



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 IBE 20.0011X** Page 1 of 4 [Certificate history:](#)
Status: **Current** Issue No: 0
Date of Issue: 2020-10-05
Applicant: **Endress+Hauser Conducta GmbH+Co. KG**
Dieselstr. 24
70839 Gerlingen
Germany
Equipment: **Memosens xOS81E**
Optional accessory:
Type of Protection: **intrinsically safety**
Marking: Ex ia op is IIC T6...T3 Ga
Ex ia op is IIIC T90 °C...T200 °C Da

Approved for issue on behalf of the IECEx
Certification Body:

Alexander Henker

Position:

Deputy Head of department Certification Body

Signature:
(for printed version)

Date:

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:

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg
Germany





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Manufacturer: **Endress+Hauser Conducta GmbH+Co. KG**
Dieselstr. 24
70839 Gerlingen
Germany

Additional
manufacturing
locations:

Endress+Hauser Conducta GmbH+Co. KG **Endress+Hauser Conducta, Inc.**
Landsberger Strasse 28 4123 E. La Palma Ave.
04736 Waldheim Anaheim, CA 92807, USA
Germany **United States of America**

**Endress+Hauser Analytical
Instruments(Suzhou) Co.,LTD.**
No.31 JiangTianLiLu
Suzhou Industrial Park 215126
China

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

IEC 60079-28:2015 Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
Edition:2

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/IBE/ExTR20.0020/00](#)

Quality Assessment Reports:

[DE/BVS/QAR06.0005/11](#)

[DE/TUR/QAR13.0004/02](#)

[DE/TUR/QAR14.0002/02](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The sensor xOS81E is designed for continuous measurement of dissolved oxygen in water and aqueous solutions, and also for continuous measurement of oxygen in gases. The sensors and measuring cables electronic circuits are 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).

The sensors can be used in Zone 0 (EPL Ga) and Zone 20 (EPL Da)

Type Code

xOS81E-aabbccdefffg

x	Manufacturer (no ex-relevance) C = E+H-labeled version (no Ex relevance) O = OEM/label partner-labeled version (no Ex relevance) OC = OEM/label partner-labeled version (no Ex relevance)
aa	Order option ex certification (no ex-relevance)
bb	Measuring range (no ex-relevance)
cc	Cap characteristics AC = Stainless steel C-shape AU = Stainless steel U-shape BC = Titan C-shape BU = Titan U-shape CC = Alloy C22 C-shape CU = Alloy C22 U-shape YY = Special version
dd	Sensor length (no ex-relevance) max 600 mm
e	O-ring material (in the cap) (no ex-relevance)
fff	only if x = O, OC = three characters determining OEM/label partner (no ex-relevance)
g	Optional = one or more characters determining optional features (no ex-relevance) e.g. test or other certificates/ declarations

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Metallic process connection parts have to be mounted electrostatically conductive at the mounting location (< 1 M Ω).
- The plastic housing may only be cleaned with a damp cloth.
- It is not allowed to operate the sensor under electrostatic critical process conditions. Significant steam and dust clouds acting directly on the Memosens sensor head must be strictly avoided.
- If sensor parts are consisting of light metal e.g. Titan, then these parts have to be protected against hits.
- The maximum ambient and process temperatures for the temperature classes T3, T4 or T6 are limited according to the table (see also in manual).



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Equipment (continued):

Technical Data

Ambient temperature

Process temperature

-25 °C ≤ Ta ≤ 70 °C (T3 resp. T200 °C)

-25 °C ≤ Ta ≤ 90 °C (T4 resp. T135 °C)

-25 °C ≤ Ta ≤ 70 °C (T6 resp. T90 °C)

-15 °C ≤ Tp ≤ 130 °C (T3 resp. T200 °C)

-15 °C ≤ Tp ≤ 120 °C (T4 resp. T135 °C)

-15 °C ≤ Tp ≤ 70 °C (T6 resp. T90 °C)

Electrical Data

Supply and signal circuit in type of protection Intrinsic Safety Ex ia IIC

Inductive coupling

P_i 180 mW

Optical radiation

P_{opt} ≤15 mW

(sensor signal)