EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

Cert NO.GYJ14.1097X

This is to certify that the product

Memosens Conductivity Sensor

manufactured by Endress+Hauser Conducta GmbH+Co. KG

(Address:Dieselstraße 24, 70839 Gerlingen, Germany)

which model is CLS*aa*D

Ex marking Ex ia II C T3/T4/T6 Ga

product standard /

drawing number 140031-1415, 140030-1415, 140029-2415, 140029-1415

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 2019.04.09

Remarks
1.Conditions for safe use are specified in the attachment to this certificate.
2.Symbol "X" placed after the certification number denotes specific conditions of use, which are specified in the attachment to this certificate.
3.Model designation is specified in the attachment to this certificate.
4.[Variation Ⅰ]: Manufacturer's name is changed; Add additional manufacturer location. Issued on 2016.06.17.
5.This certificate is also applicable for the product with the same type manufactured by Endress+Hauser Analytical Instruments (Suzhou) Co., Ltd. (address: Su Hong Zhong Lu No.491, Suzhou-SIP, China)

Director

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

Issued Date 2014.04.10

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

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Attachment Ⅱ to GYJ14.1097X
(translation)

1. Description

CLS*aa*D Series Memosens Conductivity Sensors, 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 GYJ14.1097X.

Type approved in this certificate is:

conductivity sensor:

Condumax W CLS15D-A**G

Condumax W CLS15D-B**G

Condumax W CLS15D-L**G

Condumax H CLS16D-****G

Condumax W CLS21D-***G

Note: * indicates no Ex-relevance;

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.

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 Metallic process connection parts have to be mounted at the mounting location electrostatically conductive (<1MΩ).

2.3 The sensor type CLS21D and the sensors type CLS15D with non-metallic process connection may only be used in liquid media with a conductivity of at least 10nS/cm.

2.4 The sensors type CLS15D 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 seperated outer electrode, could be expected to occur.

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)
CLS15D-A**G	Condumax	Ex ia Ⅱ T3/T4/T6 Ga	-20℃～+135℃(T3) -20℃～+120℃(T4) -20℃～+ 70℃ (T6)
CLS15D-B**G CLS15D-L**G	Condumax	Ex ia Ⅱ T3/T4/T6 Ga	-20℃～+135℃(T3) -20℃～+100℃(T4) -20℃～+ 50℃ (T6)
CLS21D-***G	Condumax	Ex ia Ⅱ T3/T4/T6 Ga	-20℃～+135℃(T3) -20℃～+115℃(T4) -20℃～+ 65℃ (T6)
CLS16D-****G	Condumax	Ex ia Ⅱ T3/T4/T6 Ga	-5℃～+135℃(T3) -5℃～+115℃(T4) -5℃～+ 65℃ (T6)

3.2 The sensors, in connection with the measuring cable type CYK10 or CYK20 may be connected to field measuring instrument type Liquiline M CM42 (terminals: 187, 188, 197 and 198), with certificate no. GYJ14.1095; 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=15μ F Li=95μ H

or Uo=5.04V Io=80mA Po=112mW Ci=14.1μ F Li=237.2μ H

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:

GB50257-2014 "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".

GB3836.13-2013 "Explosive atmospheres- Part 13:Equipment repair, overhaul and reclamation".

GB3836.15-2000 "Electrical apparatus for explosive gas atmospheres- Part 15:Electrical installations in hazardous area (other than mines)".

GB3836.16-2006 "Electrical apparatus for explosive gas atmospheres- Part 16:Inspection and maintenance of electrical installation (other than mines)".

GB3836.18-2010 "Explosive atmospheres-Part 18: Intrinsically safe system".

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 Ex NEPSI

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
2016.06.17

Note: This attachment is the amendment to the attachment Ⅰ issued on 2014.04.10.

防爆合格证

证 号：GYJ14.1097X

由　恩德斯+豪斯公司　　制造的产品：

（地址：Dieselstraße 24, 70839 Gerlingen, Germany）

名　　称　Memosens电导率传感器

型号规格　CLSaaD

防爆标志　Ex ia ⅡC T3/T4/T6 Ga

产品标准　/

图样编号　140031-1415, 140030-1415, 140029-2415, 140029-1415

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：2014 年 4 月 10 日至 2019 年 4 月 9 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. [更改 I]：单位名称更改；制造地扩展。2016年6月17日签发。
5. 本证书同时适用于恩德斯豪斯分析仪器（苏州）有限公司（地址：苏州工业园区苏虹中路491号）生产的同型号产品。

站长

国家级仪器仪表防爆安全监督检验站

颁发日期二〇一四年四月十日

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

(GYJ14.1097X) (Attachment Ⅱ)

GYJ14.1097X防爆合格证附件Ⅱ

由恩德斯＋豪斯公司生产的CLS**aa**D系列Memosens电导率传感器，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（见下表），防爆合格证号GYJ14.1097X。

本证书认可的型号规格如下：

Condumax W CLS15D-A**G

Condumax W CLS15D-B**G

Condumax W CLS15D-L**G

Condumax H CLS16D-****G

Condumax W CLS21D-***G

其中，*代码含义与防爆性能无关。

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。

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、金属过程连接件在安装场所应等电位连接（＜1MΩ）。

3、带非金属过程连接的产品及传感器CLS21D，测量介质的最小传导率为10nS/cm，以避免产生静电火花危险。

4、带非金属过程连接的传感器CLS15D不得使用在传感器尤其是电隔离的外部电极具有静电危险可能的工作环境中。

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 T3/T4/T6 Ga	-15℃~+135℃(T3) -15℃~+120℃(T4) -15℃~+ 70℃(T6)
CYK20-******	Measuring cable	Ex ia Ⅱ T6 Ga	-10℃~+ 50℃(T6)
CLS15D-A**G	Condumax	Ex ia Ⅱ T3/T4/T6 Ga	-20℃~+135℃(T3) -20℃~+120℃(T4) -20℃～+ 70℃ (T6)
CLS15D-B**G CLS15D-L**G	Condumax	Ex ia Ⅱ T3/T4/T6 Ga	-20℃~+135℃(T3) -20℃~+100℃(T4) -20℃～+ 50℃ (T6)
CLS21D-***G	Condumax	Ex ia Ⅱ T3/T4/T6 Ga	-20℃~+135℃(T3) -20℃~+115℃(T4) -20℃～+ 65℃ (T6)
CLS16D-****G	Condumax	Ex ia Ⅱ T3/T4/T6 Ga	-5℃~+135℃(T3) -5℃~+115℃(T4) -5℃～+ 65℃ (T6)

2、产品及连接电缆CYK10或CYK20可配接现场测量变送器Liquiline M CM42（端子：187, 188, 197 和 198），防爆合格证号GYJ14.1095；产品也可以连接具有下列参数的本安电路（Ex ia Ⅱ）：

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

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、GB3836.13-2013“爆炸性环境 第13部分：设备的修理、检修、修复和改造”、GB3836.15-2000“爆炸性气体环境用电气设备 第15部分：危险场所电气安装（煤矿除外）”、GB3836.16-2006“爆炸性气体环境用电气设备 第16部分：电气装置的检查和维护（煤矿除外）”、GB3836.18-2010“爆炸性环境 第18部分：本质安全系统”及GB50257-2014“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

二〇一六年六月十七日

注：本附件是对2014年4月10日签发的附件Ⅰ的更新。