

# 防爆合格证

证号: GYJ14.1087X

由 恩德斯+豪斯公司

制造的产品:

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

名 称 伽玛射线调制器

型号规格 FHG65-1A bc

防爆标志 Ex d e II C T5/T6 Gb, Ex d II C T5/T6 Gb

产品标准 /

图样编号 960008668, 960008669

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 3836.3-2010 标准, 特颁发此证。

本证书有效期: 2014年4月11日至2019年4月10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(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。

站长

国家级仪器仪表防爆安全监督检验站

颁发日期二〇一四年四月十一日

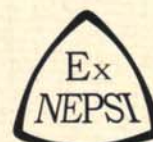
本证书仅对与认可文件和样品一致的产品有效。

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# EXPLOSION PROTECTION

## CERTIFICATE OF CONFORMITY

Cert NO.GYJ14.1087X

This is to certify that the product

**Gamma Modulator**

manufactured by **Endress + Hauser GmbH + Co. KG**

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

which model is **FHG65-1A b e**

Ex marking **Ex d e II C T5/T6 Gb, Ex d II C T5/T6 Gb**

product standard /

drawing number **960008668, 960008669**

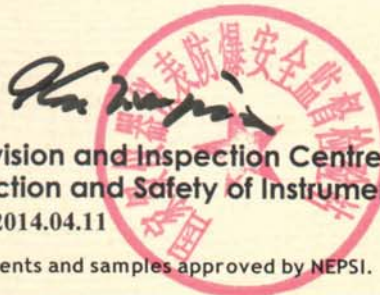
has been inspected and certified by NEPSI, and that it conforms  
to **GB 3836.1-2010,GB 3836.2-2010,GB 3836.3-2010**

This Approval shall remain in force until **2019.04.10**

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

**Director**



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

Issued Date **2014.04.11**

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



# 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

(GYJ14.1087X)

(Attachment I)

## GYJ14.1087X防爆合格证附件 I

由恩德斯+豪斯公司生产的FHG65-**a** 1A **b** **c**型伽玛射线调制器，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

GB3836.3-2010 爆炸性环境 第3部分：由增安型“e”保护的设备

产品防爆标志Ex de IIC T5/T6 Gb、Ex d IIC T5/T6 Gb，防爆合格证号GYJ14.1087X。

本证书认可的产品型号规格如下：

FHG65-**a** 1A **b** **c**

其中：**a**表示NEPSI认可代码，可为C (Ex de IIC T5/T6 Gb) 或D (Ex d IIC T5/T6 Gb)；

**b**表示电缆引入口，可为A、B、C或D；

**c**表示安装备件，可为1、2、3、4或5。

### 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厂商。
- 2、当环境温度超过70℃时，应选用耐热温度不低于85℃的接线电缆和电缆引入装置。

### 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、产品的额定电压为18~36Vdc；最大功率3.2W。
- 3、产品电缆引入口须配用经防爆检验认可、符合GB3836.1-2010和GB3836.2-2010或GB3836.1-2010和GB3836.3-2010标准且满足相应防爆型式和等级的电缆引入装置或封堵件（视接线腔的防爆型式而定）。安装后外壳防护等级不得低于IP66/IP67。
- 4、产品的使用环境温度和温度组别的关系如下：

伽玛射线调制器		环境温度	温度组别
不带水内冷 或水内冷不工作		-40℃~+60℃	T6
带水内冷	套管外壳	-40℃~+60℃	T6
	端子外壳	-40℃~+70℃	T6
		-40℃~+75℃	T5



5、产品在现场维护使用时应遵循“断电源后延时60分钟开盖”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、GB3836.13-1997“爆炸性气体环境用电气设备 第13部分：爆炸性气体环境用电气设备的检修”、GB3836.15-2000“爆炸性气体环境用电气设备 第15部分：危险场所电气安装（煤矿除外）”、GB3836.16-2006“爆炸性气体环境用电气设备 第16部分：电气装置的检查和维护（煤矿除外）”及GB50257-1996“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) “断电源后延时60分钟开盖”警告语

国家级仪器仪表防爆安全监督检验站  
二〇一四年四月十一日





# 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

(GYJ14.1087X)

(Attachment I)

## Attachment I to GYJ14.1087X (translation)

### 1. Description

Gamma Modulator typed FHG65-**a**1A **b** **c**, manufactured by Endress+Hauser GmbH+Co. KG, 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"

GB3836.3-2010 Explosive atmospheres-Part 3: Equipment protection by increased safety "e"

The Ex marking is Ex d e II C T5/T6 Gb、 Ex d II C T5/T6 Gb, its certificate number is GYJ14.1087X.

Type approved in this certificate is shown as following:

FHG65-**a**1A **b** **c**

Note: **a** indicates NEPSI approval code, including C (Ex d e II C T5/T6 Gb) or D (Ex d II C T5/T6 Gb);

**b** indicates cable entry, including A, B, C or D;

**c** indicates mounting device, including 1, 2, 3, 4 or 5.

### 2. Special Conditions for Safe Use

The suffix "X" placed after the certificate indicates that the product is subject to special conditions for safe use specified as follows:

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

2.2 Cables and cable glands suitable for a temperature of at least 85°C shall be used at an ambient temperature higher than 70°C.

### 3. Conditions for Safe Use

3.1 The external earth connection facility shall be connected reliably.

3.2 Electrical data: 18~36 Vdc, 3.2 W.

3.3 Appropriate cable glands or blind plugs which are approved by ExTL in accordance with GB3836.1-2010 and GB3836.2-2010 (terminal compartment in flameproof) or GB3836.1-2010 and GB3836.3-2010 (terminal



compartment in increased safety) shall be used and correctly installed. Cable gland and blind plug after installed shall additionally ensure a degree of protection of at least IP66/IP67.

3.4 The relationship between ambient temperature and temperature class is shown as follows:

device		ambient temperature	temperature class
modulator without water-cooling or with water-cooling out of operation		-40°C~+60°C	T6
with water-cooling	at the pipe housing (inside the water-cooling)	-40°C~+60°C	T6
	at the terminal housing	-40°C~+70°C	T6
		-40°C~+75°C	T5

3.5 Any maintenance shall be done only when the warning of "after switching off, wait 60 minutes before opening" 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:

GB50257-1996 "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".

GB3836.13-1997 "Electrical apparatus for explosive gas atmospheres Part 13:Repair and overhaul for apparatus used in explosive gas atmospheres".

GB3836.15-2000 "Electrical apparatus for explosive gas atmospheres- Part 15:Electrical installations in hazardous area (other than mines)".


GB3836.16-2006 "Electrical apparatus for explosive gas atmospheres- Part 16:Inspection and maintenance of electrical installation (other than mines)".

#### 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 Marking should show the following

4.3.1 NEPSI logo 

4.3.2 Type of explosion protection

4.3.3 Certificate number





4.3.4 Ambient temperature range

4.3.5 Warning of "after switching off, wait 60 minutes before opening"

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

2014.04.11



Ex  
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