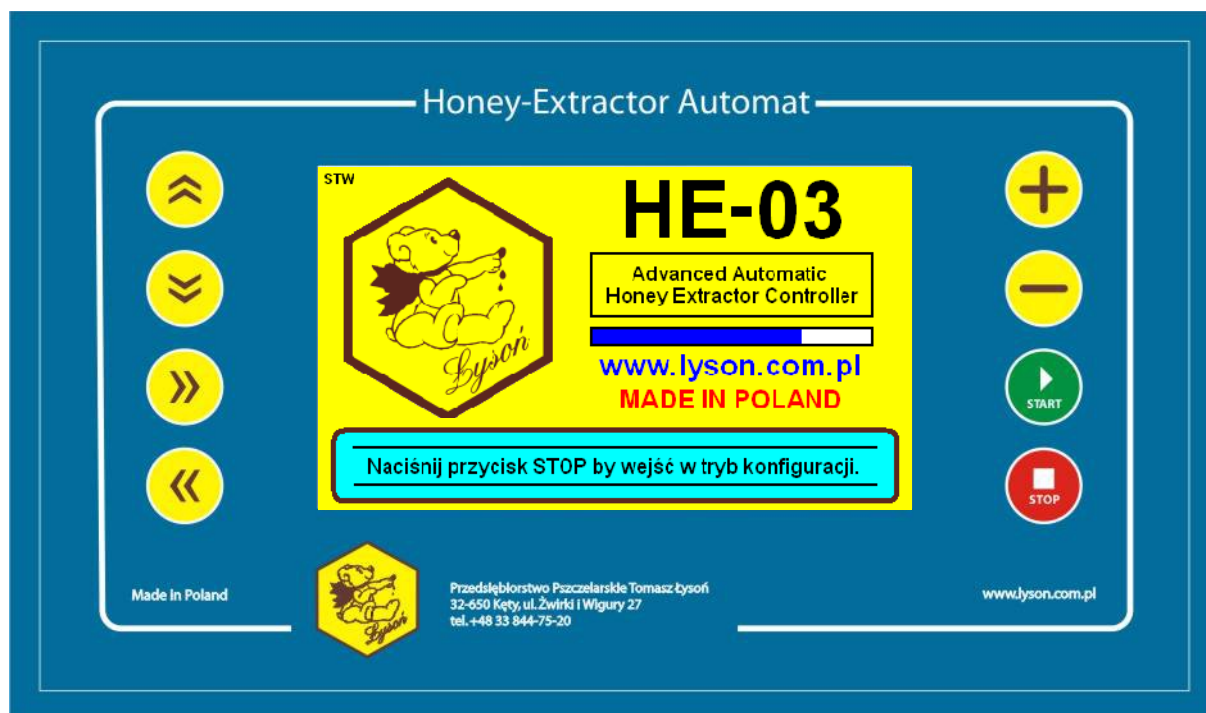


HE-03

Advanced Honey Extractor Controller



Premium Line

Radial and Cassette Extractors

INSTRUCTIONS MANUAL

Read the user manual before use and follow the instructions below. Producer cannot be held responsible for any damages caused by improper use.

- **Rules of use**

1. Honey extractor is designed to extract honey from honey frames.
2. Before using, honey extractor should be washed carefully with hot water and small amount of detergents (allowed for use in food industry) or by use of a pressure washer. Remember to protect electronic parts and bearings from water!!!



