



**SITIAs**  
Worldwide Access

# 防爆合格证

证 号: GYJ23.1040X

制 造 商 恩德斯+豪斯公司

(地址: CH-4153, Reinach BL1, Switzerland)

产 品 名 称 电磁流量计

型 号 规 格 Proline Promag E 200、Proline Promag H 200  
Proline Promag P 200、Proline Promag W 200

防 爆 标 志 详见防爆合格证附件

产 品 标 准 /

图 样 编 号 961001955-B, 340771-0000ZBD, 961001957-B,  
341029-0000ZAA, 961001406B

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 3836.2-2021, GB/T 3836.3-2021, GB/T 3836.4-2021,  
GB/T 3836.31-2021

特颁发此证。

本证书有效期: 2023 年 03 月 23 日 至 2028 年 03 月 22 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。
  4. 本证书同时适用于恩德斯豪斯流量仪表技术(中国)有限公司(地址: 苏州工业园区苏虹中路 465 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三月二十三日

本证书仅对与认可文件和样品一致的产品有效。

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(GYJ23.1040X)

(Attachment I)

## GYJ23.1040X防爆合格证附件 I

由恩德斯+豪斯公司生产的Proline Promag E 200, Proline Promag H 200, Proline Promag P 200和Proline Promag W 200型电磁流量计, 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 3836.2-2021 爆炸性环境 第2部分: 由隔爆外壳“d”保护的的设备

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

产品防爆标志Ex ia IIC T1...T6 Gb, Ex db [ia] IIC T1...T6 Gb, Ex ec IIC T1...T6 Gc, Ex ec [ia Ga] IIC T1...T6 Gc, Ex ic IIC T1...T6 Gc, Ex ic [ia Ga] IIC T1...T6 Gc, Ex tb IIIC T\*\*°C Db, 防爆合格证号GYJ23.1040X。

本证书认可产品的订购号如下:

Proline Promag 200:

5a2b cc-dd e f □□□□□□+##

O5a2b cc-dd e f □□□□□□+##

Proline Promag 200 transmitter:

5X2b XX-dd e f □□+##

O5X2b XX-dd e f □□+##

其中: a表示传感器类型, 可为E、H、P或W;

b表示产品代系识别码, 可为B (Promag E/H/P/W 200);

cc表示测量口径, 可为02、04、08、15、22、25、26、40、50、65、80、1H、1Z、1F、2H或XX;

dd表示NEPSI认证代码, 可为

NF (Ex ia IIC T1...T6 Gb)

NJ (Ex db [ia] IIC T1...T6 Gb)

NH (Ex ic IIC T1...T6 Gc, Ex ic [ia Ga] IIC T1...T6 Gc<sup>1)</sup>)

NK (Ex ec IIC T1...T6 Gc, Ex ec [ia Ga] IIC T1...T6 Gc<sup>1)</sup>)

N6 (Ex ia IIC T1...T6 Gb, Ex tb IIIC T\*\*°C Db)

N7 (Ex db [ia] IIC T1...T6 Gb, Ex tb IIIC T\*\*°C Db)

e表示输出型式, 可为A、B、C、D、E、G或X;

f表示显示/操作, 代码可为L、M (连接FHX50) 或任意一个其它数字/字母;

□代码表示外壳、电缆引入装置、管材、过程连接、校准和客户信息。

\*\*表示备选信息

#表示附加信息，与安全性能无关

注：<sup>1)</sup> 仅适用于 $f = L$ 或 $M$ 的产品。

详见产品使用说明书。

## 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，具体内容如下：

- 1、涉及产品隔爆接合面的维修须联系产品制造商（隔爆产品， $dd = NJ$ 或 $N7$ ）。
- 2、产品使用环境温度： $-40^{\circ}\text{C} \sim +60^{\circ}\text{C}$ ；代码 $dd = NK$ 时，最低使用环境温度 $-60^{\circ}\text{C}$ 。
- 3、产品介质温度范围： $-40^{\circ}\text{C} \sim +150^{\circ}\text{C}$ （与传感器内衬材料有关）。
- 4、产品最高使用环境温度、最高介质温度和温度组别的关系如下：

