Static PH Redox-Holder

Manual

Type SAS-310

seli GmbH

Automatisierungstechnik

Contents

1 Security and Safety Measures

1 Sicherheits- und Schutzmaßnahmen

1.1 General Safety Informations

The SAS-310 is constructed in such way, that there is no danger, if the manual is read carefully

- Please read the manual first.
- Install and operate the valve only if all instructions for safe and proper use have been read and understood.
- Keep the manual, so that you can always look up to
- Operate the holder and accessories in only perfect condition.
- Also regard the applicable laws, regulations, guidelines and standards in the countries and locations

1.2 Intended Use

The SAS-310 is mounted on tanks or pipelines. With the help of the holder, a sensor is inserted into the process fluid, to measure chemical or physical properties. The choice of the material properties of the holder and equipment are determined by the process characteristics. The holder must be serviced regularly.

- Make a personalized maintenance plan for your process
- Perform only maintenance which are described in the manual!
- Changes at the holders may be made only after consultation with the manufacturer.

The manufacturer is not liable for damages resulting from improper use.

1.3 Risk areas and residual risks

The holder ist connected to tanks and pipings, that can be under pressure. Process fluid can only escape by negligence and improper handling.
Before you start and after every maintenance ensure that all seals and connections are complete and working.

Don´t Loosen or remove the sensor in any case, while the process is still ongoing.

Take appropriate protective measures, before touching the holder, because parts of it can take the temperature of the process.

1.4 Utilities

Use only tested and approved Utilities and accessories.

Seals

- Select the material properties of the process seal and the O-rings depending on the process fluid and the rinsing liquid.

- Consider the swellable and the acid or Alkali resistance of sealing material.

Sensor

- Choose a suitable sensor and note the Detail in Chapter 6, "Technical data".

Qualification

1.5 Personal

Only trained personnel should install the holder and do services!

protective clothing The operators have to wear safety glasses and suitable protective clothing. during the commissioning and maintenance work

UVV You respect the applicable regulations and rules for working safety in the countries and locations.

1.6 Disposal

Observe the rules and regulations for waste disposal that are suitable in the countries and locations

1.7 Symbols and Pictograms

In the manual icons and symbols are used for better orientation.

DANGER!

The security notice with the signal word DANGER indicates that you risk life and high material damage if you ignore the instructions!

ATTENTION!

The security notice with the signal word ATTENTIN indicates that you risk high material damage if you ignore the instructions!

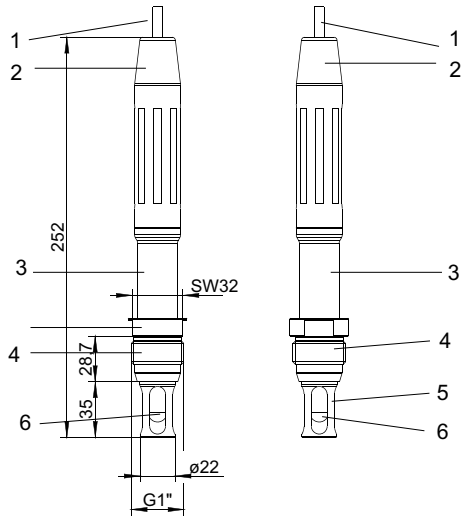
!!! Here is an important note!

☑ If you see this sign, then you have to do the working steps in the declared chronology.

2 Product Description

2.1 Automatic Holder SAS-310

Parts



1 Sensor cable
2 Protection cab
3 Holder
4 Process connection 1″ sealing system
5 Protection basket
6 Sensor

Fig. 1: Holder

Variants Holders are fixed on containers and pipes with suitable process connections. In order to fulfil the various process characteristics, the holder is made of high-grade steel or plastics. In addition, you can choose between the various process connections, sealing materials and sensors.

2.2 Process Integration

Holder The Holder SAS-310 is fastened on a process-tank or a pipe. The protection basket protects the sensor from damage by the process fluid

Transmitter The SAS brings a sensor into the process fluid, which transfers its results to a transmitter.

