Supplementary instructions

Heating for the display and adjustment module PLIC-SCOM

Document ID: 31708

Contents

1 About this document
1.1 Function ... 3
1.2 Target group ... 3
1.3 Symbols used ... 3

2 For your safety
2.1 Authorised personnel ... 4
2.2 Appropriate use ... 4
2.3 Safety instructions for Ex areas ... 4
2.4 Environmental instructions ... 4

3 Product description
3.1 Configuration ... 5
3.2 Principle of operation ... 5
3.3 Storage and transport ... 5

4 Mounting
4.1 Mounting preparations ... 6
4.2 Dismounting the electronics module ... 6
4.3 Mount the thermostat ... 6
4.4 Mount the electronics module ... 7

5 Connecting to power supply
5.1 Preparing the connection ... 8
5.2 Connection procedure ... 8
5.3 Plug connection ... 9

6 Setup
6.1 Setup ... 11

7 Maintenance
7.1 Instrument repair ... 12

8 Dismount
8.1 Dismounting steps ... 13
8.2 Disposal ... 13

9 Supplement
9.1 Technical data ... 14
9.2 Dimensions ... 14

31708-EN-150903

Editing status: 2015-08-12

1 About this document

1.1 Function

This supplementary manual, together with the attached operating instructions manual, has all the information you need for quick setup and safe operation. Please read this manual before you start setup.

1.2 Target group

This operating instructions manual is directed to trained specialist personnel. The contents of this manual should be made available to these personnel and put into practice by them.

1.3 Symbols used

Information, tip, note
This symbol indicates helpful additional information.

Caution: If this warning is ignored, faults or malfunctions can result.

Warning: If this warning is ignored, injury to persons and/or serious damage to the instrument can result.

Danger: If this warning is ignored, serious injury to persons and/or destruction of the instrument can result.

Ex applications
This symbol indicates special instructions for Ex applications.

- **List**
  The dot set in front indicates a list with no implied sequence.

→ **Action**
This arrow indicates a single action.

1 **Sequence of actions**
Numbers set in front indicate successive steps in a procedure.

2 For your safety

2.1 Authorised personnel

All operations described in this operating instructions manual must be carried out only by trained specialist personnel authorised by the plant operator.

During work on and with the device the required personal protective equipment must always be worn.

2.2 Appropriate use

The heating of the display and adjustment module PLICSCOM is part of a sensor.

2.3 Safety instructions for Ex areas

Take note of the Ex specific safety instructions for Ex applications. These instructions are attached as documents to respective sensor with Ex approval and are part of its operating instructions manual.

2.4 Environmental instructions

Protection of the environment is one of our most important duties. That is why we have introduced an environment management system with the goal of continuously improving company environmental protection. The environment management system is certified according to DIN EN ISO 14001.

Please help us fulfill this obligation by observing the environmental instructions in this manual:

- Chapter "*Storage and transport*"
- Chapter "*Disposal*"

3 Product description

3.1 Configuration

Constituent parts

If the sensor is already ordered with a heating, then the heating is already mounted.

However, the heating can be mounted also afterwards.

Scope of delivery - heating already mounted

The scope of delivery encompasses:

- Display and adjustment module PLICSCOM with heating mounted in the sensor
- Documentation
  - A device operating instructions manual
  - This supplementary operating instructions

Scope of delivery - retrofitting set

The scope of delivery encompasses:

- Display and adjustment module PLICSCOM with heating
- Thermostat
- Cable entry with plug M12 x 1
- Documentation
  - This supplementary operating instructions

The heating must not be mounted in instruments with Ex approval.

3.2 Principle of operation

Area of application

A heating can be integrated so that data can be read out on the display and adjustment module even at extremely low temperatures.

The heating must be powered with a protective extra-low voltage according to VDE 0106 part 101. For further information see also in chapter "*Technical data*".

The heating for the display and adjustment module PLICSCOM is suitable for all plics® sensors with single chamber housing and the external display and adjustment unit VEGADIS 61.

The heating is permanently available and must not be activated in addition. It switches on automatically at temperatures around -5 °C (+23 °F) and switches off at approx. 0 °C (+32 °F).

3.3 Storage and transport

Packaging

Your instrument was protected by packaging during transport. Its capacity to handle normal loads during transport is assured by a test based on ISO 4180.

The packaging of standard instruments consists of environment-friendly, recyclable cardboard. For special versions, PE foam or PE foil is also used. Dispose of the packaging material via specialised recycling companies.

