User Manual

SensoGate WA 132
Retractable Fitting with PTFE Process Adaptation

Information: www.knick-international.com
# Table of Contents

## SensoGate WA 132

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Instructions</td>
<td>4</td>
</tr>
<tr>
<td>Intended Use</td>
<td>5</td>
</tr>
<tr>
<td>Symbols and Markings</td>
<td>5</td>
</tr>
<tr>
<td>Rating Plates</td>
<td>6</td>
</tr>
<tr>
<td>Package Contents</td>
<td>6</td>
</tr>
<tr>
<td>SensoGate WA 132 Product Coding</td>
<td>7</td>
</tr>
<tr>
<td>Function Description</td>
<td>8</td>
</tr>
<tr>
<td>Overview of Retractable Fitting</td>
<td>9</td>
</tr>
<tr>
<td>Modular Design: Drive Unit, Immersion Tube, Process Adaptation</td>
<td>10</td>
</tr>
<tr>
<td>SensoLock</td>
<td>11</td>
</tr>
<tr>
<td>Media Connection</td>
<td>12</td>
</tr>
<tr>
<td>Installing the Media Connection</td>
<td>12</td>
</tr>
<tr>
<td>SERVICE Position</td>
<td>13</td>
</tr>
<tr>
<td>PROCESS Position</td>
<td>14</td>
</tr>
<tr>
<td>Installing and Removing a Sensor</td>
<td>15</td>
</tr>
<tr>
<td>Sensors with Solid Electrolyte</td>
<td>16</td>
</tr>
<tr>
<td>Short Immersion Depth</td>
<td>16</td>
</tr>
<tr>
<td>Installing the Sensor</td>
<td>16</td>
</tr>
<tr>
<td>Removing the Sensor</td>
<td>18</td>
</tr>
<tr>
<td>Long Immersion Depth</td>
<td>19</td>
</tr>
<tr>
<td>Installing the Sensor</td>
<td>19</td>
</tr>
<tr>
<td>Removing the Sensor</td>
<td>21</td>
</tr>
<tr>
<td>Sensors with Liquid Electrolyte</td>
<td>23</td>
</tr>
<tr>
<td>Installing the Sensor</td>
<td>23</td>
</tr>
<tr>
<td>Removing the Sensor</td>
<td>24</td>
</tr>
<tr>
<td>Drive Unit</td>
<td>25</td>
</tr>
<tr>
<td>Removing the Drive Unit</td>
<td>25</td>
</tr>
<tr>
<td>Installing the Drive Unit</td>
<td>26</td>
</tr>
<tr>
<td>Immersion Tube</td>
<td>27</td>
</tr>
<tr>
<td>Replacing the Immersion Tube</td>
<td>27</td>
</tr>
<tr>
<td>Removing the Immersion Tube</td>
<td>28</td>
</tr>
<tr>
<td>Installing the Immersion Tube</td>
<td>29</td>
</tr>
<tr>
<td>Calibration Chamber</td>
<td>30</td>
</tr>
<tr>
<td>Removing the Calibration Chamber</td>
<td>30</td>
</tr>
<tr>
<td>Installing the Calibration Chamber</td>
<td>31</td>
</tr>
<tr>
<td>Installation Dimensions</td>
<td>32</td>
</tr>
<tr>
<td>Specifications</td>
<td>36</td>
</tr>
<tr>
<td>Maintenance</td>
<td>37</td>
</tr>
<tr>
<td>Maintenance Intervals</td>
<td>37</td>
</tr>
<tr>
<td>Servicing the Immersion Tube</td>
<td>37</td>
</tr>
<tr>
<td>Servicing the Drive Unit</td>
<td>38</td>
</tr>
<tr>
<td>Lubricants, O-Rings</td>
<td>38</td>
</tr>
<tr>
<td>Sealing Kits for Maintenance and Servicing</td>
<td>39</td>
</tr>
<tr>
<td>Accessories / Spare Parts</td>
<td>40</td>
</tr>
<tr>
<td>EU Declaration of Conformity</td>
<td>42</td>
</tr>
<tr>
<td>Declaration of Contamination</td>
<td>43</td>
</tr>
<tr>
<td>Index</td>
<td>44</td>
</tr>
</tbody>
</table>
Safety Instructions
SensoGate WA 132

Process-Related Risks
Knick Elektronische Messgeräte GmbH & Co. KG assumes no liability for damages caused by process-related risks known to the operator, which would in fact not permit the use of the retractable fitting.

For your own safety, be sure to observe the following precautions:
Work on the retractable fitting shall only be performed by personnel authorized by the operating company and specially trained for handling and operating the retractable fitting.
Be sure to take account of the influences of humidity, ambient temperature, chemicals, and corrosion on the safe operation of the retractable fitting.

WARNING!
Potential electrostatic charging hazard! Because of the use of non-conductive parts made of PTFE (see figure), you must observe the following precautions when using the device in hazardous locations.

- Never use the device in processes where electrostatic charging of the non-conductive surfaces of the calibration chamber, flange bushing, and immersion tube can be expected. When used as intended, use of the device in liquids with a conductivity of at least 10 nS/cm can be regarded as electrostatically safe.

The following non-conductive parts made of PTFE are prone to electrostatic charging:
- Calibration chamber (K)
- Flange bushing (N) with sealing strip
- Immersion tube (T)

Registered Trademarks
The following trademarks are used in this manual without further marking:
SensoGate®, SensoLock®, Unical®, Uniclean®, Protos®
are registered trademarks of Knick Elektronische Messgeräte GmbH & Co. KG, Germany

Return of Products/Return Form
Please contact our Service Team before returning a defective device. Ship the cleaned device to the address you have been given. If the device has been in contact with process fluids, it must be decontaminated/disinfected before shipment. In that case, please attach a corresponding return form (see page 43), for the health and safety of our service personnel.
Intended Use

SensoGate WA 132

Intended Use

The SensoGate WA 132 is a pneumatically operated retractable fitting. It allows sensors to be immersed in and retracted from liquid media, e.g., for process analytics.

The SensoGate WA 132 retractable fitting allows:

- immersing and retracting the sensor under process pressure (retractable fitting)
- calibrating or adjusting the measuring system under process conditions (pressure and temperature)
- cleaning the sensor in the running process (optional)
- replacing the sensor in the running process (in Service position)
- variable process adaptation by the customer

The retractable fitting is suitable for sensors with a sensor diameter of 12 mm and a PG 13.5 thread. The following sensors can be installed:

- sensor with solid electrolyte, 225 mm long
- sensor with liquid electrolyte, 250 mm long

Safe Use

If you are not sure whether the retractable fitting can be safely used for your intended application, always contact Knick!

