



## **IR Test of Transformer**

Weshine® invented the IR Test of Transformer with CE certificate, high quality and accuracy, Invented and produced according to national standards, complete electric testing solution available. Contact us for more details of IR Test of Transformer from Weshine!



Weshine® VS-3121A is a battery powered **IR Test of Transformer** with digital and analogue arc display, designed for high voltage insulation resistance testing in the maintenance and servicing of cables, rotating plant machinery, transformers, switchgear and industrial applications.

DC insulation tests are performed at 250 V, 500 V, 1000 V, 2500 V, 5000 V. Insulation resistance measuring range is 100 k  $\Omega$  to 1000 G  $\Omega$ . Automatic discharge for capacitive circuits under test is provided and decaying voltage displayed.

The guard terminal can be used to minimize the effects of surface leakage and hence erroneous measurements when carrying out insulation resistance tests.

For capacitive test objects the instrument will automatically discharge through an internal resistor and indicate voltage across the terminals in the range 30 V to 600 V with higher voltages indicated by 'Hi'. This feature will give decaying voltage indication following the testing of reactive loads. When the voltage indicator disappears it is safe for the user to disconnect the test leads.

Weshine Electric Manufacturing Co., Ltd.

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Weshine® VS-3121A **IR Test of Transformer** is powered by eight 1.5 V IEC LR6 (AA) cells. Design safety features include high voltage warning indicator, external voltage display after IR test, automatic discharge of reactive loads and test leads

## APPLICATION

Electrical insulating materials deteriorate with time leading to breakdowns and costly repair bills. Insulation resistance testers apply a regulated DC voltage across the insulation and measure current flow through it applying Ohm's law to calculate insulation resistance. The current flows because no insulation material is perfect.

IR tester uses include:

- Product test and qualification
- Installation of equipment
- Routine maintenance
- Problem resolutions

Insulation testing with high voltage DC affects insulation polarisation such that consecutive testing without complete discharge of the unit under test will yield different results.

Care should be taken to always employ the same process and technique of connecting to and testing an insulator to be able to trend results. It is important to record temperature of the insulation as well as IR values

## FEATURES AND BENIFITS

- Compact, rugged insulation resistance tester
- Easy operation and voltage range selection
- AC and DC voltmeter (30 V - 600 V)
- User settable IR test timer (default 1 min), (max. 19 m 50 s)
- Soft carry case for instrument and leads
- Quick start and full user guide
- Locking HV insulated plugs for additional safety
- Shutters across terminals prevent accidental ingress of dirt and other objects

## SPECIFICATIONS

|                           |  |
|---------------------------|--|
| Insulation range          | 0.1 MΩ to 2 TΩ                           |
| Nominal test voltages     | 250 V, 500 V, 1000 V, 2500 V, 5000 V     |
| Terminal voltage accuracy |  |
|                           | <1000 V 0...+10% of nominal test voltage |
|                           | ≥1000 V 0...+5% of nominal               |

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|  |   |
|--|---|
|  | test voltage  |
| Insulation accuracy                      | ±5% ±3 digits   |
| Short circuit current                    | 5 mA ±0.5 mA  |
| Voltmeter accuracy                       | ±2%rdg±3dgt   |
| Power supply                             | 8 x LR6/AA batteries  |
| Operating temperature range and humidity |   |
|  | - 20°C to +45 °C  |
| Humidity                                 | 80% RH  |
| Storage temperature range and humidity   |   |
|  | -20 °C to +60 °C  |
| Safety protection                        | Insulation Cat III 600 V  |
| Note                                     | Service error with stated environmental limits is twice intrinsic error |
| EMC                                      | Conforms to IEC 61326-1:2013  |
| Dimensions                               | 177 mm x 226 mm x 100 mm  |
| Weight                                   | 1.9 kg(include the battery)   |

## VS-3121

The VS-3121 **IR Test of Transformer** has been designed for Electrical and Industrial test applications, where operation voltages exceed 1000 V and higher insulation test voltages are required.

Unlike the VS-3121A, the VS-3121 offers fixed range voltages of 50 V, 100V, 250 V, 500 V, 1000 V and 2500 V.

Equipment with operating voltages above 1 kV requires commensurately higher test voltages. To be in full conformance with the most modern testing requirements, Weshine offers a family of high-quality **IR Test of Transformers** at voltages above 1 kV. At the core of high-voltage testing, our 5/10/15 kV units afford the highest level of quality testing along with prime safety, convenience and portability.

