

防爆合格证

证号: GYJ20.1610X

由 Endress+Hauser Yamanashi Co., Ltd. 制造的产品:
(地址: 862-1 Mitsukunugi Sakaigawa-cho, Fuefuki-shi, Yamanashi)

名称 伺服式储罐液位计

型号规格 Proservo NMS 53x系列

防爆标志 Ex d II B T3 ~ T6 Ga/Gb Ex d [ia] II B T3 ~ T6 Ga/Gb
Ex d II C T3 ~ T6 Ga/Gb

产品标准 /

图样编号 Ex17-103-3、Ex17-1017 Rev.3、Ex517-731 Rev.3

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 3836.2-2010、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. 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. 隔爆接合面用紧固件性能等级为12.9。

站长

国家级仪器仪表防爆安全监督检验站

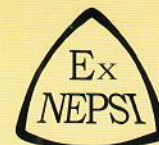
颁发日期二〇二〇年十二月三日

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.GYJ20.1610X

This is to certify that the product

Tank Gauge

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

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

which model is **Proservo NMS 53x series**

Ex marking **Ex dIIB T3 ~ T6 Ga/Gb Ex d [ia]IIB T3 ~ T6 Ga/Gb
Ex dIIC T3 ~ T6 Ga/Gb**

product standard /

drawing number **Ex17-103-3、 Ex17-1017 Rev.3、 Ex517-731 Rev.3**

has been inspected and certified by NEPSI, and that it conforms
to **GB 3836.1-2010,GB 3836.2-2010,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.Model designation is specified in the attachment(s) to this certificate.
4.Safe parameters specified in the attachment(s) to this certificate.
5.The property class of the fasteners used for the flameproof enclosure is 12.9.

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

(GYJ20.1610X)

(Attachment I)

Attachment I to GYJ20.1610X (translation)

1. Description

Proservo NMS53x series tank gauge, 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

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

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 d II B T3~T6 Ga/Gb, Ex d [ia] II B T3~T6 Ga/Gb, Ex d II C T3~T6 Ga/Gb, its certificate number is GYJ20.1610X.

Type approved in this certificate is NMS531/532/534/535/536 (NMS5-*) and NMS537 (NMS7-*), details for the symbol * specified in the instruction manual.

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:

For information on the dimensions of the flameproof joints contact the manufacturer.

3. Conditions for Safe Use

3.1 The external earth connection facility should be connected reliably.

3.2 The relationship of the type, Ex marking and ambient temperature range is shown as following:

type	Ex marking	ambient temperature range
NMS5-.T..... NMS7-T.....	Ex d [ia] II B T3~T6 Ga/Gb	-20°C ~ +60°C
NMS5-.V..... NMS7-V.....	Ex d II B T3~T6 Ga/Gb	-20°C ~ +60°C
NMS5-.W..... NMS7-W.....	Ex d II C T3~T6 Ga/Gb	-20°C ~ +60°C
NMS5-.X..... NMS7-X.....	Ex d [ia] II B T3~T6 Ga/Gb	-40°C ~ +60°C
NMS5-.4..... NMS7-4.....	Ex d II B T3~T6 Ga/Gb	-40°C ~ +60°C

3.3 The relationship between temperature class and medium temperature range is shown as following:

Temperature class	Medium temperature range
T3	-200°C ~ +200°C
T4	-200°C ~ +135°C
T5	-200°C ~ +100°C
T6	-200°C ~ +85°C

3.4 Suitable cable glands or blinding plugs separated certified by ExTL according to GB3836.1-2010 and GB3836.2-2010 should be used and installed correctly; The cable glands and blinding plugs to be used shall suitable for the product working conditions.

3.5 The mounting flange and inner part of the drum casing of the servo tank gauge can be assembled on the pipes or tanks, where could be zone 0 area.

3.6 Obey the warning "Keep tight when circuits are alive" when using the product .

3.7 Electrical data

3.7.1 Power supply (terminals 1(L+), 2(N-), 3(GND))

NMS5-.T.....3..., NMS7-T.....0.... NMS5-.X.....3..., NMS7-X.....0....	U = 85~253V AC, max.50VA Um = 253V AC
NMS5-.V.....3..., NMS7-V.....0.... NMS5-.4.....3..., NMS7-4.....0.... NMS5-.W.....3..., NMS7-W.....0....	U = 85~264V AC, max.50VA
NMS5-.T.....4..., NMS7-T.....1.... NMS5-.X.....4..., NMS7-X.....1....	U = 19~55V AC, max.50VA or U = 19~62V DC, 50W Um = 253V AC
NMS5-.V.....4..., NMS7-V.....1.... NMS5-.4.....4..., NMS7-4.....1.... NMS5-.W.....4..., NMS7-W.....1....	U = 19~55V AC, max.50VA or U = 19~62V DC, 50W

