Knick

User Manual

SE605H

Conductivity Sensor

Read before installation.
Keep for future use.

www.knick-international.com

Supplemental Directives

READ AND SAVE THIS DOCUMENT FOR FUTURE REFERENCE. BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE OR MAINTAIN THE PRODUCT, PLEASE ENSURE A COMPLETE UNDERSTANDING OF THE INSTRUCTIONS AND RISKS DESCRIBED HEREIN. ALWAYS OBSERVE ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS IN THIS DOCUMENT COULD RESULT IN SERIOUS INJURY AND/OR PROPERTY DAMAGE. THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

These supplemental directives explain how safety information is laid out in this document and what content it covers.

Safety Chapter

This document's safety chapter is designed to give the reader a basic understanding of safety. It illustrates general hazards and gives strategies on how to avoid them.

Warnings

This document uses the following warnings to indicate hazardous situations:

Symbol	Category	Meaning	Remark
⚠	**WARNING**	Designates a situation that can lead to death or serious (irreversible) injury.	The warnings contain information on how to avoid the hazard.
⚠	**CAUTION**	Designates a situation that can lead to slight or moderate (reversible) injury.	
None	**NOTICE**	Designates a situation that can lead to property or environmental damage.	

Symbols Used in this Document

Symbol	Meaning
→	Reference to additional information
✓	Interim or final result in instructions for action
▶	Sequence of figures attached to an instruction for action
①	Item number in a figure
(1)	Item number in text

Table of Contents

1 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.

1.1 Intended Use

The SE605H sensor (hereafter also called "product") is used for hygienic continuous conductivity measurement in aqueous process media.

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

The defined operating conditions must be observed when using this product.
→ *Specifications, p. 32*

Using weld-in sockets from Knick ensures the tightness of the SE605H sensor to the process. → *Accessories, p. 27*

If weld-in sockets of other manufacturers are used, they must be tested and evaluated by the operating company.

USE CAUTION AT ALL TIMES WHEN INSTALLING, USING, MAINTAINING OR OTHERWISE INTERACTING WITH THE PRODUCT. ANY USE OF THE PRODUCT EXCEPT AS SET FORTH HEREIN IS PROHIBITED, AND MAY RESULT IN SERIOUS INJURY OR DEATH, AS WELL AS DAMAGE TO PROPERTY. THE OPERATING COMPANY SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGES RESULTING FROM OR ARISING OUT OF AN UNINTENDED USE OF THE PRODUCT.

1.2 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.

1.3 Residual Risks

The product has been developed and manufactured in accordance with generally accepted safety rules and regulations. The SE605H sensor was subjected to a risk assessment. Nevertheless, not all risks can be sufficiently reduced; the following residual risks remain:

Environmental Influences

The effects of pressure, moisture, corrosion, chemicals, and ambient temperature can negatively impact on safe operation of the product.

Observe the following instructions:

- Only operate the SE605H sensor in compliance with the stated operating conditions. → *Specifications, p. 32*
- If using chemically aggressive process media, regularly check the SE605H sensor for damage.
- Adhering and sticky process media may interfere with measurements. Regularly remove adherents. As required, recalibrate the SE605H sensor. → *Cleaning, p. 21* → *Calibration, p. 22*

1.4 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), personnel may come into contact with the following hazardous substances:

- Process medium
- Cleaning medium

This document specifies the personal protective equipment that needs to be used when carrying out handling instructions.

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.

1.5 Operation in Hazardous Locations

Memosens Ex sensors are marked by an orange-red ring.

Observe all applicable local and national codes and standards for the installation of equipment in explosive atmospheres. For further guidance, consult the following:

- IEC 60079-14
- EU directives 2014/34/EU and 1999/92/EC (ATEX)
- NFPA 70 (NEC)
- ANSI/ISA-RP12.06.01

The electrical and thermal parameters of the sensors must be adhered to.

Combined with a model CA/MS-***X**, model CA/MS-***X**-L measuring cable, or a certified measuring cable that is identical in hardware and function, the sensor may be connected to a suitable measuring device, as specified in the Certificates BVS 15 ATEX E141 X and IECEx BVS 15.0114 X.

1.6 Electrical and Thermal Parameters in Hazardous Locations

Certificate Number	Marking
BVS 16 ATEX E 037 X	Ex II 1G
IECEx BVS 16.0030X	Ex ia IIC T3/T4/T6 Ga

Thermal Parameters

Special Conditions

- The measuring cable and sensor may only be used within the ambient temperature range specified for the temperature class.
- The measuring cable, including its connecting head, must be protected from electrostatic charging if it passes through areas of Zone 0 (category 1G).
- Memosens sensors must not be operated under electrostatically critical process conditions. Avoid directly exposing the connection system to strong vapor or dust currents.
- Metallic process connection parts must be mounted electrostatically conductive at the mounting location (< 1 MΩ).
- Memosens sensors must only be used in liquids with a minimum conductivity of 10 nS/cm.

Sensors with the CondCheck Add-On Function

- Resistors with a power rating of 250 mW are suitable for the temperature class T4 ... T3 at a maximal ambient temperature of 70 °C (158 °F).
- Alternatively, the CondCheck interface may only be used if a safe, non-explosive atmosphere can be ensured.
- Alternatively, the resistors connected to the CondCheck interface must be assessed regarding their self-heating when subjected to a 166 mW load. The resistor's surface temperature must remain below the required temperature class, with a safety margin of 5 K.

2 Product

2.1 Package Contents

- SE605H in the version ordered
- User Manual
- Quality certificate
- Control Drawing[1)]
- EU Declaration of Conformity[1)]

2.2 Product Identification

The various versions of the SE605H product are coded in a model designation.