| 温度组别<br>(T*)                 | $T_{med}$                      |                                 |                                 |                                 |                                 |                                 |
|------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
|                              | T6<br>(85 $^{\circ}\text{C}$ ) | T5<br>(100 $^{\circ}\text{C}$ ) | T4<br>(135 $^{\circ}\text{C}$ ) | T3<br>(200 $^{\circ}\text{C}$ ) | T2<br>(200 $^{\circ}\text{C}$ ) | T1<br>(200 $^{\circ}\text{C}$ ) |
| $T_{a(max)}$                 |                                |                                 |                                 |                                 |                                 |                                 |
| 40 $^{\circ}\text{C}^{1)3)}$ | 80 $^{\circ}\text{C}$          | 95 $^{\circ}\text{C}$           | 130 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          |
| 55 $^{\circ}\text{C}^{1)}$   | -                              | 95 $^{\circ}\text{C}$           | 130 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          |
| 60 $^{\circ}\text{C}^{1)2)}$ | -                              | 95 $^{\circ}\text{C}$           | 130 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          | 150 $^{\circ}\text{C}$          |

注：<sup>1)</sup> 产品认证代码为NF、N6或NH且配备OVP或TRM时，最高环境温度减2K；

<sup>2)</sup> 仅适用于代码 $e = A$ 、 $B$ 、 $E$ 或 $G$ 带脉冲/频率输出， $P_i = 0.85W$ ；

<sup>3)</sup> 产品代码 $e = D$ 时， $T_{a(max)} = 35^{\circ}\text{C}$ 。

## 二、产品使用注意事项

- 1、产品在现场维护使用时应遵循“严禁带电开盖”的原则（ $dd = NJ$ 或 $N7$ ）。
- 2、产品接线腔的电缆引入口须配用经防爆检验认可、符合GB/T 3836.1-2021和GB/T 3836.2-2021标准且防爆等级为Ex db II C Gb的电缆引入装置或封堵件（ $dd = NJ$ 或 $N7$ ）。
- 3、当 $dd = N6$ 或 $N7$ 时，产品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或可燃性粉尘环境。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。

4、产品本安参数如下：

| 代码 $dde$   | 端子   | $U_i$ | $I_i$ | $P_i$ | $C_i$ | $L_i$ |
|------------|------|-------|-------|-------|-------|-------|
| NFA<br>N6A | 1, 2 | 30V   | 300mA | 1W    | 5nF   | 0mH   |
|            | 3, 4 | -     | -     | -     | -     | -     |
|            | 5, 6 | -     | -     | -     | -     | -     |

|                          |      |                     |                     |                    |                   |                    |
|--------------------------|------|---------------------|---------------------|--------------------|-------------------|--------------------|
| NFB<br>N6B               | 1, 2 | 30V                 | 300mA               | 1W                 | 5nF               | 0mH                |
|                          | 3, 4 | 30V                 | 300mA               | 1W                 | 6nF               | 0mH                |
|                          | 5, 6 | -                   | -                   | -                  | -                 | -                  |
| NFC<br>N6C               | 1, 2 | 30V                 | 300mA               | 1W                 | 30nF              | 0mH                |
|                          | 3, 4 | 30V                 | 300mA               | 1W                 | 30nF              | 0mH                |
|                          | 5, 6 | -                   | -                   | -                  | -                 | -                  |
| NFD<br>N6D               | 1, 2 | 30V                 | 300mA               | 1W                 | 5nF               | 0mH                |
|                          | 3, 4 | 30V                 | 300mA               | 1W                 | 6nF               | 0mH                |
|                          | 5, 6 | 30V                 | 300mA               | 1W                 | 5nF               | 0mH                |
| NFE<br>NFG<br>N6E<br>N6G | 1, 2 | 17.5V <sup>1)</sup> | 550mA <sup>1)</sup> | 5.5W <sup>1)</sup> | 5nF <sup>1)</sup> | 10μH <sup>1)</sup> |
|                          |      | 30V                 | 300mA               | 1.2W               | 5nF               | 10μH               |
|                          | 3, 4 | 30V                 | 300mA               | 1W                 | 6nF               | 0mH                |
|                          | 5, 6 | -                   | -                   | -                  | -                 | -                  |