Storage and transport temperature

- Storage and transport temperature see chapter "*Supplement - Technical data - Ambient conditions*"
- Relative humidity 20 … 85 %

4 Mounting

4.1 Mounting preparations

Tools

The following tools are required for mounting:

- Flat wrench SW 24
- Flat headed screwdriver 3 mm (0.12 in)

4.2 Dismounting the electronics module

Installation procedure

Proceed as follows:

1. Switch off power supply
2. Unscrew the lid of the electronics compartment
3. Disconnect the connection cables according to the operating instructions manual of the respective sensor
4. Loosen the two screws (2)

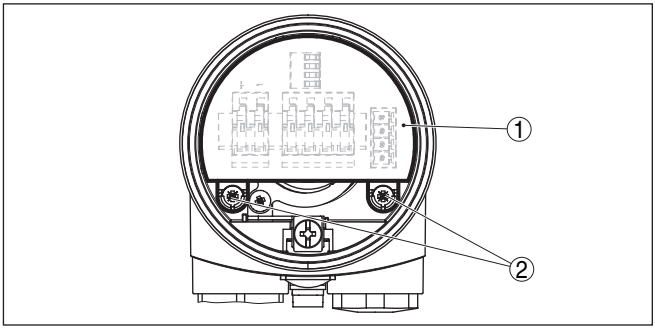

Fig. 1: Loosen the holding screws

1 Electronics module
2 Screws (2 pcs.)

5. Pull the electronics out by holding the opening levers.

4.3 Mount the thermostat

Mounting is only necessary when retrofitting the heating.

Installation procedure

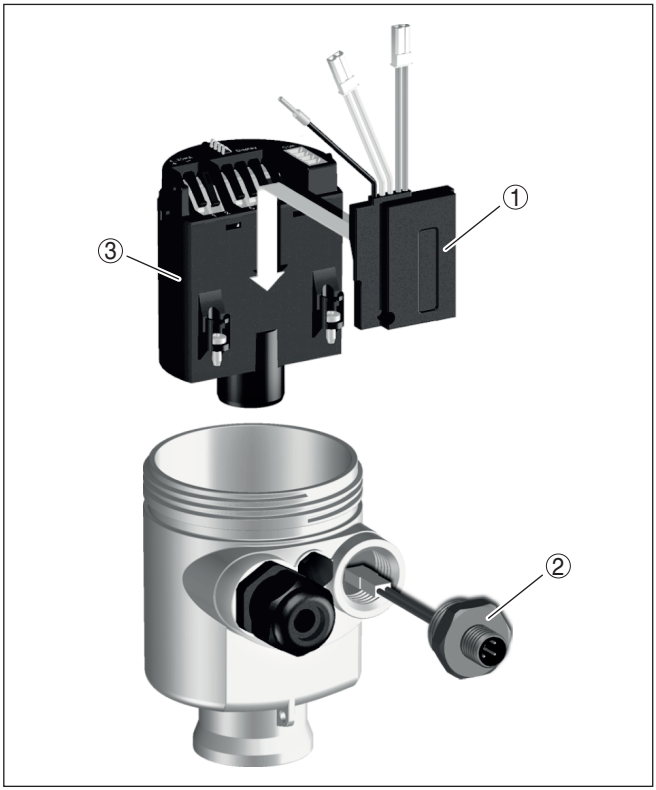

Fig. 2: Mounting the thermostat

1 Thermostat
2 Cable gland
3 Electronics module

Proceed as follows:

1. Plug the thermostat to the electronics module
2. Remove the blind plug from the second thread opening
3. Loop connection cable into the housing
4. Screw in the cable gland
5. Tighten the cable gland (3 Nm)

4.4 Mount the electronics module

1. Insert the electronics module carefully
2. Screw in and tighten the two screws with a screwdriver.
3. Connect the connection cables according to the operating instructions manual of the respective sensor

5 Connecting to power supply

5.1 Preparing the connection

Follow the instructions in the operating instructions manual of the sensor.

The heating must be powered with a protective extra-low voltage according to VDE 0106 part 101. For further information see also in chapter "*Technical data*".

5.2 Connection procedure

1. Connect the connection cables on the electronics module according to the operating instructions manual of the corresponding sensor.

