



42-300 Myszków, ul. Urodzajna 5E

UNIVERSAL REGULATOR
POWER AND TEMPERATURE

SERIA PRD2U



Zeskanuj!



PRD2U+



PRD2UF

THE PAMEL COMPANY MANUFACTURES ONLY
CONTROLLERS,
WE DO NOT SELL KEG SETS

PLEASE READ THE MANUAL

DON'T YOU KNOW? CALL! WE DON'T BITE

453-343-360 (OFFICE 9-14 weekdays)

453-343-360 (Technical Support 16-19 Monday-Saturday)

www.pamel.pl pamel@pamel.pl



https://www.youtube.com/@PAMEL_STEROWNIKI/

Table of contents

DESTINY	4
PRINCIPLE	5
SETTINGS MENU	7
FIRST LAUNCH.....	9
POWER FACTOR CALIBRATION AND ADJUSTMENT	10
TECHNICAL PARAMETERS	11
CONNECTION DIAGRAM	12
BEFORE YOU CALL.....	13
ADDITIONAL OPTIONS	17
Remote alarm module.....	17
Cords.....	17
Device configurations due to cable (connector) outlets.....	17
WARRANTY CONDITIONS.....	23

A warranty card without the Buyer's signature and the original sticker with the date of production on the bottom of the controller will be considered invalid.









Before connecting and using the appliance, please read this user manual carefully.

If you have any problems understanding its contents, please contact the seller of the device. Self-assembly and commissioning of the device is possible provided that the installer has basic knowledge. However, it is recommended that the device be installed by qualified personnel.

The manufacturer is not responsible for any damage that may result from improper installation or operation of the device. Making repairs and modifications yourself will result in the loss of the warranty.

The manufacturer reserves the right to change the appearance, features, functions and technical parameters of the device in order to improve the quality of the product.

The photos, drawings, and text used in this manual are the property of PAMEL.

	<p>Do not disassemble or introduce Modification.</p> <ul style="list-style-type: none"> • Doing so may cause a malfunction • Contact if necessary authorized service center <p>We don't bite. It will be cheaper than repairing or modifying it yourself</p>
	<p>If the device will not be used for a long period of time, disconnect the power supply. If you want to carry out electrical work, e.g. changing wires, disconnect the power supply.</p> <p>It is forbidden to leave the appliance unattended while it is running.</p>
	<p>Avoid running the power cable through the places they pass through people.</p> <ul style="list-style-type: none"> • Someone can get caught on the cable and drop the device, causing damage to it and injuring the staff.
	<p>Do not touch the appliance with wet Hands.</p> <ul style="list-style-type: none"> • Possibility of electric shock
	<p>Do not use the appliance where it may be exposed to liquids.</p> <ul style="list-style-type: none"> • Short circuit or shock may occur electric current.
	<p>Do not place the appliance in places firmly Dusty.</p> <ul style="list-style-type: none"> • There is a risk of poor cooling of the device and the thermals. <p>Nobody likes dirt, especially fans.</p>

PRD2 SERIES UNIVERSAL POWER AND TEMPERATURE CONTROLLER

DESTINY

PRD2U is used to adjust the power of heating elements. Depending on the version, the maximum adjustable power is 5.5kW (PRD2U+) 3x5.5kW (PRD2UF+)

The device is not used to adjust inductive and light circuits. The user can buy probes at any time, increasing the capabilities of the device.

In the event of a change in the ambient temperature of the controller, the set or flooding of the tank with fluid, it is necessary to wait to eliminate the phenomenon of condensation causing damage to the power amplifier by a short circuit caused by condensation, e.g. on the heater.

The maximum output power for the controller is assumed for 230V. In the event of increased voltage in the grid (e.g. power transformer or photovoltaics), the maximum load should be avoided as the load power can increase by 30%.

In winter, many damages are caused by condensation, in summer by an increase in voltage in the network.

Attention should be paid to the arrangement of the cables. The power cords for the controller and heater must not be coiled into small loops. This creates a coil that can damage the controller or melt the wires.

