



杭州爱华仪器有限公司

HANGZHOU AIHUA INSTRUMENTS CO., LTD.



AWA5937本安型手持振动测定仪



AWA5937



防爆合格证

CONFORMITY CERTIFICATE OF EXPLOSION-PROOF

证号
Certificate No. CE26. 0015

产品名称
Name of Product 手持振动测定仪
型号及规格
Type of Product AWA5937
防爆标志
Marking Ex ia IIC T4 G_{Ex}
技术文件
Technical Documents Q/AQV 0041—2026
图号
Drawing No. AQV2. 768. 009

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

发给: 杭州爱华仪器有限公司

Issued to:

本证失效日期: 2026-02-11

Date of Expiry:

发证日期: 2026-02-11

Date of Issue:

印章
Seal



主任
Director

任承强

中海油天津化工研究院有限公司
(国家防爆产品质量监督检验中心(天津))

AWA5937



防爆合格证附录

ANNEX OF CONFORMITY CERTIFICATE OF EXPLOSION-PROOF

证号
Certificate No. **GE26.0015**

1. 产品采用 HZAH-BA 3.7V 1000mAh 锂离子电池供电，且串联浇封的熔断器保护。
 2. 产品使用环境温度： $-10^{\circ}\text{C} \leq T_a \leq +40^{\circ}\text{C}$ 。
 3. 产品外壳防护等级为 IP65。
 4. 产品仅能在安全区充电，具体要求见使用说明书。
 5. 关联检验报告 J2610015。
- 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))
(石油和化学工业电气产品防爆质量监督检验中心)

National Explosion-proof Products Quality Inspection and Testing Center(Tianjin)

注：本证书对与批准的审查认可文件和规格样品一致的产品有效。

Notes: This certificate is valid for products consistent with the approved review and specification samples.

CE26.0015

1

2

USB

3

4

GB/T 3836.13—2021“

13

” GB/T 3836.15—2017“

15

” GB/T

3836.16—2017“

16

” GB 50257—2014“

”

5

6

7

8

9

10

SELV

GB 4943.1-2011 II III

Um

5V

0 40

| | | |
|--------------|-------|----|
| 1 | ..... | 1 |
| 2 | ..... | 1 |
| 2.1 | ..... | 1 |
| 2.2 | ..... | 1 |
| 3 | ..... | 1 |
| 3.1 | ..... | 1 |
| 3.2 | ..... | 3 |
| 4 | ..... | 3 |
| 5 | ..... | 7 |
| 6 | ..... | 9 |
| 6.1 | ..... | 9 |
| 6.2 | ..... | 9 |
| 7 | ..... | 9 |
| 7.1 | ..... | 9 |
| 7.2 | ..... | 10 |
| 7.2.1 | ..... | 10 |
| 7.2.2 1/3OCT | ..... | 16 |
| 7.2.3 | ..... | 18 |
| 7.2.4 | ..... | 20 |
| 7.3 | ..... | 21 |
| 7.3.1 | ..... | 21 |
| 7.3.2 | ..... | 22 |
| 7.3.3 | ..... | 23 |
| 7.4 | ..... | 24 |
| 7.5 | ..... | 26 |
| 7.5.1 | ..... | 26 |
| 7.5.2 | ..... | 27 |

| | | |
|-----------|-------|----|
| 7.5.3 | ..... | 29 |
| 7.5.4 | ..... | 29 |
| 7.5.5 | ..... | 30 |
| 7.5.6 | ..... | 32 |
| A Wh | ..... | 33 |
| B | ..... | 34 |
| C AWA5937 | ..... | 35 |

1

AWA5937

23716—2009 GBZ/T 189.9—2025 GB/T 3241.1 2025 2 GB/T
1178—2021 Q/AQV 0041—2026 JIG
GB/T 3836.1—2021 GB/T 3836.4—2021

2

2.1

(1)

(2) 1.3 TFT-LCD 240×240

(3) 1/3 OCT

(4) Type C

(5)

(6) 5V 2A USB

(7) IP65

2.2

Ex ia IIC T4 Ga

CE26.0015

3

3.1

(1)

