VACUUM RESEARCH

Dual Gauges; 1 to 2000 mTorr Pirani & 1 to 1500 Torr Diaphragm

Available in Torr, mTorr, mbar or Pascal

Easy To Read 3 1/2 Digit Backlit LCD Display

Linear DC Output for PLC or DCS is Standard

Change Cable Length Without Re-calibrating

1/8 DIN Enclosure for Bench or Panel Mount

Resolution of ± 1 mT or ± 1 Torr Over Entire Range

Adjustable Set Point and Relay for Process Control

Our most popular Vacuum Gauges are now available in 1/8 DIN enclosures. These compact instruments use the same sensors and gauge tubes as our original instruments but now the display portion uses only 25% of the panel space! With the combination Diaphragm and Pirani Gauge you can now measure from 10^{-3} Torr to Atmosphere wth a single 1/8 DIN instrument. Each instrument has an independant DC analog output and an adjustable set point with a built in relay for process control. The set point is easily adjusted from the front panel. Relays have 3 Amp contacts, form C, and have screw terminal connectors on the rear of the instruments.



Pirani Gauge Specifications

Pressure Range: 1 to 2000 milliTorr (~ 0 to 2 mmHg.)

Calibration: Air or Nitrogen.

Accuracy: Better than 5% of value or \pm 3 mTorr, whichever is larger.

Response Time: 0.3 second time constant. **Analog Output:** Linear 0 to 2.000 Volts into 2000 Ohm load or higher.

Gauge Tube: See Page 12 for gauge tubes. Materials in Sensor: 304 SS, platinum, glass to metal seal and nickel plated feed throughs. Set Point Range: Full Scale, 1 to 2000 mTorr; Repeatability: ± 2 mTorr.

Over Pressure on Gauge Tube: Maximum working pressure is 300 PSIG (Tested to 1200 PSIG, 84 kg/cm²) with 1/8 in. NPT.

Temperature Effects: Changes in ambient temperature between 0 $^{\circ}$ C and 50 $^{\circ}$ C change the reading less than 0.2 mT per 0 $^{\circ}$ C at 50 mT; less than 4 mT per 0 $^{\circ}$ C at 900 mT.

 VFL Dual Pirani Gauge

 1 to 2000 mTorr

 Set 1

Diaphragm Gauge Specifications

Pressure Range: 1 to 1500 Torr.

Calibration: Any gas, liquid or vacuum compatible with sensor materials.

Accuracy: 1% of reading or 2 Torr. Response Time: Less than 400 msec. for

response to a step change.

Analog Output: 0 to 1.500 Volt into 2000 Ohm load or higher.

Transducer: See Page 7 for sensors.

Materials: All parts in contact with process are 316 or 304 SS, or silicon.

Set Point Range: Full Scale, 1 to 1500 Torr. Repeatability: ± 2 Torr.

Sensor Internal Volume: 1.25 ml for SS; 0.5 ml for Silicon.

Temperature Effects: When Changes occur in ambient temperature between 0 $^{\circ}$ C and 50 $^{\circ}$ C, reading will change no more than $\pm 0.02\%$ per $^{\circ}$ C.



Common Specifications

Bakeout Temperature: Standard gauge tube can be baked to 100 $^{\circ}$ C (212 $^{\circ}$ F) in air or vacuum. For 250 $^{\circ}$ C (482 $^{\circ}$ F) bakeout see Page 13.

Dimensions: 1/8 DIN 96 x 48 x 188 mm.

Mounting: 1/8 DIN enclosure. Jack screws for panel mounting are included.

Gauge Tube Cables: Up to 500 ft. See ordering information.

Extension Cables: Change gauge tube cable length without recalibration. Extensions to 500 ft. (150 m) can be used. See catalog page 42.

Net Weight: w/o gauge tube is 1 lb, 6 oz. (0.6 kg) Shipping Wt.: w/o gauge tube is 3 lbs. (1.4 kg)

Power: Gauges operate from 12 to 35 VDC power, 150 mA. Optional power supply available for 115/230 V, 50/60 Hz P/N 902221.

Relay: SPDT contacts rated for 3A @ 115 VAC, non-inductive.

Wattage: Less than 1 Watt for indicator, 2 Watts for controller.

Ordering Information; Instruments

Two Channel Pirani Gauge 1 to 2000 milliTorr in 1/8 Din enclosure С Each channel includes independant 3 1/2 digit backlit LCD display, 0 to 2 S VDC output and adjustable set point with relay. С P/N: 902305 \$631. to F Two Channel Diaphragm Gauge 1 to 1500 Torr in 1/8 DIN enclosure. P Each channel includes 3 1/2 digit backlit LCD display, linear analog ir output 0 to 1.5 VDC and an adjustable set point with relay. F P/N: 902306......\$631. C Dual Gauge with one Pirani and one Diaphragm Gauge in 1/8 DIN S enclosure, separate 3 1/2 digit backlit LCD display, analog outputs and F adjustable set point for each gauge. 1 P/N: 902307......\$631. F

Ordering Information; Accessories

Cable Assembly includes a connector for the gauge tub tripped and tinned leads on the other end to connect to connector on only one end allows the cable to be pulled o more easily enter your cabinet. Specify length. Up to 5 VN 801168- xxx feet	the terminal strip. I through conduit 500 Ft.
Power Supply 24 VDC out @ 800 mA 115/230 Volt, 50/	60 Hz
nput. Can power up to 5 instruments.	
P/N 902221	\$59.
Calibrator for 2000 mTorr Instruments	
See page 37 for a complete description of the calibrator.	
P/N: 912008	\$231.
500 Torr Diaphragm Gauge Calibrator	
У/N 912027	\$231.

Sensors, gauge tubes and cable must be ordered separately.

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