



防爆合格证

CONFORMITY CERTIFICATE OF EXPLOSION-PROOF

证号
Certificate No. CE24. 0655X

产品名称 Name of Product	本安型防爆万用表
型号及规格 Type of Product	Fluke 28 II EX
防爆标志 Marking	Ex ia II CT4 Gb
技术文件 Technical Documents	/
图号 Drawing No.	700003AZ06A
备注 Note (s)	本证书备注内容详见附录。

经对上述产品图样及技术文件的审查和样品的检验, 其符合以下标准

By verifying the drawings and technical documents and checking samples, the product complies with the following standards

GB/T3836.1-2021 GB/T3836.4-2021

发给: ECOM Instruments GmbH

Issued to:

本证失效日期: 2029-04-16

Date of Expire:

发证日期: 2024-04-16

Date of Issue:

印章
Seal



主任
Director

韩勇强

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 (国家防爆产品质量检验检测中心(天津))
 (石油和化学工业电气产品防爆质量监督检验中心)
 National Explosion-proof Product Quality Inspection and Testing Center(TianJin)

注: 本证仅对与批准的审查认可文件和送检样品一致的产品有效。

Note: This certificate is only valid for the documents approved and for the products that are in accord with samples tested and verified.

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防爆合格证附录

ANNEX OF CONFORMITY CERTIFICATE OF EXPLOSION-PROOF

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Certificate No.

1. 产品可采用以下 AAA/LR03 原电池供电及对应的环境温度。

序号	制造商	型号	环境温度
1	Eveready Energizer	No. E92	-15° C ≤ Ta ≤ +50° C
2	Energizer	Industrial EN92	-15° C ≤ Ta ≤ +50° C
3	Varta	Industrial PRO 4003	-15° C ≤ Ta ≤ +50° C
4	Varta	Max Tech No. 4703	-15° C ≤ Ta ≤ +50° C
5	Varta	Industrial Alkaline No. 4003	-10° C ≤ Ta ≤ +50° C
6	Rayovac	Alkaline AAA(美国型号)	-15° C ≤ Ta ≤ +50° C
7	Panasonic	Alkaline Power	-15° C ≤ Ta ≤ +45° C
8	Panasonic	Pro Power	-15° C ≤ Ta ≤ +45° C
9	Panasonic	Powerline LR03AD* *电池标志仅显示 LR03	-15° C ≤ Ta ≤ +50° C

2. 产品外壳防护等级为 IP67。

3.

测量电路连接
V/Ohm - COM

本安保护型 Ex ia IIC 最大值:

U₀ = 9.54 V

I₀ = 3.7 mA

P₀ = 可以忽略

R_i = 2.47 kΩ

线性特征

L_i = 可以忽略

C_i = 可以忽略

最大允许外部电感 L₀ 和电容 C₀ 在下面列出。为此, 考虑了电容和电感的同时发生。

Lo/mH	1000	100	2	0.5	0.1	0.01
Co/μF	0	0.61	1	1.4	2.1	3.6

或者

用于连接经认证的本质安全电路: U_i ≤ 65 V

必须考虑本质安全电路的互连规则。

中海油天津化工研究院设计有限公司
 (国家防爆产品质量检验检测中心(天津))
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防爆合格证附录

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mA/ μ A-COM

$U_0 = 1.95 V$

$I_0 = 9.7 \mu A$

$P_0 =$ 可以忽略

$L_i =$ 可以忽略

$C_i =$ 可以忽略

最大允许外部电感 L_0 和电容 C_0 在下面列出。为此, 考虑了电容和电感的同时发生。

Lo/mH	1000	100	5	1	0.5	0.005
Co/ μ F	0	14	19	25	30	1000

或者

用于连接经认证的本质安全电路: $U_i \leq 65 V$

必须考虑本质安全电路的互连规则。

A-COM

$U_0 = 0 V$

$I_0 = 0 mA$

$P_0 = 0 mW$

$L_i =$ 可以忽略

$C_i =$ 可以忽略

用于连接经认证的本质安全电路: $U_i \leq 65 V$ $I_i \leq 5 A$

必须考虑本质安全电路的互连规则。

在潜在爆炸性环境之外, 本安型防爆万用表 Fluke 28 II EX 型可以按照其额定值 ($U_n \leq 1000V$ 和 $I_n \leq 10A$) 进行操作 (另请参阅操作说明)。

4. Fluke 28 II EX 可与下列附件一起使用:

附件	型号
Test Leads	TL175
Bead Temperature Probe	80BK-A
Alligator clips	AC 172, AC 175
AC current clamp	i400
Temperature Probe	80PK-27

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5. 防爆合格证编号后缀“X”表示产品具有安全使用特殊条件：

在危险区使用时，设备必须带有红色防爆皮套。

请勿在危险区域内打开本产品。

原电池仅能在危险区域外更换。（注意标签和安全说明）

仅使用为本产品批准的保险丝（见安全说明）。

每一次测量非本质安全电路进行之后，设备必须关闭 3 分钟后才能带入危险区域。

应保护产品不受高静电产生过程的影响。

6. 制造商：ECOM Instruments GmbH

地址：Industriestrasse 2, 97959 Assamstadt, Germany

以下空白。

中海油天津化工研究设计院有限公司
(国家防爆产品质量检验检测中心(天津))
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CONFORMITY CERTIFICATE OF EXPLOSION-PROOF

Certificate No.: CE24.0655X

Name of Product: Intrinsically Safe TRUE RMS Multimeter

Type of Product: FLUKE 28 II EX

Marking: **Ex ia IIC T4 Gb**

Technical Documents: /

Drawing No.: 700003AZ06A

Note (s): For notes of this certificate see annex.

