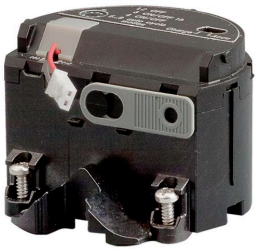
Operating Instructions

Supplementary electronics

For 4 … 20 mA/HART and power pack



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Contents

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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 Symbolism 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.

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 electronics modules, accumulators, emitting electronics, housings or process components described in this manual are replacement parts for existing sensors.

2.3 Approvals

Depending on the version, instruments with approvals can have deviating technical data. For these instruments, the corresponding approval documents must be observed. These documents are part of the scope of delivery or can be downloaded from www.vega.com via "*VEGA Tools*" and "*serial number 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 fulfill this obligation by observing the environmental instructions in this manual:

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

41033-EN-140108

3 Product description

3.1 Configuration

Scope of delivery

The scope of delivery encompasses:

- Supplementary electronics for 4 … 20 mA/HART - two-wire and power pack
- Documentation
  - this operating instructions manual
  - if necessary, further certificates

3.2 Principle of operation

Area of application

The supplementary electronics for 4 … 20 mA/HART - two-wire and power pack is a replacement component for sensors with integrated power pack:

- VEGAPULS series 60
  - Hardware version from 2.0.0
  - Software version from 4.0.0
- VEGAFLEX 80 series
- VEGABAR series 80

Functional principle

The supplementary electronics contains a power pack and makes the sensor a portable measuring system or test sensor for special applications.

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 Mounting steps

Mounting steps

The supplementary electronics is mounted in the power supply compartment. The following illustration shows the position of the power supply compartment in the double chamber housing.

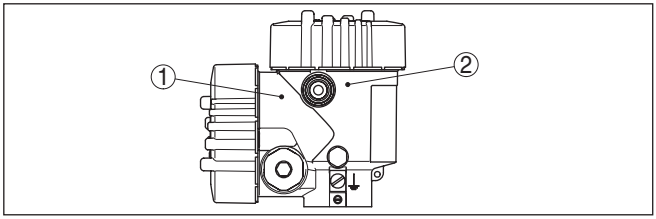

Fig. 1: Position of the power supply and electronics compartment

1 Power supply compartment (accumulator insert)
2 Electronics compartment

Proceed as follows:

1. Unscrew housing cover of the power supply compartment
2. Loosen plug connector to the charging socket
3. Loosen fixing screw of the charging socket and remove charging socket
4. Loosen the two holding screws of the accumulator insert with a screwdriver (Torx size T 10 or slot size 4)

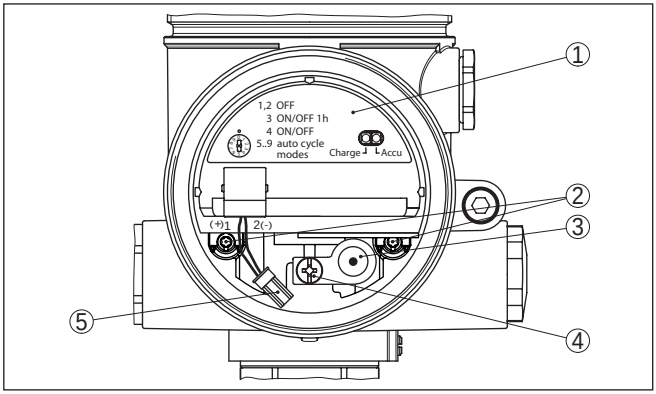

Fig. 2: Power supply compartment with accumulator insert

1 Accumulator insert
2 Holding screws
3 Charging socket
4 Fixing screw charging socket
5 Connection cable with plug connector to the charging socket

5. Pull out the previous accumulator socket with the dismounting tool
6. Insert the new accumulator insert carefully.

7. Screw in the two holding screws and tighten them
8. Insert the charging socket and tighten the fixing screw
9. Close plug connector
10. Screw the housing cover back on

The accumulator exchange is finished.

As a rule, an exchange of the accumulator insert must be documented internally when Ex applications are involved.

5 Setup

5.1 Setup steps

We recommended charging the integrated accumulator completely before setting up and commissioning the instrument. You can find further information in the operating instructions of the respective sensor.

6 Maintenance

6.1 How to proceed if a repair is needed

You can find a repair form as well as detailed information on how to proceed under www.vega.com/downloads and "*Forms and certificates*".

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.

41033-EN-140108

7 Dismounting

7.1 Dismounting steps

Warning:
Before dismounting, 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.

7.2 Disposal

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

Materials: see chapter "*Technical data*"

For disposal or recycling within the European Union proceed according to the "*Electronics recycling*" and "*Battery/Accumulator recycling*" below. Outside the European Union you should take note of the valid national regulations.

Electronics recycling
This instrument is not subject to the WEEE directive 2002/96/EG and the respective national laws. Therefore 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.

Battery/accumulator recycling

Note:
The disposal is subject to the directive 2006/66/EG on batteries and accumulators.

Batteries and accumulators contain some environmentally harmful but also some valuable raw materials that can be recycled. For that reason batteries and accumulators must not be disposed of in household waste.

All users are legally obligated to bring batteries to a suitable collection point, e.g. public collection points. You can also return the batteries and accumulators to us for correct disposal. Due to the very strict transport regulations for lithium-based batteries/accumulators, this is normally not a good idea because shipment is very expensive.

Proceed as follows to dismount the accumulator:

- Unscrew the cover of the supply room
- Loosen the plug connector
- Loosen the fixing screws
- Pull out the complete insert by means of the plastic strap

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

8 Supplement

8.1 Technical data

Technical data

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

41033-EN-140108

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