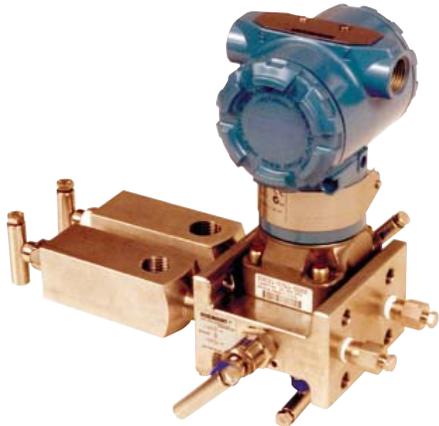


North American Differential Pressure Transmitter

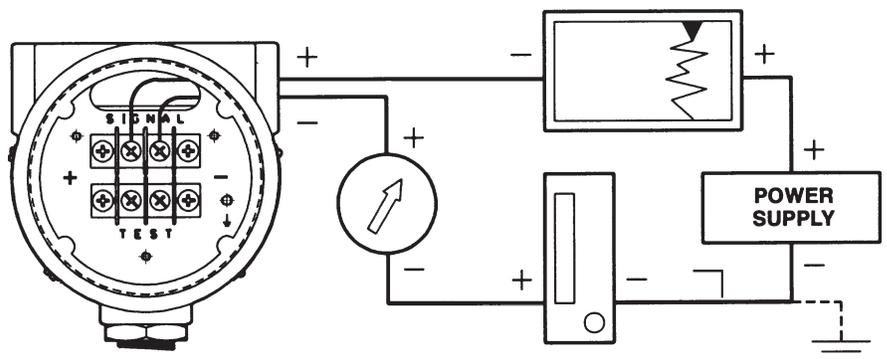
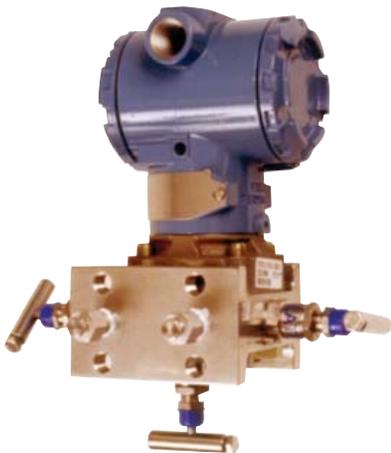


The North American 8246-A is a 2-wire transmitter that receives power and transmits its measurement over this pair of wires. It is capable of communicating digitally with a hand-held interface using the same wires.

The 8246-A is designed for compatibility with the 8246-C Interface. This communicator allows interrogation, configuration, and testing of the transmitter. It communicates with the transmitter whether it is connected directly remotely in the control cabinet or intermediate junction box. Communication is digital using the same lead wires that carry the 4-20 mA differential pressure signal.

FEATURES

- Smart differential pressure transmitter
- Microprocessor-based
- Two ranges
min. range: 0-2.5"wc
max. range: 0-250"wc
- Proven sensor technology
- User selectable linear or square root output
- Accuracy: $\pm 0.075\%$ of span



Signal loop must have 250 ohms minimum load for communications.

OPERATION

When the instrument is piped with impulse lines running from upstream and downstream sides of the orifice plate, process pressures from the respective lines are transmitted through an isolating diaphragm and silicone oil fill fluid to a sensing diaphragm in the center of the capsule. Capacitance plates on both sides of the sensing diaphragm detect the position of the diaphragm and convert the differential pressure into a 4-20 mA signal.

The 8246-A communicates with the 8246-C Interface using standard frequency shift keying, a widely accepted communication technique. The Interface uses high frequency signals superimposed on the 4-20 mA transmitter output to communicate over the loop. Because the net energy added to the loop is small, communication does not disturb the 4-20 mA signal at all.

The instrument can be re-ranged with or without the communicator. If the Interface unit is not available, range can be set with buttons located under the metal certification label. Range settings can take place on line provided an 8246-A-3M (3-valve, zeroing manifold) or 8246-A-5M (5-valve, zeroing and line blowdown manifold) are used to isolate the impulse lines from the process.

SPECIFICATIONS

Rangeability: 100:1 turndown

Differential pressure range:

min. range: 0-2.5"wc

max. range: 0-250"wc

Output: 4-20 mA dc

Accuracy: $\pm 0.075\%$ of calibrated linear span

Temperature effect: $\pm 0.0938\%$ of span per 50 F change of span

Damping time constant continuously adjustable from 0.36 seconds

Power supply effect: Less than 0.005% of output span per volt

Operates within specifications between static line pressures of 0.5 psia and 3626 psig

Maximum differential: 3626 psi

Supply voltage (external power supply required): 10.5 to 55 V dc with no load. Minimum resistance 250 ohm, 24 V dc nominal.

Operating temperature: -40 to 185 F (-40 to 85 C)

Storage temperature: -50 to 185 F (-46 to 85 C)

Electronics housing: Low copper aluminum (NEMA 4X). Rated for FM explosion proof applications.

Paint: Polyester-epoxy

Mounting: Bracket is supplied for mounting to pipe up to 2" diameter and for panel mounting. NOTE: Transmitter can be mounted in any position.

Pressure tap size: 1/4 fpt on 2 1/8" centers on flanges; 1/2 fpt on 2", 2 1/8", or 2 1/4" centers with adapters

Electrical entrance size: 1/2" fpt

Total weight: 8.5 lb

Isolating diaphragms and drain/vent valves: 316SS

Process flanges and adapters: 316 SST

Wetted O-Rings: Viton

Fill fluid: Silicone oil

To order, specify: 8246-A Smart Pressure Transmitter with calibration range.
8246-A-3M Smart Pressure Transmitter with 3 valve manifold and calibration range.
8346-A-5M Smart Pressure Transmitter with 5 valve manifold and calibration range.

WARNING: Situations dangerous to personnel and property may exist with the operation and maintenance of any combustion equipment. The presence of fuels, oxidants, hot and cold combustion products, hot surfaces, electrical power in control and ignition circuits, etc., are inherent with any combustion application. Parts of this product may exceed 160F in operation and present a contact hazard. Fives North American Combustion, Inc. urges compliance with National Safety Standards and Insurance Underwriters' recommendations, and care in operation.



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