防 爆 合 格 证

证　号：GYJ26.1076X

制　造　商　Endress+Hauser SE+Co. KG

（地址：Hauptstrasse 1, 79689 Maulburg Germany)

产 品 名 称　电容式物位开关

型 号 规 格　Minicap FTC262

防 爆 标 志　Ex ia/tb [ia Da] IIIC T_{200}108℃ T91℃ Da/Db

产 品 标 准　/

图 样 编 号　960005624, 960005625

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, GB/T 3836.31-2021

特颁发此证。

本证书有效期：2026 年 03 月 26 日 至 2031 年 03 月 25 日

备注

1. 型号规格说明见本证书附件。
2. 证书编号后缀“X”表明产品具有特殊使用条件，详见本证书附件。
3. 产品使用注意事项见本证书附件。
4. 电气参数见本证书附件。
5. 本证书同时覆盖恩德斯豪斯（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）制造的相同产品。

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 二〇二六 年 三 月 二十 六 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. GYJ26.1076X

Manufacturer	**Endress+Hauser SE+Co. KG** **(Address:Hauptstrasse 1, 79689 Maulburg Germany)**
Product	**Capacitive Level Limit Switch**
Model	**Minicap FTC262**
Ex marking	**Ex ia/tb [ia Da] IIIC T_{200}108℃ T91℃ Da/Db**
Product standard	**/**
Drawing number	**960005624, 960005625**

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

GB/T 3836.1-2021, GB/T 3836.4-2021, GB/T 3836.31-2021

Valid until: **2031.03.25**

Remarks

1.The model designation is specified in the attachment(s) to this certificate.
2.The symbol "X" placed after the certificate number denotes specific conditions of use, which are specified in the attachment(s) to this certificate.
3.The conditions for use are specified in the attachment(s) to this certificate.
4.The electrical parameters are specified in the attachment(s) to this certificate.
5.This certificate also applies to the same products 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 2026.03.26

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

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GYJ26.1076X 防爆合格证附件Ⅰ

产品符合下列标准：

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

GB/T 3836.31－2021 爆炸性环境 第 31 部分：由防粉尘点燃外壳“t”保护的设备

产品防爆标志为 Ex ia/tb [ia Da] ⅢC T_{200}108℃ T91℃ Da/Db。

本证书认可产品的具体型号规格为：Minicap FTC262-*a b c d e f* + *g*，其中：

a 表示认证代码，可为 2（Ex ia/tb [ia Da] ⅢC T_{200}108℃ T91℃ Da/Db）；

b 表示过程连接，可为 A（Thread EN10226 R1-1/2, PPS），B（Thread ANSI NPT1-1/2, PPS）；

c 表示探头长度，可为*，最长 10m；

d 表示供电/输出方式，可为 2（3-wire PNP 10.8-45VDC），4（Relay 20-253VAC/20-55VDC）；

e 表示外壳/电缆口型式，可为 H（F34 Alu IP66; thread NPT1/2），I（F34 Alu IP66; thread G1/2），J（F34 Alu IP66; thread M20）；

f 表示附加信息，可为 1（基本型），3（玻璃视窗、铝合金）；

g 表示可选项，与防爆性能无关，可以空白。

1. 产品特殊使用条件

防爆合格证号后缀“X”表明产品具有特殊使用条件：

1.1 应采取措施以防产品标牌表面产生静电放电危险。

1.2 产品使用环境温度范围：-40℃～+60℃（电子外壳）；

介质温度范围：-40℃～+80℃（探头）。

电子外壳的最高表面温度：环境温度 60℃时为 T91℃。

探头的最高表面温度：介质温度 80℃时为 T_{200}108℃。

2. 产品使用注意事项

2.1 电气参数：

FTC 262-…2… (dc version)	
电源电压	10.8 … 45 Vdc, max. 1.5 W
输出电流	max. 200 mA
Um = 253 Vac	
FTC 262-…4… (ac/dc version)	
电源电压	20 … 253 Vac, 47 … 63 Hz 20 … 55 Vdc, max. 2 W
Um = 253 Vac	
输出： 开关触点，无源	max. 253 Vac, 4 A max. 30 Vdc, 4 A max. 253 Vdc, 0.2 A

