

Product information

Indication and adjustment

Display and adjustment instruments

PLICSCOM

VEGADIS 81

VEGADIS 82

VEGADIS 176

PLICSLED



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Take note of safety instructions for Ex applications



Please note the Ex specific safety information which you can find on our homepage www.vega.com/downloads under "Approvals" and which comes with every instrument. In hazardous areas you should take note of the corresponding regulations, conformity and type approval certificates of the sensors and power supply units. The sensors must only be operated on intrinsically safe circuits. The permissible electrical values are stated in the certificate.

1 Product description for display and adjustment instruments

1.1 For continuously measuring sensors

Measured value display on site is often desired when measuring level and pressure. A wide range of indicating instruments is available for this purpose.

This product information booklet gives you an overview and helps you select the right instrument.

PLICSCOM - Pluggable display and adjustment module for plics® sensors

The display and adjustment module PLICSCOM is used for measure value indication, adjustment and diagnosis for all sensors of the VEGA plics® familie, VEGABAR Serien 50/60/80, VEGADIF 65, 85, VEGACAL series 60, VEGAFLEX series 60/80, VEGAPULS series 60, VEGASON series 60, PROTRAC as well as VEGADIS 81 and VEGADIS 82. It is mounted in the respective instrument housing.

Your benefit

- Minimum time expenditure through reliable function and clear, graphic-capable LC display with 4-key operation as well as integrated lighting.
- Simple and reliable adjustment of the plics® sensors through clear text indication and graphic support
- Since it is easy to detach, it can also be used on other sensors
- Optional wireless operation via Bluetooth with Smartphone/Tablet/PC as well as magnetic pen adjustment for housing cover with inspection window

VEGADIS 81 - External display and adjustment unit for plics® sensors

The VEGADIS 81 is an external, digital display and adjustment unit for all plics® sensors. The instrument is mounted in an easily accessible position up to 50 m away from the sensor. It is directly connected to the sensor electronics from which it is powered.

Your benefit

- Measured value indication and sensor adjustment in easily accessible position
- Good readability of the display in clear text with graphic support (PLICSCOM)
- Simple adjustment via 4 keys and clearly structured program guidance
- Optional wireless operation with Smartphone/Tablet/PC as well as magnetic pen adjustment for housing cover with inspection window

VEGADIS 82 - External display and adjustment unit for 4 ... 20 mA/HART sensors

The VEGADIS 82 is suitable for measured value indication and adjustment of 4 ... 20 mA sensors optionally with HART protocol. The instrument is looped directly into the signal line at any location. It operates as a pure display instrument in a 4 ... 20 mA current loop. Optionally the sensors can be operated with HART protocol. The device is especially designed for VEGAPULS WL 61 and VEGAWELL 52 sensors.

Your benefit

- Time and cost saving with the parameter adjustment on site with PLICSCOM
- Reliable and easy adjustment through clear text indication with graphic support
- Universal use through HART standard parameters

VEGADIS 176 - External indicating and adjustment display without external energy for front panel mounting

VEGADIS 176 is an external indicating and adjustment display without external energy for front panel mounting. It is used for separate measured value indication of all standardized 4 ... 20 mA circuits.

The instrument is looped into the 4 ... 20 mA signal cable at any position and is suitable for active (four-wire) as well as passive (two-wire) sensors.

Your benefit

- Universal use through five-digit, background lit, scalable 17 mm display
- Reliable function and wide range of application possibilities thanks to compact, rugged housing with high protection rating in the front section
- The low voltage drop of < 1 V allows use in most 4 ... 20 mA circuits

1.2 For point level sensors

Many users of point level sensors want to have on-site indication of the switching status. The display module PLICSLED for switching status indication is available for this purpose.

PLICSLED - Pluggable display module for switching status indication for plics® sensors

The display module PLICSLED for switching status indication is suitable for all sensors of the VEGA plics® family with relay output (VEGASWING 60 series, VEGAVIB 60 series, VEGAWAVE 60 series, VEGACAP 60 series and VEGAMIP 60 series). It is mounted in the respective instrument housing.

