Hi-Pot (flash), Earth (ground bond), Insulation resistance and other specific tests
MI 3394 CE MultiTesterXA

Appliance / Machine / Switchboard safety



The MI 3394 CE MultiTesterXA is a portable instrument intended for electrical safety testing and CE certification of electrical appliances, machines and switchboards during the production. The PC software MES-Manager enables the upload of automated test sequences, projects, downloading of test results to the PC, automatic data storage into a file and printing of test reports. Due to selected test functions, durable construction and accompanying PC SW package CE MultiTesterXA is the perfect instrument for electrical safety testing in the most demanding environments like laboratories, automated production lines or specialized workshops.

MEASURING FUNCTIONS

- High Voltage, programmed (AC/DC).
- Continuity tests.
- Insulation resistance measurement.
- Substitute leakage current.
- Differential leakage current.
- Touch leakage current.
- PE-leakage current.
- Discharge time.
- Functional test (power P/S/Q, voltage, current, cosφ, frequency, ThdU, ThdI,PF).

KEY FEATURES

- **Data management:** the instrument features in unique user friendly data management facility and state of the art memory organizer.
- **Multiple test terminals:** different test terminals enabling the user to chose from performing single tests or autosequences from single test socket.
- **Support for Test Adapter:** A 1460 XA CE ADAPTER enables execution of auto tests from single test terminal.
- **MicroSD:** support for microSD memory card (8-GB supplied with the instrument) up to 32GB.
- **Colour display:** 4.3˝colour LCD display with touch screen.
- **Hi-pot:** high voltage AC (5.1kV at 500VA) and DC (6kV) test.
- **Continuity:** 4 – wire continuity test with selectable test current (0.2 A, 4 A, 10A, 25A) enabling precise measurements.
- **Communication:** 4 – RS232, USB and Bluetooth communication ports enabling downloading, uploading and remote control over instrument.
- **Multi-system testing:** the instrument can be used on TT, TN, IT and 115 V supply systems.

APPLICATION

- Laboratories.
- Automated production lines.
- Specialized workshops.

STANDARDS

Functionality
- IEC/EN 60335
- IEC/EN 60204-1 Ed.5 (VDE 0113-1)
- IEC/EN 61439-1 (VDE 0660-600-1)
- IEC/EN 62368-1 (IEC/EN 60950-1)
- IEC/EN 60598
- IEC/EN 61010
- IEC/EN 61180
- EN 50191 (BGI 891)
- EN 50699
- EN 50678
- VDE 0701-0702
- AS/NZS 3760
- NEN 3140
- IET COP 5th Ed