注：<sup>1)</sup> 表示此组安全参数满足FISCO总线设备的要求。

| 代码 <b>dd e</b> | 端子   | U <sub>i</sub>      | I <sub>i</sub>  | P <sub>i</sub>  | C <sub>i</sub>    | L <sub>i</sub>     |
|----------------|------|---------------------|-----------------|-----------------|-------------------|--------------------|
| NHA            | 1, 2 | 35V                 | -               | 1W              | 5nF               | 0mH                |
|                | 3, 4 | -                   | -               | -               | -                 | -                  |
|                | 5, 6 | -                   | -               | -               | -                 | -                  |
| NHB            | 1, 2 | 35V                 | -               | 1W              | 5nF               | 0mH                |
|                | 3, 4 | 35V                 | -               | 1W              | 6nF               | 0mH                |
|                | 5, 6 | -                   | -               | -               | -                 | -                  |
| NHC            | 1, 2 | 30V                 | -               | 1W              | 30nF              | 0mH                |
|                | 3, 4 | 30V                 | -               | 1W              | 30nF              | 0mH                |
|                | 5, 6 | -                   | -               | -               | -                 | -                  |
| NHD            | 1, 2 | 35V                 | -               | 1W              | 5nF               | 0mH                |
|                | 3, 4 | 35V                 | -               | 1W              | 6nF               | 0mH                |
|                | 5, 6 | 35V                 | -               | 1W              | 5nF               | 0mH                |
| NHE<br>NHG     | 1, 2 | 17.5V <sup>1)</sup> | - <sup>1)</sup> | - <sup>1)</sup> | 5nF <sup>1)</sup> | 10μH <sup>1)</sup> |
|                |      | 32V                 | 300mA           | -               | 5nF               | 10μH               |
|                | 3, 4 | 35V                 | 300mA           | 1W              | 6nF               | 0mH                |
|                | 5, 6 | -                   | -               | -               | -                 | -                  |

注：<sup>1)</sup> 表示此组安全参数满足FISCO总线设备的要求。

5、当 **dd** = NJ、N7或NK时，产品电气参数如下：

| 代码 <b>dd e</b> | 端子   | U <sub>nom</sub> | U <sub>max</sub> | P <sub>max</sub> |
|----------------|------|------------------|------------------|------------------|
| NJA            | 1, 2 | 35Vdc            | 250Vac           | -                |
| N7A            | 3, 4 | -                | -                | -                |
| NKA            | 5, 6 | -                | -                | -                |

|     |      |       |        |                  |
|-----|------|-------|--------|------------------|
| NJB | 1, 2 | 35Vdc | 250Vac | -                |
| N7B | 3, 4 | 35Vdc | 250Vac | 1W <sup>1)</sup> |
| NKB | 5, 6 | -     | -      | -                |
| NJC | 1, 2 | 30Vdc | 250Vac | -                |
| N7C | 3, 4 | 30Vdc | 250Vac | -                |
| NKC | 5, 6 | -     | -      | -                |
| NJD | 1, 2 | 35Vdc | 250Vac | -                |
| N7D | 3, 4 | 35Vdc | 250Vac | -                |
| NKD | 5, 6 | 35Vdc | 250Vac | -                |
| NJE | 1, 2 | 32Vdc | 250Vac | 0.88W            |
| NJG | 3, 4 | 35Vdc | 250Vac | 1W <sup>1)</sup> |
| N7E | 5, 6 | -     | -      | -                |
| N7G | 1, 2 | 32Vdc | 250Vac | 0.88W            |
| NKE | 3, 4 | 35Vdc | 250Vac | 1W <sup>1)</sup> |
| NKG | 5, 6 | -     | -      | -                |

注：<sup>1)</sup> 此电路由内阻760.5Ω保护；由此可确定 $P_{max}$ 。

6、产品型号规格中 $f = L$ 或 $M$ 时，电气参数如下：

6.1、连接FHX50或其它经认证的本安显示仪表

$$U_o = 7.3V \quad I_o = 157mA \quad P_o = 362mW \quad C_o = 388nF \quad L_o = 149\mu H$$

$$C_c \leq 125nF \quad L_c \leq 149\mu H$$

6.2、当本安接口使用

$$U_o = 7.3V \quad I_o = 327mA \quad P_o = 800mW; \quad U_i = 7.3V \quad C_i = 0nF \quad L_i = 0mH$$

6.3、当非本安接口使用

$$U_N = 6.5V$$

7、产品可外接经防爆认证的接口设备，本安输出参数如下：

$$U_o = 7.3V \quad I_o = 100mA \quad P_o = 160mW \quad C_i = 0nF \quad L_i = 0mH$$

8、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。

9、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。

10、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/T 3836.18-2017 “爆炸性环境 第18部分：本质安全电气系统”、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。