- **Electrical safety**

1. Electric installation needs to be equipped with residual current device and is designed to trip on a leakage current of 30 mA. Overcurrent protection needs to be checked periodically.
2. If the power cord is damaged and needs to be exchanged it has to be done through our distribution point or by authorised point of repair in order to avoid danger. The honey extractor cannot be used if the power cord is damaged.
3. Before turning the device on, make sure that the programmer is switched off. Switch should be set to '0'.
4. Make sure that the power supply is in line with the honey extractor power supply
5. Take extra care whilst plugging a power cord
Hands have to be dry. Place on a dry surface
6. The EMERGENCY STOP button should be switched off when starting. (the button needs to pop out when switched off) Pressing the EMERGENCY button results in the immediate stop of centrifugation.
7. Keep the honey extractor lid closed during centrifugation. Opening the lid whilst spinning is strictly forbidden.
8. Honey extractor must not be moved during the spinning process.
9. Protect the motor and controller against moisture (also during storage).
10. Do not pull power cord, keep the power cord away from heat sources, sharp edges and keep it in good condition.



- **HEALTH & SAFETY**

1. This device is not designed to be used by persons (including children) with limited physical, sensual or psychological abilities or by persons who do not have experience or

knowledge of the device unless it is done under supervision and according to the user manual passed by persons responsible for their safety. Keep away from children.

2. In case of device damage the repair needs to be carried out by the authorised point in order to avoid danger.
3. It is not allowed to carry out any maintenance works when the honey extractor is in use.
4. All casings need to be firmly attached to the device during work.
5. In case of any potential danger press the STOP button immediately. The honey extractor can be restarted once the danger has been eliminated.
6. For indoor use only! The device is not designed to be used outdoors.
7. Fan belt should remain loose. It must not be strained.
8. The device should not be switched on and be stored in the temperature below 0° C.
Honey extractor should not be switched on when the temperature is below 5° C. Before switching the honey extractor on, in case when it was moved from the place with lower temperature to the place with higher temperature, wait until the temperature has balanced.



Repairing the device whilst in operation is STRICTLY FORBIDDEN



Detaching the covers during use FORBIDDEN!

Work Place

Working area should be kept clean and tidy
The proper lighting should be provided.

- **Storage**

Once honey extracting has finished, wash the honey extractor and dry it thoroughly.

Before every season the technical check-up needs to be performed. If any fault found, contact the appropriate provider.

- **Honey Extractor Maintenance**



IMPORTANT!

Unplug the extractor from the power source prior to commencing any maintenance work.

After the honey extracting has finished, honey extractor should be washed carefully with hot water and small amount of detergents (allowed for use in food industry) or by use of a pressure washer. During the duration of washing pay special care not to wet the motor and the controller (they may be covered with a water-proof cloth during washing). Whilst washing, make sure not to wet the bearings which are located under the drum. To avoid wetting the bearings, cover the slot inside the drum where the axis of the basket is located. Once completed, rinse the honey extractor with clean water and dry it thoroughly.

UTILIZATION:

The device needs to be utilized in the point designed for that purpose. The consumer has the right to return the used equipment to the network of electrical distributors, at least free of charge and directly, if the device returned is of proper type and performs the same function as the newly purchased equipment.

HONEY EXTRACTOR USER'S MANUAL

• **General guidelines**

1. Place the honey extractor in the designated place.
2. Fix the honey extractor to the surface in order to avoid unnecessary movement.

• **Terms of use:**

1. Honey extractor is designed to extract honey from honey frames.
2. Before using, honey extractor should be washed carefully with hot water and small amount of detergents (allowed for use in food industry) or by use of a pressure washer. (see **Maintenance section**)

3. Frames arrangement:

Place the honey frames (prepared beforehand) in the basket of the honey extractor paying special attention to their correct arrangement. Honey extractor should be selected accordingly to the frame type:

- In cassette honey extractor pay special attention to correct frames arrangement which should fit into the cassette.
- In radial honey extractor - upper beams of frames should rest on the upper and lower basket rods; Failing that (too short or too long beams) may result in extractor or/and frame damage.

Frames in both types of honey extractors have to be arranged with the upper beam facing the drum as shown on the **Fig. 2**



Fig. 1 Correct frame arrangement in the radial basket

basket



radial honey extractors

basket



cassette honey extractors



Fig. 2 Correct frames arrangement in the cassette basket

Improper frame arrangement may cause damages not covered by warranty!