PRINCIPLE

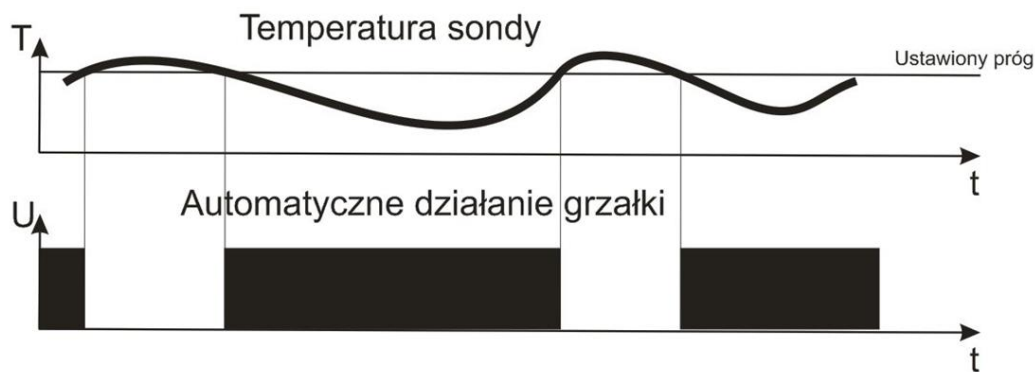
The device without probes behaves like a power regulator, without temperature readings.

You can smoothly adjust the power supplied to the heaters, so you can also adjust the temperature. It has a very high power regulation resolution of 0.25%

After connecting at least one probe In the MANUAL mode, the user can use two buttons to adjust the power supplied to the circuit and the temperature to which the system is to aspire or the maximum disconnecting heater control. The current power and temperature setpoint is displayed on the LCD display.

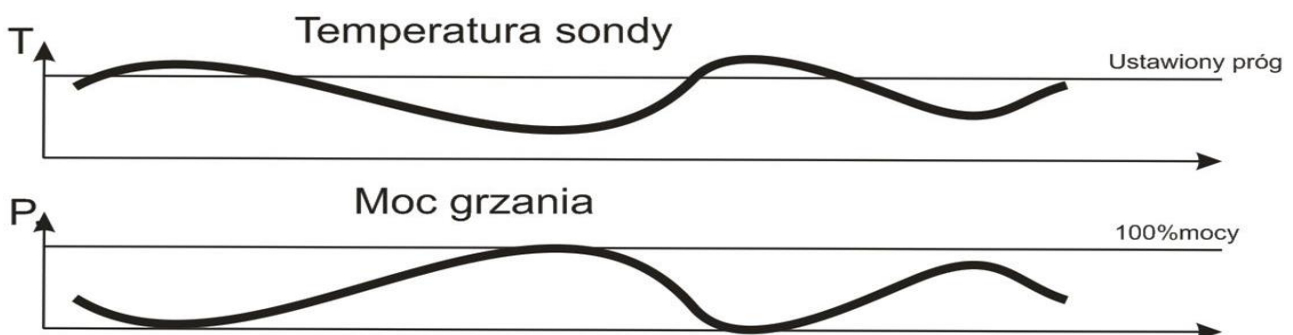
In the event of a power failure, the system remembers the set power and temperature.

The settings are adjusted by touching the "+" "-" Switching the power/temperature/temperature screens of the alarm "Ta" is done briefly by touching the middle field during the operation of the



device.

In AUTO P mode (recommended), the user can adjust the power supplied to the circuit and the temperature to which the system is to aim or the maximum disconnecting heater control. The power is selected automatically depending on the temperature difference: current and expected. By adjusting the parameter, the WSP can adjust the power factor for the temperature difference. When underheating



occurs, the coefficient should be increased.

When overheating occurs, reduce it.

Where the power is regulated according to the formula $P[\%]=WSP*(T_{set}-T_{current})/4$.

In AUTO PID mode, the user can adjust the power supplied to the circuit and the temperature to which the system is to aspire or the maximum disconnecting heater control. The power is selected automatically according to the PID algorithm.

A second probe can be connected to the device. The second probe, in addition to measuring the second

temperature, allows the device to be terminated. This is particularly useful, for example, when:

