

PAMEL

USER MANUAL

TIME PROTECTION DEVICE PZC-i



PZC-i

<https://serwer.pamel.pl/>



24.08.2026

Operating principle

PZC-i detects the current drawn by the connected load. When the current exceeds the set detection threshold, it starts counting down the preset time and supplies voltage to the output. If the current disappears before the countdown ends, the counter returns to the preset value. When the time reaches zero, the output is switched off and the unit enters a lockout state. Restarting requires clearing the lockout in the UNLOCK menu.

Intended use

The device is intended to provide time-based protection for various electrical loads. The maximum load is 3.5 kW. PZC-i is not intended to control highly inductive circuits.

Safety

- DANGER: the device operates at 230 V. Installation and work on the electrical system should be carried out by qualified personnel.
- Do not use the device after flooding or when the enclosure or wiring is visibly damaged.
- Do not exceed the 3.5 kW load or the -10...+60°C operating-temperature range.
- Do not carry out unauthorised repairs or modifications.
- The enclosure is IP20 - protect it from water, moisture and conductive dust.



Technical data

Parameter	Value
Supply voltage	230 V -20% / +10%, 50 Hz
Operating temperature	-10...+60°C
Maximum load	3.5 kW
Current setting range	0.4...5.0 A
Time resolution	1 s
Maximum time	999 s
Power consumption	max. 0.2 W
Dimensions	80 × 60 × 65 mm
Enclosure	self-extinguishing plastic
Protection rating	IP20
Compliance	PN-EN 60529, Pb-Free

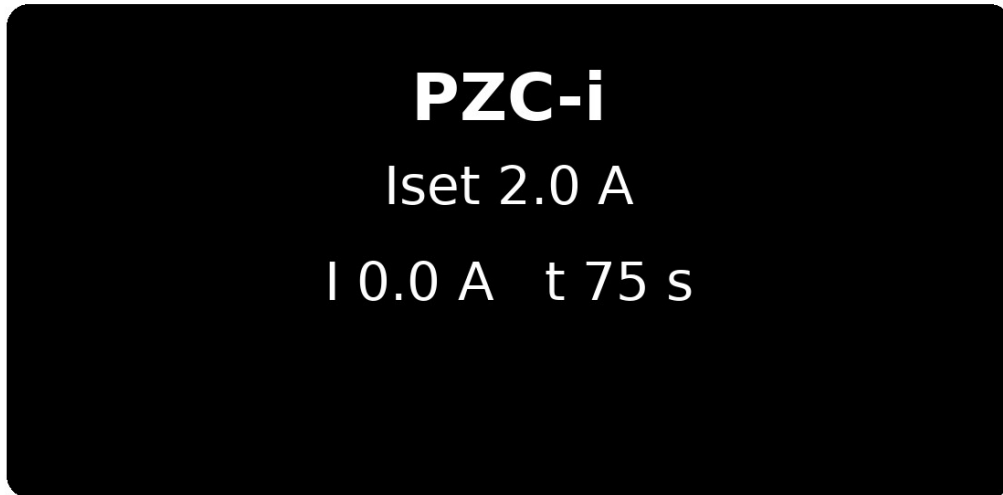
Connection and installation

Disconnect the power supply before installation. Insert the device in the supply path of the protected load according to the markings on the unit. Do not guess wiring from appearance alone - if markings are unreadable, stop installation and contact PAMEL. After installation, check all connections and close the installation enclosure before energising the circuit.

