

# VSP - Smartline Vacuum Transducer Pirani

Absolute Pressure 1000 to  $1 \times 10^{-4}$  mbar



## VSP at a glance

- Durable Pirani spiral coil filament
- High resolution
- Good accuracy and excellent reproducibility
- Short response time
- Filament is protected against oil and solvent vapors by a metal screen
- Stable measurements due to optimized temperature compensation
- Small volume of the measuring cell e. g.  $1,8 \text{ cm}^3$  for VSP63D
- Baud rate 9.6 kBd to 115 kBd
- Metal sealed stainless steel sensor, suitable for UHV applications

## Features of the Smartline product family

- Digital RS485 interface and additional analog output signal 0 - 10 V, EtherCAT or Profinet
- Digital adjustment of zero and atmospheric pressure via pushbutton or interface
- Two independent, potential-free relay switch points
- Large, integrated LCD display with background illumination
- LEDs for device status and switch points
- Protection class up to IP54
- Output signal scalable according to required output characteristics for an easy replacement of existing transducers
- Easy connection with PLCs
- Rugged, EMI-proof metal housing
- The digital output signal can be transmitted failure-free over long distances (up to 500 m)
- Bluetooth adapter available
- Suitable for Thyracont 2 and 4 channel controllers VD12 / VD14
- VacuGraph™ Windows software to visualize, analyze and save measurements
- Easily replaceable sensor heads with stored calibration data

# VSP - Smartline Vacuum Transducer Pirani

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



### Technical Data

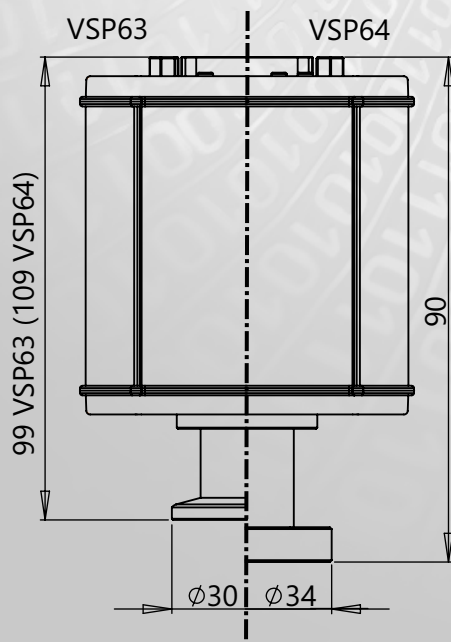
Measurement Principle	Heat conduction Pirani, depending on gas type
Measurement Range	1000 - $1e-4$ mbar (750 - $1e-4$ Torr)
Max. Overload	10 bar abs.
Accuracy	1000 - 20 mbar: Approx. 30 % from reading, 20 - 0,002 mbar: 10 % from reading
Repeatability	2% from reading (20 - $2e-3$ mbar)
Materials With Vac. Contact	Stainless steel 1.4307, tungsten, nickel, glass
Reaction Time	40 ms
Operating Temperature	+5...+60°C
Storage Temperature	-40...+65°C
Max. Bake Out Temperature	Max. 150°C at the flange (voltage supply switched-off)
Voltage Supply	20 - 30 VDC
Power Consumption	Max. 2.5 W, add. 0.8 W for EtherCAT /relays / LCD, add. 1 W f. Profibus, 1.8 W f. Profinet
Output Signal	0-10 VDC, min. 10 k $\Omega$ , measuring range 1.5 to 8.5 VDC, log.(VSP6xD/DL)
Serial Interface	RS485: 9.6 kBd to 115 kBd, 8 databit, 1 stopbit, no parity
Switch Points	2x relay, potential free, 50 VAC / 2 A, 30 VDC / 2 A, max. 60 VA
Electrical Connection	VSP6xD/DL: SubD, 15-pole, male, lockable VSP6xE, -PB, -PN: M12 circular connector, female, lockable VSP6xE, -PN: 1x A standard, 5-pole, 2x D-coded, 4-pole VSP6xPB: 1x A standard, 5-pole, 1x B-coded, 4-pole
Vacuum Connection	DN 16 ISO-KF (VSP63), DN 16 CF-F (VSP64)
Protection Class	VSP6xE, VSP6xPN: IP54; VSP6xD/DL: IP40, IP54 with XB15SL05 adaptor
Weight	190 g (VSP63)

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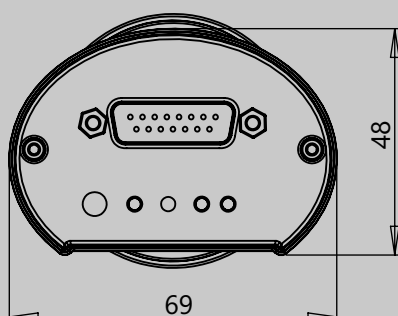


## Dimensions in mm



## Model designations

- VSP63D DN 16 ISO-KF, 0-10 V and RS485
- VSP63DL DN 16 ISO-KF, 0-10 V and RS485, with LCD display
- VSP63E DN 16 ISO-KF, EtherCAT and RS485
- VSP63PB DN 16 ISO-KF, Profibus and RS485
- VSP63PN DN 16 ISO-KF, Profinet and RS485
- VSP64D DN 16 CF-F, 0-10 V and RS485
- VSP64DL DN 16 CF-F, 0-10 V and RS485, with LCD display
- VSP64E DN 16 CF-F, EtherCAT and RS485
- VSP64PB DN 16 CF-F, Profibus and RS485
- VSP64PN DN 16 CF-F, Profinet and RS485
- VD1263P Set with 2 channel controller  
VD12 + VSP63D + measuring cable 2 m



## Accessories

- Replacement sensor heads: B\_VSP63DA, B\_VSP64DA

For further accessories and information see our Smartline brochure.

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