

## VSP63 / VSP64

## Vacuum Transducer Absolute Pressure 1000 to $1 \times 10^{-4}$ 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

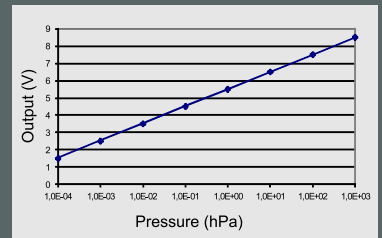
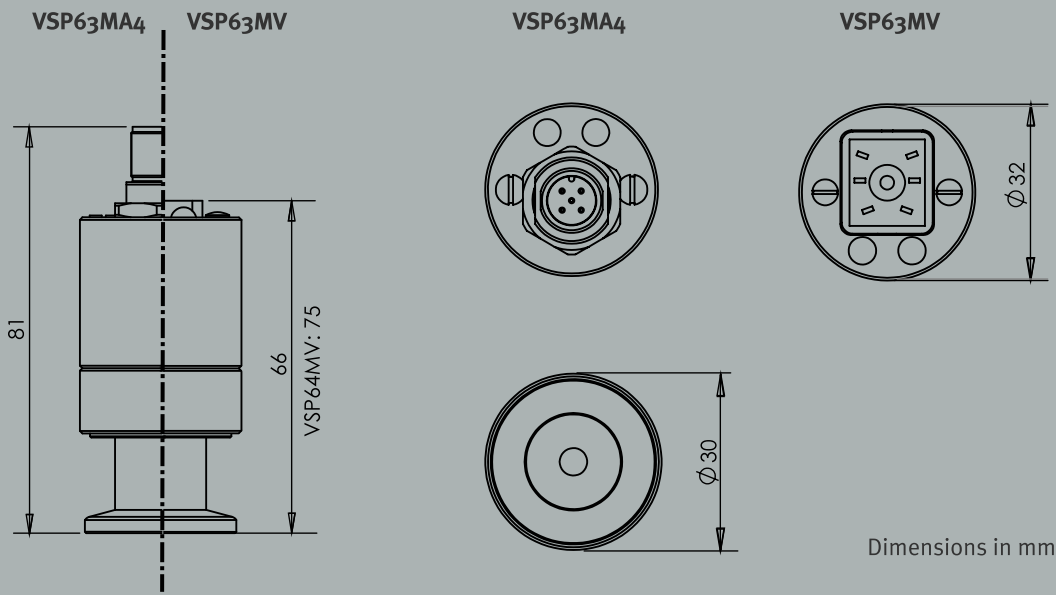
### Typical Applications

- 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)





#### VSP63MA4

$$I_{out} [\text{mA}] = 16/7 \times \log(p[\text{hPa}]) + 92/7$$

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

#### VSP63MV / VSP64MV

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

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

### 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 - $1 \times 10^{-4}$ mbar ( $750 - 1 \times 10^{-4}$ Torr), max. overpressure 4 bar absolute
Accuracy	1000 - 20 mbar: < 30% from reading 20 - $2 \times 10^{-3}$ mbar: < 10% from reading < $2 \times 10^{-3}$ 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: $RL = (\text{supply voltage} - 4 \text{ V}) / 20 \text{ mA}$ 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  $1 \times 10^{-4}$  mbar, with DN 16 ISO-KF connection; Output 4 - 20 mA, logarithmic

#### • VSP63MV

Pirani transducer, 1000 to  $1 \times 10^{-4}$  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