2.2 产品在粉尘环境使用维护时，应定期采取清洁措施，以防止表面积聚粉尘。

2.3 产品的电子部件外壳仅适用于 21 区；探头可适用于 20 区。

2.4 严禁带电开盖。

2.5 安装后，产品外壳应保持等电位联结。

2.6 产品外壳防护等级：IP66。

2.7 用户不得自行更换该产品的零部件，应会同产品制造商共同解决运行中出现的故障，以杜绝损坏现象的发生。

2.8 产品的安装、使用和维护应同时遵守产品使用说明书及下列相关标准的要求：

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 3836.15－2024 爆炸性环境 第 15 部分：电气装置设计、选型、安装规范

GB 3836.16－2024 爆炸性环境 第 16 部分：电气装置检查与维护规范

GB 15577－2018 粉尘防爆安全规程

GB 50257－2014 电气装置安装工程爆炸和火灾危险环境电气装置施工及验收规范

3. 制造商责任

3.1 制造商应将包含上述产品特殊使用条件及产品使用注意事项的使用说明书提供给用户。

3.2 制造商应严格按照国家级仪器仪表防爆安全监督检验站认可的文件资料生产。

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

二〇二六年三月二十六日

Attachment Ⅰ to GYJ26.1076X

This product 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"

GB/T 3836.31-2021 Explosive atmospheres-Part 31: Equipment dust ignition protection by enclosure "t"

The Ex marking is Ex ia/tb [ia Da] ⅢC T_{200}108℃ T91℃ Da/Db.

Type approved in this certificate is shown as below:

Minicap FTC262-*a b c d e f* + *g*

a indicates approval code, includes 2 (Ex ia/tb [ia Da] ⅢC T_{200}108℃ T91℃ Da/Db);

b indicates process connection, including A (Thread EN10226 R1-1/2, PPS), B (Thread ANSI NPT1-1/2, PPS);

c indicates probe length, includes *, max 10m;

d indicates switch output, including 2 (3-wire PNP 10.8-45VDC), 4 (Relay 20-253VAC/20-55VDC);

e indicates housing/cable entry, including H (F34 Alu IP66; thread NPT1/2), I (F34 Alu IP66; thread G1/2), J (F34 Alu IP66; thread M20);

f indicates additional option, including 1 (Basic version), 3 (Glass inspection window, aluminum);

g indicates optional codes, which can be blank, not relevant for safety.

1. 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 specified as follows:

1.1 Precautions shall be taken to assure that propagated brush discharges on the marking plate are avoided.

1.2 Ambient temperature range at the electronics enclosure: -40℃ to +60℃;

Process temperature range at the probe: -40℃ to +80℃.

The maximum surface temperature of the electronics enclosure, based on a maximum ambient temperature of 60℃, is T91℃.

The maximum surface temperature of the probe "T_{200} 108℃" is based on a maximum process temperature of 80℃.

2. Conditions for Safe Use

2.1 Electrical data:

FTC 262-…2… (dc version)	
Supply	10.8 … 45 Vdc, max. 1.5 W
Output current	max. 200 mA
Um = 253 Vac	
FTC 262-…4… (ac/dc version)	
Supply	20 … 253 Vac, 47 … 63 Hz 20 … 55 Vdc, max. 2 W
Um = 253 Vac	
Output: 1 switch-over contact, potential free	max. 253 Vac, 4 A max. 30 Vdc, 4 A max. 253 Vdc, 0.2 A

2.2 Clean the surface of this product termly when using in combustible dust atmospheres.

2.3 The electronics enclosure of this product can only be installed in zone 21; while the probe can be installed in zone 20.

2.4 Any maintenance shall be performed only when the warning “Do not open when energized” is observed.

2.5 The external earth connection facility shall be connected reliably.

2.6 Degree of ingress protection: IP66.

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

2.8 For installation, use and maintenance of this product, the end user shall observe the instruction manual and the following standards:

GB/T 3836.13-2021 “Explosive atmospheres- Part 13: Equipment repair, overhaul, reclamation and modification”.

GB 3836.15-2024 “Explosive atmospheres- Part 15: Specification of electrical installations design, selection and erection”.

GB 3836.16-2024 “Explosive atmospheres- Part 16: Specification of electrical installations inspection and maintenance”.

GB 50257-2014 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”.

GB 15577–2018 “Safety regulations for dust explosion prevention and protection”.

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.

Shanghai Inspection and Testing
Institute of Instruments and Automation Systems Co. Ltd.
National Supervision and Inspection Center
for Explosion Protection and Safety of Instrumentation
2026.03.26

Note: The translation is provided for reference purposes only, and the official Chinese version shall prevail in case of any discrepancy in meaning or expression.