To ensure safe use of the equipment, you must observe the temperature and pressure ranges given in the Specifications of this user manual.

Symbols and Markings

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE marking</td>
<td>CE marking with number of the notified body for the EU Type Examination Certificate</td>
</tr>
<tr>
<td>ATEX marking</td>
<td>ATEX marking for the operation of equipment in hazardous locations with device classification (see page 36)</td>
</tr>
<tr>
<td>Warning</td>
<td>Do not open the device! Read this user manual, observe the Specifications, and follow the safety instructions.</td>
</tr>
<tr>
<td>IP66</td>
<td>Ingress protection of the housing against dust and humidity</td>
</tr>
<tr>
<td>Outlet</td>
<td>Outlet symbol</td>
</tr>
<tr>
<td>Tamb</td>
<td>Ambient temperature</td>
</tr>
</tbody>
</table>
Intended Use
SensoGate WA 132

⚠️ WARNING!
Warning for use in hazardous locations!
Observe the corresponding local requirements and standards for electrical installations in hazardous areas. Observe the applicable codes and regulations for the use in hazardous locations when installing, operating, servicing, or disassembling the SensoGate.

⚠️ CAUTION!
Take caution when using water from drinking water pipes for the water connection!
Observe the general requirements of protection devices to prevent pollution of potable water (EN 1717).
We recommend installing a check valve on the water inlet, e.g., on the water valve provided by the customer or on the rinse connection of the retractable fitting (inlet to calibration chamber) to prevent backflow of rinse or process medium or compressed air into the water pipe. Suitable check valves made from different materials are available from Knick.

The SensoGate WA 132 retractable fitting has been developed and manufactured in compliance with the applicable European guidelines and standards. Compliance with the European Harmonized Standards for use in hazardous locations is confirmed by the EU Type Examination Certificate. Compliance with the European directives and standards is confirmed by the EU Declaration of Conformity and the CE marking.

Rating Plates

<table>
<thead>
<tr>
<th>Assembly group</th>
<th>Hazardous area</th>
<th>Safe area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive unit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Knick
Made in Germany
SensoGate®
Drive unit

<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
<th>Compressed air: 4 to 7 bar</th>
<th>Rinsing water: max. 7 bar</th>
<th>KEMA 07ATEX 0065</th>
<th>Tamb -10 to 70 °C</th>
<th>14163 Berlin</th>
</tr>
</thead>
<tbody>
<tr>
<td>II G</td>
<td>c II No self-heating</td>
<td>For temp specs see manual</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Knick
Retractable probe / Drive unit

<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
<th>Compressed air: 4 to 7 bar</th>
<th>Rinsing water: max. 7 bar</th>
<th>Made in Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamb -10 to 70 °C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Process adaptation

<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
<th>Compressed air: 4 to 7 bar</th>
<th>Rinsing water: max. 7 bar</th>
<th>KEMA 07ATEX 0065</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion fitting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Knick
Made in Germany
SensoGate®
Insertion fitting

<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
</tr>
</thead>
</table>

Check the shipment for transport damage and completeness.

The package should contain:
- Retractable fitting
- Documentation
- Test certificates
# SensoGate WA 132 Product Coding

## SensoGate WA 132

<table>
<thead>
<tr>
<th>WA 132-</th>
<th>[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]</th>
</tr>
</thead>
</table>

### Explosion protection
- **For ATEX Zone 0** (X)
- **No** (N)

### Sensor
- **Sensor, Ø 12 mm, with PG 13.5** (0)
- **pH sensor, Ø 12 mm, pressurized** (1)

### Gasket material
- **FKM** (A)
- **EPDM** (B)
- **EPDM - FDA** (E)
- **FKM - FDA** (F)
- **FFKM - FDA** (H)
- **FFKM** (K)

### Process-wetted materials*
- **PTFE** (R)

### Process adaptation
- **Loose flange, 1.457, PN10/16, DN 32** (B 0)
- **Loose flange, 1.457, PN10/16, DN 40** (B A)
- **Loose flange, 1.457, PN10/16, DN 50** (B 1)
- **Loose flange, 1.457, PN10/16, DN 65** (B 2)
- **Loose flange, 1.457, PN10/16, DN 80** (B 3)
- **Loose flange, 1.457, PN10/16, DN 100** (B 4)
- **Loose flange, ANSI 316, 150 lbs, 2”** (D 1)
- **Loose flange, ANSI 316, 150 lbs, 2 ½”** (D 2)
- **Loose flange, ANSI 316, 150 lbs, 3”** (D 3)
- **Loose flange, ANSI 316, 150 lbs, 3 ½”** (D 4)
- **Fitting, DIN 3237-2, PN16, DN 40** (T A)
- **Fitting, DIN 3237-2, PN16, DN 50** (T 1)
- **Loose flange, 1.4571, DN 40, for plane flange made of glass** (U A)
- **Loose flange, 1.4571, DN 50, for plane flange made of glass** (U 1)

### Immersion depth
- **Short** (A)
- **Long** (B)

### Connection
- **Media connection, PP** (A)
- **Media connection, PEEK** (B)
- **Media connection, PEEK, with integr. connection for additional medium** (C)

### Special version
- **Without**
- **Equipped with special grease (provided by customer)**
- **Customer-specific special datasheet** (F)

* Material combinations: process-wetted part of calibration chamber / rinse-wetted part of calibration chamber / immersion tube

Example of a possible order code: WA 132-X0ARB1BA31-00F

- **X** Explosion protection, ATEX Zone 0
- **0** Suitable for sensors with a sensor diameter of 12 mm
- **A** Gasket material: FKM
- **R** Process-wetted materials made of PTFE
- **B1** Loose flange, PN 10 / 16, DN 50 made of stainless steel 1.4571
- **B** Long immersion depth
- **A** Without electrical limit signal
- **3** inlet with PFA hose coupling NW 4 / 6, outlet with PFA hose coupling NW 6 / 8, with (optional) outlet hose made of PTFE, 3 m
- **1** Housing made of stainless steel/PP
- **F** Customer-specific special datasheet
Function Description

SensoGate WA 132

The retractable fitting can be moved to two positions using compressed air:

- **PROCESS position**: The sensor is located in the process medium.
- **SERVICE position**: The sensor is located in the calibration chamber.