AWA84411 4 mV/EU(EU m/s²)

8% 64 g

AWA84411A 1 mV/EU(EU m/s²)

5%

38 g

(2) 4 Hz 2000 Hz

(3)

AWA84411 86 dB~168 dB 0.02 m/s²~251 m/s²

AWA84411A 96 dB~186 dB 0.06 m/s²~2000 m/s²

10⁻⁶ m/s²

(4) A/D 24

(5) 6 kHz 1/3 OCT 12 kHz 1/3 OCT

(6) 1 s 8 s

(7) a Wh

(8)

(9) 1.3 TFT-LCD 240×240

(10) 4

(11) 1/3 OCT

(12)

VL VLeq,T VLmax VLmin a a,T amax amin
apeak,T ahw(4) A(8)

1/3 OCT VL VLeq,T VLmax VLmin VL(a) VL(Wh)

a a,T amax amin Acc(a) Acc(Wh) max@ 4 Hz

5 Hz 6.3 Hz 8 Hz 10 Hz 12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz

40 Hz 50 Hz 63 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz

250 Hz 315 Hz 400 Hz 500 Hz 630 Hz 800 Hz 1000 Hz 1250

Hz 1600 Hz 2000 Hz

a/1s Wh/1s a/8s Wh/8s

ahv ahwx ahwy ahwz ahvn ahwxn ahwyn ahwzn

ahw(4) A(8)

n 1-10

(13) 64 G

(14) USB

(15) 1 min

(16) HZAH-BA 3.7V 100mAh

5V/2A 4

12

AWA84411A

6 ?

30s

(17) 1 s 99 h

(18) -10 40

(19) 20% 90%

(20) -40 70

(21) mm 90×48×37

(22) 113 g

3.2

TF

a)

TF

PC

b) USB

TF

U

a) ..N#

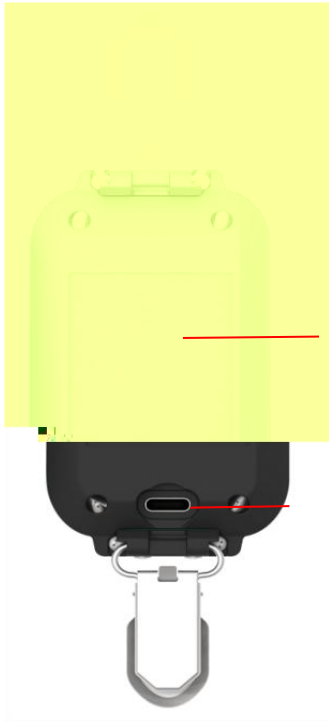
1.3 TFT-LCD

240×240

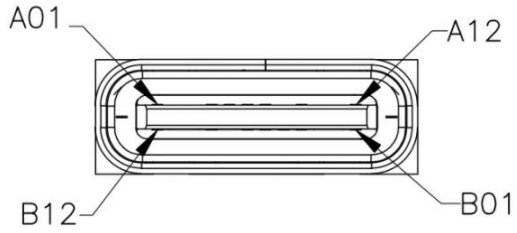
3 s

10 s





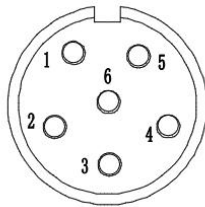
| | | | | |
|--------|---------|---------|----|---|
| Type-C | 5 V | 2 A | | |
| U | 4-3 | USB | 24 | |
| | A01-A12 | B01-B12 | | A |
| B | | | | |



| | | | |
|-----|--------|-----|--------|
| A01 | GND | B12 | GND |
| A02 | / | B11 | / |
| A03 | / | B10 | / |
| A04 | VBUS | B09 | VBUS |
| A05 | / | B08 | / |
| A06 | USB D+ | B07 | USBD- |
| A07 | USB D- | B06 | USB D+ |
| A08 | / | B05 | / |
| A09 | VBUS | B04 | VBUS |
| A10 | / | B03 | / |
| A11 | / | B02 | / |
| A12 | GND | B01 | GND |
| / | | | |