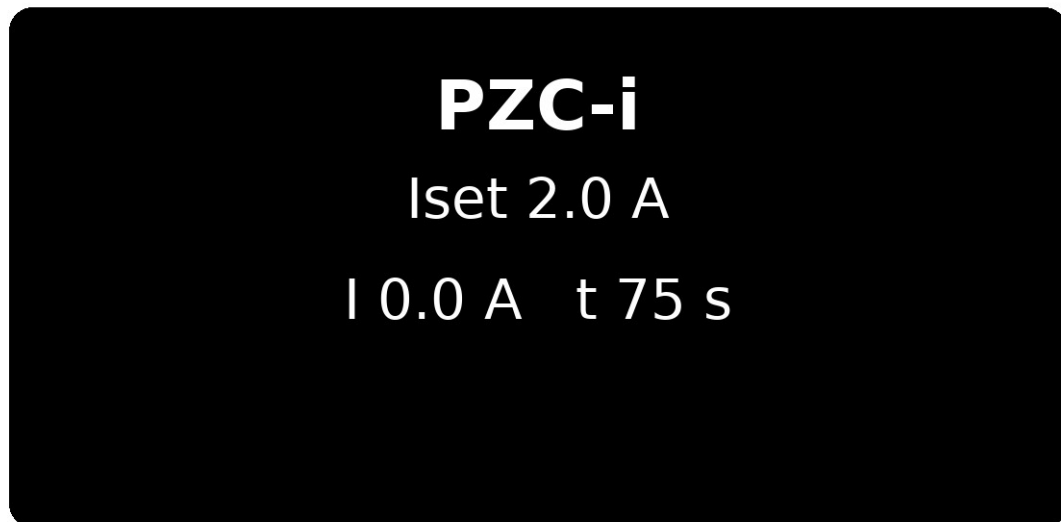
230 V / 3.5 kW max. • IP20 • Pb-Free

First start-up

1. Check that the load voltage and power comply with the PZC-i ratings.
2. Connect the load and switch on the supply.
3. Check the set current threshold, actual current and preset time on the display.
4. Set the time and detection threshold for the protected device.
5. Run a functional test: start the load and confirm that the countdown begins.



Main screen

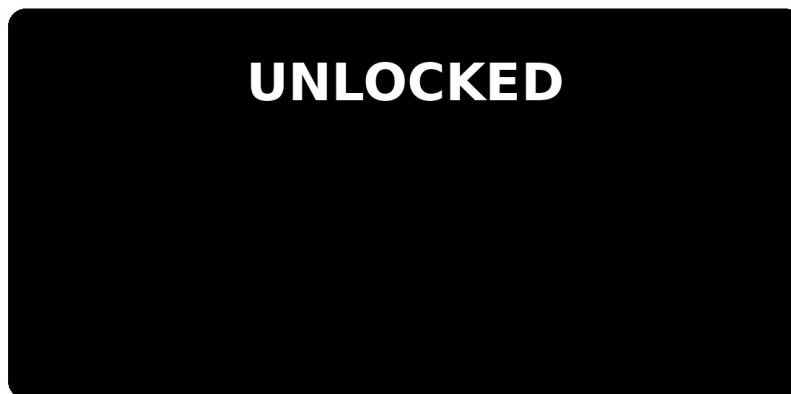


Example: detection threshold 2.0 A, actual current 0.0 A and preset time 75 s. A displayed time of 0 s means that no countdown is active because the current is below the detection threshold. Use the upper button to move through successive menu items.

