DPS 4000

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.

D P S 4 0 0 0 S e r i e s

CANbus Digital Output Pressure Transducers

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:-
$G^1/_8B$ (60° Int Cone)
$G^1/_4B$ (60° Int Cone or Flat End)
$^1/_4$ NPT
$^7/_{16}$ UNF to MS33656-4
M14 x 1.5
Female:-
$G^1/_4$, $^1/_4$ NPT
Others available - refer to Druck.

Electrical Connection
MIL-C-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

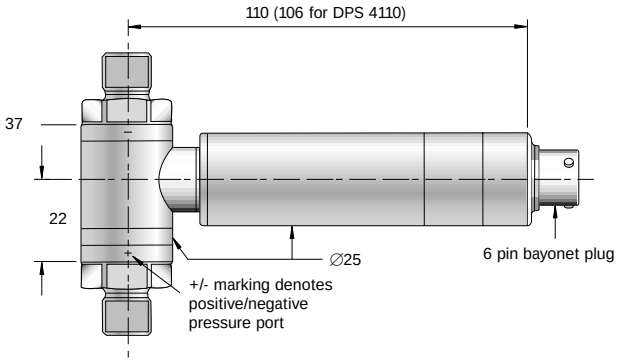
DPS Basic Type Number			
	Code	Pressure Type	
	40	Gauge or absolute	
	41	Differential	
		Code	Electrical Connection
		10	6 core vented screened cable (1m)
		60	6 pin bayonet plug
DPS	40	60	Typical example

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

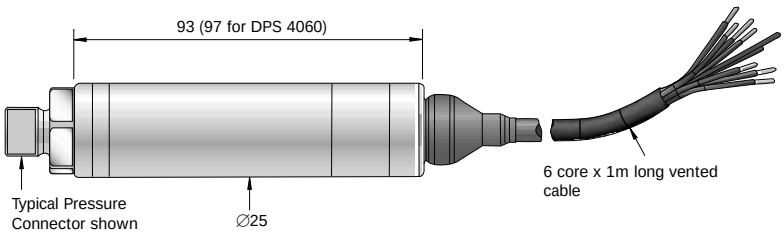
Continuing development sometimes necessitates specification changes without notice.

Installation Drawings - Dimensions mm

Model DPS 4160 (cable version DPS 4110)



Model DPS 4010 (plug version DPS 4060)



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