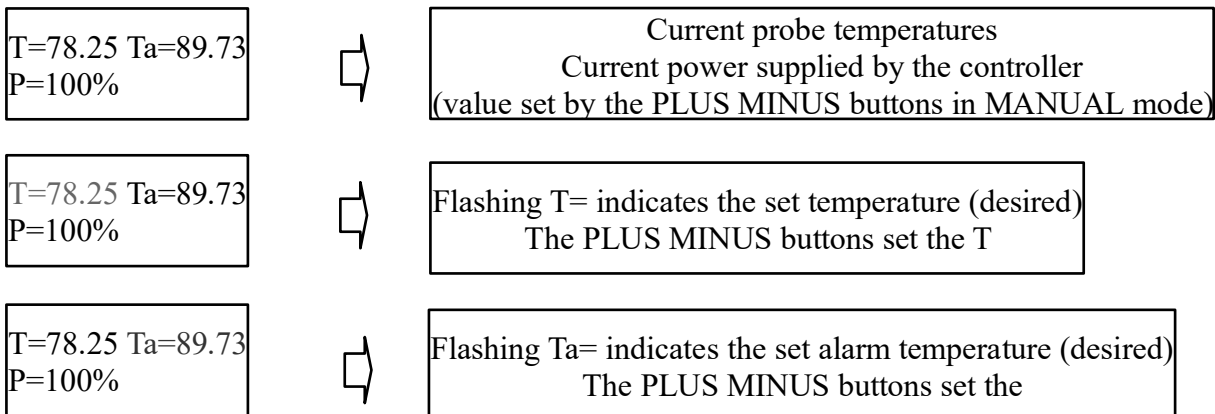
- during smoking, the second probe is placed in the meat and the process is to end when the temperature is reached, e.g. "Ta=50" degrees
- during distillation, the second probe is placed in the keg and the process is to end when the temperature in the keg exceeds a certain value, e.g. "Ta=90" degrees

To resume operation, touch the middle button to turn off the alarm.
 The device reacts only after 30 seconds of exceeding the "Ta" temperature, which gives time to change this temperature.

For better stability, the user can choose the minimum power Pmin, which is added to the calculated PID power. This will cause that when the desired temperature is reached, the heating will remain at e.g. 5% and will not interrupt the heating.

In automatic mode, it is not possible to change the power manually.

A short press of the middle button jumps to the next temperature settings.



To enter the advanced settings menu, hold down the middle button for at least 5 seconds.

SETTINGS MENU

To enter the settings menu, hold down the middle button for a long time. Short changes the preview windows.

Then the minimum power P_{min} is adjusted

Minimum power means the power that the controller provides when the expected temperature is reached.

In some cases, a complete shutdown of power can cause destabilization. Minimum power can be compared to the idle speed of a car engine. On average, it takes a value of about 10-20%

Pmin=17.00%

Then the maximum power P_{max} is adjusted

It is applicable in the case of installations with smaller fuses than those resulting from the power of the heaters.

In this way, we can artificially limit the maximum consumption of heaters, e.g. from 5 to 4kW

No need, leave the value 100%

Pmax=100.00%

Another parameter is the MANUAL/PID control mode

It means proper manual and automatic temperature control.

UST MODE
AUTO P (RECOMMENDED)

UST MODE
MANUAL

UST MODE
AUTO PID

The next parameter is whether the controller after switching on should set the last power stored before turning off, or start with power 0. This is used in manual mode when, for example, someone is working at a constant power of e.g. 30%

REMEMBER POWER
YES

REMEMBER POWER
NO

You can then swap the order of the probes. Probes are detected regardless of the socket. The ordering

depends on the serial numbers of the sensors. They can be changed by software by changing the parameter of the order of probes or physically by manually placing them in another measuring point (not a socket)

POLL WHEEL
0

The WSP power factor is then adjusted (in AUTO P mode)

The coefficient means how strongly the controller should react to temperature changes. Too little causes underheating, too much overheating.

The higher the capacity-to-power ratio, the higher the ratio. Don't overdo it. WSP=20 is enough. Larger values are for specific conditions. It is best to set 12

WSP=12.00

Then the calibration factor B is adjusted.

$T_{\text{displayed}} = B * T_{\text{read from sensor}} + A$

Calib B=1.28

Then the calibration factor A is adjusted.

$T_{\text{displayed}} = B * T_{\text{read from sensor}} + A$

Calib A=0.00

FIRST LAUNCH

REMARK!

We suggest that the first start-up is carried out on water or an empty chamber.

Once the probes and power outputs are properly functioning, commissioning can be carried out on the load.

1. Connect the device according to the diagram. Power supply to terminals L and N. Heater to N and O.

2. Connect probes (if any)

3. Turn on the power.

4. If two probes are connected, it is necessary to recognize which probe is used to regulate the power (column, chamber) and which is used as an alarm (KEG, cold cuts). It is best to do this by heating one of the probes (e.g. with the warmth of your hands), observing which temperature changes.

