



# UNIQUE VACUUM SOLUTIONS

## Diaphragm Vacuum Gauge

## DVG-1S



Accuracy : 0.75% of reading

Repeatability : 0.1% of reading

**Range : 0.1 to 1333 mbar / 0.1 to 1000 Torr**

### **Advantages:**

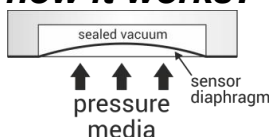
- Ceramic diaphragm sensor with excellent chemical resistance.
- Programmable current output 4-20mA.
- Programmable current output 0-10V DC.
- Has built-in temperature compensation circuit.
- Robust SS316 design.
- IP67 enclosure for harsh environment.
- Optional SSR available for setpoint outputs.

### **Applications:**

- PVD coating
- Mass spectrometers.
- Electron microscope.
- Fore-line vacuum.
- Freeze drying.
- Sterilisation process.
- Load lock systems.
- Vacuum furnaces.

***With the high accuracy and tested repeatability standards of this DVG-1S sensor, this is the best cost effective replacement solution for conventional capacitance monometers with measurement from 1333 down to 0.1 mbar.***

### **how it works?**



The DVG-1S is based on a ceramic aluminum oxide sensor diaphragm that converts the applied pressure to an electric signal. The sensor element is a dry cell diaphragm design.

### **Measurement performance**

These DVG-1S transmitters are calibrated and compensated for ambient temperature drifts. This DVG-1S comes with standard factory calibration certificate, we also provide calibration certificates traceable to standards as optional.

### **Analog and digital options**

The DVG-1S is available with industry standard analog 4-20 mA current output or 0-10 VDC voltage output. The analog output can be scaled and configured using our interface software.

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#57, 8<sup>th</sup> cross, 1<sup>st</sup> B cross, Doddanna Industrial Estate, Vishwaneedam post, near Peenya 2<sup>nd</sup> stage, Bangalore-560091.

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## TECHNICAL DATA

MODEL	DVG-1S
<b>SPECIFICATIONS</b>	Measuring range : 3 decades Accuracy of reading : 0.75% of reading Accuracy of full-scale : +/- 0.1 % BFSL Repeatability : 0.1% of reading Thermal drift (offset, base: 22 °C) : +/- 0.01%/°C of full-scale (from +10 to +50°C) Output signal (Voltage version) : 0-10 VDC (Programmable scaling) Output resolution (Voltage version) : 16 bit / 150 $\mu$ V Output signal (Current version) : 4-20 mA (Programmable scaling) Output resolution (Current version) : 16 bit / 244 nA Solid-state relay contact rating (optional) : 250 mA, 50 VDC / VAC peak
Environmental conditions for operation	Operating ambient temperature : -40 to +100 °C Media temperature at flange : -40 to +125 °C Storage ambient temperature : -40 to +125 °C Maximum media pressure : 2000 mbar / 1500 Torr Burst media pressure : 3000 mbar / 2250 Torr Mounting position : Any Protection rating, EN 60529/A2:2013 : IP67, IP65 Humidity, IEC 68-2-38 : 98%, non-condensing
Power supply	Supply voltage : 12-30 VDC Power consumption (voltage version) : 240 mW (max) Power consumption (current version) : 600 mW (max) Reverse polarity protection : Yes Overvoltage protection : Yes Internal fuse : 100 mA (thermal recoverable)
Materials	Enclosure : SS 1.4404 / AISI 316L Electrical connector DIN 175301-803A : PA Nylon Electrical connector M12 IEC 61076-2-101: PA Nylon, Nickel plated Zinc alloy Process connection (media wetted) : SS 1.4404 / AISI 316L Sensor diaphragm (media wetted) : Ceramic Al <sub>2</sub> O <sub>3</sub> 96% Sealing (media wetted) FKM (Viton®) or optional FFKM Process leak tightness (ISO 27895:2009) : $<1 \cdot 10^{-9}$ mbar·l/sec.

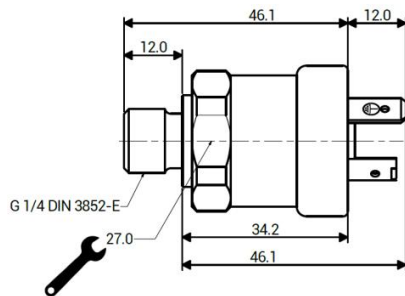
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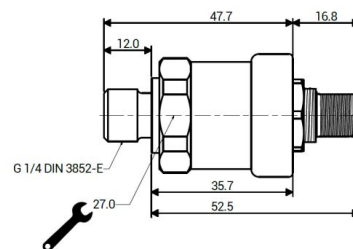


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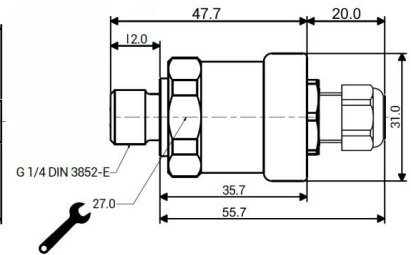
## Dimensions (in mm)



3 pin + PE DIN EN 175301 -803 A flying leads



4 pin M12 connector IEC 61076-2-101



With fixed cable and

## Ordering Information:

CVG-1-									
	1	0	1	1	0	1	1	1	
<b>Process connection</b>									<b>Connection</b>
DIN 3852-E, G $\frac{1}{4}$ " A		1							1 M12 x 1, 4 pin
DN16KF		8							2 DIN175301-803 Form A
									3 Cable 1 meter (3.3 feet)
									4 Cable 3 meter (9.9 feet)
									5 Cable 5 meter (16.4 feet)
									6 M12 x 1, 4 p. + mating connector
									7 DIN175301-803 Form A + mating connector
<b>Range</b>									<b>Setpoints</b>
0 .... 200 mbar		0	2						0 None
0 .... 500 mbar		0	5						1 On/Off Solid State Relay
0 .... 1000 mbar		0	6						
0 .... 200 Torr		1	2						
0 .... 500 Torr		1	5						
0 .... 1000 Torr		1	6						
<b>Sensor type</b>									<b>Digital interface</b>
Gauge			1						1 S4-Connect™
Absolute			2						
									<b>Analog Output</b>
									1 0-10 VDC linear
									2 0-5 VDC linear
									3 1-10 VDC linear
									4 4-20 mA linear
									5 1-5 VDC linear
									6 1-6 VDC linear
									7 0.5-4.5 VDC linear

## Our Products In Vacuum Measurements Are :

DPRG  
FLEXA  
Hybrid  
DVG  
OnePirani  
Mercury McLeod

## Our Expertise Is In :

Helium Leak test Systems  
Vacuum Measuring Gauges  
High Vacuum Systems  
Vacuum filtration solutions  
High vacuum components  
Vacuum Gauges & Helium  
Std leak Calibration Services  
Helium Leak testing services

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