IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 24.0013X**

Certificate history:

Status: **Current**

Issue No: 0

Date of Issue: 2024-06-06

Applicant: **Knick Elektronische Messgeräte**
GmbH & Co. KG
Beuckestraße 22
14163 Berlin
Germany

Equipment: **MEMOSENS ISFET pH sensor type SE547X/*-NMSN-A2**

Optional accessory:

Type of Protection: **Intrinsic Safety "i"**

Marking: **Ex ia IIC T3/T4/T6 Ga**

Approved for issue on behalf of the IECEx Certification Body: **Dr Franz Eickhoff**

Position: **Senior Lead Auditor, Certification Manager and officially recognised expert**

Signature:
(for printed version)

Date:
(for printed version) 2024-06-06

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

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Manufacturer: **Knick Elektronische Messgeräte**
GmbH & Co. KG
Beuckestraße 22
14163 Berlin
Germany

Manufacturing locations: **Knick Elektronische Messgeräte**
GmbH & Co. KG
Beuckestraße 22
14163 Berlin
Germany

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/BVS/ExTR24.0015/00

Quality Assessment Report:

DE/TUN/QAR06.0016/12

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

General product information:

The MEMOSENS ISFET pH sensor type SE547X/*-NMSN-A2 is used for pH measurement and temperature measurement of liquid media. The sensor's electronic circuit is completely encapsulated.

The sensor is connected galvanically isolated via a completely insulated connection system (inductive coupling, MEMOSENS compatible supply with $P_o \leq 180$ mW).

Subject and Type:

MEMOSENS ISFET pH sensor type SE547X/*-NMSN-A2

" * " = no ex relevance, sensor length e.g. /1 = 120 mm, /2 = 225 mm, …

Ratings:

Intrinsically safe supply- / signal circuit (Ex ia IIC), connection via inductive coupling

Maximum input power P_i 180 mW

Temperature class, process- and ambient temperature range – see table

Temperature class	Process temperature range	Ambient temperature range
T3	-15 °C ≤ T_p ≤ + 135 °C	-15 °C ≤ T_a ≤ + 70 °C
T4	-15 °C ≤ T_p ≤ + 115 °C	-15 °C ≤ T_a ≤ + 75 °C
	-15 °C ≤ T_p ≤ + 110 °C	-15 °C ≤ T_a ≤ + 80 °C
	-15 °C ≤ T_p ≤ + 100 °C	-15 °C ≤ T_a ≤ + 85 °C
	-15 °C ≤ T_p ≤ + 90 °C	-15 °C ≤ T_a ≤ + 90 °C
T6	-15 °C ≤ T_p ≤ + 65 °C	-15 °C ≤ T_a ≤ + 65 °C

The temperature table above is only valid if the installation conditions specified in the manufacturer's operating instructions are observed. If these installation conditions cannot be met, the maximum process temperature range shall not exceed the maximum ambient temperature range.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1 The sensor may be used in the following process- / ambient temperature range:
Temperature class and process- / ambient temperature range – see ratings
The temperature table is only valid if the installation conditions specified in the manufacturer's operating instructions are observed.
If these installation conditions cannot be met, the maximum process temperature range shall not exceed the maximum ambient temperature range.

2 The sensor may not be operated in electrostatically critical processing conditions. Intense vapour or dust flows directly impacting on the connection system must be avoided.

3 The sensor may not be operated on processing conditions, in which an electrostatic loading of the sensor and the connecting system is to be counted. Operation in product application intended fluid media providing conductivity of at least 10 nS/cm can be assumed as electrostatic uncritical.