In SERVICE position you can clean, maintain, calibrate or adjust the measuring system.

Using compressed air, a control unit such as the Unical 9000 moves the sensor between SERVICE position and PROCESS position and leads the different calibration or cleaning liquids to the sensor when it is located in the calibration chamber. These liquids leave the calibration chamber through an outlet hose, i.e., they are displaced from the calibration chamber by following liquids or by compressed air.

For operating the SensoGate, you must connect control air and rinsing or calibration media to the SensoGate. There are two possible ways to do so.

- When the SensoGate is operated with a Unical or Uniclean electro-pneumatic controller and the Protos measuring system, the cables and tubings for air pressure and rinsing/calibration media are combined in a single hose with just one plug connection. This hose is referred to as media connection. This media connection is installed on the SensoGate together with the outlet hose.
- When you do not use an electro-pneumatic controller (Unical or Uniclean and Protos measuring system), you can connect the supply lines for control air and rinsing/calibration media with a free hose connection via adapters ZU 0742 / ZU 0733 / ZU 0734 (see page 40).

To replace the sensor, you must move the retractable fitting to the SERVICE position (see page 13) and secure it using SensoLock (see page 11).

Mounting

- Possible mounting angle 15° above horizontal:
- Mounting angle 360° (i.e. even upside down) for special sensors only containing thickened electrolytes which thus cannot flow.
Overview of Retractable Fitting
SensoGate WA 132

The SensoGate retractable fitting has a modular design. This allows the drive unit, immersion tube and process adaptation to be exchanged. The retractable fitting consists of two main units:

The **drive unit** performs the required movements to move the sensor into and out of the process. The **process adaptation** comprises the process-wetted part of the calibration chamber. Drive unit and process adaptation can be separated, see page 25.
Overview of Retractable Fitting
SensoGate WA 132

Modular Design: Drive Unit, Immersion Tube, Process Adaptation

Drive Units
- Short immersion depth
  Sensors with solid electrolyte
- Long immersion depth
  Sensors with solid electrolyte
- Short immersion depth
  Sensors with liquid electrolyte

Immersion Tubes
- Short
- Long
  Bayonet coupling
  Material: stainless steel, 1.4571
  Immersion tube
  Material: PTFE

Process Adaptation
- Process adaptation
  - DIN and ANSI loose flanges
The SensoLock ring securely blocks the retractable fitting in SERVICE position. Twisting the SensoLock ring to the “lock” position mechanically locks the internal lift piston and thus prevents the retractable fitting from moving to PROCESS position. The SensoLock ring can only be rotated when in SERVICE position. In PROCESS position and all intermediate positions the SensoLock ring is blocked.

Before starting maintenance work or replacing a sensor,

- move the retractable fitting to the SERVICE position.
- twist the SensoLock ring to the “lock” position.

Twisting the SensoLock ring to the “lock” position prevents the immersion in the process when the sensor has been removed (locking the travel movement, safety function).

After the sensor has been installed, you can unlock the travel movement by twisting the SensoLock ring to “unlock”.
Media Connection
SensoGate WA 132

Installing the Media Connection
Installing the media connection with multiplug and Unical 9000(X) electro-pneumatic controller

1) Screw the hose bracket (M) of the media connection to the fixing bracket (H) of the retractable fitting (illustration: The 3 × 2 threaded holes on the fixing bracket allow different arrangements).

2) Screw the multiplug (AB) of the media connection to the connection (AC) of the retractable fitting.

3) Connect the outlet hose (AF) using the hose coupling (AE).
## SERVICE Position

**SensoGate WA 132**

The following illustrations clearly show the SERVICE position:

<table>
<thead>
<tr>
<th>Short immersion depth</th>
<th>Short immersion depth</th>
<th>Long immersion depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid-electrolyte sensor</td>
<td>Liquid-electrolyte sensor</td>
<td>Solid-electrolyte sensor</td>
</tr>
</tbody>
</table>

The SERVICE position is indicated by the sensor head (J) protruding out of the drive unit (AD).

The SERVICE position is indicated by the rubber bellows (B) being expanded.

The SERVICE position is indicated by the service cap (L) protruding out of the extension.
The PROCESS position is indicated by the sensor connector not protruding out of the drive unit (AD).

The PROCESS position is indicated by the rubber bellows (B) being compressed.

The PROCESS position is indicated by the sensor cap not protruding out of the extension (V).
Installing and Removing a Sensor
SensoGate WA 132

NOTICE! Sensors shall only be installed or removed by personnel authorized by the operating company and trained in the handling of the retractable fitting. To replace the sensor, you must move the retractable fitting to the SERVICE position (see page 13) and secure it using SensoLock (see page 11).

Be sure to follow the assembly instructions step by step.

Preparations:
• Check whether the sensor is damaged (e.g., glass broken). Never install a damaged sensor.
• Check whether slide washer or O-ring on the sensor are damaged and replace if required.
• Remove the watering cap from the sensor tip and rinse sensor with water.
• Internally pressurized sensors might have a silicone seal on the diaphragm (as transport protection). Remove this seal using the knife shipped with the sensor.
Sensors with Solid Electrolyte

SensoGate WA 132

Short Immersion Depth

Installing the Sensor

1) Before installing the sensor, make sure that the retractable fitting is in **SERVICE position**.

2) Use appropriate sensors (A) only:
   - Diameter: 12 mm
   - Length: 225 mm
   - Observe the pressure resistance of the sensor.

3) Make sure that the slide washer (C) and the O-ring (D) are correctly positioned and not damaged.

4) Screw in the sensor head (J) (19 mm A/F, PG 13.5 thread) with a max. torque of 3 Nm (recommended tool: 19 mm mounting wrench, e.g., Knick ZU 0647). The sensor connector protrudes out of the drive unit.
Sensors with Solid Electrolyte
SensoGate WA 132

Short Immersion Depth

5) Connect the cable jack (G).
Hold the cable in a loop and fix it using clamp (E).

**NOTICE!** The cable loop must be long enough so that the cable does not impede the stroke movement of the fitting.

6) Connect the equipotential bonding cable to terminal (F) (if required).
Sensors with Solid Electrolyte

SensoGate WA 132

Short Immersion Depth

Removing the Sensor

1) Only remove the sensor when the retractable fitting is in SERVICE position:
   Move the SensoGate retractable fitting to SERVICE position and secure it with SensoLock (the sensor connector protrudes out of the drive unit).

