

Professional insulation testing with powerful diagnostic tools

MI 3205 TeraOhmXA 5kV



MI 3205 TeraOhm XA 5kV is a portable battery (Li-ion) or mains powered test instrument with excellent IP protection (IP65 case closed and IP54 case open), intended for diagnosing of Insulation Resistance by using high test voltages of up to 5 kV. It is designed and produced with the extensive knowledge and experience acquired through many years of working in this field.



High Voltage Insulation / Continuity / Earth

MEASURING FUNCTIONS

- Insulation Measurement;
- Diagnostic Test (PI, DAR, DD);
- Step Voltage Test;
- Withstanding Voltage Test (DC) up to 5 kV;
- Voltage and frequency measurement up to 550 V TRMS.

KEY FEATURES

- Insulation resistance up to 15 TΩ;
- Adjustable test voltage (50 V...5 kV) 50 V and 100 V step;
- Programmable timer;
- Capacitance measurement;
- Charging rate for capacitive load < 1,5 s / μF at 5 kV;
- Short circuit / charge current > 6 mA;
- Automatic discharge of test object after completion of measurement;
- Guard terminal;

- High voltage breakdown detection;
- Custom defined tests;
- Auto adjustment function;
- Measurement results in numerical and graphical form;
- PC software HVLink PRO for downloading and analyzing of the test results and test report printing;
- Isolated RS232 and USB communication ports, BT interface;
- High quality accessories including shielded test leads in standard set;
- High EM interferences protection: Input AC current noise rejection (1 mA@300 V) and additional averaging of the result (5, 10, 30, 60);
- CAT IV / 600 V;
- Increased working nominal altitude to 3000 m;
- High power Li-ion battery pack (14.8V, 4.4Ah);
- Mains and rechargeable battery power supply.

APPLICATION

- Power transformers;
- Measuring transducers in distribution networks;
- Testing insulation resistance of rotating machinery and cables;
- Production line periodic testing and maintenance;
- Troubleshooting and analysis of all kinds of insulation problems;
- High voltage generators;
- Surge arrestors and varistors.

STANDARDS

Electromagnetic compatibility

- EN 61326 class A

Safety

- EN 61010-1 (instrument)
- EN 61010-2-030
- EN 61010-2-033
- EN 61010-031(accessories)

TECHNICAL SPECIFICATION

FUNCTION	Measuring range	Resolution	Accuracy
Insulation resistance	0.01 M Ω ... 9.99 M Ω	10 k Ω	$\pm(5\%$ of reading + 3 digits)
	10.0 M Ω ... 99.9 M Ω	100 k Ω	$\pm(5\%$ of reading + 3 digits)
	100 M Ω ... 999 M Ω	1 M Ω	$\pm(5\%$ of reading + 3 digits)
	1.00 G Ω ... 9.99 G Ω	10 M Ω	$\pm(5\%$ of reading + 3 digits)
	10.0 G Ω ... 99.9 G Ω	100 M Ω	$\pm(5\%$ of reading + 3 digits)
	100 G Ω ... 999 G Ω	1 G Ω	$\pm(5\%$ of reading + 3 digits)
	1.0 T Ω ... 9.9 T Ω	100 G Ω	$\pm(15\%$ of reading + 3 digits)
	10 T Ω ... 15 T Ω	1 T Ω	$\pm(15\%$ of reading + 3 digits)
Test voltage	0 V ... 999 V	1 V	$\pm(5\%$ of reading + 3 digits)
	1.00 kV... 4.99 kV	10 V	
Insulation leakage current	1.00 mA ... 5.00 mA	10 μ A	
	100 μ A ... 999 μ A	1 μ A	
	10.0 μ A ... 99.9 μ A	100 nA	$\pm(5\%$ of reading + 3 digits)
	1.00 μ A ... 9.99 μ A	10 nA	
	100 nA ... 999 nA	1 nA	
	10.0 nA ... 99.9 nA	100 pA	
	0.00 nA ... 9.99 nA	10 pA	$\pm(10\%$ of reading + 0.15 nA)
Dielectric absorption ratio (DAR)	0.01 ... 9.99	0.01	$\pm(5\%$ of reading + 3 digits)
	10.0 ... 100.0	0.1	
Polarization index (PI)	0.01 ... 9.99	0.01	$\pm(5\%$ of reading + 2 digits)
	10.0 ... 100.0	0.1	
Dielectric discharge (DD)	0.01 ... 9.99	0.01	$\pm(5\%$ of reading + 2 digits)
	10.0 ... 100.0	0.1	
Capacitance	20.0 nF ... 999 nF	1 nF	$\pm(5\%$ of reading + 3 digits)
	1.00 μ F ... 9.99 μ F	10 nF	
	10.0 μ F ... 50.0 μ F	100 nF	
True RMS voltmeter (DC, 45 Hz ... 65 Hz)	5 V ... 550 V		$\pm(2\%$ of reading + 2 digits)
Frequency	10 Hz ... 500 Hz		$\pm(0.2\%$ of reading + 1 digit)
Power supply	90-260 VAC, 45-65 Hz or 14,4 VDC (4,4 Ah Li-Ion)		
Display	Matrix LCD with backlight, 320 x 240 dots		
Overvoltage category	CAT IV / 600 V		
Protection class	Double insulation		
Degree of protection	IP 65 (case closed)		
	IP 54 (case open)		
COM port	BT, RS232 and USB		
Dimensions	345 x 160 x 335 mm		
Weight	6.5 kg		

OPTIONAL ACCESSORIES









Photo	Order No.	Acc. description
	S 2029	10 kV shielded test lead, 8 m, 2 pcs (black, red)
	S 2030	10 kV shielded test lead, 15 m, 2 pcs (black, red)
	A 1539 BLK 2M5	10 kV shielded test lead with large black HV test clip, 2.5 m
	A 1639 RED 2M5	10 kV test lead with large red HV test clip, 2.5 m

Photo	Order No.	Acc. description
	A 1655 2M5	Guard test lead green, 2.5 m
	S 1539 5M	Set 10 kV test leads with large HV test clip, 5 m
	S 1539 10M	Set 10 kV test leads with large HV test clip, 10 m
	S 1539 15M	Set 10 kV test leads with large HV test clip, 15 m

METREL D.D.

Measuring and Regulation Equipment Manufacturer
Ljubljanska 77, SI-1354 Horjul, Slovenia
T +386 (0)1 75 58 200, F +386 (0)1 75 49 226
metrel@metrel.si, www.metrel.si

ORDERING INFORMATION



Standard set MI 3205 (ST)

- Instrument MI 3205 TeraOhmXA 5 kV
- 10 kV shielded test lead, 2 m, 2 pcs (black, red)
- 10 kV crocodile clip, 2 pcs (black, red)
- Guard test lead, green, 2 m
- Crocodile clip, green
- Mains cable
- PC SW HVLink PRO with USB and RS 232 cable
- Handbook "Guide to modern insulation testing" on CD
- Instruction manual on CD
- Calibration certificate



Euro set MI 3205 (EU)

- Instrument MI 3205 TeraOhmXA 5 kV
- Large HV Crocodile with cable, red, 2.5 m
- Large HV Crocodile with shielded cable, black, 2.5 m
- Guard test lead, green, 2.5 m
- Crocodile clip, green
- Mains cable
- PC SW HVLink PRO with USB and RS 232 cable
- Handbook "Guide to modern insulation testing" on CD
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