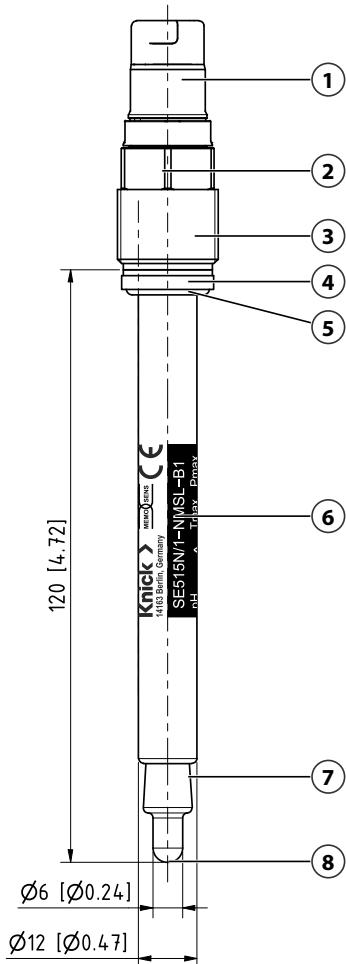


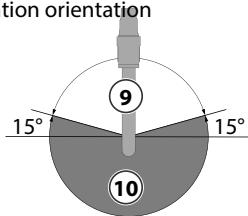
User Manual

SE515 pH Sensor



All dimensions in millimeters [inches]

Installation orientation



- 1 Memosens connector
- 2 A/F 19 with printed serial number
- 3 PG 13.5 connection
- 4 PVDF compression ring
- 5 O-ring 11.5 x 2.6 mm EPDM FDA
- 6 Nameplate
- 7 Junction
- 8 Sensor tip
- 9 Permitted installation orientation
- 10 Prohibited installation orientation

Safety

This document contains important instructions for the use of the product. Always follow all instructions and operate the product with caution. If you have any questions, please contact Knick Elektronische Messgeräte GmbH & Co. KG (hereinafter sometimes referred to as "Knick") using the information provided on the back page of this document.

Hazards due to pressure, temperature, aggressive media, or explosive atmospheres are possible, depending on the location of use.

Intended Use

The SE515 sensor (hereafter also called "product") is used for continuous pH measurement in aqueous process media.

SE515X/*-NMSN-* Digital pH measurement

Use of the product is only permitted in compliance with the operating conditions stated in the Specifications.

The measurement data of the sensor are output via a suitable industrial transmitter.

THE OPERATING COMPANY SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGES RESULTING FROM OR ARISING OUT OF AN UNINTENDED USE OF THE PRODUCT.

Personnel Requirements

The operating company shall ensure that any personnel using or otherwise interacting with the product is adequately trained and has been properly instructed.

The operating company shall comply and cause its personnel to comply with all applicable laws, regulations, codes, ordinances and relevant industry qualification standards related to product.

Hazardous Substances

IN THE EVENT OF ANY CONTACT WITH HAZARDOUS SUBSTANCES OR OTHER INJURY HEREUNDER, SEEK IMMEDIATE MEDICAL ATTENTION OR FOLLOW APPLICABLE PROCEDURES TO ADDRESS HEALTH AND SAFETY OF PERSONNEL. FAILURE TO SEEK IMMEDIATE MEDICAL ATTENTION MAY RESULT IN SERIOUS INJURY OR DEATH.

In certain situations, e.g., sensor replacement or cleaning, personnel may come into contact with the following hazardous substances:

- Process medium
- Cleaning medium

The operating company is responsible for conducting a job hazard analysis.

See the relevant manufacturers' safety datasheets for hazard and safety instructions on handling hazardous substances.

Product

Package Contents

- SE515 with watering cap
- User Manual
- Quality Certificate
- EU Declaration of Conformity

Product Identification

pH Sensor	SE515	/	-
Explosion protection	Without	N/	N
Sensor length	120 mm	/1	
Pt electrode	Without	-	N
Electrical connections	Memosens connector	MS	
Glass material	Sigma glass	L	
Internal marking		B	1

Product Characteristics

- Sensor tip made of Sigma glass, low impedance, application for low temperatures
- Precision-ground junction
- Gel electrolyte, pressurized
- Integrated temperature detector

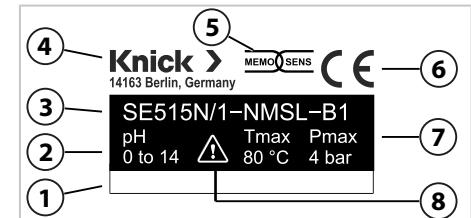
Note: The temperature detector measures the temperature as secondary measured value. This measurement is primarily intended for automatic compensation of the measured value and not for regulating and controlling the process temperature.

