

Operating Instructions

Lock fitting ARV-SG63.1

for VEGASWING 63

- unpressurised operation



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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.



SIL applications

This symbol indicates instructions for functional safety which must be taken into account particularly for safety-relevant 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

ARV-SG63.1 is used for for infinite locking with tube extension.

You can find detailed information about the area of application in chapter "*Product description*".

Operational reliability is ensured only if the instrument is properly used according to the specifications in the operating instructions manual as well as possible supplementary instructions.

For safety and warranty reasons, any invasive work on the device beyond that described in the operating instructions manual may be carried out only by personnel authorised by the manufacturer. Arbitrary conversions or modifications are explicitly forbidden.

2.3 Warning about incorrect use

Inappropriate or incorrect use of the instrument can give rise to application-specific hazards, e.g. vessel overfill or damage to system components through incorrect mounting or adjustment.

2.4 General safety instructions

This is a state-of-the-art instrument complying with all prevailing regulations and guidelines. The instrument must only be operated in a technically flawless and reliable condition. The operator is responsible for the trouble-free operation of the instrument.

During the entire duration of use, the user is obliged to determine the compliance of the necessary occupational safety measures with the current valid rules and regulations and also take note of new regulations.

The safety instructions in this operating instructions manual, the national installation standards as well as the valid safety regulations and accident prevention rules must be observed by the user.

For safety and warranty reasons, any invasive work on the device beyond that described in the operating instructions manual may be carried out only by personnel authorised by the manufacturer. Arbitrary conversions or modifications are explicitly forbidden.

The safety approval markings and safety tips on the device must also be observed.

2.5 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*"

3 Product description

3.1 Configuration

Scope of delivery

The scope of delivery encompasses:

- Lock fitting ARV-SG63.1 for VEGASWING 63 vibrating level switch
- Documentation
 - This operating instructions manual

3.2 Principle of operation

Area of application

The lock fitting ARV-SG63.1 is a threaded fitting and can be used together with a level sensor in tube version (VEGASWING 63). Depending on the version, the tube extension of the sensor must have a diameter of 21.3 mm (ø 0.84 in).

The sensor in tube version must have a min. length (L) of 120 mm (4.73 in).

ARV-SG63.1 cannot be used in coated tube extensions.

The wetted parts of ARV-SG63.1 are made of steel (316L).

The ARV-SG63.1 must only be used in unpressurized vessels.

Functional principle

With the lock fittings, sensors with tube extension can be fixed infinitely.

The terminal screws protect the tube against sliding through.

The following versions are available:

- ø 21.3 mm - G1 A or 1 NPT (SW 41)
- ø 21.3 mm - G1½ A or 1½ NPT (SW 60)

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 see chapter "*Supplement - Technical data - Ambient conditions*"
 - Relative humidity 20 ... 85 %

Storage and transport temperature

4 Mounting

4.1 Mounting sequence

The numbers in brackets refer to the figures on the following pages.

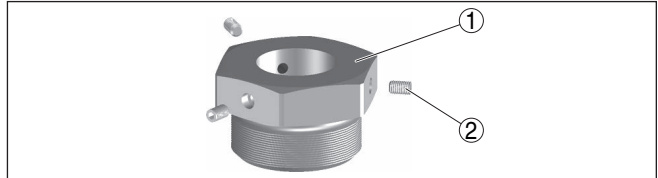


Fig. 1: Lock fitting ARV-SG63.1 - unpressurised

- 1 Lock fitting
- 2 Terminal screws (3 pcs.)

1. Screw the lock fitting (1) with a resistant seal ring into the thread of your vessel and tighten the lock fitting (1) on the hexagon
2. Clean the connection tube of the sensor and the lock fitting carefully and remove grease, oil and dirt. Insert the sensor into the lock fitting. Slide the tube into the requested position and hold it
3. Make sure that the sensor is in the correct position (height). The height adjustment of the sensor determines also the switching point
4. Tighten the terminal screws (2) with a torque of 4 ± 1 Nm (3 ± 0.7 lbf ft)

The terminal screws (2) press lightly into the tube and fix the tube of the sensor in this position.

5 Maintenance and fault rectification

5.1 Maintenance

If the instrument is used properly, no special maintenance is required in normal operation.

5.2 Instrument repair

If it is necessary to repair the instrument, please contact the agency serving you.

6 Dismount

6.1 Dismounting steps

Note chapter "*Mounting*" and carry out the described steps in reverse order.

If you proceed as follows, it is not necessary to readjust the switching point and the lock fittings must not be dismantled completely.

1. Switch off power supply of the sensor
2. Remove all connection cables
3. Loosen lock fitting with a screwdriver
4. Remove the sensor together with the lock fitting

6.2 Disposal

The instrument consists of materials which can be recycled by specialised recycling companies. Mark the instrument as scrap and dispose it according to the national, legal regulations.

Materials: see chapter "*Technical data*"

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

General data

Material 316L corresponds to 1.4404 or 1.4435

Process fittings

- Pipe thread, cylindrical (DIN 3852-A) G1, G1½
- American pipe thread, conical (ASME B1.20.1) 1 NPT, 1½ NPT

Tube diameter of the sensor \varnothing 21.3 mm (0.84 in)

Min. length of the sensor 120 mm (4.73 in)

Materials

- Lock fitting 316L
- Process seal Klingersil C-4400¹⁾

Terminal screws Pin with hexagon DIN 913 M5 x 8

Torque

- Terminal screws (M5) 4 ± 1 Nm (3 ± 0.7 lbf ft)

Process conditions

Operating pressure unpressurized

Process temperature -50 ... +250 °C (-58 ... +482 °F)

Approvals

The lock fittings have no own approvals

7.2 Dimensions

Lock fitting ARV-SG63.1 for VEGASWING 63

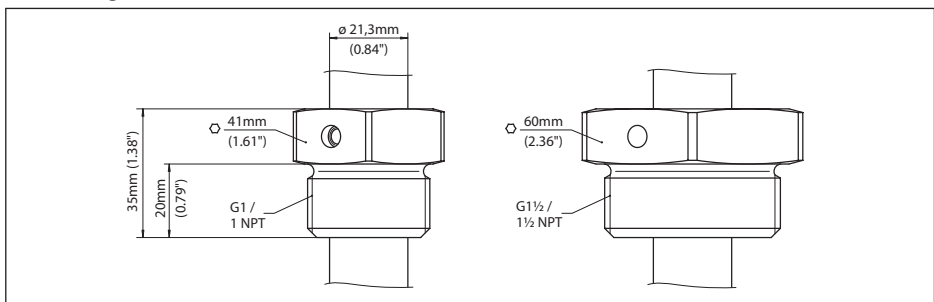


Fig. 2: Lock fitting ARV-SG63.1 unpressurized for VEGASWING 63

¹⁾ Not with thread NPT.

Printing date:

VEGA

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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