



# PI Test of Transformer

Weshine® invented the PI 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 PI Test of Transformer from Weshine!





Weshine<sup>®</sup> VS-3121A is a battery powered **PI 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 indicator disappears it is safe for the user to disconnect the test leads.



Weshine<sup>®</sup> VS-3121A PI 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	

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	<1000 V 0+10% of nominal
	test voltage
	≥1000 V 0+5% of nominal
	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 r	ange and humidity
	- 20°C to +45 °C
Humidity	80% RH
Storage temperature ran	ge 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 **PI 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 **PI 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.



	VS-3127
	The VS-3127 PI Test of Transformer offers the ability to perform accurate
	insulation resistance measurements up to 15 kV test voltage with a
	maximum resistance of 30 T $\Omega.$ Resistance measurement accuracy is ± 5 %
	from 1 MΩ to 3 TΩ!
6) Weshine Electric VS-3127	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
0 0.0¥ (r-m 0.0000 µÅ) 0.00	designed to work wherever you work.
	Output rated voltage max reach 7 gears (250V,500V,1KV,2.5KV,5KV,
Amount 2.55 10 20	10KV, 15KV).
And the second s	Max short circuit current 7mA
	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.).
	Voltage monitor function, automatically monitoring the live voltage of the
	measured

# 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 accura	асу
	(5%~10%) ±10V
Insulation accuracy	1 MΩ to 3 TΩ, ±5% ±3 digits
	>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
Valtaga tast	AC/DC:0V~1000V,
Voltage test	Accuracy: ±5%rdg±3V
Canacitanco tost	10nF~25uF,
Capacitance test	Accuracy: ±10%rdg±10nF
Current test	0.01nA~7mA,
current test	Accuracy: ±5%rdg±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** JOKV 0.5M-570 Superiority Durable and high-quality materials the and blab-state wide rates. blab a Filtered Ramp Resistance Test FR 0.0 MΩ

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### Selections

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

ORDERING IN	IFORMATION FOR PI Test o	f TransformerS				
Cat. No.	Max Test Voltage	Max Test Range	IR/PI/DAR	RAMP	FR	Cap.
VS-3121	2.5 kV	100 GΩ	V			
VS-3121A	5.0 kV	20 ΤΩ	V			
VS-3125	5.0 kV	10 ΤΩ	V	v	V	
VS-3125A	5.0 kV	10 TΩ	$\checkmark$	v	V	V
VS-3126	10.0 kV	20 ΤΩ	V	V	V	
VS-3126A	10.0 kV	20 ΤΩ	V	V	V	V
VS-3127	15.0 kV	30 TΩ	$\checkmark$	V	V	V

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. **PI Test of Transformer** meet the highest quality requirements specified in ISO9001, ISO14000:14001 guidelines and our strict quality control system.



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# Shipment



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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