2) Remove the cable jack (G).

3) Before removing the sensor, check that there is no liquid leaking from the outlet (process sealing might be defective).

4) Remove the sensor (recommended tool: 19 mm mounting wrench, e.g., Knick ZU 0647).

5) Check whether the slide washer (C) or the O-ring (D) are damaged.

NOTICE!
When replacing damaged sensors (glass breakage), be sure to check the sensor seal in the immersion tube and replace it if required. (See page 29.)
Sensors with Solid Electrolyte
SensoGate WA 132

Long Immersion Depth

Installing the Sensor

1) Before installing the sensor, make sure that the retractable fitting is in **SERVICE position** (red service cap (L) is visible).

2) Use appropriate sensors (A) only:
   - Diameter: 12 mm
   - Length: 225 mm
   - Observe the pressure resistance of the sensor.

3) Make sure that the slide washer (C) and the O-ring (D) are correctly positioned and not damaged.

4) Insert the sensor and screw in the sensor head (J) (19 mm A/F, PG 13.5 thread) with a max. torque of 3 Nm (recommended tool: 19 mm mounting wrench, e.g., Knick ZU 0647).

5) Thread the cable jack (G) through the extension (V).

6) Connect the cable jack (G) with the sensor plug (connection with coupling nut).
Long Immersion Depth

Installing the Sensor (continued)

NOTICE! The cable loop must be long enough so that the cable does not impede the stroke movement of the fitting. When the cable is installed for the first time, you must first pull off the split red service cap (L).

7) Attach the extension (V) and turn it clockwise until it noticeably snaps in.

8) Put the split (red) service cap (L) on the cable as shown. Then push it into the extension (V) until it noticeably snaps in.

9) Hold the sensor cable in a loop and fix it using clamp (E).

10) Connect the equipotential bonding cable to terminal (F) (if required).
Long Immersion Depth

Removing the Sensor
Only remove the sensor when the retractable fitting is in **SERVICE position**:
Move the SensoGate retractable fitting to SERVICE position and secure it with SensoLock (red service cap (L) is visible).

1) Before removing the sensor, check that there is no liquid leaking from the outlet (process sealing might be defective).

2) Rotate the extension (V) counterclockwise. This unlocks the bayonet coupling.

**Note:** The extension (V) can only be unlocked in SERVICE position (safety function).

3) Pull off the extension (V) in direction of the arrow. Now you can see the cable jack (G).
Removing a Solid-Electrolyte Sensor
SensoGate WA 132

Long Immersion Depth

Removing the Sensor (Continued)

4) Disconnect the cable jack (G) from the sensor.
5) Screw off the sensor head (J) (19 mm, PG 13.5), (recommended tool: 19 mm mounting wrench, e.g., Knick ZU 0647) and pull out the sensor.

6) Check whether slide washer (C) or O-ring (D) on the sensor are damaged. **NOTICE!** When replacing damaged sensors (glass breakage), be sure to check the sensor gasket in the immersion tube and replace it if required (see page 29).
Sensors with Liquid Electrolyte
SensoGate WA 132

You can use sensors with a length of 250 mm and an electrode diameter of 12 mm, e.g., Knick SE 551.
To ensure that the electrolyte flows from the reference electrode to the process medium, the air pressure in the sensor pressure chamber must be 0.5 to 1 bar above that of the process medium. The compressed-air connection (AL) for the sensor pressure chamber is made via connection nipple NW 6 mm. Check whether the sensor is damaged (e.g., glass broken).
Remove the watering cap from the sensor tip and rinse the sensor with water.

NOTICE! In the case of inclined installation, the sensor must be installed as described below to prevent electrolyte from flowing out during operation of the retractable fitting. First, move the fitting into SERVICE position.
Remove the plug and turn the electrolyte filling hole (W) towards the top to prevent electrolyte from flowing out when the sensor is inclined.
Observe the installation instructions of the sensor manufacturer.

Installing the Sensor
1) Before installing the sensor, make sure that the retractable fitting is in SERVICE position (the rubber bellows is expanded).
2) Loosen the small coupling nut (R) – do not remove it.
3) Unscrew and remove the large coupling nut (S) and pull the detached unit upwards.
4) Install the sensor (A).
5) Replace the unit you have detached in step 3. First hand-tighten the large coupling nut (S) and then the small coupling nut (R).
6) Connect the cable jack, hold the cable in a loop and fix it using clamp (E).
   NOTICE! The cable loop must be long enough so that the cable does not impede the stroke movement of the fitting.
7) Connect the equipotential bonding cable to terminal (F) (if required).
Removing the Sensor

1) Before removing the sensor, make sure that the retractable fitting is in SERVICE position and secured with SensoLock (the rubber bellows is expanded).

2) Remove the cable jack.

3) Before removing the sensor, check that there is no liquid leaking from the outlet (process sealing might be defective).

4) Loosen the small coupling nut (R) – do not remove it.

5) Unscrew and remove the large coupling nut (S) and pull the detached unit upwards.

6) Remove the sensor (A).
 Removing the Drive Unit

**NOTICE!** Be sure to follow the steps below in the correct order.
Take appropriate safety precautions against escaping process fluids.
Disconnect all process media and process pressure!

1) Move the retractable fitting to the SERVICE position.
2) Make sure that no process fluid is leaking from the outlet (I).
3) If required, remove the sensor as described on page 15.
4) Separate the outlet and rinse connection if required.
5) Carefully turn the coupling nut (AH) counterclockwise (using the ZU 0680 accessory wrench (MS) if required – see figure). Take care to not cant the unit!
6) Pull off the drive unit (AD) upwards.
**Drive Unit**

SensoGate WA 132

**Installing the Drive Unit**

**NOTICE!** Be sure to follow the steps below in the correct order.

1) Insert the drive unit (in SERVICE position) into the process adaptation (P).
   The radial position of the drive unit is determined by a coding pin (O) in the calibration chamber and an opening (AJ) in the drive unit. The coupling nut can only be tightened when the drive unit is in the correct position.

2) Now tighten the coupling nut (AH) (turn clockwise – hand-tight or 10 Nm – using the ZU 0680 accessory wrench (MS) if required).

3) Attach the outlet connector (AM).