T power control temperature (column, chamber)

This alarm temperature (tank, sausage)

The probes can be swapped physically (sensors, not sockets) or by hardware by changing the KOL PROBE parameter

5. Attach the probes to the apparatus (smokehouse, still).

6. Touch the middle button (longer touch). In the service menu, set the operating mode (MANUAL, AUTO P, AUTO PID) and other parameters according to the description of the MENU chapter

7. Exit the menu.

8. Set the temperature T to which the system should aim and the alarm temperature Ta.

Below are examples of settings.

Distillation	Smoking
T=79degrees	T=80degrees
Ta=97degrees	Ta=50degrees

9. Start the process.

10. During the first process, observe the temperatures.

In the case of underheating, the Pmin coefficient should be increased.

In the event of overheating, the parameters should be reduced.

The temperature difference mainly depends, for example, on the height and location of the analog and digital sensors.

What is the easiest way to find the minimum power for automatic mode?

Set the manual mode to MANUAL. "T" and "Ta" temperatures set to 110 degrees. We carry out the process in MANUAL mode. At the beginning, we set the power to 100%. Then, as we approach the expected temperature, we reduce the current power. After obtaining the expected temperature and system stability, we read the current power, e.g. 32%.

We prescribe the current power as the minimum power a few percent lower, e.g. 26%. We can then switch to Automaton mode P

What is the easiest way to determine the Ta?

We carry out the process with the setting of Ta=110. When we want to finish the process (distillation or smoking), we read the Ta temperature and enter it as the setpoint. From now on, when it reaches the same level, the driver will terminate the process.

NOTE: In distillation, in the case of "water" tests, the above parameters are incorrect because the evaporation temperature of alcohol is about 78.4; not 100 degrees. The water can be boiled, but after the END sign is displayed, the water tests must be completed and the process should be carried out on mash.

POWER FACTOR CALIBRATION AND ADJUSTMENT

To ensure process accuracy, the user can calibrate the probes themselves.

Hold the middle button for a longer period of time after powering on, the user calibrates and adjusts the power factor.

By tapping the "+" "-" fields the WSP power factor is set. Confirm the setting by pressing the middle "O" button.

For the probe, the linearity (straight inclination) coefficient "B" is set with the "+", "-" buttons, which causes the indication $T_{\text{displayed}} = B * T_{\text{read from the sensor}} + A$. The setting is confirmed with the middle "O" button.

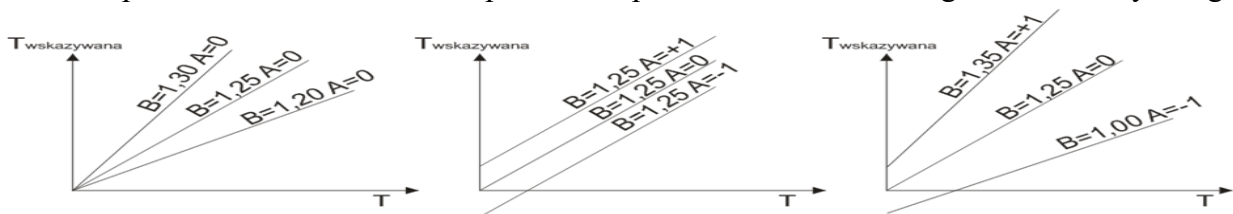
The temperature calibration window with the A-index appears.

Then, with the buttons "+", "-", the offset "A" is set, which causes the indication $T_{\text{displayed}} = B * T_{\text{read from the sensor}} + A$. Confirm the setting with the middle "O" button.

It is recommended to leave the default settings $B=1.25$ and $A=0$

"B" is adjusted when the difference between the temperature and the expected temperature increases or decreases as the temperature increases. For example, at room temperature, the temperature is lowered by 0.1 degrees, and at 80 degrees by 0.3 degrees.

"A" is adjusted when the difference between the temperature and the expected temperature is constant as the temperature increases. For example, the temperature in the entire range is lowered by 2 degrees.



SYMPTOM	ACTIVITY
The thermostat lowers the indicated temperature by a constant value, e.g. 2 degrees	Set the A correction value from "0" to "-2"
The thermostat overestimates the indicated temperature by a constant value, e.g. 2 degrees	Set the adjustment value A from "0" to "2"
The thermostat lowers the indicated temperature, e.g. by 10 percent	Increase the value of correction B, e.g. by "01", e.g. from "1.4" to "1.5"
The thermostat overestimates the indicated temperature, e.g. by 10 percent	Decrease the value of correction B, e.g. by "01", e.g. from "1.4" to "1.3"
A combination of the above	A combination of the above

The indicated temperature takes the value of $T_{\text{displayed}} = B * T_{\text{read from the sensor}} + A$ and depends on the corrections set.

