



**PENTA**  
ELECTRICAL SAFETY PRODUCTS

## KEEPER User Manual

Proximity Voltage & Current detector





## INTRODUCTION

The **KEEPER** continuously detects voltage and current at distance, alerting the user before entering a dangerous area. Not only detects the hazard but also indicates the direction and distance to the hazard. The **KEEPER** continuously sensing its surroundings, which makes it extremely safe, it is always alert. The **KEEPER** mounted on the visor of the hard hat, alerts the user in real time through lights and sounds. The **KEEPER** detects 360 degrees around the user, indicates the danger, direction and approximate distance of the threat. The location of the **KEEPER** on the hard hat allows the user to have a peripheral vision, maximizing the visibility. The **KEEPER** has 4 modes of use according to the user's requirement: Rookie, Pro1, Pro2, Pro3. (Each mode has an associated sensibility/distance of detection).

The **KEEPER** works under face shields.

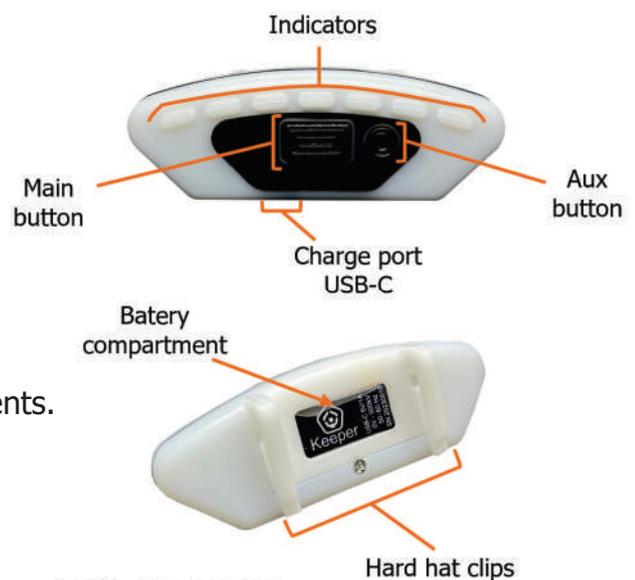
## By using the KEEPER, you minimize:

The electrical risk associated with sources of any voltage level, such as power lines, cables or downed installations.

The risk of electric arc, associated with high current sources, such as panels, switches and industrial installations.

## Characteristics

- Intuitive use.
- Always alert, always looking after you.
- Directional and proximity alerts.
- Adjustable sensitivity, according to the user's requirements.
- Robust and lightweight design (1.2 oz.).
- Water resistant: Rated IP-64.
- High capacity rechargeable Li-ion battery.
- Self-test function, "TRUE TEST".
- Standards: ASTM F3283/F3283M, IEC 61243-6, IEC 61326-1 Ed. 2.0 (2012).



## OPERATION MODES

### POWER ON



To power the **KEEPER** on, press and release the MAIN button.

The **KEEPER** will execute a SELF-TEST routine and it is ready to use.

The **KEEPER** signals the presence of voltage with **RED** LEDs.

The LEDs point to the source of origin, indicating whether it is detected from the left, front, or right.



The **KEEPER** signals the presence of current with **YELLOW** LEDs.

The amount of detected current is represented through animated indicators.



### SLEEP MODE



The **KEEPER** enters SLEEP mode after 60 seconds without voltage or current detection, signaled by a short beep. **While in SLEEP mode, the KEEPER remains fully alert.** ⚠️

### CURRENT MODE



**Press and hold** the "AUX" button to activate only current detection on the **KEEPER**. An intermittent beep confirms the enabled mode, during which VOLTAGE detection is **disabled**. Once released, the **KEEPER** will restart detecting voltage.

### AIRPLANE MODE



To power off the **KEEPER**, press both the AUX and MAIN buttons simultaneously. A quick animation of white LEDs accompanied by a sound, signals successful entry into POWER-OFF mode.

⚠️ **This mode does not keep you safe.** ⚠️

## LOW BATTERY INDICATION



Low battery will be indicated with an **orange** blink.

NOTE: this will not reduce the operation of the **KEEPER**, it is only a warning to recharge it.



Very Low battery will be indicated with an **red** blink.

NOTE: this will disable all functions of the **KEEPER** until it is charged again.

## DISTANCE OF ACTIVATION

The **KEEPER** can be configured in 4 modes of use, according to the user requirements. Each mode has an associated detection distance.

The following illustration describe the first and full detection of the **KEEPER**.