2.2.1 Example Design

Model designation		**SE605H**	**–**	**X**	**MS**	**H**	**0**	**F**	**/**	**0**	**0**	**0**	**-**	**0**	**0**	**0**
Explosion protection	ATEX			**X**									**-**			
Communication	Memosens				**MS**								**-**			
Process connection	Ingold socket 25 mm (G 1¼")					**H**	**0**						**-**			
Seal material	FKM FDA							**F**					**-**			
Special version	Without								**/**	**0**	**0**	**0**	**-**			
Certificates	Without												**-**	**0**	**0**	**0**

[1)] Only for versions certified for operation in hazardous locations.

2.2.2 Product Code

Hygienic 2-Electrode Conductivity Sensor		**SE605H**	**-**	**_**	**_**	**_**	**_**	**_**	**/**	**_**	**_**	**_**	**-**	**_**	**_**	**_**
Explosion protection	Without			**N**														
	ATEX			**X**														
Communication	Memosens				**MS**													
Process connection	Ingold socket 25 mm, (G 1¼")					**H**	**0**											
	Ingold socket 25 mm, (G 1¼"), 50 mm long					**H**	**Z**											
	Clamp 1.5"					**J**	**1**											
	Clamp 2"					**J**	**2**											
Seal material	FKM FDA							**F**										
	EPDM FDA							**E**										
	FFKM FDA							**H**										
	FKM FDA USP VI							**V**										
	EPDM FDA USP VI							**U**										
	FFKM FDA USP VI							**W**										
Special version[1]	Without								**/**	**0**	**0**	**0**						
	Customer-specific special datasheet								**/**	**0**	**0**	**F**						
	CondCheck								**/**	**0**	**0**	**P**						
Certificates[2]	Without												**-**	**0**	**0**	**0**		
	Inspection Certificate 3.1 in accordance with EN 10204												**-**	**0**	**0**	**3**		
	FDA - USP VI												**-**	**0**	**0**	**U**		
	Surface Ra < 0.4 µm												**-**	**0**	**0**	**4**		
	Surface Ra < 0.8 µm												**-**	**0**	**0**	**8**		
	FDA												**-**	**0**	**0**	**F**		

1) Can be combined.

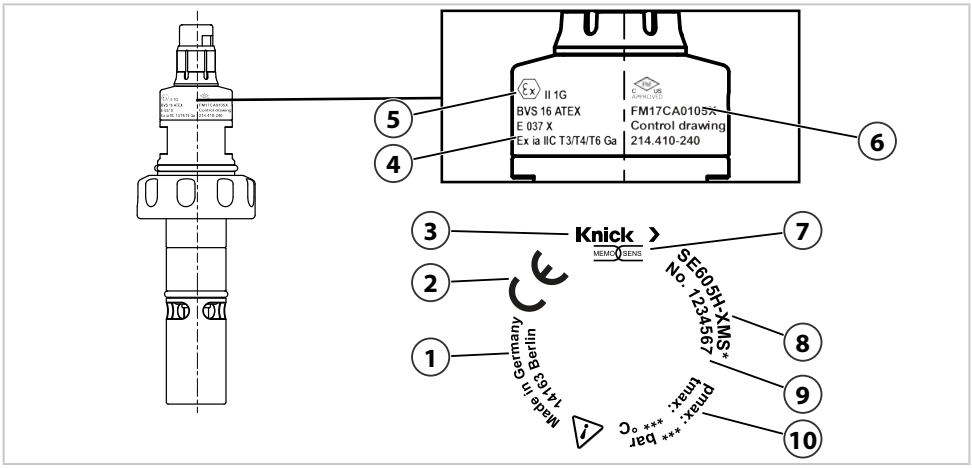
2) Can be combined. Max. three certificates possible.

2.3 Nameplates

The body of the SE605H sensor is marked with a nameplate.

Nameplate, Version with Ex Approval

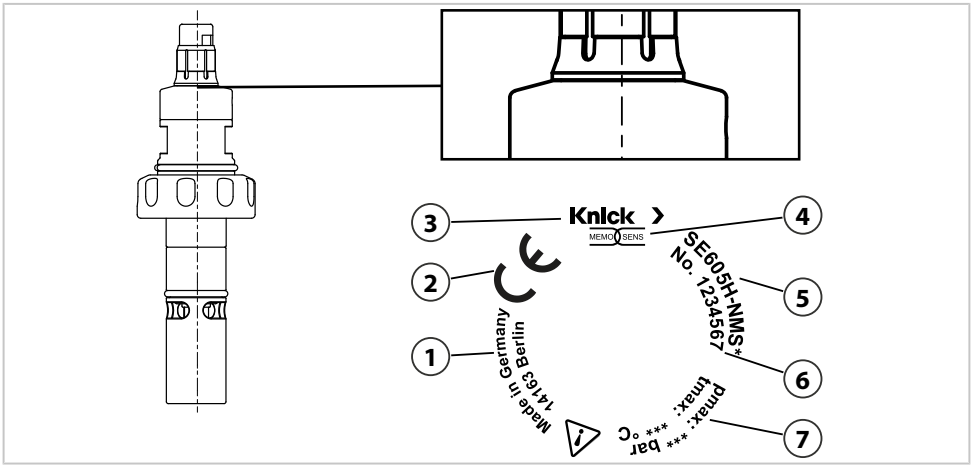
Note: The figure shows a nameplate for the SE605H-X version by way of example.



1	Manufacturer address with designation of origin	6	Approval/FM approval
2	Conformity marking with identification number	7	Memosens technology logo
3	Manufacturer	8	Type (product code)
4	Ex marking	9	Serial number
5	ATEX mark	10	Max. operating pressure and temperature

Nameplate, Version Without Ex Approval

Note: The figure shows a nameplate for the SE605H version by way of example.



