Operating Instructions

Electronics second chamber

VEGAPULS 6X

Two-wire 4 … 20 mA/HART

Overvoltage protection

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Contents

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1 About this document

1.1 Function

This instruction provides all the information you need for mounting, connection and setup as well as important instructions for maintenance, fault rectification, the exchange of parts and the safety of the user. Please read this information before putting the instrument into operation and keep this manual accessible in the immediate vicinity of the device.

1.2 Target group

This operating instructions manual is directed to trained personnel. The contents of this manual must be made available to the qualified personnel and implemented.

1.3 Symbols used

Document ID
This symbol on the front page of this instruction refers to the Document ID. By entering the Document ID on www.vega.com you will reach the document download.

Information, note, tip: This symbol indicates helpful additional information and tips for successful work.

Note: This symbol indicates notes to prevent failures, malfunctions, damage to devices or plants.

Caution: Non-observance of the information marked with this symbol may result in personal injury.

Warning: Non-observance of the information marked with this symbol may result in serious or fatal personal injury.

Danger: Non-observance of the information marked with this symbol results in serious or fatal personal injury.

Ex applications
This symbol indicates special instructions for Ex applications.

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

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

Disposal
This symbol indicates special instructions for disposal.

2 For your safety

2.1 Authorised personnel

All operations described in this documentation must be carried out only by trained, qualified 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 components described in this manual are replacement components for existing sensors.

2.3 Approvals

For devices with approvals, the associated approval documents of the sensor must always be observed. These are included in the scope of delivery or can be downloaded from our homepage via the serial number.

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 fulfil this obligation by observing the environmental instructions in this manual:

- Chapter " *Packaging, transport and storage*"
- Chapter " *Disposal*"

3 Product description

3.1 Configuration

Scope of delivery

The scope of delivery encompasses:

- Supplementary electronics
- Documentation
  - This operating instructions manual
  - If necessary, further certificates

3.2 Principle of operation

Application area

The electronics module " *Supplementary electronics overvoltage protection*" is a replacement module for the sensor VEGAPULS 6X two-wire 4 … 20 mA/HART with double chamber housing.

3.3 Packaging, transport and storage

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 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.

Transport

Transport must be carried out in due consideration of the notes on the transport packaging. Nonobservance of these instructions can cause damage to the device.

Transport inspection

The delivery must be checked for completeness and possible transit damage immediately at receipt. Ascertained transit damage or concealed defects must be appropriately dealt with.

Storage

Up to the time of installation, the packages must be left closed and stored according to the orientation and storage markings on the outside.

Unless otherwise indicated, the packages must be stored only under the following conditions:

- Not in the open
- Dry and dust free
- Not exposed to corrosive media
- Protected against solar radiation
- Avoiding mechanical shock and vibration

Storage and transport temperature

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

Lifting and carrying

With instrument weights of more than 18 kg (39.68 lbs) suitable and approved equipment must be used for lifting and carrying.

4 Mounting

4.1 General instructions

Safety during mounting

We recommended installing the electronics module with the instrument dismounted and brought to a suitable place, e.g. a workshop. If it is not possible to dismount the instrument, the electronics module can also be installed on site at the measuring point.

Warning:
Switch off voltage supply before starting the installation procedure. The electronics module may only be installed when the sensor is in a **de-energised state**. Non-observance will damage the electronics!

Ex approval

For sensors with Ex approval, make sure that the replacement electronics module has the same designation as the exchanged electronics module.

4.2 Mounting preparations

Assignment

The supplementary electronics is mounted into the second chamber of the sensor housing and is adapted to the respective sensor. Make sure that you are using a replacement electronics suitable for the instrument.

4.3 Installation procedure

Position in the housing - Double chamber

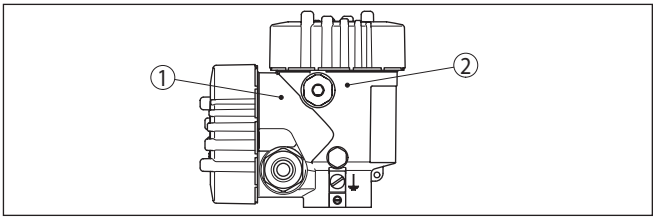

Fig. 1: Position of the supplementary electronics in the second chamber and the main electronics in the electronics compartment (example illustration)

1 Supplementary electronics
2 Main electronics

Procedure

Proceed as follows:

1. Switch off voltage supply
2. Unscrew the housing cover of the second chamber
3. Detach the connection cables from the terminals according to the operating instructions manual of the respective sensor
4. Loosen the holding screws with a screwdriver (Torx size T 10 or slotted screwdriver size 4)

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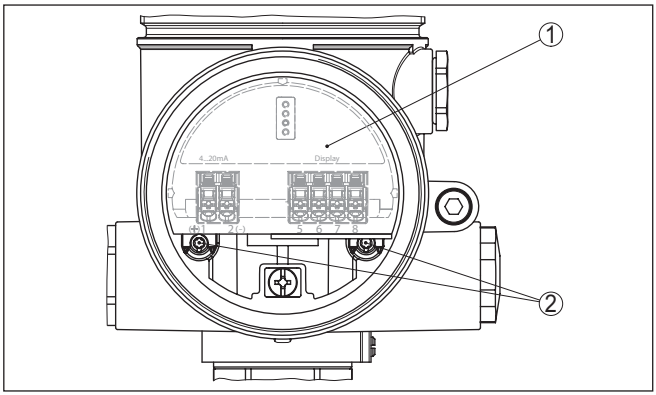

Fig. 2: Second chamber with supplementary electronics (example illustration)

1 Supplementary electronics
2 Screws (2 pcs.)

5. Pull the previous supplementary electronics out by using the dismounting tool.
6. Insert the new supplementary electronics module carefully.
7. Screw in the holding screws and tighten them
8. Insert the connection cables into the terminals again
9. Screw the housing lid back on

The supplementary electronics is exchanged.

As a rule, the exchange of the supplementary electronics must be documented internally when used in Ex applications.

5 Maintenance

5.1 How to proceed if a repair is necessary

You can find an instrument return form as well as detailed information about the procedure in the download area of our homepage. By doing this you help us carry out the repair quickly and without having to call back for needed information.

In case of repair, 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
- Ask the agency serving you to get the address for the return shipment. You can find the agency on our homepage.

6 Dismount

6.1 Dismounting steps

To remove the device, carry out the steps in chapters " *Mounting*" and " *Connecting to power suplly*" in reverse.

Warning:
When dismounting, pay attention to the process conditions in vessels or pipelines. There is a risk of injury, e.g. due to high pressures or temperatures as well as aggressive or toxic media. Avoid this by taking appropriate protective measures.

6.2 Disposal

Pass the instrument on to a specialised recycling company and do not use the municipal collecting points.

Remove any batteries in advance, if they can be removed from the device, and dispose of them separately.

If personal data is stored on the old device to be disposed of, delete it before disposal.

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

7 Supplement

7.1 Technical data

Technical data

The technical data are listed in the operating instructions manual of the respective device.

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