AP&T®

Shanghai Anping Static Technology Co.,ltd

# Portable Static Meter

AP-YV1301/1302/1303

AP-YF1201


Normal type & Explosion-proof

—AP&T—

Question

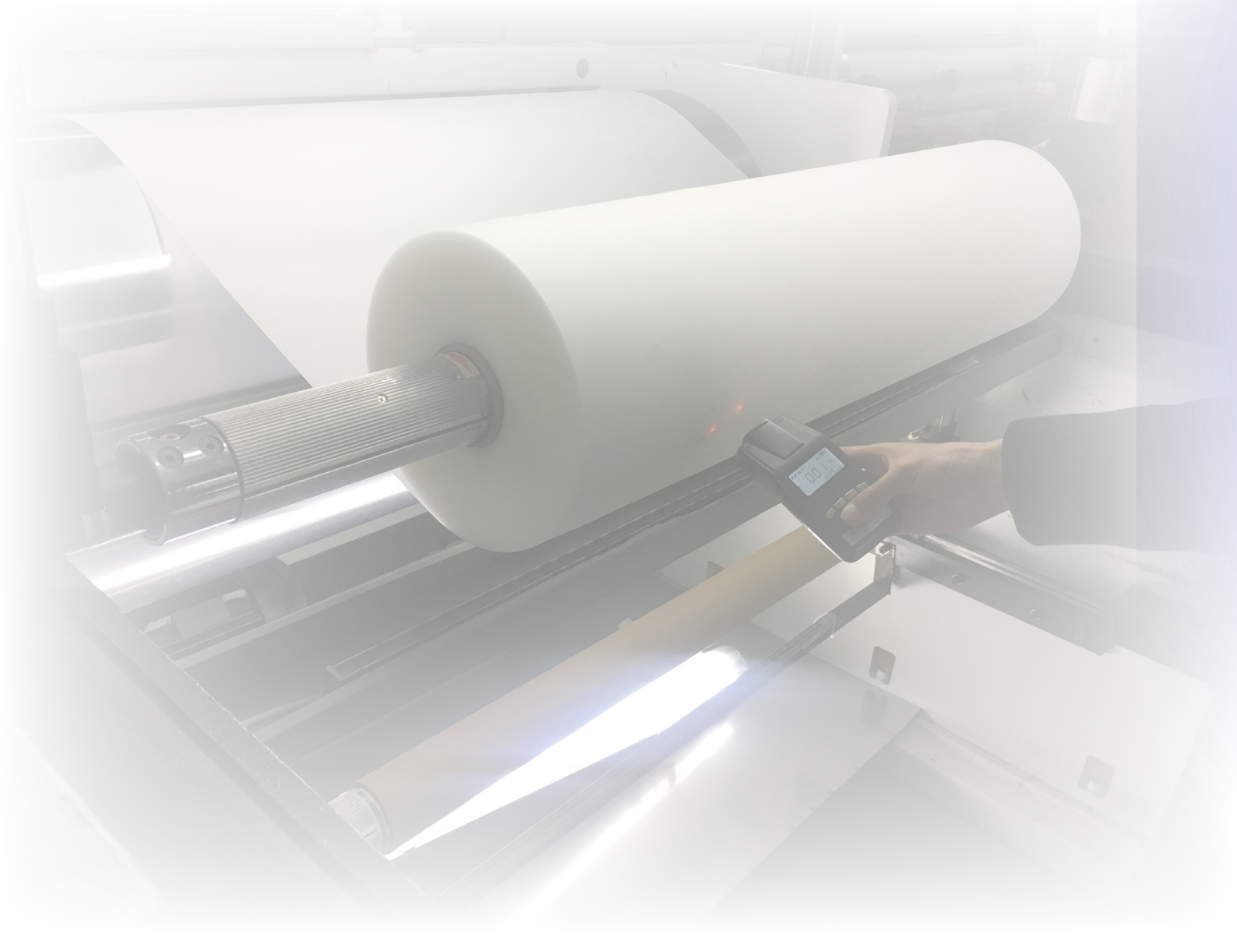
Q1:Where is electrostatic easy to be generated?

Q2:How is the static voltage?

Q3:How effective are anti-static measures?

Q4:How to choose the installation position of static eliminator?

# APPLICATION CASE



# Use in flammable and explosive environment

## Explosion-proof Static Meter

**Explosion-proof grade:Ex ib IIB T5 Gb**

With intrinsically safe explosion-proof function, it can be applied to explosive hazardous environments corresponding to Ex ib IIB T5 Gb or lower.


EXPLOSION PROTECTION
CERTIFICATE OF CONFORMITY

**Can detect static electricity on the surface of any object**

## Application field:

- Film Industry
- Textile Industry
- Coating Industry
- Printing Industry
- Injection molding Industry
- Electronics Industry
- Chemical Industry
- Medical Industry and etc.