LEMO 6

4-4



A(8) 8h

VL

VLeq,T T

VLmax T

VLmin T

ahv

ahwx X

ahwy Y

ahwz Z

TEST

1/3OCT 1/3

Freq

Acc(a) 1/3 OCT

Acc(Wh) 1/3 OCT

VL(a) 1/3 OCT

VL(Wh) 1/3 OCT

max@

axis

R

Total T

m/s²

dB



6

6.1

7.3.3

6.2

USB
DC5 V DC5.5 V

7

7.1

3 s

7-1-1

“ ” “ ”

“ ” “ ”



7.2

7.2.1

7.2.1.1

OK

/ “ ”
7-2-1-2

7-2-1-1



“ ”



”
“ ”

OK

“1/3 OCT”

“ ”

“ ”

7-2-1-3

/

“

“ ”

7-2-1-4



m/s^2 dB

/

a, T amax amin apeak, T

Wh ahw(4) A(8)

“>”

a)

T_s T_s “ = /

” T_m

/ T_s

T_l

$T_l = T_s - T_m$

T_m

b)

a/1s / OK

“a/1s Wh/1s a/8s Wh/8s”

c)

“ ” ▶ /

“ ” || “ ”

”

“ ”

d)

Ts

“ = ”

“

0”

“ = ”

Ts

“ = ”

T

T:

“10 s 30 s 1 min

2 min 5 min 10 min 20 min 30 min 1 h” 1 min

5 Å

Ts /

7.2.1.4

“ ”
”

7.2.1.2

“ ”
▶ a VL -.-
“ ▶ ”
“ ” ||
Ts
“ ”

“ || ”

“ ”

“ ”

“ ”

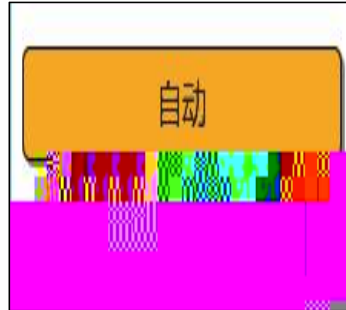
7.2.1.3

“ ”
1 s

/

7.2.1.4

/ “ ” 
7-2-1-5



/
a) “ ”

20251117001

b)

Ts
m:59 s

7-2-1-6

2025 11 17
1

001

001

30

x

10 s

00 h:00 m:01 s 99 h:59

“ ” “ ”

| | |
|------|----------------------------------|
| 启动模式 | <input type="text" value="手动"/> |
| 延迟 | <input type="text" value="00s"/> |

| | |
|------|----------------------------------|
| 启动模式 | <input type="text" value="等间隔"/> |
| 间隔时间 | <input type="text" value="10s"/> |

| | |
|------|-----------------------------------|
| 启动模式 | <input type="text" value="超限"/> |
| 限值 | <input type="text" value="50dB"/> |

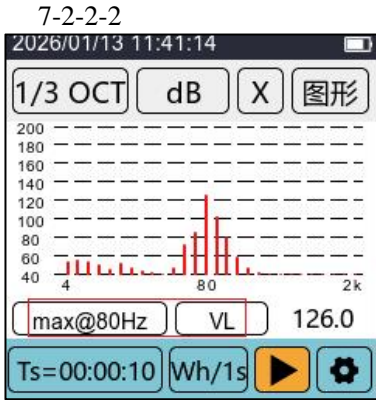
| | |
|------|--|
| 启动模式 | <input type="text" value="定时"/> |
| 启动时间 | <input type="text" value="2000-01-01 00:00:00"/> |

- a) “ ” = ” 7-2-1-7 /
“▶” “ ” 0 s 99
s
- b) “ ” = ” 7-2-1-8
/ “▶” T

T: “10 s 30 s 1 min 2 min 5 min 10 min
20 min 30 min 1 h” 1 min 5 min
5 “*:*:0:00” “*:*:5:00”
Ts Ts
5 min Ts 6 min 5
min 08:00:00 6 min
08:10:00 10 min

