

Operating Instructions

Electronics module

VEGAPULS series 60



Document ID: 36801



VEGA

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1 About this document

1.1 Function

This operating instructions manual provides all the information you need for mounting, connection and setup as well as important instructions for maintenance and fault rectification. 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 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.



Sequence of actions

Numbers set in front indicate successive steps in a procedure.



Battery disposal

This symbol indicates special information about the disposal of batteries and accumulators.

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 components described in this manual are replacement components for existing sensors.

2.3 Approvals

If the instrument comes with approvals, the associated approval documents of the sensor must always be noted. They are included with the delivery but can also be downloaded under www.vega.com via "VEGA Tools" and "Instrument search" as well as via "Downloads" and "Approvals".

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 this operating instructions manual

This operating instructions manual applies to electronics modules in instruments with the following hardware and software versions:

- VEGAPULS 61 to 68 (hardware ≥ 2.0.0, software ≥ 4.00.00)
- VEGAPULS 64 (hardware ≥ 1.0.0, software ≥ 1.00.00)
- VEGAPULS 69 (hardware ≥ 1.0.0, software ≥ 1.00.00)

Scope of delivery

The scope of delivery encompasses:

- Electronics module
- Documentation
 - This operating instructions manual
 - Ex-specific "*Safety instructions*" (with Ex versions)
 - If necessary, further certificates

3.2 Principle of operation

Application area

The electronics module is intended as a replacement part for sensors of series VEGAPULS 60. You can find information on the different versions in chapter "*Mounting preparations*".

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 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.

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 %

4 Mounting

4.1 General instructions

Sensor serial number

The new electronics module must be loaded with the order and factory data of the sensor. These are the options:

- At the factory by VEGA
- Or on site by the user



Information:

When loading on site, the order data must first be downloaded from the Internet (see "Setup").

In both cases, the sensor serial number is necessary. The serial numbers are stated on the type label of the instrument, inside the housing or on the delivery note.



Caution:

The order data and factory data contain important presettings for the sensor. These data are important for reliable operation and correct measurement.

Safety during mounting

We recommended installing the replacement electronics 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 replacement electronics may only be installed when the sensor is in a **de-energised state**. Non-observance will damage the electronics!

Ex approval

It is absolutely necessary that the following points are observed with sensors with Ex approval:



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

For example, an electronics module with a hardware version $\geq 2.0.0$ must be only installed in a sensor with hardware version $\geq 2.0.0$.

4.2 Mounting preparations

Assignment

The electronics modules are mounted into the electronics compartment and are adapted to the respective sensor. Make sure that you are using a replacement electronics suitable for the instrument.

The electronics modules differ:

- In the signal output, e.g. 4 ... 20 mA/HART, Profibus PA or Foundation Fieldbus
- In the version, e.g. standard or increased sensitivity
- In the frequency range, C-band, K-band or W-band
- In the approvals, e.g. according to LPR radio standard

4.3 Installation procedure

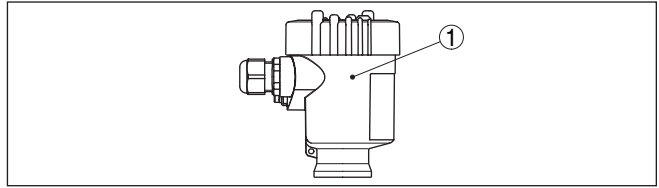


Fig. 1: Single chamber housing

1 Position electronics compartment/Electronics module

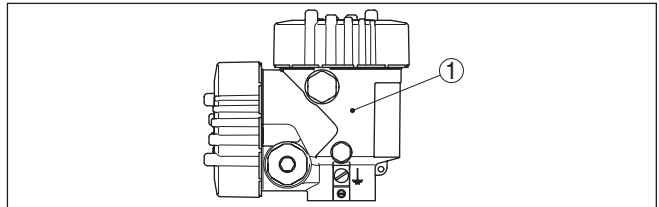


Fig. 2: Double chamber housing

1 Position electronics compartment/Electronics module

Proceed as follows:

1. Switch off power supply
2. Unscrew the lid of the electronics compartment
3. Remove the terminal blocks according to the operating instructions manual of the respective sensor
4. Loosen the two holding screws with a screwdriver (Torx size T 10 or slotted screwdriver size 4)

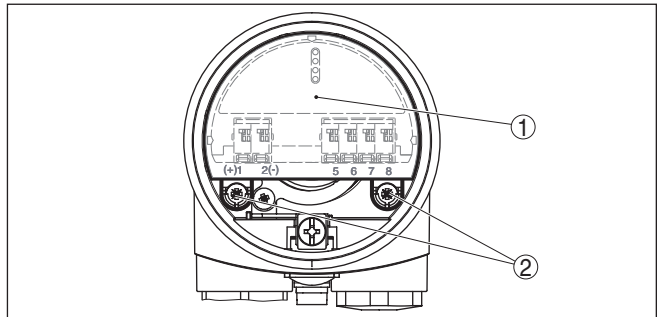


Fig. 3: Loosen the holding screws

1 Electronics module
2 Screws (2 pcs.)

5. Pull the previous electronics out with the dismantling tool.
6. Insert the new electronics module carefully.
7. Screw in the two holding screws and tighten them

8. Attach the terminal blocks according to the operating instructions manual of the respective sensor
9. Screw the housing lid back on

The electronics exchange is now finished.



As a rule, an exchange of electronics must be documented internally if Ex applications are involved.

5 Setup

5.1 Setup preparations

With sensor serial number

If you ordered the electronics module **by stating the sensor serial number**, it is ready for the setup procedure immediately after installation and connection to power supply.

Without sensor serial number

If you ordered the electronics module **without stating the sensor serial number** or you are using a suitable electronics module from stock, you first have to load the sensor data after installation.

The sensor data also include the TAG no., information on the process fitting and seal as well as activation data for a supplementary electronics.

At www.vega.com go to "*Instrument search*". The order data of the sensor are displayed after entering the serial number.

Below the order data you will find "*Sensor data for Service DTM*" as an XML file. Save this file with "*Save as*" on your PC and transfer it via PACTware and the Service DTM to the sensor.

5.2 Setup steps

Parameter adjustment

If the instrument is used in the same application after the electronics exchange, the previous parameter settings of the instrument must be restored. To do this, you can use the import function of the adjustment software PACTware with the device DTMs or the copy function of the display and adjustment module.



Information:

It is recommended to recreated an existing false signal suppression after an electronics exchange. If this is not possible, for example, because the vessel is filled, the false signal suppression can be imported also via the DTM. However, the false signal suppression should be updated or recreated next time when the vessel is empty.

6 Dismount

6.1 Dismounting steps

**Warning:**

Before dismantling, be aware of dangerous process conditions such as e.g. pressure in the vessel or pipeline, high temperatures, corrosive or toxic products etc.

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

6.2 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.

Printing date:

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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.

Subject to change without prior notice

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