 % FS Maximum at reference conditions
±0.2 % Maximum over five years at reference conditions is available by arrangement with the factory
Stability effects increase pro-rate for pressure ranges below 700 mbar

Physical Specifications

**Environmental Protection**
Up to IP68, see Electrical Connector section

**Operating Temperature Range**
-40 °C to 80 °C (~-40 °F to 176 °F)

**Pressure Media**
Fluids compatible with Stainless Steel 316L and Hastelloy C276 or Titanium
Statement in accordance with the European Pressure Equipment Directive

**Enclosure Materials**
Stainless Steel 316L PVDF (Nose cone) or Titanium (body) and cable sheath as specified

**Pressure Connectors**
See the Ordering Information

**Electrical Connector**

<table>
<thead>
<tr>
<th>Option Code</th>
<th>Description</th>
<th>IP rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Raychem Cable</td>
<td>IP65</td>
</tr>
<tr>
<td>3</td>
<td>Polyurethane</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depth Cable</td>
<td>IP68</td>
</tr>
<tr>
<td>4</td>
<td>Hytrel Depth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cable</td>
<td>IP68</td>
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*Note: Maximum cable length is 457 m (1500 ft).*

**Wiring Details**

<table>
<thead>
<tr>
<th>Core Colour</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>Case</td>
</tr>
<tr>
<td>Red</td>
<td>+ VE Supply</td>
</tr>
<tr>
<td>Blue</td>
<td>- VE Supply</td>
</tr>
<tr>
<td>White</td>
<td>SDI-12 Data</td>
</tr>
<tr>
<td>Screen</td>
<td>Case</td>
</tr>
</tbody>
</table>

**General Certifications**
RoHS 2011/65/EU
CRN Certified 0F18611.513467890YTN for pressure ranges up to and including 100 bar

CE Conformity
Pressure Equipment Directive 97/23/EC: Sound Engineering Practice

EMC Directive 2014/30/EU
BS EN 61326-1:2013
BS EN 61000-6-1: 2007
BS EN 61000-6-3: 2007 + A1:2011

DPS5000 SDI-12 Specifications

**Physical Specifications**

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BS EN 61000-6-3: 2007 + A1:2011
1) Select part number

Main Product Family
DPS 5000 Series

Diameter and Material
0 25mm Stainless Steel
T 25mm Titanium

Electrical Connection
2 Raychem Cable (see Note 1)
3 Polyurethane Depth Cable
4 Hytrel Depth Cable

Electronics Option
E SDI-12 Protocol

Compensated Temperature Range
TA -10 to +50 °C (See Note 2)
TC -40 to +80 °C (See Note 3)

Accuracy
A2 Improved
A3 Premium

Calibration
CC Full Thermal

Hazardous Area Certification
H0 None

Pressure Connector
~ Stainless Steel
PA G1/4 Female
PB G1/4 Male Flat
PC G1/4 Male 60° Int Cone
PD G1/8 Male 60° Int Cone
PE 1/4 NPT Female
PF 1/4 NPT Male
PG 1/8 NPT Male
PH M20 x 1.5 Male (3mm Bore)
PJ M14 x 1.5 60° Int Cone
PL 7/16-20 UNJF Male 74° Ext
PN G1/2 Male
PQ G1/2 Male Flat
PR 1/2 NPT Male
PV 7/16-20 UNF Female
PW Depth Cone (G1/4 Female)
RV R1/4 Male

~ Titanium
PA G1/4 Female
PB G1/4 Male Flat
PF 1/4 NPT Male
PH M20 x 1.5 Male (3mm Bore)
PN G1/2 Male
PR 1/2 NPT Male
PW Depth Cone (G1/4 Female)
RJ M20 x 1.5 Male (8mm Bore)
RK M20 x 1.5 Male (14mm Bore)

2) Specify maximum working pressure unit and reference. Available units are:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bar</td>
<td>bar</td>
<td>mbar</td>
<td>millibar</td>
</tr>
<tr>
<td>psi</td>
<td>pounds/square inch</td>
<td>mH₂O</td>
<td>millimeters water</td>
</tr>
<tr>
<td>Pa</td>
<td>Pascal</td>
<td>in H₂O</td>
<td>centimeters water</td>
</tr>
<tr>
<td>hPa</td>
<td>hecto Pascal</td>
<td>ft H₂O</td>
<td>feet water</td>
</tr>
<tr>
<td>kPa</td>
<td>Kilo Pascal</td>
<td>mmHg</td>
<td>millimeters mercury</td>
</tr>
<tr>
<td>inHg</td>
<td>inches mercury</td>
<td>Kg/cm²</td>
<td>Kilograms force/centimeters square</td>
</tr>
<tr>
<td>atm</td>
<td>atmosphere</td>
<td>Torr</td>
<td>torr</td>
</tr>
<tr>
<td>MPA</td>
<td>Mega Pascal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3) Specify cable length and units:
Integer values in m or ft (maximum length 457 m (1500 ft)).

Notes:
1. Not available with a titanium body.
2. Choose A3-Premium accuracy with this option.
3. Choose A2-Improved accuracy with this option.

Typical Order Examples
DPS503E - TA - A3 - CC - H0 - PW 700 mbar gauge 10m Cable
DPSST4E - TC - A2 - CC - H0 - PA 10 bar absolute 10m Cable
Note: All dimensions in millimetres.