EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

Cert NO.GYJ19.1156X

This is to certify that the product

Memosens pH/ORP sensor

manufactured by Endress+Hauser Conducta GmbH+Co. KG

(Address:Dieselstraße 24, 70839 Gerlingen, Germany)

which model is CPS*aa*D-*b cc d e*G

Ex marking Ex iaIIC T4/T6 Ga

product standard /

drawing number 133956-Z0415-2G、133962-Z0415-3E

has been inspected and certified by NEPSI, and that it conforms to GB 3836.1-2010,GB 3836.4-2010,GB 3836.20-2010

This Approval shall remain in force until 2024.05.05

Remarks
1.Conditions for safe use are specified in the attachment(s) to this certificate.
2.Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment(s) to this certificate.
3.Model designation is specified in the attachment(s) to this certificate.
4.Intrinsic safety parameters specified in the attachment(s) to this certificate.
5.This certificate is also applicable for the product with the same type manufactured by multi- locations, which are speified in the attachment(s) to this certificate.
6.[VariationI]: Add manufacturer location. Signed on 2019.06.06.

Director

National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

Issued Date 2019.05.06

This Certificate is valid for products compatible with the documents and samples approved by NEPSI.

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防爆合格证

证 号：GYJ19.1156X

由 恩德斯+豪斯公司 制造的产品：

（地址： Dieselstraße 24, 70839 Gerlingen, Germany）

名 称 Memosens pH/ORP传感器

型号规格 CPSaaD-b cc d eG

防爆标志 Ex ia II C T4/T6 Ga

产品标准 /

图样编号 133956-Z0415-2G、133962-Z0415-3E

经图样及技术文件的审查和样品检验，确认上述产品符合 GB 3836.1-2010、GB 3836.4-2010、GB 3836.20-2010 标准，特颁发此证。

本证书有效期： 2019 年 5 月 6 日 至 2024 年 5 月 5 日

备注
1. 安全使用注意事项见本证书附件。
2. 证书编号后缀“X”表明产品具有安全使用特殊条件，内容见本证书附件。
3. 型号规格说明见本证书附件。
4. 本安电气参数见本证书附件。
5. 本证书同时适用于多个制造地生产的同型号产品，详见附件。
6. [更改 I]：制造地扩展。2019年6月6日签发。

站长

国家级仪器仪表防爆安全监督检验站

颁发日期二〇一九年五月六日

本证书仅对与认可文件和样品一致的产品有效。

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版本05

国家级仪器仪表防爆安全监督检验站

National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation

(GYJ19.1156X) (Attachment Ⅱ)

GYJ19.1156X防爆合格证附件Ⅱ

由恩德斯＋豪斯公司生产的CPS**aa**D-**b** **cc** **d** **e**G型Memosens pH/ORP传感器，经国家级仪器仪表防爆安全监督检验站(NEPSI)检验，符合下列标准：