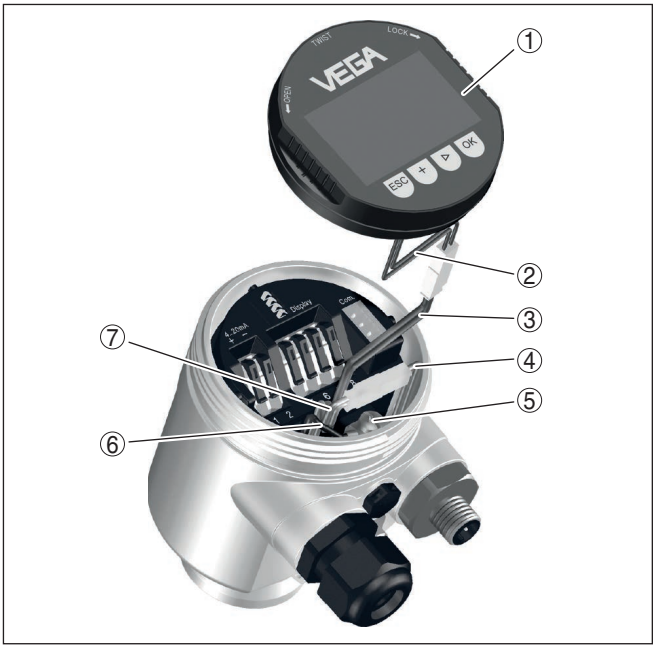

Fig. 3: Connection of the sensor in the socket housing

1 Display and adjustment module
2 Connection cables to the display and adjustment module (red)
3 Connection cables to the thermostat (red)
4 Connection cables to the cable gland (green)
5 Ground screw
6 Ground cable to the thermostat (black)
7 Connection cables to the thermostat (green)

2. Connect the black ground cable (6) to the ground screw (5)
3. Plug the green connection cables to the cable gland (4) and the green connection cables to the thermostat (7) together

4. Plug the red connection cables to the display and adjustment module (2) and the red connection cables to the thermostat (3) together
5. Insert the plug connector into the excavation in front of the electronics module
6. Place the display and adjustment module (1) in the desired position on the electronics (you can choose any one of four different positions - each displaced by 90°)
7. Press the display and adjustment module (1) onto the electronics and turn it to the right until it snaps in.

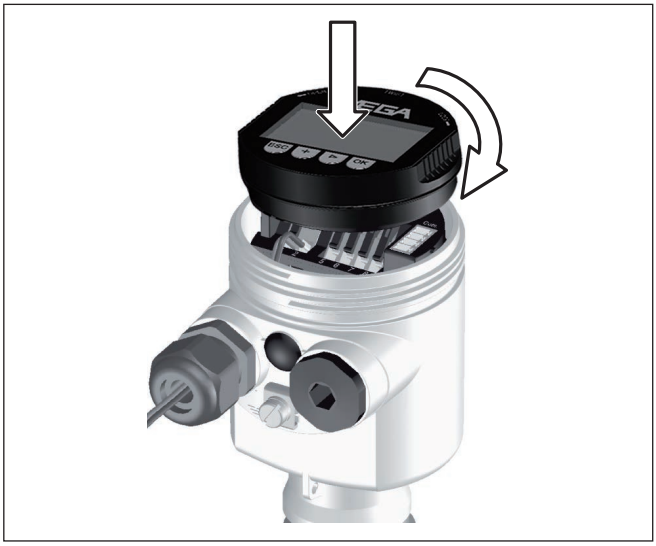

Fig. 4: Insert display and adjustment module

Note:
If you intend to retrofit the instrument with a display and adjustment module for continuous measured value indication, a higher lid with an inspection glass is required.

5.3 Plug connection

M12 x 1 plug

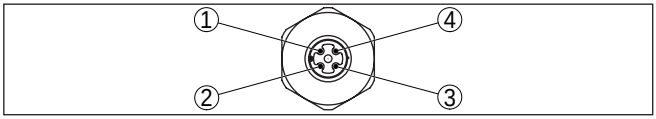

Fig. 5: View to the plug connector with 4 … 20 mA/HART

1 - (Pin 1)
2 + (Pin 2)
3 free (Pin 3)
4 free (Pin 4)

Contact pin	Colour connection cable in the sensor
Pin 1	Green
Pin 2	Green
Pin 3	free
Pin 4	free

Tip:
We recommend using a suitable confectioned lead cable, e.g. length 25 m, VEGA article no. ASL.1SC.

6 Setup

6.1 Setup

Setup is carried out according to the operating instructions manual of the respective sensor.

The heating is permanently available and must not be activated in addition. It switches on automatically at temperatures around -5 °C (+23 °F) and switches off at approx. 0 °C (+32 °F).

7 Maintenance

7.1 Instrument repair

You can find an instrument return form as well as detailed information of the procedure in the download area on our homepage: www.vega.com.