1	Manufacturer address with designation of origin	5	Type (product code)
2	Declaration of Conformity	6	Serial number
3	Manufacturer	7	Max. operating pressure and temperature
4	Memosens technology logo		

2.4 Symbols and Markings

	Special conditions and danger points! Observe the safety information and instructions on safe use of the product as outlined in the product documentation.
CE 0044	CE mark with identification number[1)] of the notified body involved in the production control.
Ex	ATEX marking[1)] of the European Union for operation in hazardous locations → *Operation in Hazardous Locations, p. 7*
FM C US APPROVED	FM marking for operation in hazardous locations in the US and Canada
	The symbol on Knick products means that waste devices must be disposed of separately from unsorted municipal waste.

1) Dependent on the ordered version → *Product Code, p. 10*

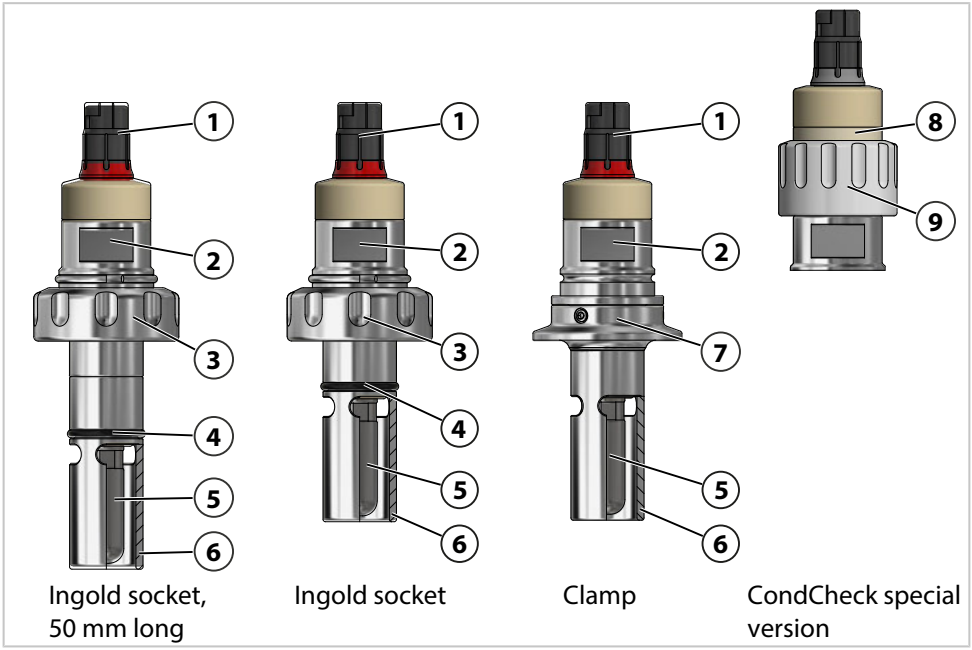
2.5 Design and Function

The SE605H sensor features a temperature detector and outer and inner electrodes made of stainless steel.

Note: The temperature detector is used for automatic measured value compensation, but not to display the temperature or control the process temperature.

The sensor is attached either to a flow-through fitting, a container, or piping with different process connections.

A Memosens measuring cable is required for connection to an industrial transmitter. This cable is plugged into the Memosens connector.

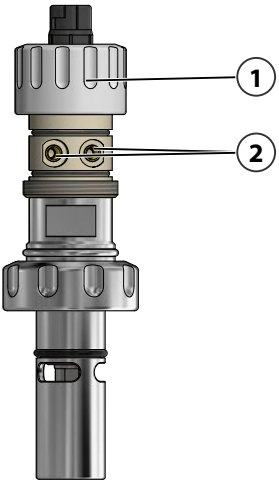


Ingold socket, 50 mm long | Ingold socket | Clamp | CondCheck special version

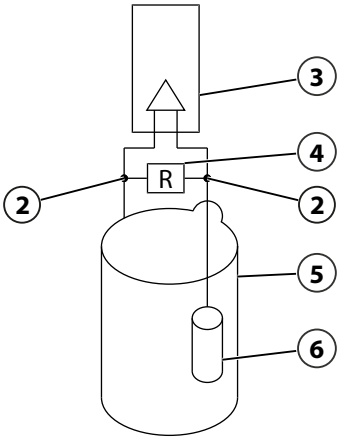
1	Memosens connector	6	Outer electrode
2	A/F 24	7	Clamp 1.5″ or 2″
3	Coupling nut G1¼″	8	Test connection with two test jacks
4	O-ring 21 x 2.5 mm	9	Coupling nut
5	Inner electrode		

2.5.1 Structure and Function of CondCheck Add-On Function

The special-version of the SE605H sensor with CondCheck is used to verify the sensor's own transmitter with an external test resistor. Measurement is only possible when the sensor is not immersed in liquid. Conductive soiling must not be present.



Block diagram



1	Coupling nut	4	Test resistor
2	Test jacks, Ø 4 mm	5	Outer electrode
3	Memosens electronics in sensor head	6	Inner electrode

2.6 Measuring Principle

For contacting conductivity measurement, AC voltage is applied to the electrodes of the sensors in the measuring solution. The ions in the process medium move toward the electrode with the respective opposite charge, thereby generating a current flow. In accordance with Ohm's law, this results in the electrical resistance or its inverse, conductance G.

The conductivity of the process medium is determined under consideration of the cell constant determined by the sensor geometry.

3 Installation

3.1 General Installation Instructions

Installation options:

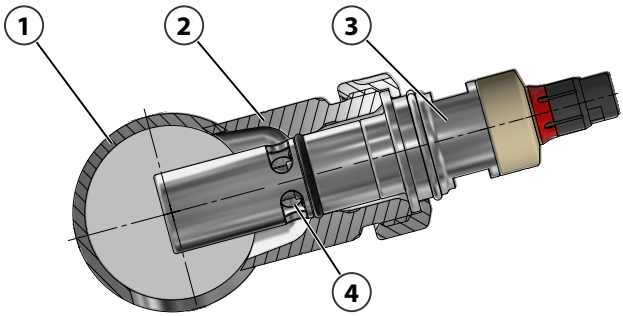
- Flow-through fittings
- Vessels
- Piping
- Bypass systems

Note: If the SE605H sensor is combined with products from other manufacturers, the tightness to the process must be tested and evaluated.

3.1.1 Sensor Installation Orientation

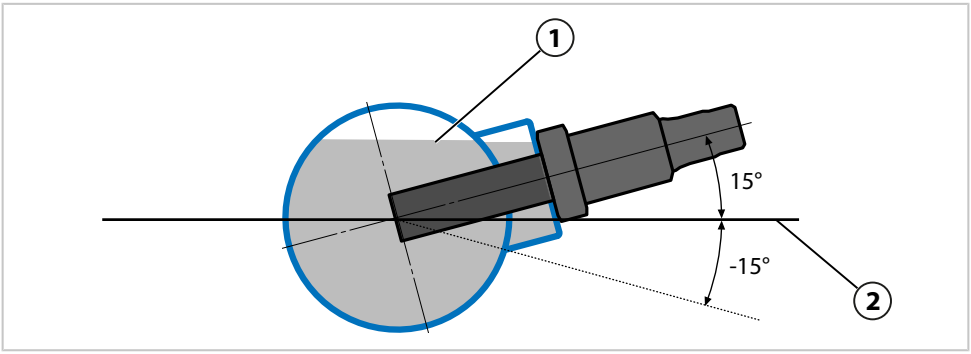
The SE605H sensor can be installed in any position.

Ensure that the process medium surrounds or passes through the vent openings.



1	Piping	3	SE605H sensor
2	Ingold socket	4	Vent openings

Recommended Installation Orientation:



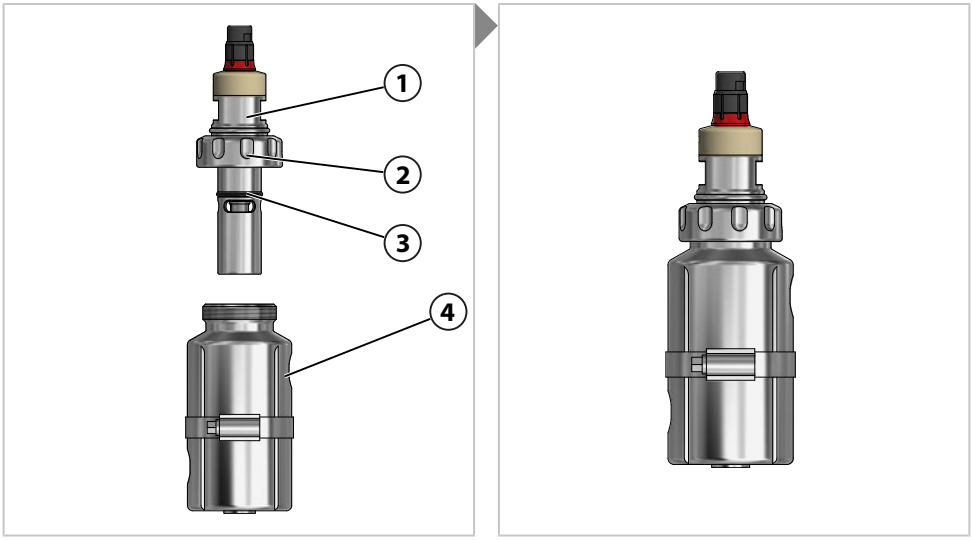
Install the SE605H sensor at an installation angle ±15° above the horizontal **(2)** and pay attention to the fill level **(1)**. The process medium must surround or pass through the vent openings.

Installation angle over 15°: Cavities or bubbles can form in the weld-in socket and affect the results of the measurement.

Installation angle upside down: The sensor can become sludged up. Clean the sensor at regular intervals. → *Cleaning, p. 21*

3.2 Installation in ARF203 Flow-Through Fitting

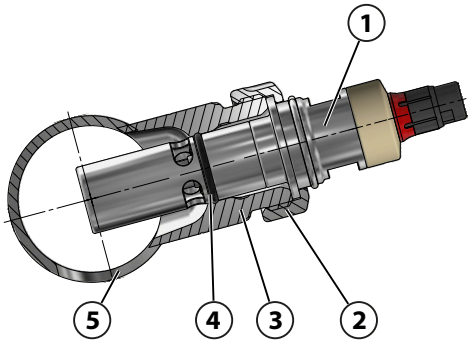
⚠ CAUTION! When removing the sensor, process medium that contains hazardous substances may escape. Depressurize the process and, if necessary, drain off process medium prior to installing, replacing, or removing the sensor.



01. Check the SE605H sensor **(1)** and O-ring 20 x 2.5 mm **(3)** for damage.
02. Fit the sensor **(1)** in the ARF203 flow-through fitting **(4)** and tighten the coupling nut **(2)**.
03. Test for leaks.
    ✓ The SE605H sensor is mechanically installed.

3.3 Installation in Piping

⚠ CAUTION! When removing the sensor, process medium that contains hazardous substances may escape. Depressurize the process and, if necessary, drain off process medium prior to installing, replacing, or removing the sensor.



01. Check the SE605H sensor **(1)** and O-ring 20 x 2.5 mm **(4)** for damage.
02. Check the distance to the pipe wall **(5)**. If necessary, calibrate the sensor.
    → *Calibration, p. 22*
03. Fit the sensor **(1)** in the pipe socket **(3)**.
04. Tighten the coupling nut **(2)**.
05. Test for leaks.
    ✓ The SE605H sensor is mechanically installed.

3.4 Electrical Installation

3.4.1 General Information on Electrical Installation

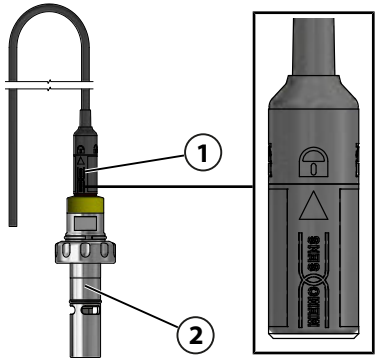
The SE605H sensor is electrically connected to an industrial transmitter.

Note: More information on Knick industrial transmitters is available at www.knick-international.com. → *www.knick-international.com*

3.4.2 Sensor Cable (Memosens)

A CA/MS-***N** type Memosens cable or one with an identical construction is required for the electrical connection of the SE605-**MS sensor. → *Accessories, p. 27*

Note: For operation in hazardous locations, use the C/MS-***X** type Memosens cable.



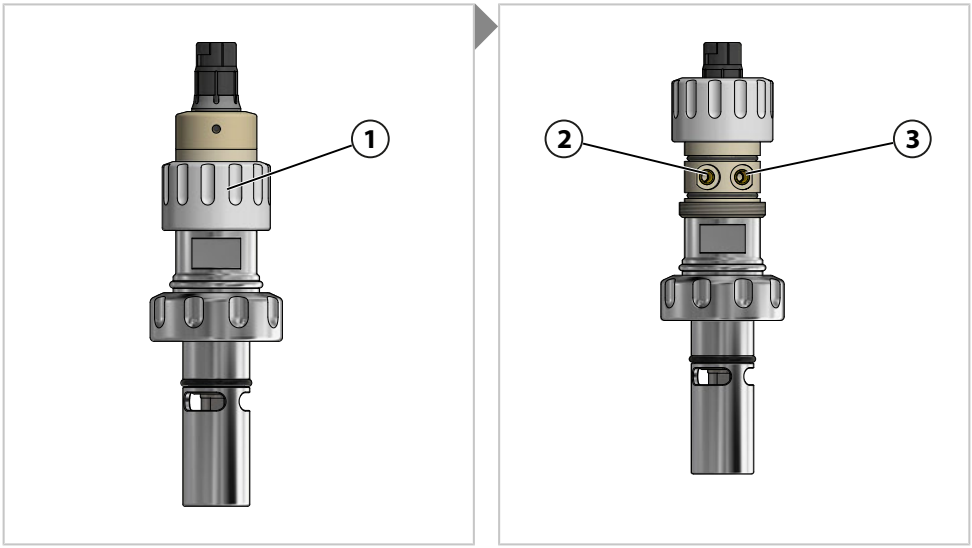
01. Connect the Memosens cable **(1)** to the sensor SE605H **(2)**.
02. Close the bayonet coupling by turning.
03. Connect the ferrules or M12 plug of the Memosens cable to the industrial transmitter.

    Note: For information on the terminal assignment, see the user manuals of the relevant cable and industrial transmitter.

    ✓ SE605H is electrically installed.

4 Operation

4.1 CondCheck Add-On Function: Checking the Sensor Electronics



01. Switch off the temperature compensation on the industrial transmitter.
02. Dry the sensor.
03. Clean the SE605H sensor if it is soiled. → *Cleaning, p. 21*
04. Loosen the coupling nut **(1)** and push it upward.
05. Connect the test resistor[1)] to the test jacks **(2)** and **(3)**.
06. Read the resistance value (conductance) using the connected transmitter. If this is not possible, convert the specific conductivity displayed into the resistance value without temperature compensation.
07. Remove the test resistor from the test jacks **(2)** and **(3)**.
08. Push the coupling nut **(1)** downward and tighten manually.
    ✓ The sensor electronics check is completed.

1) Observe the special conditions for use in a hazardous location.
→ *Operation in Hazardous Locations, p. 7*

5 Maintenance, Cleaning, Calibration

5.1 Maintenance

The SE605H sensor does not require any maintenance.

5.2 Cleaning

If there are visible deposits, clean the SE605H sensor.

⚠ WARNING! For process media that contain hazardous substances: The sensor has direct contact with the process medium. Rinse and clean the SE605H after removing it from the process medium. Follow the information on hazardous substances.

⚠ CAUTION! When removing the sensor, process medium that contains hazardous substances may escape. Depressurize the process and, if necessary, drain off process medium prior to installing, replacing, or removing the sensor.

01. Remove the SE605H sensor and rinse if necessary.
02. Soak and dissolve coatings and deposits in the corresponding cleaning medium.
03. Use a soft brush to remove coatings and deposits.
04. Rinse the sensor with demineralized water and dry it.
    ✓ SE605H is cleaned.

Recommended Cleaning Media

Impurity	Cleaning Medium
Water-soluble substances	Deionized water
Greases and oils	Warm water and household dishwashing liquid
Heavy contamination	Ethanol or isopropanol
Lime and hydroxide deposits	Acetic acid (5 %) or hydrochloric acid (1 %)

5.3 Calibration

⚠ WARNING! For process media that contain hazardous substances: The sensor has direct contact with the process medium. Rinse and clean the SE605H after removing it from the process medium. Follow the information on hazardous substances.

⚠ CAUTION! When removing the sensor, process medium that contains hazardous substances may escape. Depressurize the process and, if necessary, drain off process medium prior to installing, replacing, or removing the sensor.

01. Remove the sensor.
02. Clean, rinse, and dry the sensor. → *Cleaning, p. 21*
03. Fill the calibration beaker with the appropriate conductivity standard. → *Accessories, p. 27*
04. Immerse the sensor in the conductivity standard.
05. Use the industrial transmitter to calibrate the SE605H sensor and adjust it if necessary.
    ✓ SE605H is calibrated or adjusted.
    Note: More information on Knick industrial transmitters is available at www.knick-international.com. → *www.knick-international.com*

6 Maintenance

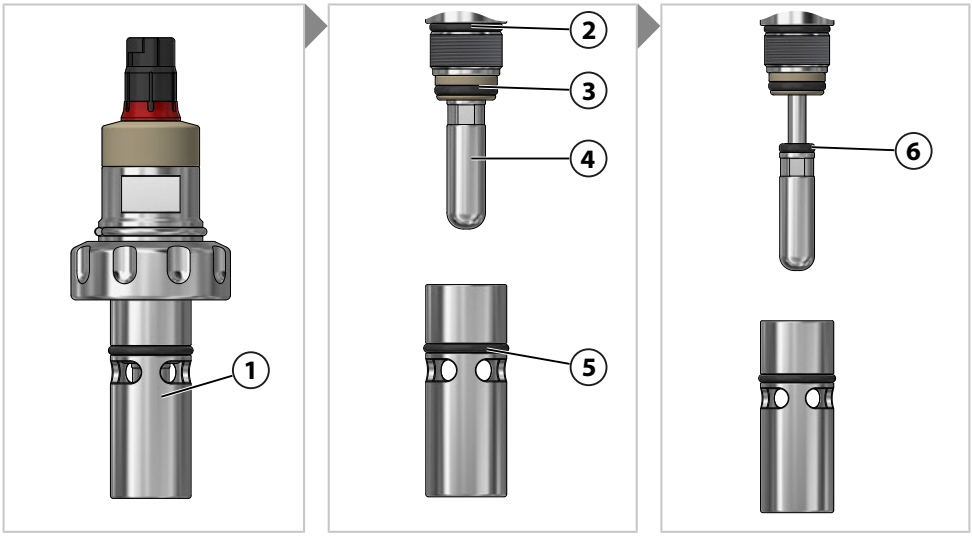
6.1 Replacing the O-Rings

⚠ WARNING! For process media that contain hazardous substances: The sensor has direct contact with the process medium. Rinse and clean the SE605H after removing it from the process medium. Follow the information on hazardous substances.

⚠ CAUTION! When removing the sensor, process medium that contains hazardous substances may escape. Depressurize the process and, if necessary, drain off process medium prior to installing, replacing, or removing the sensor.

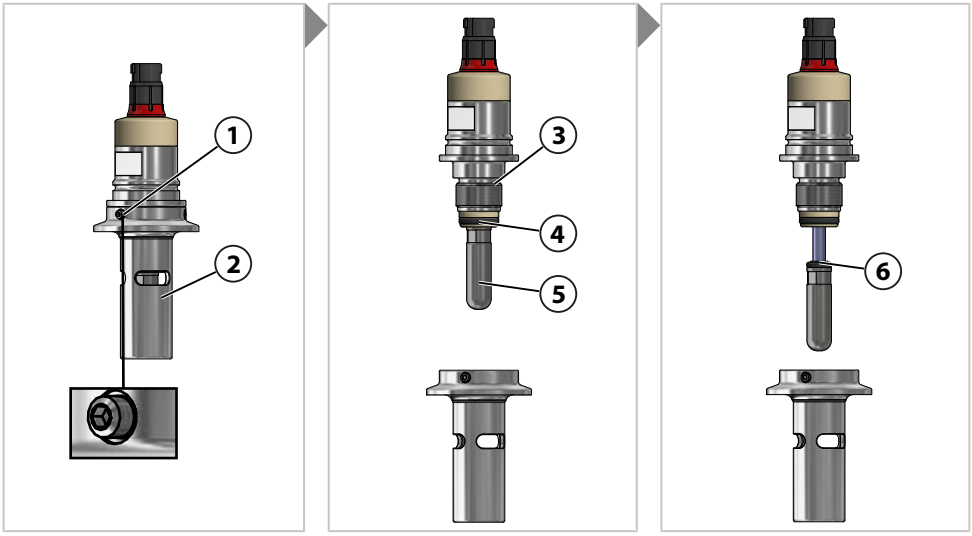
The operating company specifies the relevant inspection and maintenance intervals. Replace the O-rings at these intervals.

Sensor with Ingold Socket Process Connection



01. Remove and clean the sensor. → *Cleaning, p. 21*
02. Unscrew the outer electrode **(1)** and inner electrode **(4)**.
03. Replace O-ring **(2)** 18.0 × 2.0 mm, O-ring **(3)** 15.5 × 2.6 mm, O-ring **(5)** 20 × 2.5 mm, and O-Ring **(6)** 8.0 × 2.5 mm.
04. Screw on the inner electrode **(4)** and outer electrode **(1)** tightly.
05. Install the sensor.
    ✓ The O-rings are replaced.

Sensor with Clamp Process Connection



01. Remove the sensor.
02. Use a A/F 4 Allen key to loosen the set screws **(1)**. Do not unscrew them completely.
03. Unscrew the outer electrode and Tri-Clamp **(2)**.
04. Unscrew the inner electrode **(5)**.
05. Replace O-ring **(3)** 18.0 x 2.0 mm, O-ring **(4)** 15.5 x 2.6 mm, and O-ring **(6)** 8.0 x 2.5 mm.
06. Screw on inner electrode **(5)** tightly.
07. Screw on the outer electrode and Tri-Clamp **(2)** tightly.
08. Tighten the set screws **(1)**.
09. Install the sensor.