Your benefit

- Minimum time expenditure for installation because no external wiring is necessary
- Clearly readable switching status indication even with strong daylight
- Universal use
- High protection rating because the module is integrated in the plics® sensor housing

2 Type overview

PLICSCOM



VEGADIS 81



Function	Pluggable display and adjustment module for plics® sensors	External display and adjustment unit for plics® sensors
Signal input	I ² bus	I ² bus
Sensors	plics® sensors	plics® sensors
Display on the instrument	Graphics-capable clear text display with background lighting	Graphics-capable clear text display with background lighting
Mounting	In the sensor or in VEGADIS 81	Wall, rail, tube mounting
Ambient temperature	-20 ... +70 °C (-4 ... +158 °F)	-20 ... +70 °C (-4 ... +158 °F) -40 ... +70 °C (-40 ... +158 °F)
Protection rating	IP20 (unassembled), IP40 (assembled)	IP66/IP67, IP66/IP68 (0.2 bar)
Approvals ¹⁾	According to the sensor or VEGADIS 81	ATEX, IEC, FM, CSA, OL, EAC (GOST), UKR SEPRO, INMETRO, KOSHA, NEPSI, CCOE, CCC, ship approval

VEGADIS 82



VEGADIS 176



Function	Display and adjustment unit without additional external energy	Digital indicating instrument without additional external energy
Signal input	4 ... 20 mA, 4 ... 20 mA/HART	4 ... 20 mA, 4 ... 20 mA/HART
Sensors	4 ... 20 mA active or passive	4 ... 20 mA active or passive
Display on the instrument	Graphics-capable clear text display with background lighting	Large digital indication
Mounting	Wall, rail, tube mounting	Front panel mounting
Ambient temperature	-20 ... +70 °C (-4 ... +158 °F)	-25 ... +60 °C (-13 ... +140 °F)
Protection rating	IP66/IP67, IP66/IP68 (0.2 bar)	IP65
Approvals ²⁾	ATEX, IEC, FM, CSA, OL, EAC (GOST), INMETRO, CCC, ship approval	ATEX, IEC, EAC (GOST)

PLICSLED



Function	Pluggable module for indication of the switching status
Signal input	Operating voltage switched via relay contact
Sensors	Point level sensors
Display on the instrument	LED with colour change green/red and green/yellow
Mounting	In the sensor housing
Ambient temperature	-40 ... +80 °C (-40 ... +176 °F)
Protection rating	According to the sensor
Approvals	-

¹⁾ Further approvals under www.vega.com.

²⁾ Further approvals under www.vega.com.

3 Mounting

3.1 PLICSCOM

The display and adjustment module PLICSCOM offers the following installation possibilities:

- In the sensor
- In VEGADIS 81
- In VEGADIS 82

3.2 VEGADIS 81 and VEGADIS 82

The display and adjustment instruments VEGADIS 81 and 82 offer the following mounting possibilities:

- Wall mounting
- Carrier rail mounting
- Tube mounting
- Front panel mounting

Wall mounting

The VEGADIS 81 and 82 are suitable for wall mounting in all available housing materials.

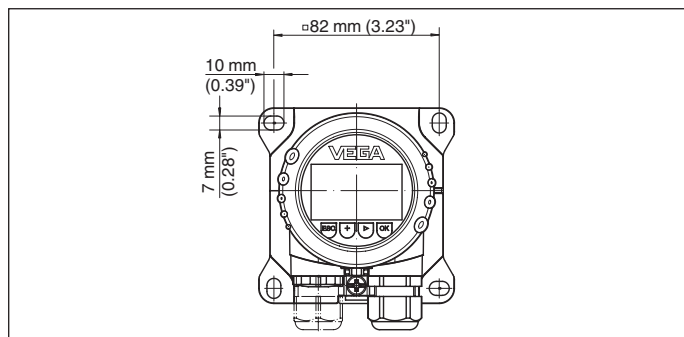


Fig. 1: Drilling dimensions with VEGADIS 81, 82 for wall mounting

Carrier rail mounting

The VEGADIS 81 and 82 with plastic housing are suitable for direct carrier rail mounting.

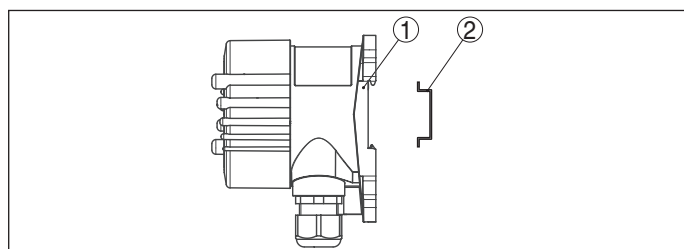


Fig. 2: VEGADIS 81 and 82 with plastic housing for carrier rail mounting

- 1 Base
- 2 Carrier rail

The versions with aluminium or stainless steel housing for carrier rail mounting according to EN 50022 are supplied with unassembled mounting accessories. The kit consists of an adapter plate and four mounting screws M6 x 12.

