

# Instruction Manual

**SUNJE**  
Electrostatic

**SPE-100(New)**

(Eng)

It is recommended that only persons who have sufficient knowledge and experience such as system designers and responsible persons deal with this product after carefully reading the product manual.

## 1 The matters of safety

### ⚠ WARNING

- \* If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- \* It may fail to function properly if someone drops or any misuse of the product.
- \* Please connect to Ground for precise measurement.
- \* 9V Battery only. (rectangular shaped battery)

## 2 Check the package contents

### ► Product compositions

The package includes the following products composition.



Body  
SPE-100 (New)  
1ea



Ground Cable  
SGC-PE-1-001  
1ea



Adaptor  
SAD-1C-1-001  
1ea



Alligator Clip  
SAC-PE-1-001  
1ea



Banana Jack  
SBJ-PE-1-001  
1ea



Battery  
1ea

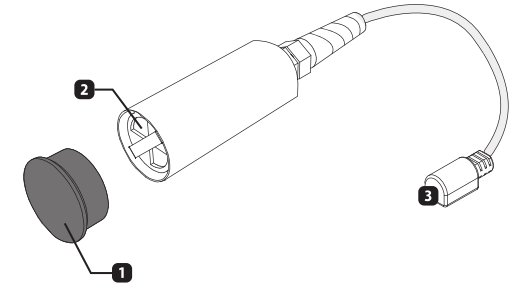
## 3 Nomenclatures of parts

### ► Body



Button	Function
Power	Power On / Off
Peak / Reset	Switching to peak hold mode
Record	This button is not supported in the current version.
Zero	Zeroing the Meter

### ► Static Voltage Sensor



#### 1. Sensor Cap

The sensor cap is for adjust offset. Please cap securely in place over the end of the sensor. Please remove sensor cap before measure.

#### 2. Static Voltage Sensor

This is static voltage of charged object measuring sensor. Please keep this sensor away from any particles.

#### 3. Sensor Connector

The length of sensor cable is 60mm. (86mm with mounting parts)

## 4 How to use

### ⚠ CAUTION

- \* SPE-100(New) measures the magnitude and polarity of static charge on objects or surfaces.
- \* Take a measure keeping distance 1inch(25.4mm) between the sensor and the surface. At 2inch it is approximately 60% as sensitive.
- \* if the surface is a bare insulator (without a ground plane or metal backing) that is charged, then the insulator will emit an electric field (but will not have a well-defined voltage).

### ► How to use static voltage measurement instrument

#### Measuring Surface Voltages

1. To use, first ground the SPE-100(New) with the ground cable(SGC-PE-1-001)
2. With the sensor cap installed on the sensor, press the "Zero" pad.
3. Remove the sensor cap and hold the end of the sensor at a distance of one inch from the surface being measured. At 1inch, the display shows voltage (+/-2%) of a conductive surface.

### ► How to operate

#### Power On

On power up, 0.0 will be displayed until the rotating shutter in the sensor reaches its proper rotation speed, which typically takes no more than four seconds.

If [Probe Error] is displayed, verify that the probe is plugged in and that nothing is obstructing the shutter's rotation.

To power off the meter, hold down the "Power" pad for one second.

## Zeroing the Meter

Depressing the "Zero" pad will zero the meter. Typically this will be done with the sensor cap installed on the sensor. If the meter detects a large residual voltage the meter will alternately display the words "CAP, PROBE, PRESS, ZERO". This provides a reminder to make sure that the cap is in place. There are applications when it would be advantageous to zero the meter with the cap off, such as when you wish to subtract out a background level in a test setup. Even though the cap reminder message is displaying, depressing zero a second time will zero the meter and remove any residual/ background voltage.



## Measuring a Surface Voltage

Surface voltages of +/-19999.9 volts can be measured with an accuracy of +/-2%. The measured voltage will be with respect to the meters ground connection which would usually be connected to earth ground.

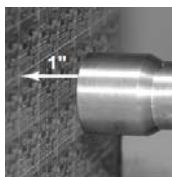


## Calibrated Distance

SPE-100(New) is factory calibrated for a distance of 1inch (25.4mm) between the end of the sensor and the surface being measured.

On conductive surfaces, the reading is approximately inversely proportional to the distance if at <1inch.

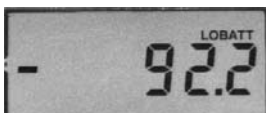
However, at >1inch the reading falls off more slowly.



## Power Options

The meter may be powered from an internal 9V battery, the USB port or with an external wall adapter.

