

# Air and Gas Pressure Transducers, mA or VDC

Specifications subject to change without notice. | USA 200204 | Page 1 of 2



## DESCRIPTION

I-851D

Low range gage and differential pressure transducers.

## APPLICATION

Measure gage or differential pressure of air or inert non-conductive gases in VAV, fan-coil, duct systems, and other air conditioning equipment, and transmit to any compatible electronic analog controller, DDC/PLC control or automation system.

## FEATURES

- Eight (8) selectable pressure ranges
- Three (3) selectable output signals
- Signal conditioned
- Temperature compensated
- Long life sensor
- Compact size
- Low power consumption
- Calibrated, traceable to NIST
- High overpressure
- Pluggable terminal block



certified  
ISO 9001

## SPECIFICATIONS

### Electrical

Power supply 24 VDC (18 to 24 VDC),  
24 VAC,  $\pm 15\%$ , 50 to 60 Hz

Power consumption  
- VDC signal 10 mA, max.  
- mA signal 30 mA, min.

### Sensor Performance

Media sensed Air, gases and liquids, limited only to media that will not attack PPS, PEI, Silicon, Silicon RTV, or Fluorosilicone

Sensor element Piezoresistive, with silicon diaphragm

Compensation Built-in temperature and signal conditioning

- range 50°F to 122°F (10°C to 50°C)

Accuracy  $\pm 1\%$  F.S.O.

incl. non-linearity, hysteresis, and non-repeatability at a fixed temperature  
 $\pm 1\%$  F.S.O./yr.

Stability

Thermal effects

- zero  $\pm 0.042\%$  F.S.O./°F

- span  $\pm 0.003\%$  F.S.O./°F

Adjustment

- zero offset Screw adjustable

Pressure ranges Eight (8) various selectable "WC ranges, incl. split ranges per transducer, refer to ordering information

Overpressure 20 PSI or two times full scale pressure, whichever is greater

### Type of Control

General Continuous proportional analog sensor signal output

Analog output

Selectable: 4-20 mA, 3-wire, 1-5 VDC, or 1-10 VDC

Load requirement

- current output

Max loop resistance 500  $\Omega$

@ 24 VDC power

(= wire resistance plus controller input resistance)

Min load 2K  $\Omega$

- voltage output

### Environmental

Permissible ambient

- humidity

0 to 90% RH, non-condensing

- working temperature

32°F to 149°F (0°C to 65°C)

- storage temperature

-13°F to 158°F (-25°C to 70°C)

### Physical

Enclosure

- material

High impact ABS, UL94-HB

- color

Black

- protection

NEMA 1

- installation

Surface mounted or

DIN rail mounted

Dimensions

3.4 x 2.7 x 1.4 in.

(87 x 68 x 35 mm), with

mounting flanges

Wire connections

Pressure connection

- P1. high port

Pluggable screw terminal block

- P2. low port

Barbed fittings for 1/8" I.D. tubing

Weight

Positive or high pressure

Negative or low pressure

0.20 lb. (0.09 kg)

### Warranty

Two years material and

workmanship

## OPTIONS

N4

NEMA 4 enclosure

D

Enclosure w/DIN rail mounting

## ORDERING INFORMATION

### I-851D - 040

Pressure Group	Rotary Switch Selectable Ranges
0	• 0-0.5" WC   • 0-1" WC   • 0-2" WC   • 0-4" WC • -0.25 to +0.25" WC   • -0.5 to +0.5" WC   • -1 to +1" WC   • -2 to +2" WC
1	• 0-1.5" WC   • 0-3" WC   • 0-6" WC   • 0-12" WC • -0.75 to 0.75" WC   • -1.5 to 1.5" WC   • -3 to 3" WC   • -6 to +6" WC
<b>Signal Ranges Built-in, Switch Selectable</b> • 4-20 mA   • 1-5 VDC   • 1-10 VDC	

#### Sample order number

I-851D-040

Differential or gage\*\* pressure transducer, eight (8) selectable pressure ranges (see table, Pressure Group 0), for 18-24 VDC or 24 VAC power supply, and output signal selectable at the transducer between 4-20 mA, 1-5 VDC, and 1-10 VDC

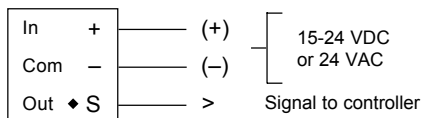
\*\* With gage application, the low pressure port is vented to atmosphere.

With NEMA 4 enclosure add "N4" to the ordering part number.

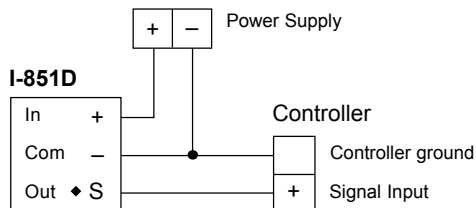
## WIRING CONFIGURATION

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#### 3-Wire to 2-Wire Connection



♦ **Be Alert: Do not apply voltage to S terminal as permanent damage will occur.**