



防爆合格证

证 号：GYB24.2475X

制 造 商 恩德斯豪斯温度仪表(苏州)有限公司

(地址：江苏省苏州市苏州工业园区 江田里路 31 号)

产 品 名 称 电涌保护器

型 号 规 格 HAW566/HAW568

防 爆 标 志 Ex ia IIC T6...T4 Ga, Ex ia IIIC T₂₀₀85°C...T₂₀₀135°C Da, Ex db IIC T6...T4 Gb

产 品 标 准 /

图 样 编 号 212056422.REV.B , 212056116.REV.B , 212056115.REV.B ,
212056114.REV.B, 212056113.REV.B, 212056112.REV.B

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 3836.4-2021

特颁发此证。

本证书有效期：2024 年 10 月 15 日 至 2029 年 10 月 14 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。

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 四 年 十 月 十 五 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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Worldwide Access

EXPLOSION PROTECTION CERTIFICATE OF CONFORMITY

Cert No. GYB24.2475X

Manufacturer	Endress+Hauser Wetzer(Suzhou)Co.,Ltd. (Address:No.31 Jiang-Tian-Li-Lu,Suzhou Industrial Park)
Product	surge protective device
Model	HAW566/HAW568
Ex marking	Ex ia IIC T6...T4 Ga, Ex ia IIIC T ₂₀₀ 85°C...T ₂₀₀ 135°C Da, Ex db IIC T6...T4 Gb
Product standard	/
Drawing number	212056422.REV.B, 212056116.REV.B, 212056115.REV.B, 212056114.REV.B, 212056113.REV.B, 212056112.REV.B

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

GB/T 3836.1-2021,GB/T 3836.2-2021,GB/T 3836.4-2021

Valid until: 2029.10.14

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.Model designation is specified in the attachment(s) to this certificate.
- 4.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 2024.10.15

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



(GYB24.2475X)

(Attachment I)

GYB24.2475X 防爆合格证附件 I

由恩德斯豪斯温度仪表(苏州)有限公司生产的HAW566/HAW568系列电涌保护器，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 3836.2-2021 爆炸性环境 第2部分：由隔爆外壳“d”保护的的设备

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

产品防爆标志见第二条，防爆合格证号为GYJ24.2475X。

本证书认可的产品型号规格如下：

HAW566-**a b c d e f g h**

a 表示防爆认证代码，可为：NA=NEPSI Ex ia IIC T6...T4 Ga；

b 表示安装型式，可为：C=信号类轨道安装；

c 表示保护类型，可为：

A1=TC,RS485,CAN,

A2=RTD,

B1=0/4-20mA,

B2=PFM, Profibus PA, Foundation Fieldbus,

B3=Ethernet-APL/SPE,10Mbit/s,

B4=PNP, NPN;

d 表示接线方式，可为：2=2 线制 或 3=3 线制；

e 表示电气连接类型，可为：A=螺丝端子或 B=直插端子；

f 表示测试，证书声明，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

g 表示功能安全测试，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

h 表示标签信息，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

HAW568-NC **a b c d e f g h**

a 表示安装型式，可为：B=现场安装 316L 壳体，并联接线；

b 表示保护类型，可为：

A1=TC,RS485,CAN,

A2=RTD,

B1=0/4-20mA,

B2=PFM, Profibus PA, Foundation Fieldbus,

B3=Ethernet-APL/SPE,10Mbit/s,

B4=NPN,PNP;

c 表示接线方式，可为：2=2 线制，3=3 线制 或 4=4 线制；

d 表示电气连接类型，可为：C=M20x1.5，D=1/2NPT 或 E=3/4NPT；

e 表示测试报告，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

f 表示功能安全认证，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

g 表示接头附件，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

h 表示标签信息，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

HAW568-NB **a b c d e f g h**

a 表示安装型式，可为：A=现场安装 316L 壳体，串联接线；

b 表示保护类型，可为：

A1=TC,RS485,CAN,

A2=RTD,

B1=0/4-20mA,

B2=PFM, Profibus PA, Foundation Fieldbus,

B3=Ethernet-APL/SPE,10Mbit/s,

B4=NPN,PNP;

