



MAMAC



PR-274/275

DESCRIPTION

The MAMAC Systems PR274/275 Series Differential Pressure Transmitter incorporates a new micro-machined glass-on-silicon (GI-Si) capacitance sensor. This technology revolutionizes very low pressure measurement. Temperature related zero drift, calibration shift due to overpressure, non-repeatability, non-linearity, and extremely low pressure sensitivity have been some of the problems which have plagued the controls industry. The PR274/275 Series with the new GI-Si technology not only addresses all of the above shortcomings, but for the first time offers a reliable, accurate means to measure and control building/room pressure, air flow, duct pressure, filter pressure drop, or any other extremely low pressure application. Up to six field selectable direct or compound ranges, two enclosure types, field selectable outputs, fully temperature compensated NIST traceable accuracy, non-interacting zero and span adjustments, short circuit and reverse polarity protected output, and a liberal five year warranty are some of the features which make the PR274/275 Series the industry's highest performance, ultra-stable, low pressure sensor.

FEATURES

- 100% solid state, micro-machined, glass-on-silicon, ultra-stable capacitance sensor
- As low as $\pm 0.05"$ W.C. (± 12.5 pa)
- Up to 6 field selectable ranges in one unit
- Can resolve less than $0.00001"$ W.C. (0.0025 pa)
- Two rugged steel enclosure types NEMA-4 (IP-65) or panel mount for ease of installation
- Short circuit and reverse polarity protected
- Conforms to EMC and RoHS standards

SPECIFICATIONS	
Supply Voltage	12 to 40V DC @20mA
Current Output	12 to 40VDC/12 to 35VAC @10mA/0.35VA
Volts Output	0-5V, 0-10V, 4-20mA loop per ordered
Signal Output	0-5V, 0-10V, 4-20mA loop per ordered
Min Voltage Output Impedance	1K Ω
Max Current Output Impedance	600 Ω @24VDC
Accuracy	$\pm 1\%$ Full Scale
Sensor Type	Capacitive
Adjustments	(Z/S) Range select switch and Zero & Span POT
Normal Measurement Range	0 to 30"WC, Uni- or Bi- Directional
Display	
Overpressure	(Burst) ± 10 psid (68.95 kPa)
Max Operating Pressure	(Proof) $\pm 30"$ WC, (± 7.47 kPa)
Operating Temperature	25° to 150°F (-4 to 65°C)
Operating Humidity	10 to 90% Non-condensing
Wetted Parts	Silicone
Media Compatibility	Inert
Process Connection	Dry air
Wiring Plug-in terminals	3/16"OD brass, for 1/4" OD tubing
Mounting	2-(4-20mA), 3-(Volts)
Enclosure Rating	2, #8 screws
Dimensions	Painted Metal, NEMA 4, (IP66), or panel mount
Weight	6.0"W x 2.2"H x 4.0"D, (15.2 x 5.6 x 10.2 cm)
Approvals	1.0 lb (0.45kg)
Warranty	CE, RoHS
	5 years

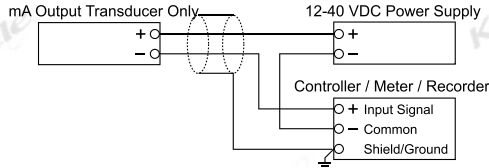


PRESSURE

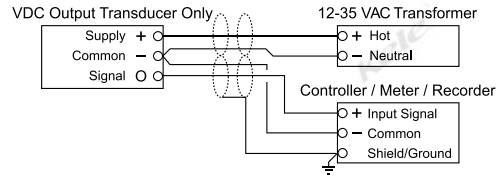
DIFFERENTIAL PRESSURE TRANSMITTERS PR274/275 SERIES

WIRING

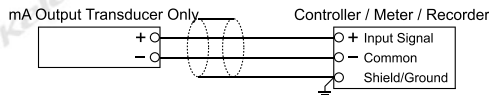
Wiring for mA Low Pressure Transducers with an External DC Power Supply



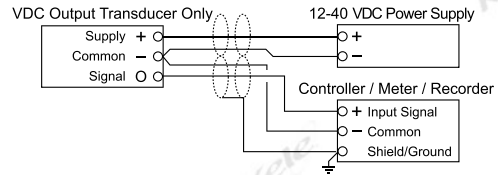
Wiring for VDC Low Pressure Transducers when Applied with External AC Supply



Wiring for mA Output Transducers where the Controller or Meter has Internal DC Power Supply



Wiring for VDC Low Pressure Transducers when Applied with External DC Power Supply



ORDERING INFORMATION

MODEL	DESCRIPTION
PR274	Low pressure sensor with enclosure mount
PR275	Low pressure sensor with panel mount
RANGE	
R1	0 to 0.10 / -0.05 to 0.05" W.C.
R2	0 to 1.0 / 0 to 0.5 / 0 to 0.25 / -0.5 to 0.5 / -0.25 to 0.25 / -0.125 to 0.125" W.C.
R3	0 to 5.0 / 0 to 2.5 / 0 to 1.25 / -2.5 to 2.5 / -1.25 to 1.25 / -0.625 to 0.625" W.C.
R4	0 to 30 / 0 to 15 / 0 to 7.5 / -15.0 to 15.0 / -7.5 to 7.5 / -3.75 to 3.75" W.C.
R5	0 to 25 / -12.5 to 12.5 Pa
R6	0 to 250 / 0 to 125 / 0 to 62.5 / -125 to 125 / -62.5 to 62.5 / -31.25 to 31.25 Pa
R7	0 to 1250 / 0 to 625 / 0 to 312.5 / -625 to 625 / -312.5 to 312.5 / -156.25 to 156.25 Pa
R8	0 to 7500 / 0 to 3750 / 0 to 1875 / -3750 to 3750 / -1875 to 1875 / -937.5 to 937.5 Pa
OUTPUT	
mA	4-20 mA 2-wire
VDC	0-5 VDC or 0-10 VDC field selectable

PR-274 - R2 - mA

Example: PR-274-R2-mA Low pressure sensor with enclosure mount, R2 range which has six (6) selectable field range options and 4-20 mA output.

RELATED PRODUCTS

T-101	1/4" OD black poly tubing, 1 coil, 250 ft (76 m)
SD-01	Surge dampener
RPS	Stainless steel room pressure sensor, 1/4" barb
RPS-I	Ivory plastic room pressure sensor, 1/4" barb
RPS-W	White plastic room pressure sensor, 1/4" barb
A-302-K	Duct static pressure tip, 1/4" barb
A-301-K	Duct static pressure tip, 1/4" compression
A-345-K	Flange mounting kit (1 required for each A-301-K or A-302-K)
A-308-K	Duct static pressure fitting, 1/4" barb
DCPA-1.2	Power supply, 120 VAC IN to 24 VAC/24 VDC OUT
691-K0A	Control transformer, 120:24 VAC, 40 VA, Class 2
DCP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT