

Air and Gas Pressure Transducers



I-885D

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.



certified
ISO 9001

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 $RL_{min} = (VS - 30 \text{ VDC}) \times 40 \text{ Ohms}$

$RL = \text{resistance } (\Omega)$
 $VS = \text{voltage supply (VDC)}$

General

Continuous proportional analog sensor signal output

Analog output 4-20 mA, 2-wire

Load requirement - current output

Max loop resistance 500 Ω @ 24 VDC power (= wire resistance plus controller input resistance)

Digital Display

Type One line liquid crystal display "LCD"

Height of digit 0.38" (9.75 mm)

Digit display 3 1/2 (i.e. numbers max: 1.999, 19.99, 199.9 or 1999)

Environmental

Permissible ambient

- humidity 0 to 90% RH, non-condensing

- working temperature 32°F to 122°F (0°C to 50°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 Pluggable two-wire screw terminal block

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

- P1. high port Positive or high pressure

- P2. low port Negative or low pressure

Weight 0.20 lb. (0.09 kg)

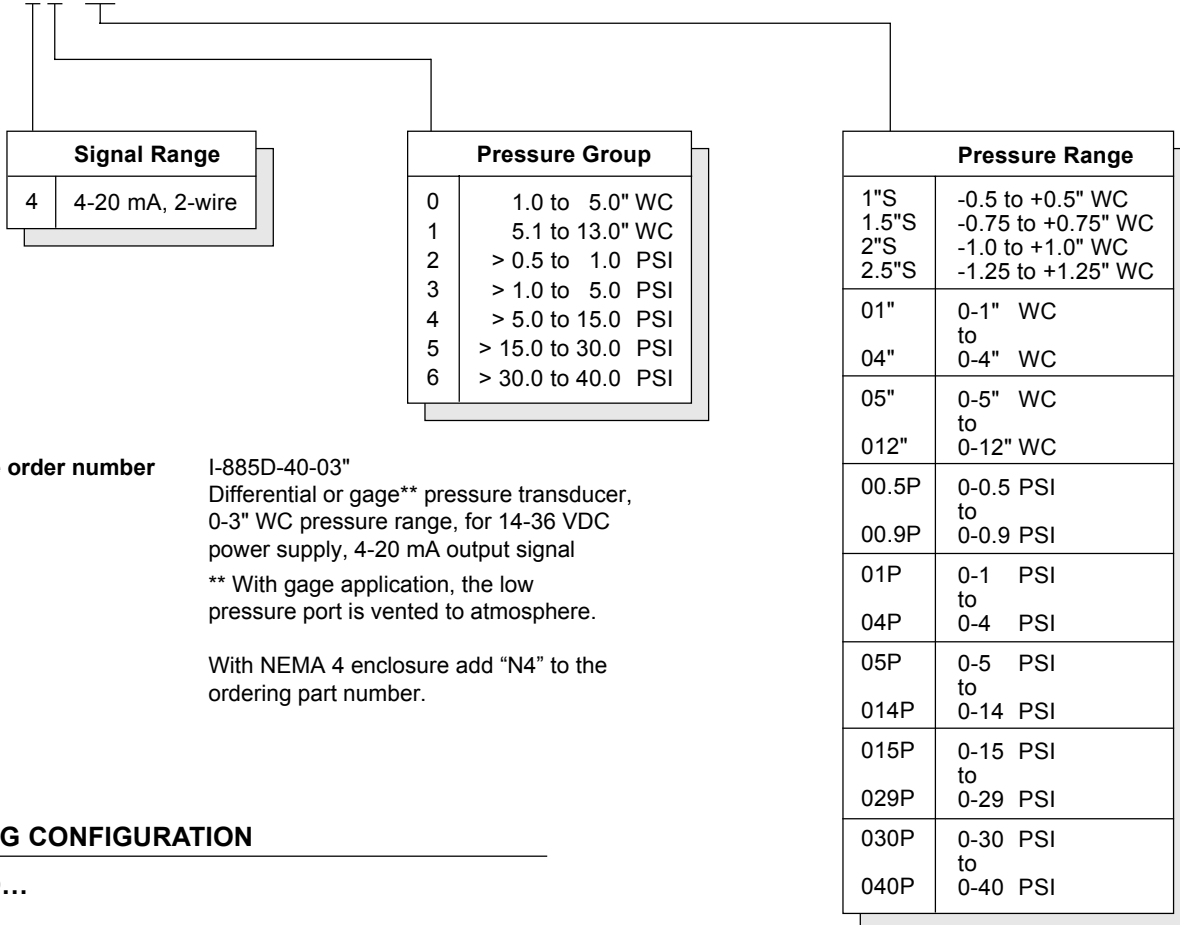
Warranty Two years material and workmanship

OPTIONS

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

ORDERING INFORMATION

I-885D - 4 0 - 03"



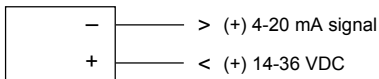
Sample order number I-885D-40-03"
 Differential or gage** pressure transducer,
 0-3" WC pressure range, for 14-36 VDC
 power supply, 4-20 mA output signal
 ** With gage application, the low
 pressure port is vented to atmosphere.
 With NEMA 4 enclosure add "N4" to the
 ordering part number.

Custom split ranges are available on request.

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 Ω resistor at controller input to convert transducer signal 4-20 mA to 1-5 VDC.