PLS The transmitter can be connected to a process control system. Thereby an automatic registration in the guidance system can be made.

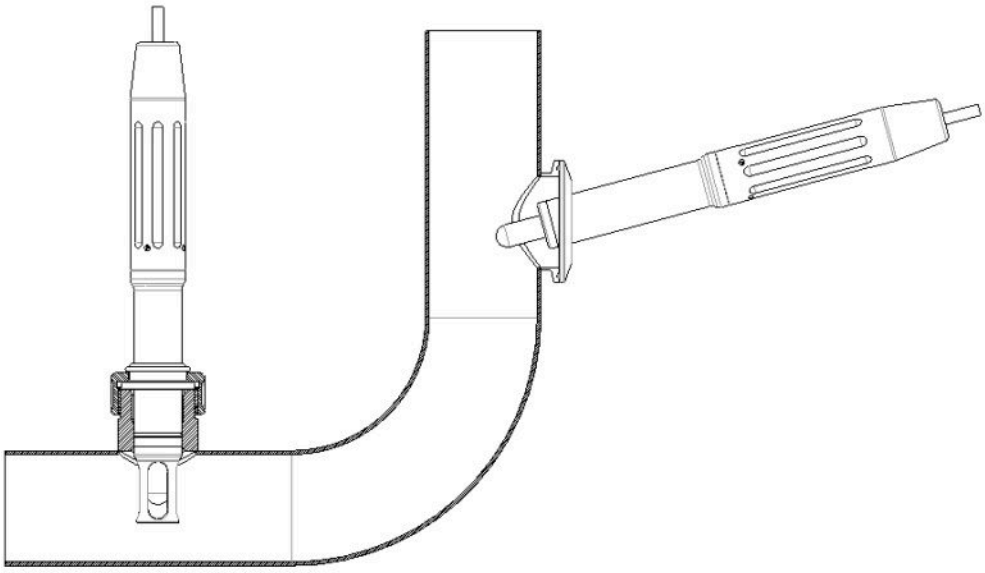


Fig. 2: Process Procedure

Proc.connection For an appropriate choice of the fitting the process and temperature conditions of the process are important. The fitting of stainless steel can be used up to a pressure of 10 bar and a process temperature between -10 ° and 140 ° C.

!!! Note the pressure and temperature diagrams in Chapter 6!

Position of installation The SAS can be operated in any position principally.
In order to obtain reliable results, the properties of the selected sensor are relevant.

3 Delivery

3.1 Delivery Contents

The holder is controlled in the factory and shipped ready for installation in a package that offers the best possible protection.

The delivery includes:

- Holder
- Manual
- Material Certificate

!!! Keep the SAS in the box. There it is protected until installation at best.

3.2 Checking the delivery

Before you release the holder for installation, you must ensure that:

- ▸ Packaging and device are in perfect condition.
- ▸ The nameplate of the holder correspondends with the details of the order.

4 Assembly

4.1 Prepare Facility

☑ Ensure that:

- that sufficient work space for the operation of the valve exist
- the process is switched off
- tanks or pipings are pressure free, empty and clean
- flange and process connection of the holder are compatible
- the process seal is located on the mounting flange

4.2 Installing the holder

First make sure that:

- The facililty is prepared (chapter 4.1)

You install the holder in this way:

1. Position the holder on the process seal
2. Tighten process connection firmly.

4.3 Installing the sensor

In the holder sensors must be used with a diameter of 12 mm, a length of 120mm and a connecting thread PG 13.5.

!!! Notice the information in Chapter 6, "Technical Data"!

