INSTRUCTION MANUAL

MT405EX

INTRINSICALLY SAFE NON-CONTACT AC VOLTAGE DETECTOR

EX II 2 G EX
ib op is IIB T4 Gb

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1. ⚠WARNINGS

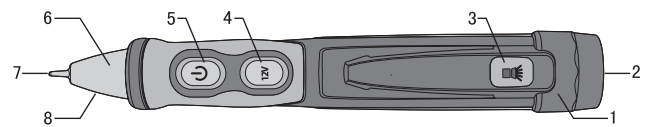
- Read, understand and follow Safety Rules and Operating Instructions in the manual before using this tester.
- The tester's safety features may not protect the user if not used in accordance with the manufacturer's instructions.
- Check on a known live source within the rated AC voltage range of the tester before use to ensure it is in working order.
- Insulation type and thickness, distance from the voltage source, shielded wires, and other factors may effect reliable operation. Use other methods to verify live voltage, if there is any uncertainty.
- Do not use if the tester appears damaged or if it is not operating properly. If in doubt, replace the tester.
- Do not use on voltages that are higher than as marked on the tester.
- Use caution with voltages above 30 volts AC as a shock hazard may exist.
- Comply with all applicable safety codes. Use approved personal protective equipment when working near live electrical circuits-particularly with regard to arc-flash potential.
- Do not operate tester if Low Battery warning occurs. Replace batteries immediately

2. INTERNATIONAL SAFETY STANDARDS

⚠	Potential danger. Indicates the user must refer to the manual for important safety information
⚠	Indicates hazardous voltages may be present
▣	Equipment is protected by double or reinforced insulation

3. DETECTOR DESCRIPTION

1. Screw on battery cover
2. Flashlight
3. Flashlight ♛ button
4. 12V button
5. Tester On/Off ⏻ button
6. LED indicators
7. Detector tip
8. Worklight



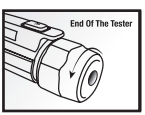
4. OPERATION

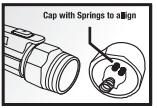
1. **Turning the Tester On:** Momentarily press the tester ⏻ On/Off button. The beeper will beep once and the green LED will illuminate to indicate that the tester is on and ready for use.
2. **Turning the Tester Off:** Momentarily press the ⏻ On/Off button. The tester will beep twice and the green LED will turn off.
3. **Turning the Beeper Off:** With the tester off, press and hold the ⏻ On/Off button until the green LED is illuminated. The tester will now operate without the beeper. To turn the beeper off when the tester is on, press and hold the ⏻ On/Off button until the green LED flashes. To turn the beeper back on, press and hold the ⏻ On/Off button until the green LED flashes and beeper beeps.
4. **Verify Operation:** Before using tester, (1) Make sure the green LED is glowing, (2) Check tester on a known live AC voltage that is within the defined detection range of the tester.
5. **High Voltage Mode (100 to 1000V AC):** Place the tip of the tester near an AC voltage. If the tester detects voltage within the defined detection range, the green LED will turn off, the red LED will turn on, and the beeper will beep rapidly.
6. **Low Voltage Mode (12 to 1 000V AC):** Press and hold the 12V button. The green LED will change to yellow to indicate the tester is in the low voltage mode. While pressing the 12V button, place the tip of the tester near an AC voltage. When AC voltage is detected, the yellow LED will turn off, the red LED will flash and the beeper will beep. The flash rate and beeping rate will increase as the tester gets closer to the voltage source. If the tester detects high voltage, it will automatically change over to the high voltage mode: The red LED will change to a steady glow and the beeper will beep rapidly.
   NOTE: The tester cannot determine the actual voltage. The voltage level where the tester switches from the low to high voltage mode is effected by insulation type and thickness, distance from the voltage source, and other factors.
7. **Low Battery Indication:** Replace the batteries if the green LED does not turn on. When the tester is on and the batteries are too low for reliable operation, the beeper will beep three times and the green LED will turn off indicating the tester is not operational. Replace the batteries to restore operation.
8. **Auto Power Off:** To conserve battery life, the tester will automatically turn off after approximately 5 minutes of inactivity. When powering down, the beeper will beep twice and the green LED will turn off.

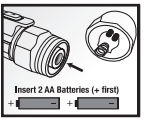
9. **Flashlight:** Momentarily press the Flashlight button to turn the flashlight on or off. To conserve battery life, the flashlight will automatically turn off after approximately 5 minutes. The beeper will beep twice as the flashlight turns off.
   NOTE: If the battery voltage is too low to operate the flashlight, the tester will indicate this condition by beeping three times and the flashlight will turn off. The voltage detector has it's own low battery threshold and may remain operational. Refer to Verify Operation (step 4) in this manual before using tester.

5. CHANGING BATTERIES

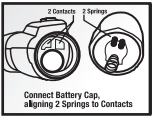
1. Carefully unscrew battery cap at the rear(flashlight end)of the tester.
   2.Replace batteries with two AAA 1.5V batteries. Observe polarity.
3. Carefully align cover with tester as shown below.
4. Screw cover onto tester until it feels tight. Do not use excessive force.
5. Verify operation by using the tester on a known live AC voltage within the defined detection range of the tester.







Observe correct polarity when installing batteries.



Push IN and Rotate Cap back onto Tester Body

NOTE: When batteries are loaded for the first time, please remove the white, rectangular security strip before installing batteries.
NOTE: When replacing the batteries, be sure to secure the cap firmly to maintain IP67 water and dust protection. A loose or over tightened battery cap may compromise water and dust protection.

6. GENERAL SPECIFICATIONS

Function	Range
Detection voltage range	100V AC to 1000V AC, 12V to 1000V AC
Frequency range	50/60Hz
Batteries	Two AAA 1.5V batteries
Operating temperature	0°C to 50°C (32°F to 122°F)
Storage temperature	-10°C to 60°C (14°F to 140°F)
Humidity	80% max.
Altitude	2000 meters
Pollution Degree	2
Safety Compliance	CAT IV-1000V

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