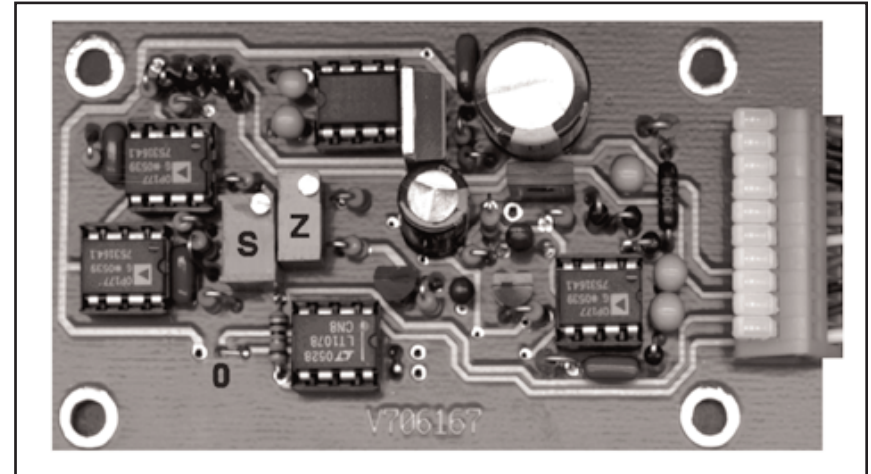


Operating Instructions

Pa	mbar	Pressure	Voltage Out
0.000	0.000	0.000mT	0.0000
1.333	0.013	10mT	0.0280
3.333	0.033	25mT	0.0690
6.666	0.066	50mT	0.1338
9.999	0.099	75mT	0.1930
13.332	0.133	100mT	0.2490
33.331	0.333	250mT	0.5235
66.661	0.666	500mT	0.8542
99.992	0.999	750mT	1.1015
133.322	1.333	1Torr	1.3012
166.653	1.666	1.25T	1.4669
199.984	1.999	1.5T	1.6101
233.314	2.333	1.75T	1.7356
266.645	2.666	2T	1.8475
333.306	3.333	2.5T	2.0402
666.612	6.666	5T	2.6632
999.918	9.999	7.5T	3.0298
1,333.224	13.332	10T	3.2806
1,666.530	16.665	12T	3.4658
1,999.836	19.998	15T	3.6116
2,333.141	23.331	17T	3.7291
2,660.447	26.664	20T	3.8261
3,333.059	33.331	25T	3.9787
3,999.671	39.997	30T	4.0924
5,332.895	53.329	40T	4.2590
6,666.118	66.661	50T	4.3692
9,999.177	99.992	75T	4.5335
13,332.237	133.322	100T	4.6260
19,998.355	199.984	150T	4.7264
26,664.474	266.645	200T	4.7799
39,996.711	399.967	300T	4.8387
53,328.948	533.289	400T	4.8718
66,661.185	666.611	500T	4.9026
79,993.422	799.934	600T	4.9329
93,325.659	933.256	700T	4.9682
ATM	ATM	ATM	4.9999



Printed Circuit Board Convection Gauge 24 Volt DC Power



Vacuum Research Ltd.
2419 Smallman Street • Pittsburgh, PA 15222 USA
(800) 426-9340 • (412) 261-7630 • FAX: (412) 261-7220
VRL@vacuumresearch.com • www.vacuumresearch.com

Specifications, PC Board Convection Gauges

Range of Measurement: 1 milli Torr to Atmosphere or equivalent range in Pascal or mbar.

Sensor Type: Thermal conductivity with convection enhancement.

Resolution: ± 2 milli Torr from 1 to 25 milli Torr; or 2% of full scale.

Response Time: Less than 1 second for 90% of an increase in pressure, less than 4 secs. for a decrease in pressure from atmosphere to 1 m Torr.

Hysteresis: Minimum hysteresis is less than 2 m Torr from 1 to 25 m Torr and less than 2% of full scale to atmosphere.

Maximum Pressure without Affecting Calibration: 2300 Torr (30 PSIG)

Maximum Gauge Tube Temperature: 100 °C (212 °F) maximum bake out of gauge tubes in air or vacuum. Automatic compensation 0 to 35°C.

Analog Output: 0 to 5 VDC, non linear. Other outputs such as 0 to 10 VDC can be provided. Look up table of output vs. pressure in Torr, mbar and Pascal included.

Gauge Tube Orientation: Axis of tube must be horizontal.

