防爆合格证

证　号：GYJ23.1061X

制　造　商　恩德斯豪斯公司

（地址：Hauptstrasse 1, D-79689 Maulburg, Germany）

产品名称　超声波物位仪

型号规格　Prosonic T FMU30 系列

防爆标志　Ex ia ⅡC T5 Ga/Gb

产品标准　/

图样编号　960014398, 960014401-A, 960014399-A

经图样及技术文件的审查和样品检验，确认上述产品符合下列标准：
GB/T 3836.1-2021,GB/T 3836.4-2021

特颁发此证。

本证书有效期：2023 年 06 月 13 日 至 2028 年 06 月 12 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. 本证书同时适用于恩德斯豪斯（苏州）自动化仪表有限公司（地址：苏州工业园区苏虹中路 491 号）生产的同型号产品。

批　准

上海仪器仪表自控系统检验测试所有限公司
国家级仪器仪表防爆安全监督检验站

颁发日期 二〇二三 年 六 月 十三 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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EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

Cert No. GYJ23.1061X

Manufacturer	**Endress + Hauser SE Co. KG** **(Address: Hauptstrasse 1, D-79689 Maulburg, Germany)**
Product	**Compact ultrasonic level transmitter**
Model	**Prosonic T FMU30 Series**
Ex marking	**Ex ia IIC T5 Ga/Gb**
Product standard	**/**
Drawing number	**960014398, 960014401-A, 960014399-A**

The product was found to comply with the following standard(s):

GB/T 3836.1-2021,GB/T 3836.4-2021

Valid until: 2028.06.12

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(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 Endress+Hauser (Suzhou) Automation Instrumentation Co., Ltd. (address: Su Hong Zhong Lu No.491, Suzhou-SIP, China)

Approval

Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation
Date of issue 2023.06.13

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

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GYJ23.1061X防爆合格证附件Ⅰ

由恩德斯豪斯公司生产的Prosonic T FMU30系列超声波物位仪，经检验，符合下列标准：

GB/T 3836.1-2021 爆炸性环境 第1部分：设备 通用要求

GB/T 3836.4-2021 爆炸性环境 第4部分：由本质安全型“i”保护的设备

产品防爆标志为Ex ia Ⅱ CT5 Ga/Gb，防爆合格证号为GYJ23.1061X。

产品认可的型号规格如下：

Prosonic T FMU30-*aa b c dd eee*+*ff gg*

其中，*aa*表示认可代码，可为NB；

*b*表示显示/操作，可为G、H或Y；

*c*表示电气连接，可为E、F、G或Y；

*dd*表示传感器测量范围；

*eee*表示过程连接；

*ff*表示配件（可选项），可为RA~R9或空白；

*gg*表示标识（可选项），可为Z1（TAG）或空白。

详见产品使用说明书。

一、产品安全使用特定条件

防爆合格证号后缀“X”表示该产品安全使用特定条件，具体内容如下：

严禁干擦、摩擦产品非金属外壳表面，以防产生静电火花危险。

二、产品使用注意事项

1、产品外壳设有接地端子，用户在安装使用时应可靠接地。

2、产品使用环境温度范围：- 20℃～+60℃；

产品介质温度范围：- 20℃～+60℃。

3、产品必须与已通过防爆认证的关联设备配套共同组成本安防爆系统方可使用于爆炸性气体环境。其系统接线必须同时遵守本产品和所配关联设备的使用说明书要求，接线端子不得接错。

4、产品本安电气参数：

电路	端子	电气参数
电源电路	+, -	U_i = 30V I_i = 300mA P_i = 1W C_i = 13nF L_i = 0mH
显示电路	X301	U_o = 3.8V I_o = 30.53mA P_o = 29mW C_o = 100 μF L_i = 1mH U_i = 3.8V I_i = 47mA P_i = 66mW C_i = 0nF L_i = 0 μH

5、产品与关联设备的连接电缆应为带绝缘护套的屏蔽电缆，其屏蔽层应接地。

6、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。

7、产品的安装、使用和维护应同时遵守产品使用说明书、GB/T 3836.13-2021“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 3836.16-2022“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）本安电气参数

上海仪器仪表自控系统检验测试所有限公司

国家级仪器仪表防爆安全监督检验站

二〇二三年六月十三日

Attachment Ⅰ to GYJ23.1061X
(translation)

1. Description

Prosonic T FMU30 series Compact ultrasonic level transmitter, manufactured by Endress + Hauser SE + Co. KG, has been certified and accords with following standards:

GB/T 3836.1-2021 Explosive atmospheres-Part 1: Equipment-General requirements

GB/T 3836.4-2021 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety "i"

The Ex marking is Ex ia Ⅱ C T5 Ga/Gb, its certificate number is GYJ23.1061X.

Type approved in this certificate is shown as following:

Prosonic T FMU30-*aa b c dd eee+ff gg*

aa indicates approval code, including NB;

b indicates display/operating, including G, H or Y;

c indicates electrical connection, including E, F, G or Y;

dd indicates sensor/measuring range;

eee indicates process connection;

ff indicates optional, including RA~R9 or blank;

gg indicates optional, including Z1 (TAG) or blank.

Refer to instruction manual for the details.

2. Special Conditions for Safe Use

The suffix "X" placed after the certificate number indicates that this product is subject to special conditions for safe use, that is:

Electrostatic charges on this product shall be avoided.

3. Conditions for Safe Use

3.1 The external earth connection facility of the enclosure shall be connected reliably.

3.2 Ambient temperature range: -20℃～+60℃;

Process temperature range: -20℃～+60℃.

3.3 This product should be used in explosive gas atmospheres together with associated apparatus, follow the instruction manual of this product and the associated apparatus when connecting the wiring. Connect the wiring terminals correctly.

3.4 The intrinsic safety parameters are shown as following:

circuits	terminals	electrical data
power supply	+, -	U_i = 30V I_i = 300mA P_i = 1W C_i = 13nF L_i = 0mH
display circuit	X301	U_o = 3.8V I_o = 30.53mA P_o = 29mW C_o = 100μF L_i = 1mH U_i = 3.8V I_i = 47mA P_i = 66mW C_i = 0nF L_i = 0μH

3.5 Connecting cable between this product and associated apparatus should be insulated screen cable; connect the cable screen functionally to earth ground.

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

3.7 For installation, use and maintenance of this product, the end user should 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/T 3836.13-2021 "Explosive atmospheres- Part 13:Equipment repair, overhaul ,reclamation and modification".

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

GB/T 3836.16-2022 "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 Nameplate should at least include these contents listed below:

1) NEPSI logo
2) Ex marking
3) certificate number
4) ambient temperature range
5) intrinsic safety parameters

In case the nameplate does not provide enough space, information can be given in the manual, provided the nameplate shows a link to the appropriate documentation.

Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation
2023.06.13