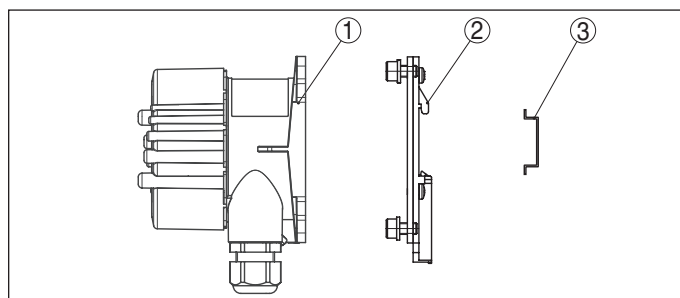


Fig. 3: VEGADIS with aluminium and stainless steel housing for carrier rail mounting

- 1 Base
- 2 Adapter plate with screws M6 x 12
- 3 Carrier rail

Tube mounting

VEGADIS 81 and 82 for tube mounting are supplied with unassembled mounting accessories. These consist of two pairs of mounting brackets and four mounting screws M5 x 12.

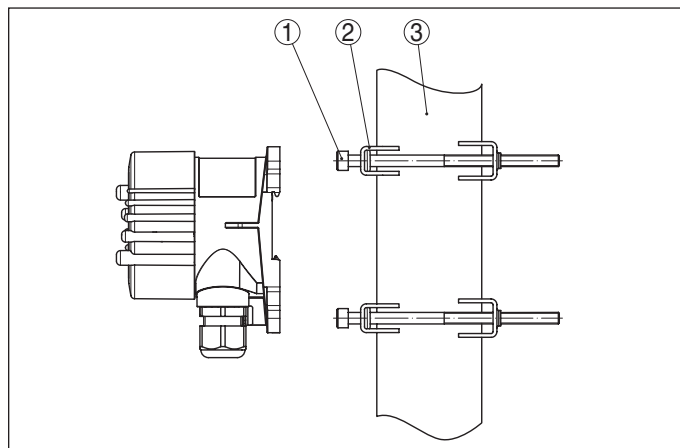


Fig. 4: VEGADIS 81, 82 for tube mounting

- 1 4 screws M5 x 12
- 2 Mounting brackets
- 3 Tube (diameter 1" to 2")

Front panel mounting

VEGADIS 82 is also available with a plastic housing for panel mounting. The housing is fastened on the rear of the panel via the supplied screw clamps.

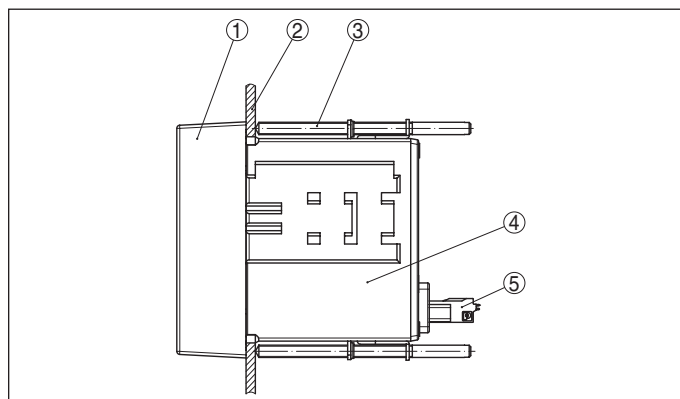


Fig. 5: VEGADIS 82 for panel mounting

- 1 Inspection window
- 2 Front panel
- 3 Screw clamp
- 4 Housing
- 5 Plug connector

3.3 VEGADIS 176

VEGADIS 176 is designed for panel mounting. The housing is fastened to the rear of the panel via the supplied mounting clips.

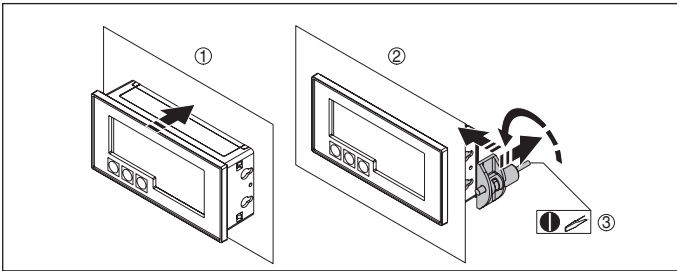


Fig. 6: VEGADIS 176 for panel mounting

- 1 Installation in panel cut-out
- 2 Mounting via mounting clips

3.4 PLICSLED

The display module PLICSLED is a part of the sensor and is mounted directly on the electronics module of the sensor. A lid with inspection window is required for the sensor housing.