✓ The O-rings are replaced.

Process connection	Dimensions	Quantity	Material
Ingold socket	8.0 × 2.5 mm	1	→ *Product Code, p. 10*
	15.5 × 2.6 mm	1	
	18.0 × 2.0 mm	1	
	20.0 × 2.5 mm	1	
Clamp	8.0 × 2.5 mm	1	
	15.5 × 2.6 mm	1	
	18.0 × 2.0 mm	1	

7 Troubleshooting

Failure Condition	Possible Cause	Remedy
Deviating measurement display[1)]	Visible deposits on the sensor.	Clean and calibrate the sensor. → *Cleaning, p. 21* → *Calibration, p. 22*
Measured value not displayed[1)]	Faulty cable connection.	Check terminal assignment on industrial transmitter.
		Check bayonet coupling at sensor.
	Sensor cable defective.	Replace sensor cable.
	Sensor defective.	Replace sensor.

1) Measured value on industrial transmitter.

8 Decommissioning

8.1 Removing the Sensor

⚠ WARNING! For process media that contain hazardous substances: The sensor has direct contact with the process medium. Rinse and clean the SE605H after removing it from the process medium. Follow the information on hazardous substances.

⚠ CAUTION! When removing the sensor, process medium that contains hazardous substances may escape. Depressurize the process and, if necessary, drain off process medium prior to installing, replacing, or removing the sensor.

01. Remove the sensor cable from the sensor.
02. Unscrew the sensor.
03. Seal the process connection suitably.
    ✓ TheSE605H is removed.

8.2 Disposal

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

Customers can return their electrical and electronic waste devices.

For details on how to return and dispose of electrical and electronic devices in an environmentally friendly manner, please refer to the manufacturer's declaration on our website. If you have any queries, suggestions, or questions about how Knick recycles electrical and electronic waste devices, please send us an email: → *support@knick.de*

9 Accessories

Conductivity Standard CS-C147K/ 500

Measured value:	147 µS/cm at 25 °C (77 °F)
Volume size:	500 ml
Order No.:	CS-C147K/500

CS-C15K/500 Conductivity Standard

Measured value:	15 µS/cm at 25 °C (77 °F)
Volume size:	500 ml
Order code:	CS-C15K/500

ZU0320 Calibration Certificate for Conductivity Sensors

Determination of the individual cell constant with a measurement uncertainty of 1 %.

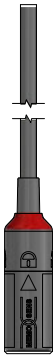
ZU0286 Inspection Certificate 3.1

Inspection Certificate 3.1 in accordance with EN 10204 with description and results of the tests carried out

Memosens cable CA/MS [1)]

Cable end	Cable length	Order designation
Ferrule	3 m	CA/MS-003NAA
	5 m	CA/MS-005NAA
	10 m	CA/MS-010NAA
	20 m	CA/MS-020NAA
M12 plug (8-pin)	3 m	CA/MS-003NCA
	5 m	CA/MS-005NCA
	10 m	CA/MS-010NCA
	20 m	CA/MS-020NCA

1) Other cable lengths and ends on request.



Memosens cable CA/MS with Ex approval [1)]

Cable End	Cable Length	Order Designation
Ferrule	3 m	CA/MS-003XAA
	5 m	CA/MS-005XAA
	10 m	CA/MS-010XAA
	20 m	CA/MS-020XAA
M12 plug (8-pin)	3 m	CA/MS-003XCA
	5 m	CA/MS-005XCA
	10 m	CA/MS-010XCA
	20 m	CA/MS-020XCA

ZU0717 (Straight) Weld-In Socket for Tank Walls

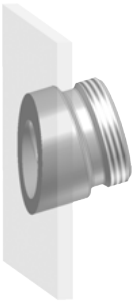
Process connection: Ingold socket (Ø 25 mm, G1¼")

ZU0717/DN (Straight) Weld-In Socket for Pipes

Process connection: Ingold socket (Ø 25 mm, G1¼")

Adapted to DN 50 ZU0717/DN 50
Adapted to DN 65 ZU0717/DN 65
Adapted to DN 80 ZU0717/DN 80
Adapted to DN 100 ZU0717/DN 100

1) Other cable lengths and ends on request.



ZU0718 (15° Incline) Weld-In Socket for Tank Walls

Process connection: Ingold socket (Ø 25 mm, G1¼")

ZU0718/DN (15° Incline) Weld-In Socket for Pipes

For connection with Ingold socket (Ø 25 mm, G1¼")

Adapted to DN50 ZU0718/DN50
Adapted to DN65 ZU0718/DN65
Adapted to DN80 ZU0718/DN80
Adapted to DN100 ZU0718/DN100

Safety weld-in sockets with Handling Safety Design (HSD) feature special grooves on the sealing surface for the process connection O-ring. These grooves prevent the O-ring from sealing if the Ingold coupling nut loosens inadvertently when process pressure is present. A minor leak means the loosening can be detected quickly and remedied before the Ingold coupling nut comes loose from the thread completely. This increases safety for personnel.