4) If required, install the sensor as described on page 15.
The wetted part of the immersion tube is made of PTFE. The upper part of the immersion tube (T) is provided with a stainless steel endpiece with bayonet contour (U). This endpiece serves for connecting the immersion tube to the drive unit of the retractable fitting. The endpiece is aligned with the three windows (Q) in the immersion tube and non-rotatably connected to the tube body (see the centerline in the figure below). This fixed alignment is imperative to ensure an easy connection and an optimal rinsing result for the retractable fitting.

If the endpiece is not properly aligned or can be twisted, the tube is defective. In this case, you must replace the immersion tube.

High process pressures and high process temperatures can cause the immersion tube to shrink (known creep tendency of PTFE).

Before installing the immersion tube, always check its total length as shown above. If the total length X is more than 2 mm shorter than specified (see figure and table), you must replace the immersion tube.

### Replacing the Immersion Tube

The immersion tube must be removed or replaced:
- for general maintenance
- for cleaning the immersion tube, e.g., after the sensor is broken
- for replacing the sensor gasket (O-ring)
- in the event of a technical fault of the drive unit
Immersion Tube
SensoGate WA 132

Removing the Immersion Tube

⚠️ WARNING!
Warning! No process medium and no process pressure!
To separate the retractable fitting safely from the process, make sure that it is disconnected from all process media and process pressure.

⚠️ NOTICE! Before working on the drive unit, make sure that the retractable fitting is in SERVICE position (see page 13).

Conditions:
First, separate the drive unit from the process adaptation (see page 25).

1) Pull out the immersion tube by hand until you see the two screws (Z). Loosen the two screws (Z) using a screwdriver (TX 25) until they contact the stop at the immersion tube (see illustration).

2) Turn the immersion tube (T) counterclockwise by approx. 60°.

3) The bayonet coupling opens so you can pull out the immersion tube (T) in direction of the arrow.

4) Now, O-ring (D) (sensor gasket) is visible. Check and replace if required (O-ring dimensions: 11.9 x 2.6 mm).

Note:
Contrary to the figure, the O-ring may still be in the immersion tube.
Immersion Tube
SensoGate WA 132

Installing the Immersion Tube

Conditions:
The retractable fitting must be in PROCESS position (see page 14).

1) Push the O-ring (D) (sensor gasket) onto the sensor (A) as shown.

**NOTICE!** Make sure that there is no further O-ring in the immersion tube (T) (installed by mistake).

2) Loosen the two screws (Z) by approx. 4 turns (do not detach them) if you have not done that when removing the immersion tube.

**NOTICE!** If the screws have been screwed out too far, the immersion tube cannot be installed (correct if required).

3) Push the immersion tube (T) in direction of the arrow and insert it in the bayonet coupling (Y).

4) Press the tube in place and turn it clockwise until the stop (approx. 60°).

5) Fasten the two screws (Z) using a screwdriver (TX 25).

**Note:** The bayonet coupling is locked by the form-fit screw heads. The immersion tube, however, remains movable to compensate for tolerances.
1) Remove the outlet connector (AM). Take off the loose flange if required.

2) Loosen and remove the two screws (AK) from the calibration chamber (using screwdriver TX 25).

3) Pull the calibration chamber (K) vertically out of the process adaptation (P).

4) Push the flange bushing (N) downwards out of the process adaptation. Now, the gaskets are accessible and can be checked and replaced if required.
Installing the Calibration Chamber

1) Align the guiding edges (AI) of the calibration chamber (K) and insert it in the process adaptation (P).

2) Always secure the calibration chamber with both screws (AK).

3) Install the loose flange (LF) if required. Screw in the outlet connector (AM).

4) Insert the flange bushing (N) in the process adaptation (P) in direction of the arrow.

5) When you push the flange bushing (N) in the process adaptation (P), you can hear how the sealing strip snaps in.
Installation Dimensions
SensoGate WA 132

WA 132, Short Immersion Depth for Sensors with Solid Electrolyte
Installation Dimensions
SensoGate WA 132

WA 132 for Sensors with Liquid Electrolyte

Freiraum für Sensormontage

clearance for sensor installation

870 mm

PG 13,5
PG 13.5

448 mm
**Installation Dimensions**

SensoGate WA 132

**WA 132, Long Immersion Depth for Sensors with Solid Electrolyte**

* Freiraum ca. 635 mm für Sensorkabelbogen oder Schutzhaube

* approx. 635 mm clearance for sensor cable loop or protective cap

* 386 mm

* 535 mm
Installation Dimensions
SensoGate WA 132

Process Adaptation
Loose flange, DIN DN32 ... DN100
ANSI 316, 1½" ... 3"
short and long immersion depth
## Specifications