Fig. 7: Insert display module

4 Electrical connection

4.1 Connection VEGADIS 81

Wiring plan

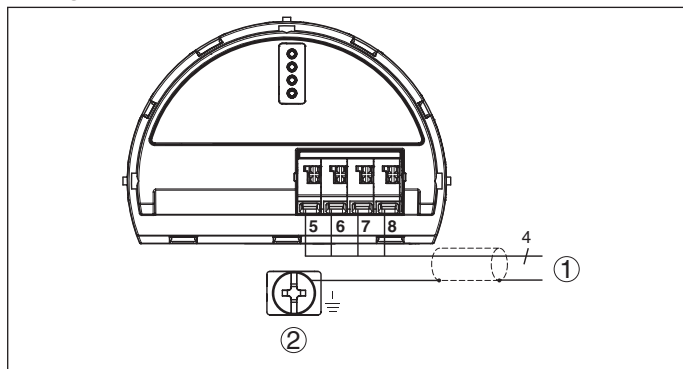


Fig. 8: Wiring plan VEGADIS 81 for 4 ... 20 mA/HART sensors

- 1 To the sensor
- 2 Ground terminal for connection of the cable screening ³⁾

4.2 Connection VEGADIS 82

Wiring plan 4 ... 20 mA

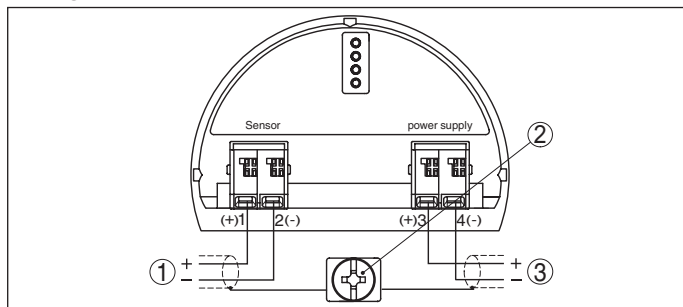


Fig. 9: Wiring plan VEGADIS 82 - 4 ... 20 mA

- 1 To the sensor
- 2 Ground terminal for connection of the cable screening ⁴⁾
- 3 For power supply

Wiring plan 4 ... 20 mA/HART

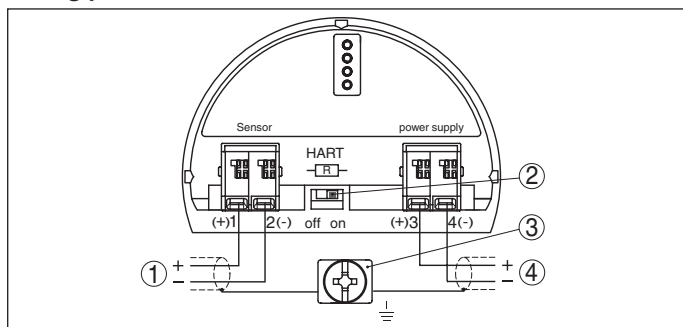


Fig. 10: Wiring plan VEGADIS 82 - 4 ... 20 mA/HART

- 1 To the sensor
- 2 Switch for HART resistor (on = activated, off = deactivated)
- 3 Ground terminal for connection of the cable screening ⁵⁾
- 4 For power supply

³⁾ Connect shielding here. Connect ground terminal on the outside of the housing to ground as prescribed. The two terminals are galvanically connected.

