VEGAMIP R 61 / T 61

Relay

Microwave barrier for level detection in bulk solids and liquids

**Technical data**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process pressure</td>
<td>-1 … +4 bar/-100 … +400 kPa (-14.5 … +58 psig)</td>
</tr>
<tr>
<td>Process temperature</td>
<td>-40 … +80 °C (-40 … +176 °F)</td>
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<tr>
<td>Process temperature with mounting adapter</td>
<td>-40 … +450 °C (-40 … +842 °F)</td>
</tr>
<tr>
<td>Ambient, storage and transport temperature</td>
<td>-40 … +80 °C (-40 … +176 °F)</td>
</tr>
<tr>
<td>Hysteresis</td>
<td>approximately 1.33 dB</td>
</tr>
<tr>
<td>Process fitting</td>
<td>Thread from G1½, flanges from DN 50</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>20 … 253 V AC, 50/60 Hz; 20 … 72 V DC</td>
</tr>
<tr>
<td>Power consumption</td>
<td>1 … 8 VA (AC), approximately 1.5 W (DC)</td>
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<tr>
<td>Turn-on voltage</td>
<td>min. 10 mV, max. 253 V AC, 253 V DC</td>
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<tr>
<td>Switching current</td>
<td>min. 10 µA / max. 3 A AC, 1 A DC</td>
</tr>
<tr>
<td>Breaking capacity</td>
<td>min. 50 mW, max. 750 VA AC, 54 W DC</td>
</tr>
</tbody>
</table>

**Application area**

The microwave emitter VEGAMIP 61 is used mainly in bulk solids applications. The non-contact measuring principle is especially suitable for the harsh operating conditions in mineral rock extraction as well as coal and ore processing. Like a light barrier, the microwave barrier can also be used for object monitoring.

**Advantages**

- Non-contact measurement
- Non-sensitive to soiling
- Unaffected by changing product properties
- Wear and maintenance free
- Measurement right through walls of plastic containers
- Simple adjustment

**Function**

The measuring system consists of a microwave emitter and a corresponding receiver. The emitted signal is focused by an antenna system and radiated in the direction of the receiver. A medium in the path of the beam damps the signal. This signal damping is detected by the receiver and converted into a switching signal. The built-in sensitivity adjustment makes it easy to adapt the instrument to the local conditions and the medium.

**Materials**

The wetted parts of the instrument are made of stainless steel 316L and PTFE. The optional mounting adapter for process temperatures up to 450 °C is made of 316L and has a cover of ceramic Al₂O₃.

You can 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 in plastic, stainless steel or Aluminium. They are available with protection ratings up to IP 67.

**Electronics versions**

The receiving unit of the instrument has a relay output with two floating spdt.

**Approvals**

The instruments are suitable for use in dust explosive areas and are approved e.g. according to ATEX, FM, CSA and IEC.

You can find detailed information on the existing approvals in the "configurator" on our homepage under www.vega.com/configurator.
Operation
You can adjust the mode and sensitivity of the level switch on the electronics module of the receiving unit (R). Control lamps indicate operation, switching condition of the instrument and possible faults.

Electronics module receiving unit MPE60R - Relay output
1 Mode switch for selecting the switching behaviour (min./max.)
2 Control lamp (LED) for indication of a fault (red)
3 Signal lamp (LED) for indication of the switching condition (yellow)
4 Control lamp (LED) for indication of the instrument function (green)
5 Connection terminals
6 Ground terminal
7 DIL switch for sensitivity adjustment (−−)
8 DIL switch for sensitivity adjustment (−−)
9 LED indicating board for indication of reception strength (yellow)

Wiring plan receiving unit - VEGAMIP 61 R (receiver)
1 Relay output
2 Relay output
3 Voltage supply

Wiring plan emitting unit - VEGAMIP 61 T (transmitter)
1 Voltage supply

Dimensions
VEGAMIP 61
1 Threaded version with PTFE cover
2 Plastic antenna with PP cover
3 Mounting strap
4 Adapter flange

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.

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.