# Dual LED Precise Positioning & Accurate Detection Distance

## Wide detection range

It can perform not only high-precision measurement with a minimum display unit of 0.001kv, but also measurement on strongly charged workpieces of ±200 kV, thus meeting a wide range of needs.

## High detection accuracy

High-precision mode with accuracy ±10%.

## Accurate detection distance

The detection distance is 25mm±1.0mm.

## Convenience

Small & light, comfortable button and easy to operate.

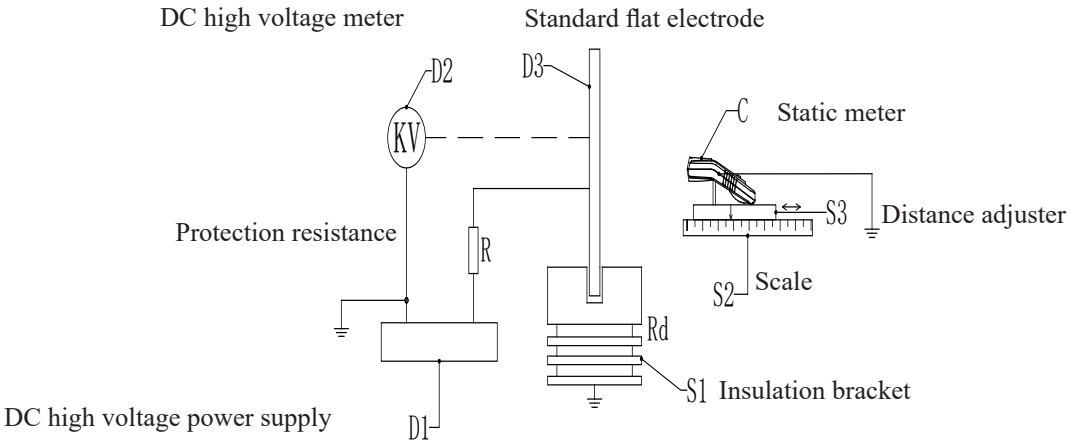
# Calibration

## Calibration condition

a) Ambient temperature: 20℃±3℃.
b) Relative humidity: 40-45%RH.
c) No measurable electric field, magnetic field, positive and negative ions around.
d) With ground wire, ground wire resistance <1Ω.

## Calibration equipment

The instruments and equipment used for calibration must be calibrated by the measurement technical institution to meet the calibration requirements and be within the validity period.
The calibration equipment mainly includes: DC high-voltage meter, DC high-voltage power supply, standard flat electrode, distance regulator, etc. The test meter is located on the center line of the calibration plate. The block diagram of the non-contact electrostatic voltmeter calibration device is as follows:



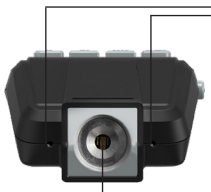

**Requirements to equipment or devices as follows:**

C——calibrated product: static meter
D1——DC high voltage power supply: output range -30KV~+30KV, continuously adjustable, or minimum step 1V, measurement uncertainty less than 1/4 of the allowable error limit of the calibration table;
D2——DC high voltage meter: measuring range -40KV~+40KV, measurement uncertainty less than 1/4 of the allowable error limit of the calibration table;
D3——Standard plate electrode: The plate electrode should be round or square with rounded corner. The radius of curvature of the edge of the electrode should not cause corona. It is recommended to wrap the edge of the electrode with insulating material; the area of the plate should be large enough. The diameter or side length should be no less than 0.4m. Our calibration plate is stainless steel size 600mm*600mm square.
——Protection resistance: The resistance of the resistor should be >20KV, the protection current and the current of the human body are <5mA, and the resistance value meets the requirements of the following formula:

$$R/(R+R_d) < 0.1\%$$

Where: for protection of resistance, the unit is ohm (Ω);
The resistance of the insulating bracket is in ohms (Ω), the resistance is >1013Ω, and the compressive strength is >25KV.
The above two resistors, their different resistance values, may cause the detected static voltage values to be different under the same standard voltage.
S1 - insulated bracket
S2——scale, measuring range: 5mm~700mm, measurement uncertainty less than 0.5mm
S3——Distance adjuster: Place the test meter on the calibration device. The front end of the test chart should be extended. The geometry and material of the support should be minimized to affect the electric field distribution around the front end of the test chart.