**SensoGate WA 132**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Permissible process pressure and</strong></td>
<td><strong>Temperature</strong></td>
</tr>
<tr>
<td></td>
<td>6 bar (at 0 ... 40 °C)</td>
</tr>
<tr>
<td></td>
<td>6 bar (40 °C), falling linearly to 3 bar (100 °C)</td>
</tr>
<tr>
<td></td>
<td>3 bar (max. 1 hour) at 135 °C</td>
</tr>
<tr>
<td><strong>Ambient temperature</strong></td>
<td>-10 ... +70 °C</td>
</tr>
<tr>
<td><strong>Ingress protection</strong></td>
<td>IP 66</td>
</tr>
<tr>
<td><strong>Housing material</strong></td>
<td>Stainless steel / PP or PEEK</td>
</tr>
<tr>
<td><strong>Permissible pressure for probe control</strong></td>
<td>4 ... 7 bar</td>
</tr>
<tr>
<td><strong>Quality of compressed air</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Standard</strong></td>
<td>According to ISO 8573-1:2001</td>
</tr>
<tr>
<td><strong>Quality class</strong></td>
<td>3.3.3 or 3.4.3</td>
</tr>
<tr>
<td><strong>Solid contaminants</strong></td>
<td>3 (max. 5 μm, max. 5 mg/m³)</td>
</tr>
<tr>
<td><strong>Water content for temperatures &gt; 15 °C</strong></td>
<td>Class 4, pressure dew point 3 °C or below</td>
</tr>
<tr>
<td><strong>Water content for temperatures 5 ... 15 °C</strong></td>
<td>Class 3, pressure dew point -20 °C or below</td>
</tr>
<tr>
<td><strong>Oil content</strong></td>
<td>Class 3 (max. 1 mg/m³)</td>
</tr>
<tr>
<td><strong>Sensors</strong></td>
<td></td>
</tr>
<tr>
<td>with solid electrolyte</td>
<td>Ø 12 mm, length 225 mm, PG 13.5 thread</td>
</tr>
<tr>
<td>with liquid electrolyte</td>
<td>Ø 12 mm, length 250 mm</td>
</tr>
<tr>
<td><strong>Process adaptations</strong></td>
<td></td>
</tr>
<tr>
<td>Flanges, EN 1092-1</td>
<td>DN 32 to DN 100</td>
</tr>
<tr>
<td>Flanges, ANSI B 16.5</td>
<td>1½&quot; to 3&quot;</td>
</tr>
<tr>
<td>Flange bushings, suitable for sight glass</td>
<td>from DN 40</td>
</tr>
<tr>
<td>fittings acc. to DIN 3237 Part 2</td>
<td></td>
</tr>
<tr>
<td><strong>Connections</strong></td>
<td></td>
</tr>
<tr>
<td>Inlet</td>
<td>Via Unical multiplug</td>
</tr>
<tr>
<td>Outlet</td>
<td>PFA hose coupling for hose, Ø 8×1 mm</td>
</tr>
<tr>
<td>for pressurized sensors</td>
<td>Hose connection NW 6 mm, pressure in calibration chamber 0.5...1 bar</td>
</tr>
<tr>
<td></td>
<td>above process pressure (max. 7 bar)</td>
</tr>
<tr>
<td>for compressed air</td>
<td>Via Unical multiplug (control air for retractable fitting)</td>
</tr>
<tr>
<td>Immersion depths / Dimensions</td>
<td>See dimension drawings</td>
</tr>
<tr>
<td>Process-wetted materials</td>
<td>PEEK (natural)</td>
</tr>
<tr>
<td><strong>Specifications for application in</strong></td>
<td></td>
</tr>
<tr>
<td><strong>hazardous locations</strong></td>
<td></td>
</tr>
<tr>
<td><strong>N° of EU Type Examination Certificate</strong></td>
<td>KEMA 07 ATEX 0065</td>
</tr>
<tr>
<td><strong>Device</strong></td>
<td>SensoGate WA 13**-X… retractable fitting</td>
</tr>
<tr>
<td><strong>ATEX marking of the equipment</strong></td>
<td>Il 1 G/D c II</td>
</tr>
<tr>
<td><strong>Ambient temperature (Ex)</strong></td>
<td>-10 ... +70 °C</td>
</tr>
<tr>
<td><strong>Process pressure (Ex)</strong></td>
<td>Max. 6 bar</td>
</tr>
<tr>
<td><strong>Compressed-air supply (Ex)</strong></td>
<td>4 to 7 bar, momentarily approx. 100 l/min</td>
</tr>
<tr>
<td><strong>Process temperature (Ex)</strong></td>
<td>0 to 120 °C (plastic) or 0 to 140 °C (steel)</td>
</tr>
<tr>
<td><strong>Special conditions (Ex)</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

1) Explosive atmospheres caused by gases, vapors, mists:
The maximum surface temperature only depends on the process temperature at the SensoGate housing and the flange.
Maintenance
SensoGate WA 132

Maintenance Intervals

As the process conditions (pressure, temperature, chemically aggressive media etc.) depend on the specific application, we can only give recommendations for maintenance intervals.

The following maintenance intervals are generally recommended:

<table>
<thead>
<tr>
<th>Maintenance interval</th>
<th>Operations required</th>
</tr>
</thead>
<tbody>
<tr>
<td>First inspection after a few days/weeks</td>
<td>Move the retractable fitting to the SERVICE position and observe the outlet. If the retractable fitting is not tight, process fluid will leak from the outlet hose. Observe the leakage bore (located directly below the coupling nut, see page 9). When there are deposits on the leakage bore or compressed air is escaping, replace the process-wetted (dynamically stressed) gaskets.</td>
</tr>
<tr>
<td>After 6 – 12 months</td>
<td>Repeat the operations of the first inspection. When there are deposits on the leakage bore or compressed air is escaping, replace the process-wetted (dynamically stressed) gaskets.</td>
</tr>
</tbody>
</table>

* These maintenance intervals are rough recommendations. The actual intervals depend on the application of the retractable fitting.

Servicing the Immersion Tube

High process pressures and high process temperatures can cause the immersion tube to shrink (known creep tendency of PTFE). Remove the fitting from the process to see if the immersion tube shrunk. (Illustrations show SERVICE position)

As delivered, the immersion tube fits flush with the flange bushing (N).

The immersion tube may shrink by maximal 2 mm. If it has shrunk by more than 2 mm, you must replace the immersion tube.
Maintenance
SensoGate WA 132

Servicing the Drive Unit

The drive unit must be removed, for example:
- for general maintenance or inspection
- to clean the calibration chamber, e.g., after a sensor has broken
- to change the sensor / calibration-chamber gaskets
- in the event of a technical fault of the drive unit

⚠️ WARNING!

Warning! No process medium and no process pressure!
To separate the retractable fitting safely from the process, make sure that it is disconnected from all process media and process pressure.

Lubricants, O-Rings

For fittings used in the chemical industry, the lubricant Syntheso Glep1 (silicone-free) is applied. For fittings used in the pharmaceutical / food industry (when FDA conformity is required), the lubricant Beruglide L (silicone-free) is applied (registered according to NSF-H1).

On request, the lubricant Paraliq GTE 703 can be applied (good lubricating properties also at increased temperatures and for a large number of stroke movements). This lubricant contains silicone and is only used as special application on specific request.

<table>
<thead>
<tr>
<th>Application</th>
<th>Pharma / Food</th>
<th>Chemistry / Wastewater</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lubricant</td>
<td>Beruglide L (silicone-free) FDA-conforming NSF-H1-registered</td>
<td>Paraliq GTE 703 (containing silicone) FDA-conforming (USDA H1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Materials of elastomeric gaskets</th>
<th>Pharma / Food</th>
<th>Chemistry / Wastewater</th>
</tr>
</thead>
<tbody>
<tr>
<td>FKM</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>FFKM</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>EPDM</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>FKM - FDA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>FFKM - FDA</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>EPDM - FDA</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Maintenance
SensoGate WA 132

Sealing Kits for Maintenance and Servicing

The sealing kits are available in different materials. The smaller sealing kits (“Set X/1”) only contain gaskets for direct contact with the process. The extended sealing kits (“Set X/2”) also include gaskets for contact with the rinse medium.

**NOTICE!** Take account of the process adaptations. The sealing kits come with detailed illustrations for installation. The new O-rings must be lubricated with the included lubricant.

