Knick

User Manual
English

SE 604X-MS

2-Electrode Conductivity Sensor

MEMO SENS

www.knick.de

⚠ **WARNING!** Failure to observe this warning may result in serious injury. The safety alert symbol on the nameplate means: **Read these instructions for use, observe the Specifications, and follow the Safety Instructions.**

1. Safety Instructions

1.1. All Applications

Hazards due to pressure, temperature, aggressive media or explosive atmosphere are possible, depending on the location of use. Therefore, the installation, operation, and servicing of the sensor shall only be carried out by suitably trained personnel authorized by the operating company.

1.2. Hazardous Areas

Comply with all applicable local codes and standards for the installation of electrical equipment in hazardous locations. For orientation, please refer to 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.
Memosens Ex sensors are marked by an orange-red ring. Combined with a model CA/MS-***X** measuring cable or a certified measuring cable which is identical in hardware and function, the sensor may be connected to a suitable measuring device, as described in the Certificates BVS 15 ATEX E141 X and IECEx BVS 15.0114X.

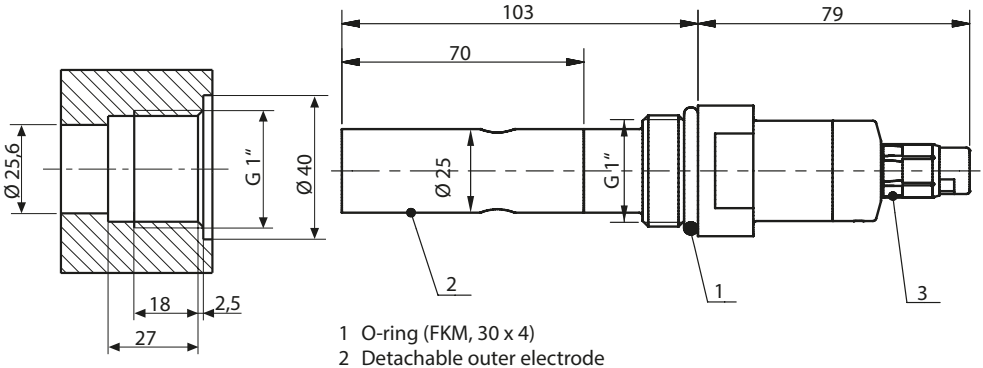
1. Applications

The SE 604X-MS conductivity sensor is a coaxially arranged 2-electrode sensor made of stainless steel. It has a large measuring range from ultrapure water to 500 µS/cm. The sensor provides a detachable outer electrode for simple cleaning. A temperature detector is integrated in the sensor. It is particularly suitable for monitoring ultrapure water in power plants

2. Package Contents

- SE 604X Memosens® conductivity sensor
- Instructions for use
- Certificates

3. Dimension Drawing

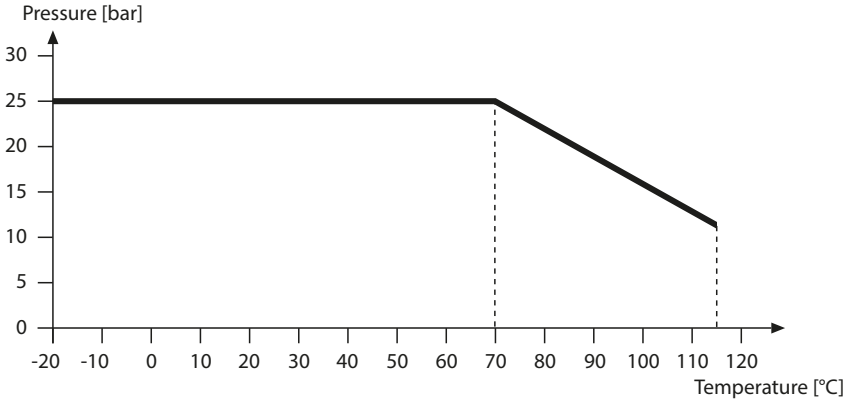


1 O-ring (FKM, 30 x 4)
2 Detachable outer electrode
3 Memosens cap

4. Calibration / Adjustment

Remove sensor, clean, rinse, and dry it, then immerse it in a calibration solution. Suitable calibration solution CS-C15K/500 (15 µS/cm), CS-C147K/500 (147 µS/cm). Perform a product calibration if the sensor can or shall not be removed. Observe instruction manual of meter. The cell constant of the sensor can be certified by the manufacturer (ZU 0320). For that purpose, you must send in the sensor.

5. Pressure / Temperature Diagram



6. Specifications

Cell constant:	0.029/cm	
Range:	0.04 ... 500 µS/cm	
Material:	• Cell and electrodes:	Stainless steel, 1.4571
	• Insulator:	PVDF
	• Gaskets:	FKM (Viton)
Temperature detector:	NTC 30 kohms	
Temperature:	Process: -20 ... 115 °C, environment: -25 ... 80 °C	
Pressure:	Max. 25 bar (-20 ... 70 °C); max. 10 bar (115 °C)	
Process connection:	G 1“	
Electrical connection:	Memosens® connector cap	
Dimensions:	See dimension drawing	
Weight:	Approx. 0.5 kg	

7. Disposal

Please observe the applicable local or national regulations concerning the disposal of “waste electrical and electronic equipment”.

8. Hazardous Areas: Electrical and Thermal Parameters

Certificate Number:

BVS 16 ATEX E 037 X
IECEx BVS 16.0030X
JPEx DEK19.0047X

Marking:

Ⓔx II 1G
Ex ia IIC T4 Ga
Ex ia IIC T4 Ga

Thermal Parameters:

Temperature class	Ambient temperature range Ta	Maximum permissible process temperature
T4	-20 °C < Ta < +115 °C	115 °C

Special Conditions

- The cable and the sensor shall 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).
- The Memosens sensors shall not be operated in electrostatically critical processing conditions.
  Intense vapor or dust flows directly impacting on the connection system shall be avoided.
- Metallic process connection parts must be mounted at the installation site so that they are electrostatically conductive (< 1 MΩ).

9. Memosens Measuring Cable (Accessory)

Model Code

The markings on the cable label or on the Memosens connector include the following information:

CA/MS - 003XAA **Model designation**

Device connection

A Ferrules

C M12 (8-pin) connector

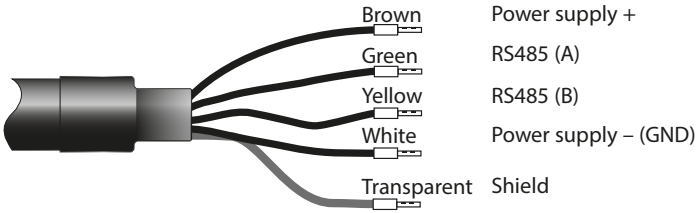
Ex approval

X Yes

Cable length

The indicated number corresponds to the length in meters (003=3 m; 015=15 m etc.).
For flexible cables, the assignment is as follows:
001=1.5 m length and 003=2.9 m length.

Cable with Ferrules – Assignments:



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

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