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防爆合格证

证 号: GYJ22.1876X

制 造 商 Heinrichs Messtechnik GmbH

(地址: Robert-Perthel-Strasse 9, 50739 Cologne, Germany)

产 品 名 称 电磁流量计传感器

型 号 规 格 PIT-S (PIT-520), PIT-A (PIT-571), PIT-U (PIT-580)

防 爆 标 志 Ex eb ia II C T3...T6 Ga/Gb

产 品 标 准 /

图 样 编 号 /

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 3836.3-2021, GB/T 3836.4-2021, GB 3836.20-2010
特颁发此证。

本证书有效期: 2022 年 06 月 14 日 至 2027 年 06 月 13 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. 电气安全参数见本证书附件。



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六月十四日

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. GYJ22.1876X

Manufacturer	Heinrichs Messtechnik GmbH (Address: Robert-Perthel-Strasse 9, 50739 Cologne, Germany)
Product	Electromagnetic Flowmeter Sensor
Model	PIT-S (PIT-520), PIT-A (PIT-571), PIT-U (PIT-580)
Ex marking	Ex eb iaIIC T3...T6 Ga/Gb
Product standard	/
Drawing number	/

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

GB/T 3836.1-2021, GB/T 3836.3-2021, GB/T 3836.4-2021, GB 3836.20-2010

Valid until: 2027.06.13

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. Safe parameters specified in the attachment(s) to this certificate.



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 2022.06.14

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

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(GYJ22.1876X)

(Attachment I)

GYJ22.1876X防爆合格证附件 I

由Heinrichs Messtechnik GmbH公司生产的PIT-S (PIT-520), PIT-A (PIT-571)和PIT-U (PIT-580)型电磁流量计传感器, 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 3836.3-2021 爆炸性环境 第3部分: 由增安型“e”保护的的设备

GB/T 3836.4-2021 爆炸性环境 第4部分: 由本质安全型“i”保护的的设备

GB 3836.20-2010 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Ex eb ia II C T3...T6 Ga/Gb, 防爆合格证号GYJ22.1876X。

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、产品使用的连接电缆和电缆引入装置应适用于该产品的工作条件。
- 2、在使用过程中应确保介质对传感器材质无损害。
- 3、产品与配接的电磁流量计转换器之间应等电位连接。

二、产品使用注意事项

- 1、产品传感器部分可安装于0区, 接线盒部分应安装于1区或2区。
- 2、产品的温度组别、最高介质温度与环境温度范围的关系如下:

产品型号	最高介质温度	环境温度范围	温度组别
PIT-S/PIT-U (PIT-520/PIT-580)	+60℃	-40℃~+50℃	T6
PIT-S/PIT-U (PIT-520/PIT-580)	+80℃	-40℃~+60℃	T5
PIT-A (PIT-571)	+60℃	-40℃~+45℃	T6
PIT-A (PIT-571)	+60℃	-40℃~+60℃	T5
PIT-A (PIT-571)	+100℃	-40℃~+60℃	T4
PIT-A (PIT-571)	+130℃	-40℃~+60℃	T3

- 3、产品电气参数如下:

线圈电路: $U_n = 60\text{ V}$ 、 $I_n = 200\text{ mA}$ 、 $I_m = 250\text{ mA}$ 、 25 Hz 。

电极电路: $U_i = 30\text{ V}$ 、 $I_i = 160\text{ mA}$ 、 $C_i = 0$ 、 $L_i = 0$ 。

4、产品的本安输入端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。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。

5、传感器PIT-S (PIT-520)和PIT-U (PIT-580)允许的介质压力为16 bar；

传感器PIT-A (PIT-571)允许的介质压力为40 bar。

6、产品接线盒在现场维护使用时应遵循“断电源后开盖”的原则。

7、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。

8、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）”、GB/T 3836.16-2017 “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）”、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。

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) 安全电气参数

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

二〇二二年六月十四日



(GYJ22.1876X)

(AttachmentI)

Attachment I to GYJ22.1876X
(translation)

1. Description

Electromagnetic Flowmeter Sensor type PIT-S (PIT-520), PIT-A (PIT-571) and PIT-U (PIT-580), manufactured by Heinrichs Messtechnik GmbH, has been certified and accords with following standards:

GB/T 3836.1-2021 Explosive atmospheres-Part 1: Equipment-General requirements

GB/T 3836.3-2021 Explosive atmospheres-Part 3: Equipment protection by increased safety "e"

GB/T 3836.4-2021 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety "i"

GB 3836.20-2010 Explosive atmospheres-Part 20: Equipment with equipment protection level (EPL) Ga

The Ex marking is Ex eb ia II C T3...T6 Ga/Gb, its certificate number is GYJ22.1876X.

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 Connection cables, cable glands and blanking elements to be used shall be suitable for the working condition.

2.2 It has to be ensured that the fluid will not harm an material of the sensor.

2.3 The equipotential bonding between the remote transmitter and sensor has to be done.

3. Conditions for Safe Use

3.1 The sensor can be installed in zone 0 while the connection box should be installed in zone 1 or zone 2.

3.2 The relationship between temperature class, max. medium temperature and ambient temperature range is shown as the following:

model type	max. medium temperature	ambient temperature range	temperature class
PIT-S/PIT-U (PIT-520/PIT-580)	60°C	-40°C ~ +50°C	T6
PIT-S/PIT-U (PIT-520/PIT-580)	80°C	-40°C ~ +60°C	T5
PIT-A (PIT-571)	60°C	-40°C ~ +45°C	T6
PIT-A (PIT-571)	60°C	-40°C ~ +60°C	T5
PIT-A (PIT-571)	100°C	-40°C ~ +60°C	T4
PIT-A (PIT-571)	130°C	-40°C ~ +60°C	T3

3.3 Electrical data:

Field coil circuit: $U_n = 60V$ $I_n = 200mA$ $I_m = 250mA$ $25Hz$

Electrode circuit: $U_i = 30V$ $I_i = 160mA$ $C_i = 0$ $L_i = 0$

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

3.5 Maximum permitted pressure of medium:

For PIT-S (PIT-520) and PIT-U (PIT-580), 16 bar

For PIT-A (PIT-571), 40 bar

3.6 Any maintenance shall be performed only when the warning of "Do not open when energized" is observed (for the terminal box).

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

3.8 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 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) Safety parameters

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

2022.06.14