- c) “ ” = ” 7-2-1-9

“ ” X Y Z
 1/3 OCT 1/3 OCT
 m/s² 0.0001
 10000 7-2-2-1 dB 40
 200 7-2-2-2
 1/3 OCT
 a/1s Ts “ ”
 / OK
 a a,T amax amin
 / OK
 max@ Acc(a)/VL(a) Acc(Wh)/VL(Wh)
 1/3 OCT 4 Hz 5 Hz 6.3 Hz 8 Hz 10 Hz 12.5 Hz 16
 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63 Hz 80 Hz 100 Hz
 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400 Hz 500 Hz 630 Hz
 800 Hz 1000 Hz 1250 Hz 1600 Hz 2000 Hz



7-2-2-2

max@ a a,T amax amin “ ”
 / OK 1/3 OCT
 Ts

“ ”

7.2.2.2 1/3OCT

1/3 OCT / “ ” OK
1/3 OCT 7-2-2-3



7-2-2-3 1/3OCT

1/3 OCT Acc(a)/VL(a)

Acc(Wh)/VL(Wh) 1/3 OCT 4 Hz 5 Hz 6.3 Hz 8 Hz
 10 Hz 12.5 Hz 16 Hz 20 Hz 25 Hz 31.5 Hz 40 Hz 50 Hz 63
 Hz 80 Hz 100 Hz 125 Hz 160 Hz 200 Hz 250 Hz 315 Hz 400
 Hz 500 Hz 630 Hz 800 Hz 1000 Hz 1250 kHz 1600 kHz 2000
 Hz a a,T amax amin

Ts

7.2.3

/ OK
7-2-3-1



“ ”



Wh

“>”

OK

ahv

OK

7-2-3-2

10

10

ahw(4) A(8)

TW

0.5~8 h

0.5 h



7-2-3-2

7.2.4

7-2-4-1 / “ ” OK

“ ” / OK
“ ” “ ” 1/3OCT”
“ ” “ ” Ts “ ”
/ “ ” OK
“ ”
“ ” OK
“ ”



7-2-4-1

“ ”

7.2.1.2

7.3

7.3.1

/ “ ”

7-3-1-1



2

3 X X Y Z

4 4 mv/EU(EU m/s²)

0.1 100 7-3-1-2

AWA84411

5 10.0 m/s² 1.0 100.0 m/s²

6 AWA84411 86.0 dB 168.0 dB 4

mv/EU AWA84411A 96.0 dB 186.0 dB 1

mv/EU AWA84411

7 “ ” ▶

10 s ▶

“ ” ▶

8 “ ”



7.3.2

/ “ ”

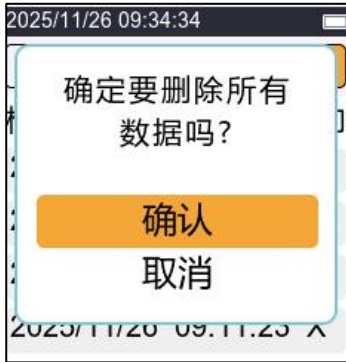
7-3-2-1



“ ”

“ ”

7-3-2-3



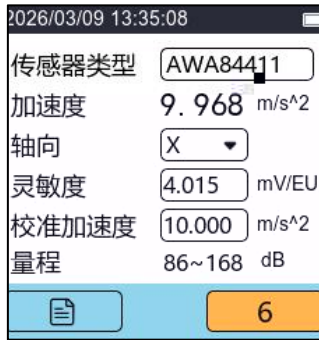
7.3.3

10 m/s²

80 Hz

10 s

7-3-3-1



“ ”

0.1 100 mv/EU /

“ ”

“ ”

“ ”

“ ”

0.1 100 mv/EU

“

“0571-85022700”

“ ”

“ ”

7.4

7.4.1

“ ”