For complete insulation testing capability of all high-capital equipment, Weshine goes one step further! The universal testing standard for rotational equipment, IEEE 43-2000, increased the test voltage recommendation to 10 kV for equipment rated 12 kV and above. Full compliance with this standard can be attained with just one tester, our 10 kV model.

|   |  |
|---|--|
|  | <p>VS-3127</p> <p>The VS-3127 <b>IR Test of Transformer</b> offers the ability to perform accurate insulation resistance measurements up to 15 kV test voltage with a maximum resistance of 30 TΩ. Resistance measurement accuracy is ± 5 % from 1 MΩ to 3 TΩ!</p> <p>For utilities and service companies the VS-3127 is an all-around tester with its flexibility and future proofing capability. The Weshine VS-3127 is designed to work wherever you work.</p> <p>Output rated voltage max reach 7 gears (250V, 500V, 1KV, 2.5KV, 5KV, 10KV, 15KV).</p> <p>Max short circuit current 7mA</p> <p>Insulation resistance test (IR), polarization index test (PI), dielectric absorption ratio test(DAR). Ramp test mode (RAMP), filtered resistance test mode (FR). *Capacitance Test (Cap.).</p> <p>Voltage monitor function, automatically monitoring the live voltage of the measured</p> |
|---|--|

## WHY TEST AT 15 KV?

5 kV to 15 kV will triple test current - this can prevent negative test current in the presence of high noise.

15 kV is specified for assets of 35,000 V to 69,000 V based on NETA ATS 2007.

Motors above 34,500 V should be tested at 15 kV based on NETA ATS 2007.

## SPECIFICATIONS

|  |  |
|--|--|
| Insulation range                         | 0.1 MΩ to 30 TΩ  |
| Nominal test voltages                    | 250 V, 500 V, 1 kV, 2.5 kV, 5 kV, 10 kV, 15kV                                    |
| Terminal voltage accuracy                | (5%~10%) ±10V  |
| Insulation accuracy                      | 1 MΩ to 3 TΩ, ±5% ±3 digits<br>>3 TΩ, ±20% ±3 digits                             |
| Short circuit current                    | ≥7 mA ±0.5 mA  |
| Ramp test mode                           | ±2%rdg±3dgt  |
| Power supply                             | Step up to the preset voltage by testing with 10% stepped size of preset voltage |
| Operating temperature range and humidity | - 20°C to +50 °C   |
| Humidity                                 | 80% RH   |

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|  |   |
|--|---|
| Storage temperature range and humidity |   |
|  | -25 °C to +65 °C  |
| Voltage test                           | AC/DC:0V~1000V,<br>Accuracy: $\pm 5\%rdg \pm 3V$                        |
| Capacitance test                       | 10nF~25uF,<br>Accuracy: $\pm 10\%rdg \pm 10nF$                          |
| Current test                           | 0.01nA~7mA,<br>Accuracy: $\pm 5\%rdg \pm 0.5nA$                         |
| Safety protection                      | Insulation Cat III 600 V  |
| Note                                   | Service error with stated environmental limits is twice intrinsic error |
| EMC                                    | Conforms to IEC 61326-1:2013  |
| Dimensions                             | 280 mm x 260 mm x 160 mm  |
| Weight                                 | 4.9 kg(include the battery)   |

# HIGHT VOLTAGE INSULATION RESISTANCE TESTER

10KV  
0.5M-5TΩ



## Superiority

Durable and high-quality materials

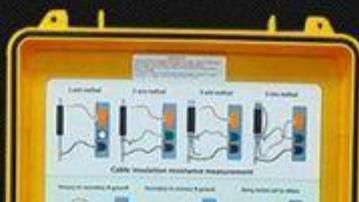
Beautiful and high-grade, wide range, high resolution, agile operation, accuracy, reliability, stable performance and strong anti-interference ability.

Ramp  
Test



Filtered  
Resistance  
Test

FR 0.0 MΩ





# PRODUCT PARAMETERS





## Live show

Accurate and reliable







**Voltage  
Gear Knob**

**Equipment Volume:**



**Volume of bag:**



## Selections

Weshine has 8 years of experience specifically for deal with complete range of Electrical Equipment. At present, Weshine has invented various **IR Test of Transformer** for each step as shown as form:

| ORDERING INFORMATION FOR <b>IR Test of Transformer</b> S |                  |                |           |      |    |      |
|--|------------------|----------------|-----------|------|----|------|
| Cat. No.   | Max Test Voltage | Max Test Range | IR/PI/DAR | RAMP | FR | Cap. |
| VS-3121  | 2.5 kV           | 100 GΩ         | √         |      |    |      |
| VS-3121A   | 5.0 kV           | 20 TΩ          | √         |      |    |      |
| VS-3125  | 5.0 kV           | 10 TΩ          | √         | √    | √  |      |
| VS-3125A   | 5.0 kV           | 10 TΩ          | √         | √    | √  | √    |
| VS-3126  | 10.0 kV          | 20 TΩ          | √         | √    | √  |      |
| VS-3126A   | 10.0 kV          | 20 TΩ          | √         | √    | √  | √    |
| VS-3127  | 15.0 kV          | 30 TΩ          | √         | √    | √  | √    |

Based on Supply Chain issues: Please contact your preferred Authorized Weshine Distributor for current pricing and lead times.

## Quality Certificates

We always believe that all the success of our company is directly related to the quality of the products we provide. **IR Test of Transformer** meet the highest quality requirements specified in ISO9001, ISO14000:14001 guidelines and our strict quality control system.



## Shipment

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For further information on Weshine's Service Solutions, contact our 24/7 online sales representative to get quotes from Weshine.

## Contact us

|  |   |
|--|---|
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