

AFCI/GFCI Outlet Tester PM6800



▲ As the product is constantly upgraded,
the picture is for reference only.

EMC&LVD

Designed and Conforms to
IEC61010-1
CAT IV 600V



Y01-04-0274



Before using the instrument, please read this manual
carefully, and save it well for future using.

尺寸 : 125x85mm 红框不要印

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1. Declaration

According to international copyright laws, no part of this manual may be reproduced in any form (including storage and retrieval or translation into other languages) without express permission and written consent. Any modifications to this manual in future versions will be made without prior notice.

Please read this manual carefully before use to ensure the safety and functionality of the tester.

2. Safety precautions

- Before using this product, please read this user manual for optimal performance.
- After reading this manual, store it in a safe place for future reference.
- Carefully review the safety information before using the tester.
- Failure to comply with warnings and instructions may result in electric shock, fire, serious personal injury, or equipment damage.

2.1 Work area safety

- Keep the work area clean and well-lit.

- Do not operate the equipment in explosive environments, such as in the presence of flammable liquids, gases, or dust.
- Keep children and bystanders away while operating the equipment.

2.2 Electrical safety

- For indoor use, do not expose the equipment to rain or damp environments.
- Water entering the equipment increases the risk of electric shock.

2.3 Personal safety

- Stay alert while operating the equipment; be aware of your actions and use common sense.
- Do not operate the equipment when you are fatigued or under the influence of drugs, alcohol, or medication.
- Distraction while operating the equipment may lead to serious personal injury.

Warnings

- Improper use of this tester may result in damage, electric shock, injury, or death.

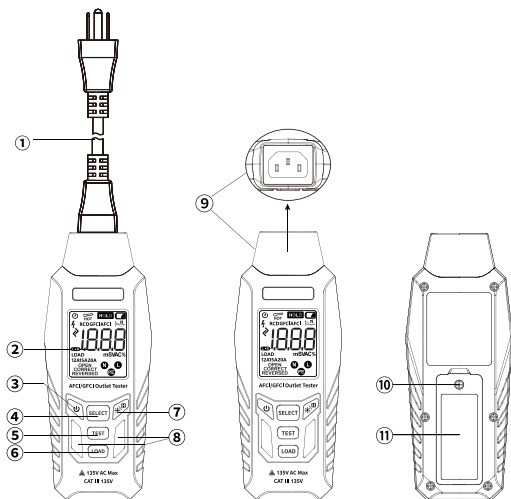
- Read and understand this user manual before operating the tester.
- Using the tester in a manner not specified by the manufacturer may damage the protection of the tester.

3. Overview

This tester is designed for use with 120V AC 3-wire power outlets.

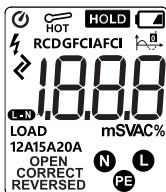
It is a socket tester that checks the wiring condition of power outlets, displays the AC line voltage, and checks for missing wires, socket sequence, AFCI, GFCI, RCD (30mA), and LOAD protective devices, as well as trip time devices.

3.1 Component Structure



- ① Power cord
- ② Display
- ③ Power button
- ④ Function selection button
- ⑤ Test button
- ⑥ LOAD selection button
- ⑦ Data hold and backlight button
- ⑧ Indicator lights
- ⑨ Three-prong power socket
- ⑩ Battery cover screw
- ⑪ Battery cover

3.2 LCD display



VAC	AC Voltage		Auto Shut-off
mS	Milliseconds		Electric shock hazard
L-N	Live and neutral	HOLD	Data hold
	Over temperature protection		Low battery
LOAD	Voltage Drop Rate	OPEN	Open circuit
12A	Drop test current	REVERSED	Reversed
15A	Drop test current	CORRECT	Correct
20A	Drop test current	N	Neutral
%	Percentage	L	Live
RCD	Leakage current 30mA	PE	Ground
GFCI	Leakage current 5mA		Less than symbol
AFCI	Arc simulation		Greater than symbol
	Phase 0-degree trigger		

4. Instructions

4.1 Power on/off / Auto shut-off

Power on/off: Long press the power button “” for more than 2 seconds to power on, and short press the power button “” to turn it off.