Default : $A=0$ $B=1.25$ (in some versions the parameters may be swapped).

The device is delivered pre-calibrated. If your thermometer shows 19 degrees, it does not mean that this is the temperature in the entire room. **The temperature difference mainly depends on the height and location of the sensor**, e.g. a different temperature is in the room closer to the radiator, near the floor, ceiling, wooden or metal element or by the window.

The same temperature behavior is in the device (still, smokehouse). The temperature may vary depending on the installation location, mounting method, thermal conductivity, etc. That is why we have left you the option of manually calibrating the probes.

No probe calibration is necessary.

REMARK!!! The temperature of boiling water in a kettle is almost never 100.00 degrees. It should not be used as a calibration standard.

TECHNICAL PARAMETERS

Supply voltage: 230V -20% +10%, 50Hz

Operating temperature: -10 to +60°C

Load capacity: 5.5kW PRD2U+ (3x5.5kW PRD2UF+)

Maximum power consumption: 1.5W

Power regulation resolution: 0.25%

Temp setting range : 10 to +130°C

Temperature Measurement Resolution: 0.05degree

Dimensions: length – 150mm, width ,.-155mm, height – 60mm (PRD2U+)

Housing: Self-extinguishing plastic

Ingress protection: IP20

Warranty: up to 60 months from the date of sale

Compliance with standards:

PN- EN 60529

Lead-free (Pb-Free)

The basic version of the product is delivered without probes. This is due to its wide functionality.

Probes are options. The device has the ability to connect up to two probes.

The maximum power is indicated on the warranty seal.

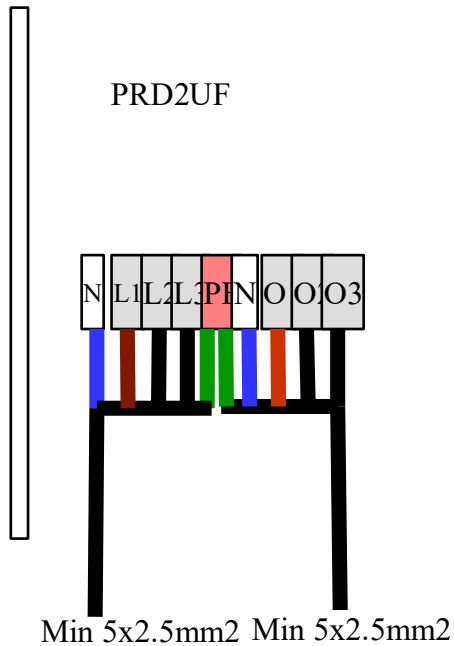
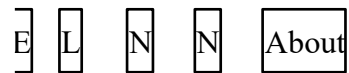
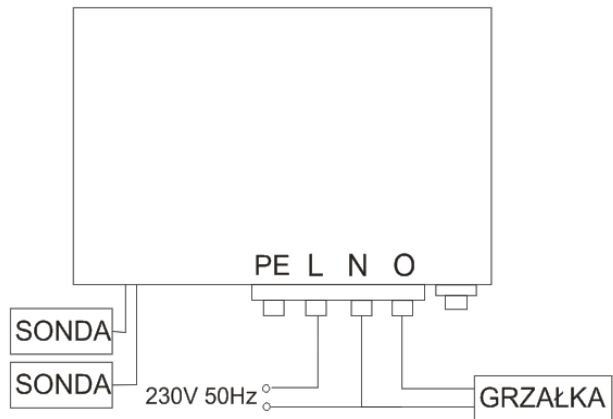
The appliance can be sold with power cords routed. This is an additional accessory for the regulator.

CONNECTION DIAGRAM

REMARK!!!!

