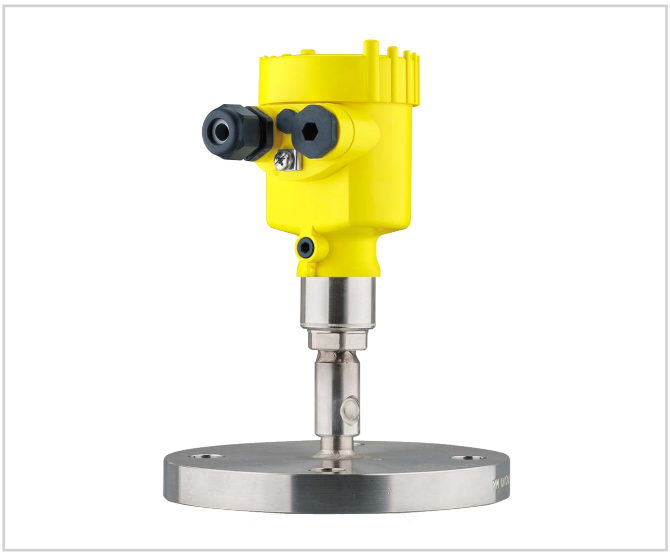
Specification sheet

VEGABAR 81

Slave sensor for electronic differential pressure
Pressure transmitter with chemical seal



Application area

The VEGABAR 81 Slave sensor is combined with a sensor from the VEGABAR 80 series to an electronic differential pressure measurement. The unit is suitable for the measurement of differential pressure, level with superimposed pressure or vacuum, flow, density or interface.

The chemical seal systems of VEGABAR 81 adapted to the process ensure the measurement even with highly corrosive and hot products.

Your benefit

- Simple adaptation, thanks to versatile configuration
- Reliable measurement up to temperatures of 400 °C
- Reliable measurement independent of foam generation and tank installations

Function

The heart of the pressure transmitter is the pressure measuring cell transforming the pressure into an electrical signal. This pressure-dependent signal is convereted by the integrated electronics into a standardized output signal.

For this reason, the VEGABAR 81 is provided with a completely welded chemical seal system with internal transmission liquid. For measuring ranges up to 40 bar, a piezoresistive sensor element is used, from 100 bar a strain gauge sensor element.

Technical data

Measuring ranges	-1 … +1000 bar/-0.1 … +100 MPa (-14.5 … +15000 psig)
Smallest measuring range	+0.4 bar/+40 kPa (+5 psig)
Deviation	< 0.2 %
Deviation - Complete system	< 0.3 %
Process fitting	Threads from G½, flanges from DN 15, ½", hygienic fittings
Process temperature	-90 … +400 °C (-130 … +752 °F)
Ambient, storage and transport temperature	-40 … +80 °C (-40 … +176 °F)
Voltage supply	Through the Master sensor

Materials

The process fitting is made of stainless steel 316L. The process diaphragm is available in 316L and in the high resistance materials Alloy C276, Tantalum as well as PTFE on 316Ti.

You will find a complete overview of the available materials and seals in the "*Configurator*" at www.vega.com and "*Products*".

Housing versions

The housings are available as single chamber version in plastic, aluminium or stainless steel.

They are available in protection ratings up to IP 68 (25 bar) with external electronics as well as in IP 69K.

Electronics versions

Apart from the two-wire electronics with 4 … 20 mA/HART, also purely digital versions with Profibus PA and Foundation Fieldbus are possible for the corresponding master sensor.

Approvals

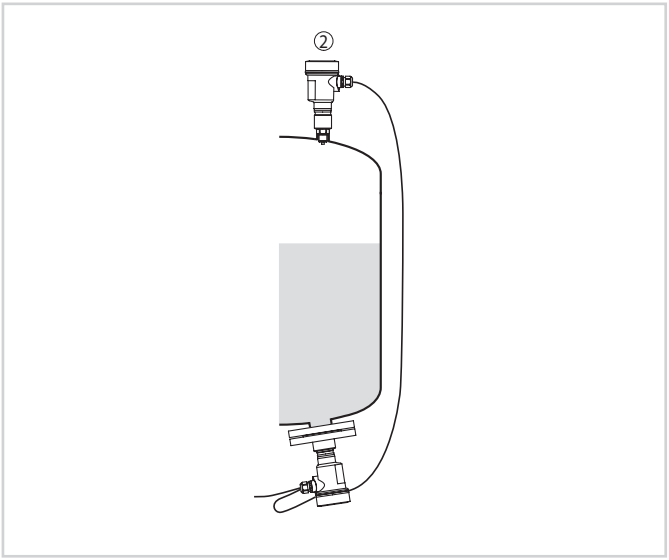
The instruments are suitable for use in hazardous areas and are approved e.g. according to ATEX and IEC. The instruments also have various ship approvals such as e.g. GL, LRS or ABS.

You can find detailed information on www.vega.com/downloads with the respective product under "*Approval*".

Adjustment

The adjustment of the instrument is carried out through the connected Master sensor.

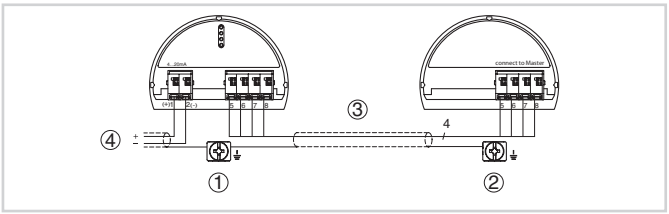
Measurement setup



Measurement setup, level measurement in pressurized vessel

1 *VEGABAR 81*
2 *VEGABAR 81 - Slave sensor*

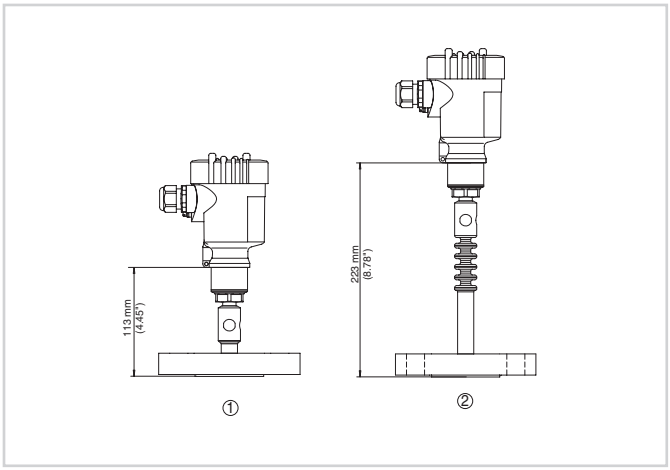
Electrical connection



Connection example, electronic differential pressure

1 *Master sensor*
2 *Slave sensor*
3 *Connection cable*
4 *Supply and signal circuit, Master sensor*

Dimensions



Dimensions VEGABAR 81

1 *Flange version up to +150 °C (+302 °F)*
2 *Flange version with cooling element +400 °C (+752 °F)*

Information

You can find further information about the VEGA product line on www.vega.com.

In the download section at www.vega.com/downloads you'll find operating instructions, product information, brochures, approval documents, instrument drawings and much, much more.

There, you will also find GSD and EDD files for Profibus PA systems as well as DD and CFF files for Foundation Fieldbus systems.

Instrument selection

Under "*Specify product*" on www.vega.com and "*Products*" you can select the suitable measuring principle and instrument for your application.

You can find detailed information on the instrument versions in the "*Configurator*" at www.vega.com and "*Products*".

Contact

You can find your personal contact person at VEGA on our homepage www.vega.com and "*Contact*".