

VEGABAR 83

4 ... 20 mA/HART

Pressure transmitter with metallic measuring cell



Application area

The VEGABAR 83 is a pressure transmitter for pressure measurement of gases, vapours and liquids in all industries. VEGABAR 83 offers special advantages for applications with high pressures.

In conjunction with a Slave sensor the VEGABAR 83 is also suitable for the electronic differential pressure measurement.

Your benefit

- Universal use thanks to completely welded measuring cell
- High measurement certainty through vacuum resistant version
- Maximum reliability and safety through proven technology

Function

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

Sensor element with VEGABAR 83 is a fully welded metallic measuring cell. With measuring ranges up to 16 bar, a piezoresistive sensor element with internal transmission liquid is used. From 25 bar upwards, a strain gauge sensor element is used on the back side of the stainless steel diaphragm. This dry system works without additional isolating liquid.

With larger process fittings and higher temperature ranges, the ME-TEC® measuring cell is the measuring unit. It consists of the ceramic-capacitive CERTEC® measuring cell and a special, temperature-compensated chemical seal system.

Technical data

Measuring ranges	-1 ... +1000 bar/-0,1 ... +100 MPa (-14.5 ... +15000 psig)
Smallest measuring range	+0.1 bar/+10 kPa (+1.45 psig)
Deviation	< 0.075 %; < 0.1 %; < 0.2 %
Process fitting	Threads from G½, flanges from DN 25, 1½", hygienic fittings
Process temperature	-40 ... +400 °C (-40 ... +752 °F)
Ambient, storage and transport temperature	-40 ... +80 °C (-40 ... +176 °F)
Operating voltage	9.6 ... 35 V DC
SIL qualification	Optionally up to SIL2 (with homogeneous redundancy up to SIL3)

Materials

The process fitting of the instrument is made of 316Ti or Hastelloy C4, the process diaphragm of 316Ti or Elgiloy 2.4711. The process seal is available in FKM, FFKM, EPDM and NBR.

With VEGABAR 83 with larger process fittings and higher temperature ranges, the process fitting is made of stainless steel 316L. The process diaphragm is available in 316L and high resistance materials Hastelloy 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 "VEGA Tools".

Housing versions

The housings are available as single chamber or double 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

The instruments are available in different electronics versions. Apart from the two-wire electronics 4 ... 20 mA or 4 ... 20 mA/HART also pure digital versions with Profibus PA, Foundation Fieldbus and Modbus are possible. In addition, a version as Slave sensor is available for the electronic differential pressure measurement.

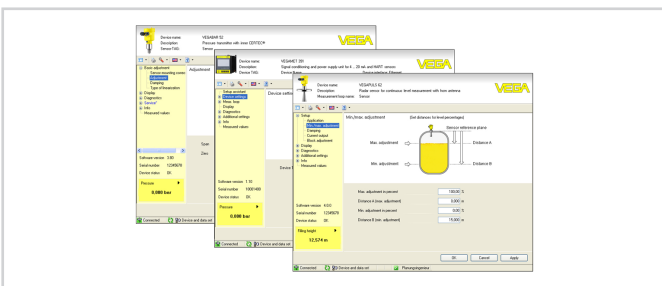
Approvals

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.

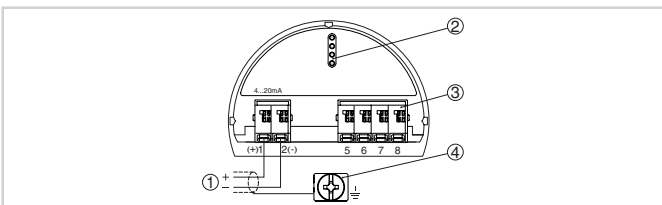
You can find detailed information at www.vega.com/downloads and "Approvals".

Operation

The adjustment of the instrument is carried out via the optional display and adjustment module PLICSCOM or via a PC with the adjustment software PACTware and corresponding DTM. Further adjustment options are available via HART communicator as well as manufacturer-specific programs such as AMS™ or PDM.



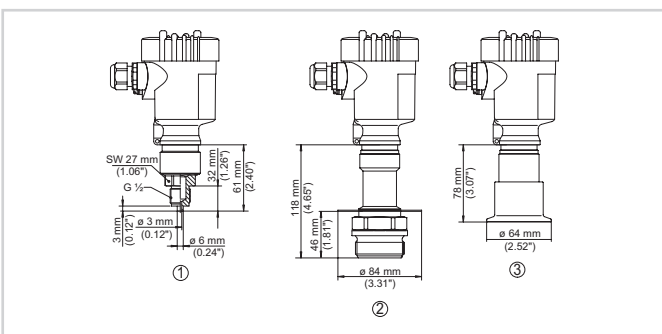
Electrical connection



Electronics and connection compartment, single chamber housing

- 1 Voltage supply/Signal output
- 2 For display and adjustment module or interface adapter
- 3 For external display and adjustment unit
- 4 Ground terminal for connection of the cable screen

Dimensions



Dimensions VEGABAR 83

- 1 Threaded version G 1/2, manometer connection EN 837
- 2 Threaded version front-flush with screening sheet
- 3 Clamp version 2"

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

With the "Finder" at www.vega.com/finder and "VEGA Tools" you can select the most suitable measuring principle for your application. You can find detailed information on the instrument versions in the "Configurator" at www.vega.com/configurator and "VEGA Tools".

Contact

You can find the VEGA agency serving your area on our homepage www.vega.com.