4. Before commencing work:

- make sure that frames are correctly arranged in the basket of the honey extractor to avoid damages (see point 5 – honey extractor user manual)
- check if the emergency stop button is not pressed
- insert the plug into the socket, followed by turning the knob on the control panel from position "0" to position "1". Then proceed to honey extractor powering according to the honey extractor controller user manual – **see Automatic Controller section.**

5. First phase of the spinning should be performed slowly, in order to avoid possible breaking of honeycombs. Special attention should be paid to so called "young honey frames".

6. Spinning basket should not be blocked by the honey accumulated in the drum. If that happens, stop the honey extractor in order to avoid its damage. Once honey has dripped down to a container, the spinning can be restarted.

7. Place the honey containers under the drain valves.

8. During the spinning the drain valves should be left open so that the extracted honey can flow freely.



Warning!!! Frames can only be rearranged when the basket has fully stopped!

AUTOMATIC CONTROLLER

1. Manual mode.

Manual mode is a mode, where engine rotates in one, previously chosen direction, the end-user can adjust the rotation speed.

To start the work in manual mode, press :

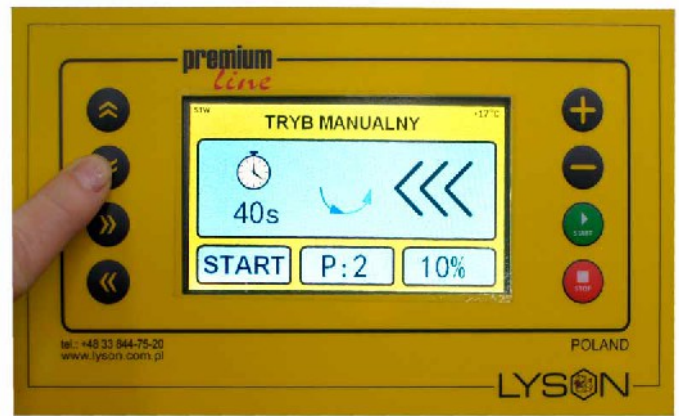
- „UP ARROW”
- „DOWN ARROW”
- „LEFT ARROW”
- „RIGHT ARROW”,

followed by activating it by pressing „START” button.

Extracting can be stopped at any time by pressing “STOP” button.

By default, the spinning time in manual mode is not defined i.e. the basket will be rotating as long as the **STOP** button is pressed. Such solution is the common standard. However, in some cases the timer feature can be helpful. Timer feature is a time-delay of switching the extracting off i.e. coming to a complete standstill once the set time has passed.

To activate timer, having chosen the one out of two manual programs and whilst the extractor is in motion, press „UP” or „RIGHT” arrow. Pressing the “UP” arrow once will result in increasing the time left to complete standstill by 60 seconds. Pressing the “RIGHT” arrow once will increase the set time by 15 seconds. Accordingly, “DOWN” and “LEFT” arrow decrease the set time. Maximum available range of settings is 900 seconds. When the timer function is in use, the “clock” symbol will be displayed on the left side, the remaining time will be displayed underneath.



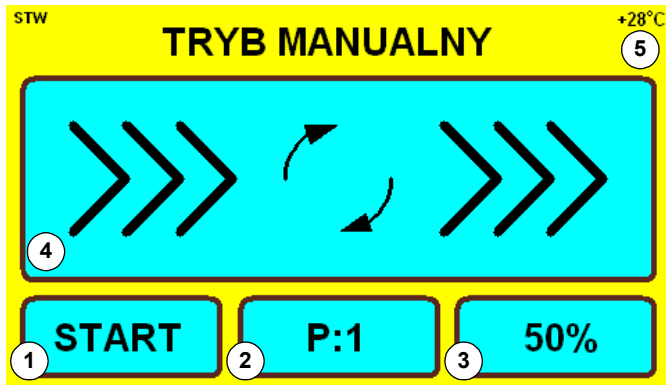
First press „START” then with „STRZAŁKA W GÓRĘ” or „STRZAŁKA W DÓŁ” Turn on timer..

