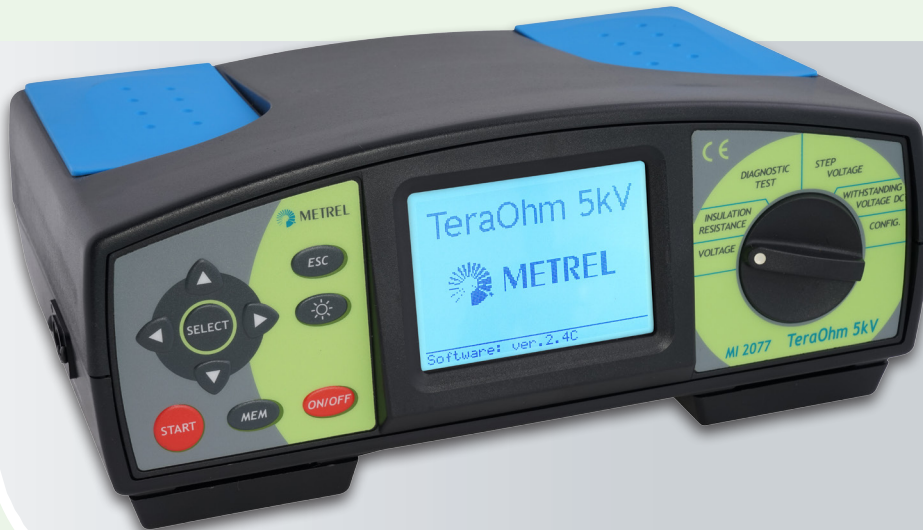


MI 2077 TeraOhm 5 kV

5 kV Insulation and Voltage tester



Advanced, field proven instrument. Technical demands require high performance measuring instruments capable of measuring polarization index (PI), dielectric absorption ratio (DAR), dielectric discharge (DD), insulation system capacitance. Easiness of use, high EM immunity and automatic discharge of load after completed measurement are just some of many outstanding features that distinguish Metrel HV testers from other similar products on the market.

High insulation resistance measurement:

- DC test voltages from 250 V up to 5000 V in steps of 50 V;
- Measuring range up to 5 T Ω ;
- Timer mode from 1 s up to 30 min;
- Capacitance measurement up to 50 μ F.

Step voltage measurement of insulation resistance:

- DC test voltage up to 5000 V automatically divided in 5 steps;
- Adjustable test time.

Withstanding voltage test up to 5000 V:

- Insulation leakage current measurement;
- Adjustable test voltage slope;
- Pre-set threshold test current from 1 mA to 1.4 mA;
- Time programmable step voltage test.

Other features:

- Voltage and frequency measurement up to 600 V AC/DC;
- Automatic discharge of capacitive loads;
- Guard terminal to eliminate influence of insulation surface leakage currents;
- Digital and bar graph display;
- Built-in battery charger;
- User-friendly PC software (optional);
- RS232 isolated communication port.

5 kV

CAT III
600 V

TYPICAL APPLICATIONS:

- Rotating machines
- Transformers
- Cables
- High voltage generators
- Electrical circuits
- Surge arresters
- Measuring transducers

STANDARDS:

- Instruments operation: IEC/EN 61557-2
- Electromagnetic compatibility: (EMC) EN 61326 Class B
- Safety: EN 61010-1 (instruments), EN 61010-031 (accessories)

