



**Gauge Tube Mount** Active switch shown on Pirani tube with NW-16 Flange. 1/8" NPT, VCR & Conflat® also available.

- Ranges From 10<sup>-5</sup> Torr to 2 Atmospheres
- Active Switch, Plugs Directly Onto Sensor
- Pirani, Diaphragm or Thermocouple Gauge Tubes
- Use With Hastings DV-6 or VRC Gauge Tubes
- Adjustable Setpoint, SPDT Relay, 5A @ 115 V
- Analog Output for PLC or Computer Interface
- Uses Less than 200 mA @ 12 Volts DC or 24 VDC

The Active Vacuum Switch provides an inexpensive and straightforward way to control your vacuum system. Use the Pirani Switch directly to initiate crossover after roughing, or the Diaphragm Switch to control backfill pressure on pump and purge operations. Or, feed the Active Switch output into your PC or PLC and let the digital system make the control decisions based on the output signal.

**Notes For Operation:**

1. Range Of This Switch is 3 To 5000 mT.
2. Relay Point Output is 0 To 2 V DC, Non Linear. See Table In Manual.
3. Analog Output 0 To 2 V DC Non Linear
4. Relay Contacts Are Rated For 5A @ 115V Or 1A @ 230V Non Inductive.
5. Power Required Is 12V DC @ 200 mA.

Relay Point Adj.	Relay Point Output	Analog Output	S.P.D.T. Relay	12V DC
⊖ ⊕	⊕ ⊖	⊕ ⊖	NO C NC	⊕ ⊖

## Specifications

**Size:** Switch is 3.08 X 3.5 X 1.5 in. high (78 X 89 X 38 mm)

**Materials:** Base plate is 300 series stainless steel. Standard cover is ABS plastic. Stainless steel cover is optional.

**Relay:** SPDT contacts rated for 5A @ 115 VAC, non-inductive.

**Power:** Standard vacuum switches operate from 12 VDC power, 200 mA. Vacuum switches shipped to customers in the USA include an external wall mount style power supply with 115 VAC in/12 VDC out. Customers outside the USA must provide 200 mA @ 12 VDC. See below for optional 220 V 50 Hz power supply.

**Response time:** With Vacuum Research Pirani; 0.3 sec time constant. With Diaphragm tubes; less than 400 milliseconds.

**Accuracy:** With Pirani better than 1% of value or ±3 mT. With Diaphragm Sensor 1% of reading or 2 Torr.

## Ordering Information

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

### Vacuum Range • Sensor Type • Analog Output

### Sensors for Vacuum Switch

<p><b>10<sup>-5</sup> to 10<sup>-1</sup> Torr • Pirani Sensor</b>                      Analog Output 0 - 1 VDC                      (.01 X 10<sup>-3</sup> to 100 X 10<sup>-3</sup> mbar, .001 to 13.3 Pa)  <b>P/N: 902134</b> .....\$271.</p>	<p><b>Standard Pirani Gauge Tube For 0.01 to 100 mTorr Instruments</b> (More styles on Page 18)                      With Smooth 3/4 In. O.D. Tubulation, P/N: 912018....\$125. • 1/8 NPT, P/N: 912125.....\$164.                      With NW-16 Flange, P/N: 912037 • NW-25 Flange, P/N: 912113.....\$164.</p>
<p><b>1 to 1000 mTorr • Thermocouple Sensor</b>                      Output 0 - 5 VDC (1 X 10<sup>-3</sup> to 1 mbar, 0.1 to 100 Pa)  <b>P/N: 902130</b> .....\$213.</p>	<p><b>Standard Thermocouple Gauge Tubes</b> (More flange styles on Page 24)                      Interchangeable with Teledyne-Hastings DV-6M &amp; DV-6R.                      With VRC-6M 1/8" NPT Stainless Steel Body, P/N: 912086.....\$57.                      With VRC-6M NW-16 Stainless Steel Body, P/N: 912096.....\$104..                      With VRC-6M NW-25 Stainless Steel Body, P/N: 912203.....\$104.</p>
<p><b>3 to 5000 mTorr • Pirani Sensor</b>                      Analog Output 0 - 2 VDC (10<sup>-3</sup> to 2 mbar, 0.1 to 200 Pa)  <b>P/N: 902136</b> .....\$213.</p>	<p><b>Standard Pirani Gauge Tube For 1 to 2000 mT Instruments</b> (More styles on Page 19)                      With 1/8 in. NPT Male Thread, P/N: 912001.....\$82.                      With NW-16 Flange, P/N: 912005 • NW-25 Flange, P/N: 912202.....\$121.</p>
<p><b>.01 to 20 Torr • Pirani Sensor</b>                      Analog Output 0 - 5 VDC (.01 to 20 mbar, 1 to 2000 Pa)  <b>P/N: 902155</b> .....\$271.</p>	<p><b>Standard Gauge Tube For .01 to 20 Torr Instruments</b> (More flange styles on Page 20)                      With 1/8 in. NPT Male Thread, P/N: 912011.....\$86.                      With NW-16 Flange, P/N: 912072 • NW-25 Flange, P/N: 912204.....\$126.</p>
<p><b>1 to 1500 Torr • Diaphragm Sensor</b>                      Output 0 - 1.5 VDC (1 to 2000 mbar, 0.1 to 200.0 kPa)  <b>P/N: 902138</b> .....\$271.</p>	<p><b>Transducer with Stainless Steel Diaphragm</b> (More flange styles on Page 13)                      1/4 in. NPT P/N: 912022.....\$399.                      Stainless Steel Diaphragm with NW-16 Flange, P/N: 912151.....\$451.                      Stainless Steel Diaphragm with NW-25 Flange, P/N: 912117.....\$451.</p>
<p><b>30 In. Hg to Atmosphere • Diaphragm Sensor</b>                      Output 0 to negative 300 mV DC  <b>P/N: 902140</b> .....\$271.</p>	<p><b>Transducer With Standard Stainless Steel Diaphragm</b> (More flange styles on Page 14)                      for 30 In. Hg Diaphragm and wetted parts are 316 SS 1/4 in. NPT P/N: 912093.....\$393.</p>

**Explosion Proof Enclosure**, Class 1 Group C or D, Div. 1 Meets NEMA-4 & IP66 Water Resistance Specifications. Order from page 42. P/N V805010 .....\$349.  
 Optional Stainless Steel Cover in place of Standard ABS Cover P/N: V700271.....add \$30.

**Power Supply** 100 to 240 V, 50-60 Hz input, 15 VDC @ 1.0 A output. Wallmount style with adapter plugs for US, UK, Europe, Australia. P/N: V104124 .....\$52. each  
**Switches Wired for 24 VDC** power instead of standard 12 VDC.  
 Add suffix **24 V** to P/N.....add \$29.