Safety
- EN 61010-1
- EN 61010-2-030
- EN 61010-031
- EN 61557

EMC
- EN 61326-1

METREL®

TECHNICAL SPECIFICATION

FUNCTION	Measuring range	Resolution	Accuracy
HVAC, Programmable HV AC, Output voltage 100 V – 5100 V, 10 V steps			
- Test voltage (AC)	0 ... 1999 V	1 V	±(3 % of reading)
	2.00 ... 5.99 kV	10 V	±(3 % of reading)
- Test current apparent	0.0 ... 99.9 mA	0.1 mA	±(3 % of reading + 3 digits)
- Capacitive	0.0 mA ... 99.9 mA	0.1 mA	Indicative
- Resistive	-99.9 mA ... 99.9 mA	0.1 mA	Indicative
- Short circuit current	> 200 mA		
- Output power	500 VAmax		
HVDC, Programmable HV DC, Output voltage 500 V – 6000 V, 50 V steps			
- Test voltage (DC)	0 ... 1999 V	1 V	±(3 % of reading)
	2.00 ... 6.99 kV	10 V	±(3 % of reading)
- Test current	0.01 ... 9.99 mA	0.01 mA	±(5 % of reading + 3 digits)
Discharging time			
- t	0.0 ... 9.9 s	0.1 s	±(5 % of reading + 3 digits)
- Up	0 ... 550 V	1 V	±(5 % of reading + 3 digits)
Continuity (0.2A, 4A, 10A, 25A)			
- R	0.000 Ω ... 1.999 Ω	0.001 Ω	±(2 % of reading + 2 D)
	2.00 Ω ... 19.99 Ω	0.01 Ω	± 2 % of reading
	20.0 Ω ... 99.9 Ω	0.1 Ω	± 3 % of reading
	100.0 Ω ... 199.9 Ω	0.1 Ω	± 5 % of reading
	200 Ω ... 999 Ω	1 Ω	indicative
Insulation resistance (250 V, 500 V, 1000 V), Insulation resistance - S (250 V, 500 V, 1000 V)			
- Riso/Riso-s	0.00 MΩ ... 19.99 MΩ	0.01 MΩ	±(3 % of reading + 2 digits)
	20.0 MΩ ... 199.9 MΩ	0.1 MΩ	±(10 % of reading)
- Output voltage	0 V ... 1200 V	1 V	±(3 % of reading + 2 digits)
Insulation resistance (50 V, 100 V), Insulation resistance - S (50 V, 100 V)			
- Riso/Riso-s	0.00 MΩ ... 19.99 MΩ	0.01 MΩ	±(5 % of reading + 2 digits)
	20.0 MΩ ... 199.9 MΩ	0.1 MΩ	±20 % of reading
- Output voltage	0 V ... 1200 V	1 V	±(3 % of reading + 2 digits)
(open circuit voltage <50 V a.c.)			
- Isub / Isub s	0.00 mA ... 19.99 mA	10 µA	±(5 % of reading + 3 digits)
Differential Leakage current			
- Idiff	0.00 mA ... 19.99 mA	0.01 mA	±(3 % of reading + 5 digits)
PE leakage current			
- Ipe	0.00 mA ... 19.99 mA	0.01 mA	±(3 % of reading + 3 digits)
Touch leakage current			
- Itou	0.00 mA ... 19.99 mA	0.01 mA	±(3 % of reading + 3 digits)
Power			
- P	0.00 W ... 19.99 VA	0.01 VA	±(5 % of reading + 5 D)
	20.0 W ... 199.9 VA	0.1 VA	±(5 % of reading)
	200 W ... 1999 VA	1 VA	±(5 % of reading)
	2.00 kW ... 3.70 kVA	10 VA	±(5 % of reading)
- S	0.00 W ... 19.99 VA	0.01 VA	±(5 % of reading + 10 D)
	20.0 W ... 199.9 VA	0.1 VA	±(5 % of reading)
	200 W ... 1999 VA	1 VA	±(5 % of reading)
	2.00 kW ... 3.70 kVA	10 VA	±(5 % of reading)
- Q	0.00 W ... 19.99 VA	0.01 VA	±(5 % of reading + 10 D)
	20.0 W ... 199.9 VA	0.1 VA	±(5 % of reading)
	200 W ... 1999 VA	1 VA	±(5 % of reading)
	2.00 kW ... 3.70 kVA	10 VA	±(5 % of reading)
- PF	0.00i ... 1.00i	0.01	±(5 % of reading + 5 digits)
	0.00c ... 1.00c	0.01	±(5 % of reading + 5 digits)
- THDU	0.0% ... 99.9%	0.1%	±(5 % of reading + 5 digits)
- THDI	0 mA...999 mA	1 mA	±(5 % of reading + 5 D)
	1.00 A ... 16.00 A	10 mA	±(5 % of reading)
- Cos fi	0.00i ... 1.00i	0.01	±(5 % of reading + 5 digits)
	0.00c ... 1.00c	0.01	±(5 % of reading + 5 digits)
- U	0.1 V ... 199.9 V	0.1	±(3 % of reading + 10 digits)
	200 V ... 264 V	1 V	±(3 % of reading)
- I	0 mA...999 mA	1 mA	±(3 % of reading + 5 D)
	1.00 A ... 16.00 A	10 mA A	±(3 % of reading)
Power supply	110 V / 230 V AC, 50 Hz / 60 Hz		
Overvoltage category	CAT II / 300 V, CAT II / 600 V (DISCH1 / DISCH2, only)		
Protection class	I		
HV output	5 kV a.c. / 6 kV d.c., double insulation		
COM port	4 x RS232, 1 x USB, 1 x Bluetooth		
Dimensions (w×h×d)	43,5 cm x 29,2 cm x 15,5 cm		
Weight	17 kg		

Note: *Technical specification relates to HW 3 version.*

ORDERING INFORMATION

	MI 3394 EURO SET	MI 3394 LINE SET	MI 3394 ST SET	MI 3394 LAB SET
				
MI 3394 Instrument CE MultiTesterXA	•	•	•	•
A 1460 CE Test adapter		•		
S 2073 HV test lead 5m, without pistols			•	
A 1560 Burn Link adapter				•
A 1105 Barcode scanner		•		
A 1511 Tip Comander		•		
HV test pistol with 2 m cable, 2 pcs	•			•
Continuity test lead, 2.5 m, 2 pcs	•	•	•	•
Continuity test lead, red, 1.5 m, 1pcs	•	•	•	•
Insulation test lead, red, 2.5 m	•	•	•	•
Insulation test lead, black, 2.5 m	•	•	•	•
Crocodile clip, black, 3 pcs	•	•	•	•
Crocodile clip, red, 2 pcs	•	•	•	•
Discharge time cable	•	•	•	•
Mains cable	•	•	•	•
Bag for accessories	•	•	•	•
Calibration certificate	•	•	•	•
RS232 cable	•	•	•	•
USB cable	•	•	•	•
A 1521 USB isolator		•		
CD with instruction manual (full version)	•	•	•	•
Metrel ES Manager BASIC license	•	•	•	•

OPTIONAL ACCESSORIES

Photo	Order No.	Acc. decription
	A 1017	EXT/DOOR IN cable
	A 1060	Two way mains adapter
	S 1058	CONTINUITY test lead, 10 m, 2 pcs
	S 1072	CONTINUTY test lead with 2 pole aligator clip, 2.5 m, set of 2 pcs

Photo	Order No.	Acc. decription
	A 1458	SanDisk MicroSD card reader
	A 1460 XA	CE adapter supports Auto tests
	A 1495	Remote control pedal
	A 1496	Warning lamp / 2 LED's signal tower with buzzer

Photo	Order No.	Acc. decription
	A 1496 MAG	Warning lamp / 2-LED signal tower HV ready for magnetic mounting
	A 1497	Warning lamp / 4 LED's signal tower with buzzer
	P 1101	Lizenzschluessel für Advanced Metrel ES Manager

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