

# DosiTorr

SRG Transducer /  
SRG Process Manometer



0-10 VDC out



RS 485 24 VDC

## Key Advantages:

- First autonomously working Spinning rotor gauge (SRG)
- High intrinsic accuracy
- Measurement range:  
10 mbar to  $5 \times 10^{-7}$  mbar
- 100% linear
- Drift-“free”, <1.5%/year
- Corrosion & deposition insensitive
- Sensor changeable
- Super clean / sterile
- No electronics inside vacuum
- Designed for tool lifetime

## Applications:

- Replacement of failing ion gauges
- In-situ ion gauge calibration
- Ion implantation, dry etching
- Online vacuum insulation monitoring

## Introduction

The DosiTorr is a process manometer based on Spinning Rotor Gauge (SRG) technology. It uses a simple sensor design with a rotating stainless-steel sphere that moves smoothly via electromagnetic forces. This is ideal for high-purity processes as the measured medium is not influenced by the SRG, when compared to Pirani gauges (heat) or ion gauges (ionization, gettering effects). The DosiTorr has long-term robustness, highly accurate and stable pressure readings, even in corrosive process environments, where other gauges can drift and fail.

## SRG technology advantages for process

For many years, the accuracy and long-term stability of SRGs have been well documented and used in calibration applications for high vacuum manometers (e.g. ion gauges). Now, for the first time, the advantages of the SRG technology are available as an autonomous process transducer:

- High achievable accuracy:  
1% of reading from 0.1 to  $1 \times 10^{-6}$  mbar
- 100% linear pressure readings, regardless of gas type
- Long term stability: drift <1.5%/year
- Corrosion & deposition insensitive stainless-steel sensor
- Safe & clean measurements:  
No contamination/heating/ionization by SRG sensor

In addition, the DosiTorr is equipped for various process environments:

- Magnetic shielding: Protection from external magnetic fields
- Stronger magnetic suspension for reliable measurements
- Integrated temperature sensor for automatic temperature adjustment

## Technical Data

<b>Measurement Principle</b>	Spinning Rotor Gauge
<b>Measurement Range</b>	10 mbar to $5 \times 10^{-7}$ mbar
<b>Achievable Accuracy</b>	10 mbar to 0.1 mbar approx. 10% of reading 0.1 mbar to $1 \times 10^{-6}$ mbar 1% of reading
<b>Measurement Time</b>	1, 3, 5, 10, 20, 30 s or adaptive
<b>Long Term Stability</b>	< 1.5 % drift each year
<b>Wetted Materials</b>	1.4404, 1.4034
<b>Alignment</b>	Horizontal
<b>Hardware Interfaces</b>	USB Type C, Bluetooth (optional), High Density 15 pin
<b>Digital Interfaces</b>	USB, Bluetooth (optional), RS 232, RS 485
<b>Communication Protocol</b>	Modbus protocol, ASCII protocol (optional), LabView driver (optional)
<b>Remote Control / GUI</b>	Win7/10
<b>Operating Temperature</b>	10°C to 40°C (50°F to 104°F)
<b>Power Requirements</b>	18 to 28 VDC*
<b>Compliance</b>	2004/108/EU Electromagnetic Compatibility Directive
<b>Analog Output</b>	0 to 10 VDC configurable
<b>Flange Type</b>	KF25, KF40, CF40, 8 VCR, 1/8" NPT
<b>Weight</b>	1250 g (44 oz)
<b>Dimensions</b>	L x B x H = 200 x 105 x 65 mm (8 x 4 x 2.5 in.)
<b>Power Consumption</b>	Maximum 1.5 A at 24 VDC, typically < 1 A
<b>Response Time (fast mode)</b>	1 s

\* Power Source in accordance with current Council Directives, following 2004/108/EU and 2014/30/EU

## About us

ph-instruments develops, manufactures, and sells vacuum measurement systems with unique technologies for demanding tasks in industry, research, and science. Our guidelines are to provide our customers with cost-effective and application-related solutions. Our specialists each have more than 20 years of experience in measuring and regulating pressures in the vacuum sector. The products are developed and produced in Germany and Austria and meet the highest quality standards for measuring accuracy, sustainability, and reliability. Innovative technologies help to increase energy efficiency and thus protect the environment from unnecessary CO2 emissions.

Specifications can be changed without further notice.