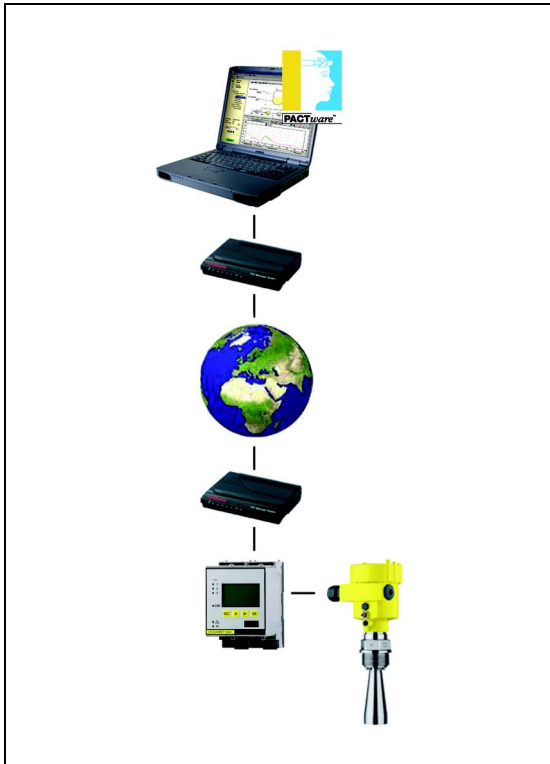


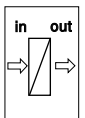
## Operating instructions

### Remote parameter adjustment and remote maintenance

#### Configuration and connection



Document ID:  
23051



Signal conditioning instruments  
and communication

## 1 Introduction

The configuration, parameter adjustment, operation and measured value indication of all communication-capable VEGA instruments can be carried out via the adjustment software PACTware with respective DTM. Here, a PC is connected via an RS232, USB or Ethernet interface to the respective VEGA instrument. If there are none of these standard interfaces integrated in the respective VEGA instrument, connection must be provided via the interface converter VEGA-CONNECT.

Remote parameter adjustment means a connection between PC and VEGA instrument via modem and public or private telephone network instead of a direct cable connection. After the transmission path has been set up via modem and telephone network, the adjustment with PACTware is no different than with a direct connection via cable.

A modem connection is only possible via the standard RS232 interface. Hence, all involved instruments must have this interface. With all VEGA sensors, connection is carried out via VEGACONNECT 3 (interface converter RS232 -> HART/I<sup>2</sup>C). A VEGACONNECT 4 cannot be used in conjunction with a modem. If the PC has no RS232 interface, an RS232-USB adapter can be used.

All external analogue modems with RS232 interface can be used. For the PC and for short-term/mobile use on-site, the modems from US-Robotics are recommended. If the option of remote parameter adjustment should be permanent, we recommend on-site use of the Phoenix industrial modem with top-hat rail mounting. All modems listed here are available from VEGA.

Alternatively, a radio modem with RS232 interface can be used if a telephone connection is not available. For this you need a SIM card with deactivated PIN. In addition, the option 'Data transmission for incoming connections' must be activated. The GSM radio modems from Siemens (e.g. TC35i) have proven to be a good solution.

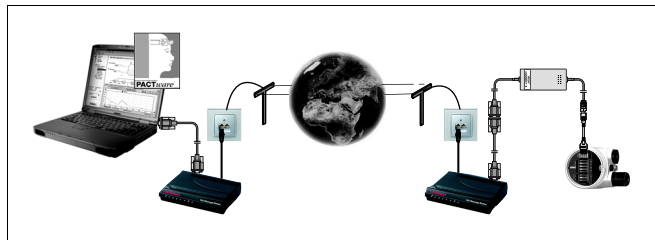


Fig. 1: Example: Configuration remote parameter adjustment with analogue modem

## 2 Connection plics® sensor

### Connection to the sensor (I<sup>2</sup>C)

With this version, connection of VEGACONNECT 3 is carried out via the I<sup>2</sup>C interface integrated in the sensor. This is the easiest and fastest way to make a connection. The housing cover of the sensor cannot be closed when VEGACONNECT 3 is connected.



**Note:**

Use this connection variant only if the connection is to be short-term, in a dry environment and not in an Ex-area.