'PE' STANDS FOR
PROTECTIVE CONDUCTOR
CONNECT
NOT REQUIRED
FOR PROPER WORK

ENTRANCE MARKING S
POWER SUPPLY 230V "L" and "N"
THEY ARE SYMBOLIC
THE DEVICE WORKS
REGARDLESS OF



BEFORE YOU CALL

Symptom	Tip
The tank does not reach the correct temperature	In PID mode, increase the WSP factor. Replace the heater with a higher wattage heater. Increase minimum power Pmin
The heater does not turn off	Check that the "O" and "L" terminals have not been replaced. Check if the heater is working. After consulting the PAMEL service, check the fuse on the controller motherboard. The measured temperature is higher than the set temperature.
The light is dimming	Dim of the light is caused by overloading the electrical system. Each 1kW of heater power is an additional current of up to 5A, which can cause voltage drops with an old installation or thin wires. The fuses in the apartment should be checked.
The device displays a temp of 0 degrees	The probe must be connected before the power is turned on. Turn off the device, wait a few seconds, then turn on the device. Check if the following message appears during start-up: SENSORS 1 or SENSORS 2.
In AUTO mode, the power is 0% all the time	Set WSP power factor The measured temperature is higher than the set temperature.
The driver is warm	The device is working properly. Most amplifiers, TVs, mobile phone chargers are warm. The device has a thermal protection. If the temperature is too high, the controller will automatically turn off the control.
The controller is very hot, no control.	The device has a maximum power limit. Electric heaters are manufactured with different tolerances, e.g. 10 or even 20%. This means that, for example, heaters with a total power of 3.5KW can load the device with a power of almost 4kW (at 10% tolerance). If the heaters are not tested to consume a maximum of 3.5kW, a certain reserve of power should be used. Some heaters are manufactured with a tolerance of up to 20%.
When measuring with the meter, strange values come out.	The output needs a load of at least 50W to work properly, otherwise the triac is incorrectly triggered. It should also be remembered that this is a power regulator, not a voltage regulator. I.e. 50% power does not mean 115V output voltage.
The probe does not work or "Probe error"	Check the number of probes detected during CZUJ startup:number of probes Connect the probes one at a time and verify that both are detected. Remember to change the KOL PROBE to 0
No temperature-related settings (only displays power P)	The probe must be connected before the power is turned on. Turn off the device, wait a few seconds, then turn on the device. Check if the following message appears during start-up: SENSORS 1 or SENSORS 2.

<p>Detects one probe but T=0</p>	<p>Reorder the KOL probes. PROBE AT 0</p>
<p>Unable to set power to 0 or 100%</p>	<p>You have probably set the wrong values of minimum and maximum power, e.g. the same values. Go to settings.</p>
<p>The display shows the word END and the controller stops heating.</p>	<p>The actual temperature has risen above the set temperature. The controller has completed the process. The set temperature should be increased Ta. Before this step, think about whether you are doing it consciously. Especially when trying "on the water". Page no 11</p>
<p>There is voltage at the output of the controller (power or valve) all the time.</p> <p>Does not turn off the heater (heating)</p>	<p>Unfortunately, this is due to inattention when plugging in or due to liquid spillage.</p> <p>The outputs in the controllers are at least twice as large. That is, at the output of the "pluses" there are BTA41 triacs, which are designed for 40 AMPERS.</p> <p>In addition, the outputs are galvanically isolated, and the triac leg is ONLY in contact with your heater. So the output circuit is electrically similar to a contactor.</p> <p>If someone does not believe it, he can go to a trusted electronics service and ask about the same situation with connecting speakers to the amplifier, 99.99999% is caused by the wrong treatment of the output, not the fault of the device.</p> <p>Repairs of such damage are paid (flat fee of PLN 20 + cost of components)</p>
<p>The controller does not keep the set temperature</p>	<p>The controller is not a complicated device and cannot suddenly become out of adjustment.</p> <p>Temperature stability is influenced by:</p> <ul style="list-style-type: none"> - supply voltage (in winter it drops to 200V (heating), in summer it increases to 260 (photovoltaics))

-outdoor temperature (summer, winter)

– replacement of materials in the column (scourers), dirt on the column, or the way of arranging springs or scourers.

The only variables are the environment and the mechanics of the kolumna. For this reason, please do not send the controller for a complaint. Parameters such as minimum power should be adjusted by the user within a few years, adapting to changes. If the controller is operational, i.e. regulates the power, we are not able to set it in the workshop to an unknown column, and each one is different.

www.pamel.pl/faq

Any wire connections, if not properly made and carefully maintained, can cause melting due to excessive heating.

The cause of this phenomenon is loosening of metallic contacts due to damage to the terminals or their corrosion, or insufficient tightening of the terminals.