PAUSE – is activated if the controller is in **START** mode and the **START** button is pressed. In manual mode **PAUSE** freezes the remaining time when the timer is in use. If the timer has not been activated, **PAUSE** does not affect the working mode. **PAUSE** is deactivated by pressing the “START” or „STOP” button”.

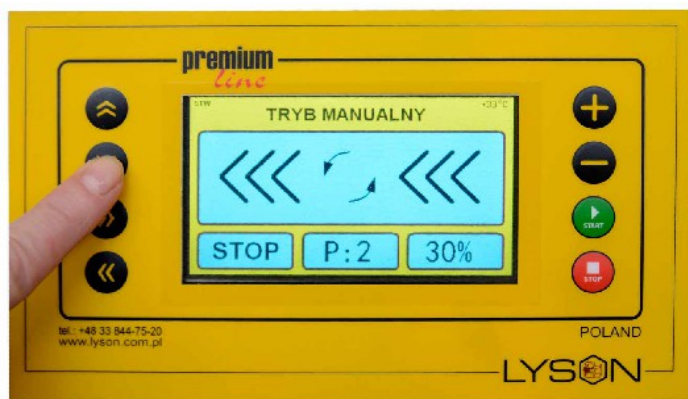
Once the open lid is detected or **EMERGENCY** button pressed, the manual work mode is stopped and appropriate message is displayed.

In case of detecting a serious fault in controller’s performance(controller’s error, software error, faulty inverter), the work in manual mode is stopped and the list of errors is displayed. After 30 seconds of inactivity, the controller displays screen saver mode. The screen saver shows various pictures of the manufacturer (LYSON). The manufacture has the option to turn the screen saver off (see: manufacturer – entering the code).

MANUAL MODE



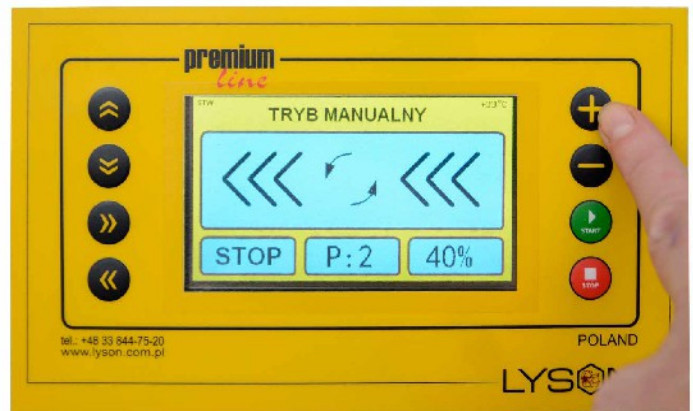
Field	Description
1	START / STOP indication – showing the controller's current mode
2	Program Indication – displaying current program.
3	Speed indication – percentage of maximum spinning velocity.
4	Direction of extracting.
5	Temperature indication – measured inside the controller.



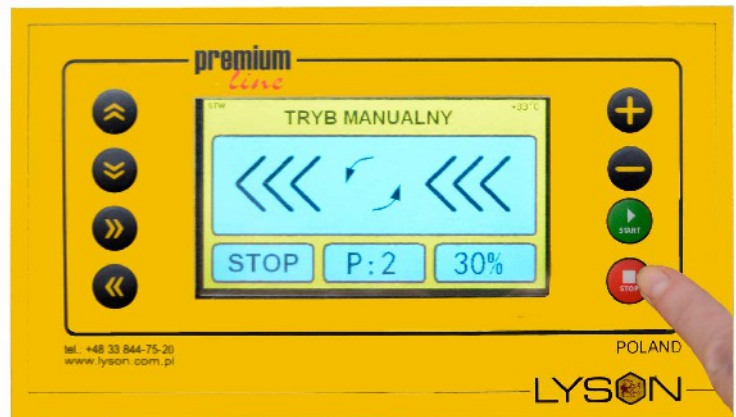
Fot.1 Press „UP” or „DOWN” to choose PROGRAM P:1 or P:2 (rotation direction) and then press „Start” as shown at Fot.2



Fot.2 Switching on the extractor.



