



SITIiAs
Worldwide Access

防爆合格证

证 号: GYJ22.3605X

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

型 号 规 格 TMT86

防 爆 标 志 Ex ia II C T4...T6 Ga, Ex ia II C T4...T6 Gb,
Ex ia Iia Ga I II C T4...T6 Gb

产 品 标 准 /

图 样 编 号 10000013008

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: 2022 年 12 月 08 日 至 2027 年 12 月 07 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. 本安电气参数见本证书附件。
4. 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。



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
颁发日期二〇二二年十二月八日

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. GYJ22.3605X

Manufacturer	Endress + Hauser Wetzer GmbH + Co. KG (Address: Obere Wank 1, 87484 Nesselwang, Germany)
Product	Temperature Transmitter
Model	TMT86
Ex marking	Ex ia IIC T4...T6 Ga, Ex ia IIC T4...T6 Gb, Ex ia [ia Ga] IIC T4...T6 Gb
Product standard	/
Drawing number	10000013008

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

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

Valid until: 2027.12.07

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. Intrinsic safety parameters specified in the attachment(s) to this certificate.
4. 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

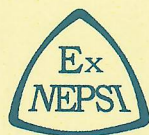
Shanghai Inspection and Testing Institute of
Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for
Explosion Protection and Safety of Instrumentation
Date of issue 2022.12.08

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

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(GYJ22.3605X)

(Attachment I)

GYJ22.3605X防爆合格证附件 I

由恩德斯+豪斯公司生产的TMT86型温度变送器，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Ex ia II C T4...T6 Ga（模块式）、Ex ia II C T4...T6 Gb（模块式）、
Ex ia [ia Ga] II C T4...T6 Gb（现场式），防爆合格证号GYJ22.3605X。

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，即：

- 1、危险场所不得使用CDI接口进行配置设定。
- 2、模块式和导轨式变送器在现场使用时应采取措施以防产品表面产生静电火花危险。
- 3、产品类型、使用环境温度和温度组别的关系：

类型	温度组别	使用环境温度	
		用于1区/Gb	用于0区/Ga
模块式 (不带显示)	T6	-52℃~+55℃	-52℃~+40℃
	T5	-52℃~+70℃	-52℃~+60℃
	T4	-52℃~+85℃	-52℃~+60℃
模块式 (带显示TID10)	T6	-40℃~+55℃	/
	T5	-40℃~+70℃	/
	T4	-40℃~+85℃	/
现场式 (不带显示)	T6	-52℃~+55℃	/
	T5	-52℃~+70℃	/
	T4	-52℃~+85℃	/
现场式 (带显示TID10)	T6	-40℃~+55℃	/
	T5	-40℃~+70℃	/
	T4	-40℃~+85℃	/

二、产品使用注意事项

1、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 and 所配关联设备的使用说明书要求，接线端子不得接错。

2、本安电气参数：

电源电路（端子+、-）的本安输入参数：

$U_i \leq 17.5V$ $I_i \leq 380mA$ $C_i = 0$ $L_i = 0$

适用于根据FISCO模型连接到现场总线系统的现场设备

传感器电路（端子3~7）的本安输出参数如下：

$U_o \leq 3.71V$ $I_o \leq 5.24mA$ $P_o \leq 4.86mW$

外部最大允许参数	Ex ia II C	Ex ia II B	Ex ia II A
Co	4 μ F	24 μ F	64 μ F
Lo	50mH	100mH	100mH

显示屏连接参数（可选）：

$U_o \leq 4.02V$ $I_o \leq 4.12mA$ $C_i = 0$ $L_i = 0$

外部最大允许参数	Ex ib II C	Ex ib II B	Ex ib II A
Co	4.3 μ F	27 μ F	73 μ F
Lo	50mH	100mH	100mH

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/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/T3836.15-2017“爆炸性环境 第15部分：电气装置的设计、选型和安装”、GB/T3836.16-2017“爆炸性环境 第16部分：电气装置的检查和维护”、GB/T 3836.18-2017“爆炸性环境 第18部分：本质安全电气系统”及GB50257-2014“电气装置安装工程爆炸和火灾危险环境 电气装置施工及验收规范”。

三、制造厂责任

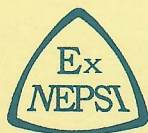
1. 产品制造厂必须将上述安全使用特殊条件和使用注意事项纳入该产品使用说明书。

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

二〇二二年十二月八日



(GYJ22.3605X)

(Attachment I)

Attachment I to GYJ22.3605X

1. Description

Temperature transmitter typed TMT86, manufactured by Endress+Hauser Wetzler GmbH + Co.KG, has been 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 T4...T6 Ga (head) ,Ex ia II C T4...T6 Gb (head) ,Ex ia [ia Ga] II C T4...T6 Gb(Field), its certificate number is GYJ22.3605X.

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:

2.1 In hazardous areas it is not permitted to use the CDI interface of TMT7x or TMT182B for configuration.

2.2 The head transmitter and DIN rail transmitter must be protected against electrostatic charge/ discharge.

2.3 The relationship between product type, ambient temperature range and the temperature class is shown as follows:

Type	temperature class	ambient temperature range	
		used in zone 1/ Gb	used in zone 0/ Ga
Headtransmitter without display	T6	-52℃～+55℃	-52℃～+40℃
	T5	-52℃～+70℃	-52℃～+60℃
	T4	-52℃～+85℃	-52℃～+60℃
Headtransmitter with display TID10	T6	-40℃～+55℃	/
	T5	-40℃～+70℃	/
	T4	-40℃～+85℃	/
Field housing without display	T6	-52℃～+55℃	/
	T5	-52℃～+70℃	/
	T4	-52℃～+85℃	/
Field housing with display TID10	T6	-40℃～+55℃	/
	T5	-40℃～+70℃	/
	T4	-40℃～+85℃	/

3. Conditions for Safe Use

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

3.2 Electrical data

3.2.1 power supply (terminal +, -):

$U_i \leq 17.5V$ $I_i \leq 380mA$ $C_i = 0$ $L_i = 0$

Respectively as a field device appropriate for connection to a field bus system according to the FISCO model.

3.2.2 sensor circuits (terminal 3~7):

$U_o \leq 3.71V$ $I_o \leq 5.24mA$ $P_o \leq 4.86mW$

Max.connection values	Ex ia II C	Ex ia II B	Ex ia II A
Co	4 μ F	24 μ F	64 μ F
Lo	50mH	100mH	100mH

3.2.3 Display connection(optional)

$U_o \leq 4.02V$ $I_o \leq 4.12mA$ $C_i = 0$ $L_i = 0$

Max.connection values	Ex ib II C	Ex ib II B	Ex ib II A
Co	4.3 μ F	27 μ F	73 μ F
Lo	50mH	100mH	100mH

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

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

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

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

GB 50257-2014 "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
2022.12.08