GB3836.1-2010 爆炸性环境 第1部分：设备 通用要求

GB3836.4-2010 爆炸性环境 第4部分：由本质安全型“i”保护的设备

GB3836.20-2010 爆炸性环境 第20部分：设备保护级别（EPL）为Ga级的设备

产品防爆标志Ex ia ⅡC T3/T4/T6 Ga（详见下表），防爆合格证号GYJ19.1156X。

本证书认可的型号规格如下：

pH/ORP传感器：

CPS**aa**D-**b** **cc** **d** **e**G

其中，**aa**表示型号，代码可为11、12、16、31、41、42、71、72、76、91、92或96；

b表示类型，代码可为7（基本型）或8（SIL型，仅对CPS11D/CPS71D/CPS91D）；

cc表示特殊应用（与防爆无关）；

d表示套长（最长600mm，与防爆无关）；

e表示电解液（仅对CPS4*D，与防爆无关）；

CPS171D-NA7**a** **bb** **c**

其中，**a**表示特殊应用（与防爆无关）；

bb表示参考系统（与防爆无关）；

c表示套长（≤600mm，与防爆无关）；

测量电缆：

CYK10-**a** **bb** **c**

其中，**a**表示认证，可为G、I、E或J；

bb表示电缆长度（L≤100m）；

c表示连接，可为1（电缆）或2（带插头电缆）。

CYK20-****aa** **bb**（试验室用）

其中，**表示与防爆无关；

aa表示电缆长度，代码可为B1（1.5m）或B2（3m）；

bb表示连接，代码可为C1（带M12插头电缆）或C2（带M8插头电缆）。

详见产品使用说明书。

本证书同时适用于多个制造地生产的同型号产品，具体如下：

制造商	地址
Endress+Hauser Conducta GmbH+Co. KG	Dieselstraße 24, 70839 Gerlingen, Germany
恩德斯豪斯分析仪器（苏州）有限公司	苏州工业园区江田里路31号
Endress+Hauser Conducta Inc	4123 E. La Palma Ave, Anaheim, CA 92807, United States of America

一、产品安全使用特殊条件

产品防爆合格证号后缀“X”表示产品有安全使用特殊要求，具体内容如下：

1、测量电缆及其连接器应用于EPL Ga场所时，应采取措施以防产生静电火花危险。

2、产品不得使用在具有静电危险可能的工作环境中，应避免气流对连接系统的直接影响。

二、产品使用注意事项

1、产品型号、防爆标志、使用环境温度和温度组别的关系如下：

型号	描述	防爆标志	环境温度范围
CYK10-****	Measuring cable	Ex ia Ⅱ C T3/T4/T6 Ga	-15℃～+135℃ (T3) -15℃～+120℃ (T4) -15℃～+70℃ (T6)
CYK20-******	Measuring cable	Ex ia Ⅱ C T6 Ga	-10℃～+50℃ (T6)
CPS11D-****G CPS12D-****G CPS16D-****G	Orbisint	Ex ia Ⅱ C T3/T4/T6 Ga	-15℃～+135℃ (T3) -15℃～+120℃ (T4) -15℃～+70℃ (T6)
CPS31D-****G	Memosens	Ex ia Ⅱ C T4/T6 Ga	0℃～+80℃ (T4) 0℃～+70℃ (T6)
CPS41D-****G CPS42D-****G	Ceraliquid	Ex ia Ⅱ C T3/T4/T6 Ga	-15℃～+135℃ (T3) -15℃～+120℃ (T4) -15℃～+70℃ (T6)
CPS71D-****G CPS76D-****G	Ceragel	Ex ia Ⅱ C T3/T4/T6 Ga	0℃～+135℃ (T3) 0℃～+120℃ (T4) 0℃～+70℃ (T6)
CPS72D-****G	Ceragel	Ex ia Ⅱ C T3/T4/T6 Ga	-15℃～+135℃ (T3) -15℃～+120℃ (T4) -15℃～+70℃ (T6)
CPS91D-****G CPS92D-****G CPS96D-****G	Orbipore	Ex ia Ⅱ C T4/T6 Ga	0℃～+110℃ (T4) 0℃～+70℃ (T6)
CPS171D-NA7****	pH sensor	Ex ia Ⅱ C T3/T4/T6 Ga	0℃～+135℃ (T3) 0℃～+120℃ (T4) 0℃～+70℃ (T6)

2、产品及连接电缆CYK10或CYK20可配接单独认证的现场测量变送器Liquiline M CM42（端子：187, 188, 197 和 198）；产品也可以连接具有下列参数的本安电路（Ex ia ⅡC）：

