



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

- 0.01 to 100 mTorr Range (10<sup>-5</sup> to 0.1 Torr)
- .01 to 100 X 10<sup>-3</sup> mbar or .001 to 13.333 Pa
- Safe to Operate, No High Voltage, No Magnets
- ± 0.01 mT Resolution Over Entire Range
- Easy To Read Decimal or Exponential Display
- Dual Set Point Controller With 2 Relays
- Linear 0 to 1.0 VDC Output; 4-20 mA Optional
- 3/4" O.D. Tube Fits Standard Quick Connects
- Fits Hastings, Varian, TeleVac Panel Cut-Outs

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 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 so they can be replaced without recalibration, and they can withstand working pressures to 300 PSI, tested to 1200 PSI.

**Specifications**

**Pressure Range:** 0.01 to 100.00 mTorr (10<sup>-5</sup> to 10<sup>-1</sup> mm Hg.)  
**Calibration:** Air or Nitrogen.  
**Accuracy:** Better than 5% of value or ± 0.03 mTorr, whichever is larger.  
**Response Time:** For 90% of step change; 1 mT to Atmos. ~ 1 sec., 10 mT to 100 mT 7 sec., 1 mT to 10 mT 18 sec.  
**Display:** 4 1/2 Digit Green Backlit LCD. Decimal display is standard (.01 to 100.00 mTorr). Exponential display is optional (1.0 X 10<sup>-5</sup> to 1.0 X 10<sup>-1</sup>)  
**Analog Output:** 0 to 1.000 Volt D.C. into 2000 Ohm load or higher. 2 pin connector included. 4 to 20 mA and 0 to 10 VDC output in addition to 0 to 1.000 Volt D.C. available for instruments in 1/4 DIN enclosure.  
**Gauge Tubes:** Have 3/4 inch O.D. smooth tubulation to fit standard gauge quick connects. NW or Conflat® flanges available.  
**Set Point Range:** Full Scale, 0.01 to 100 mT. Repeatability: ±0.02 mTorr.  
**Line Power:** 115 VAC, 50/60 Hz; 230 VAC optional at no additional cost.  
**Line Regulation:** ± 20% change in line voltage produces less than 1% change in reading.

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

**Dual Set Point Controller With Digital Display in standard enclosure.** Gauge tube not included. P/N: 902005 . . . . . \$784.  
**Dual Set Point Controller With Digital Display in 1/4 DIN enclosure.** Built to CSA standards. Gauge tube not included. P/N: 902096 . . . \$823.  
**Digital Indicator only in standard enclosure.** Gauge tube not included. P/N: 902006 . . . . . \$604.  
**Digital Indicator only in 1/4 DIN enclosure.** Built to CSA standards. Gauge tube not included. P/N: 902095 . . . . . \$636.  
**Add "EXP" suffix to P/N to specify exponential instead of digital display.**  
**4 to 20 mA or 0 to 10 VDC Output** in addition to 0 to 1.000 VDC analog output. Only available for instruments in 1/4 DIN enclosure. P/N: V801082 . . . . . add \$214.  
**Calibrator for 100 mTorr Instruments**  
 See page 37 for a complete description of the calibrator. P/N: 912019 . . . . . \$231.  
**Gauge and gauge tube accessories** . . . see pages 39, 40, 41 and 43.

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 0.004 mTorr per °C at hard vacuum and 0.4 mTorr at 50 mTorr.  
**Bakeout Temperature:** Gauge tube can be baked to 100 °C (212 °F) in air or vacuum.  
**Dimensions:** See page 44.  
**Mounting:** Panel mounting hardware is standard. Bench mount cabinets are also available, see page 43 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)

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

**Standard Gauge Tube For 0.01 to 100 mTorr Instruments**  
 Gauge tube body is 304 SS, connector pins are nickel plated Kovar.  
**With Smooth 3/4 in. O.D. Tubulation,** P/N: 912018 . . . . . \$121.  
**With NW-16 Flange,** P/N: 912037 • **NW-25 Flange,** P/N: 912113 \$159.  
**With 1.33 in. Conflat® Flange,** Tapped holes, P/N: 912179 . . . . \$159.  
**With 1.33 in. Conflat® Flange,** Through holes, P/N: 912160 . . . \$159.  
**With 2.75 in. Conflat® Flange,** non-rotatable, P/N: 912038 . . . \$159.  
**With 15 mm Diameter Tube,** P/N: 912101 . . . . . \$159.  
**With 1/8 NPT,** P/N: 912125 . . . . . \$159.  
**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. 3/4 in. OD, NW-16, Conflat®, and special flanges can be provided. Add "SS" suffix to any tube P/N and to standard tube price: . . . . . add \$42.  
**Stainless Steel Dust Baffle** to keep particles out of the gauge tube. Fits 3/4" quick connect. Has 3/4" quick connect for the gauge tube. P/N: 912153 . . . . . see page 40