

## VEGAMIP R61/T61

### Transistor

### 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 ... 55 V DC
Power consumption	max. 0.8 W
Load current	< 400 mA
Voltage loss	< 0.5 V
Switching voltage	< 55 V DC
Blocking current	< 10 µA

#### 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 Al<sub>2</sub>O<sub>3</sub>. You will find a complete overview of the available materials and seals in the "configurator" on our homepage at [www.vega.com/configurator](http://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

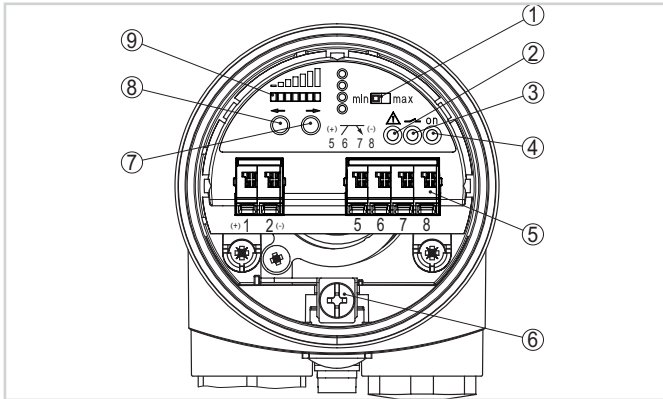
The receiving unit is available in different electronics versions. A transistor or a relay output with two floating spdts is possible.

#### 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

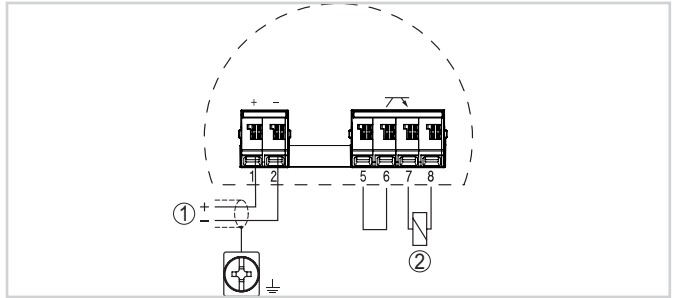
You can adjust the mode and sensitivity of the level switch on the electronics module of the receiving unit (R). Control lamps indicate operation, switching status of the instrument and possible faults.



Electronics module MP60EE.S receiver unit - Transistor output

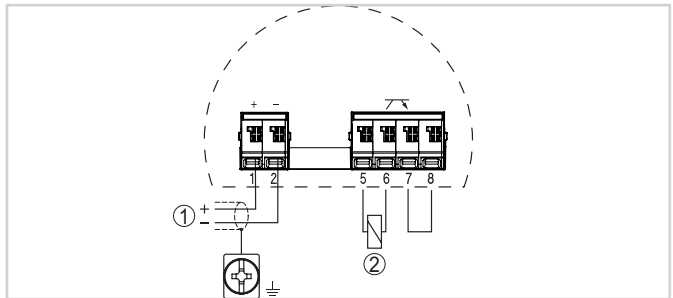
- 1 Mode switch for selecting the switching behaviour (min./max.)
- 2 Control lamp (LED) for indication of a fault (red)
- 3 Signal lamp (LED) for indication of the switching status (yellow)
- 4 Control lamp (LED) for indication of the instrument function (green)
- 5 Connection terminals
- 6 Ground terminal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

## Electrical connection



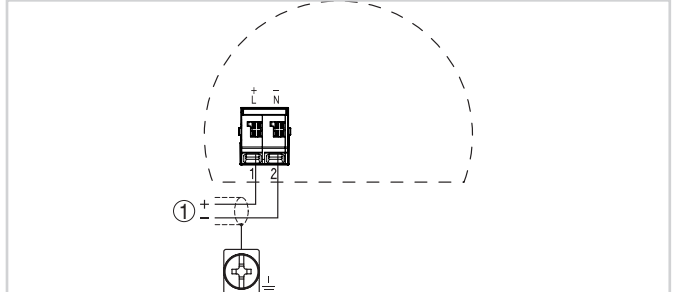
Wiring plan receiving unit - VEGAMIP 61 (receiver) - PNP action

- 1 Voltage supply
- 2 Load



Wiring plan receiving unit - VEGAMIP 61 (receiver) - NPN action

- 1 Voltage supply
- 2 Load



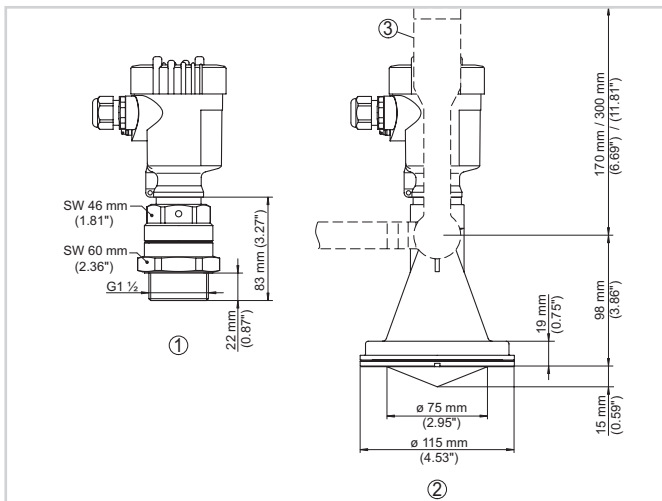
Wiring plan, Emitting unit - VEGAMIP 61 T (transmitter)

- 1 Voltage supply

You can find details on electrical connection in the instrument operating instructions on our homepage at [www.vega.com/downloads](http://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](http://www.vega.com).  
 In the download section under [www.vega.com/downloads](http://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](http://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](http://www.vega.com/configurator) and "VEGA Tools".

**Contact**

You can find the VEGA agency serving your area on our homepage [www.vega.com](http://www.vega.com).