Uo=5.1V Io=130mA Po=166mW Ci=15μF Li=95μH

或 Uo=5.04V Io=80mA Po=112mW Ci=14.1μF Li=237.2μH

测量电缆CYK10或CYK20具备如下电气参数，可用于连接经认证的Memosens传感器：

Po = 178mW

3、用户不得自行随意更换该产品的电气零部件，应会同产品制造商共同解决运行中出现的故障，以免影响防爆性能和损坏现象的发生。

4、产品的安装、使用和维护应同时遵守产品使用说明书、GB 3836.13-2013“爆炸性环境 第13部分：设备的修理、检修、修复和改造”、GB/T 3836.15-2017“爆炸性环境 第15部分：电气装置的设计、选型和安装”、GB/T 3836.16-2017“爆炸性环境 第16部分：电气装置的检查与维护”、GB/T 3836.18-2017“爆炸性环境 第18部分：本质安全电气系统”及GB 50257-2014“电气设备安装工程爆炸和火灾危险环境电气装置施工及验收规范”的有关规定。

三、制造厂责任

1、产品制造厂必须将上述使用注意事项纳入产品使用说明书；

2、制造厂必须严格按照NEPSI认可的文件资料生产；

3、产品铭牌中应至少包括下列内容：

a) NEPSI认可标志（见防爆合格证书）

b) 产品防爆标志

c) 防爆合格证号

d) 使用环境温度

e）本安参数说明

国家级仪器仪表防爆安全监督检验站

二O一九年六月六日

注：本附件是对2019年5月6日签发的附件Ⅰ的更新。

Attachment Ⅱ to GYJ19.1156X
(translation)

1. Description

Memosens pH/ORP sensor type CPS**aa**D-**b cc d e**G, manufactured by Endress+Hauser Conducta GmbH+Co. KG, has been certified by National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI). This product accords with following standards:

GB3836.1-2010 Explosive atmospheres-Part 1: Equipment-General requirements

GB3836.4-2010 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety "i"

GB3836.20-2010 Explosive atmospheres-Part 20: Equipment with equipment protection level (EPL) Ga

The Ex marking is Ex ia Ⅱ C T3/T4/T6 Ga (details see table below), its certificate number is GYJ19.1156X.

Type approved in this certificate is:

pH/ORP sensor:

CPS**aa**D-**b cc d e**G

Note: **aa** indicates type, including 11, 12, 16, 31, 41, 42, 71, 72, 76, 91, 92 or 96;

b indicates version, including 7 (basic version) or 8 (SIL version only for type CPS11D, CPS71D, CPS91D);

cc indicates application specified version (non Ex-relevant);

d indicates shaft length (≤600mm, non Ex-relevant);

e indicates electrolyte supply (only for type CPS4*D, non Ex-relevant).

CPS171D-NA7**a bb c**

Note: **a** indicates application specified version (non Ex-relevant);

bb indicates reference system (non Ex-relevant);

c indicates shaft length (≤600mm, non Ex-relevant).

Measuring cable:

CYK10-**a bb c**

Note: **a** indicates Ex approval, including G, I, E or J;

bb indicates cable length (L≤100m);

c indicates connection, including 1 (cable) or 2 (cable with plug-in connector).

CYK20-** **aa bb** (for laboratory use)

Note: ** have no Ex-relevance;

aa indicates cable length, including B1 (1.5m) or B2 (3m);

bb indicates connection, including C1 (cable with plug-in connector M12)

C2 (cable with plug-in connector M8).

Refer to the instruction manual for the details.

This certificate is also applicable for the product with the same type manufactured by multi-locations as below:

Manufacturer	Address
Endress+Hauser Conducta GmbH+Co. KG	Dieselstraße 24, 70839 Gerlingen, Germany
Endress+Hauser Analytical Instruments (Suzhou) Co., Ltd.	No.31 Jiang Tian Li Lu, Suzhou-SIP, China
Endress+Hauser Conducta Inc	4123 E. La Palma Ave, Anaheim, CA 92807, United States of America

2. Special Conditions for Safe Use

The suffix "X" placed after the certificate indicates that the product is subject to special conditions for safe use specified as follows:

2.1 The measuring cable and its connecting head must be protected from electrostatic charging, if installed through areas of EPL Ga.