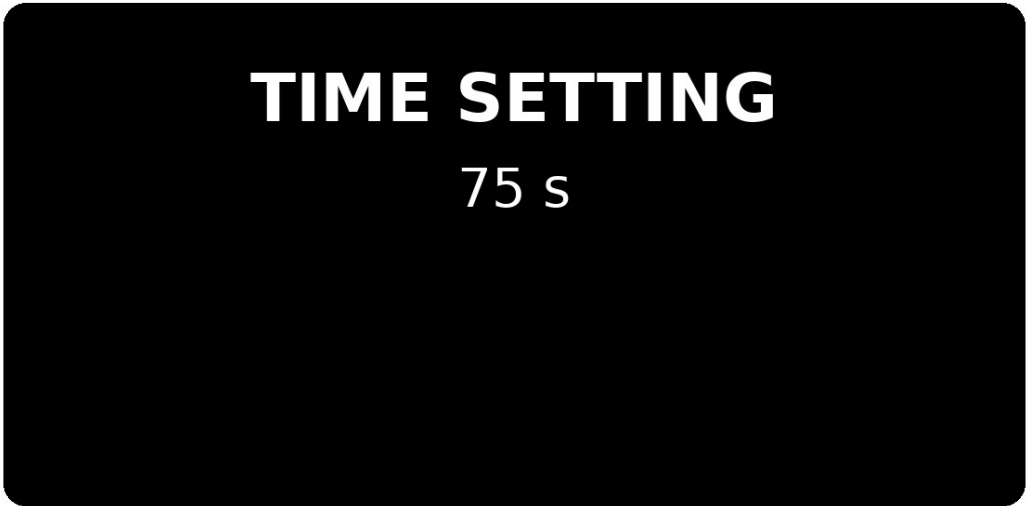
UNLOCK menu



After the protection has tripped, hold the lower button for about 6 seconds. The controller clears the lockout and displays UNLOCKED. Only unlock the unit after identifying the reason for the trip.



TIME SETTING menu



Hold the lower button for about 6 seconds to enter time setting. Adjust the value with the up/down buttons. After about 10 seconds without button presses, the setting is stored. The documented range is up to 999 s; the source does not state the adjustment step unambiguously.

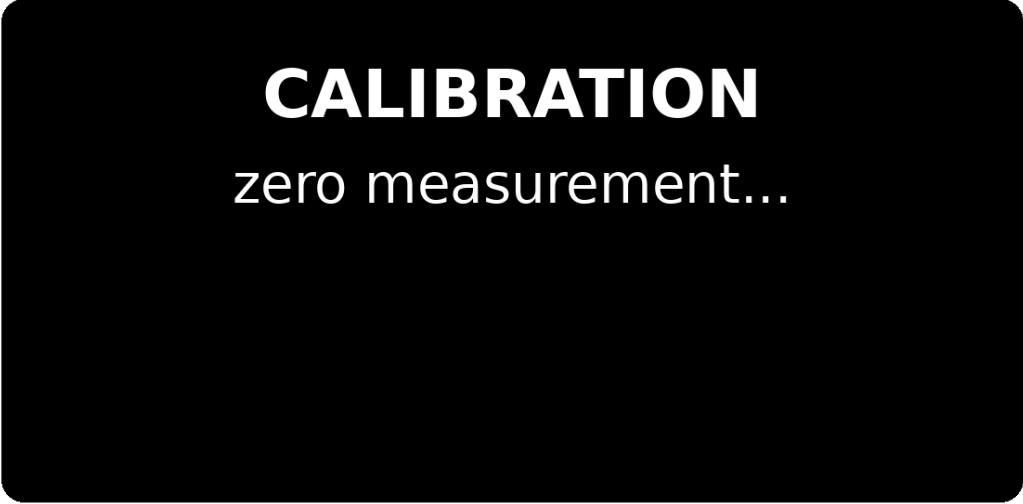
Parameter	Value
Range	0...999 s
Resolution	1 s
Save	~10 s

CURRENT SETTING menu



Hold the lower button for about 6 seconds to enter the detection-current setting. Adjust the value with the up/down buttons. After about 10 seconds of inactivity, the setting is stored. Range: 0.4...5.0 A. The source does not state the adjustment step unambiguously.

Parameter	Value
Range	0.4...5.0 A
Example	2.0 A
Save	~10 s



CALIBRATION
zero measurement...

Hold the lower button for about 6 seconds. The controller switches off the load, measures the zero-current offset and then restarts the unit. PZC-i is a detector, not a reference meter; a deviation of about 0.1 A does not affect its protective function.

Practical operation

- When the load current is above the threshold, PZC-i counts down the time.
- If the current disappears before timeout, the counter returns to the preset value.
- If the countdown reaches zero, the output is switched off and lockout is activated.
- Before unlocking, determine why the load operated for too long.
- A threshold set too high may prevent detection; a threshold set too low may detect unwanted current.