Technical Specification

Function	Measuring range	Resolution	Accuracy
Insulation resistance	0 kΩ ... 999 kΩ	1 kΩ	±(5 % of reading + 3 digits)
	1.00 MΩ ... 9.99 MΩ	10 kΩ	±(5 % of reading + 3 digits)
	10.0 MΩ ... 99.9 MΩ	100 kΩ	±(5 % of reading + 3 digits)
	100 MΩ ... 999 MΩ	1 MΩ	±(5 % of reading + 3 digits)
	1.00 GΩ ... 9.99 GΩ	10 MΩ	±(5 % of reading + 3 digits)
	10.0 GΩ ... 99.9 GΩ	100 MΩ	±(5 % of reading + 3 digits)
	100 GΩ ... 999 GΩ	1 GΩ	±(5 % of reading + 3 digits)
1.00 TΩ ... 5.00 TΩ	10 GΩ	±(5 % of reading + 3 digits)	
Test voltage	0 V ... 5500 V	1 V	±(3% of reading + 3 V)
Insulation leakage current	0.00 nA ... 9.99 nA	0.01 nA	±(5% of reading + 0.05 nA)
	10.0 nA ... 99.9 nA	0.1 nA	
	100 nA ... 999 nA	1 nA	
	1.00 μA ... 9.99 μA	10 nA	
	10.0 μA ... 99.9 μA	100 nA	
	100 μA ... 999 μA	1 μA	
1.00 mA ... 1.54 mA	10 μA		
Dielectric absorption ratio (DAR)	0.01 ... 9.99	0.01	±(5 % of reading + 2 digits)
	10.0 ... 100.0	0.1	±5 % of reading
Polarization index (PI)	0.01 ... 9.99	0.01	±(5 % of reading + 2 digits)
	10.0 ... 100.0	0.1	±5 % of reading
Dielectric discharge (DD)	0.01 ... 9.99	0.01	±(5 % of reading + 2 digits)
	10.0 ... 100.0	0.1	±5 % of reading
Voltage AC / DC	0 V ... 600 V	1 V	±(3% of reading + 3 V)
Frequency	45.0 Hz ... 65.0 Hz	0.1 Hz	±0.2 Hz
Capacitance	0.0 nF ... 99.9 nF	0.1 nF	±(5 % of reading + 2 digits)
	100 nF ... 999 nF	1 nF	
	1.00 μF ... 50.00 μF	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		



Large custom LCD dot matrix display with bar graph and backlight. Simultaneous presentation of measuring results and test parameters. Built-in timer and real time clock.

n	Location	Function	Results	Parameters	Date Time
1	001	INSULATION RESISTANCE	R = 9.23 MΩ I = 210 V I = 211 μA C = 202 nF Max = 9.99 MΩ Min = 0.00 MΩ	On = 2000 V Timer = 10min00s	14.Feb.2000 12:20
2	002	DIAGNOSTIC TEST	R = 9.23 MΩ I = 210 V I = 211 μA C = 202 nF R(12) = 9.50 MΩ R(13) = 9.99 MΩ R(14) = 10.0 MΩ R(15) = 0.99 MΩ R(16) = 0.99 MΩ R(17) = 0.99 MΩ R(18) = 0.99 MΩ R(19) = 0.99 MΩ R(20) = 0.99 MΩ	On = 1000 V Timer = 00min00s Line1 = 01 min Line2 = 00 min Line3 = 00 min	14.Feb.2000 12:24
3	003	STEP VOLTAGE	R = 9.50 MΩ I = 105 V I = 105 μA C = 201 nF R(0M1) = 9.98 MΩ R(0M2) = 9.98 MΩ R(0M3) = 10.0 MΩ R(0M4) = 10.0 MΩ R(0M5) = 0.98 MΩ R(0M6) = 0.98 MΩ R(0M7) = 0.98 MΩ R(0M8) = 0.98 MΩ R(0M9) = 0.98 MΩ R(0M10) = 0.98 MΩ	On = 1000 V Timer = 00min00s O1 = 200 V O2 = 400 V O3 = 600 V O4 = 800 V O5 = 1000 V	14.Feb.2000 12:50

Up to 1000 test results can be stored in the memory module of TeraOhm 5 kV. Windows compatible PC software TeraLink serves for downloading and management of test results. Results can be further exported to other Windows programs.

ORDERING INFORMATION

MI 2077

Standard set



Instrument TeraOhm 5 kV
Soft carrying bag
Mains cable
Test lead, 2 m, 2 pcs (black, red)
Guard test lead, 2 m, with crocodile clip (green)
Crocodile clip, 2 pcs (black)
Test probe, 2 pcs (black, red)
Handbook "Guide to modern insulation testing" on CD
Instruction manual
Calibration certificate

OPTIONAL ACCESSORIES

Photo	Order No.	Acc. description
	A 1046	6 x 1.2 V NiMH batteries, C type
	A 1056	PC SW TeraLink with RS232 cable
	A 1171	RS232 / USB adapter with 1 m cable
	S 2036	HV crocodile clip, 2 pcs (black, red)
	S 2039	5 kV shielded test lead 15 m, 2 pcs
	S 2042	5 kV shielded test lead with test probe 10 m, 2 pcs
	S 2044	5 kV shielded test lead with test probe 15 m, 2 pcs

Note! Photographs in this catalogue may slightly differ from the instruments at the time of delivery. Subject to technical change without notice.



Measuring and Regulation Equipment Manufacturer

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