



防爆合格证

证号: GYJ20.1611X

由 Endress+Hauser Yamanashi Co., Ltd.

制造的产品:

(地址: 862-1 Mitsukunugi Sakaigawa-cho, Fuefuki-shi, Yamanashi)

名称 储罐温度计/液位计

型号规格 Prothermo NMT539-G/ NMT532-G

防爆标志 Ex ia II B T2 ~ T6 Ga/Gb Ex ia II B T2 ~ T6 Gb

产品标准 /

图样编号 Ex459-870、Ex459-871

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: 2020 年 12 月 3 日至 2025 年 12 月 2 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。

站长

国家级仪器仪表防爆安全监督检验站

颁发日期 二〇二〇 年 十二 月 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.GYJ20.1611X

This is to certify that the product

Tank Temperature/Level Transmitters

manufactured by **Endress+Hauser Yamanashi Co., Ltd.**

(Address:862-1 Mitsukunugi Sakaigawa-cho, Fuefuki-shi, Yamanashi)

which model is **Prothermo NMT539-G/ NMT532-G**

Ex marking **Ex iaIIB T2 ~ T6 Ga/Gb Ex iaIIB T2 ~ T6 Gb**

product standard /

drawing number **Ex459-870、 Ex459-871**

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 **2025.12.02**

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.

Director

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

Issued Date **2020.12.03**

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

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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

(GYJ20.1611X)

(Attachment I)

Attachment I to GYJ20.1611X (translation)

1. Description

Tank temperature/level transmitters typed Prothermo NMT539-G or NMT532-G, manufactured by Endres+Hauser Yamanashi Co., Ltd, 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 B T2~T6 Ga/Gb Ex ia II B T2~T6 Gb, its certificate number is GYJ20.1611X.

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:

In order to exclude ignition sources due to impact and friction sparks, even in the event of rare incidents, the temperature sensor tube shall not be subject to environmental stress, such as impact from moving parts, and the bottom part shall be secured.

3. Conditions for Safe Use

3.1 The external earth connection facility should be connected reliably.

3.2 Ambient temperature range is -40°C ~ +85°C.

3.3 The relationship of temperature class, ambient temperature and process temperature is shown as following:

Temperature class	Ambient temperature	Process temperature (sensor)	
		Temperature measurement only	Temperature measurement and water level or water level only
T6	≤ 60°C	≤ 60°C	≤ 60°C
T5	≤ 85°C	≤ 80°C	≤ 80°C
T4	≤ 85°C	≤ 100°C	≤ 100°C
T3*	≤ 85°C	≤ 175°C	≤ 125°C
T2*	≤ 85°C	≤ 235°C	---

Note: * applicable to Prothermo NMT539-G only

3.4 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.

3.5 Intrinsically safe input parameters of supply and output circuit are shown as following:

Terminals	Ui(V)	Ii(mA)	Pi(W)	Ci(nF)	Li(μ H)
H1+, H1-	30	120	1	7.9	48

3.6 Intrinsically safe output parameters of temperature sensor circuit are shown as following:

Terminals	Uo(V)	Io(mA)	Po(mW)	Co(μ F)	Lo(mH)
connectors CN4 and CN5, module 3	8.6	71	153	9.5	7.5

Note: trapezoidal characteristic

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

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

3.9 For installation, use and maintenance of this 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 Nameplate should include these contents listed below:

- 1) NEPSI logo 
- 2) Ex marking
- 3) certificate number

- 4) ambient temperature range
- 5) process temperature range
- 6) intrinsically safe 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.

National Supervision and Inspection Center
for Explosion Protection and Safety of Instrumentation
2020.12.03



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

(GYJ20.1611X)

(Attachment I)

GYJ20.1611X防爆合格证附件 I

由Endress+Hauser Yamanashi Co., Ltd.生产的Prothermo NMT539-G/NMT532-G型储罐温度计/液位计, 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

产品防爆标志为Ex ia II B T2~T6 Ga/Gb、Ex ia II B T2~T6 Gb, 防爆合格证号为GYJ20.1611X。

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: 为了避免产生冲击和摩擦火花, 安装环境不得使传感器套管易受到运动部件等的冲击, 底部应固定。

一、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为: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ 。
- 3、产品温度组别、使用环境温度和介质温度的关系如下:

温度组别	环境温度	介质温度(传感器部分)	
		仅作为温度计时	作为温度计和液位计或仅作为液位计时
T6	$\leq 60^{\circ}\text{C}$	$\leq 60^{\circ}\text{C}$	$\leq 60^{\circ}\text{C}$
T5	$\leq 85^{\circ}\text{C}$	$\leq 80^{\circ}\text{C}$	$\leq 80^{\circ}\text{C}$
T4	$\leq 85^{\circ}\text{C}$	$\leq 100^{\circ}\text{C}$	$\leq 100^{\circ}\text{C}$
T3*	$\leq 85^{\circ}\text{C}$	$\leq 175^{\circ}\text{C}$	$\leq 125^{\circ}\text{C}$
T2*	$\leq 85^{\circ}\text{C}$	$\leq 235^{\circ}\text{C}$	——

注: * 仅适用于Prothermo NMT539-G

- 4、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。

5、产品电源端本安输入参数及内部最大等效参数如下：

端子	最高输入电压 U_i (V)	最大输入电流 I_i (mA)	最大输入功率 P_i (W)	最大内部等效参数	
				C_i (nF)	L_i (μ H)
H1+, H1-	30	120	1	7.9	48

6、产品本安输出参数及外部最大等效参数如下（外接温度传感器）：

端子	最高输出电压 U_o (V)	最大输出电流 I_o (mA)	最大输出功率 P_o (mW)	最大外部等效参数	
				C_o (μ F)	L_o (mH)
CN4和CN5, 模块3	8.6	71	153	9.5	7.5

注：参数成梯形特性

7、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。

8、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。

9、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。

二、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或相关技术文件中；
- 2、制造厂必须严格按照NEPSI认可的文件资料生产；
- 3、产品铭牌中应包括下列内容：

- 1) NEPSI认可标志  （见防爆合格证书）
- 2) 产品防爆标志
- 3) 防爆合格证号
- 4) 环境温度范围
- 5) 介质温度范围
- 6) 本安参数说明

国家级仪器仪表防爆安全监督检验站

二〇二〇年十二月三日