VSP63 / VSP64

Vacuum Transducer
Absolute Pressure 1000 to 1 x 10^{-4} mbar

The VSP63 is based on a new, patented measurement principle.

The well proven Thyracont impulse Pirani sensor provides a larger measuring range with higher resolution.

The advanced VSP63 uses an optimized temperature compensation. Accuracy and stability have been further improved.

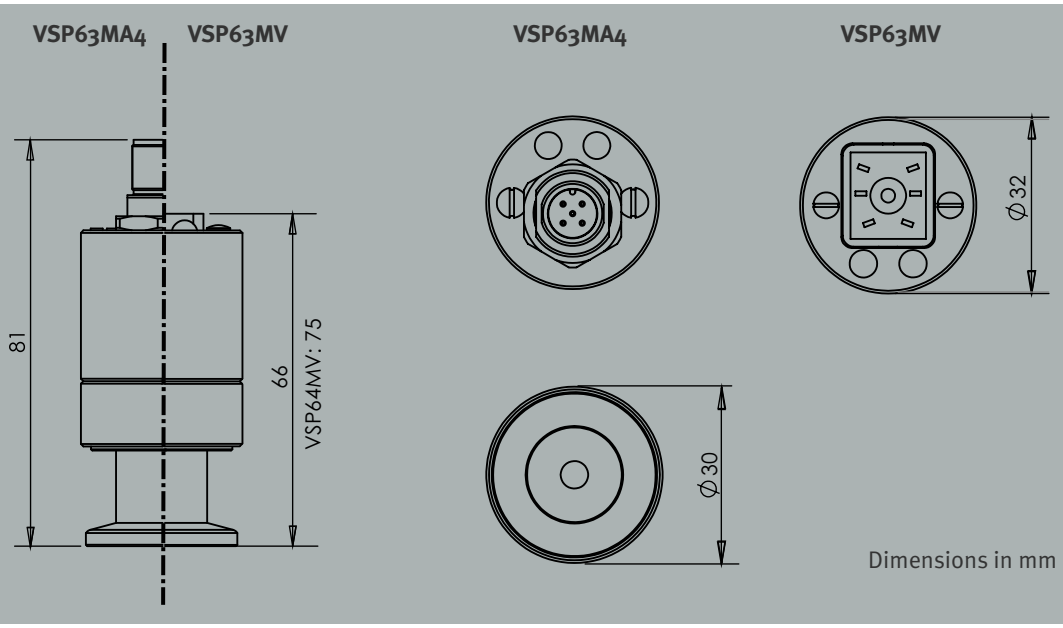
Analog, logarithmic output signal

Typical Applications

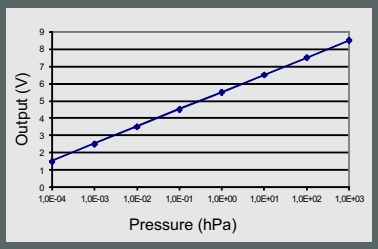
- Analysis instruments
- Coating plants
- Vacuum ovens
- Leakage testing
- Freeze drying
- Operational control of roughing pumps and vacuum plants
- Applications requiring cost savings and inaccessible installations
- Safety circuits in vacuum systems
- Monitoring of fore vacuum
- Process engineering
- Vacuum centrifuges

Benefits

- High reliability
- Extremely compact, designed for industrial applications
- Wide measuring range, high resolution in the rough vacuum range
- Excellent reproducibility
- Suitable for UHV applications due to the robust metal sealed stainless steel sensor
- Durable Pirani helix filament
- Highly cost effective
- Filament protected by a metal screen provides good resistance against oil and solvent vapors
- Stable measuring values due to optimized temperature compensation
- Suitable for Thyracont 1 and 2 channel display and control units VD6 / VD12
- Precise push button digital adjustment on zero pressure and atmosphere
- Logarithmic standard output 1.5 - 8.5 V (VSP63MV, VSP64MV) or 4-20 mA (VSP63MA4)
- Easy system integration and connection with PLCs, wide supply voltage range
- Rugged, EMI-proof metal housing
- Protection class IP54 (VSP63MA4)
- Vacuum connection using stainless steel small flange DN 16 ISO-KF (VSP63MV, VSP63MA4) or conflat flange DN 16 CF (VSP64MV)



Dimensions in mm



VSP63MA4

I_{out} [mA] = 16/7 x log (p[hPa]) + 92/7

p [hPa] = $10^{7/16 \times (I_{out}[mA] - 92/7)}$

VSP63MV / VSP64MV

V_{out} (V) = log (p(hPa)) + 5.5

p (hPa) = $10^{(V_{out}(V) - 5.5)}$

Technical Data

Measuring Principle	Heat conduction (Impulse Pirani), depending on gas type
Materials In Contact With Vacuum	Stainless steel 1.4307, nickel, tungsten, glass
Measurement Range	1000 - 1 x 10^{-4} mbar (750 - 1 x 10^{-4} Torr), max. overpressure 4 bar absolute
Accuracy	1000 - 20 mbar: ‹ 30% from reading 20 - 2 x 10^{-3} mbar: ‹ 10% from reading ‹ 2 x 10^{-3} mbar: ‹ factor 2
Repeatability	2%
Reaction Time	Max. 200 ms
Voltage Supply	15 - 30 VDC
Electrical Connection	M12 A, 5pole, male, lockable (VSP63MA4) Hirschmann, 6 pole, male, lockable (VSP63MV/VSP64MV)
Power Consumption	Max. 1 W with 24 VDC supply voltage
Operating Temperature	+5...+60°C
Storage Temperature	-40...+70°C
Max. Bake Out Temperature	80°C at the flange
Output Signal	VSP63MA4: 4 - 20 mA, logarithmic, three wire, max. loop resistance: RL = (supply voltage - 4 V) / 20 mA VSP63MV/VSP64MV: 1.5 - 8.5 VDC, logarithmic, 1 V / decade load resistance › 10 kΩ
Vacuum Connection	Small flange DN 16 ISO-KF (VSP63MA4, VSP63MV), conflat flange DN 16 CF (VSP64MV)
Protection Class	IP54 (VSP63MA4), IP40 (VSP63MV, VSP64MV)
Weight	Approx. 120 g

Product Codes

- **VSP63MA4**
  Pirani transducer, 1000 to 1 x 10^{-4} mbar, with DN 16 ISO-KF connection; output 4 - 20 mA, logarithmic
- **VSP63MV**
  Pirani transducer, 1000 to 1 x 10^{-4} mbar, with DN 16 ISO-KF connection; output 0 - 10 V logarithmic
- **VSP64MV**
  As above, with DN 16 CF connection

Accessories:

- **XB0500004**
  Mating plug, 5pole, for VSP63MA4
- **XB0600002**
  Mating plug, 6pole, for VSP63MV/VSP64MV
- **W0509002**
  Measuring cable for VSP63MA4 with VD6, shielded, 2 m
- **W0509006**
  As W0509002, 6 m
- **W0606002**
  Measuring cable for VSP63MV/VSP64MV with VD12, shielded, 2 m
- **W0606006**
  As W0606002, 6 m