



UNIQUE VACUUM SOLUTIONS

Diaphragm Vacuum Gauge

UDG-2S

Accuracy : 0.5% of reading



Range : 0.1 to 1333 mbar / 0.1 to 1000 Torr

Advantages:

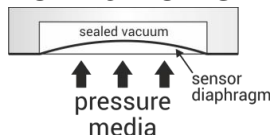
- Ceramic diaphragm sensor with excellent chemical resistance.
- Programmable Voltage output 0-10v dc.
- Has built in temperature compensation circuit.
- Gas-independent measurement throughout the pressure range
- Digital RS-232 or RS-485 interface
- Optional solid-state setpoint relays for external controlling

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 UDG-2S 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 UDG-2S 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 UDG-2S transmitters are calibrated and compensated for ambient temperature drifts. This UDG-2S comes with standard factory calibration certificate, we also provide calibration certificates traceable to standards as optional.

Analog and digital options

The UDG-2S 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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TECHNICAL DATA

MODEL	UDG-2S
SPECIFICATIONS	Measuring range : 0.1 to 1333 mbar (0.1 to 1000 Torr) Measuring principle : Ceramic diaphragm piezo resistive Accuracy 100 to 1333 mbar : 0.5% of reading Accuracy 1 to 99.9 mbar : 0.05% of full scale (1333 mbar) Hysteresis 1×10 ⁻¹ to 10 mbar : 1% of reading Hysteresis 10 to 1200 mbar : 0.1% of reading Analog output resolution : 16 bit (150 µV) Analog output update rate : 560 Hz Response time : <20 ms Temperature compensation : +10 to +50 °C SSR set point range : 1 to 1333 mbar (0.75 to 1000 Torr) SSR contact rating : 50 V, 100 mArms / mADC SSR contact endurance : Unlimited (no mechanical wear)
Environmental conditions for operation	Operating ambient temperature : -20 to +50 °C Media temperature : -20 to +50 °C Storage ambient temperature : -40 to +80 °C Bake-out temperature (non-operating) : +80 °C Maximum media pressure : 2 bar absolute (29 psia) Burst pressure : 4 bar absolute (58 psia) Mounting position : Arbitrary Protection rating, EN 60529/A2:2013 : IP40 Humidity, IEC 68-2-38 : 98%, non-condensing
Power supply	Supply voltage : 12-30 VDC Power consumption (voltage version) : 240 mW (max) Reverse polarity protection : Yes Overvoltage protection : Yes Internal fuse : 100 mA (thermal recoverable)
Materials	Enclosure : SS 1.4307 / AISI 304L / Aluminum 6061 Vacuum Process flange (media wetted) : SS 1.4401 / AISI 316 Vacuum exposed materials (media wetted) Standard version : 316 Stainless steel, Viton®, Aluminum oxide (Al ₂ O ₃ 96%) Vacuum exposed materials (media wetted) Parylene protected version : 316 Stainless steel, Viton®, Parylene Process leak tightness (ISO 27895:2009) : <1·10 ⁻⁹ mbar·l/sec.

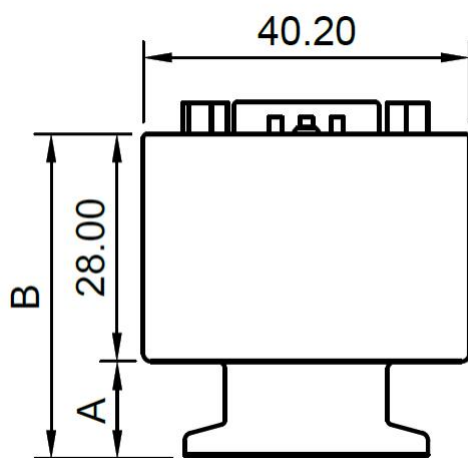
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Dimensions (in mm)



Flange type	A [mm]	B [mm]	A [inch.]	B [inch.]
DN16KF	12.00	40.00	0.47	1.57
DN25KF	12.00	40.00	0.47	1.57
VCR41	33.70	61.70	1.32	2.43
VCR81	29.43	57.43	1.15	2.26
1/8" NPT	37.00	65.00	1.45	2.56
DN16CF	21.83	49.83	0.86	1.96

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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