Auto shut-off: If there is no operation within 10 minutes (including connection to the circuit) , it will automatically shut down. To cancel the auto shut-off feature, long press the power button “” and the “” button to power on the tester, and the auto shut-off function can be disabled.

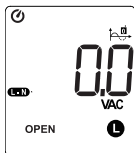
4.2 Data hold / backlight

Short press the “” button to turn on or off the measurement value hold display; long press “” for about 2 seconds to turn the backlight on or off, which will automatically turn off after about 30 seconds.

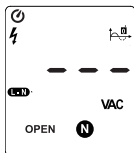
4.3 Missing wire and socket sequence

● When the socket is correctly wired, the green indicator light will illuminate; if there is a missing wire or reversed socket sequence, the red indicator light will illuminate.

● Inspection status display



● OPEN L:
Missing live wire



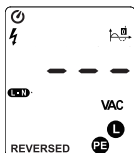
● OPEN N:
Missing zero line



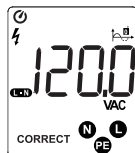
● OPEN PE:
Missing ground wire



● REVERSED N L:
Neutral wire and live wire are connected in reverse



● REVERSED PE L:
Ground wire and live wire are connected in reverse.



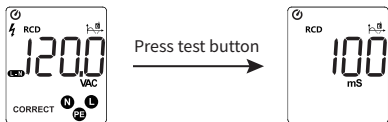
● CORRECT N L PE:
Connection is correct

Note:

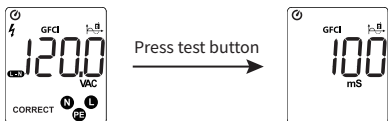
● For any status other than the above six detection states, incorrect wiring is detected. Please check the circuit connections.

4.4 RCD(30mA)/GFCI/AFCI/LOAD tests

RCD (30mA) Test: When correctly wired, short press the SELECT button to switch modes, and short press the TEST button to start the test. After the test is complete, the display will show the trip time; reset or long press the SELECT button for about 2 seconds to return to the initial interface.



GFCI test: When correctly wired, short press the SELECT button to switch modes, and short press the TEST button to start the test. After the test is complete, the display will show the trip time; reset or long press the SELECT button for about 2 seconds to return to the initial interface.

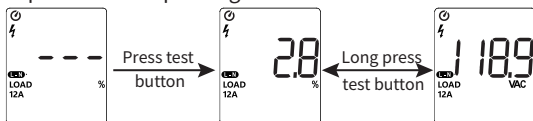


AFCI test: When correctly wired, short press the SELECT button to switch modes, and short press the TEST button to start the test. After the test is complete, the display will show the trip time; reset or long press the SELECT button for about 2 seconds to return to the initial interface.



LOAD test: When correctly wired, short press the LOAD button to enter and exit the voltage drop mode, and short

press the TEST button to start the test. After the test is complete, the display will show the trip time; short press the SELECT button to switch test currents, and long press the SELECT button for about 2 seconds to toggle between drop rate and drop voltage.



4.5 Over-temperature protection

The AFCI and LOAD tests have over-temperature protection. After over-temperature protection is triggered, AFCI and LOAD function tests will become ineffective. The screen will display a  symbol indicating protection, and the letters "otP" will appear. The short press of the TEST button will be ineffective, and the buzzer will emit two "beep" sounds. Once the over-temperature protection symbol  disappears, AFCI and LOAD functions will return to normal testing.



Over temperature protection



Resume protection

Notes:

- Testing voltage: 100~135V AC. Pressing the TEST key will not function when the voltage exceeds the rated range. The red indicator light illuminates, and the buzzer emits two “beep” sounds.
- When performing continuous AFCI tests, allow a 30-second interval between each test. An interval of over 60 seconds can extend the test duration.
- If the cable length from the test position to the circuit breaker exceeds 100 feet (30.48 meters), certain AFCI models may fail to trip.

