

Air and Gas Pressure Transducers, mA or VDC, 2-Wire

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



DESCRIPTION

Low range gage and differential pressure transducers.

880D

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

- 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



certified
ISO 9001

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 (Ω)
VS = voltage supply (VDC)

General

Analog output
Load requirement
- current output

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

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

Environmental

Permissible ambient
- humidity
- working temperature
- storage temperature

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

Physical

Enclosure

- material
- color
- protection
- installation

High impact ABS, UL94-HB
Black
NEMA 1

Dimensions

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

Wire connections

Pressure connection

- P1. high port
- P2. low port

Weight

Warranty

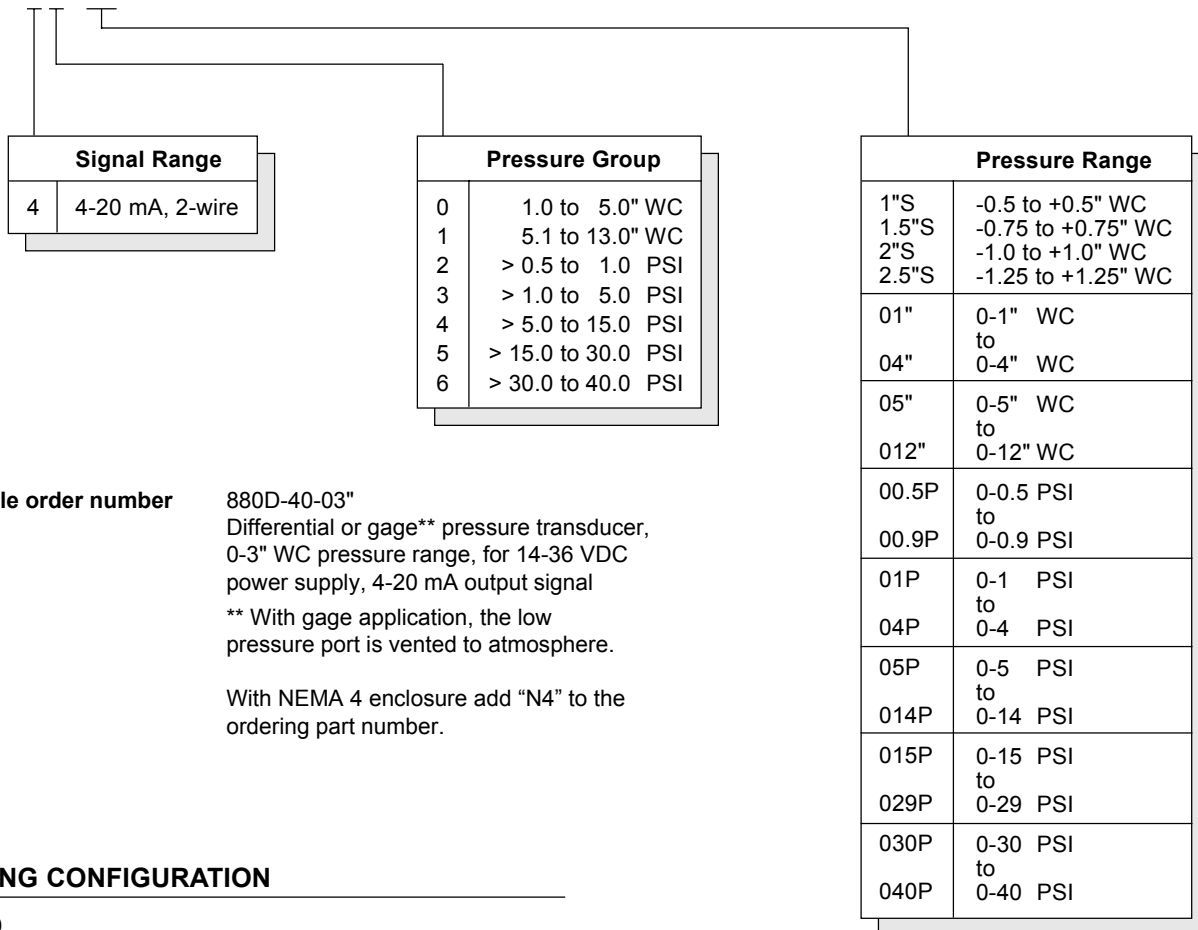
OPTIONS

N4
D

NEMA 4 enclosure
Enclosure w/DIN rail mounting

ORDERING INFORMATION

880D - 4 0 - 03"



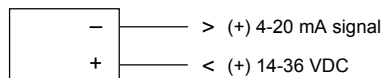
Sample order number 880D-40-03"
 Differential or gage** pressure transducer,
 0-3" WC pressure range, for 14-36 VDC
 power supply, 4-20 mA output signal
 ** With gage application, the low
 pressure port is vented to atmosphere.

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

WIRING CONFIGURATION

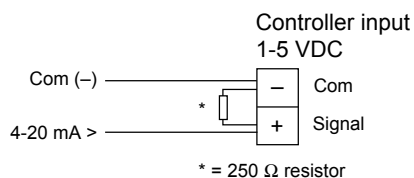
880D...

880D
 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.



Custom split ranges are
 available on request.