VEGABAR 53
4 ... 20 mA/HART

Pressure transmitter with metallic measuring cell

Area of application
The VEGABAR 53 is a pressure transmitter for measurement of gases, vapours and liquids. The VEGABAR 53 is the right choice when small process fittings are required. Applications can be found in all areas of industry.

Advantages
• 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. The metallic measuring cell allows fully welded versions and also covers higher measuring ranges. 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.

Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring ranges</td>
<td>1 ... +1000 bar/-100 ... +100000 kPa (-14.5 ... +14503 psig)</td>
</tr>
<tr>
<td>Smallest measuring range</td>
<td>0.1 bar/10 kPa (1.45 psig)</td>
</tr>
<tr>
<td>Deviation</td>
<td>&lt; 0.2 %, optionally up to &lt; 0.075 %</td>
</tr>
<tr>
<td>Process fitting</td>
<td>Thread G½ (EN837) or ½ NPT, thread from G½ (ISO 228-1) completely front-flush, flanges from DN 25 or 1&quot;, hygienic fittings</td>
</tr>
<tr>
<td>Process temperature</td>
<td>-40 ... +150 °C (-40 ... +302 °F)</td>
</tr>
<tr>
<td>Ambient, storage and transport temperature</td>
<td>-40 ... +80 °C (-40 ... +176 °F)</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>Measuring ranges &lt; 100 bar 12 ... 36 V DC</td>
</tr>
<tr>
<td></td>
<td>Measuring ranges ≥ 100 bar 14 ... 36 V DC</td>
</tr>
<tr>
<td>SIL rating</td>
<td>up to SIL2</td>
</tr>
</tbody>
</table>

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. You will find a complete overview of the available materials and seals in the "configurator" on our homepage under www.vega.com/configurator.

Housing versions
The housings are available as single chamber or double chamber version in plastic, stainless steel or aluminium. They are available in protection ratings up to IP 68 (1 bar).

Electronics versions
The instruments are available in different electronics versions. Apart from the two-wire electronics with 4 ... 20 mA or 4 ... 20 mA/HART, two purely digital versions with Profibus PA and Foundation Fieldbus are available.

Approvals
The instruments are suitable for use in hazardous areas and are approved e.g. according to ATEX and IEC. The instruments have also different ship approvals such as e.g. GL, LRS or ABS. You can find detailed information on the existing approvals in the "configurator" on our homepage under www.vega.com/configurator.
**Operation**

The adjustment of the instrument is carried out via the optional indicating and adjustment module PLICSCOM or via a PC with the adjustment software PACTware and respective 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. Plug connector for VEGACONNECT (I²C interface)
2. Spring-loaded terminals for connection of the external indication VEGADIS 61
3. Ground terminal for connection of the cable screen
4. Spring-loaded terminals for voltage supply and signal output

You can find details on the electrical connection in the instrument operating instructions on our homepage at www.vega.com/downloads.

---

**Dimensions**

Dimensions VEGABAR 53

1. Threaded version G1/2 A, manometer connection EN 837
2. Threaded version G1/2 A, front-flush
3. Threaded version G1 A, front-flush

---

**Information**

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

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

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

---

**Instrument selection**

With the “finder” you can select the most suitable measuring principle for your application: www.vega.com/finder.

You can find detailed information on the instrument versions in the “configurator” on our homepage under www.vega.com/configurator.

---

**Contact**

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