By verifying the drawings and technical documents and checking samples, the product complies with the following standards:

GB/T 3836.1-2021

GB/T 3836.4-2021

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Seal



Director

Han Yongqiang

**CenerTech Tianjin Chemical Research and Design Institute Co.,Ltd.
National Explosion-proof Product Quality Inspection and Testing Center (Tianjin)
(Supervision & Test Center of Ex-products of China Petroleum & Chemical Industry)**

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Certificate No.: CE24.0655X

1. For the relationship between the permissible max. ambient temperature and the used primary cells AAA/LR03 reference to the following table:

No.	manufacturer	type	ambient temperature
1	Eveready Energizer	No. E92	-15°C ≤ Ta ≤ +50°C
2	Energizer	Industrial EN92	-15°C ≤ Ta ≤ +50°C
3	Varta	Industrial PRO 4003	-15°C ≤ Ta ≤ +50°C
4	Varta	Max Tech No. 4703	-15°C ≤ Ta ≤ +50°C
5	Varta	Industrial Alkaline No. 4003	-10°C ≤ Ta ≤ +50°C
6	Rayovac	Alkaline AAA (U.S. type)	-15°C ≤ Ta ≤ +50°C
7	Panasonic	Alkaline Power	-15°C ≤ Ta ≤ +45°C
8	Panasonic	Pro Power	-15°C ≤ Ta ≤ +45°C
9	Panasonic	Powerline LR03AD* *Battery marking shows only LR03	-15°C ≤ Ta ≤ +50°C

2. Degree of ingress protection by the enclosure is IP67.

3.

Measuring circuits In type of protection intrinsic safety Ex ia IIC Maximum values:

Connections

V/Ohm - COM

U₀ = 9.54 V

I₀ = 3.7 mA

P₀ = negligibly low

R_i = 2.47 kΩ

Characteristic linear

L_i = negligibly low

C_i = negligibly low

The maximum permissible external inductances L₀ and capacitances C₀ are listed below. The simultaneous occurrence of capacitances and inductances has been considered.

Lo/mH	1000	100	2	0.5	0.1	0.01
Co/μF	0	0.61	1	1.4	2.1	3.6

or

For connection to a certified intrinsically safe circuit: U_i ≤ 65 V

The rules for interconnection of intrinsically safe circuits must be taken into account.

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mA/μA-COM

$U_0 = 1.95 \text{ V}$

$I_0 = 9.7 \text{ μA}$

$P_0 = \text{negligibly low}$

$L_i = \text{negligibly low}$

$C_i = \text{negligibly low}$

The maximum permissible external inductances L_0 and capacitances C_0 are listed below. The simultaneous occurrence of capacitances and inductances was considered here.

Lo/mH	1000	100	5	1	0.5	0.005
Co/μF	0	14	19	25	30	1000

or

For connection to a certified intrinsically safe circuit: $U_i \leq 65 \text{ V}$

The rules for interconnection of intrinsically safe circuits must be considered

A-COM

$U_0 = 0 \text{ V}$

$I_0 = 0 \text{ mA}$

$P_0 = 0 \text{ mW}$

$L_i = \text{negligibly low}$

$C_i = \text{negligibly low}$

For connection to a certified intrinsically safe circuit: $U_i \leq 65 \text{ V}$ $I_i \leq 5 \text{ A}$

The rules for interconnection of intrinsically safe circuits must be considered

Outside the potentially explosive atmosphere, the Intrinsically Safe TRUE RMS Multimeters Type Fluke 28 II EX may be operated with their nominal data ($U_n \leq 1000\text{V}$ and $I_n \leq 10\text{A}$) (see also operating instructions).

4. The FLUKE 28 II EX may operate there with the accessories listed below.

Accessory	Type
Test Leads	TL175
Bead Temperature Probe	80BK-A
Alligator clips	AC 172, AC 175
AC current clamp	i400
Temperature Probe	80PK-27

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5. The suffix "X" behind the certificate number indicates specific condition of use of this product:
The device may be used only with the provided (red) Ex-holster in the explosion hazardous area.
The device must not be opened in the hazardous area.
The primary cells may only be changed outside the hazardous area (note the label and safety instructions).
Use only the fuses which are checked for the Fluke 28 II EX (see safety instructions).
The device must be turned off for at least 3 minutes after the measurement of a non I.S. circuit before the unit can be brought into the ex-hazardous area.
The product shall be protected against high static charge generating processes.

6. Manufacturer: ECOM Instruments GmbH
Address: Industriestrasse 2, 97959 Assamstadt, Germany
None



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