### 三、制造厂责任

1、产品制造厂必须将上述产品安全使用特殊条件和使用注意事项纳入该产品使用说明书。

2、制造厂必须严格按照NEPSI认可的文件资料生产。





# EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert No. GYJ23.1040X

|                  |                                                                                          |
|------------------|------------------------------------------------------------------------------------------|
| Manufacturer     | Endress + Hauser Flowtec AG<br>(Address: CH-4153, Reinach BL1, Switzerland)              |
| Product          | Magnetic-inductive Flowmeter                                                             |
| Model            | Proline Promag E 200, Proline Promag H 200<br>Proline Promag P 200, Proline Promag W 200 |
| Ex marking       | Refer to the attachment for details                                                      |
| Product standard | /                                                                                        |
| Drawing number   | 961001955-B, 340771-0000ZBD, 961001957-B,<br>341029-0000ZAA, 961001406B                  |

The product was found to comply with the following standard(s):  
GB/T 3836.1-2021, GB/T 3836.2-2021, GB/T 3836.3-2021, GB/T 3836.4-2021,  
GB/T 3836.31-2021

Valid until: 2028.03.22

Remarks

1. Conditions for safe use are specified in the attachment 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. Safe parameters specified in the attachment to this certificate.
4. This certificate is also applicable for the product with the same type manufactured by Endress+Hauser Flowtec (China) Co., Ltd. (address: Su Hong Zhong Lu No.465, 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 2023.03.23

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

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(GYJ23.1040X)

(Attachment I )

## Attachment I to GYJ23.1040X (translation)

### 1. Description

Magnetic-inductive Flowmeter typed Proline Promag E 200, Proline Promag H 200, Proline Promag P 200 and Proline Promag W 200, manufactured by Endress+Hauser Flowtec AG, has been certified accords with following standards:

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

GB/T3836.2-2021 Explosive atmospheres-Part 2: Equipment protection by flameproof enclosure"d"

GB/T3836.3-2021 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/T3836.31-2021 Explosive atmospheres-Part 31: Equipment dust ignition protection by enclosure"t"

The Ex marking is Ex ia IIC T1...T6 Gb, Ex db [ia] IIC T1...T6 Gb, Ex ec IIC T1...T6 Gc, Ex ec [ia Ga] IIC T1...T6 Gc, Ex ic IIC T1...T6 Gc, Ex ic [ia Ga] IIC T1...T6 Gc, Ex tb IIIC T\*\*°C Db, its certificate number is GYJ23.1040X.

The order code of the approved product is detailed as below:

Proline Promag 200:

5a2b cc-dd e f □ □ □ □ □ □ □ +##\*#

O5a2b cc-dd e f □ □ □ □ □ □ □ +##\*#

Proline Promag 200 transmitter:

5X2b XX-dd e f □ □ +##\*#

O5X2b XX-dd e f □ □ □ +##\*#

**a** indicates sensor, including E, H, P or W;

**b** indicates generation, including B (Promag E/H/P/W 200);

**cc** indicates nominal diameter, including 02, 04, 08, 15, 22, 25, 26, 40, 50, 65, 80, 1H, 1Z, 1F, 2H or XX;

**dd** indicates NEPSI approval code, including NF (Ex ia IIC T1...T6 Gb)

NJ (Ex db [ia] IIC T1...T6 Gb)

NH (Ex ic IIC T1...T6 Gc, Ex ic [ia Ga] IIC T1...T6 Gc<sup>1)</sup>)

NK (Ex ec IIC T1...T6 Gc, Ex ec [ia Ga] IIC T1...T6 Gc<sup>1)</sup>)

N6 (Ex ia IIC T1...T6 Gb, Ex tb IIIC T\*\*°C Db)

N7 (Ex db [ia] IIC T1...T6 Gb, Ex tb IIIC T\*\*°C Db)

**e** indicates output type, including A, B, C, D, E, G or X for sensor only;

**f** indicates display, operation, including L, M prepared for FHX50

Any other single number or letter.

□ indicates enclosure, cable gland, tube material, process connection, calibration and customer version;

\*\* indicates option;

# indicates additional options, not relevant for safety.

Note: <sup>1)</sup> Approval code for Flowmeters with display code **f** = L or M only.

For the details, see 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:

2.1 For information on the dimensions of the flameproof joints contact the manufacturer (flameproof product only, approval code **dd** = NJ or N7).