⁴⁾ Connect shielding here. Connect ground terminal on the outside of the housing

4.3 Connection VEGADIS 176

Wiring plan, passive sensors

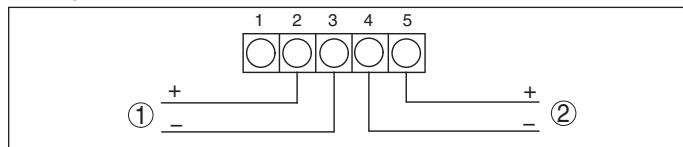


Fig. 11: Wiring plan, VEGADIS 176 for passive sensors

- 1 To the sensor
- 2 To voltage supply or processing system
- 3 Internal bridge

Wiring plan, active sensors

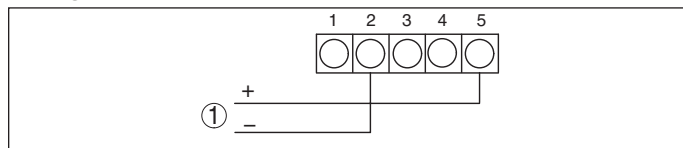


Fig. 12: Wiring plan, VEGADIS 176 for active sensors

- 1 To the sensor
- 2 Internal bridge

4.4 Connection PLICSLED

Wiring plan

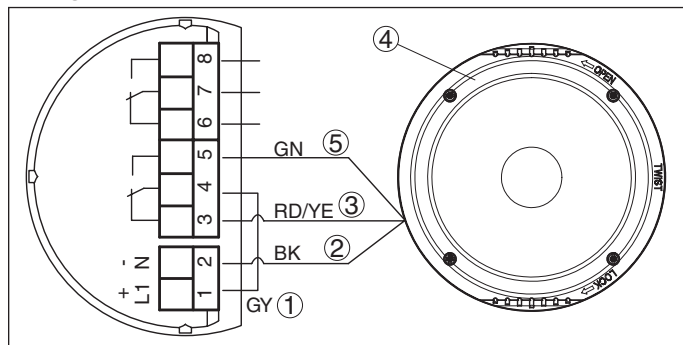


Fig. 13: Connection of the display module

- 1 Connection cable (GY = grey) - between terminal 1 and 4
- 2 Connection cable (BK = black) - to terminal 2
- 3 Connection cable (RD = red or YE = yellow) - to terminal 3
- 4 Display module VEGADIS
- 5 Connection cable (GN = green) - to terminal 5

to ground as prescribed. The two terminals are galvanically connected.

⁵⁾ Connect shielding here. Connect ground terminal on the outside of the housing to ground as prescribed. The two terminals are galvanically connected.

5 Adjustment

5.1 Display and adjustment module PLICSCOM

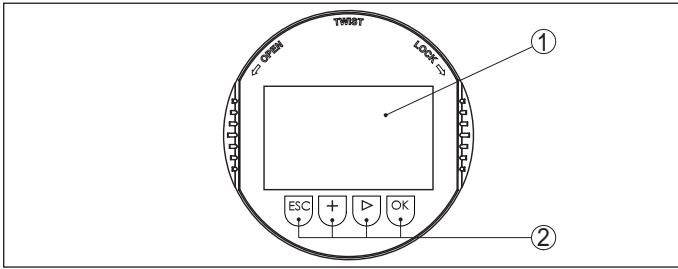


Fig. 14: Display and adjustment elements

- 1 LC display
- 2 Adjustment keys

Key functions

- **[OK]** key:
 - Move to the menu overview
 - Confirm selected menu
 - Edit parameter
 - Save value
- **[>]** key:
 - Change measured value presentation
 - Select list entry
 - Select editing position
- **[+]** key:
 - Change value of the parameter
- **[ESC]** key:
 - Interrupt input
 - Jump to next higher menu

5.2 Adjustment directly at the measuring point

Via PLICSCOM through keys

The plug-in display and adjustment module is used for measured value indication, adjustment and diagnosis. It is equipped with an illuminated full dot matrix as well as four keys for adjustment.



Fig. 15: Display and adjustment module with single chamber housing

Via the display and adjustment module through magnetic pen

With the Bluetooth version of the display and adjustment module, the sensor can also be adjusted with the magnetic pen. This is done right through the closed lid (with inspection window) of the sensor housing.



Fig. 16: Display and adjustment module - with adjustment via magnetic pen

5.3 Operation in the measurement loop environment - wireless via Bluetooth

Via a smartphone/tablet

The display and adjustment module with integrated Bluetooth functionality allows wireless connection to smartphones/tablets with iOS or Android operating system. The adjustment is carried out via the VEGA Tools app from the Apple App Store or Google Play Store.

