

# Air and Gas Pressure Transducers, 4-20 mA

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



## DESCRIPTION

Low range gage and differential pressure transducers with digital display.

## 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

- Large digital display
- 4-20 mA, 2-wire/loop powered
- Signal conditioned
- Temperature compensated
- Long life sensor
- Compact size
- Low power consumption
- Calibrated, traceable to NIST
- High overpressure
- Pluggable terminal block

## SPECIFICATIONS

### Electrical

Power supply	19 to 30 VDC
- extended range	14 to 36 VDC for appropriate load/loop resistance*, polarity protected
Power consumption	30 mA, max.

### 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	± 1% F.S.O. incl. non-linearity, hysteresis, and non-repeatability at a fixed temperature
Stability	± 0.5% F.S.O./yr.
Thermal effects	
- zero	± 0.042% F.S.O./°F
- span	± 0.006% F.S.O./°F
Adjustment	
- zero offset	Screw, up to 60% of F.S.O.
Pressure ranges	0-1.0" WC to 0-40 PSI (split ranges available), refer to ordering information
Overpressure	20 PSI or two times full scale pressure, whichever is greater

### Type of Control

#### \* Load/Loop resistance calculation

- maximum allowable  $RL_{max} = (VS - 14 \text{ VDC}) \times 50 \text{ Ohms}$
- minimum required only for voltage supply above 30 VDC  $RL_{min} = (VS - 30 \text{ VDC}) \times 40 \text{ Ohms}$

RL = resistance ( $\Omega$ )

VS = voltage supply (VDC)

### General

Analog output  
Load requirement  
- current output

### Digital Display

Type  
Height of digit  
Digit display  
One line liquid crystal display "LCD"  
0.38" (9.75 mm)  
3 1/2 (i.e. numbers max: 1.999, 19.99, 199.9 or 1999)

### Environmental

Permissible ambient  
- humidity  
- working temperature  
- storage temperature

### Physical

#### Enclosure

- material
- color
- protection
- installation

#### Dimensions

#### Wire connections

#### Pressure connection

- P1. high port
- P2. low port

#### Weight

#### Warranty

Continuous proportional analog sensor signal output  
4-20 mA, 2-wire

Max loop resistance 500  $\Omega$   
@ 24 VDC power  
(= wire resistance plus controller input resistance)

One line liquid crystal display "LCD"

0.38" (9.75 mm)  
3 1/2 (i.e. numbers max: 1.999, 19.99, 199.9 or 1999)

0 to 90% RH, non-condensing  
32°F to 122°F (0°C to 50°C)  
-13°F to 158°F (-25°C to 70°C)

High impact ABS, UL94-HB  
Black

NEMA 1

Surface mounted or  
DIN rail mounted

3.4 x 2.7 x 1.4 in.  
(87 x 68 x 35 mm), with  
mounting flanges

Pluggable two-wire screw  
terminal block

Barbed fittings for 1/8" I.D. tubing  
Positive or high pressure  
Negative or low pressure  
0.20 lb. (0.09 kg)