By doing this you help us carry out the repair quickly and without having to call back for needed information.

If a repair is necessary, please proceed as follows:

- Print and fill out one form per instrument
- Clean the instrument and pack it damage-proof
- Attach the completed form and, if need be, also a safety data sheet outside on the packaging
- Please contact the agency serving you to get the address for the return shipment. You can find the agency on our home page www.vega.com.

8 Dismount

8.1 Dismounting steps

Take note of chapters "*Mounting*" and "*Connecting to power supply*" and carry out the listed steps in reverse order.

8.2 Disposal

The instrument consists of materials which can be recycled by specialised recycling companies. We use recyclable materials and have designed the parts to be easily separable.

Correct disposal avoids negative effects on humans and the environment and ensures recycling of useful raw materials.

Materials: see chapter "*Technical data*"

If you have no way to dispose of the old instrument properly, please contact us concerning return and disposal.

WEEE directive 2002/96/EG
This instrument is not subject to the WEEE directive 2002/96/EG and the respective national laws. Pass the instrument directly on to a specialised recycling company and do not use the municipal collecting points. These may be used only for privately used products according to the WEEE directive.

9 Supplement

9.1 Technical data

Technical data

All technical data are listed in the operating instructions manual of the respective sensor.

General data	
Material 316L corresponds to 1.4404 or 1.4435	
Materials, non-wetted parts	
– Cable entry with plug M12 x 1	316L

Process conditions	
Process temperature	Depending on the sensor
Ambient, storage and transport temperature on the instrument housing	
– without PLICSCOM	-40 … +80 °C (-40 … +176 °F)
– with PLICSCOM	-15 … +70 °C (+5 … +158 °F)
– with PLICSCOM and heating	-40 … +70 °C (-40 … +158 °F)

Electromechanical data	
Additional cable gland	1 x plug M12 x 1

Voltage supply	
The heating must be powered with a protective extra-low voltage accordin to VDE 0106 part 101.	
Operating voltage	24 V DC +5%
Power	1.7 W

9.2 Dimensions

Housing versions - instrument housing

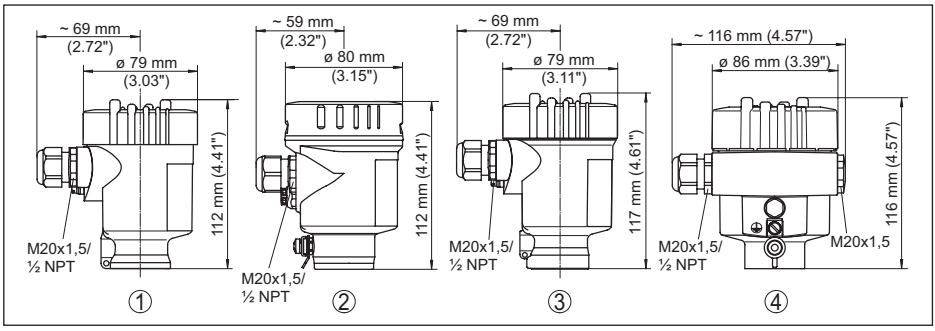

Fig. 6: Housing versions

1 Plastic housing
2 Stainless steel housing, electropolished
3 Stainless steel housing, precision casting
4 Aluminium housing

9.3 Industrial property rights

VEGA product lines are global protected by industrial property rights. Further information see www.vega.com.

Only in U.S.A.: Further information see patent label at the sensor housing.

VEGA Produktfamilien sind weltweit geschützt durch gewerbliche Schutzrechte.

Nähere Informationen unter www.vega.com.

Les lignes de produits VEGA sont globalement protégées par des droits de propriété intellectuelle. Pour plus d'informations, on pourra se référer au site www.vega.com.

VEGA lineas de productos están protegidas por los derechos en el campo de la propiedad industrial. Para mayor información revise la pagina web www.vega.com.

Линии продукции фирмы ВЕГА защищаются по всему миру правами на интеллектуальную собственность. Дальнейшую информацию смотрите на сайте www.vega.com.

VEGA系列产品在全球享有知识产权保护。

进一步信息请参见网站<www.vega.com。

9.4 Trademark

All the brands as well as trade and company names used are property of their lawful proprietor/ originator.

Printing date:

31708-EN-150903

VEGA Grieshaber KG
Am Hohenstein 113
77761 Schiltach
Germany

Phone +49 7836 50-0
Fax +49 7836 50-201
E-mail: info.de@vega.com
www.vega.com