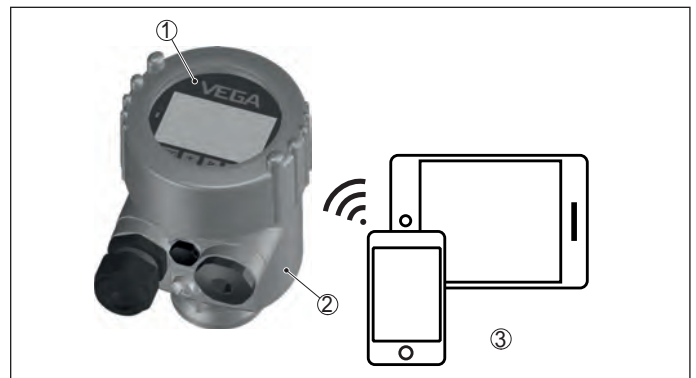


Fig. 17: Wireless connection to smartphones/tables

- 1 Display and adjustment module
- 2 Sensor
- 3 Smartphone/Tablet

Via a PC with PACTware/DTM

The wireless connection from the PC to the sensor is carried out via the Bluetooth USB adapter and a display and adjustment module with integrated Bluetooth function. The adjustment is carried out via the PC with PACTware/DTM.

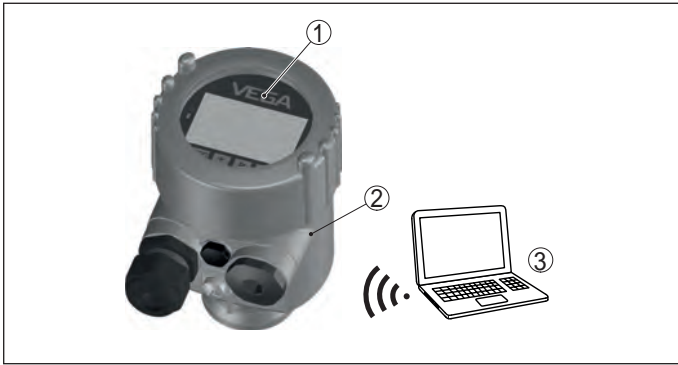


Fig. 18: Connection of the PC via Bluetooth USB adapter

- 1 Display and adjustment module
- 2 Sensor
- 3 PC with PACTware/DTM

5.4 Remote adjustment on VEGADIS 81 and VEGADIS 82

PACTware/DTM

plics® sensors can be adjusted via VEGADIS 81 independently of the respective signal output. To adjust with PACTware, an instrument driver (DTM) is required for the respective sensor.

PLICSCOM in VEGADIS 81

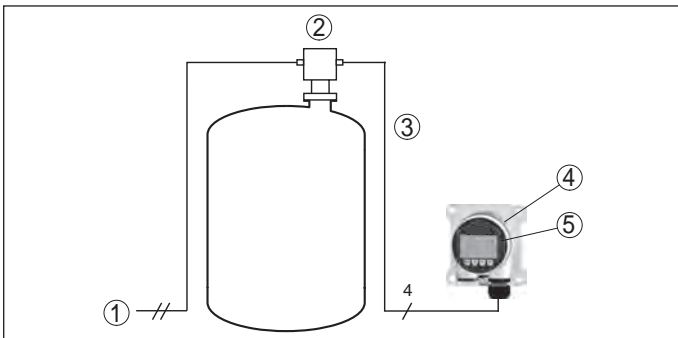


Fig. 19: Connection of VEGADIS 81 to the sensor

- 1 Voltage supply/Signal output sensor
- 2 Sensor
- 3 Connection cable sensor - external display and adjustment unit
- 4 External display and adjustment unit
- 5 Display and adjustment module

Connection of the PC to VEGADIS 81

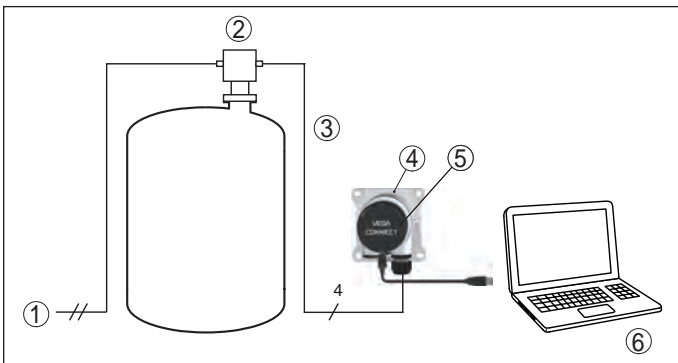


Fig. 20: Connection of VEGADIS 81 to the sensor and the PC

- 1 Voltage supply/Signal output sensor
- 2 Sensor
- 3 Connection cable VEGADIS 81 - Sensor
- 4 VEGADIS 81
- 5 VEGACONNECT
- 6 PC with PACTware/DTM

plics® sensors with 4 ... 20 mA/HART signal output can be adjusted via VEGADIS 82. To adjust with PACTware, an instrument driver (DTM) is required for the respective sensor.

