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 19.0056X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2020-08-13) Issue 0 (2019-09-10)
Date of Issue:	2021-02-08		
Applicant:	**Endress+Hauser Conducta GmbH+Co. KG** Dieselstr. 24 70839 Gerlingen **Germany**		
Equipment:	**MEMOSENS-Sensors pH/ORP-Sensors type *PS ** E- ** * * ** * *** +*, ISFET_Sensors type *PS ** *- ** * * ** * +* and Sensor-simulator Memocheck type *YP02E- ** * ** *** +***		
Optional accessory:			
Type of Protection:	**intrinsic safety "i"**		
Marking:	See Annex		

Approved for issue on behalf of the IECEx Certification Body: **Jörg Koch**

Position: **Head of 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:

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

DEKRA
On the safe side.

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

Additional manufacturing locations:

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

Endress+Hauser Conducta GmbH+Co. KG
Landsbergerstraße 28
04736 Waldheim
Germany

Endress+Hauser Conducta Inc.
4123 E. La Palma Ave.
Anaheim
CA 92807
United States of America

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/ExTR19.0055/02

Quality Assessment Reports:

DE/BVS/QAR06.0005/11 DE/TUR/QAR13.0004/02 DE/TUR/QAR14.0002/03

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

Subject and Type:
See Annex

General product information:

The MEMOSENS-Sensors are used to measure different parameters of fluid 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).

Parameters:

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 Annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The sensors may be used in the following process- / ambient temperature range:
   Temperature class and process- / ambient temperature range - see Annex
   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 sensors may not be operated in electrostatically critical processing conditions. Intense vapour or dust flows directly impacting on the connection system must be avoided.
3. Additional for ISFET Sensors:
   The sensors 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.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
The pH/ORP-Sensors type *PS16E-**********+*, *PS62E-**********+*, *PS76E-**********+*, *PS96E-**********+* were added.

The documentation was partly modified.

Annex:

BVS_19_0056X_Endress+Hauser_Annex_2.pdf

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Certificate No.: **IECEx BVS 19.0056X Issue 2**
Annex

Subject and Type:

MEMOSENS-Sensors

pH/ORP-Sensors **type *PS ** E- ** * * ** * *** +***
a bb cc d e ff g hhh +j

a	=	C or O or OC (non-Ex-relevant)
bb	=	11, 12, 16, 31, 41, 42, 61, 62, 71, 72, 76, 91, 92, 96 (details see table)
cc, d, e, ff	=	non Ex-relevant
g	=	Shaft length max. 600 mm (non-Ex-relevant)
hhh	=	Only by OPS or OCPS, Label partner (non-Ex-relevant)
+j	=	Optional, one or more characters (non-Ex-relevant)

ISFET_Sensors **type *PS ** *- ** * * ** * +***
a bb c- dd e f gg h +j

a	=	C or O or OC (non-Ex-relevant)
bb	=	47, 77, 97 (details see table)
c	=	D or E
dd, e, f, gg	=	non Ex-relevant
h	=	Shaft length max. 600 mm (non-Ex-relevant)
+j	=	Optional, one or more characters (non-Ex-relevant)

Sensor-simulator

Memocheck **type *YP02E- ** * ** *** +***
a bb c dd eee +f

a	=	C or O or OC (non-Ex-relevant)
bb, c, dd	=	non Ex-relevant
eee	=	Only by OPS or OCPS, Label partner (non-Ex-relevant)
+f	=	Optional, one or more characters (non-Ex-relevant)

MEMOSENS Sensor details - type, marking:

Type	Marking
PS11E-*******+*, *PS12E-**********+*, *PS16E-**********+*, *PS41E-**********+*, *PS42E-**********+*, *PS61E-**********+*, *PS62E-**********+*, *PS71E-**********+*, *PS72E-**********+*, *PS76E-**********+*, *PS47D-*******+*, *PS47E-*******+*, *PS77D-*******+*, *PS77E-*******+*	**Ex ia IIC T3/T4/T6 Ga**
PS31E-*******+* *PS91E-**********+* *PS92E-**********+* *PS96E-**********+* *PS97D-*******+* *PS97E-*******+*	**Ex ia IIC T4/T6 Ga**
YP02E-*****+*	**Ex ia IIC T6 Gb**

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Annex

MEMOSENS Sensor details - type, temperature class, ambient- and process temperature range:

Type	Temperature class	Process temperature range	Ambient temperature range
PS11E-*******+* ***PS12E-**********+* ***PS16E-**********+* ***PS41E-**********+* ***PS42E-**********+* ***PS72E-**********+*	T3	-15 °C ≤ T_p ≤ + 135 °C	-15 °C ≤ T_a ≤ + 70 °C
	T4	-15 °C ≤ T_p ≤ + 120 °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 ≤ + 70 °C	-15 °C ≤ T_a ≤ + 70 °C
PS61E-*******+* ***PS62E-**********+* ***PS71E-**********+* ***PS76E-**********+*	T3	0 °C ≤ T_p ≤ + 140 °C	0 °C ≤ T_a ≤ + 70 °C
	T4	0 °C ≤ T_p ≤ + 120 °C	0 °C ≤ T_a ≤ + 75 °C
		0 °C ≤ T_p ≤ + 110 °C	0 °C ≤ T_a ≤ + 80 °C
		0 °C ≤ T_p ≤ + 100 °C	0 °C ≤ T_a ≤ + 85 °C
		0 °C ≤ T_p ≤ + 90 °C	0 °C ≤ T_a ≤ + 90 °C
	T6	0 °C ≤ T_p ≤ + 70 °C	0 °C ≤ T_a ≤ + 70 °C
PS31E-*******+*	T4	0 °C ≤ T_p ≤ + 80 °C	0 °C ≤ T_a ≤ + 90 °C
	T6	0 °C ≤ T_p ≤ + 70 °C	0 °C ≤ T_a ≤ + 70 °C
PS91E-*******+* ***PS92E-**********+* ***PS96E-**********+*	T4	0 °C ≤ T_p ≤ + 110 °C	0 °C ≤ T_a ≤ + 80 °C
		0 °C ≤ T_p ≤ + 100 °C	0 °C ≤ T_a ≤ + 85 °C
		0 °C ≤ T_p ≤ + 90 °C	0 °C ≤ T_a ≤ + 90 °C
	T6	0 °C ≤ T_p ≤ + 70 °C	0 °C ≤ T_a ≤ + 70 °C
YP02E-*****+*	T6	--	-15 °C ≤ T_a ≤ + 70 °C
PS47D-****+* ***PS47E-*******+* ***PS77D-*******+* ***PS77E-*******+*	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
PS97D-****+* ***PS97E-*******+*	T4	-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.