The following sealing kits are available:

<table>
<thead>
<tr>
<th>Gaskets</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loose flange process connection</td>
<td></td>
</tr>
<tr>
<td>Set A/1</td>
<td>Process-wetted gasket material: FKM On request</td>
</tr>
<tr>
<td>Set B/1</td>
<td>Process-wetted gasket material: EPDM On request</td>
</tr>
<tr>
<td>Set E/1</td>
<td>Process-wetted gasket material: EPDM - FDA On request</td>
</tr>
<tr>
<td>Set F/1</td>
<td>Process-wetted gasket material: FKM - FDA On request</td>
</tr>
<tr>
<td>Set H/1</td>
<td>Process-wetted gasket material: FFKM - FDA On request</td>
</tr>
<tr>
<td>Set K/1</td>
<td>Process-wetted gasket material: FFKM On request</td>
</tr>
<tr>
<td>Set A/2</td>
<td>Process-wetted/rinse-wetted gasket material: FKM On request</td>
</tr>
<tr>
<td>Set B/2</td>
<td>Process-wetted/rinse-wetted gasket material: EPDM On request</td>
</tr>
<tr>
<td>Set E/2</td>
<td>Process-wetted/rinse-wetted gasket material: EPDM - FDA On request</td>
</tr>
<tr>
<td>Set F/2</td>
<td>Process-wetted/rinse-wetted gasket material: FKM - FDA On request</td>
</tr>
<tr>
<td>Set H/2</td>
<td>Process-wetted/rinse-wetted gasket material: FFKM - FDA On request</td>
</tr>
<tr>
<td>Set K/2</td>
<td>Process-wetted/rinse-wetted gasket material: FFKM On request</td>
</tr>
</tbody>
</table>
Accessories / Spare Parts

SensoGate WA 132

For ordering, use the part numbers beginning with ZU, e.g., ZU 0680.

**ZU 0680**  
**SensoGate Service Set, Basic**  
These tools are suitable for minor maintenance operations. They help separating the drive unit from the process adaptation and replacing the immersion tube including sensor gasket maintenance.

**ZU 0647**  
**Sensor Mounting Wrench**  
Required for safely screwing in the sensor without overloading the PG 13.5 plastic thread of the sensor head by an excessive torque (as caused by an open-end wrench).

**ZU 0670/1,**  
**Air Supply for Pressurized Sensors**  
0.5 – 4 bar

**ZU 0670/2,**  
**Air Supply for Pressurized Sensors**  
1 – 7 bar  
This module maintains the defined overpressure in the pressure chamber of the sensor.

**ZU 0713**  
**Hose, 20 m (extension for ZU 0670)**

**ZU 0759**  
**Protective Cap**  
The ZU 0759 protective cap protects against intrusion of liquids or particles into the area of the electrical connector of a sensor (e.g., due to weather exposure during outdoor use).  
**Note:** Can only be used with fittings for solid-electrolyte sensors.

**ZU 0742**  
**Adapter for Free Hose Connection, with electrical limit switches, PEEK housing**  
This adapter is used for operating the SensoGate WA 132 via multi-plug without the Unical 9000 (X) controller and the corresponding media connection.
Accessories / Spare Parts
SensoGate WA 132

ZU 0733
Adapter for Free Hose Connection, with electrical limit switches, PP housing
This adapter is used for operating the SensoGate WA 132 via multi-plug without the Unical 9000 (X) controller and the corresponding media connection.

ZU 0734
Adapter for Free Hose Connection, without electrical limit switches, PP housing
This adapter is used for operating the SensoGate WA 132 via multi-plug without the Unical 9000 (X) controller and the corresponding media connection.

ZU 0739
Bellows
The bellows (for liquid-electrolyte sensors only) protects the fitting beneath the sensor pressure chamber against pollution and wear.

Immersion Tubes
Immersion Tube, Short
Material: PTFE, on request

Immersion Tube, Long
Material: PTFE, on request
EU Declaration of Conformity
SensoGate WA 132

EU Declaration of Conformity for using the retractable fitting in hazardous locations (downsized representation)

<table>
<thead>
<tr>
<th>Dokument-Nr. / Document No. / No. document</th>
<th>EU150922C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wir, die / We, / Nous,</td>
<td></td>
</tr>
<tr>
<td>erklären in alleiniger Verantwortung, dass dieses Produkt / diese Produkte, declare under our sole responsibility that the product / products, déclaraons sous notre seule responsabilité que le produit / les produits,</td>
<td></td>
</tr>
<tr>
<td>Produktnummer / Product Identification / Désignation du produit</td>
<td>SensoGate® WA 13* -</td>
</tr>
<tr>
<td>auf welche(s) sich diese Erklärung bezieht, mit allen wesentlichen Anforderungen der folgenden Richtlinien des Rates übereinstimmen: to which this declaration relates is/are in conformity with all essential requirements of the Council Directives relating to: auquelle(s) se réfère cette déclaration est/sont conforme(s) aux exigences essentielles de la Directives du Conseil relatives à: *)</td>
<td></td>
</tr>
<tr>
<td>Harmonisierte Normen / Harmonised Standards / Normes harmonisées</td>
<td>EN 13463-5: 2003</td>
</tr>
<tr>
<td>Ausstellungsort, -datum / Place and date of issue / Lieu et date d'émission</td>
<td>Berlin, 22.09.2015</td>
</tr>
</tbody>
</table>

*) Die Sicherheitshinweise der mitgelieferten Produktikulation sind zu beachten. Bei einer einem der Hersteller nicht abgestimmten Änderung des Gerätes und/oder bei Nichtbeachtung der Sicherheitshinweise verliert diese Erklärung ihre Gültigkeit. / The safety instructions contained in the documentation accompanying the product have to be observed. If the apparatus is modified without having obtained manufacturer’s prior consent and/or the safety instructions are not followed, this declaration becomes void. / Il est impératif de respecter les instructions de sécurité dans la documentation fournie avec le produit. En cas de modification de l’appareil sans l’accord du fabricant et/ou en cas de non-respect des instructions de sécurité, cette déclaration perd sa vigueur.

Knick Elektronische Messgeräte GmbH & Co. KG
Leiter Bereich Forschung und Entwicklung
Vice President R & D

Jörg Grabson

42
Return Form
Declaration of potential hazards in the enclosed products from exposure to chemicals

We can only accept and carry out the service order if this declaration is filled out completely. Please include it with the shipping documents.