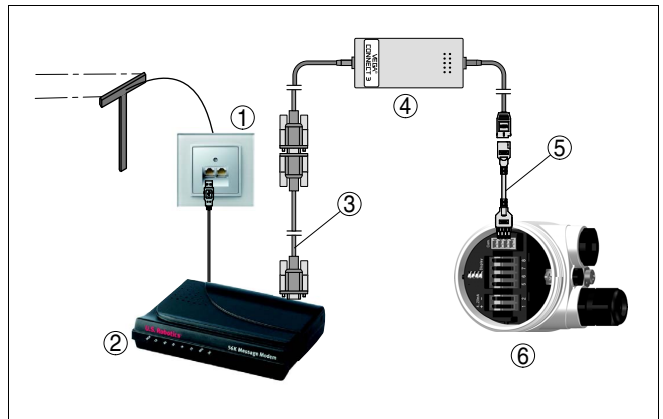


Fig. 2: Connection plics® series via I<sup>2</sup>C interface

- 1 Analogue telephone connection (not applicable in case of GSM radio modem)
- 2 Standard analogue modem or GSM radio modem
- 3 Special cable, art. no.: MODEM.KX
- 4 VEGACONNECT 3
- 5 I<sup>2</sup>C adapter (in the scope of delivery of VEGACONNECT 3)
- 6 Sensor from the plics® serie

### Connection to cable (HART)

With this version, connection of VEGACONNECT 3 is carried out via the HART protocol and the supply cable of the sensor. Hence, the connection can be made at any point between power supply/ processing system and sensor.



This version can also be used for connection in Ex-areas. The modem and VEGACONNECT 3 themselves must not be located in Ex-area.

If the resistance of the connected processing system is less than 230 Ω, the digital adjustment signal is extremely damped or short-circuited. Digital communication with the PC is then no longer possible. With low impedance processing systems, a resistance of approx. 230 Ω must be integrated into the 4 ... 20 mA connection cable. The connection can be either carried out in parallel to the sensor or via the resistor.

**Information:**

With most PLC systems and other universal power supply units, this resistance must be used for communication. VEGAMET 381 (Ex), VEGADIS 371 (Ex), VEGATRENN 149 Ex are constructed in such a way that no additional resistance is required. With VEGAMET 624/625 and VEGASCAN 693, no communication is possible via the HART cable. Here, communication to the sensor is carried out via one of the integrated interfaces of the signal conditioning instrument.

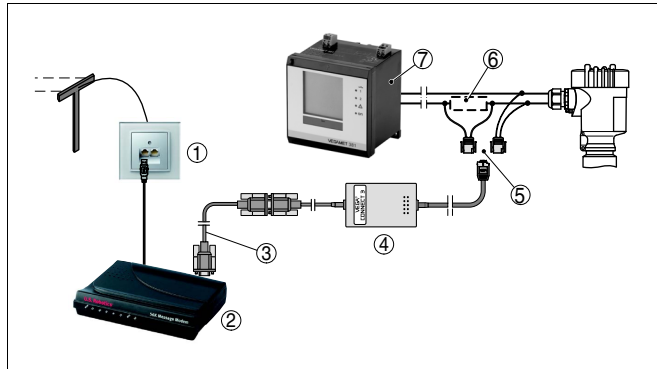


Fig. 3: Connection plics® series via HART

- 1 Analogue telephone connection (not applicable in case of GSM radio modem)
- 2 Standard analogue modem or GSM radio modem
- 3 Special cable, art. no.: MODEM.KX
- 4 VEGACONNECT 3
- 5 HART adapter (in the scope of delivery of VEGACONNECT 3)
- 6 HART resistance 230  $\Omega$  (optional depending on processing)
- 7 Sensor supply/Processing system (e.g. VEGAMET/PLC)

### 3 Connection VEGAMET 624/625, VEGASCAN 693, PLICSRADIO C62

#### Connection via RS232

This version requires an RS232 interface (optional) integrated in the signal conditioning instrument. The modem can be connected directly to the RS232 interface of the signal conditioning instrument via the cable included with the delivery.

