



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 TUR 19.0030X** Page 1 of 4 Certificate history:
Issue 0 (2019-07-08)

Status: **Current** Issue No: 1

Date of Issue: **2020-09-09**

Applicant: **Endress+Hauser Conducta GmbH+Co. KG**
Dieselstrasse 24
70839 Gerlingen
Germany

Equipment: **Conductivity Sensors Memosens CLS15E/CLS16E/CLS21E/CLS82E**

Optional accessory:

Type of Protection: **Ex ia**

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


Approved for issue on behalf of the IECEx
Certification Body:

Dipl.-Ing. Klauspeter Graffi

Position:

Head of Certification Body

Signature:
(for printed version)



2020-09-09

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:

TUV Rheinland Industrie Service GmbH
Am Grauen Stein
51105 Cologne
Germany





IECEX Certificate of Conformity

Certificate No.: **IECEX TUR 19.0030X**

Page 2 of 4

Date of issue: 2020-09-09

Issue No: 1

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

Additional
manufacturing
locations:

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/TUR/ExTR19.0030/01](#)

Quality Assessment Report:

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



IECEx Certificate of Conformity

Certificate No.: **IECEx TUR 19.0030X**

Page 3 of 4

Date of issue: **2020-09-09**

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

Conductivity Sensors Memosens type CLS15E/CLS16E/CLS21E/CLS82E

Further information see attachment.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. CLS15E, CLS16E, CLS21E: Metallic process connection parts have to be mounted electrostatically conductive at the mounting location ($< 1 \text{ M}\Omega$).
CLS15E and CLS21E with non-metallic process connection may only be used in liquid media with a conductivity of at least 10 nS/cm .
CLS15E with non-metallic process connection may not be operated on processing conditions, in which an electrostatic loading of the sensor and in particular of the electrically separated outer electrode, could be expected to occur.
CLS82E: 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. The metallic parts of the sensor have to be mounted at the mounting location electrostatically conductive ($< 1 \text{ M}\Omega$).
2. The maximum ambient and process temperatures for the temperature classes T3, T4 or T6 are limited according to the tables of this certificate (see "Environmental data").



IECEx Certificate of Conformity

Certificate No.: **IECEx TUR 19.0030X**

Page 4 of 4

Date of issue: **2020-09-09**

Issue No: **1**

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

- Some changes in the Ex-relevant part of the circuit: They were evaluated in such a way that they do not impair the intrinsic safety of the product and have no influence on the technical data.
- Not Ex relevant changes in the circuit diagram described in Notification of Change 557/Ex 8377.01/19.

Annex:

[IECEx_TUR_19.0030_X_01_Attachment.pdf](#)



Attachment to Certificate
IECEX TUR 19.0030X
Revision 01

Attachment to Certificate IECEX TUR 19.0030X issue 01

Device: Conductivity Sensors Memosens
Type: CLS15E/CLS16E/CLS21E/CLS82E

Manufacturer: Endress+Hauser Conducta GmbH+Co. KG

Address: Dieselstrasse 24
70839 Gerlingen, Germany

General product information:

The Memosens sensors are used together with a certified Memosens cable and Memosens transmitter. The electronic circuits of the sensor are completely encapsulated and the connection between sensor and measuring cable/transmitter is galvanically isolated via a completely isolated connection system (inductive coupling). It is suitable to be operated in hazardous gas atmospheres of up to zone 0.

Name	Type									
Memosens	xLS15E	-	**	**	**	a	***	+*		
								optional +* = + one or more characters determining optional features (no ex-relevance)		
							*** only if x = O, OC = three characters determining OEM/label partner (no ex-relevance)			
						a=A constant k a=B = type A (cell constant k = 0.01 cm ⁻¹) = type B (cell constant k = 0.1 cm ⁻¹)				
				** = two characters determining sensor material, (no ex-relevance)						
			** = two characters determining process connection (no ex-relevance)							
		** = two characters determining order option approval certification, no Ex relevance, see chapter 3.3								
	x = C	E+H-labeled version (no Ex relevance)								
	x = O	OEM/label partner-labeled version (no Ex relevance)								
	x = OC	OEM/label partner-labeled version (no Ex relevance)								



Attachment to Certificate
IECEX TUR 19.0030X
Revision 01

Name	Type							
Memosens	xLS16E xLS21E xLS82E	-	**	**	**	***	+*	
		<p>optional</p> <p>+* = + one or more characters determining optional features (no ex-relevance)</p> <p>only if x = O, OC</p> <p>*** = three characters determining OEM/label partner (no ex-relevance)</p> <p>** = two characters determining sensor material, metallic sensor shaft material according to requirements of standard IEC 60079-0:2017 chapter 8</p> <p>** = two characters determining process connection (no ex-relevance)</p> <p>** = two characters determining order option approval certification, no Ex relevance, see chapter 3.3</p>						
		<p>x = C E+H-labeled version (no Ex relevance)</p> <p>x = O OEM/label partner-labeled version (no Ex relevance)</p> <p>x = OC OEM/label partner-labeled version (no Ex relevance)</p>						

Technical data

Electrical data:

Input power limitation of the Memosens inductive interface:

Maximum input power: $P_i = 180\text{mW}$



Attachment to Certificate
IECEX TUR 19.0030X
Revision 01

Environmental data:

Sensor type	T class	T _p (process)		T _a (ambient)
		min.	max.	max.
xLS15E-*****A***+*	T3	-20 °C	135 °C	60 °C
	T4	-20 °C	120 °C	60 °C
	T6	-20 °C	70 °C	60 °C

Sensor type	T class	T _p (process)		T _a (ambient)
		min.	max.	max.
xLS15E-*****B***+*	T3	-20 °C	135 °C	60 °C
	T4	-20 °C	100 °C	60 °C
	T6	-20 °C	50 °C	60 °C

Sensor type	T class	T _p (process)		T _a (ambient)
		min.	max.	max.
xLS16E-*****+*	T3	-5 °C	135 °C	60 °C
	T4	-5 °C	115 °C	60 °C
	T6	-5 °C	65 °C	60 °C

Sensor type	T class	T _p (process)		T _a (ambient)
		min.	max.	max.
xLS21E-*****+*	T3	-20 °C	135 °C	60 °C
	T4	-20 °C	115 °C	60 °C
	T6	-20 °C	65 °C	60 °C

Sensor type	T class	T _p (process)		T _a (ambient)
		min.	max.	max.
xLS82E-*****+*	T3	-20 °C	140 °C	60 °C
	T4	-20 °C	120 °C	60 °C
	T6	-20 °C	70 °C	60 °C