

Air and Gas Pressure Transducers



860D

DESCRIPTION

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

- *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

Stability $\pm 0.5\%$ F.S.O./yr.

Thermal effects
- zero $\pm 0.042\%$ F.S.O./°F

- span $\pm 0.003\%$ F.S.O./°F

Adjustment
- zero offset Screw adjustable, up to 60% of F.S.O.

Pressure ranges 0-0.5" 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

General Continuous proportional analog sensor signal output

Analog output

- current version 4-20 mA
- voltage versions 1-5 VDC, 1-6 VDC, or 1-10 VDC

Load requirement

- current output Max loop resistance 250 or 500 Ω (review ordering selection) @ 24 VDC power (= wire resistance plus controller input resistance)
Min load 2K Ω

- voltage output

Environmental

Permissible ambient

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

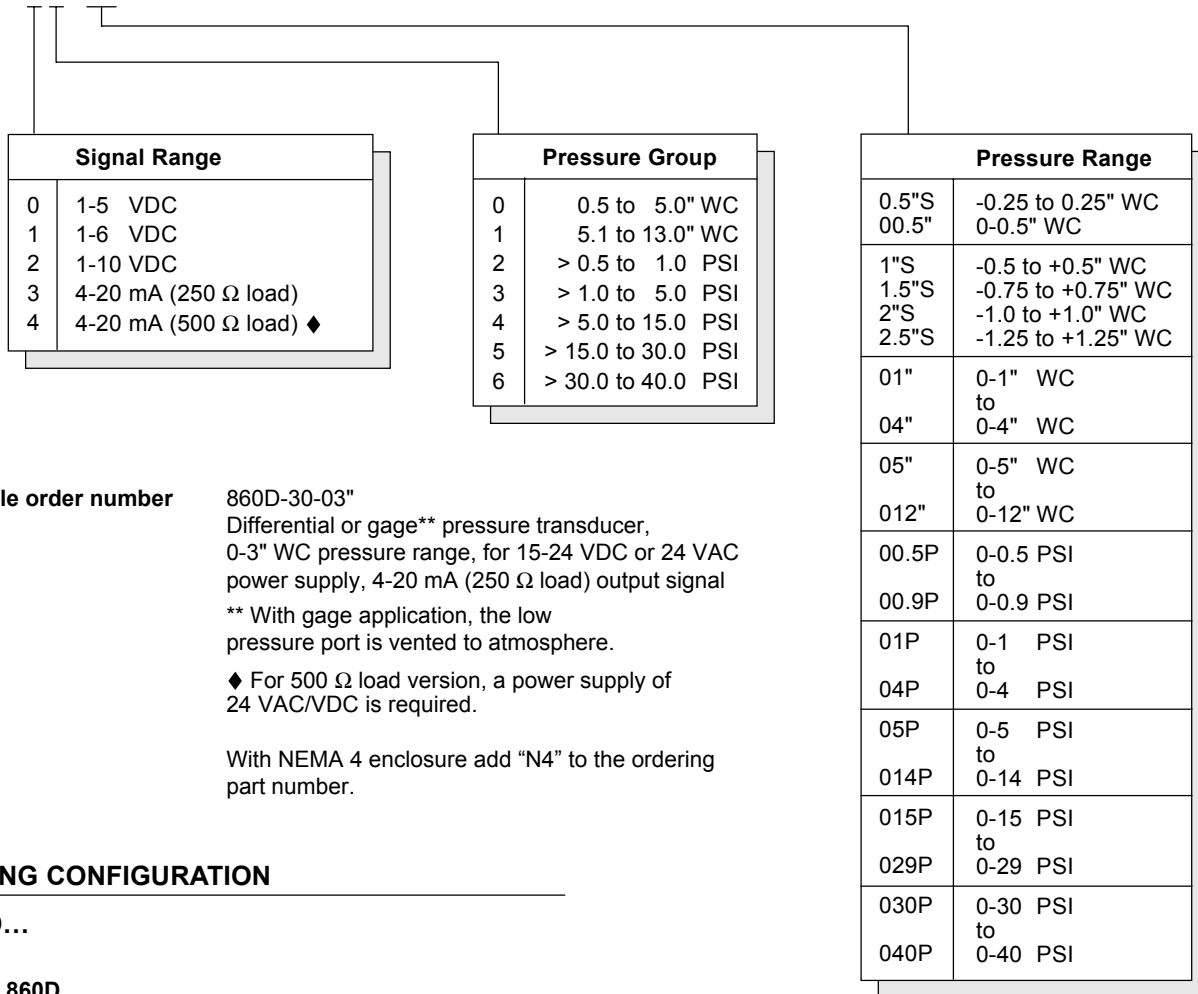
NEMA 4 enclosure

D

Enclosure w/DIN rail mounting

ORDERING INFORMATION

860D - 3 0 - 03"

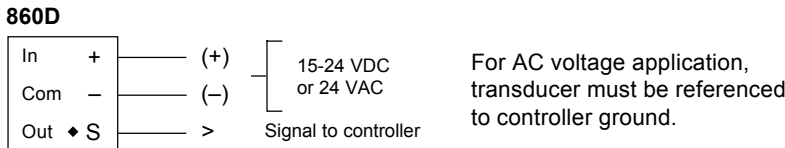


Sample order number 860D-30-03"
 Differential or gage** pressure transducer, 0-3" WC pressure range, for 15-24 VDC or 24 VAC power supply, 4-20 mA (250 Ω load) output signal
 ** With gage application, the low pressure port is vented to atmosphere.
 ◆ For 500 Ω load version, a power supply of 24 VAC/VDC is required.
 With NEMA 4 enclosure add "N4" to the ordering part number.

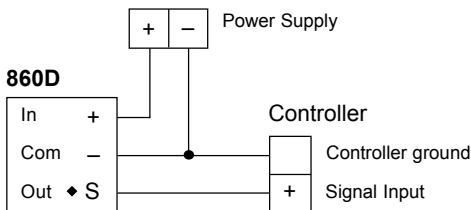
Custom split ranges are available on request.

WIRING CONFIGURATION

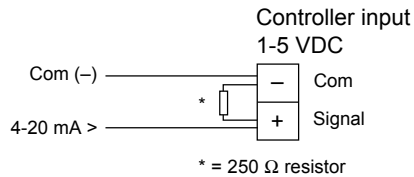
860D...



3-Wire to 2-Wire Connection



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



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