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防爆合格证

证 号: GYJ22.1040X

制 造 商 恩德斯+豪斯公司

(地址: Obere Wank 1, 87484 Nesselwang, Germany)

产 品 名 称 温度变送器 (带 HART/PA/FF)

型 号 规 格 TMT162 系列

防 爆 标 志 Ex d IIC T4~T6 Gb

产 品 标 准 /

图 样 编 号 10000007831

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:

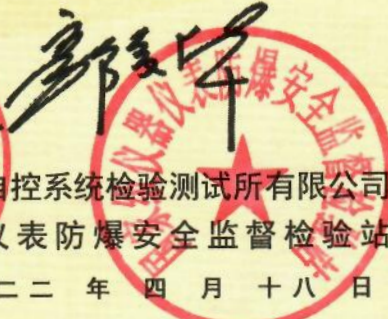
GB 3836.1-2010, GB 3836.2-2010

特颁发此证。

本证书有效期: 2022 年 04 月 18 日 至 2027 年 04 月 17 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. 电气安全参数见本证书附件。
5. 本证书同时适用于恩德斯豪斯温度仪表(苏州)有限公司(地址: 苏州工业园区江田里路 31 号)生产的同型号产品。



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
颁发日期二〇二二年四月十八日

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. GYJ22.1040X

Manufacturer	Endress + Hauser Wetzer GmbH + Co. KG (Address: Obere Wank 1, 87484 Nesselwang, Germany)
Product	Temperature Transmitter (with HART/PA/FF)
Model	TMT162 Series
Ex marking	Ex d IIC T4~T6 Gb
Product standard	/
Drawing number	10000007831

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

GB 3836.1-2010, GB 3836.2-2010

Valid until: 2027.04.17

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. Safe 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 Wetzer(Suzhou) Co., Ltd. (address: No. 31 JiangTianLiLu, Suzhou Industrial Park).



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 2022.04.18

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

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(GYJ22.1040X)

(Attachment I)

GYJ22.1040X防爆合格证附件 I

由恩德斯+豪斯公司生产的TMT162系列温度变送器（带HART/PA/FF），经检验符合下列标准：

GB3836.1-2010 爆炸性环境 第1部分：设备 通用要求

GB3836.2-2010 爆炸性环境 第2部分：由隔爆外壳“d”保护的设备

产品防爆标志Ex d II C T4~T6 Gb，防爆合格证号GYJ22.1040X。

本证书认可的产品型号规格如下：

TMT 162-□

其中：□表示外壳、电缆引入装置、组态连接等，详见产品规格说明书。

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、涉及隔爆接合面的维修须联系产品制造商。
- 2、避免静电聚集引发点燃危险。

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、产品的电气参数如下：

模块	TMT162-	TMT162-	TMT162-
通讯接口	HART5	FF/PA	HART7
工作电压	8~40Vdc	9~35Vdc	11.5~40Vdc
输出信号	4-20mA	FF/PA	4-20mA
工作电流	23mA	11mA	23mA
功耗	≤3W	≤3W	1W

- 3、产品使用环境温度和温度组别的关系：

温度组别	T6	T5	T4
环境温度	-40℃~+55℃	-40℃~+70℃	-40℃~+80℃

若使用环境温度高于65℃，应选用至少耐热90℃连接电缆。

4、产品的电缆引入口应配用经防爆检验认可的、符合GB3836.1-2010和GB3836.2-2010的规定、且防爆等级Ex d II C Gb的螺纹规格为 $\frac{1}{2}$ NPT（或M20×1.5）的电缆引入装置。冗余电缆引入口应采用相应防爆等级的封堵件进行堵封。

5、产品在现场使用维护时必须遵守“断电源后开盖”的原则。

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 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”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产品安全使用特殊条件和使用注意事项纳入该产品使用说明书；

2、制造厂必须严格按照NEPSI认可的文件资料生产。

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

二〇二二年四月十八日



(GYJ22.1040X)

(Attachment I)

Attachment I to GYJ22.1040X

1. Description

TMT162 series Temperature transmitter (with HART/PA/FF), manufactured by Endress+Hauser Wetzer GmbH + Co.KG, accords with following standards:

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

GB3836.2-2010 Explosive atmospheres-Part 2: Equipment protection by flameproof enclosure"d"

The Ex marking is Ex d IIC T4~T6 Gb, its certificate number is GYJ22.1040X.

Type approved in this certificate is shown as the following:

TMT162-☐

☐ indicates enclosure, cable entry, configuration connection and etc.

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:

1. For information on the dimensions of the flameproof joints contact the manufacturer.
2. Avoid ignition hazards from static electricity.

3. Conditions for Safe Use

3.1 The external earth connection facility of this product shall be connected reliably.

3.2 Electrical data:

Unit	TMT162-	TMT162-	TMT162-
Communication	HART5	FF/PA	HART7
Voltage	8~40Vdc	9~35Vdc	11.5~40Vdc
Output signal	4-20mA	FF/PA	4-20mA
Current consumption	23mA	11mA	23mA
Power dissipation	≤3W	≤3W	1W

3.3 The relationship between ambient temperature range and the temperature class is shown as follows:

Temperature class	T6	T5	T4
Ambient temperature range	-40℃~+55℃	-40℃~+70℃	-40℃~+80℃

Use the connection cable endurance to heat at least 90℃ when the ambient temperature is $> 65^{\circ}\text{C}$.

3.4 Suitable certified cable glands or blanking plugs for unused holes (1/2 NPT or M20*1.5) approved by ExTL according to GB3836.1-2010 and GB3836.2-2010 with Ex marking "Ex d II C Gb" shall be used and correctly installed. The cable glands and blanking plugs to be used shall be suitable for the product working conditions.

3.5 Any maintenance shall be performed only when the warning of "Do not open when energized" is observed.

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

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

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

GB3836.15-2017 "Explosive atmospheres- Part 15:Electrical installations design, selection and erection".

GB3836.16-2017 "Explosive atmospheres- Part 16:Electrical installations inspection and maintenance".

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

4. Manufacturer's Responsibility

4.1 Conditions for safe use and special 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.

Shanghai Inspection and Testing Institute of
Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for
Explosion Protection and Safety of Instrumentation
2022.04.18