防爆合格证

证　号：GYJ23.1005

制　造　商　恩德斯豪斯公司

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

产品名称　限位信号转换器

型号规格　Nivotester FailSafe FTL825 系列

防爆标志　[Ex ia Ga]ⅡC, [Ex ia Da]ⅢC

产品标准　/

图样编号　960014427

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：2023 年 01 月 31 日 至 2028 年 01 月 30 日

备注

1. 安全使用注意事项见本证书附件。
2. 型号规格说明见本证书附件。
3. 电气安全参数见本证书附件。
4. 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。

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

颁发日期二〇二三　年　一　月三十一　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. GYJ23.1005

Manufacturer	**Endress+Hauser SE+Co. KG** **(Address: Hauptstrasse 1, D-79689 Maulburg, Germany)**
Product	**Power supply and level limit detection device**
Model	**Nivotester FailSafe FTL825 Series**
Ex marking	**[Ex ia Ga]IIC, [Ex ia Da]IIIC**
Product standard	**/**
Drawing number	**960014427**

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

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

Valid until: 2028.01.30

Remarks

1.Conditions for safe use are specified in the attachment(s) to this certificate.
2.Model designation is specified in the attachment(s) to this certificate.
3.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 (Suzhou) Automation Instrumentation Co., Ltd. (address: Su Hong Zhong Lu No.491, Suzhou-SIP, China)

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 2023.01.31

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

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GYJ23.1005防爆合格证附件Ⅰ

由恩德斯豪斯公司生产的Nivotester FailSafe FTL825系列限位信号转换器，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 Ga]ⅡC、[Ex ia Da]ⅢC，防爆合格证号GYJ23.1005。

本证书认可的型号规格如下：

FTL825-*a b c d* + *e f g*

*a*表示NEPSI认可代码，代码可为N2 = [Ex ia Ga]ⅡC
[Ex ia Da]ⅢC

*b*表示外壳，代码可为3或9；

*c*表示电源，代码可为A（85～253Vac、50/60Hz）
E（20～30Vac、20～60Vdc）；

*d*表示开关量输出，代码可为4；

*e*表示附加认证，代码可为L*或空缺，与防爆性能无关；

*f*表示安装附件，代码可为PA或空缺，与防爆性能无关；

*g*表示标签，代码可为Z1或空缺，与防爆性能无关。

具体说明详见产品使用说明书和XA文件（XA00663F）。

一、产品使用注意事项

1、产品使用环境温度：

-20℃～+60℃（独立安装）；

-20℃～+50℃（并排安装）。

2、产品为本安关联设备，必须安装在安全场所。

3、产品电气参数：

3.1 电源

版本	参数
AC	85～253Vac、50/60Hz、≤3.8VA（AC供电） 85～253Vdc、≤2.0W（DC供电）
DC	20～30Vac、50/60Hz、≤3.6VA（AC供电） 20～60Vdc、≤2.5W（DC供电）

3.2 继电器输出

版本	触点容量
AC	250Vac、2A、≤500VA
DC	40Vdc、2A、≤80W

3.3 本安输出（端子82 - 83或91 - 92）

U_o = 22V I_o = 166mA P_o = 970mW C_o = 0.165 μF L_o = 2.8mH

C_i = 1nF L_i = 0mH R_i ≥ 132Ω

4、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。

5、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/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 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”及GB 15577-2018“粉尘防爆安全规程”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）安全电气参数

e）使用环境温度

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

二〇二三年一月三十一日

Attachment I to GYJ23.1005
(translation)

1. Description

Nivotester FailSafe FTL825 series Power supply and level limit detection device, manufactured by Endress+Hauser SE+Co.KG, has been certified and 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 Ga] II C or [Ex ia Da] III C, its certificate number is GYJ23.1005.

Type approved in this certificate is shown as following:

FTL825-*a* *b* *c* *d* +*e* *f* *g*

Note: *a* indicates NEPSI approval code, N2 = [Ex ia Ga] II C and [Ex ia Da] III C

b indicates housing, including 3 or 9;

c indicates power supply, including A (85~253Vac, 50/60Hz) or E (20~30Vac/20~60Vdc);

d indicates switch output, including 4;

e indicates additional approval, including L* or blank, no relevant to Ex;

f indicates accessory enclosed, including PA or blank, no relevant to Ex;

g indicates tagging, including Z1 or blank, no relevant to Ex.

Details see the instruction manual and safety instruction (document no. XA00663F).

2. Conditions for Safe Use

2.1 Ambient temperature range:

-20℃～+60℃ (Stand-alone mounting);

-20℃～+50℃ (Row mounting).

2.2 The device is an associated apparatus, only use the device outside explosion hazardous areas.

2.3 Electrical data:

2.3.1 Power supply

Version	Parameters
AC-version	85~253Vac, 50/60Hz, ≤3.8VA (AC supplied) 85~253Vdc, ≤2.0W (dc supplied)
DC-version	20~30Vac, 50/60Hz, ≤3.6VA (AC supplied) 20~60Vdc, ≤2.5W (dc supplied)

2.3.2 Relay output

Version	Contact Ratings
AC-version	250Vac, 2A, ⩽500VA
DC-version	40Vdc, 2A, ⩽80W

2.3.3 Intrinsic output circuit (terminals 82 - 83 or 91 - 92)

U_o = 22V I_o = 166mA P_o = 970mW C_o = 0.165μF L_o = 2.8mH

C_i = 1nF L_i = 0mH $R_i \geq 132\Omega$

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

2.5 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/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 15577-2018 "Safety regulations for dust explosion prevention and protection". (Only if installed in dust hazardous areas).

3. Manufacturer's Responsibility

3.1 Conditions for safe use, as specified above, should be included in the documentation the user is provided with.

3.2 Manufacturing should be done according to the documentation approved by NEPSI.

3.3 Nameplate should include these contents listed below:

1) NEPSI logo
2) Ex marking
3) certificate number
4) safety parameters
5) ambient temperature range

Shanghai Inspection and Testing Institute of Instruments and Automation Systems Co., Ltd.
National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation
2023.01.31