

**UK Type Examination Certificate    CML 21UKEX2129X    Issue 1****United Kingdom Conformity Assessment**

- 1 Product or Protective System Intended for use in Potentially Explosive Atmospheres UKSI 2016:1107 (as amended) – Schedule 3A, Part 1
- 2 Equipment        **MEMOSENS Sensors**
- 3 Manufacturer    **Endress+Hauser Conducta GmbH+Co. KG**
- 4 Address           **Dieselstr. 24,  
70839 Gerlingen,  
Germany**
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 Eurofins E&E CML Limited, Newport Business Park, New Port Road, Ellesmere Port, CH65 4LZ, United Kingdom, Approved Body Number 2503, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.  
  
The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to specific conditions of use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This UK Type Examination certificate relates only to the design and construction of the specified equipment. Further requirements of the Regulations apply to the manufacturing process and supply of the product. These are not covered by this certificate.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:  
  
BS EN IEC 60079-0:2018    BS EN 60079-11:2012
- 10 The equipment shall be marked with the following:



Refer to attached certificate BVS 19 ATEX E 062 X Issue 2 for specific marking of explosion protection symbols.

Refer to attached certificate BVS 19 ATEX E 062 X Issue 2 for marked code and ambient temperature range.



**CML 21UKEX2129X  
Issue 1**

## **11 Description**

For product description refer to attached certificate BVS 19 ATEX E 062 X Issue 2.

## **12 Certificate history and evaluation reports**

<b>Issue</b>	<b>Date</b>	<b>Associated report</b>	<b>Notes</b>
0	09 June 2021	R13831A/00	The issue of prime certificate.  BVS 19 ATEX E 062 X Issue 1 is attached and shall be referred to in conjunction with this certificate.
1	15 Oct 2021	R14693A/00	Issue 1 BVS 19 ATEX E 062 X Issue 2 is attached and shall be referred to in conjunction with this certificate.

Note: Drawings that describe the equipment are listed in the Annex.

## **13 Conditions of Manufacture**

For Condition of Manufacture refer to attached certificate BVS 19 ATEX E 062 X Issue 2.

## **14 Specific Conditions of Use**

For Specific Condition of Use refer to attached certificate BVS 19 ATEX E 062 X Issue 2.

## Certificate Annex

**Certificate Number** CML 21UKEX2129X  
**Equipment** MEMOSENS Sensors  
**Manufacturer** Endress+Hauser Conducta GmbH+Co. KG



The following documents describe the equipment defined in this certificate:

### Issue 0

For drawings describing the equipment, refer to attached certificate BVS 19 ATEX E 062 X. In addition to the drawings listed on BVS 19 ATEX E 062 X, the following drawings include the additional marking required for this UK Type Examination certification:

Drawing No	Sheets	Rev	Approved date	Title
2004064	1 of 1	AB	09 Jun 2021	Nameplate XPXxxE shaft header data
2004230	1 of 1	AB	09 Jun 2021	Nameplate XPXxxEshaft ATEX

### Issue 1

For drawings describing the equipment, refer to attached certificate BVS 19 ATEX E 062 X. In addition to the drawings listed on BVS 19 ATEX E 062 X. The drawings included in issue 0 of this certificate still apply to the equipment.



Translation

# EU-Type Examination Certificate Supplement 2

Equipment intended for use in potentially explosive atmospheres  
Directive 2014/34/EU

EU-Type Examination Certificate Number: **BVS 19 ATEX E 062 X**

Product: **Memosens-Sensors**

Manufacturer: **Endress+Hauser Conducta GmbH+Co. KG**

Address: **Dieselstr. 24, 70839 Gerlingen, Germany**

This supplementary certificate extends EU-Type Examination Certificate No. BVS 19 ATEX E 062 X to apply to products designed and constructed in accordance with the specification set out in the appendix of the said certificate but having any acceptable variations specified in the appendix to this certificate and the documents referred to therein.