Fot.3 „PLUS” or „MINUS” to change rotation speed



Fot.4 „STOP” button to stop rotation.

2. Automatic mode.

Automatic mode is a mode where the controller performs one out of eight programmed spinning sequences. Each sequence consists of 7 steps. Each step is defined by the time of switching on, defined speed and direction of spinning. Last, 7th step is defined by a single parameter - time of switching the cycle off.

To enter the automatic mode, choose the appropriate program by pressing:

- „UP ARROW”
- „DOWN ARROW”
- „LEFT ARROW”
- „RIGHT ARROW”

and confirm it by pressing the „START” button. To stop the process, press the „STOP” button.

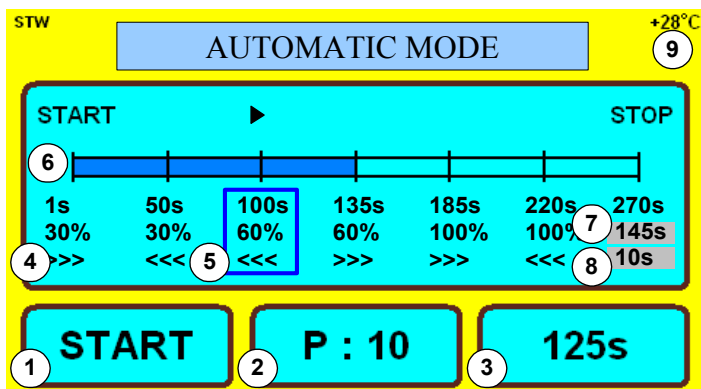
The duration of each automatic cycle can be temporarily lengthen or shorten. Having chosen one out of eight automatic modes and when the **STOP** button is pressed, press the „PLUS” or „MINUS” button. Pressing the „PLUS” button once will lengthen the duration of each steps by 10%. Analogically, pressing „MINUS” button will shorten the duration of each cycle by 10%. Such modification is strictly temporary, once the system has been restarted or changed, the parameters will come back to the programmed values. The modification of cycles steps' duration is calculated and rounded up to one second. It is only possible as long as time limits for each steps are not exceeded.

“PAUSE” function– is activated if the controller is in **START** mode and the **START** button is pressed. In automatic mode **PAUSE** freezes the remaining time. **PAUSE** is deactivated by pressing the “**START**” or „**STOP**” button”. ponownym naciśnięciu przycisku **START** lub zatrzymaniu pracy przyciskiem **STOP**.

Once the open lid is detected or **EMERGENCY** button pressed, the automatic work mode is stopped and appropriate message is displayed.

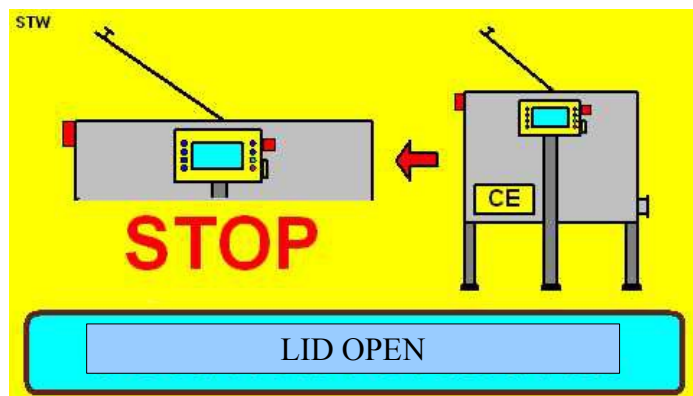
In case of detecting a serious fault in controller’s performance (controller’s error, software error, faulty inverter), the work in automatic mode is stopped and the list of errors is displayed.

