# **Insulation Analyzers** 1 kV DC-15 kV DC



## **Design Features**

- Microprocessor-controlled
- Rechargeable battery
- Auto-range
- External Noise rejection
- IEC compliant



Model PM1A



 $\succ$ 

Model PM5A2





> Perform **multiple** testing **functions** 

Reliable and accurate measurements in the

Simple set-up and operation

laboratory or in the field

Model PM15-4A

## Model PM1A

- Insulation Resistance testing up to 200 G $\Omega$
- Pass / Fail test
- Low Resistance and Continuity measurement
- AC/DC Voltmeter up to 600 V True RMS
- Automatic Polarization Index

# **Testing Applications**

#### Model PM5A2 and PM10A

- Insulation Resistance testing up to 5 T $\Omega$  (PM5A2) or up to 10 T $\Omega$  (PM10A)
- AC/DC Voltmeter up to 1000 V (PM5A2) or 600 V (PM10A) True RMS
- Pass / Fail test
- Automated tests: Absorption Index **Polarization Index** Capacitance Leakage Current Step Voltage

#### Model PM15-4A

- Insulation Resistance testing up to 15 TΩ
- Automated tests: **Dielectric Absorption Ratio** Polarization Index Capacitance Insulation Resistance Step Voltage



Brochure No. 10306

MODEL	PM1A	PM5A2	PM10A	PM15-4A
	250 V - 500 V - 1000 V	500 V – 1 kV - 2.5 kV – 5 kV directly, one button selectable	500 V – 1 kV - 5 kV – 10 kV directly, one button selectable	0-15 kV, keypad, operator selectable
TEST VOLTAGES	DC, negative	500 V to 5 kV in 25 V, 100 V or 500 V steps	500 V to 10 kV in 25 V, 100 V or 500 V steps	100 V to 15 kV in 10 V steps
		DC, negative	DC, negative	DC, negative
Accuracy	-0 /+15% for resistances between 10 MΩ and open circuit	$\pm 3\%$ of nominal test voltages on 10 G $\Omega$	$\pm 3\%$ of nominal test voltages on 10 G $\Omega$	±0.8% of Reading, ±0.2% of range, > 100 VDC
RESISTANCE MEASUREMENT	10 kΩ to 200 GΩ	maximum 5 TΩ @ 5 kV	maximum 10 TΩ @ 10 kV	125 kΩ to 15 TΩ
Accuracy	±5% of reading ±2 digits			$\pm 5\%$ of Reading up to 2 TΩ $\pm 20\%$ of Reading up to 15 TΩ
LEAKAGE CURRENT MEASUREMENT	maximum 1.5 mA	maximum 3 mA	maximum 1.5 mA	maximum 4 mA
Accuracy	±0.3 mA	±(10% of reading + 3 digits)	±(10% of reading + 3 digits)	±0.8% of reading, ±0.2% of range
CAPACITANCE MEASUREMENT	N/A	50 nF up to 10 μF @ 500 V 50 nF up to 5 μF @ 1000 V 30 nF up to 2 μF @ 2500 V 30 nF up to 1 μF @ 5000 V	50 nF up to 10 μF @ 500 V 50 nF up to 5 μF @ 1000 V 30 nF up to 2 μF @ 2500 V 30 nF up to 1 μF @ 5000 V 30 nF up to 680 nF @ 10,000 V	6 nF up to 100 μF @ 5000 V
Accuracy		$\pm 10\%$ of reading $\pm 3$ digits	$\pm 10\%$ of reading $\pm 3$ digits	$\pm 5\%$ of reading $\pm 5$ nF
LOW RESISTANCE MEASUREMENT & CONTINUITY TESTER	0.05 Ω to 150 Ω	N/A	N/A	N/A
Accuracy Test Current Continuity indicator	±5% of reading ±2 digits up to 200 mA Activates at R <5 Ω ±0.5 Ω			
<b>BUILT-IN TIMER</b>	up to 15 minutes	up to 90 minutes	up to 90 minutes	adjustable up to 60 minutes
EXTERNAL VOLTAGE METERING	0-600 V AC/DC	10-1000 V AC/DC	15-600 V AC/DC	
Accuracy Protection	±3% of reading ±2 digits CAT. III - 600 V	±(5% of reading +3 digits) CAT. III - 600 V	±(5% of reading +3 digits) CAT. III - 600 V	N/A
INPUT	Internal Rechargable Battery	Internal Rechargable Battery	Internal Rechargable Battery	Internal Rechargable Battery or Input Power Cord 100-240 VAC, 50/60 Hz
	R ≤50 GΩ ±5% of reading ±2 digits	±5% of reading 1 MΩ to 1 TΩ @ 5 kV	±5% of reading 1 MΩ to 1 TΩ @ 10 kV	±2% of reading
	$R > 50 G\Omega \pm 10\%$ of reading $\pm 2$ digits	±20% of reading 1 TΩ to 5 TΩ @ 5 kV	±20% of reading 1 TΩ to 10 TΩ @ 10 kV	
BASIC ACCURACY		(for lower test voltages, the upper limit will be reduced proportionally)	(for lower test voltages, the upper limit will be reduced proportionally)	
		$\pm 20\%$ of reading 10 kΩ to 100 kΩ	$\pm 20\%$ of reading $\pm 5$ digits 0 kΩ to 100 kΩ	
		±10% of reading 10 kΩ to 1 MΩ	±10% of reading ±5 digits 100 kΩ to 1 MΩ	

