

VSR - Smartline Vacuum Transducer Piezo / Pirani

Absolute Pressure 1200 to 1×10^{-4} mbar

PROFI[®]
NET

EtherCAT[®]

RS485

0-10 V



VSR at a glance

- Wide measuring range due to combination sensor piezo / Pirani
- High accuracy and optimal resolution over the whole measuring range
- Excellent reproducibility and long term stability
- Short response time of up to 40 ms
- Integrated metal screen for protection against contamination such as oil and solvent vapors
- Stable measurements due to optimized temperature compensation
- Measurements independent of gas type above 20 mbar and adjustable gas type correction factor for Pirani sensor
- Easily replaceable sensor heads with stored calibration data
- Two independent, potentialfree relay switch points
- Options for drop-in replacements (scalable output signals and adapters)

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Technical Data

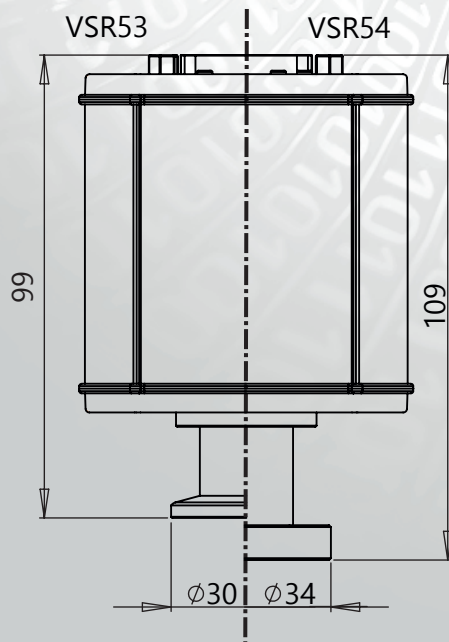
Measurement Principle	Piezo resistive / heat conduction Pirani (Pirani, depending on gas type)
Measurement Range	1200 - $1e-4$ mbar (900 - $1e-4$ Torr)
Max. Overload	4 bar abs.
Accuracy	1200 - 40 mbar: 0.3% f. scale end, 40 - $2e-3$ mbar: 10% f. r.
Repeatability	1200 - 40 mbar: 0.1 % full scale, 40 - $1e-2$ mbar: 2% from reading
Materials with Vac. Contact	Stainless steel 1.4307, tungsten, nickel, glass, gold, silicon oxide
Reaction Time	40 ms
Operating Temperature	+5...+60°C (Profinet -5... + 50°C)
Storage Temperature	-40...+65°C
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. 1.6 W for Profinet
Output Signal	0-10 VDC, min. 10 k Ω , measuring range 1.5 to 8.58 VDC, log. (Default) 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, 50 VAC / 2 A or 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 (VSR53), DN 16 CF-F (VSR54)
Protection Class	Up to IP54 (SubD with XB15SL05 adaptor)
Weight	195 g (VSR53D)

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Dimensions in mm



Model designations

- VSR53D DN16 ISO-KF, 0-10V and RS485
- VSR54D DN16 CF-F, 0-10V and RS485
- VSR53DL DN16 ISO-KF, 0-10V and Rs485, with LCD display
- VSR54DL DN16 CF-F, 0-10V and RS485, with LCD display
- VSR53E DN16 ISO-KF, EtherCAT and RS485
- VSR54E DN16 CF-F, EtherCAT and RS485
- VSR53PN DN16 ISO-KF, Profinet and RS485
- VSR54PN DN16 CF-F, Profinet and RS485

Set

- VD1253P Set including a 2 channel controller VD12, VSR53D, measuring cable 2 m

Accessories

- Replacement sensor heads: B_VSR53, B_VSR54
- 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.