c 表示接线方式，可为：2=2 线制，3=3 线制 或 4=4 线制；

d 表示电气连接类型，可为：C=M20x1.5，D=1/2NPT，E=3/4NPT 或 Y=TSP，其他类型；

e 表示测试报告，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

f 表示功能安全认证，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

g 表示接头附件，与防爆性能不相关，可为任意两位数字与字母的组合或空白；

h 表示标签信息，与防爆性能不相关，可为任意两位数字与字母的组合或空白。

一、 产品安全使用特殊条件

防爆合格证号后缀“X”表示该产品安全使用特殊条件，具体内容为：

1、产品型号、温度组别与使用环境温度的关系为：

HAW568-NC 系列作为 Ex db 设备的安装时：

温度组别	使用环境温度
T4	-40°C ~ 85°C
T5	-40°C ~ 80°C
T6	-40°C ~ 70°C

HAW568-NC 系列作为 Ex ia 设备的安装：

温度组别	使用环境温度
T4 / T ₂₀₀ 135°C	-40°C ~ 85°C
T5 / T ₂₀₀ 100°C	-40°C ~ 80°C
T6 / T ₂₀₀ 85°C	-40°C ~ 70°C

HAW566 系列：

温度组别	使用环境温度
T4	-40°C ~ 80°C
T5	-40°C ~ 75°C
T6	-40°C ~ 50°C

HAW568-NB 系列：

温度组别	使用环境温度
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T4	-40°C ~ 80°C
T5	-40°C ~ 75°C
T6	-40°C ~ 60°C

2、当产品为隔爆型时，产品需要通过隔爆螺纹（1/2”NPT, 3/4”NPT, M20×1.5, M25×1.5）连接到获得认证的金属隔爆外壳上。NPT 螺纹应锁紧至少 5 扣螺纹。M 螺纹应锁紧至少 6 扣螺纹并且防止自松脱。整体导线应进行适当的机械保护，并端接在金属隔爆外壳中。隔爆外壳不得产生大于 1.45MPa 的压力。隔爆外壳应具有外部固定设施和内部接地设施。电涌保护器未提供接地/固定连接。黄-绿导线未连接到电涌保护器的金属外壳。安装时，黄-绿导线须与隔爆外壳内部接地可靠连接。作为安装的一部分，用户/安装人员有责任确保正确接地。

3、有关隔爆接合面尺寸的信息，请联系原始制造商。

4、当 HAW568-NC 系列作为 Ex ia 设备的安装时，电涌保护器应通过内部螺纹（1/2”NPT, 3/4”NPT, M20×1.5, M25×1.5, G1/2”或 G3/4”）安装在本安设备的外壳中。当使用在可燃性粉尘环境时，本安设备的外壳应符合 GB/T 3836.4-2021 第 6.1 条的规定。整体导线应进行适当的机械保护，并可靠端接在本安设备的外壳中。

5、关联装置应优先选用隔离式安全栅。如选用齐纳式安全栅，应符合 GB/T 3836.15-2017 标准关于本安电路接地的要求。

6、严禁摩擦产品外壳以防静电引燃危险。

7、用户/安装人员有责任确保正确接地。产品没有提供接地/等电位联结。

二、产品使用注意事项

1、产品的防爆标志为：

HAW566 系列：Ex ia IIC T6...T4 Ga

HAW568-NC 系列：Ex ia IIC T6...T4 Ga, Ex ia IIIC T₂₀₀85°C...T₂₀₀135°C Da, Ex db IIC T6...T4 Gb（当 $d=C, D$ 或 E 时）

HAW568-NB 系列：Ex ia IIC T6...T4 Ga, Ex ia IIIC T₂₀₀85°C...T₂₀₀135°C Da

2、产品防爆型式为 Ex ia 时，必须与已通过防爆认证的关联装置配套共同组成本安防爆系统方可使用于现场存在爆炸性气体混合物的危险场所，其系统接线必须同时遵守本产品和所配关联装置的使用说明书要求，接线端子不得接错。

HAW568-NC 系列本安电气参数：

最高输入电压 U_i (V)	最大输入电流 I_i (mA)	最大输入功率 P_i (W)	最大内部等效参数	
			C_i (nF)	L_i (mH)
48	500	5.32	0	0

HAW568-NB 系列本安电气参数：

型号	最高输入电压 U_i (V)	最大输入电流 I_i (mA)	最大输入功率 P_i (W)	最大内部等效参数	
				C_i (μ F)	L_i (mH)
$c=2$	50	32	0.4	近似为0	近似为0
$c=3$	50	16	0.2	近似为0	近似为0
$c=4$	50	16	0.2	近似为0	近似为0

