

# Operation and Maintenance Manual

## PAINT CONDUCTIVITY TESTER

# EM-V



This manual contains important information on warnings and cautions. Read the manual thoroughly before starting to operate the equipment, and follow the instructions.

Always keep the manual handy until such time as the product is no longer being used. If your manual is lost or worn badly, do not hesitate to contact our agency which is closest to you, or Asahi Sunac Corporation directly, and ask us to send you a new one.

# Introduction

Thank you for purchasing our product, paint conductivity tester <EM-V>.

Before you use the equipment, carefully read this manual and understand how to use it safely, efficiently and effectively. Please pay particular attention to major specifications, warnings and precautions, including prohibited items. Use the equipment appropriately and with care, following the instructions. We hope that by doing so you win benefit from use of the product over a long period of time.

The painting equipment in this manual is for professional use only, calling for a qualified person to operate. Use of the equipment should, therefore, be limited to those who have acquired operation and application skills through appropriate training.

Should you have any questions with regard to the manual, please give us the “Model Name” and “Serial Number” of your equipment, so that we may be able to help you with your questions. You can reach us at any of the addresses, phone numbers and fax numbers shown on the back cover.

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Please read and follow all the technical and safety instructions in this manual.

Failure to do so may result in personal injury and/or property damage.

While all the safety precautions in the manual are very important, you should not consider them to be as cure-all.

They are nothing but minimum requirements. You should observe matters specified by law and regulations, and rules and regulations of company or office.

● The levels of risk or damage that may be caused by misuse are classified as follows:

 <b>WARNING</b>	Indicates it may cause death or serious injury.
 <b>CAUTION</b>	Indicates that it may cause injury or damage to property.
<b>NOTE</b>	Indicates important methods and practical information.

\* Safety precautions classified into the CAUTION category could cause personal injury if not properly followed.

To ensure safety and prevent equipment failure, always observe the safety precautions and follow the hazard avoidance measures in any categories.

### **WARNING**

● Since this equipment is not explosion-proof, it cannot be used in a dangerous area.

### **WARNING**

● High voltage is applied to the electrode of the paint resistance probe. Be careful of electric shock.

### **CAUTION**

● This equipment is composed of special components for measuring high voltage. Do not disassemble it. Doing so may cause electric shock, injury, malfunction or fire.

### **CAUTION**

● This equipment is a high-sensitivity instrument. Do not subject it to vibration. Doing so may cause malfunction.

### **CAUTION**

● This equipment is not organic solvent resistant.

 **CAUTION**

- This equipment is at IP04 in accordance with the protection classification. Do not subject it to water or use it outdoor.

 **CAUTION**

- Do not use the equipment in hot and humid places. Doing so may cause malfunction.

 **CAUTION**

- Stop using it immediately when it becomes defective.

**NOTE**

- Cleanly use the paint conductivity measurement probe.  
After every use, clean the probe well. It is impossible to measure properly if the probe is dirty, especially electrode section.

**NOTE**

- Do not immerse the lead of the paint conductivity measurement probe in paint and .  
Doing so may cause malfunction.  
If dirty, quickly wipe off with a waste cloth containing thinner.

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## OUTLINE OF EQUIPMENT

This equipment is composed of paint conductivity measurement probe and insulation tester, and this is for measure electric resistance of paint.

Immerse an electrode gap at tip of paint conductivity measurement probe in paint, and apply DC voltage between electrode gaps. Measure the current which is flowing between electrode gaps, after that measure electric resistance of paint.

When measuring, DC 500V is applied between electrode gaps, please be careful of electric shock.

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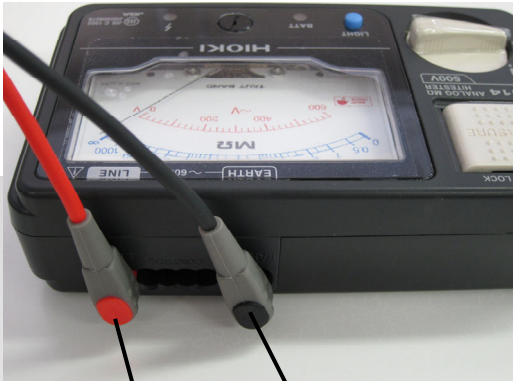
## SPECIFICATIONS

Item	Specification
Product name	Paint conductivity tester (Paint conductivity measurement probe, Insulation tester)
Model	EM - V (EM - 5)
Maximum measurement scale	2 to 200 MΩ • cm
Accuracy	±5% of reading(at approx.16 MΩ, cm)
Rated measurement voltage	DC 500V
Input power	LR6 alkaline battery x 4
Range of operating temperatures	0 to 40°C
Operating environment	Indoors, Pollution degree 2, Altitude up to 2000m
Protection classification	IP67 (Paint conductivity measurement probe) IP40 (Insulation tester)
Accessories	Carrying case, Instruction manual of insulation tester
Dimensional outline	Paint conductivity measurement probe : Approx.100 × 50 × 34 mm (Excluding the lead) Insulation tester: Approx.152 × 92 × 40 mm (Excluding the protrusion) Carrying case: Approx.170 × 170 × 60 mm (Excluding the protrusion)
Mass	Approx.0.9kg (Including the battery and the carrying case)

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## NAME OF EACH PART

MEASURE Key



LINE terminal    EARTH terminal

Function selector

Effective battery range indicator

Live circuit indicator

②

Electrode gaps

①

Paint conductivity tester EM - V (EM-5)

No.	Parts No.	Product name	Qty.
	2728	Paint conductivity tester	1set
1	2728-001	Insulation tester	1set
2	2727	Paint conductivity measurement probe	1set

Grip of insulation tester is simply protected by organic solvent

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## HOW TO USE THE EQUIPMENT

- 1) Confirm that the function selector of the body is OFF. (The battery power is turned off.)
- 2) Connect the black plug of paint conductivity measurement probe to the EARTH terminal, and the red plug to the LINE terminal.
- 3) Move the function selector to "MΩ".
- 4) Immerse the tip of paint conductivity measurement probe in paint that you measure.
- 5) Press the MEASURE key, and measure the paint resistance.  
The measurement value is displayed "MΩ, cm".
- 6) After measurement, move the function selector to "OFF".
- 7) Clean the paint conductivity measurement probe.

### NOTE

1. Before use, confirm the indicator needle points at "0".
2. Set the function selector at "~V" "MΩ", confirm that "Effective battery range indicator/BATT" lights up green. When it lights up red or not light, please replace the batteries.
3. When press the MEASURE key, confirm that "Live circuit indicator/⚡" lights up red.  
When the red lamp is lit, high voltage is applied to the electrode of the paint resistance probe.  
Be careful of electric shock.
4. The lead of the paint conductivity measurement probe is not organic solvent resistant.  
Do not directly immerse it in paint.  
If dirty, quickly wipe off with a waste cloth containing thinner.  
The body of the paint conductivity measurement probe is composed of polyaceta and stainless.  
Do not use the liquid which attack those materials.
5. The body of insulation tester is not organic solvent resistant. Function selector, MEASURE key and meter scale are simply protected by films.
6. Regarding the specification of the measurement body, please refer to instruction manual of "Analog MΩ Hitester" which has attached.

### Measurement procedures



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- When a transfer of title of this equipment takes place, please see to it that this Operation and Maintenance Manual is handed over to the new owner.
  - This equipment is manufactured in compliance with the Laws and Regulations of Japan. In the rare eventuality of this equipment being used outside Japan, compliance with the safety standards of the relevant countries is of course mandatory.
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