Two years material and  
workmanship



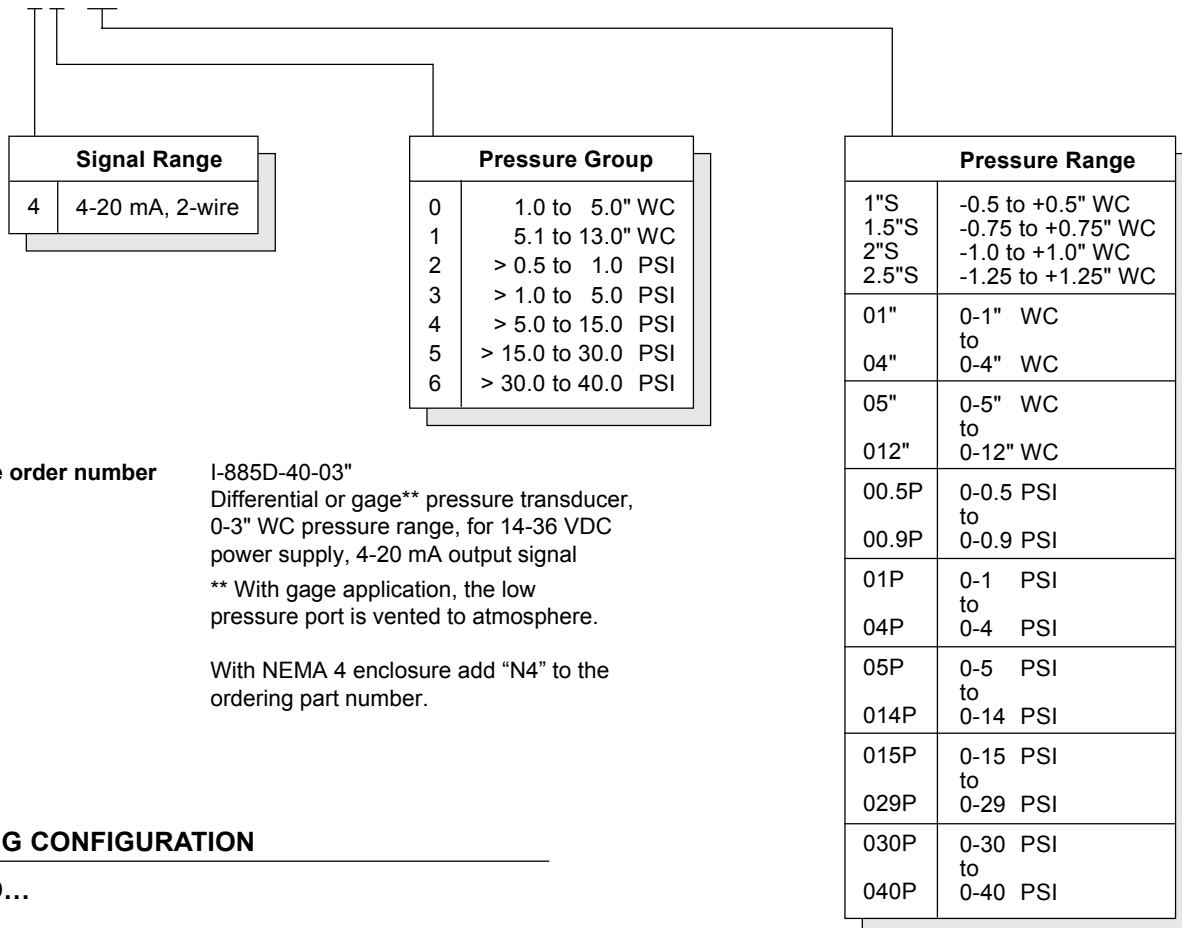
I-885D

certified  
ISO 9001

## OPTIONS

N4	NEMA 4 enclosure w/clear cover
D	Enclosure w/DIN rail mounting

## ORDERING INFORMATION

**I-885D - 4 0 - 03"**


**Sample order number** I-885D-40-03"

Differential or gage\*\* pressure transducer,  
0-3" WC pressure range, for 14-36 VDC  
power supply, 4-20 mA output signal

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

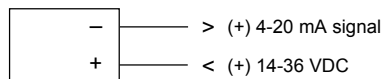
With NEMA 4 enclosure add "N4" to the  
ordering part number.

## WIRING CONFIGURATION

**I-885D...**

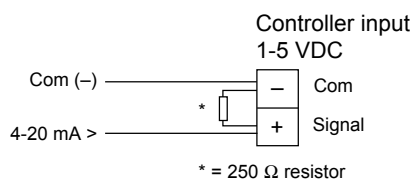
### I-885D

24 VDC, 4-20 mA signal, 2-wire configuration



◆ Connect power supply ground  
and controller ground if necessary

Add 250  $\Omega$  resistor at controller  
input to convert transducer signal  
4-20 mA to 1-5 VDC.



Custom split ranges are  
available on request.