

PulsePro™ Non-Clogging Differential Pressure Transmitter

Heavy-duty, maintenance-free transmitter designed for fabric filters, cyclones, powder processes and low pressure particulate laden pipes.

The PulsePro DP 20T Differential Transmitter's ability to transmit accurate measurements below 10" WC over a broad temperature range without clogging concerns makes the DP 20T a worthy replacement for mechanical/helical devices and an ideal compliment to our PulsePro Control System.

It's unique flush/ported design enables configuration for either differential or static measurement. When measuring differential pressure, the flush diaphragm is mounted to the dirty or wet side of the process. The port connection is tubed to the cleaner side. For static measurement, such as in a powder conveying pipe, the port is simply vented to atmosphere.

Standard output is a 4–20mA signal for connection to a PulsePro Controller, PLC, DCS, PC, or chart recorder.

Operating Principle

The DP-20T uses an advanced micro-machined sensing element with temperature compensation packaged in an industrial grade stainless steel body. Changes in process pressure or vacuum applied to the diaphragm cause deflection in the sensing element. A precise, linear 4–20mA output signal proportional to the pressure is produced by the circuitry.



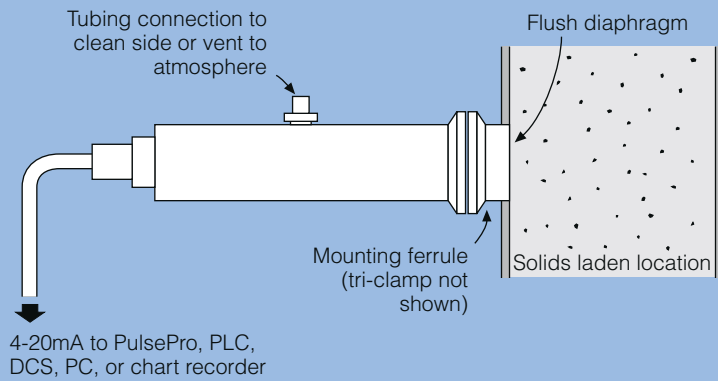
Features and Benefits

- Solid state micro-machined sensing element.
- Temperature compensated, operates at temperatures up to 450°F/232°C.
- Accurate and repeatable 4–20mA output signal.
- Heavy duty body prevents errors from mounting stress.
- Wet/wet design for scrubbers and mist eliminators.
- Static measurement for powder and solids flow pipes.
- Intrinsically safe version for hazardous locations.
- 3A sanitary rating for food and pharmaceutical industries.

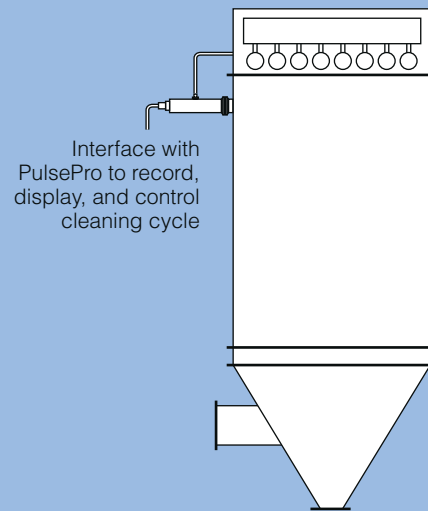
Applications

- Ideal for baghouses, cartridge collectors, and cyclones:
 - Replace photomechanical/helical devices that are subject to clogging.
 - Record differential pressure to meet EPA regulations.
 - Ensure reliable “pressure activated” filter cleaning.
 - Integrate with PulsePro Control System to optimize filter cake and maximize filtration efficiency and flow control.

General Installation



Dust collector Installation



Non-Clogging Pressure Transmitter Specifications

Configurations and Ranges

Configurations	Differential wet/dry, wet/wet.
Ranges	0–10" WC std, other opt.
Action	Positive at diaphragm std. Negative at diaphragm or bidirectional, opt.
Proof pressure	50" WC for 0–10" WC range. Consult factory for higher rating.

Process Compatibility and Temperature

Sanitary rating	Optional 3-A #37-01.
Process media	Wet/wet design is compatible with most gasses and fluids.
Temperature	–20°F/–29°C to 280°F/138°C std. –20°F/–29°C to 450°F/232°C opt.

Electrical

Supply voltage	+13 to 32 VDC.
Connection	½" NPT exit with 5' cable.
Load impedance	950 Ohm @ 32 VDC.
Output	4–20mA.
Intrinsic safety	Optional.

Accuracy and Performance

Total error	< 1.5% FS @ 200°F/93°C. < 3.0% FS @ 280°F/138°C. Based on zeroing at ambient; zeroing at temperature reduces error to < 1.0%.
Response time	500 microseconds.
Resolution	Infinite.
Orientation sensitivity	0.03 psig.

Mechanical

Diaphragm	Polished 316L SS std., other opt.
Case material	304L SS std., other opt.
Fill material	NEOBEE M-20.
Housing	NEMA 4X equivalent.
Mount	Tri-clamp flange.
Port connection	¾"-20 UNF.
Weight	1 lb. / 0.45 kg.

Installation Kit

Includes	Mounting ferrule Tri-clamp & gasket Differential port connectors 10 ft. (3m) of aluminum tubing
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Specifications subject to change



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