

# Operating Instructions

Lock fitting ARV 67

unpressurised for OPTISWITCH 3300 C



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Variable area flowmeters

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Vortex flowmeters

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Flow controllers

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Electromagnetic flowmeters

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Ultrasonic flowmeters

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Mass flowmeters

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**Level measuring instruments**

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Communications engineering

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Engineering systems & solutions

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Switches, counters, displays and recorders

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Heat metering

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Pressure and temperature

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# 1 About this document

## 1.1 Function

This operating instructions manual has all the information you need for quick setup and safe operation of ARV 67. Please read this manual before you start setup.

## 1.2 Target group

This operating instructions manual is directed to trained 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, warning, danger

This symbol informs you of a dangerous situation that could occur. Ignoring this cautionary note can impair the person and/or the instrument.



### 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

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, specialised personnel authorised by the operator. For safety and warranty reasons, any internal work on the instruments must be carried out only by personnel authorised by the manufacturer.

### **2.2 Appropriate use**

ARV 67 is used for for infinite locking with tube extension.

Detailed information on the application range of ARV 67 is available in chapter Product description.

### **2.3 Warning about misuse**

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**

ARV 67 is a high-tech instrument requiring the strict observance of standard regulations and guidelines. The user must take note of the safety instructions in this operating instructions manual, the country-specific installation standards (e.g. the VDE regulations in Germany) as well as all prevailing safety regulations and accident prevention rules.

## 3 Product description

### 3.1 Configuration

#### Scope of delivery

The scope of delivery encompasses:

- Lock fitting ARV 67 for OPTISWITCH 3300 C vibrating level switches
- Documentation
  - this operating instructions manual

### 3.2 Principle of operation

#### Area of application

The lock fitting ARV 67 is a threaded fitting and can be used together with a level sensor in tube version (OPTISWITCH 3300 C). Depending on the version, the tube extension of the sensor must have a diameter of 43 mm ( $\varnothing$  1.7 in):

The wetted parts of the ARV 67 are made of steel (316L).

The ARV 67 must only be used in unpressurized vessels.

#### Physical principle

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

The terminal screws protect the tube against sliding through.

The following version is available:

- $\varnothing$  43 mm - G2A or 2 NPT (SW 70)

### 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 acc. to DIN EN 24180.

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

## 4 Mounting

### 4.1 Mounting procedure

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

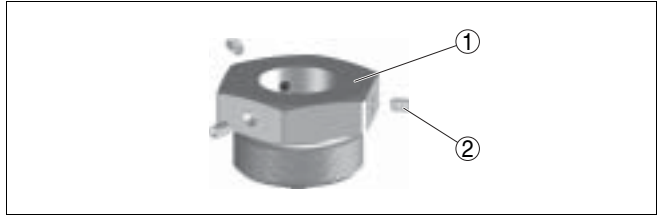


Fig. 1: Lock fitting ARV 67 - unpressurized

- 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  $8 \pm 1$  Nm ( $6 \pm 0.7$  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**

When used as directed in normal operation, lock fitting ARV 67 is completely maintenance-free.

### **5.2 Instrument repair**

If a repair is necessary, please proceed as follows:

You can download a return form from our Internet homepage [http://www.krohne-mar.com/fileadmin/media-lounge/PDF-Download/Specimen\\_e.pdf](http://www.krohne-mar.com/fileadmin/media-lounge/PDF-Download/Specimen_e.pdf).

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

- Print and fill out one form per instrument
- Clean the instrument and pack it damage-proof
- Attach the completed form and possibly also a safety data sheet to the instrument.

## 6 Dismounting

### 6.1 Dismounting procedure

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 ARV 67 consists of materials which can be recycled by special recycling companies. Mark the instrument as scrap and dispose it according to the legal regulations.

Materials: see "*Technical data*"

If you cannot dispose of the instrument properly, please contact us about disposal methods or return.

## 7 Supplement

### 7.1 Technical data

#### General data

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Material 316L corresponds to 1.4404 or 1.4435

Process fitting

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– G2A or 2 NPT

Tube diameter of the sensor  $\varnothing$  43 mm ( $\varnothing$  1.7 in)

Materials

– Lock fitting 316L or Hastelloy C22 (2.4602)

– Process seal Klingersil C-4400<sup>1)</sup>

Terminal screws Pin with hexagon DIN 913 M8 x 8

Torque

– Terminal screws (M8) 8 Nm  $\pm$ 1 Nm (6 lbf ft  $\pm$ 0.7 lbf ft)

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#### Process conditions

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Operating pressure unpressurized

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

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#### Approvals

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The lock fittings have no own approvals

<sup>1)</sup> not with thread NPT

## 7.2 Dimensions

### Lock fitting ARV 67 for OPTISWITCH 3300 C

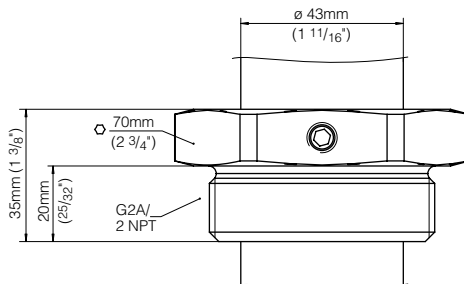


Fig. 2: Lock fitting ARV 67 unpressurised for OPTISWITCH 3300 C



Subject to change without notice