

# VCP - Smartline Vacuum Transducer Pirani for Corrosive Media

Absolute Pressure 1000 to  $5 \times 10^{-4}$  mbar



Smartline



## Overview VCP vacuum transducer

- Durable, elastic Pirani spiral coil filament
- Suitable for demanding applications with aggressive media due to platinum rhodium filament
- Overpressure stability up to 16 bar
- Short response time of up to 40 ms
- Integrated metal screen for protection against oil and solvent vapors
- Stable measurements due to optimized temperature compensation

## Overview Smartline vacuum transducers

- Digital RS485 interfaces plus 0-10 V output signal, EtherCAT or PROFINET, Bluetooth adapter SLKBT for wireless communication
- PROFINET transducers support MRP
- Exchangeable sensor heads with stored calibration data
- Large LCD display (exc. EtherCAT, PROFINET)
- Readjustment of zero and atmosphere by push-button or interface
- LEDs for device status and switch points
- Two independent, potentialfree relay switch points (exc. EtherCAT, PROFINET)
- Protection class up to IP54
- 0-10 V output signal can be scaled according to the required output characteristics. Exchange of existing vacuum gauges easily, independent of the manufacturer, without programming effort
- Intelligent sensors for simplified integration according to Industry 4.0 standards
- Metal sealed stainless steel sensor cell, suitable for UHV (He leakage rate  $< 5 \times 10^{-10}$  mbar l / s)
- Expansion with 2 channel controller VD12 or 4 channel controller VD14 possible
- VacuGraph™ Windows software for visualisation, analysis and storage of measuring data

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## Absolute Pressure 1000 to $5 \times 10^{-4}$ mbar

### Technical Data

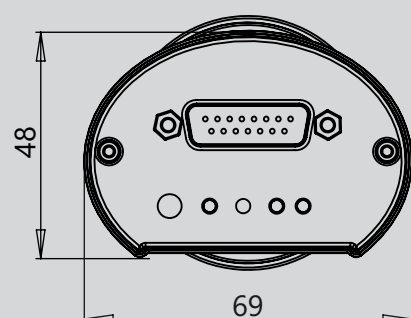
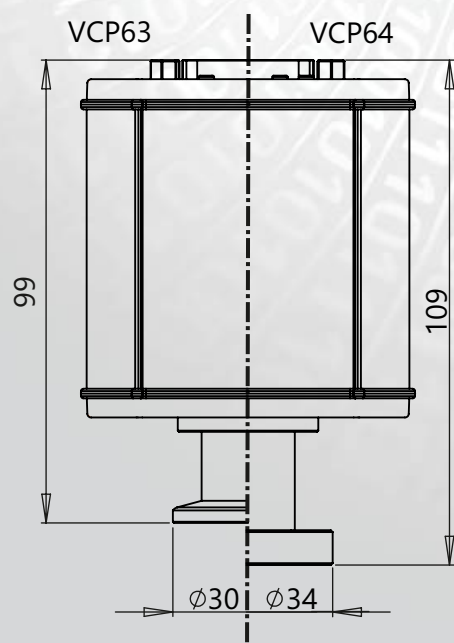
Measurement Principle	Heat conduction Pirani, depending on gas type
Measurement Range	1000 - $5 \times 10^{-4}$ mbar (750 - $5 \times 10^{-4}$ Torr)
Max. Overload	10 bar abs.   optional: 16 bar abs. (with CERT31P)
Accuracy	1000 - 10 mbar: Approx. 30 % f. r., 10 - $1 \times 10^{-2}$ mbar: 10 % f. r.
Repeatability	10 - $1 \times 10^{-2}$ mbar: 5 % f. r.
Materials with Vac. Contact	Stainl. steel 1.4307, platinum/rhodium, 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)
Supply	20 - 30 VDC
Power Consumption	Max. 2.5 W, add. 0.8 W for EtherCAT /relays / LCD add. 1.6 W f. Profinet
Output Signal	0-10 VDC, min. 10 k $\Omega$ , measuring range 2.2 to 8.5 VDC, log. except for EtherCAT, Profinet
Digital Interface	RS485: 9.6 kBd to 115 kBd, 8 databit, 1 stopbit, no parity EtherCAT, Profinet
Switch Points	2x relay, potential free, 49 VAC / 2 A, 30 VDC / 2 A, max. 60 VA except for EtherCAT, Profinet
Electrical Connection	RS485/0-10V: SubD, 15-pole, male RS485/EtherCAT/Profinet: 1x M12 A / 2x M12 D, female
Vacuum Connection	DN 16 ISO-KF (VCP63), DN 16 CF-F (VCP64)
Protection Class	Up to IP54 (SubD with XB15SL05 adaptor)
Weight	190 g (VCP63)

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## Dimensions



## Model designations

- VCP63D DN 16 ISO-KF, 0-10 V and RS485
- VCP64D DN 16 CF-F, 0-10 V and RS485
- VCP63DL DN 16 ISO-KF, 0-10 V and RS485, with LCD display
- VCP64DL DN 16 CF-F, 0-10 V and RS485, with LCD display
- VCP63E DN 16 ISO-KF, EtherCAT and RS485
- VCP64E DN 16 CF-F, EtherCAT and RS485
- VCP63PN DN 16 ISO-KF, Profinet and RS485
- VCP64PN DN 16 CF-F, Profinet and RS485

## Accessories

- CERT31P: overpressure stability 16 bar, incl. testing certificate 3.1
- Replacement sensor heads: B\_VCP63D, B\_VCP64D
- SLCASE Smartline protective plastic case, SLN4 plug-in power supply, SLKUSB interface converter RS485-USB, VGR VacuGraph software lite version

Further accessories as well as detailed information about our product family can be found in our Smartline brochure.