



国家防爆

防爆合格证

制造单位 Endress+Hauser Optical Analysis Inc.
11027 Arrow Route, Rancho Cucamonga CA 91730, United States of America

产品名称 TDLAS 气体分析仪

型号规格 J22

防爆标志 Ex db ia ib op is h IIC T4 Gb

产品标准 --

总装图号 EX8000000114

经对上述产品图样及技术文件的审查和样品检验,确认符合下列标准:

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”保护的设备》

GB/T 3836.22-2017 《爆炸性环境 第22部分:光辐射设备和传输系统的保护措施》

GB/T 3836.28-2021 《爆炸性环境 第28部分:爆炸性环境用非电气设备 基本方法 and 要求》

记事:见附页(共5页)。

中心主任

颁发日期

2023年05月10日

本证有效期

2023年05月10日至2028年05月09日



南阳防爆电气研究所
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本产品已取得 IECEx 证书, 证书号: IECEx SIR 20.0035X, 版本 4, 颁发日期: 2023-01-04。
本产品为带 SCS 面板式安装结构的 TDLAS 气体分析仪。

3. 型号命名:
- J22- ABCDEFGHIJKLMNOPQRSTUVWXYZ
- A (10) - 认证类型
- BA - ATEX/IECEx/UKEx Zone 1
- HD - CNEx
- B (20) - 被分析介质
- C (30) - 测量范围
- D (40) - 测量范围 2
- E (50) - 气体成分
- F (60) - 排气
- G (70) - 工艺膜盒材料
- V - 316 不锈钢; FKM 密封
- H (80) - 电源参数
- A - 100-240 VAC (50/60 Hz) $\pm$ 10%
- D - 24 VDC $\pm$ 20%
- I (90) - 输出; 输入 1
- J (100) - 输出; 输入 2
- K (110) - 输出; 输入 3
- L (120) - 流量计电子模块外壳材料
- 1 - 涂层无铜铝
- 2 - 316 不锈钢
- M (130) - 安装控制器
- N (140) - 样气预处理系统 (SCS)
- A - 面板安装, 铝

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王军

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- O (150) - 过滤
P (160) - 采样系统连接形式
 A - 英制螺纹接口
 B - 公制螺纹接口
Q (170) - 压力调节
R (180) - 流量计
 G - 铠装, 出厂默认
 P - 铠装, Krohne 转子流量计带流量开关
 F - 玻璃管, 出厂默认
 K - 玻璃管, Krohne 转子流量计
 N - 无
S (190) - 加热器选项
 8 - 无
T (200) - 吹扫
U (500) - 显示的操作语言
V (580) - 测试/证书/声明
W (895) - 标志

注: 无选项的位码信息看作对产品设计不重要。

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第3页 共5页

4. 额定参数:

额定值: AC100-240V, 50/60Hz $\pm$ 10%, U_m = 250V 或 DC19.2-28.8V,
最大 U_m 为 250V, 10W

I/O1: 端子 26 和 27, U_n =DC30V, U_m = AC250V

I/O2: 端子 24 和 25, U_n =DC30V, U_m = AC250V 或 U_n = DC30V,
 I_n = DC100mA/AC500mA, U_m = AC250V

I/O3: 端子 22 和 23, U_n =DC30V, U_m = AC250V 或 U_n = DC30V,
 I_n = DC100mA/AC500mA,
 U_m = AC250V

5. 使用环境温度: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$

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防爆合格证 (附页)

第 4 页 共 5 页

6. 本产品配用的已获证防爆产品:

序号	产品名称	产品型号	防爆标志	数量
1	外壳	G305, G307	Ex db IIC Gb	1
2	流量计电子模块	Proline 300/500	Ex [ia] IIC	1
3	显示器模块	DP-PA1A	Ex ia IIC Ga	1
4	转子流量计	DK32 / R1 / .. / L / .. / .. - Ex	Ex ia IIC T6...T4 Gb	1 或 2

7. 防爆标志: Ex db ia ib op is h IIC T4 Gb

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防爆合格证 (附页)

第 5 页 共 5 页

8. 特殊使用条件:

- 用户不得对隔爆接合面进行修理;
- 不干胶标签、铝制外壳设备型号的粉末涂层以及带有流量开关的流量计的涂层都是不导电的材料,在某些极端条件下可能产生可点燃的静电放电。用户应确保不在可能产生极端条件(例如高压蒸汽)的环境中安装或使用该设备,否则可能会导致静电荷积聚。此外,只能用湿布对该设备进行清洁;
- 可选的不锈钢标签没有接地。通过测量确定的标签的最大平均电容为 30 pF。用户应考虑本设备在具体应用中的适用性;
- 介质的温度应在设备的额定环境温度范围内;
- 与本质安全型流量开关连接器的任何连接应通过一个获得防爆证书的 M12 × 1.5、防爆标志为 Ex eb IIC 且防护等级为 IP66 的电缆引入装置进行,该引入装置应适用于 -20℃ 至 +60℃ 的温度范围,且应安装在光学头外壳入口处。该连接应通过一个配套的连接器的使用压接式端子与安装在印刷电路板上的四针黑色连接器 J6 进行连接。通过拆卸光学头外壳,可以接触到该连接,重新安装时,应使用 2Nm 的紧固扭矩;
- 本质安全型流量开关连接电路与设备外壳之间不能通过 GB/T 3836.4 第 6.3.13 条规定的 500V r.m.s. 绝缘强度试验。在设备安装中都应考虑到这一点;
- 本设备设计在恒定的压力下运行,没有对工作压力范围内的压力持续波动的影响进行评估。因此,用户应确保设备的采样单元管道内的压力波动不会经常超过 5 lbf/in² (psi)。
- 警告:存在爆炸性环境时严禁打开!

中心主任

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南阳防爆电气研究所
国家防爆电气产品质量检验检测中心

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防爆合格证

Electrical Apparatus for Explosive Atmospheres
CERTIFICATE OF CONFORMITY

Manufacturer Endress+Hauser Optical Analysis Inc.
11027 Arrow Route, Rancho Cucamonga CA 91730, United States of America

Product TDLAS Gas Analyzer

Type J22

Marking Ex db ia ib op is h IIC T4 Gb

Standard(s) --

Drawing No. EX8000000114

The drawings, technical documents and the samples are verified and certified according to standard(s) for safety as below:

GB/T 3836.1-2021	Explosive atmospheres - Part 1: Equipment - General requirements
GB/T 3836.2-2021	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"
GB/T 3836.22-2017	Explosive atmospheres—Part 22: Protection of equipment and transmission system using optical radiation
GB/T 3836.28-2021	Explosive atmospheres -Part28: Non-electrical equipment for explosive atmospheres—Basic method and requirements

Note:

See Annex (5 pages in total).

Director

Date:

2023-05-10

Valid until:

2028-05-09



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NANYANG EXPLOSION PROTECTED ELECTRICAL APPARATUS RESEARCH INSTITUTE
国家防爆电气产品质量检验检测中心
CHINA NATIONAL QUALITY SURVEY AND TEST CENTER FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS
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Electrical Apparatus for Explosive Atmospheres
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1. This product has been certified, under certificate number IECEX SIR 20.0035X, issue 4, dated 2023-01-04.
2. This product is TDLAS Gas analyzer with SCS on panel.
3. Nomenclature:

J22 – ABCDEFGHIJKLMNOPQRSTUVWXYZ

A (10) – Approval

BA - ATEX/IECEX/UKEx Zone 1

HD – CNEx

B (20) – Analyte

C (30) – Measurement Range

D (40) – Measurement Range 2

E (50) – Stream Composition

F (60) – Venting to

G (70) – Process Wetted Materials

V - 316 Stainless Steel; FKM Seals

H (80) – Supply Parameters

A - 100-240 VAC (50/60 Hz) $\pm$ 10%D – 24 VDC $\pm$ 20%

I (90) – Output; Input 1

J (100) – Output; Input 2

K (110) – Output; Input 3

L (120) – Electronics Housing

1 - Coated Copper-Free Aluminum

2 – 316 Stainless Steel

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Electrical Apparatus for Explosive Atmospheres
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M (130) – Controller Mounting
N (140) – Sample Conditioning System (SCS)
 A – On Panel, Aluminum
O (150) – Filtration
P (160) – Sample System Gas Connections
 A – Imperial
 B – Metric
Q (170) – Pressure Regulation
R (180) – Flow Meter
 G – Armored, factory default
 P – Armored, Krohne with flow switch
 F – Glass Tube, factory default
 K – Glass Tube, Krohne
 N – None
S (190) – Heating Options
 8 – None
T (200) – Purge
U (500) – Operating Language Display
V (580) – Test/Certificate/Declaration
W (895) – Marking

Note: Headings without sub-options are not considered critical to the design of the equipment.

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国家防爆电气产品质量检验检测中心
CHINA NATIONAL QUALITY SURVEY AND TEST CENTER FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS
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4. Rating:

Rated: 100 - 240Vac, 50/60 Hz $\pm$ 10%, Um = 250V or 19.2 - 28.8 Vdc, max., Um 250V, 10 W.

I/O1: Terminal 26 and 27, Un = 30Vdc, Um = 250Vac

I/O2: Terminal 24 and 25, Un = 30Vdc, Um = 250Vac or Un = 30Vdc, In = 100mAac/500mAac, Um = 250Vac

I/O3: Terminal 22 and 23, Un = 30Vdc, Um = 250Vac or Un = 30Vdc, In = 100mAac/500mAac, Um = 250Vac

5. Tamb: -20°C to +60°C.

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CHINA NATIONAL QUALITY SURVEY AND TEST CENTER FOR EXPLOSION PROTECTED ELECTRICAL PRODUCTS
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6. The certified Ex components included in this product are given in the following table:

NO.	Component	Model/Type	Ex Marking	Quantity
1	Enclosure	G305, G307	Ex db IIC Gb	1
2	Electronic	Proline 300/500	Ex [ia] IIC	1
3	Display	DP-PA1A	Ex ia IIC Ga	1
4	Variable Area Flowmeters	DK32 / R1 / .. / L / .. / .. - Ex	Ex ia IIC T6...T4 Gb	1 or 2

7. Ex-Marking: Ex db ia ib op is h IIC T4 Gb;

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8. Specific conditions of use:

- The flameproof joints of this equipment are other than the minimums specified in GB/T 3836.2 and shall not be repaired by the user;
- Adhesive labels, the powder coating of models of the equipment with an aluminium enclosure, and coated parts of the flowmeter with flow switch are non-conducting materials and may generate an ignition-capable level of electrostatic discharge under certain extreme conditions. The user should ensure that the Equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charges on these non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth;
- The optional stainless-steel label tag is not bonded to earth. The maximum average capacitance of the tag determined by measurement is max. 30 pF. This shall be considered by the user to determine suitability of the equipment in a specific application;
- The temperature of the process medium shall be within the ambient temperature rating of the equipment;
- Any connection to the Intrinsically Safe Flow Switch connector shall be made via a certified M12 $\times$ 1.5 Ex eb IIC IP66 rated certified cable gland suitable for a temperature range of -20°C to $+60^{\circ}\text{C}$, that shall be fitted in an Optical Head Enclosure entry. The connection is made to a printed circuit board mounted four Pin black connector J6 via a mating free connector using crimp type terminals. Access to the connection is gained by removal of the Optical Head Enclosure cover which shall be refitted using a fastener torque of 2Nm;
- The equipment is not capable of passing a 500V r.m.s. dielectric strength test in accordance with Clause 6.3.13 of GB/T 3836.4 between the Intrinsically Safe Flow Switch connection circuits and the equipment enclosure. This shall be taken into account in any equipment installation;
- This equipment is intended to operate at a constant pressure and has not been assessed for the effects of persistent fluctuations of pressure within the operating pressure range. Therefore, the user shall ensure that the pressure fluctuation within the Sample Cell Tube of the equipment does not routinely exceed 5 lbf/in² (psi).
- Warning: DO NOT OPEN IN AN EXPLOSIVE ATMOSPHERE.

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