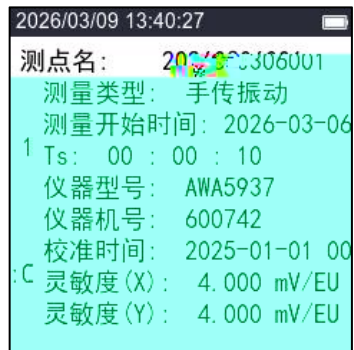
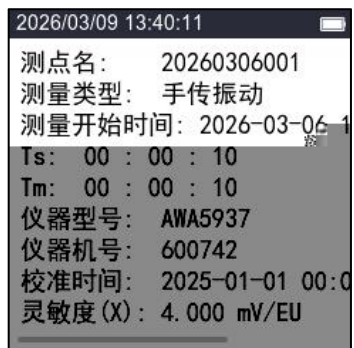
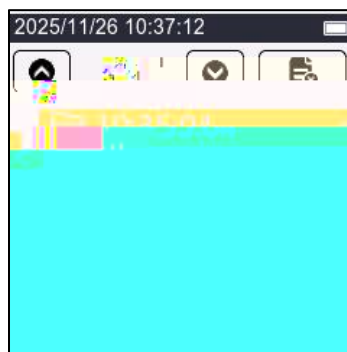
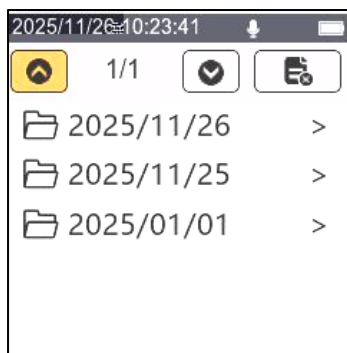
7-4-1-1

7-4-1-2

7-4-1-3

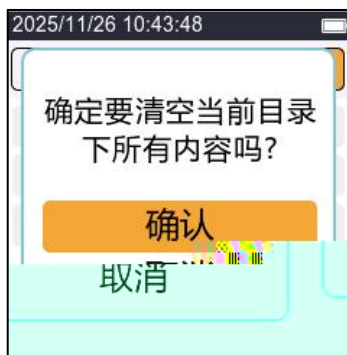
Ts

7-4-1-4



7.4.2

7-4-2-1



7.5

7.5.1

“ ”

7-5-1-1

ALL

X Y Z

X Y Z ALL

“ ”

0.5 s 1

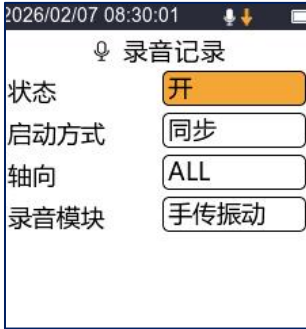
s 2 s 5 s 10 s

1/3 OCT

7.5.2.2

/
7-5-2-2

“ ”



“ ” “ ”

a) “ = ”

1/3OCT

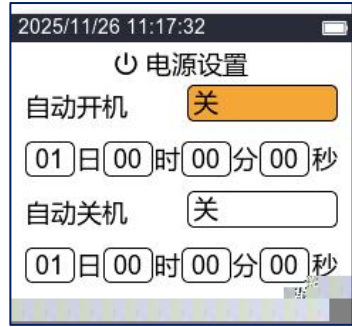
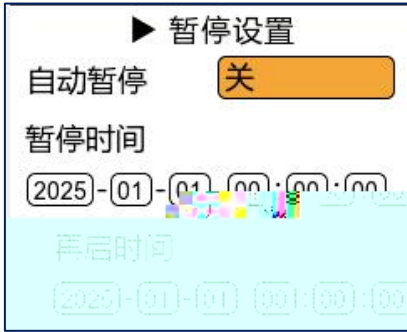
b) “ = ”

7-5-2-3

“ ”

“ ”

1 h



7.5.4.2

/ “ ”

7-5-4-2

**

6:00

****_**_**-6:00:00

7.5.5

/ “ ”

7-5-5-1



(1) /

(2) /

(3) 10 s 20s...80s 90 s

(4) 10% 20%...90% 100%

(5)USB

U U

(6)

(7) / “ ” “ ”

(8)

/ “ ” “ ”

