Gossen Metrawatt M520P

Gossen Metrawatt Profitest Mxtra VDE 0100 Test Tool User Manual

Comprehensive guide for operation, maintenance, and troubleshooting of your Profitest Mxtra device.

1. Introduction

The Gossen Metrawatt Profitest Mxtra is a universal testing device designed to verify protection measures in electrical installations in accordance with DIN VDE 0100 Part 600 and international standards such as IEC 364-6-61. This manual provides detailed instructions for the safe and effective use of your Profitest Mxtra, ensuring accurate measurements and reliable operation.

2. Safety Information

Always observe the following safety precautions to prevent injury and damage to the device.

2.1 General Safety

- Read and understand all instructions before operating the device.
- Use the device only for its intended purpose as an electrical installation tester.
- Do not operate the device if it appears damaged or is not functioning correctly.
- Ensure the device is regularly calibrated by qualified personnel.
- Keep the device away from moisture, dust, and extreme temperatures.

2.2 Electrical Safety

- Always disconnect power to the circuit before making connections, unless performing live measurements specifically permitted by the device's functions and safety standards.
- Verify that the test leads and accessories are in good condition and free from damage.
- Observe all local and national electrical safety codes and regulations.
- Do not exceed the maximum input ratings specified for the device.
- Wear appropriate personal protective equipment (PPE) when working with electrical systems.

3. Product Overview

3.1 Key Features

- Compliance with DIN VDE 0100 Part 600 and IEC 364-6-61.
- High precision and reliability for accurate measurements.
- Ergonomic design with easily maneuverable soft keys and a rotary switch for function selection.
- Large, illuminated display with adjustable viewing angle.
- ETC software for defining individual test structures and generating automatic test protocols.
- USB port for data exchange with a PC.
- Storage capacity for up to 50,000 measurement values.
- Measurement capabilities: loop and network impedance, RCD/FI switch testing (10 mA to 500 mA), insulation resistance, low resistance, earth resistance.

3.2 Components

The Profitest Mxtra device includes the main unit, test leads, and a power cable. Familiarize yourself with the various parts of the device as shown below.



Figure 1: Gossen Metrawatt Profitest Mxtra Installation Tester (angled view). This image shows the device from an elevated angle, highlighting the display, rotary switch, and connection ports.



Figure 2: Gossen Metrawatt Profitest Mxtra Installation Tester (front view). This image provides a direct frontal view of the device, clearly showing the display, control buttons, and the coiled test lead.

1. **Display:** Large, illuminated dot matrix LCD for displaying measurement results and menu navigation.
2. **Soft Keys:** Context-sensitive buttons located below the display for menu navigation and function selection.
3. **Rotary Switch:** Used to select different measurement functions (e.g., impedance, RCD, insulation).
4. **Connection Ports:** Various ports for connecting test leads, power cable, and USB.
5. **USB Port:** For connecting to a PC for data transfer and software updates.

4. Setup

4.1 Unpacking

Carefully remove the Profitest Mxtra device and all accessories from its packaging. Inspect all components for any signs of damage. If any damage is found, contact your supplier immediately.

4.2 Powering On

The device is powered via an electric cable. Connect the provided power cable to the device's power input port and then to a suitable electrical outlet. Press the power button (if applicable, otherwise the device powers on upon connection) to turn on the device. The display should illuminate.

4.3 Initial Configuration

Upon first use, you may need to configure basic settings such as language, date, and time. Use the soft keys and rotary switch to navigate through the on-screen menus and adjust these settings as required. Refer to the on-screen prompts for guidance.

5. Operating Instructions

This section details the procedures for performing various measurements with the Profitest Mxtra.

5.1 Basic Measurements

To perform a basic measurement:

1. **Select Function:** Use the rotary switch to select the desired measurement function (e.g., Loop Impedance, RCD Test).
2. **Connect Test Leads:** Connect the appropriate test leads to the device and to the circuit under test, ensuring correct polarity and secure connections.
3. **Initiate Measurement:** Press the "START" or equivalent soft key to begin the measurement.
4. **Read Results:** The measurement results will be displayed on the LCD. Note down or save the results as needed.

5.2 Advanced Functions

The Profitest Mxtra offers advanced functionalities for comprehensive testing:

- **RCD/FI Switch Testing:** Perform tests with or without 10 mA to 500 mA resolution. Follow on-screen prompts for specific test sequences.
- **Insulation Resistance Measurement:** Measure insulation resistance with nominal voltage or variable increasing test voltage. Ensure the circuit is de-energized before performing this test.
- **Earth Resistance Measurement:** Utilize appropriate accessories and follow the specific procedure for accurate earth resistance readings.
- **Custom Test Structures:** Use the ETC software to define and execute customized test sequences for specific installation requirements.

5.3 Data Management (USB)

The device can store up to 50,000 measurement values. To transfer data to a PC:

1. Install the Gossen Metrawatt ETC software on your PC.
2. Connect the Profitest Mxtra to your PC using a standard USB cable.
3. Follow the instructions in the ETC software to download measurement data and generate test protocols.
4. The software also allows for firmware updates of the device.

6. Maintenance

6.1 Cleaning

Clean the exterior of the device with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no liquid enters the device.

6.2 Storage

Store the Profitest Mxtra in a dry, dust-free environment, away from direct sunlight and extreme temperatures. Use the original carrying case (if provided) for protection during transport and storage.

6.3 Calibration

To ensure continued accuracy and compliance with standards, it is recommended to have the Profitest Mxtra calibrated annually by an authorized Gossen Metrawatt service center or a DAKKS-accredited laboratory.

7. Troubleshooting

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
Device does not power on.	Power cable not connected, faulty outlet, internal issue.	Check power cable connection. Test outlet with another device. If problem persists, contact support.
Inaccurate measurement readings.	Damaged test leads, incorrect measurement setup, device needs calibration.	Inspect test leads for damage. Review operating instructions for correct setup. Consider professional calibration.
USB data transfer fails.	Incorrect USB cable, driver issues, software not running.	Ensure correct USB cable is used. Reinstall ETC software and drivers. Verify software is running and device is connected.
Display is dim or unreadable.	Backlight setting, environmental conditions.	Adjust display brightness settings. Move to a better lit environment.

8. Technical Specifications

Parameter	Value
Model Number	M520P
Manufacturer	GOSSEN-METRAWATT
Dimensions (L x W x H)	49.4 x 35.1 x 18.9 cm (Package)
Weight	2.3 kg (Product) / 2300 Grams
Power Source	Electric Cable
Display Type	Dot Matrix LCD
Measurement Storage	Up to 50,000 values
PC Interface	USB Port

Parameter	Value
Applicable Standards	DIN VDE 0100 Part 600, IEC 364-6-61
Operating Voltage Range	108 – 500 V AC (three-phase networks)
Frequency Range	15.4 – 420 Hz
Calibration	DAKKS calibrated

9. Warranty and Support

Gossen Metrawatt products are manufactured to the highest quality standards. For information regarding warranty coverage, please refer to the warranty card included with your product or visit the official Gossen Metrawatt website.
For technical support, service, or calibration inquiries, please contact Gossen Metrawatt customer service or your local authorized distributor. Contact details can typically be found on the manufacturer's official website.
Note: Keep your purchase receipt as proof of purchase for warranty claims.

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Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question