

### MI 2077 TeraOhm 5 kV

The MI 2077 TeraOhm 5 kV is an advanced, field proven high voltage diagnostic insulation tester. Its small lightweight design make it easily portable and its bright LCD display ensures that readings can be made in almost any lighting conditions. TeraOhm 5 kV enables insulation resistance measurements up to 5 T $\Omega$ , step voltage test, withstanding voltage test, PI, DD and DAR calculation and capacitance measurement. Built-in memory and optional PC SW TeraLink enables data storing, downloading to PC, analysis of test results and printout of test reports.

#### MEASURING FUNCTIONS:

- Insulation resistance measurement;
- Step voltage insulation resistance testing;
- Withstanding voltage testing;
- Diagnostic test (PI, DD, DAR);
- Capacitance measurement;
- Voltage measurement;
- Frequency measurement.

#### KEY FEATURES:

- **Measuring range** up to 5 T $\Omega$ .
- **Wide range of DC test voltages:** from 250 V up to 5000 V in steps of 50 V.
- **Withstanding voltage:** testing of insulation with programmable ramp test voltage from 250 V up to 5 kV and programmable threshold current.
- **Step voltage:** insulation resistance measurement with five discrete proportionately set test voltages and programmable timer per step.
- **Automated testing:** PI, DD, DAR calculations with automated resistance ranging. All data is displayed during one single measurement.
- **Fault finding:** fully programmable step voltage and withstanding voltage test functions assist in diagnosing faults in insulation.
- **Guard test terminal:** for elimination of potential surface leakage currents.
- **Automatic discharge** of tested object after test.
- **Accurate:** selectable noise rejection filters ensure accurate measurement.
- **Built-in timer:** programmable timer from 1 s up to 30 min.
- **Memory:** stores up to 1000 results with date and time stamp.
- **Easy to read:** large custom LCD dot matrix display with bar graph and with backlight.
- **Built-in charger:** instrument has a built-in charger which enables measurement during the charging.
- **Portable:** lightweight 2.1 kg design with carrying bag and neck strap.



#### APPLICATION:

- Testing insulation resistance of rotating machinery, cables, transformers, HV generators, surge arresters;
- Production line periodic testing and maintenance;
- Troubleshooting and analysis of all kinds of insulation problems;
- Diagnostic testing.

#### STANDARDS:

**Functionality:**  
IEC/EN 61557-2  
**Electromagnetic compatibility:**  
EN 61326 Class B  
**Safety:**  
EN 61010-1  
EN 61010-031

#### STANDARD SET:

- Instrument TeraOhm 5 kV
- Soft carrying bag
- Mains cable
- Test lead, black, 2 m
- Test lead, red, 2 m
- Guard lead, green, with crocodile clip, 2 m
- Test probe, black
- Test probe, red
- Crocodile clip, black, 2 pcs
- Handbook on CD
- Instruction manual
- Calibration certificate



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#### TECHNICAL SPECIFICATION:

Function	Measuring range	Resolution	Accuracy
Insulation resistance	0 k $\Omega$ ... 999 k $\Omega$	1 k $\Omega$	$\pm 5\%$ of reading + 3 digits
	1.00 M $\Omega$ ... 9.99 M $\Omega$	10 k $\Omega$	$\pm 5\%$ of reading + 3 digits
	10.0 M $\Omega$ ... 99.9 M $\Omega$	100 k $\Omega$	$\pm 5\%$ of reading + 3 digits
	100 M $\Omega$ ... 999 M $\Omega$	1 M $\Omega$	$\pm 5\%$ of reading + 3 digits
	1.00 G $\Omega$ ... 9.99 G $\Omega$	10 M $\Omega$	$\pm 5\%$ of reading + 3 digits
	10.0 G $\Omega$ ... 99.9 G $\Omega$	100 M $\Omega$	$\pm 5\%$ of reading + 3 digits
Test voltage	100 G $\Omega$ ... 999 G $\Omega$	1 G $\Omega$	$\pm 5\%$ of reading + 3 digits
	1.00 T $\Omega$ ... 5.00 T $\Omega$	10 G $\Omega$	$\pm 5\%$ of reading + 3 digits
Insulation leakage current	0 V ... 5500 V	1 V	$\pm 3\%$ of reading + 3 V
	0.01 nA ... 9.99 nA	0.01 nA	$\pm 5\%$ of reading + 0.05 nA
	10.0 nA ... 99.9 nA	0.1 nA	
	100 nA ... 999 nA	1 nA	
	1.00 $\mu$ A ... 9.99 $\mu$ A	10 nA	
	10.0 $\mu$ A ... 99.9 $\mu$ A	100 nA	
100 $\mu$ A ... 999 $\mu$ A	1 $\mu$ A		
Dielectric absorption ratio (DAR)	1.00 mA ... 1.54 mA	10 $\mu$ A	$\pm 5\%$ of reading + 2 digits
	0.01 ... 9.99	0.01	
Polarization index (PI)	10.0 ... 100.0	0.1	$\pm 5\%$ of reading
	0.01 ... 9.99	0.01	
Dielectric discharge (DD)	10.0 ... 100.0	0.1	$\pm 5\%$ of reading + 2 digits
	0.01 ... 9.99	0.01	
Voltage AC / DC	0 V ... 600 V	1 V	$\pm 3\%$ of reading + 3 V
Frequency	45.0 Hz ... 65.0 Hz	0.1 Hz	$\pm 0.2$ Hz
Capacitance	0.0 nF ... 99.9 nF	0.1 nF	$\pm 5\%$ of reading + 2 digits
	100 nF ... 999 nF	1 nF	
	1.00 $\mu$ F ... 50.00 $\mu$ F	10 nF	
Battery power supply	6 x 1.2 V NiMH rechargeable batteries, type C		
Display	Matrix LCD with backlight, 160 x 116 dots		
Overvoltage category	CAT III / 600 V		
Protection class	Double insulation		
COM port	RS232 (optional USB with serial converter)		
Dimensions	265 x 110 x 185 mm		
Weight	2.1 kg		

#### KEY FEATURES



Large custom LCD dot matrix display with bar graph and backlight.



User friendly keyboard enables simple and fast adjustment.



Guard connection terminal to eliminate the influence of surface insulation currents.

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