Power: 12 to 35 VDC, less than 200 mA

Gauge Tube Cable: Use up to 150 m (500 ft.) without affecting calibration.

Weight: Net: 0.12 lb. (57 g); Ship: 0.4 lbs. (300 g.)

Power Supplies These instruments will operate with any voltage from 12 to 35 volts D.C. and can be powered from your D.C. bus. If no D.C. power is available these wall mount supplies will operate with any input from 100 to 240 VAC (90 to 264 VAC) 47 to 63 Hz. 4 A.C. plugs are included for outlets in USA, UK, Europe and Australia.

P/N V104134, 800 mA Suitable for 4 instruments

P/N V104135, 1600 mA Suitable for 8 instruments

Ordering Information, PC Board Convection Gauges

Convection Gauge PC Board

Convection gauge PC board with range of 1 milli Torr to atmosphere and output signal of 0 to 5 VDC. Power required is 12 to 35 VDC @ 200 mA. Calibrated and ready to operate.

P/N: 801188

Gauge Tube with 1.4 in. NPT thread P/N 912105

Gauge Tube with 1/2 in. outside diameter P/N 912280

Gauge Tube with NW-16 flange P/N 912286

Gauge Tube with NW-25 P/N 912287

Gauge Tube with VCR-8 female flange P/N 912288

Calibrator for Convection Gauge PC Board

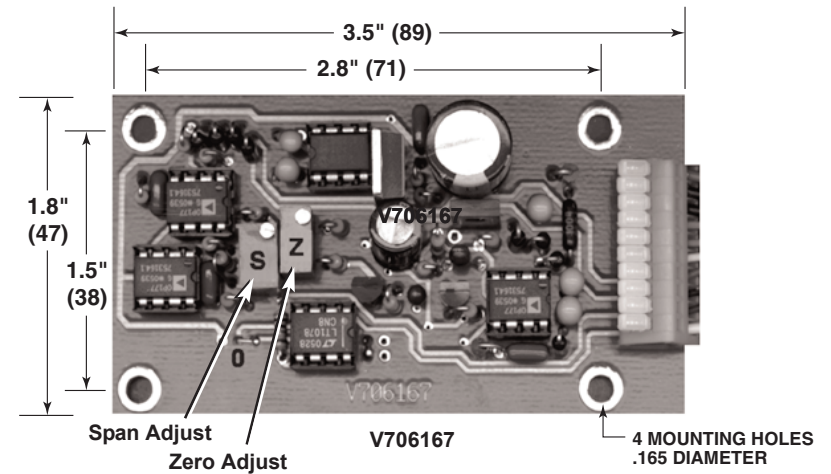
Plugs directly onto the gauge tube connector for easy verification of zero and span.

P/N: 912279

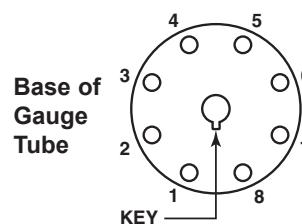
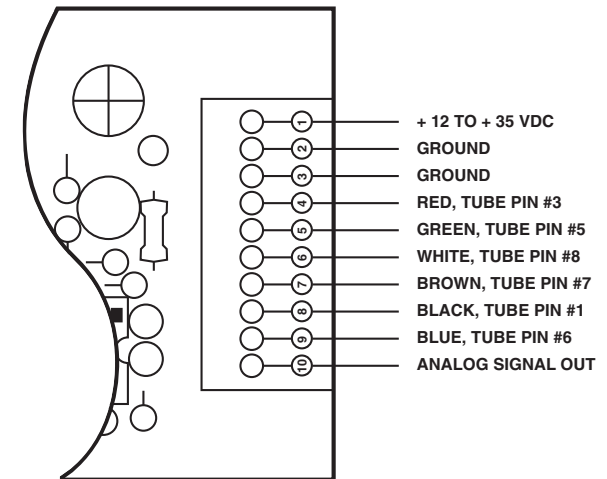
Cable Assembly includes a connector for the sensor on one end and stripped and tinned leads on the other end to connect to the terminal strip on the circuit board. Connector on only one end allows the cable to be pulled through conduit or to more easily enter your cabinet. Specify length. Calibration not affected by cables less than 150 meters (500 ft.)

P/N V801029 xxx feet

Dimensions and Mounting Details



Wiring Details



The tube filament is O.K. if the resistance between pins 1 and 5 is 25 Ohms or less. A value of 900 Ohms or higher is typical when the filament is broken.