2.2 Ambient temperature range: -40°C ~ +60°C, and -60°C for product with approval code **dd** = NK.

2.3 Process temperature range: -40°C ~ +150°C, and it depends on the sensor liner material used.

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

| Temp. Class<br>(T*)  | T <sub>med</sub> |               |               |               |               |               |
|----------------------|------------------|---------------|---------------|---------------|---------------|---------------|
|                      | T6<br>(85°C)     | T5<br>(100°C) | T4<br>(135°C) | T3<br>(200°C) | T2<br>(200°C) | T1<br>(200°C) |
| Ta(max)              |                  |               |               |               |               |               |
| 40°C <sup>1)3)</sup> | 80°C             | 95°C          | 130°C         | 150°C         | 150°C         | 150°C         |
| 55°C <sup>1)</sup>   | -                | 95°C          | 130°C         | 150°C         | 150°C         | 150°C         |
| 60°C <sup>1)2)</sup> | -                | 95°C          | 130°C         | 150°C         | 150°C         | 150°C         |

Note: <sup>1)</sup> for versions with approval code NF, N6, NH and provided with option OVP or TRM, the maximum ambient temperature decreases by 2K.

<sup>2)</sup> only for product with symbol **e** = A, B, E and G with pulse/frequency output limited to P<sub>i</sub> = 0.85W.

<sup>3)</sup> Ta(max) = 35°C for product with symbol **e** = D.

## 3. Conditions for Safe Use

3.1 When symbol **dd** = NJ or N7, any maintenance shall be performed only when the warning "Do not open when energized" is observed.

3.2 When symbol **dd** = NJ or N7, suitable certified cable glands or blanking plugs for unused holes approved by ExTL according to GB/T 3836.1-2021 and GB/T 3836.2-2021 with Ex marking "Ex db II C Gb" shall be used and correctly installed (for the terminal compartment).

3.3 When the symbol **dd** = N6 or N7, this product should be used in explosive gas atmospheres/combustible dust 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.

### 3.4 Safe parameters

| <b>dd e</b> code | terminals | U <sub>i</sub> | I <sub>i</sub> | P <sub>i</sub> | C <sub>i</sub> | L <sub>i</sub> |
|------------------|-----------|----------------|----------------|----------------|----------------|----------------|
| NFA<br>N6A       | 1, 2      | 30V            | 300mA          | 1W             | 5nF            | 0mH            |
|                  | 3, 4      | -              | -              | -              | -              | -              |
|                  | 5, 6      | -              | -              | -              | -              | -              |

|                          |      |                     |                     |                    |                   |                    |
|--------------------------|------|---------------------|---------------------|--------------------|-------------------|--------------------|
| NFB<br>N6B               | 1, 2 | 30V                 | 300mA               | 1W                 | 5nF               | 0mH                |
|                          | 3, 4 | 30V                 | 300mA               | 1W                 | 6nF               | 0mH                |
|                          | 5, 6 | -                   | -                   | -                  | -                 | -                  |
| NFC<br>N6C               | 1, 2 | 30V                 | 300mA               | 1W                 | 30nF              | 0mH                |
|                          | 3, 4 | 30V                 | 300mA               | 1W                 | 30nF              | 0mH                |
|                          | 5, 6 | -                   | -                   | -                  | -                 | -                  |
| NFD<br>N6D               | 1, 2 | 30V                 | 300mA               | 1W                 | 5nF               | 0mH                |
|                          | 3, 4 | 30V                 | 300mA               | 1W                 | 6nF               | 0mH                |
|                          | 5, 6 | 30V                 | 300mA               | 1W                 | 5nF               | 0mH                |
| NFE<br>NFG<br>N6E<br>N6G | 1, 2 | 17.5V <sup>1)</sup> | 550mA <sup>1)</sup> | 5.5W <sup>1)</sup> | 5nF <sup>1)</sup> | 10μH <sup>1)</sup> |
|                          |      | 30V                 | 300mA               | 1.2W               | 5nF               | 10μH               |
|                          | 3, 4 | 30V                 | 300mA               | 1W                 | 6nF               | 0mH                |
|                          | 5, 6 | -                   | -                   | -                  | -                 | -                  |