Similar effects can also be caused by sparks in the multi-core cable in which the vein has been broken. Such a place heats up quite strongly and the resulting sparks can melt the insulation.

With 25A current, there is no joke, so please pay attention to the proper tightening of the terminals.



ADDITIONAL OPTIONS

Remote alarm module.

The controller can be equipped with a remote alarm module.

It consists of two parts. The first one is permanently installed in the controller.

The second is the receiver, which audibly and optically signals the occurrence of an alarm in the controller.



The sound signal is emitted directly from the device as well as from the receiver adapter, which can be placed up to 100 meters away in an open space, which is enough power to receive the signal between the ceilings of the building.

This means that the operator does not have to be constantly in the vicinity of the controller and is informed of any alarms reported by the controller.

Cords.

The controller is equipped with a power strip as standard. The power strip has two advantages. You can screw a cable of any length to it. Secondly, twisted connections are always better than plugs. To use the regulator, just cut the wire from the heater and connect the controller.



We can equip the controller with factory cables with a length of about 90 cm.

The wires are terminated with a standard 230V plug and socket or a three-phase one in the three-phase version.

Device configurations due to cable (connector) outlets.

INVERTED STANDARD





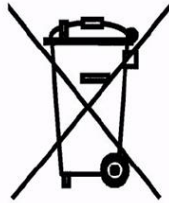
Any wire connections, if not properly made and carefully maintained, can cause melting due to excessive heating.

The cause of this phenomenon is loosening of metallic contacts due to damage to the terminals or their corrosion, or insufficient tightening of the terminals. Similar effects can also be caused by sparks in the multi-core cable in which the vein has been broken. Such a place heats up quite strongly and the resulting sparks can melt the insulation.

Ideally, the ends of the wires should be whitened or in ferrules.

With 25A current, no joke, so please pay attention to the good tightening of the terminals.

Alternatively, you should buy a controller with a set of wires.



As professionals, we operate legally, which is why our products are registered in the Chief Inspectorate of Environmental Protection under number BDO000073814. **When you buy equipment from us, you do not expose yourself to control problems.**

After using the purchased items, you have the right to take them to a disposal point in your own city or send them to us.

When reselling unregistered equipment, it is your responsibility to place it on the market. There is a penalty of PLN 5000 and more. Calculate whether it is worth the risk or whether it is better to buy a registered, legal device from us.



All our products have a certificate or declaration of conformity. All equipment is subject to high standards

and equipment that does not meet these conditions must not be introduced. Devices that meet the standards are easy to distinguish by the CE mark.

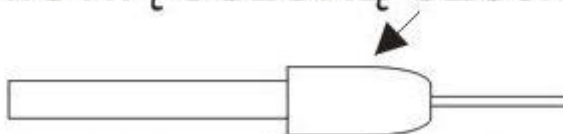
In Polish, it is not allowed to sell devices without meeting these two conditions. Otherwise, it means that there is a reason for circumventing the norms, and the company is operating illegally.

UWAGA !!!!

Prosimy o używanie
jak przyrządu pomiarowego



NIE CIĄGNAĆ ZA PRZEWÓD
WYCIĄGAĆ WYŁĄCZNIE
ZA GUMOWĄ OSŁONĘ CZUJNIKA



USZKODZENIA MECHANICZNE NIE PODLEGAJĄ REKLAMACJI

The probes are additional accessories and are subject to natural wear and tear. Therefore, a standard warranty (not 5 years) applies to these elements. In addition, it should be remembered that threaded probes are a whole. Do not tear the sensors out of the metal covers. This results in the loss of the warranty.

From 09.2021, all probes have a warranty seal specifying the date of manufacture. Destruction of the seal is considered to be the blurring of the marks identifying the product

**DISASSEMBLE THE PROBES ONLY WHEN THEY ARE COLD.
NOT TO PULL THEM OUT "HOT"**



https://www.youtube.com/@PAMEL_STEROWNIKI/

Dear User,

First of all, we would like to thank you for choosing a PAMEL product. We are sure that you will be satisfied with this choice. We design our devices to meet your requirements and guarantee future trouble-free use.

Before using the equipment, carefully read the installation procedures and operating conditions described in the Owner's Manual.

If you have any doubts, please contact us.

453-343-360 (OFFICE 9-14 weekdays)

453-343-360 (Technical Support 16-19 Monday-Saturday)

WARRANTY CONDITIONS.