PLICSCOM in VEGADIS 82

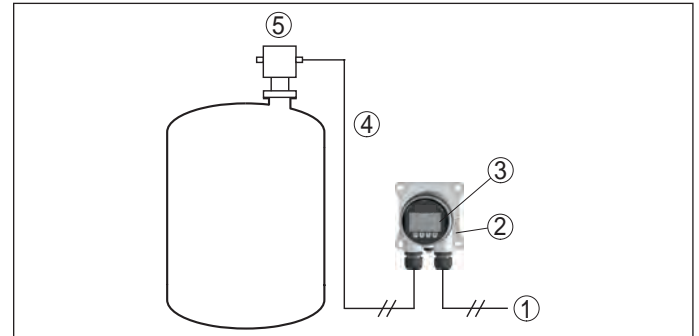


Fig. 21: Connection of VEGADIS 82 to the sensor

- 1 Voltage supply/Signal output sensor
- 2 External display and adjustment unit
- 3 Display and adjustment module
- 4 4 ... 20 mA/HART signal cable
- 5 Sensor

Connection of the PC to VEGADIS 82

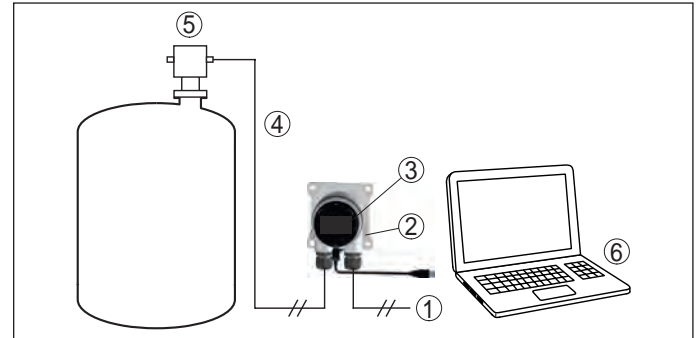


Fig. 22: Connection of the VEGADIS 82 to the sensor and the PC, adjustment via PC with PACTware/DTM

- 1 Voltage supply/Signal output sensor
- 2 VEGADIS 82
- 3 VEGACONNECT
- 4 4 ... 20 mA/HART signal cable
- 5 Sensor
- 6 PC with PACTware/DTM

5.5 Adjustment on VEGADIS 176

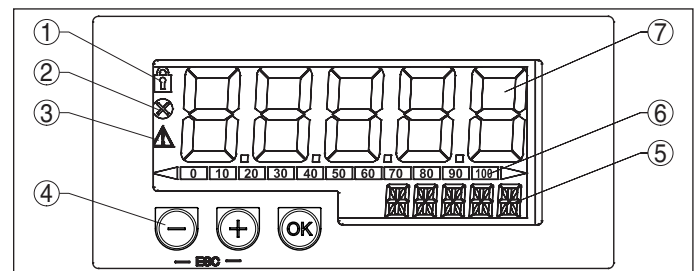


Fig. 23: Display and adjustment elements of VEGADIS 176

- 1 Symbol: adjustment menu locked
- 2 Symbol: error
- 3 Symbol: upper/lower range
- 4 Adjustment keys
- 5 14-segment display for unit/TAG
- 6 Bargraph with marks for lower and upper range
- 7 5-digit, 7-segment display for measured value

The adjustment is carried out via three buttons on the housing front.