HAW566 系列本安电气参数：

型号	最高输入电压 U_i (V)	最大输入电流 I_i (mA)	最大输入功率 P_i (W)	最大内部等效参数	
				C_i (nF)	L_i (mH)
$c=A1,A2$	6	500	5.32	≈ 0	≈ 0
$c=B1,B2,B3,B4$	30	500	5.52	≈ 0	≈ 0

3、产品防爆型式为 Ex db 时，电气参数： $U_n=24Vdc$ ， $I_{Lmax}=500mA$ ， $U_c=48Vdc$ 。

4、产品外壳防护等级：IP66 / IP67。

5、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。

6、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 3836.16-2022“爆炸性环境 第 16 部分：电气装置
的检查与维护”、GB/T 3836.18-2024“爆炸性环境 第 18 部分：本质安全电气系统”、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”和 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。

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

二〇二四年十月十五日



(GYB24.2475X)

(Attachment I)

Attachment I to GYB24.2475X

1. Description

Surge protective device typed HAW566/HAW568 manufactured by Endress+Hauser Wetzler(Suzhou)Co.,Ltd., 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/T 3836.4-2021 Explosive atmospheres-Part 4: Equipment protection by intrinsic safety “i”

The Ex marking is shown in the type code designation, its certificate number is GYB24.2475X.

Type approved in this certificate is shown as below:

HAW566-**a b c d e f g h**

a indicates Approval, including: NA=NEPSI Ex ia IIC T6...T4 Ga;

b indicates Housing, including: C = Control cabinet version, DIN rail;

c indicates application, including:

A1=TC,RS485,CAN,

A2=RTD,

B1=0/4-20mA,

B2=PFM, Profibus PA, Foundation Fieldbus,

B3=Ethernet-APL/SPE,10Mbit/s,

B4=PNP, NPN;

d indicates Version, including: 2=2-wire,3=3-wire;

e indicates Electrical connection, including: A=Screw terminals, B=Push-in terminals;

f indicates Tests, Certificate, Declaration, could be any combination of two digits or blank, not relevant for explosion safety;

g indicates Additional approval, could be any combination of two digits or blank, not relevant for explosion safety

h indicates Marking, could be any combination of two digits or blank, not relevant for explosion safety.

HAW568-NC **a b c d e f g h**

a indicates housing, including: B=Field mount housing 316L ,screw in version;

b indicates Application, including:

A1=TC,RS485,CAN,

A2=RTD,

B1=0/4-20mA,

B2=PFM, Profibus PA, Foundation Fieldbus,

B3=Ethernet-APL/SPE,10Mbit/s,

B4=NPN,PNP;

c indicates Version, including: 2=2-wire,3=3-wire,4=4-wire;

d indicates Electrical Connection, including: C=M20x1.5, D=1/2NPT, E=3/4NPT;

e indicates Tests, Certificate, Declaration, could be any combination of two digits or blank, not relevant for explosion safety;

f indicates Additional approval, could be any combination of two digits or blank, not relevant for explosion safety;

g indicates Accessory Enclosed, could be any combination of two digits or blank, not relevant for explosion safety;

h indicates Marking, could be any combination of two digits or blank, not relevant for explosion safety.

HAW568-NB **a b c d e f g h**

a indicates housing, including: A=Field mount housing 316L lead through version;

b indicates Application, including:

A1=TC,RS485,CAN,

A2=RTD,

B1=0/4-20mA,

B2=PFM, Profibus PA, Foundation Fieldbus,

B3=Ethernet-APL/SPE,10Mbit/s,

B4=NPN,PNP;

c indicates Version, including: 2=2-wire,3=3-wire,4=4-wire;

d indicates Electrical Connection, including: C=M20x1.5, D=1/2NPT, E=3/4NPT, Y=technical special product;

e indicates Tests, Certificate, Declaration, could be any combination of two digits or blank, not relevant for explosion safety;

f indicates Additional approval, could be any combination of two digits or blank, not relevant for explosion safety;

g indicates Accessory Enclosed, could be any combination of two digits or blank, not relevant for explosion safety;

h indicates Marking, could be any combination of two digits or blank, not relevant for explosion safety.

