

VEGAMIP R61/T61

Relay

Microwave barrier for level detection in bulk solids and liquids



Application area

The VEGAMIP T61 is the emitting unit, the VEGAMIP R61 the receiving unit of the microwave barrier for level detection of bulk solids and liquids. Typical applications are the detection of bulk solids in silos, bunkers and crushers as well as of liquids in pipelines and vessels. The non-contact measuring principle has no direct contact with the medium and ensures continuous wear-free and maintenance-free operation.

Your benefit

- Reliable measurement even with very abrasive products
- Simple adjustment saves time and costs with setup and commissioning
- Reliable measurement even with changing product properties

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.

Technical data

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

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 will find a complete overview of the available materials and seals in the "configurator" on our homepage at 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

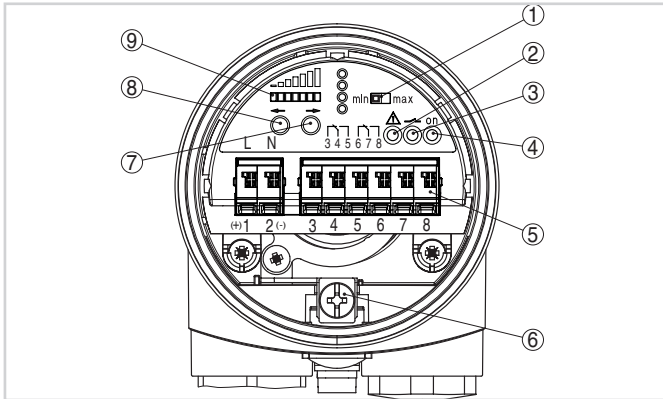
The receiving unit is available in different electronics versions. A transistor or a relay output with two floating spdts is possible.

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" unter "VEGA Tools" on our homepage.

Operation

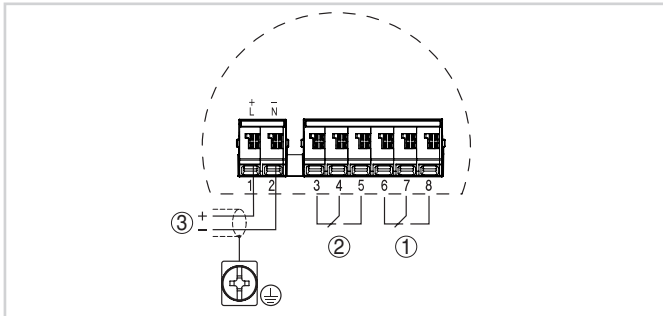
You can adjust the mode and sensitivity of the level switch on the electronics module of the receiving unit (R). Control lamps indicate operation, switching status of the instrument and possible faults.



Electronics module receiving unit MP60EE.R - Relay output

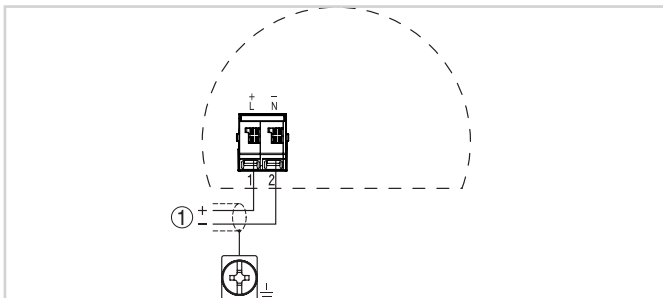
- 1 Mode switch for selecting the switching behaviour (min./max.)
- 2 Control lamp (LED) for indication of a fault (red)
- 3 Signal lamp (LED) for indication of the switching status (yellow)
- 4 Control lamp (LED) for indication of the instrument function (green)
- 5 Connection terminals
- 6 Ground terminal
- 7 DIL switch for sensitivity adjustment (→)
- 8 DIL switch for sensitivity adjustment (←)
- 9 LED indicating board for indication of reception strength (yellow)

Electrical connection



Wiring plan, Receiving unit - VEGAMIP 61 R (receiver)

- 1 Relay output
- 2 Relay output
- 3 Voltage supply



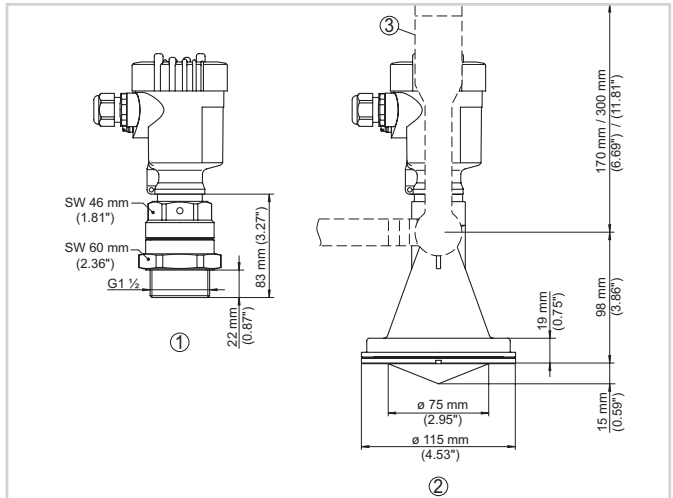
Wiring plan, Emitting unit - VEGAMIP 61 T (transmitter)

- 1 Voltage supply

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

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 on 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" 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.