6 Dimensions

PLICSOM

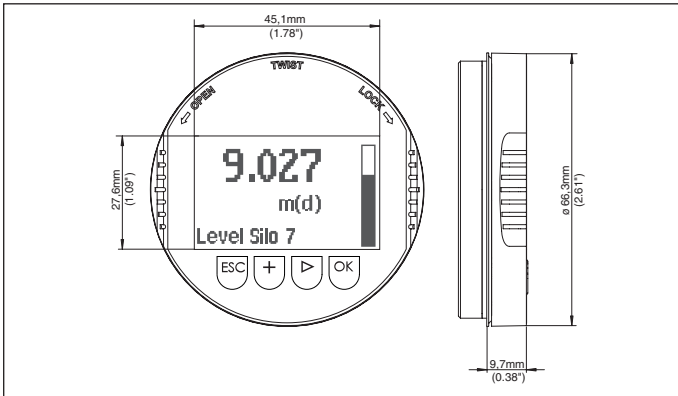


Fig. 24: Dimensions of display and adjustment module

VEGADIS 81

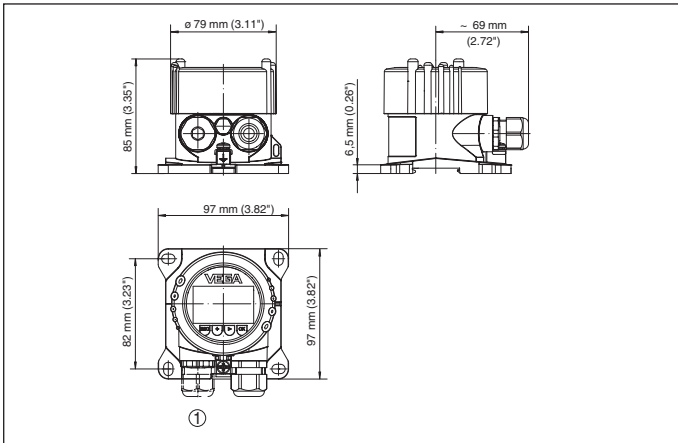


Fig. 25: Dimensions, VEGADIS 81 with plastic housing

1 Cable gland with version with heated display and adjustment module

VEGADIS 82, plastic housing

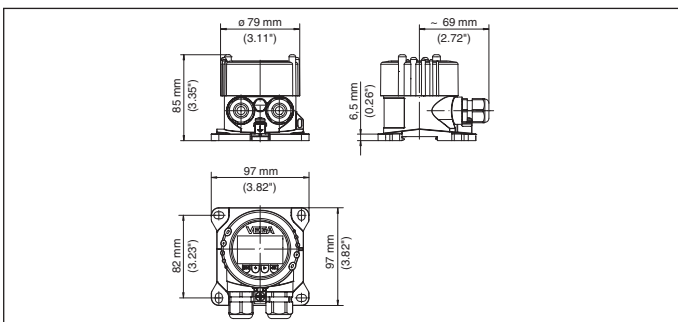


Fig. 26: VEGADIS 82 with plastic housing

VEGADIS 82, plastic housing (panel mounting)

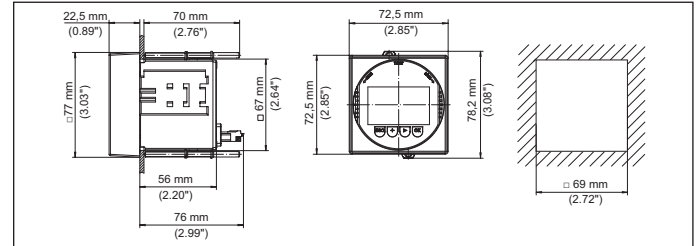


Fig. 27: VEGADIS 82 with plastic housing for panel mounting

VEGADIS 176

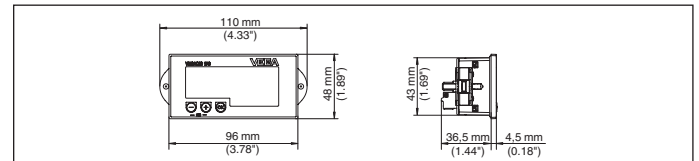


Fig. 28: Dimensions VEGADIS 176

Display module PLICSLED

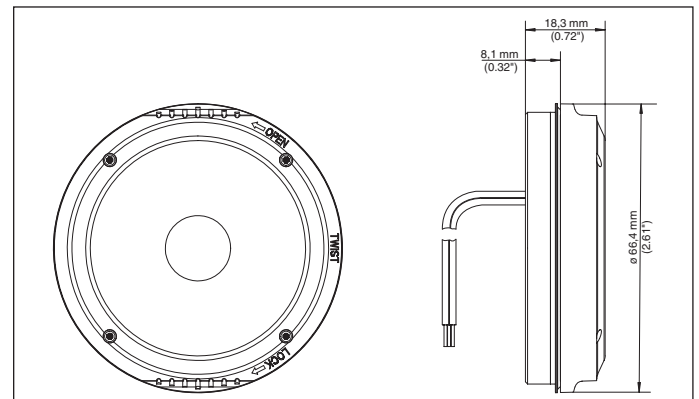


Fig. 29: Dimensions - Display module PLICSLED



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.
Subject to change without prior notice

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