

Description

The DNX is an analogue pressure transmitter which employs the latest surface mount technology in conjunction with our proven inductive pressure sensor to provide an economically priced loop powered transmitter. The transmitters are of all welded stainless steel construction and have very high over range capability as standard.

On site zero and span adjustment may be undertaken by means of the PCB mounted potentiometers.

The transmitter electrical connection is by a DIN 43650 electrical connector which can be installed to IP65 or IP54 requirements.

The following transmitter types are available:

Type 1:

Gauge pressure with 1/4" BSP female process connection. Adaptors are available to provide alternative process connections if required. This transmitter type is suitable for use on gasses and low viscosity liquids.

Type 3:

Gauge pressure with 1" BSP male process connection and flush measurement diaphragm. This transmitter type is suitable for use on gasses, low or high viscosity liquids, liquids with solids in suspension, slurries and product that is liable to crystallise.

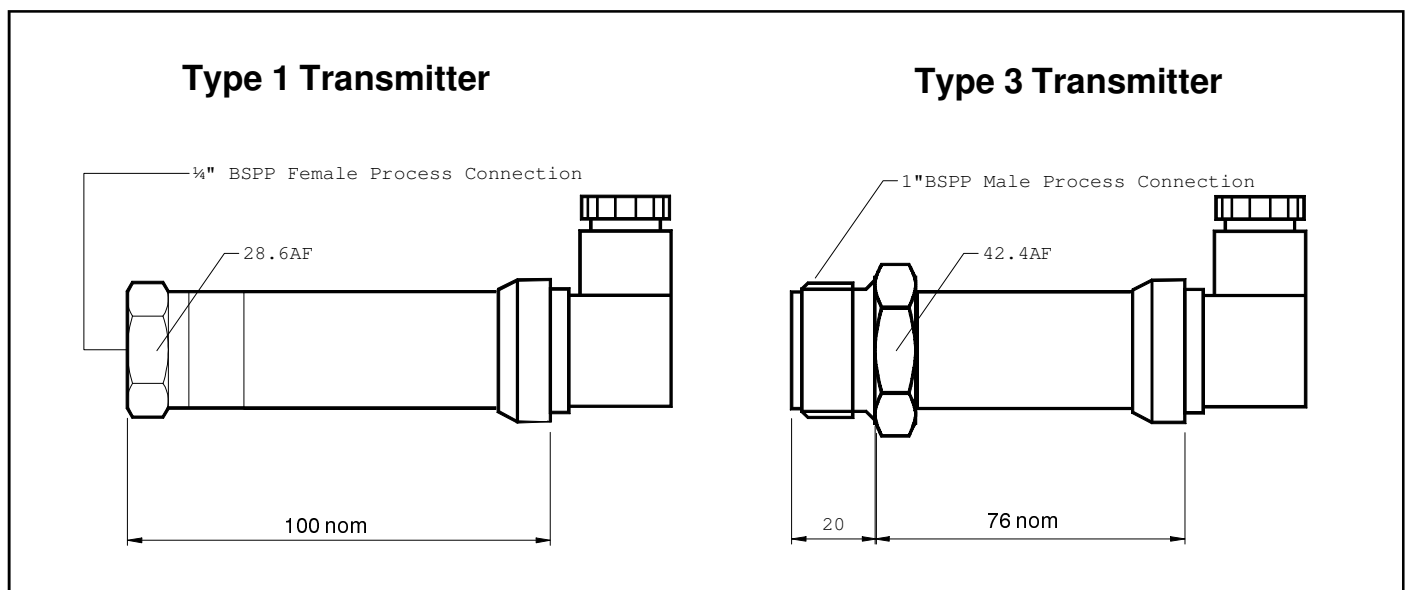


Features

- Analogue signal processing
- Sensor over-range protection
- All welded Stainless Steel wetted parts

Applications

- Hydraulic and pneumatic systems
- Level measurement
- Steam pressure measurement



Outline drawings and dimensions. All dimensions in mm unless otherwise noted.