If you have any questions, please contact our repairs department in Berlin.

RMA number (can be obtained by calling +49 30 80191-233):

Customer information (must be completed if no RMA no. available):

Company:
Address:
Contact: Tel./E-mail:

Information on the product:

Product name:
Serial number:
Included accessories:

☐ The product being returned is new/unused or has not been exposed to hazardous substances.

☐ The product has been exposed to hazardous substances.

☐ The product has been exposed to infectious substances.

☐ The product was subjected to suitable cleaning procedures to prevent exposure to hazards prior to return.

☐ The product was not freed of hazardous substances prior to return.

I have answered the above questions to the best of my knowledge.

Name: Company: Date: Signature:
Index

SensoGate WA 132

A
Accessories 41, 42
Adapter for free hose connection 40
Air supply 40
Ambient temperature 5
Assembly, calibration chamber 31
Assembly, drive unit 26
Assembly, sensors 15
ATEX directive 42
ATEX marking 36
Attaching the media connection 12

B
Basic SensoGate tool kit 40
Bayonet contour (U) 27
Bayonet coupling 29
Bellows 41
Blocking the retractable fitting 11

C
Cable jack (G) 22
Cable loop length 20
Calibration chamber, assembly 31
Calibration chamber, disassembly 30
Calibration chamber (K) 30
CE marking 5
Clamp (E) 23
Coding pin (O) 26
Compressed-air connection (AL) 23
Compressed-air supply (Ex) 36
Conductivity, electrostatics 4
Connection (AC) to media hose 12
Connections, overview 36
Control air, connection possibilities 8
Coupling nut (AH) 25
Coupling nut, large (S) 23
Coupling nut, small (R) 23

D
Declaration of Contamination 43
Dimension drawings (installation dimensions) 32
Drinking water pipes 6
Drive unit, assembly 26
Drive unit, disassembly 25
Drive unit, servicing 38
Drive units, variants 10

e
Electrostatic charging 4
Equipotential bonding cable 23
EU Declaration of Conformity 42
Extension (V), sensor installation 19

F
Filling hole (W) 23
Fixing bracket (H) for media connection 12
Flange bushing (N) 30
Form-fit screw heads 29
Function description 8

G
Gasket material 39
Glass breakage 15, 22
Guiding edges of calibration chamber 31

H
Hazardous locations, electrostatics 4
Hazardous locations, specifications 36
Hose bracket (M), media connection 12
Hose coupling (AE), media connection 12
Hose, extension for air supply 40
Housing material 36

I
Icons 5
Immersion tube, assembly 29
Immersion tube, disassembly 28
Immersion tubes 10
Immersion tube, servicing 37
Immersion tube (T), design 27
Immersion tube, total length 27
Ingress protection 5
Installation dimensions 32
Installing a liquid-electrolyte sensor 23
Installing a sensor, preparations 15
Installing a solid-electrolyte sensor, long 19
Installing a solid-electrolyte sensor, short immersion 16
Installing the calibration chamber 31
Installing the drive unit 26
Installing the immersion tube 29
Installing the media connection 12
Intended Use 6

K
KEMA 36

L
Leakage hole 9
Length of immersion tube 27
Lift piston, SensoLock 11
Liquids, conductivity 4
Lock position 11
Loose flange 9
Lubricants 38

M
Maintenance intervals 37
Markings 5
Media connection 9
Media connection, installation 12
Modular design, retractable fitting 10
Mounting angle 8
Mounting wrench 40
Moving to PROCESS position blocked 11
Multiplug (AB) 12

O
Opening (AJ) in drive unit 26
Operating the retractable fitting 5
Order code 7
O-ring (D) on sensor 22
O-ring sets 39
Outlet hose (AF) 12
Outlet symbol 5
Overview of retractable fitting 9

P
Package contents 6
Permissible pressure for probe control 36
Pressure chamber of sensor 40
Pressure ratings for electro-pneumatic controller 36
Pressurized sensors 36
Process adaptation, modular design 10
Process adaptation (P), disassembly 30
Process adaptations, specifications 36
Index

SensoGate WA 132

PROCESS position, illustrations 14
Process pressure (Ex) 36
Process pressure ratings 36
Process temperature (Ex) 36
Product coding 7
Protective cap 40
PTFE 27
Q
Quality of compressed air 36
R
Rating plates 6
Removing a liquid-electrolyte sensor 24
Removing a solid-electrolyte sensor, long 21
Removing a solid-electrolyte sensor, short 18
Removing the calibration chamber 30
Removing the drive unit 25
Removing the immersion tube 28
Replacement parts 41
Replacing the immersion tube 27
Retractable fitting, modular design 9
Return form 43
Risks 4
Rubber bellows (B) 13
S
Safety function, SensoLock 11
Safety instructions 4
Sealing kits 39
SensoLock 11
Sensor gasket 22
Sensor head (J) 22
Sensor length 5
Sensor mounting wrench 40
Sensor specifications 36
Sensors, pressurized 36
Sensor thread 5
Sensor with liquid electrolyte, assembly 23
Sensor with liquid electrolyte, disassembly 24
Sensor with solid electrolyte, assembly (long immersion) 19
Sensor with solid electrolyte, assembly (short immersion) 16
Sensor with solid electrolyte, disassembly (long immersion) 21
Sensor with solid electrolyte, disassembly (short immersion) 18
Service cap (L) 13
SERVICE position, illustrations 13
Service set 40
Servicing the drive unit 38
Servicing the immersion tube 37
Slide washer (C) 22
Spare parts 41
Specifications 36
Step-by-step assembly, sensors 15
Supply lines 8
Surface temperature, max. 36
T
Tamb 5
Technical data 36
Temperature ratings 36
Terminal (F) 23
Test certificates 6
Tool kit, SensoGate basic equipment 40
Transport protection for sensors 15
U
Unlocking the bayonet coupling 21
Unlocking the travel movement 11
Unlock position 11
Usage 5
W
Water connection 6
Watering cap 15
Windows in the immersion tube (Q) 27
Z
ZU0647, sensor mounting wrench 40
ZU0670/1, air supply 40
ZU0670/2, air supply 40
ZU0680, SensoGate service set, basic 40
ZU0713, hose 40
ZU0733, adapter with electrical limit switch 41
ZU0734, adapter without electrical limit switch 41
ZU0739, bellows 41
ZU0742, adapter with electrical limit switch 40
ZU0759, protective cap 40