5. Technical specifications

Socket testing criteria	Correct wiring, missing neutral wire, missing ground wire, reverse connection of live and neutral wires, reverse connection of live and ground wires; Voltage: 36~135V AC.
AFCI test	Internal impedance: Approximately 1.3Ω; Voltage Range: 100~135V; Time: 10~500mS; Accuracy: 2% ± 10mS.
GFCI test	Internal impedance: Approximately 15Ω; Voltage Range: 100~135V; Time: 10~500mS; Accuracy: 1% ± 10mS.
RCD(30mA) test	Internal impedance: Approximately 3kΩ; Voltage Range: 100~135V; Time: 10~500mS; Accuracy: 1% ± 10mS.

Technical specifications

LOAD test	Internal impedance: Approximately 20Ω; Voltage Range: 100~135V; Drop rate: 0.1-99.9%; Accuracy: 3% ± 3 digits.
Voltage measurement	AC voltage L-N (30~150V): 50/60Hz, Accuracy: ± (1.5% + 5 digits); Display “  ” symbol when above 36V
Auto power-off	About 10min
Battery undervoltage	Approximately less than 2.6V
Operating temperature	0~40°C
Storage temperature	-10~50°C
Altitude	<2000m
Safety class, pollution class	Safety class CAT III 135V, pollution class:2
Drop test resistance	1m
Power supply	1.5V AAA Battery x 2
Product dimension	166mm×66mm×31mm (excluding cables)
Product weight	About 182g (excluding power cord and battery)
Applicable standard	IEC 61010-1, IEC 61010-2-030

6. Precautions before use

The following equipment and accessories are included in the packaging, please ensure all items are included before using the device.

● Main unit	x 1
● Portable packaging	x 1
● Battery 1.5V AAA	x 2
● Manual	x 1
● US standard three-pin connection cable	x 1

7. Maintenance

● Special maintenance is not required when using the tester according to the user manual.

● However, if a functional error occurs during normal operation, customer service is responsible for repairing your instrument. Please contact the local service office.

7.1 Cleaning

● If the tester requires cleaning after daily use, use a damp cloth and mild household detergent.

● Disconnect the tester from all test circuits before cleaning.

- Never use acidic detergents or solvents for cleaning.
- Do not use the tester until it is completely dry after cleaning.

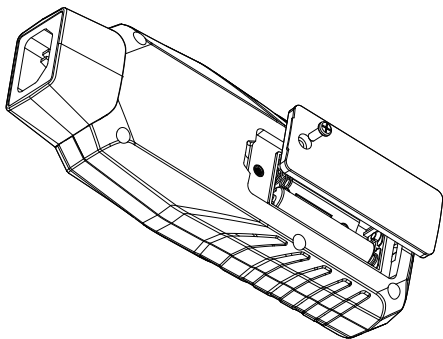
7.2 Storage

- The tester must be stored in a dry, enclosed area.
- If the adapter is transported under extreme temperatures, it requires at least 2 hours of recovery time before any operation.

7.3 Battery replacement

When the LCD display shows “” symbol during use, the battery must be replaced to avoid abnormal operation of the instrument.

1. Disconnect the power plug.
2. Press the power off button to turn off the tester.
3. Use a screwdriver to open the battery cover on the back, removing the battery.
4. The tester uses: 1.5V AAA x2, please insert batteries of the same specifications, noting the polarity.
5. After replacing the battery, secure the battery cover and tighten the screws before using the tester.



7.4 Fuse replacement

1. Disconnect the power plug.
2. Press the power off button to turn off the tester.
3. Use a screwdriver to unscrew the cover screws at the back, open the cover, and remove the fuse.
4. The tester uses a fuse of: 15A/250V 5x20mm specification, please insert a fuse of the same specification.
5. After replacing the fuse, secure the cover and tighten the screws before using the tester.