3.7.2 Signal circuit supply (terminals 4 – 23)

NMS5-.T....., NMS7-T..... NMS5-.X....., NMS7-X.....	U = 24V, max.50mA Um = 253V AC
NMS5-.V....., NMS7-V..... NMS5-.4....., NMS7-4..... NMS5-.W....., NMS7-W.....	U = 24V, max.50mA

3.7.3 External interface supply and signal input (NMS5-.T/X....., NMS7-T/X.....)

Terminals	Uo(V)	Io(mA)	Po(mW)	Co(μ F)	Lo(mH)
24(+), 25(-)	28.7	114	816	0.615	10

24(A), 25(B), 26(b)	11.3	81.6	406	1.3	4
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3.7.4 External device connection supply

model	electrical data
NMS5-V/4/W..... NMS7-V/4/W.....	terminals 24(+) and 25(-), U = 28.7V
NMS5-V/4/W..... NMS7-V/4/W.....	terminals 24(A), 25(B) and 26(b), U = 11.3V

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".




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 temperture range
- 5) warning of "Keep tight when circuits are alive"
- 6) 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

(GYJ20.1610X)

(Attachment I)

GYJ20.1610X防爆合格证附件 I

由Endress+Hauser Yamanashi Co., Ltd.生产的Proservo NMS53×系列伺服式储罐液位计，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

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

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 d II B T3~T6 Ga/Gb、Ex d [ia] II B T3~T6 Ga/Gb、Ex d II C T3~T6 Ga/Gb，防爆合格证号为GYJ20.1610X。

产品认可型号为NMS531/532/534/535/536（NMS5-□）和NMS537（NMS7-□），□的具体含义参见产品使用说明书。

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，即：涉及隔爆接合面的维修须联系产品制造商。

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、产品型号、防爆标志和使用环境温度范围的关系如下：

型号	防爆标志	使用环境温度
NMS5-. T..... NMS7-T.....	Ex d [ia] II B T3~T6 Ga/Gb	-20℃~+60℃
NMS5-. V..... NMS7-V.....	Ex d II B T3~T6 Ga/Gb	-20℃~+60℃
NMS5-. W..... NMS7-W.....	Ex d II C T3~T6 Ga/Gb	-20℃~+60℃
NMS5-. X..... NMS7-X.....	Ex d [ia] II B T3~T6 Ga/Gb	-40℃~+60℃
NMS5-. 4..... NMS7-4.....	Ex d II B T3~T6 Ga/Gb	-40℃~+60℃

3、产品温度组别和介质温度范围的关系如下：

温度组别	介质温度范围
T3	-200℃~+200℃
T4	-200℃~+135℃
T5	-200℃~+100℃
T6	-200℃~+85℃

4、产品的电缆引入口须配用经防爆检验认可、符合GB3836.1-2010和GB3836.2-2010标准且具有相应防爆等级的电缆引入装置或封堵件；选用的电缆引入装置和封堵件应与产品的使用条件相适应。

5、产品的安装法兰和鼓室可安装在内部为0区的管道或储罐上。

6、产品在现场使用和维护时，必须遵循“断电源后开盖”的原则。

7、产品电气参数：

7.1 电源电压（端子：1(L+), 2(N-), 3(GND)）

NMS5-.T.....3..., NMS7-T.....0.... NMS5-.X.....3..., NMS7-X.....0....	U = 85~253V AC, max.50VA Um=253V AC
NMS5-.V.....3..., NMS7-V.....0.... NMS5-.4.....3..., NMS7-4.....0.... NMS5-.W.....3..., NMS7-W.....0....	U = 85~264V AC, max.50VA
NMS5-.T.....4..., NMS7-T.....1.... NMS5-.X.....4..., NMS7-X.....1....	U = 19~55V AC, max.50VA 或 U = 19~62V DC, 50W Um=253V AC
NMS5-.V.....4..., NMS7-V.....1.... NMS5-.4.....4..., NMS7-4.....1.... NMS5-.W.....4..., NMS7-W.....1....	U = 19~55V AC, max.50VA 或 U = 19~62V DC, 50W

7.2 信号电路电压（端子4-23）

NMS5-.T....., NMS7-T..... NMS5-.X....., NMS7-X.....	U = 24V, max.50mA Um=253V AC
NMS5-.V....., NMS7-V..... NMS5-.4....., NMS7-4..... NMS5-.W....., NMS7-W.....	U = 24V, max.50mA

7.3 外接电源和信号电路（NMS5-.T/X....., NMS7-T/X.....）

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	
				Co(μ F)	Lo(mH)
24(+), 25(-)	28.7	114	816	0.615	10
24(A), 25(B), 26(b)	11.3	81.6	406	1.3	4

7.4 外接电源和信号电路


型号	电气参数
NMS5-V/4W..... NMS7-V/4W.....	端子24(+), 25(-), 电压U = 28.7V
NMS5-V/4W..... NMS7-V/4W.....	端子24(A), 25(B), 26(b), 电压U = 11.3V

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”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) “断电源后开盖”警告语
- 6) 安全电气参数

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