7.5.6



2025/11/26 11:24:55

① 关于仪器

| | |
|------|----------|
| 型号名称 | AWA5937 |
| 序列号 | 917790 |
| 软件版本 | V1.0.0 |
| 硬件版本 | 1.0.0 |
| 存储容量 | 59.45 GB |
| 剩余容量 | 59.44 GB |

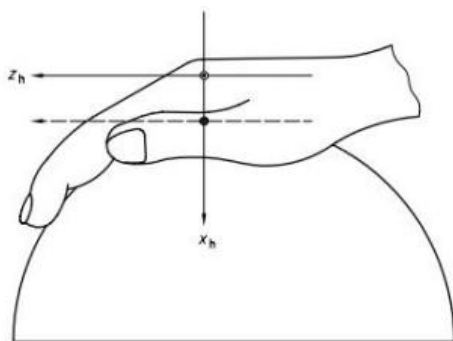
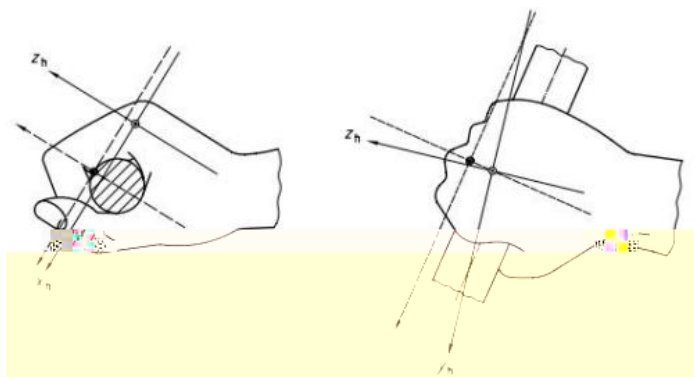
/ “ ”
7-5-6-1

A Wh

1 Wh

| /Hz | /Hz | /Wh | /dB | /% |
|--------|-------|--------|-----|----------|
| 4.00 | 3.981 | -8.51 | +2/ | +26/-100 |
| 5.00 | 5.012 | -5.27 | ±2 | +26/-21 |
| 6.30 | 6.310 | -2.77 | ±2 | +26/-21 |
| 8.00 | 7.943 | -1.18 | ±2 | +26/-21 |
| 10.00 | 10.00 | -0.43 | ±1 | +12/-11 |
| 12.50 | 12.59 | -0.38 | ±1 | +12/-11 |
| 16.00 | 15.85 | -0.96 | ±1 | +12/-11 |
| 20.00 | 19.95 | -2.14 | ±1 | +12/-11 |
| 25.00 | 25.12 | -3.78 | ±1 | +12/-11 |
| 31.50 | 31.62 | -5.69 | ±1 | +12/-11 |
| 40.00 | 39.81 | -7.72 | ±1 | +12/-11 |
| 50.00 | 50.12 | -9.78 | ±1 | +12/-11 |
| 63.00 | 63.10 | -11.83 | ±1 | +12/-11 |
| 80.00 | 79.43 | -13.88 | ±1 | +12/-11 |
| 100.00 | 100 | -15.91 | ±1 | +12/-11 |
| 125.00 | 125.9 | -17.93 | ±1 | +12/-11 |
| 160.00 | 158.5 | -19.94 | ±1 | +12/-11 |
| 200.00 | 199.5 | -21.95 | ±1 | +12/-11 |
| 250.00 | 251.2 | -23.96 | ±1 | +12/-11 |
| 315.00 | 316.2 | -25.97 | ±1 | +12/-11 |
| 400.00 | 398.1 | -28.00 | ±1 | +12/-11 |
| 500.00 | 501.2 | -30.07 | ±1 | +12/-11 |
| 630.00 | 631 | -32.23 | ±1 | +12/-11 |
| 800.00 | 794.3 | -34.60 | ±1 | +12/-11 |
| 1000.0 | 1000 | -37.42 | ±2 | +26/-21 |
| 1250.0 | 1259 | -40.97 | ±2 | +26/-21 |
| 1600.0 | 1585 | -45.42 | ±2 | +26/-21 |
| 2000.0 | 1995 | -50.60 | +2/ | +26/-100 |

B



C AWA5937





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