- Battery operation with an Alkaline battery is typically 6 hours of continuous use.
- The [LOBATT] indicates a remaining battery life of approximately 30minutes.
- The meter may be operated with a 9 or 12VDC 100mA regulated or unregulated power adapter with a 2.1mm barrel plug, (positive center).
- Whenever the meter is plugged into a USB port, the meter's power is derived from the PC/Laptop.



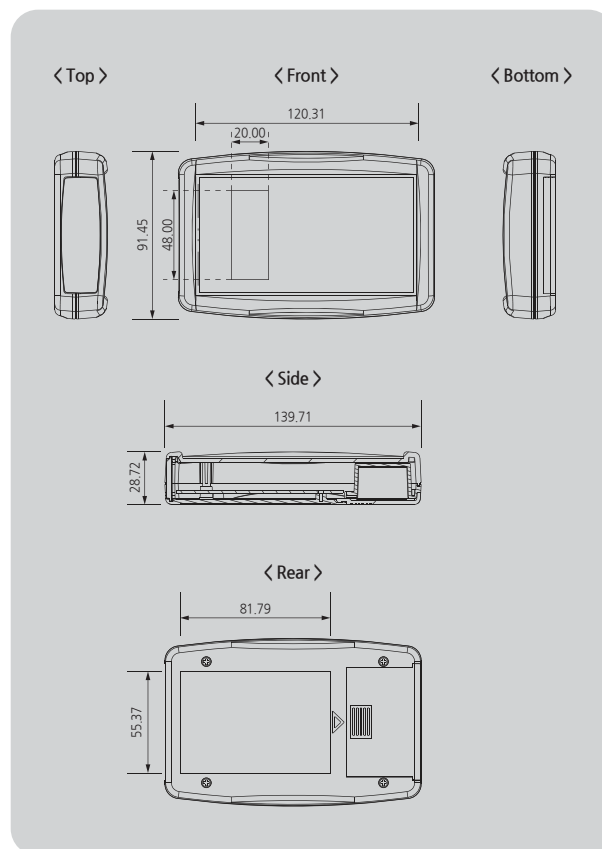
## Peak Hold

Depressing the "Peak Hold" pad places SPE-100(New) in the peak hold mode.

In this mode the display shows the highest positive or negative value measured by the meter since the last time the peak hold was reset. While in this mode, momentarily depressing the "Peak Hold" pad resets the peak value. Holding the "Peak Hold" pad down for one second turns off the peak hold mode. When peak hold mode is off the meter continues to capture the highest positive or negative value measured, which will be shown when peak hold mode is activated.



## 5 Dimensions



## 6 Specification

Parameter	Description / Value
Range at 1"	0 to +/- 19,999.9 V
Resolution at 1"	0.1 Volt
Accuracy	+/- 2% of the reading
Outputs	Analog Output
Environmental	-1 C to 43 C (30°F to 110°F), 0-90% RH non-condensing
Meter Size	115 X 72 X 30 mm
Probe Size	31 x 63.5 mm
Probe Cable Length	74 cm (detachable 6 pin mini din connector)
Weight	156g
Power	1. Battery 9 Volt Alkaline ~6 hour life (included) 2. External 9VDC Power adapter (included)

※ The appearance and specification of the product may be changed without prior notice for the improvement of the product.

## SUNJE Electrostatics

www.sunstat.com

**Head Office & Factory (Busan)**  
8, Cheonggwang-gil, Ilgwang-Myeon, Gijang-Gun,  
Busan, Korea  
T) +82-51-720-7500 F) +82-51-720-7501

**Sunje Japan Co., Ltd.**  
Dai 7 Matsuya Bldg 10F 1005 2-23, Honmachi-bashi,  
Chuo-ku, Osaka, Japan  
T) +81-6-6949-5001 F) +81-6-6949-5011

**Central Sales Office (Hwaseong)**  
3F, Ilshin B/D, 4, Namnyeoul 2-gil, Hwaseong-si,  
Gyeonggi-do, Korea  
T) +82-31-203-9034 F) +82-31-202-9034

**Sunje (SHANGHAI) Trading Co., Ltd.**  
Block C, 4F, No.482, Hongxu Road, Minhang District,  
Shanghai, China  
T) +86-21-5433-9761 F) +86-21-5433-9762

**Southern Sales Office (Chilgok)**  
35-2, Seojungni 3-gil, Seokjeok-eup, Chilgok-gun,  
Gyeongsangbuk-do, Korea  
T) +82-54-476-9033 F) +82-54-476-9034

**Sunje Technology Co., Ltd.**  
2F, No.6, Lane, 102, Sinhe Rd, Sinfong Township,  
Hsinchu County, Taiwan 30472  
T) +886-3-568-7891 F) +886-3-568-7950

**Customer Center** +82-70-7714-9033  
**Sales Contact** +82-31-203-9034