

Druck

DPS 4000 Series

CANbus Digital Output Pressure Transducers

- Ranges from 350mbar to 70 bar
- High accuracy over wide temperature range
- Full CAN version 2.0B
- CANopen protocol
- Input/output isolation
- Device self-checking and diagnostics

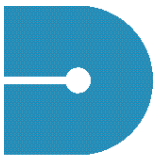


The DPS 4000 Series is a state of the art range of digital output pressure transducers featuring a CANbus serial communications interface. Fully temperature corrected pressure readings are output as a digital word in any one of 24 engineering units, requiring no user system set-up or calibration. The integral digital electronics enhance performance to levels unmatched by traditional analogue transducers.

Communication software is based on the CANopen protocol. The DPS 4000 functionality offers the user access to last/next calibration date, calibration routines and serial number identification amongst others.

Capable of operation from a range of supply voltages (including batteries) the transducer is fully input/output isolated for complete system protection and user confidence. With ranges from 350mbar to 70 bar and 400% overpressure it is ideal for many applications where optimum transducer performance is essential and customer specific requirements can be accommodated.

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STANDARD SPECIFICATIONS

Pressure Measurement

Operating Pressure Ranges

Zero based ranges: 350mbar*, 700mbar, 1bar, 2, 3.5, 7, 10, 20, 35 and 70bar gauge, absolute or differential. *350mbar absolute not available. *Bi-directional gauge and differential ranges available on request.*

Overpressure

The pressure range can be exceeded by the following with negligible effect on calibration:

Positive side:-
4 x F.S. (140bar maximum)
Negative side:-
2 x F.S. (10 bar maximum).

Line Pressure

35 bar maximum (differential model only).

Positive Pressure Media

Fluids compatible with Stainless Steel 316L and Hastelloy C276.

Excitation Voltage

7.5 to 30 Vd.c.

Output Configuration

CANopen digital data via CANbus interface. User configurable pressure reading <100Hz. (factory set to default value of 10Hz).

Software Protocol

In accordance with:
DS301 V 4.01 (CANopen)
DS404 V 1.0 (Analogue input device profile)
DSP 305 V 1.0 (Layer setting service)

Performance Specification

Accuracy

0.2% reading down to 50% F.S., then 0.1% F.S. to zero. Includes all errors over 10 to 60°C.

Long Term Stability

Typically less than 0.08% F.S. per annum.

Operating Temperature Range

-40° to 80°C.

Insulation Resistance

Greater than 100 MΩ at 500Vd.c.

Mechanical Shock

1000g, 1mS half sine pulse in 3 mutually perpendicular axes will not affect performance.

Vibration

Response <0.05% F.S./g at 30g peak 10Hz to 2kHz, limited by 12mm double amplitude.

Safety

CE marked
EMC emissions: EN 50081-1
EMC immunity: EN 61000-6-2

Physical Specification

Weight

200g nominal.

Pressure Connection

Male:-
G¹/₈B (60° Int Cone)
G¹/₄B (60° Int Cone or Flat End)
1/4 NPT
7/16 UNF to MS33656-4
M14 x 1.5
Female:-
G¹/₄, 1/4 NPT
Others available - refer to Druck.

Electrical Connection

MILC-26482 6 pin bayonet plug or 6 core shielded cable (1m supplied as standard)
Alternatives available - refer to Druck.

OPTIONS

- (A) Mating connector for bayonet plug
- (B) Negative calibration
- (C) Alternative engineering units (psi)
- (D) User instruction handbook

CALIBRATION STANDARDS

Druck pressure transducers are calibrated against precision calibration equipment which is traceable to International Standards.

RELATED PRODUCTS

Druck manufacture a wide range of pressure sensors, portable calibrators, pressure controllers and deadweight testers. Please refer to Druck for further information.

ORDERING INFORMATION

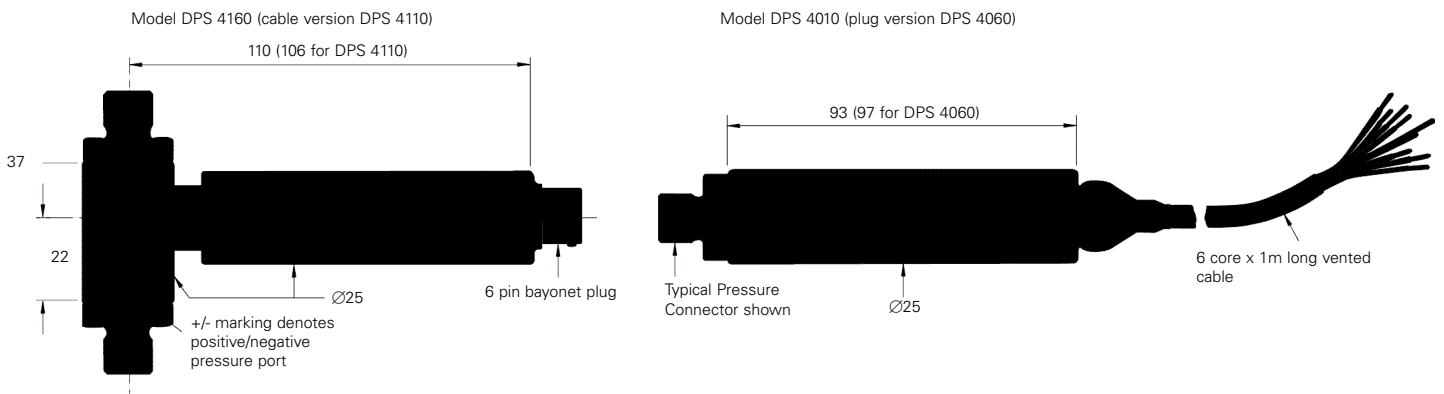
- (1) Select Model number

DPS Basic Type Number	
Code	Pressure Type
40	Gauge or absolute
41	Differential
Code Electrical Connection	
10	6 core vented screened cable (1m)
60	6 pin bayonet plug
DPS 40	60 Typical example

- (2) Pressure range
- (3) Gauge, absolute or differential
- (4) Pressure connection
- (5) Options (if required)

Continuing development sometimes necessitates specification changes without notice.

Installation Drawings - Dimensions mm



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