### VOLTAGE

Orange: Full alert  
Black: First alert

Volts (phase to ground / Phase to Phase)	120 / 207 V.	2,4 / 4,2 kV.	4,2 / 7,3 kV.	14,4 / 24,9 kV.	19,9 / 34,4 kV.
Rookie/Pro1	0' 0'3"	1'3" 4'3"	2'7" 5'6"	3'7" 7'10"	4'3" 9'10"
Pro2	x x	0'7" 1'3"	1'3" 1'11"	3'3" 4'3"	3'11" 5'10"
Pro3	x x	0' 0'3"	0'7" 0'9"	1'11" 2'3"	2'3" 2'11"

### CURRENT

Amps	1 A.	10 A.	50 A.	100 A.	200 A.
Rookie/Pro1	0'2" 0'4"	1'1" 1'7"	1'7" 2'11"	2'7" 3'11"	5'6" 6'6"
Pro2	x 0'	0'4" 0'7"	0'7" 1'3"	0'11" 1'11"	1'7" 2'7"
Pro3	x x	0' 0'2"	0'2" 0'7"	0'7" 0'11"	0'9" 1'3"

The user mode can only be changed when the **KEEPER** is in charging mode to prevent it from being changed at the workplace. Activation distances may vary depending on the electromagnetic field configuration.

## ADAPTATIVE PRO OPTION

Pro1, Pro2 and Pro3 modes allows adapting to the present voltage and current conditions, silencing the **KEEPER**, so as not to interfere during work in known dangerous situations.



To adapt the **KEEPER**, press the central button while it is in alert mode (Do not interfere with your hand between the equipment and the voltage source, for better performance).

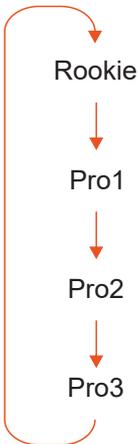
Once adapted, the **KEEPER** will confirm with a sound and a purple indication that the sensitivity has been adapted to the environment. If the **KEEPER** moves closer to the source, the alarm will start sounding again. To revert press MAIN button.

### CHARGING & USERS MODE SELECTION



Connect the **KEEPER** to a power source using the provided USB-C cable. The blue blinking LED signals charging and readiness for user mode selection.

For safety, user modes can only be selected when the **KEEPER** is connected to the power source, and modifications during normal operation are not allowed.



Pressing the MAIN button, you can cycle through the different **VOLTAGE** user modes.



Release the MAIN button for **3 seconds**, the **KEEPER** will emit a sound and indicate the actual **CURRENT** user mode selected.



Pressing the MAIN button, you can cycle through the different **CURRENT** user modes.

In this mode, **CURRENT DETECTION MODE DISABLED.**

## SELF-TEST

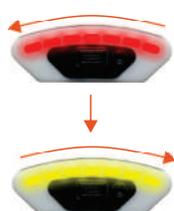
TRUE TEST, the self-test routine, not only tests the sound and LEDs.

When starting an self-test the **KEEPER** internally generates an electromagnetic field that tests the voltage and current sensors, making it a 100% real test.



To run self-test, press and realease "MAIN" button (While not in detection/alert mode).

### SELF-TEST ROUTINE



#### Self-test will:

- 1- Test all the **VOLTAGE** indicators plus sound.
- 2- Test all the **CURRENT** indicators plus sound.
- 3- Show the user mode selected for **VOLTAGE**.



- 4- Show the user mode selected for **CURRENT**.



In this mode,  
**CURRENT DETECTION  
MODE DISSABLED.**



After the self-test is completed, the central LEDs will show the condition of the **KEEPER**:

None  
**SATISFACTORY**



Red indicator  
**NOT SATISFACTORY**



If the test is **NOT SATISFACTORY**, the **KEEPER** will enter ERROR mode:

The center indicator will show the type of error: **1 Red Blink** - Left Voltage sensor error.  
**2 Red Blink** - Right Voltage sensor error.  
**3 Red Blink** - Current sensor error.

**This will indicate that the KEEPER is not enabled for use.**

## AUXILIARY MODES

The **KEEPER** has 3 auxiliary modes, such as flashlight, "SOS" signal and sound beacon.

	<p>To enter auxiliary modes, keep pressing MAIN button for <b>two TEST cycles</b>.</p>
	<p>Press AUX button to cycle through the different modes:</p> 
	<p>To exit press MAIN button, the <b>KEEPER</b> will do an self-test.</p>

## PRODUCT SPECIFICATIONS

- Proximity Voltage and Current detection from 50 v to 500 kV.
  - Directional and proximity alerts.
  - Adjustable sensitivity, according to the user's requirements.
  - Self-test function - "TRUE TEST".
  - High capacity rechargeable Li-ion battery 3.7V, 350mAh.
  - Autonomy: Up to 3 months in stand by.
  - Operating Frequency: 50 Hz and 60 Hz.
  - Water resistant: Rated IP-64.
  - Weight 1.2 oz.
  - USB-C connector.
  - Dimensions: 2.5" x 1.25" x 0.75".
- Standards: ASTM F3283/F3283M, IEC 61243-6, IEC 61326-1 Ed. 2.0 (2012).



### Box contains:

- **KEEPER**.
- Case.
- USB-C cable.
- Quick-start guide card.

