



Photo shows the dual set point controller with standard enclosure on the left, and indicator in the 1/4 DIN enclosure on the right.

These compact vacuum measurement and control instruments offer the precision and high resolution of digital electronics at the same price as analog instruments. Our extremely rugged sensor is constructed with a solid, inert, noble metal that maintains its calibration over long periods. Because no gold is used, these gauges are compatible with both mercury and oil pumps. The low 125°C operating temperatures in our Pirani type gauge tube (half that of thermopile gauges), enhances stability as does a unique temperature compensation network. Gauge tubes are matched and can be replaced without recalibration, and they can withstand working pressures to 300 psi, tested to 1200 psi.

## Specifications

- Pressure Range:** 0.01 to 20 Torr.
- Calibration:** Air or Nitrogen.
- Accuracy:** Better than 5% of value or  $\pm 0.03$  Torr, whichever is larger.
- Response Time:** 0.3 second time constant.
- Analog Output:** 0 to 2,000 Volts = 0 to 20 Torr into 2000 Ohm load or higher. 2 pin connector included. 4 to 20 mA & 0 to 10 VDC out in addition to 0 to 2,000 Volt D.C. available for instruments in 1/4 DIN enclosure.
- Display:** 3 1/2 Digit Green Backlit LCD.
- Gauge Tube:** Standard gauge tubes have 1/8 NPT male thread or fit into quick connects sized for 1/8 inch pipe (0.405" dia.) NW, VCR and Mini Conflat® available. Internal Volume: 0.79 cc (1/8 NPT).
- Set Point Range:** Full Scale, 0.01 to 20 Torr. Repeatability:  $\pm 0.02$  Torr.
- Line Power:** 115 VAC, 50/60 Hz; 230 VAC optional at no additional cost.
- Line Regulation:**  $\pm 20\%$  change in line voltage produces less than 1% change in reading.

- 0.01 to 20 Torr Range
- $\pm 0.01$  Torr Resolution Over Entire Range
- Available in .01 to 20.00 mbar and 1 to 2000 Pa
- Easy To Read Backlit 3 1/2 Digit Display
- Dual Set Point Controller With 2 Relays
- Linear 0 to 2.0 VDC Output; 4-20 mA Optional
- Change Cable Length Without Re-calibrating
- Fits Hastings, Varian, TeleVac Panel Cut-Outs

The Dual Set Point Controller operates two control relays. Set point values are adjusted from the front panel and displayed on the meter. Push-to-set switches simplify display of the set point pressures. Relays have 3 Amp contacts, form C, and have screw terminal connectors on the rear of the instruments.

Both the indicator and the controller instruments are available in either 1/4 DIN or 2.75 inch diameter standard enclosures. The 2.75 inch diameter standard enclosure fits the same panel cut out as Hastings, Varian, Televac and other analog meters. Mounting hardware is included with both styles.

- Wattage:** Less than 1 Watt for indicator, 2 Watts for controller.
- Temperature Effects:** Changes in ambient temperature between 0°C and 50°C change the reading less than 0.01 Torr per C°.
- Bakeout Temperature:** Gauge tube can be baked to 100°C (212°F) in air or vacuum.
- Dimensions:** DIN enclosure: 92 X 92 mm panel cutout, 122 mm F to B.
- Standard enclosure:** 2.75 in. diameter panel cutout, 4.8 in. F to B.
- Mounting:** Panel mounting hardware is standard. Bench mount cabinets are also available, see page 39 for complete specifications.
- Gauge Tube Cables:** 10 ft. (3m) attached.
- Extension Cables:** Change gauge tube cable length without recalibration. Extensions to 500 ft. (150 m) can be used. see page 39.
- Line Cord:** 3 wire, 65 inch (170 cm) attached.
- Net Weight:** Indicator: 1 lb., 2 oz. (0.5 kg); Controller: 1 lb., 6 oz. (0.6 kg)
- Shipping Wt:** Indicator: 2 lbs., 8 oz. (1.1 kg); Controller: 3 lbs. (1.3 kg)

## Ordering Information *Specify 115 or 230 V 50/60 Hz or 24 VDC*

**BUY NOW! Go to [www.vacuumresearch.com](http://www.vacuumresearch.com) to order online**

- Dual Set Point Controller With Digital Display** in standard enclosure. Gauge tube not included. P/N: 902015.....\$898
- Dual Set Point Controller With Digital Display** in 1/4 DIN enclosure. Built to CSA standards. Gauge tube not included. P/N: 902098.....\$955
- Digital Indicator only** in standard enclosure. Gauge tube not included. P/N: 902016.....\$646
- Digital Indicator only** in 1/4 DIN enclosure. Built to CSA standards. Gauge tube not included. P/N: 902097.....\$695
- 4 to 20 mA or 0 to 10 VDC Output** in addition to 0 to 2,000 VDC analog output. Only available for instruments in 1/4 DIN enclosure. P/N: V801082..... add \$310
- Calibrator for 20 Torr Instruments**  
See page 33 for a complete description of the calibrator. P/N: 912009.....\$321
- Gauge tube baffles and traps**..... see page 36
- 24VDC for 1/4 DIN enclosures..... Add \$100

- Standard Gauge Tube For .01 to 20 Torr Instruments**  
Gauge tube body is 304 SS, connector pins are nickel plated Kovar.
- With 1/8 in. NPT Male Thread**, P/N: 912011.....\$117
- With 1/4 in. SAE 45° Flare, Male**, P/N: 912285.....\$169
- With NW-16 Flange**, P/N: 912072 • **NW-25 Flange**, P/N: 912204.....\$169
- With 1.33 in. Conflat® Flange**, non-rotatable, P/N: 912073.....\$169
- With VCR-4 FEM Fitting**, P/N: 912074.....\$216
- With 3/8 in. OD Tube**, P/N: 912314.....\$169
- With 15 mm Diameter Tube**, P/N: 912103.....\$151
- All Stainless Steel Gauge Tubes For Outdoor Applications Or Wherever The Use Of 304 SS Is Appropriate.** All wetted parts as well as all external parts and connector pins are 304 SS. 1/8 in. NPT, NW-16, Conflat®, VCR-4 and special flanges can be provided. Add "SS" suffix to any tube P/N and to standard tube price:..... add \$59
- Quick connect couplings, tube selector switch, extension cable, and other accessories**..... see pages 35, 36, 37 and 39