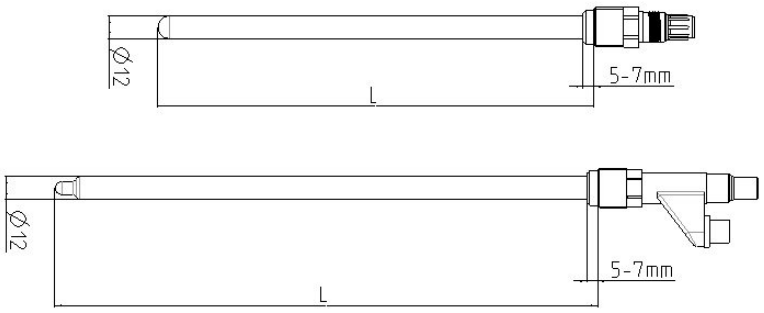


Fig. 4: Sensor filled with gel (on top)
Sensor filled with liquid (below)

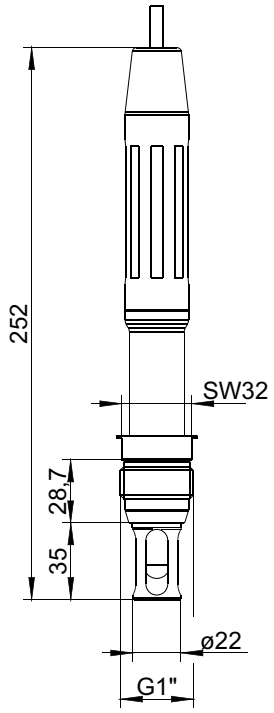
Sensor			
SAS	**l [mm]**	**d [mm]**	**PG**
310	120	12	13.5

Ensure that:

- all seals that belong to the sensor are on hand

You install the sensor in this way:

1. screw in sensor and tighten firmly
2. put on the sensor-cable
3. put on protection cab and tighten it



The SAS-310 is now ready to use!

5 Maintenance

5.1 Important Notes for Maintenance

- Make a personalized maintenance plan for your process!
- Only qualified personnel authorized to perform service.
- Always wear suitable protective clothing during maintenance work.
- Only perform maintenance or repairs which are described in the instruction manual!
- Structural changes may be made only after consultation with the manufacturer.
- Before disconnecting the holder from the process, pipelines or containers must be free of pressure , empty and clean.
- Ex – atmosphere is not allowed

5.2 Removing the Sensor

ATTENTION!

System is under pressure!

Process fluid may leak out if the sensor or the holder are separated from the process.

- Ensure that the system is depressurized before you seperate the sensor or the holder from the process.
- Clean the pipe or tank at the holder is connected.

You remove the sensor in this way:

1. Pipe or tank must be pressureless and clean
2. Unscrew protection cap
3. Remove sensor cable
4. Unfasten sensor
5. Take out the sensor

DANGER! **Broken glas-sensor!**

The shards can damage the media touched seals

- The media-touched seals must be checked
- Notice work instruction in chapter 5.3!

5.3 Changing media-touched seals

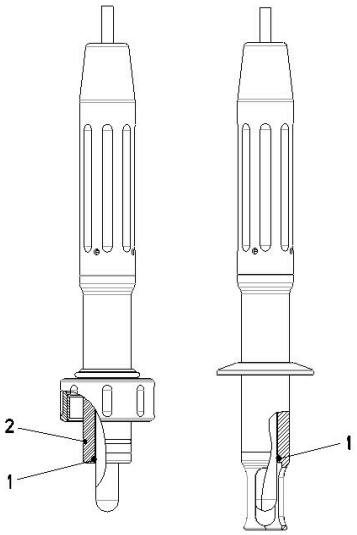
DANGER! **The fassility is under pressure.**

Process fluid may leak out if the holder is separated from the process improperly.

- Ensure previously that the facility is depressurized.
- Empty and clean pipes or tanks.
- Ensure that no ex-atmosphere exist.

Install the seals, that are adapted for holder and process.

- Use only original parts!



1 O-Ring, Ø 10,77 x 2,62
2 O-Ring, Ø 21,95 x 1,78

So you change seals in this way:

1. Remove the sensor from the holder (chapter 5.2)
2. Remove the holder from the process
3. Remove and replace the o-ring seals

5.4 Maintenance Plan

Perform the maintenance within recommended intervals

quarterly

- Check the process connection for leaks and tightness

yearly

- Change the process-touched seals (Kap.5.3).

5.5 Disposal

Holder

Make sure that the holder is free of hazardous and toxic substances. According to the material you need to dispose the parts separately.