1. PAMEL provides a warranty for the controller (without additional equipment) in the Republic of Poland for a maximum period of 60 months (24 months for the basic and 6 months for the manufacturer's extended warranty) + possibly purchased warranty extensions up to 40 or 50 months; counting from the date of commencement of the warranty period, but no longer than 80 months from the date of production placed on the Product for which the warranty card is issued, provided that the equipment is used in accordance with the intended use and technical and operational conditions described in the User Manual.

Additional equipment (e.g. probes, heaters, etc.) is covered by the standard warranty provided in the KC.

The purchased extended warranty is marked with a holographic sticker on the warranty card.

2. The warranty does not cover movable elements of the product's equipment (accessories) intended for self-assembly by the user, e.g. antennas, sensors, handles, heaters, wires, power batteries.

3. The guarantor undertakes to remove physical defects free of charge, if these defects become apparent

during the warranty period or to deliver the item free from defects, if within the period

At least 4 repairs have been made to the item and the item is still defective.

In the event of replacement, the product will be replaced with a new one, the same model or with similar, not worse technical parameters. If such an exchange is impossible, the Buyer will receive a refund.

3. The period of the basic warranty, provided for in point 1, is extended by the duration of the repair.

4. The duration of the repair is counted from the date of delivery of the item to the service point until the date of handing over the item to the carrier for delivery to the Buyer.

5. In the event of a defect, the Buyer reports this fact to the Guarantor by post

Internet (pamel@pamel.pl) or by phone, then the Guarantor first tries to solve the problem remotely and indicates the further way of the complaint procedure.

6. At the Guarantor's request, the Buyer is obliged to diligently fill in the Complaint Notification Report made available by the Guarantor.

7. The guarantor is responsible only for defects arising from reasons inherent in the subject of sale.

8. The warranty does not cover damage to equipment caused by improper or

use inconsistent with the installation and assembly, in particular, storage, maintenance, misuse, use of improper consumables,

unauthorized repairs or improvements, mechanical damage, fault of the

user, due to external reasons such as pollution, flooding, condensation of water vapour, atmospheric phenomena, random events. Damage to electronic components resulting from exceeding the rating parameters is also not covered by the warranty.

9. The warranty does not cover claims for the technical parameters of the devices, as long as they are

in accordance with those specified by the manufacturer.

10. The condition for the Buyer to retain the rights under the warranty is the delivery of the equipment to the service point specified in point 5, in complete condition, in

packaging to reduce the risk of damage, with documentation, cables and all other elements issued in connection with the performance of the sales contract, without tampered seals or stickers and the original warranty card signed by both parties.

11. The warranty does not cover materials and operations that are part of normal operation, e.g. installation of equipment, programming, cleaning and maintenance, replacement of bulbs and fuses, function check. The above-mentioned services are paid.

12. In addition to the situations referred to in points 7-11, the service point may refuse to make a warranty repair also in the case of:

- finding inconsistencies between the data contained in the sales documentation and the data of the device
- corrections made to documents by unauthorized persons
- removal of identification marks (stickers on the bottom of the device)

13. Physical defects of the device revealed during the warranty period will be removed within 21 days, counted from the day following the date of delivery of the device to the point of delivery of the

Service. If you need to import spare parts from abroad

The guarantor reserves the right to extend the warranty period for the time necessary to repair, of which the Buyer will be informed each time by means of a Email.

14. The device should be installed in accordance with the required standards, technical requirements contained in the manual. If there is a legal requirement, the installation of the device must be carried out by a person with the appropriate authorization in this respect.

15. The rights and obligations of the parties in respect of the guarantee shall be governed solely by the Herein.

16. Equipment not collected from the service within 3 months from the completion of the repair is forfeited to the service.

17. In the event that the warranty repair requires the replacement of parts, the replaced element remains the property of the Guarantor.

18. The guarantor is not responsible for damage caused by the loss of user data stored in the device, we also inform you that the device will be returned in accordance with the production condition.

19. By signing, the buyer declares that he has read the warranty conditions and accepts them. A warranty card without the Buyer's signature and the original sticker with the date of production on the bottom of the controller will be considered invalid.

REMARK!

The number of repairs does not include, in particular: cleaning, maintenance, replacement bulbs, filaments or fuses, repairs resulting from wear and tear due to the e.g. wear of potentiometers, etc.

WARRANTY PERIOD START DATE	SELLER'S STAMP	CUSTOMER SIGNATURE

1.09.2025