MODEL	PM1A	PM5A2	PM10A	PM15-4A
OPERATING TEMPERATURE	-5°C to 50°C	-5°C to 50°C	-5°C to 50°C	-10°C to 40°C
STORAGE TEMPERATURE	-10°C to 60°C	-25°C to 65°C	-25°C to 65°C	-25°C to 65°C
HUMIDITY	<95%, non-condensing	<95%, non-condensing	<95%, non-condensing	<95%, non-condensing
UNIQUE	Hand-held device Guard terminal High voltage and acoustic indicators	Digital & bar graph reading 4000 readings memory Automatic discharge of potential	Digital & bar graph reading 4000 readings memory Automatic discharge of potential	Internal discharge device USB interface SD card
FEATURES	Hold memory ISO 17025 Calibrated	USB interface Software for data management Built-in printer Real time clock & calendar ISO 17025 Calibrated	USB interface Software for data management Built-in printer Real time clock & calendar ISO 17025 Calibrated	Built-in printer ISO17025 Calibration upon request
DIMENSIONS Length Width Height WEIGHT	4″ (102 mm) 7.75″ (195 mm) 1.75″ (46 mm) 1 lb (0.5 kgs)	13″ (330mm) 11.5″ (295mm) 6″ (152mm) 10 lbs (4.3 kgs)	16" (406 mm) 13" (330 mm) 7" (174 mm) 14 lbs (6.3 kgs)	16.5″ (419mm) 15.25″ (387mm) 11.25″ (286mm) 27 lbs (12 kgs)
	2 Measuring test leads 1 Guard test lead	2 Measuring test leads 1 Guard test lead	2 Measuring test leads 1 Guard test lead	1 Input power cable, 3 wire, 7' (2.3 m) 1 Output voltage cable, 10' (3 m)
ACCESSORIES included	1 Power supply Carrying bag	1 AC adapter 1 USB cable	1 AC adapter 1 USB cable	1 Output return cable, 10' (3 m) 1 Output ground cable, 10' (3 m)
	User guide	Protective bag User guide Software	Protective bag User guide Software	User guide



**PHENIX Technologies** is committed to providing leadership, innovation, technology, quality, and service in all areas of our business.

Our 85,000 square-foot headquarters is a modern manufacturing facility. All aspects of electrical, mechanical, and software design and production are performed in this facility. Our engineers offer a unique blend of theoretical knowledge and practical experience. Our Service and Calibration Department assists customers during and after installation to ensure years of trouble free service.

We carry our commitment into the future as we proudly continue to provide the best in **high voltage, high current, high power test systems and components**.



#### WORLD HEADQUARTERS

**Phenix Technologies, Inc.** 75 Speicher Drive Accident, MD 21520 USA Ph: +1.301.746.8118 Fx: +1.301.895.5570 Info@phenixtech.com

#### BRANCH OFFICES Phenix Systems AG

Riehenstrasse 62A, 4058 Basel, Switzerland Ph: +41.61.383.2770, Info@phenixsystems.com Phenix Asia Zhong Cheng Rd, Sec 1, No 177, 2F, Taipei 11148 Taiwan Ph: +886.2.2835.9738, Fx: +886.2.2835.9879, Info@phenixasia.com





## www.phenixtech.com