2.2 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. Conditions for Safe Use

3.1 The relationship between model type, marking, ambient temperature and the temperature class is shown as following:

Type	Designation	Marking	Ambient temperature range
CYK10-****	Measuring cable	Ex ia Ⅱ C T3/T4/T6 Ga	-15℃～+135℃ (T3) -15℃～+120℃ (T4) -15℃～+ 70℃ (T6)
CYK20-******	Measuring cable	Ex ia Ⅱ C T6 Ga	-10℃～+ 50℃ (T6)
CPS11D-****G CPS12D-****G CPS16D-****G	Orbisint	Ex ia Ⅱ C T3/T4/T6 Ga	-15℃～+135℃ (T3) -15℃～+120℃ (T4) -15℃～+ 70℃ (T6)
CPS31D-****G	Memosens	Ex ia Ⅱ C T4/T6 Ga	0℃～+80℃ (T4) 0℃～+ 70℃ (T6)
CPS41D-****G CPS42D-****G	Ceraliquid	Ex ia Ⅱ C T3/T4/T6 Ga	-15℃～+135℃ (T3) -15℃～+120℃ (T4) -15℃～+ 70℃ (T6)
CPS71D-****G CPS76D-****G	Ceragel	Ex ia Ⅱ C T3/T4/T6 Ga	0℃～+135℃ (T3) 0℃～+120℃ (T4) 0℃～+ 70℃ (T6)
CPS72D-****G	Ceragel	Ex ia Ⅱ C T3/T4/T6 Ga	-15℃～+135℃ (T3) -15℃～+120℃ (T4) -15℃～+ 70℃ (T6)
CPS91D-****G CPS92D-****G	Orbipore	Ex ia Ⅱ C T4/T6 Ga	0℃～+110℃ (T4)

CPS96D-****G			0℃～+ 70℃ (T6)
CPS171D-NA7****	pH sensor	Ex ia Ⅱ C T3/T4/T6 Ga	0℃～+135℃ (T3) 0℃～+120℃ (T4) 0℃～+ 70℃ (T6)

3.2 The sensors, in connection with the measuring cable type CYK10 or CYK20 may be connected to seperately approved field measuring instrument type Liquiline M CM42 (terminals: 187, 188, 197 and 198); furthermore, the sensors with measuring cable can be connected to the intrinsically safe output circuit (Ex ia Ⅱ C) with the following maximum values:

Uo=5.1V Io=130mA Po=166mW Ci=15μF Li=95μH

or Uo=5.04V Io=80mA Po=112mW Ci=14.1μF Li=237.2μH

Furthermore, the measuring cable type CYK10 or CYK20 has the value Po = 178mW, and can be conneceted to approved power limited Memosens sensors.

3.3 The user shall not change the configuration in order to maintain/ensure the explosion protection performance of the equipment. Any change may impair safety.

3.4 For installation, use and maintenance of the product, the end user shall observe the instruction manual and the following standards:

GB 50257-2014 "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".

GB 3836.13-2013 "Explosive atmospheres- Part 13:Equipment repair, overhaul and reclamation".

GB/T 3836.15-2017 "Explosive atmospheres- Part 15:Electrical installations design, selection and erection".

GB/T 3836.16-2017 "Explosive atmospheres- Part 16:Electrical installations inspection and maintenance".

GB/T 3836.18-2017 "Explosive atmospheres-Part 18: Intrinsically safe electrical systems".

4. Manufacturer's Responsibility

4.1 Conditions for safe use, as specified above, should be included in the documentation the user is provided with.

4.2 Manufacturing should be done according to the documentation approved by NEPSI.

4.3 Marking should show the following

4.3.1 NEPSI logo

4.3.2 Type of explosion protection

4.3.3 Certificate number

4.3.4 Ambient temperature range

4.3.5 Intrinsically safe parameters

National Supervision and Inspection Center
for Explosion Protection and Safety of Instrumentation
2019.06.06

Note: This attachment is the amendment to the attachment Ⅰ issued on 2019.05.06.