



NON-CONTACT VOLTAGE DETECTOR W/ LASER INFRARED THERMOMETER

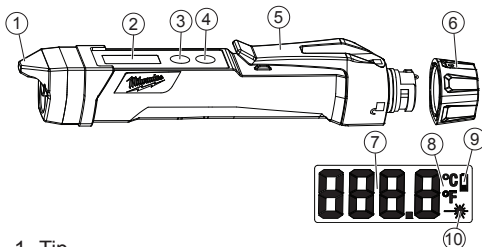
Cat. no.: 2225-20

IMPORTANT SAFETY INSTRUCTIONS

AWARNING Read all safety warnings, instructions, illustrations and specifications provided with this product. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. Save these instructions.

- This tool is intended for indoor use.
- Before use, test on a known live circuit to ensure the tool is functioning properly. Do not use if damaged in any way.
- If no indication, voltage may still be present.
- Failure to follow instructions could result in serious injury or death.
- Use caution with voltages above 30 V AC as a shock hazard may exist. Do not apply more than the rated voltage as marked on the detector.
- Never assume neutral or ground wires are de-energized. Neutral wires in multi-wire branch circuits may be energized when disconnected and must be retested before handling.
- Operation may be affected by differences in outlet design and insulation thickness and type.
- The detector **WILL NOT** detect voltage if:
 - The wire is shielded.
 - The voltage is DC.
- The detector **MAY NOT** detect voltage if:
 - The wire is partially buried or in a grounded metal conduit.
 - The field created by the voltage source is being blocked, dampened, or otherwise interfered with.
 - The frequency of the voltage is not a perfect sine wave between 50 Hz and 500 Hz.
 - The tip of the detector is not within 5 mm of an AC voltage source radiating unimpeded.
 - The air humidity is not nominal (50% relative humidity – non-condensing).
 - The detector is not held still.

FUNCTIONAL DESCRIPTION



1. Tip
2. LCD screen
3. Infrared thermometer button (IR)
4. Non-contact voltage button (NCV)
5. Clip
6. Battery cap
7. Numeric display
8. Units
9. Low battery indicator
10. Laser warning icon

SYMBOLGY



AC Current



Volts



Hertz

CAT IV

Measurement Category IV



Safety Alert



Risk of Electric Shock



Laser



Class 1 Laser Warning



Non-Contact Voltage Button (NCV)



Infrared Thermometer Button (IR)



Double Insulated



Read Operator's Manual



Do not dispose of electric tools together with household waste material. Electric tools and electronic equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

SPECIFICATIONS

Cat. No.	2225-20
Safety Rating	CAT IV 1000 V AC
Voltage Measurement Range	12 to 1000 V AC
Temperature Measurement Range	-30 °C to 250 °C
Distance-to-Spot Ratio	4:1
Max Laser Output	0.39 mW
Wavelength	630 - 670 nm
Frequency Range	50 to 500 Hz
Temperature Resolution	0.1 °C
Temperature Accuracy	
-30 °C to 20 °C	Accurate to +/- 3 °C
20.5 °C to 250 °C	Accurate to +/- 2% or +/- 2 °C
Battery	2 x 1.5V AAA
	Alkaline Batteries
Operating Altitude	2000 m
Relative Humidity	
Operating	10 to 90% non-condensing
Storage	<80% non-condensing
Drop Protection	2 m
Dust/Water Ingress Protection	IP54
Storage Temperature	-10° to 50°C
Recommended Ambient Operating Temperature	0° to 50°C

ASSEMBLY

Changing Battery

Only use alkaline batteries. Do not use zinc-carbon batteries. If the tool will not be used for a long time, remove the batteries as a protection against corrosion.

1. When the batteries are low, the low battery indicator is displayed on the LCD.
2. Twist 1/4 turn anticlockwise to unlock the battery cap.
3. Remove and properly dispose of the old batteries.
4. Install the batteries according to the polarity marked on the tool.
5. Twist 1/4 turn clockwise to lock the battery cap and ensure a tight seal with the o-ring.

WARNING Never use tool without battery cover in place.

OPERATION

WARNING To reduce the risk of electric shock or injury, test on a known live circuit to ensure the tool is functioning properly before use. Do not use detector if damaged in any way.

Turning the Detector On/Off

1. Press the NCV button to turn on the detector. The tip will light green with a single beep.
2. Press the NCV button to turn off the detector.
3. The detector automatically shuts off after 5 minutes of no use.

Selecting Audible or Silent Mode

The detector automatically starts in audible mode when powered on. To change the mode, press and hold the NCV button for two seconds. The tip will flash green to indicate silent mode is activated, or it will flash green and beep to indicate audible mode is activated.

Selecting Temperature Units

The detector automatically starts in Celsius (°C) or the last selected unit, when powered on. To change the units to Fahrenheit (°F) or back to Celsius (°C), press and hold the infrared thermometer and NCV buttons simultaneously.

Checking for the Presence of AC Voltage

WARNING Failure to follow instructions could result in serious injury or death.

Use caution with voltages above 30V AC as a shock hazard may exist. Do not apply more than the rated voltage as marked on the detector.

1. Turn the detector on.
2. Place tip of the detector near AC voltage. If voltage is detected the tip will turn red and beep:
 - For extra-low voltage (12 V) detection, the red light blinks slowly and the tool beeps.
 - For low voltage (120 V) detection, the red light remains on and the tool beeps continuously.

Measuring Temperature

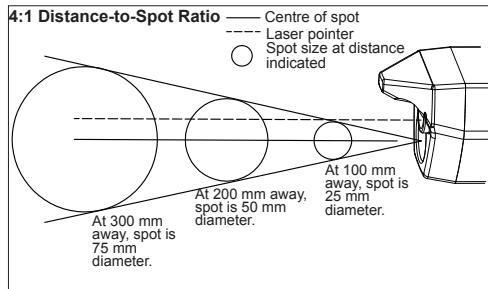
WARNING Thermometer is NOT intended for use on people or animals.

Do not stare at or look directly into the laser.

While holding down the IR button, aim the laser at the object to be measured. The temperature will display on the LCD. The error code "HI" will appear on the LCD if the measurement is hotter than the measurement range, or "LO" if it is colder. The error code "Ot" will appear if the ambient temperature is outside the operating temperature range.

NOTE: Releasing the button will hold the last measurement taken. The thermometer will automatically deactivate after about 10 seconds of inactivity and the held reading will be cleared.

The targeting laser has a distance-to-spot ratio of 4:1, which describes the relationship of the distance between the detector and the object, to the target measurement area.



Cleaning

Keep tool clean, dry and free of oil or grease. Use only mild soap and a damp cloth to clean.

WARRANTY - AUSTRALIA and NEW ZEALAND

Please refer to Australian and New Zealand warranty supplied with tool. This warranty applies only to product sold by authorised dealers in Australia and New Zealand.

SERVICE - AUSTRALIA and NEW ZEALAND

MILWAUKEE® prides itself in producing a premium quality product that is Nothing But Heavy Duty™. Your satisfaction with our products is very important to us! If you encounter any problems with the operation of this tool, please contact your authorised **MILWAUKEE®** dealer.

For a list of **MILWAUKEE®** dealers, guarantee or service agents please contact **MILWAUKEE®** Customer Service or visit our website.

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