



SmartLine™ Vacuum Transducer

Absolute Pressure 1000 - 1×10^{-9} mbar (Torr) VSH82MV

The combination transducer VSH82MV (Pirani/hot cathode) measures absolute pressure from atmosphere to ultrahigh vacuum.

Don't care about measurement ranges, switching points and the appropriate control of sensors. Our intelligent, processor-controlled SmartLine transducer takes on this job for you.

SmartLine stands for the employment of modern technology to achieve comfortable, safe and cost-effective process-control.



Typical Applications

- ▶ Analysis technology
- ▶ Coating plants and vapor deposition
- ▶ Process engineering
- ▶ Measuring and controlling in fine and ultrahigh vacuum
- ▶ Sputtering plants
- ▶ Vacuum furnaces

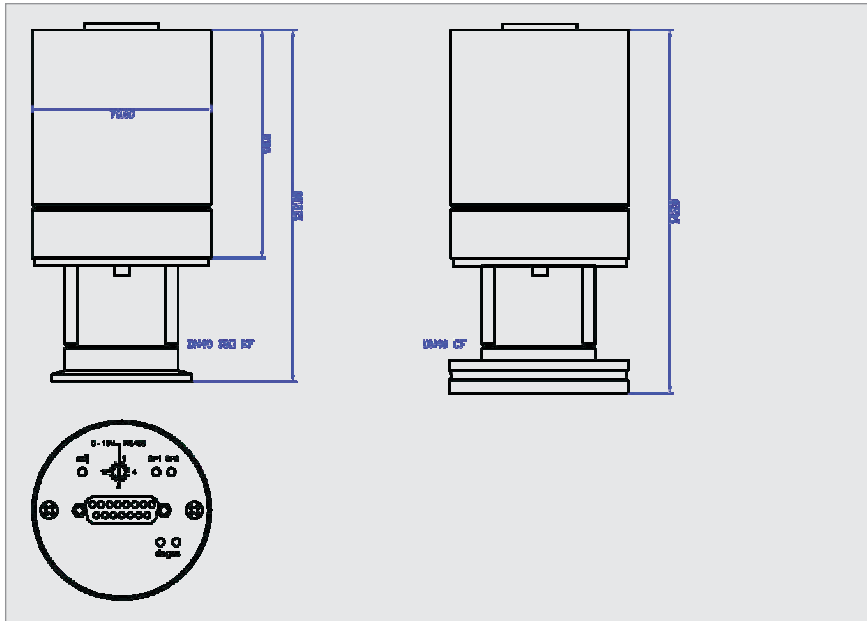
Your Benefits

- ▶ Wide measuring range by the use of combination sensors
- ▶ The hot cathode is automatically switched on and off by the Pirani
- ▶ Patented pulsed Pirani with extended range, thus operation of the hot cathode at lower pressure and increase of lifetime
- ▶ Excellent repeatability and high accuracy
- ▶ Low thermal and electrical interference with the vacuum process
- ▶ Bayard-Alpert with double filament, in case of a failure the gauge automatically shifts to the backup filament
- ▶ Insensitive against gas irruption
- ▶ Logarithmic signal output 0 - 10 V allows for easy interpretation
- ▶ Suitable for digital networks by serial interface RS485
- ▶ The digital output signals can be transmitted failure-free over long distances (up to 500 m)
- ▶ Low power consumption
- ▶ Correct pressure readings by means of separate gas-type-factors for every sensor principle
- ▶ Metal-sealed stainless steel sensor cell with detachable protective screen
- ▶ Easy and exact adjustment by the push of a button



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Suitable Display and Control Unit:

VD9S2, 19" cassette with serial interface RS232, recorder output 2 relay switch points, 95 - 265 VAC



Technical Data

Measuring Principle	Pirani: heat conduction Hot cathode: Bayard Alpert both depending on gas type
Materials in Contact with Vacuum	Stainl. steel 1.4301, tungsten, yttria coated iridium, nickel, glass, ceramic
Measuring Range	1000 - $1,0 \times 10^{-9}$ mbar ($750 - 1,0 \times 10^{-9}$ Torr) Zulässige Überlast: 4 bar abs.
Accuracy	1000 - 20 mbar: ca. 30 % from reading 20 - 0,001 mbar: < 10 % from reading < 0,001 mbar: < 15 % from reading
Emission Current	10 μ A, 100 μ A, 1 mA
Degas	Ohmic heating of the anode
Operating Temperature	5 ... 50°C
Storage Temperature	-20 ... +70°C
Voltage Supply	19-30 VDC
Power Consumption	ca 6,5 W (without switchpoint)
Output Signal	0 - 10 VDC, measuring range 1,4 - 8,6 VDC, logarithmic
Serial Interface	RS485: 9600 baud, address switch 1 - 15
Switchpoints	2 switch-over relais, 60 V, 0,5 A
Electrical Connection	Sub-D, 15-pole, male
Vacuum Connection	DN 40 KF, stainless steel
Maximum Baking Temperature	180 °C on flange (electronic detached)
Protection Class	IP40
Weight	665 g

Article Numbers

▶ **VSH82MV**
Combination-Transducer
Pirani / Bayard Alpert
1000 - $1,0 \times 10^{-9}$ mbar
with DN40 KF flange;
output 0 - 10 V logarithmic, RS485

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Accessories

▶ **W1506002**
Measuring cable, shielded, 2 m
(for VD9)

▶ **W1506006**
Measuring cable, shielded, 6 m
(for VD9)

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