# Panel Function Introduction





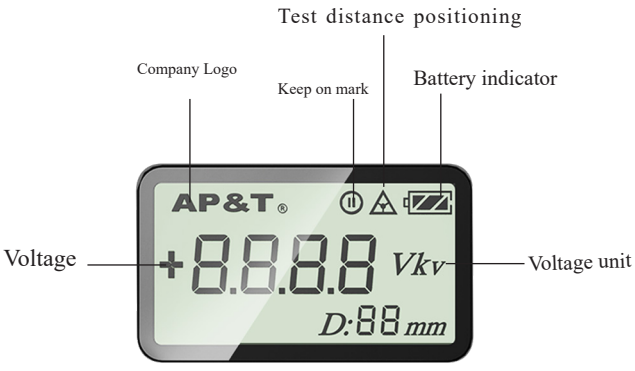
WD key:
Short press, on or off
LED distance focusing

BL key:
Short press to turn the back light on or off

HOLD key:
Short press, the data remains unchanged
Short press again to resume real-time display

ZERO key:
Long press to reset

POWER button:
Short press to turn on (the screen displays ON)
Long press to turn off (the screen displays OFF)

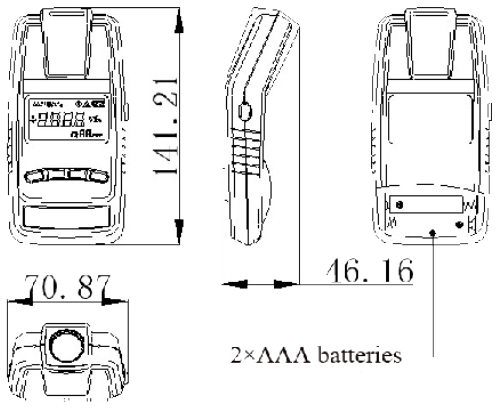


# Specification

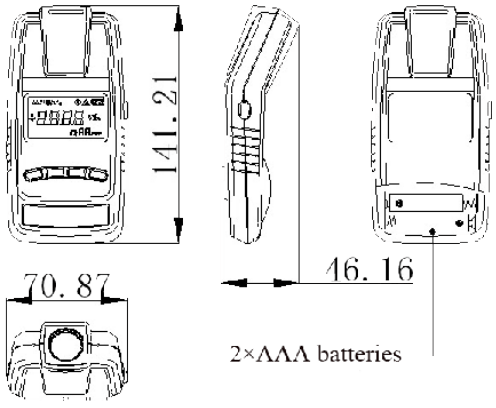
| Type | Static meter | | | Explosion-proof static meter | | |
|---|---|---|---|---|---|---|
| Model | AP-YV1301 | AP-YV1302 | AP-YV1303 | AP-YF1201 | | |
| Detection range (KV) | 0.001-±2.000 | 0.01-±20.00 | 0.1-±200.0 | 0.001-±2.000 | 0.01-±20.00 | 0.1-±200.0 |
| Exterior color | Gray shell gray key | Black shell gray key | Black shell black key | Gray shell gray key | Black shell gray key | Black shell black key |
| Explosion-proof grade | —— | | | Ex ib IIB T5 Gb | | |
| Detection accuracy | ±10% | | | | | |
| Detection distance | 25mm±1.0mm | | | | | |
| Input voltage | DC3V(2*AAA) | | | | | |
| Working current | <100mA | | | | | |
| Power off | Press and hold the power button for 3 seconds or 180 seconds to automatically power off | | | | | |
| Working temperature | -18℃→+50℃ | | | | | |
| Working humidity | 0-85%RH | | | | | |
| Dimensions | 141*71*38mm （L*W*H） | | | | | |
| Net weight | 146g (including: 2 batteries) | | | | | |
| Gross weight | 359g±20g (including: 4 batteries and packaging accessories) | | | | | |

# Product size chart

Static meter




Explosion-proof static meter




## Installation tips

(1) Install the battery and switch on/off:
First open the battery cover on the back of the static meter and put in 2xAAA standard batteries in the package. Press switch button to open. See the picture above for details.
(2) Preparation before testing:
In order to ensure the normal use of the static meter, first confirm that the three-segment power display on the display screen is marked as full (or enough power) and the parameters reading on the screen are clearly visible. Check whether the various function buttons can be used normally. See the display function diagram for details:
(3) Detecting static electricity on the surface of the object:
When using, the static detection window of the meter should be parallel to the surface of the object to be measured, and 25mm which is the standard detection distance should be kept away from the surface of the object to be measured. It is recommended to use a ruler for distance calibration if conditions permit.
After measuring the data, data hold button can be pressed to keep the measured data on the display. Press the data hold button repeatedly to resume the detection status.

AP&T®

Speciality Creates Value

Shanghai Anping Static Technology Co,.Ltd

Tel : 021-64517676

Fax : 021-64517673

Postcode : 200233

Website : www.ap-static.com

Address:3/F,Building 27,No.69,Guiqing Road,Shanghai,China