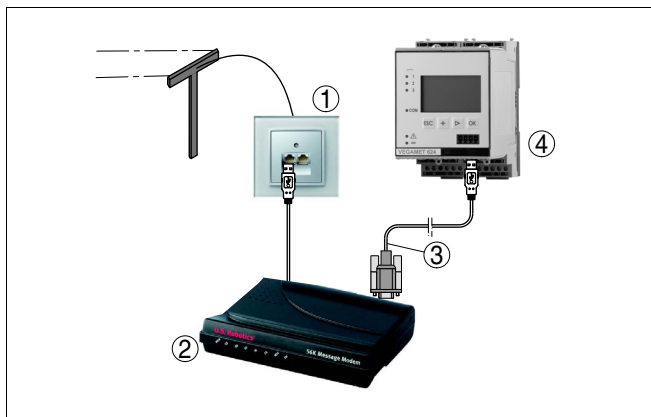
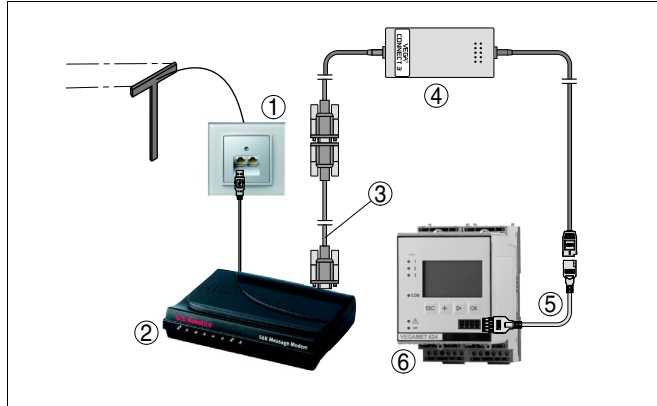


Fig. 4: Connection signal conditioning instrument via RS232

- 1 Analogue telephone connection (not applicable in case of GSM radio modem)
- 2 Standard analogue modem or GSM radio modem
- 3 RS232 special cable (in the scope of delivery of VEGAMET)
- 4 VEGAMET 624/625, VEGASCAN 693, PLICSRADIO C62

#### Connection via VEGA-CONNECT 3

If there is no RS232 interface integrated in the signal conditioning instrument, the connection can be also carried out via the front-mounted I<sup>2</sup>C interface and a VEGACONNECT 3.



*Fig. 5: Connection signal conditioning instrument via VEGACONNECT 3*

- 1 Analogue telephone connection (not applicable in case of GSM radio modem)*
- 2 Standard analogue modem or GSM radio modem*
- 3 Special cable, art. no.: MODEM.KX*
- 4 VEGACONNECT 3*
- 5 I<sup>2</sup>C adapter (in the scope of delivery of VEGACONNECT 3)*
- 6 VEGAMET 624/625, VEGASCAN 693, PLICSRADIO C62*

## 4 Connection VEGALOG

### Connection via RS232

The connection can be carried out via the RS232 interface in the front of either the VEGALOG CPU or the VEGACOM 557/558.

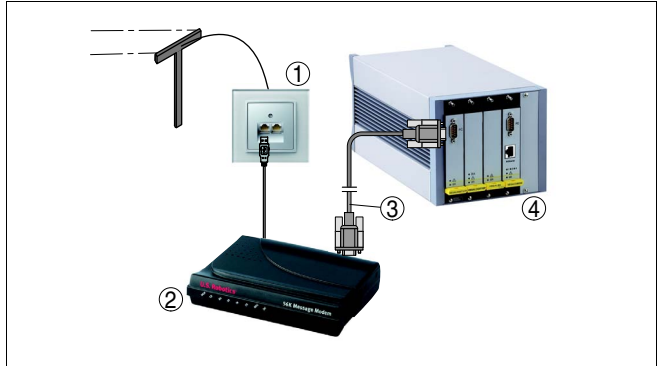


Fig. 6: Connection VEGALOG 571

- 1 Analogue telephone connection (not applicable in case of GSM radio modem)
- 2 Standard analogue modem or GSM radio modem
- 3 RS232 modem cable (in the scope of delivery of the modem)
- 4 VEGALOG 571 CPU, VEGACOM 557/558



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All statements concerning scope of delivery, application, practical use and operating conditions of the sensors and processing systems correspond to the information available at the time of printing.

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