DEKRA Testing and Certification GmbH, Notified Body number 0158, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential Report No. BVS PP 19.2116 EU.

The Essential Health and Safety Requirements are assured in consideration of:

**EN IEC 60079-0:2018**  
**EN 60079-11:2012**

**General requirements**  
**Intrinsic Safety "i"**

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the appendix to this certificate.

This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following:

**II 1G Ex ia IIC T3/T4/T6 Ga**



**II 1G Ex ia IIC T4/T6 Ga**

**II 2G Ex ia IIC T6 Gb**

Details see table section 15.1

DEKRA Testing and Certification GmbH  
Bochum, 2021-02-03

Signed: Jörg-Timm Kilisch

Managing Director



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This certificate may only be reproduced in its entirety and without any change.

DEKRA Testing and Certification GmbH, Handwerkstr. 15, 70565 Stuttgart, Germany  
Certification body: Dinnendahlstr. 9, 44809 Bochum, Germany  
Phone +49.234.3696-400, Fax +49.234.3696-401, e-mail DTC-Certification-body@dekra.com



13 **Appendix**  
 14 **EU-Type Examination Certificate**

**BVS 19 ATEX E 062 X**  
**Supplement 2**

15 **Product description**

15.1 **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-*****+*	 II 1G Ex ia IIC T3/T4/T6 Ga
*PS31E-*****+*, *PS91E-*****+*, *PS92E-*****+*, *PS96E-*****+*, *PS97D-*****+*, *PS97E-*****+*	 II 1G Ex ia IIC T4/T6 Ga
*YP02E-*****+*	 II 2G Ex ia IIC T6 Gb