Note: <sup>1)</sup> the safe parameters meet all requirements for a FISCO Field Device

| dde code   | terminals | U <sub>i</sub>      | I <sub>i</sub>  | P <sub>i</sub>  | C <sub>i</sub>    | L <sub>i</sub>     |
|------------|-----------|---------------------|-----------------|-----------------|-------------------|--------------------|
| NHA        | 1, 2      | 35V                 | -               | 1W              | 5nF               | 0mH                |
|            | 3, 4      | -                   | -               | -               | -                 | -                  |
|            | 5, 6      | -                   | -               | -               | -                 | -                  |
| NHB        | 1, 2      | 35V                 | -               | 1W              | 5nF               | 0mH                |
|            | 3, 4      | 35V                 | -               | 1W              | 6nF               | 0mH                |
|            | 5, 6      | -                   | -               | -               | -                 | -                  |
| NHC        | 1, 2      | 30V                 | -               | 1W              | 30nF              | 0mH                |
|            | 3, 4      | 30V                 | -               | 1W              | 30nF              | 0mH                |
|            | 5, 6      | -                   | -               | -               | -                 | -                  |
| NHD        | 1, 2      | 35V                 | -               | 1W              | 5nF               | 0mH                |
|            | 3, 4      | 35V                 | -               | 1W              | 6nF               | 0mH                |
|            | 5, 6      | 35V                 | -               | 1W              | 5nF               | 0mH                |
| NHE<br>NHG | 1, 2      | 17.5V <sup>1)</sup> | - <sup>1)</sup> | - <sup>1)</sup> | 5nF <sup>1)</sup> | 10μH <sup>1)</sup> |
|            |           | 32V                 | 300mA           | -               | 5nF               | 10μH               |
|            | 3, 4      | 35V                 | 300mA           | 1W              | 6nF               | 0mH                |
|            | 5, 6      | -                   | -               | -               | -                 | -                  |

Note: <sup>1)</sup> the safe parameters meet all requirements for a FISCO Field Device

3.5 When the symbol **dd** = NJ, N7 or NK, the electrical data is as follows:

| dde code          | terminals | U <sub>nom</sub> | U <sub>max</sub> | P <sub>max</sub> |
|-------------------|-----------|------------------|------------------|------------------|
| NJA<br>N7A<br>NKA | 1, 2      | 35Vdc            | 250Vac           | -                |
|                   | 3, 4      | -                | -                | -                |
|                   | 5, 6      | -                | -                | -                |
| NJB               | 1, 2      | 35Vdc            | 250Vac           | -                |

|     |      |       |        |                  |
|-----|------|-------|--------|------------------|
| N7B | 3, 4 | 35Vdc | 250Vac | 1W <sup>1)</sup> |
| NKB | 5, 6 | -     | -      | -                |
| NJC | 1, 2 | 30Vdc | 250Vac | -                |
| N7C | 3, 4 | 30Vdc | 250Vac | -                |
| NKC | 5, 6 | -     | -      | -                |
| NJD | 1, 2 | 35Vdc | 250Vac | -                |
| N7D | 3, 4 | 35Vdc | 250Vac | -                |
| NKD | 5, 6 | 35Vdc | 250Vac | -                |
| NJE | 1, 2 | 32Vdc | 250Vac | 0.88W            |
| NJG |      |       |        |                  |
| N7E | 3, 4 | 35Vdc | 250Vac | 1W <sup>1)</sup> |
| N7G |      |       |        |                  |
| NKE | 5, 6 | -     | -      | -                |
| NKG |      |       |        |                  |

Note: <sup>1)</sup> this circuit is functionally limited by an internal resistance of  $760.5\Omega$ ; herewith  $P_{max}$  may be determined.

3.6 When symbol  $f = L$  or  $M$ , the electrical data is as follows:

3.6.1 prepared for connection of FHX50 or any other suitable display in type of protection intrinsic safety

$$U_o = 7.3V \quad I_o = 157mA \quad P_o = 362mW \quad C_o = 388nF \quad L_o = 149 \mu H \quad C_c \leq 125nF \quad L_c \leq 149 \mu H$$

3.6.2 if used as interface in type of protection intrinsic safety

$$U_o = 7.3V \quad I_o = 327mA \quad P_o = 800mW; \quad U_i = 7.3V \quad C_i = 0nF \quad L_i = 0mH$$

3.6.3 if used as non-intrinsically safe interface

$$U_N = 6.5V$$

3.7 This product can be connected to an separated certified interface, with following maximum values:

$$U_o = 7.3V \quad I_o = 100mA \quad P_o = 160mW \quad C_i = 0nF \quad L_i = 0mH$$

3.8 Clean the surface of this product termly when using in combustibile dust atmosphere.

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

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

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/T 3836.18-2017 "Explosive atmospheres- Part 18:Intrinsically safe electrical systems".

GB50257-2014 "Code for construction and acceptance of electric equipment on fire and device for explosion hazard electrical installation engineering".

GB15577-2018 "Safety regulations for dust explosion prevention and protection".

**4. Manufacturer's Responsibility**

4.1 Conditions for safe use and special 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.

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

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