Before calling service

Symptom	Possible cause	What to do
No countdown	Current is below the detection threshold	Check actual current and the set threshold. Adjust the threshold within the permitted range if needed.
Device locked	Countdown reached zero	Remove the cause of excessive operating time, then use the UNLOCK menu.
Incorrect zero-current reading	Zero offset	Run CALIBRATION with no load.
Setting is not saved immediately	Controller waits for inactivity	After changing the value, do not press any buttons for about 10 s.
No response / blank display	No power or installation fault	Disconnect the supply and check the installation. Do not open the device while energised.

pamel@pamel.pl • serwer.pamel.pl

Product Centre and revision history

Current manuals, FAQ, PAMEL EDU materials and product support are available in the PAMEL Centre. The main customer address is serwer.pamel.pl.



<https://serwer.pamel.pl/>

Historia zmian / Revision

Manual version 24.08.2026 - layout rebuilt to current PAMEL rules, with full screen descriptions, troubleshooting and Product Centre information.

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WARRANTY TERMS

PAMEL, 42-300 Myszków, ul. Urodzajna 5E

1. PAMEL provides a warranty for the controller (excluding optional equipment) in the Republic of Poland: 24 months basic warranty, 6 months manufacturer extended warranty, and an option to purchase an extension to 40 or 50 months. The total warranty period may not exceed 80 months from the device production date. A purchased extension is confirmed by a holographic sticker on the warranty card.
2. Optional equipment and consumable items, including probes, heaters, antennas, sensors, holders, cables and batteries, are not covered by the device extended warranty; statutory rules and the applicable sales terms apply to them.
3. During the warranty period the manufacturer undertakes to remove physical defects free of charge. If at least four repairs have been carried out under the basic warranty and the device remains defective, the Buyer may request replacement with a unit of equivalent parameters or reimbursement. The warranty period is extended by the repair time.
4. Claims should be reported by e-mail to pamel@pamel.pl or by telephone. The manufacturer first attempts to solve the problem remotely and indicates further claim steps. At the manufacturer's request, the Buyer shall complete a claim report.
5. The warranty covers only defects caused by reasons inherent in the device. It does not cover damage caused by, among other things, incorrect installation, use or maintenance, improper storage, incorrect consumables, unauthorised repairs or modifications, mechanical damage, flooding, condensation, contamination, atmospheric events, accidental events or exceeding rated parameters.
6. The warranty does not cover claims concerning technical parameters when those parameters comply with the manufacturer's data.
7. To retain warranty rights, the device must be delivered complete, in protective packaging, with documentation, cables and additional components, with seals and identification markings intact, and with the original warranty card signed by both parties and bearing the production-date sticker.
8. The warranty does not cover services and materials connected with normal operation, such as installation, programming, cleaning, maintenance, replacement of fuses, lamps or wear parts. Such services are chargeable.

WARRANTY TERMS

9. The service centre may refuse a warranty repair if documentation data do not match the actual device, if documents contain unauthorised corrections, or if identification marks have been removed.
10. Warranty repairs are carried out within up to 21 days from delivery of the device to the service centre. If parts must be sourced from abroad, this period may be extended and the Buyer will be informed by e-mail.
11. The device must be installed in accordance with standards and the operating instructions; where required by law, installation must be carried out by a person with the appropriate qualifications.
12. This document defines the rights and obligations of the parties. Equipment not collected from the service centre within 3 months after completion of repair becomes the property of the service centre. Parts replaced during repair remain the property of the manufacturer.
13. The manufacturer is not responsible for loss of user data stored in the device. After repair, the device may be returned with factory settings.
14. A signature on the warranty card confirms that the warranty terms have been read and accepted. A card without a signature and without the original production-date sticker is invalid.
15. Maintenance, cleaning, replacement of lamps, fuses, consumables and repairs resulting from normal wear are not counted as warranty repairs.

DATA / DATE	SPRZEDAWCA / SELLER	KLIENT / CUSTOMER