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

Type	Temperature class	Process temperature range	Ambient temperature range
*PS11E-*****+*	T3	$-15\text{ °C} \leq T_p \leq +135\text{ °C}$	$-15\text{ °C} \leq T_a \leq +70\text{ °C}$
*PS12E-*****+*	T4	$-15\text{ °C} \leq T_p \leq +120\text{ °C}$	$-15\text{ °C} \leq T_a \leq +75\text{ °C}$
*PS16E-*****+*		$-15\text{ °C} \leq T_p \leq +110\text{ °C}$	$-15\text{ °C} \leq T_a \leq +80\text{ °C}$
*PS41E-*****+*		$-15\text{ °C} \leq T_p \leq +100\text{ °C}$	$-15\text{ °C} \leq T_a \leq +85\text{ °C}$
*PS42E-*****+*		$-15\text{ °C} \leq T_p \leq +90\text{ °C}$	$-15\text{ °C} \leq T_a \leq +90\text{ °C}$
*PS72E-*****+*		$-15\text{ °C} \leq T_p \leq +70\text{ °C}$	$-15\text{ °C} \leq T_a \leq +70\text{ °C}$
*PS61E-*****+*	T3	$0\text{ °C} \leq T_p \leq +140\text{ °C}$	$0\text{ °C} \leq T_a \leq +70\text{ °C}$
*PS62E-*****+*	T4	$0\text{ °C} \leq T_p \leq +120\text{ °C}$	$0\text{ °C} \leq T_a \leq +75\text{ °C}$
*PS71E-*****+*		$0\text{ °C} \leq T_p \leq +110\text{ °C}$	$0\text{ °C} \leq T_a \leq +80\text{ °C}$
*PS76E-*****+*		$0\text{ °C} \leq T_p \leq +100\text{ °C}$	$0\text{ °C} \leq T_a \leq +85\text{ °C}$
		$0\text{ °C} \leq T_p \leq +90\text{ °C}$	$0\text{ °C} \leq T_a \leq +90\text{ °C}$
	T6	$0\text{ °C} \leq T_p \leq +70\text{ °C}$	$0\text{ °C} \leq T_a \leq +70\text{ °C}$
*PS31E-*****+*	T4	$0\text{ °C} \leq T_p \leq +80\text{ °C}$	$0\text{ °C} \leq T_a \leq +90\text{ °C}$
	T6	$0\text{ °C} \leq T_p \leq +70\text{ °C}$	$0\text{ °C} \leq T_a \leq +70\text{ °C}$
*PS91E-*****+*	T4	$0\text{ °C} \leq T_p \leq +110\text{ °C}$	$0\text{ °C} \leq T_a \leq +80\text{ °C}$
*PS92E-*****+*		$0\text{ °C} \leq T_p \leq +100\text{ °C}$	$0\text{ °C} \leq T_a \leq +85\text{ °C}$
*PS96E-*****+*		$0\text{ °C} \leq T_p \leq +90\text{ °C}$	$0\text{ °C} \leq T_a \leq +90\text{ °C}$
	T6	$0\text{ °C} \leq T_p \leq +70\text{ °C}$	$0\text{ °C} \leq T_a \leq +70\text{ °C}$
*YP02E-*****+*	T6	--	$-15\text{ °C} \leq T_a \leq +70\text{ °C}$
*PS47D-*****+*	T3	$-15\text{ °C} \leq T_p \leq +135\text{ °C}$	$-15\text{ °C} \leq T_a \leq +70\text{ °C}$
*PS47E-*****+*	T4	$-15\text{ °C} \leq T_p \leq +115\text{ °C}$	$-15\text{ °C} \leq T_a \leq +75\text{ °C}$
*PS77D-*****+*		$-15\text{ °C} \leq T_p \leq +110\text{ °C}$	$-15\text{ °C} \leq T_a \leq +80\text{ °C}$
*PS77E-*****+*		$-15\text{ °C} \leq T_p \leq +100\text{ °C}$	$-15\text{ °C} \leq T_a \leq +85\text{ °C}$
		$-15\text{ °C} \leq T_p \leq +90\text{ °C}$	$-15\text{ °C} \leq T_a \leq +90\text{ °C}$
		$-15\text{ °C} \leq T_p \leq +65\text{ °C}$	$-15\text{ °C} \leq T_a \leq +65\text{ °C}$
	T6	$-15\text{ °C} \leq T_p \leq +65\text{ °C}$	$-15\text{ °C} \leq T_a \leq +65\text{ °C}$
*PS97D-*****+*	T4	$-15\text{ °C} \leq T_p \leq +110\text{ °C}$	$-15\text{ °C} \leq T_a \leq +80\text{ °C}$
*PS97E-*****+*		$-15\text{ °C} \leq T_p \leq +100\text{ °C}$	$-15\text{ °C} \leq T_a \leq +85\text{ °C}$
		$-15\text{ °C} \leq T_p \leq +90\text{ °C}$	$-15\text{ °C} \leq T_a \leq +90\text{ °C}$
	T6	$-15\text{ °C} \leq T_p \leq +65\text{ °C}$	$-15\text{ °C} \leq T_a \leq +65\text{ °C}$

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.

## 15.2 Description

### Reason for this supplement:

The pH/ORP-Sensors type \*PS16E-\*\*\*\*\*+\*, \*PS62E-\*\*\*\*\*+\*, \*PS76E-\*\*\*\*\*+\*, \*PS96E-\*\*\*\*\*+\* were added.

The documentation was partly modified.



## Description of product:

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  $P_o \leq 180 \text{ mW}$ ).

### 15.3 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 table section 15.1

### 16 Report Number

BVS PP 19.2116 EU, as of 2021-02-03

### 17 Special Conditions for Use

17.1 The sensors may be used in the following process- / ambient temperature range:

Temperature class and process- / ambient temperature range – see table section 15.1

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.

17.2 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.

17.3 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.

### 18 Essential Health and Safety Requirements

The Essential Health and Safety Requirements are covered by the standards listed under item 9.

### 19 Drawings and Documents

Drawings and documents are listed in the confidential report.


We confirm the correctness of the translation from the German original.

In the case of arbitration only the German wording shall be valid and binding.

DEKRA Testing and Certification GmbH

Bochum, 2021-02-03

BVS-Rip/MGR A 20201154

  
Managing Director