The sensor's identification and calibration data is stored in the Memosens connector. The data communication of the Memosens sensors takes place exclusively via a compatible meter.

Nameplate

The SE515 sensor is labeled with a nameplate on the sensor body.

Example:



1 Approval information ¹⁾	5 Memosens logo
2 Measuring Range	6 CE mark
3 Manufacturer and address	7 Permitted pressure and temperature range
4 Product designation	8 Special conditions and danger points

Item number/serial number/product date in form *****/*****/YYWW are printed on the packaging.

Refer to the packaging for more information on approvals and disposal.



Installation

⚠ CAUTION! Risk of cutting injuries from broken sensor glass. Handle the sensor with care.

1. Check the SE515 sensor for damage.
Note: Replace damaged sensors.
2. Remove the watering cap.
3. Briefly rinse the sensor with pure water and pat dry.
4. Remove air bubbles from the sensor tip by flicking the sensor upwards.
5. Install the sensor at the installation location.
Note: Do not install the sensor upside down. See graphic for permitted installation position.
6. Align the junction in the process flow direction.
7. Connect the sensor to the sensor cable²⁾ and connect the sensor cable to a measuring device³⁾.

Operation

1. Clean the sensor after every work cycle.
Note: Adjust the cleaning intervals to the operating conditions.
2. During work breaks or measurement interruptions, store the sensor in the hydration cap filled with electrolyte (3 mol/l KCl).
Note: Do not allow process media to dry on the sensor tip and junction.

Cleaning

⚠ CAUTION! Injury due to the use of aggressive cleaning agents. Handle aggressive cleaning agents with care; wear protective equipment if necessary. Observe safety instructions.

Clean the sensor in case of soiling and deviations in slope, zero point, and/or response time.

1. Remove soiling with an appropriate cleaning agent.
2. Rinse the sensor with demineralized water.

Recommended Cleaning Agents

Contamination	Cleaning Medium
Water-soluble substances	Water
Greases and oils	Warm water and household dishwashing liquid
Lime and hydroxide deposits	Acetic acid (5 %) or hydrochloric acid (1 %)
Protein	Pepsin/HCl solution
Silver sulfide	Thiourea/HCl solution

Calibration

If necessary, remove the sensor SE515 before calibration. A 2-point calibration is recommended, which is performed on the measuring device³⁾.

Removal

⚠ WARNING! For process media that contain hazardous substances: The sensor has direct contact with the process medium. Rinse and clean the SE515 after removing it from the process medium. Follow the information on hazardous substances.

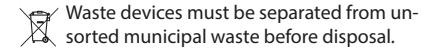
1. Depressurize the process and discharge if necessary.
2. Disconnect the sensor from the sensor cable.
3. Remove the sensor from the fitting.
4. Clean and store the sensor.

Storage

Immerse the sensor tip and junction into the watering cap with electrolyte (3 mol/l KCl) and store. If the sensor is unintentionally stored dry, water the sensor in electrolyte (3 mol/l KCl) for several hours.

Disposal

To dispose of the product properly, follow the local regulations and laws.



Information on return and recycling can be found in the manufacturer's declaration on our website.

Specifications

Measuring Range	
pH	0 ... 14
Process Temperature	-5 ... 80 °C (23 ... 176 °F)
Relative Process Pressure	0 ... 4 bar (0 ... 58 psi)
Temperature Detector	NTC 30 kΩ
Wetted Materials	
Body	Glass
Junction	Precision-ground junction
Sensor tip	Sigma glass
Reference System	Ag/AgCl/Cl ⁻ Gel electrolyte
Process Connection	PG 13.5
Tightening torque	1 ... 3 Nm
Electrical Connection	Memosens connector
Dimensions	See graphic

Translation of the original instructions
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Version 2

This document was published on September 19, 2025.

The latest documents are available for download on our website under the corresponding product description.

TA-300.007-KNEN02



²⁾ See Control Drawing for information on the certified Memosens cable.

³⁾ Observe the instructions for use relating to the measuring device.