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 Temperature class and allowable ambient temperature are shown in tables below:

HAW568-NC series when installed as Ex db equipment:

Temperature class	Ambient temperature
T4	-40°C ~ 85°C
T5	-40°C ~ 80°C
T6	-40°C ~ 70°C

HAW568-NC series when installed as Ex ia equipment:

Temperature class	Ambient temperature
T4 / T ₂₀₀ 135°C	-40°C ~ 85°C
T5 / T ₂₀₀ 100°C	-40°C ~ 80°C
T6 / T ₂₀₀ 85°C	-40°C ~ 70°C

HAW566 series :

Temperature class	Ambient temperature
T4	-40°C ~ 80°C
T5	-40°C ~ 75°C
T6	-40°C ~ 50°C

HAW568-NB series :

Temperature class	Ambient temperature
T4	-40°C ~ 80°C
T5	-40°C ~ 75°C
T6	-40°C ~ 60°C

2.2 When certified as flameproof equipment, the surge protection device shall be connected to a certified metal flameproof enclosure with type of protection Ex db by flameproof threads(1/2 "NPT, 3/4" NPT, M20×1.5, M25×1.5).NPT threads shall engage at least 5 full threads wrench tight. Metric threads shall engage at least 6 full threads and effectively be locked from self-loosening.The integral wires shall be suitably mechanically protected and terminated in a metallic flameproof enclosure. The flameproof enclosure shall not generate a pressure greater than 1.45 Mpa. The flameproof enclosure shall have an external bonding facility and internal earthing facility. The surge protective device is not provided with earthing/bonding connection. The yellow-green wire needs to be reliably connected to internal earthing of the flameproof enclosure during installation. It is the responsibility of the user/installer to ensure proper earthing as part of the installation.

2.3 Contact the original manufacturer for information on the dimensions of the flameproof joints.

2.4 When HAW568-NC series are installed as Ex ia equipment, the surge protector shall be installed in the housing of the intrinsic safety equipment via internal threads (1/2 "NPT, 3/4" NPT, M20×1.5, M25×1.5, G1/2 "or G3/4"). When used in an environment of combustible dust, the enclosure of the equipment shall comply with the

provisions of Article 6.1 of GB/T 3836.4-2021. The integral wire shall be properly mechanically protected and reliably terminated in the housing of the intrinsic safety equipment.

2.5 Isolated safety grids should be preferred for associated devices. If the Zener safety grid is selected, it should meet the requirements of GB/T 3836.15-2017 standard on the grounding of the intrinsic safety circuit.

2.6 Do not rub the product enclosure to prevent the risk of electrostatic ignition.

2.7 It is the user/installer's responsibility to ensure proper grounding.

3. Conditions for Safe Use

3.1 Ex markings for products are:

HAW566 Series: Ex ia II C T6...T4 Ga

HAW568-NC Series: Ex ia II C T6...T4 Ga, Ex ia IIIC T₂₀₀85°C...T₂₀₀135°C Da, Ex db II C T6...T4 Gb (only when d=C,D,E)

HAW568-NB Series: Ex ia II C T6...T4 Ga, Ex ia IIIC T₂₀₀85°C...T₂₀₀135°C Da

3.2 This product 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.

HAW568-NC series electrical data for intrinsic safety:

Ui (V)	Ii (mA)	Pi (W)	Internal equivalent electrical data	
			Ci (nF)	Li (mH)
48	500	5.32	0	0

HAW568-NB series electrical data for intrinsic safety:

Option	Ui (V)	Ii (mA)	Pi (W)	Internal equivalent electrical data	
				Ci (μF)	Li (mH)
c =2	50	32	0.4	≈0	≈0
c =3	50	16	0.2	≈0	≈0
c =4	50	16	0.2	≈0	≈0

HAW566 series electrical data for intrinsic safety:

Option	Ui (V)	Ii (mA)	Pi (W)	Internal equivalent electrical data

				Ci (nF)	Li (mH)
c =A1,A2	6	500	5.32	≈0	≈0
c =B1,B2,B3,B4	30	500	5.52	≈0	≈0

3.3 Electrical data $U_n=24V_{dc}$, $I_L \max=500mA$, $U_c=48V_{dc}$ when Ex protection type is Ex d.

3.4 Enclosure protection rating: IP66/IP67.

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

3.6 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/T 3836.15-2017 "Explosive atmospheres- Part 15:Electrical installations design, selection and erection".

GB/T 3836.16-2022 "Explosive atmospheres- Part 16:Electrical installations inspection and maintenance".

GB/T 3836.18-2024 "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

2024.10.15