Packaging

Observe the rules and regulations for waste disposal in the particular country and location.

The packaging is made of cardboard and can be disposed as waste paper.

6 Technical Data

6.1 Norms

Pressure Equipment Directive

6.2 Material Properties

Wetted Parts		
Holder		
SAS	**High-Grade Steel**	**Seals**
310	1.4404/316L	EPDM FDA USP IV FPM

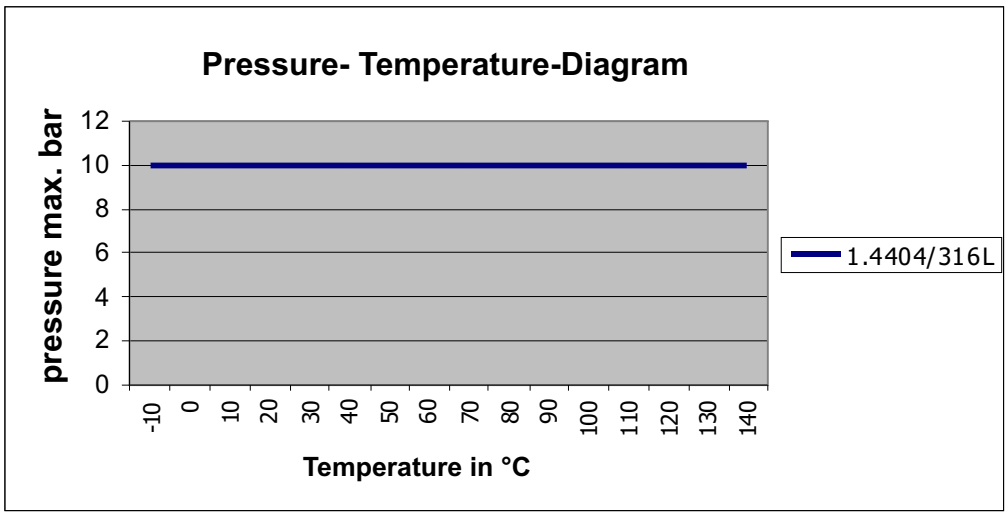
Not wetted Parts		
Protection Cab		
SAS	**Material**	
310	PA 6.6.GF30	

6.4 Ambient Conditions

Ambient Temperature	**-10... 70 °C**
Transport- and Storage Temperature	**-20... 80 °C**

6.5 Process Conditions SAS-310

Permissible pressure max. PS:	**10 bar**
Permissible temperature max. TS:	**140 °C**



SAS-310-	0408	-		-	120	-	SE10	-	035	-	
Material (wetted parts)											
High grade steel 1.4404 / 316L - Surface < Ra0,8	**0408**										
Sealing Materials (wetted parts)											
EPDM / FDA/USP VI			**EPD**								
FPM (Viton)			**FPM**								
Sensor Type											
120 mm PG 13,5 Ø12					**120**						
Process Connections											
Thread nozzle G1"							**SE10**				
Immersion length											
35 mm under process connection									**035**		
Protection cage											
without											**0**
with protection cage											**1**

Accessories and Spareparts

Part.Nr.	Description
2-123-20-003	Sealing Set (wettetd parts) EPDM/FDA
2-123-20-004	Sealing Set (wetted parts) FPM (Viton)
7-152-26-001	Protection Cap

Certificates

Part.Nr.	Description
2-121-01-001	Certificate EN10204-2.2 for surface-finishing (wetted parts)
2-121-01-002	Certificate EN10204-3.1.B for material (wetted parts)

Spare Parts and Accessories

Certificates		
SAS	**Part**	**Order Number**
310	EN10204-2.2 for surface finish (wetted part)	2-121-01-001
310	EN10204-31B for material (wetted part)	2-121-01-002

Seals		
SAS	**Part**	**Order Number**
310	Gasket Set EPDM / FDA USP IV	2-123-20-003
	Gasket Set FPM	2-123-20-004

Cap		
SAS	**Part**	**Order Number**
310	Protection Cap	7-152-26-001

!!! Please give us the serial number of your holder, if you ordner spare Parts and accessories.

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