Analogue pressure transmitter

Characteristics

Over-Pressure Limits

The over-pressure limit is defined as the maximum over-pressure or suction pressure that causes less than $\pm 5\%$ of transducer FSD range zero shift.

The following limits apply:

Over pressure: Up to 2.4bar FSD range, 10x FSD.
6bar and 0-16bar FSD ranges, 4x FSD.
40 and 100bar FSD ranges, 2x FSD.
400bar FSD range, 1.5x FSD.

Suction: Up to 0.4bar FSD range, 100% FSD.
All other ranges, full vacuum.

Operating Temperature Limits

Transmitter electronics: -10°C to $+70^{\circ}\text{C}$.

Process Temperature Limits: -40°C to $+85^{\circ}\text{C}$.

Note: If the process temperatures are outside the electronics operating range, the transmitter body (tube) must be adequately cooled or heated to ensure the electronics maximum and minimum operating temperatures are not exceeded.

Transmitter Performance

	DNXD	DNXE
Non-Linearity including Hysteresis	± 0.40	± 1.00
Zero Stability over 6 months	± 0.30	± 0.60

Note: The figures quoted are typical values as %age of maximum span at a constant temperature (20°C nominal).

Thermal Performance

Specified over the compensated temperature range of $+20^{\circ}\text{C}$ to $+70^{\circ}\text{C}$.

Zero: DNXD type $\pm 0.035\%$ of max span/ $^{\circ}\text{C}$ typical
DNXE type $\pm 0.05\%$ of max span/ $^{\circ}\text{C}$ typical

Span: DNXD type $\pm 0.035\%$ of max span/ $^{\circ}\text{C}$ typical
DNXE type $\pm 0.05\%$ of max span/ $^{\circ}\text{C}$ typical

Signal Output

4-20mA Two-wire. Output over-current limit set at a nominal 28mA.

Power Supply

Min operating voltage: 8Vdc.

Max operating voltage: 30Vdc.

Voltage Dependency

Less than $\pm 0.01\%$ max span/volt.

Zero and Span Adjustment

Zero: $\pm 10\%$ nominal of instrument full scale range.

Span: The transmitter may be calibrated to give 4-20mA output for pressure inputs to the transducer from 25% to 100% of full scale range, ie 4:1 span adjustment.

Damping

Fixed 25mSec analogue RC time, approx. 125mSec 1% settling time.

Electrical Connection

DIN 43650 male plug. Transmitters are supplied with a mating DIN socket which is fitted with terminal blocks for electrical connection.

Connection details:

Two-wire Type: Pin 1, Loop positive.
Pin 2, Loop negative.
Pin 3, No connection.
Pin 4, Cable Screen

Ordering Information:

Code	Description
	Transmitter Type
DNX	Two-wire Analogue Pressure Transmitter
	Electronics Type
E	Standard 1% Accuracy
D	Improved 0.4% Accuracy (Refer to Sales)
	Process Connection
1	1/4" BSP female
3	1" BSP male flush diaphragm
	Transducer Type
G	Gauge Pressure
	FSD Range
840	40mbar [1G 3G]
851	160mbar [1G 3G]
860	400mbar [1G 3G]
870	1000mbar [1G 3G]
872	2.4bar [1G 3G]
881	6bar [1G 3G]
891	16bar [1G 3G]
900	40bar [1G 3G]
910	100bar [1G]
920	400bar [1G]
	Process Adaptors [Type 1 only]
/N2N	1/4" NPT male
/N4N	1/2" NPT male
/N2	1/4" BSP male taper
/N4	1/2" BSP male taper
/P2	1/4" BSP male parallel with 60° cone
/P4	1/2" BSP male parallel with 60° cone

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Company Reg. No.: 4346738, VAT No.: 786 6596 54, Reg Address: Impress Sensors & Systems Ltd, Unit 6 Mercury House, Calleva Park, Aldermaston, Berkshire, RG7 8PN