ZU0922 (Straight) HSD Safety Weld-In Socket for Tank Walls

Process connection: Ingold socket (Ø 25 mm, G1¼")

ZU0922/DN (Straight) HSD Safety Weld-In Socket for Pipes

Process connection: Ingold socket (Ø 25 mm, G1¼")

Adapted to DN50 ZU0922/DN50
Adapted to DN65 ZU0922/DN65
Adapted to DN80 ZU0922/DN80
Adapted to DN100 ZU0922/DN100

ZU0923 (ZU0923 (15° Incline) HSD Safety Weld-In Socket for Tank Walls

Process connection: Ingold socket (Ø 25 mm, G1¼")

ZU0923/DN (15° Incline) HSD Safety Weld-In Socket for Pipes

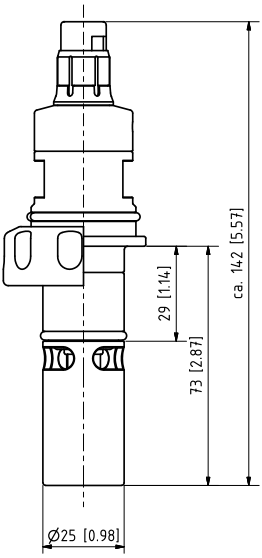
Process connection: Ingold socket (Ø 25 mm, G1¼")

Adapted to DN50 ZU0923/DN50
Adapted to DN65 ZU0923/DN65
Adapted to DN80 ZU0923/DN80
Adapted to DN100 ZU0923/DN100

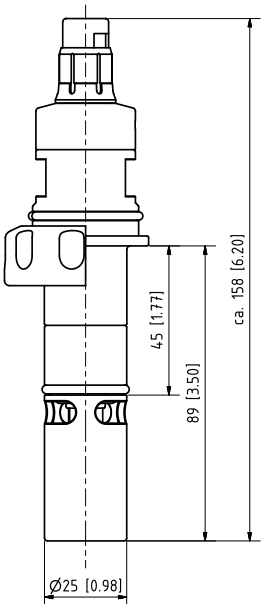
10 Dimension Drawings

Note: All dimensions are listed in millimeters [inches].

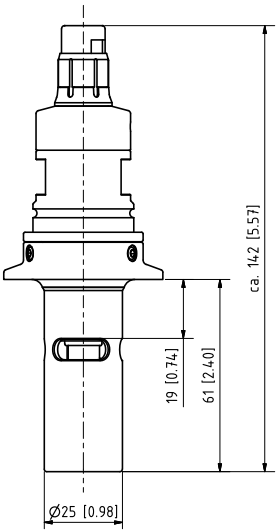
SE605H-*MSH0**



SE605H-*MSHZ**



SE605H-*MSJ***

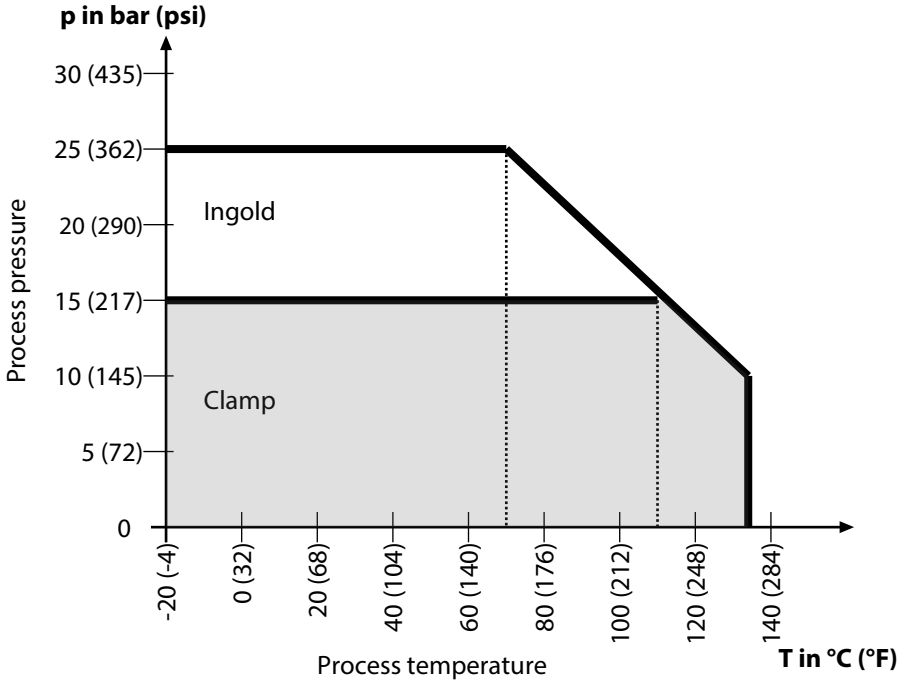


11 Specifications

Cell constant	0.021 /cm
Measuring range	0 ... 1000 µS/cm
Measurement uncertainty	0.05 + 0.02 * measured value (µS/cm; measuring range < 600 µS/cm) 0.05 + 0.04 * measured value (µS/cm; measuring range ≥ 600 µS/cm)
Material	
Sensor body	Stainless steel 1.4435
Electrodes	Stainless steel 1.4404
Isolator	PEEK
Seals	→ *Product Code, p. 10*
Test point [1)]_	PEEK, PVDF
Test jacks [1)]_	CuZn gold-plated, Ø 4 mm, spacing 14 mm
Temperature detector	NTC 30 kΩ
Temperature	
	-20 ... 135 °C (-4 ... 275 °F)
Ambient	-25 ... 80 °C (-13 ... 176 °F)
Ingold socket pressure	
-20 ... 70 °C (-4 ... 158 °F)	Max. 25 bar (362.6 psi)
70 ... 135 °C (158 ... 275 °F)	Linear drop 10 bar (145 psi)
Clamp pressure	
-20 ... 110 °C (-4 ... 230 °F)	Max. 16 bar (232 psi)
110 ... 135 °C (230 ... 275 °F)	Linear drop 10 bar (145 psi)
Process connection	→ *Product Code, p. 10*
Electrical connection	Memosens connector
Degree of protection	IP68
Dimensions	→ *Dimension Drawings, p. 31*
Weight	Approx. 0.5 kg

1) CondCheck special version

Pressure/Temperature Diagram



Notes

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Translation of the original instructions

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website under the corresponding product description.

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