After 30 seconds of inactivity, the controller displays screen saver mode. The screen saver shows various pictures of the manufacturer (LYSON). The manufacturer has the option to turn the screen saver off (see: manufacturer – entering the code).



Pole	Funkcja
1	START / STOP indication– showing current controller’s mode. START – extracting in progress, STOP extractor’s drive stopped, no cycle is being performed.
2	Current program displayed.
3	Time indication: In STAR mode: displaying elapsed time since the programmed has started. In STOP mode – displaying total duration time.
4	Step’s parameter indication – velocity, spinning direction.
5	Displaying current phase of the performed cycle. Enabled only in START mode.
6	Progress indication – increasing as subsequent steps are performed – enabled in START mode.
7	Time indication – displaying time left to the end of the extraction. Only available in START mode.
8	Time indication – displaying time remaining till the end of current cycle. Only active in START mode.
9	Wskazanie temperatury zmierzonej wewnątrz obudowy sterownika. Indicating temperature measured inside the controller.

Warning messages:



LID OPEN – message displayed when the lid has been opened.



EMERGENCY button pressed – message displayed once the emergency button has been pressed.

The above messages will not be displayed if:

- the controller is in system menu or in its sub-menu
- the controller is displaying the list of errors
- an error in electrical connector occurred

3. Controller’s system menu

Entering controller’s system menu.

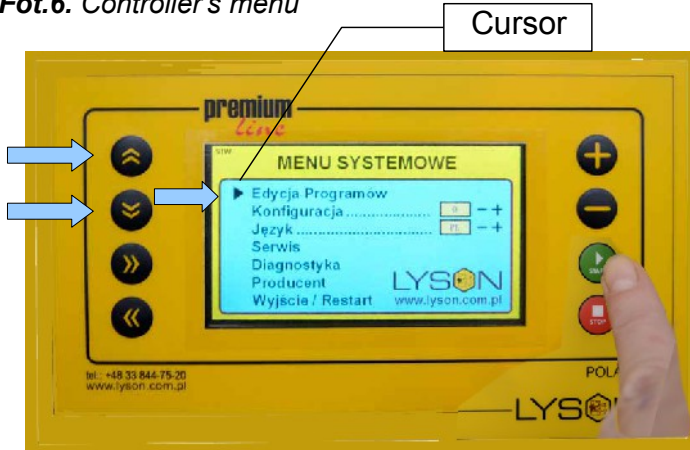
During controller’s start-up there will be a message displayed at the bottom of the LCD screen “**Press STOP to configure**”. **Fot 6**



Fot.5 Entering controller’s system menu.



Fot.6. Controller's menu



Fot. 7 Press **UP/DOWN ARROW** to navigate the menu and press **START** button to select desired option.



Fot. 8

• **1. Program editing.**

Programs' edition mode enables to customize own cycles of spinning of frames. Whilst creating customised cycle we set: program number, time, speed and spinning direction. Currently edited programme is highlighted in yellow.

STW

PROGRAMMING MODE

START	PROGRAM : 4					STOP
1s	50s	100s	135s	185s	220s	270s
30%	30%	60%	60%	100%	100%	
>>>	<<<	<<<	>>>	>>>	<<<	

Naciśnij przycisk START by zapisać program.
Naciśnij przycisk STOP by wyjść z trybu programowania.

PROGRAMMING MODE		
#	Button	Description
1	↑	Navigation button, press it to highlight a parameter placed higher on the menu list.
2	↓	Navigation button, press it to highlight a parameter placed lower on the menu list.
3	→	Navigation button, press it to highlight a parameter placed to the right on the menu list.
4	←	Navigation button, press it to highlight a parameter placed to the left on the menu list.
5	PLUS	Parameter's value increasing button
6	MINUS	Parameter's value decreasing button
7	START	Press to store currently adjusted program
8	STOP	Press to cancel program editing.

• **2. Configuration.**

Configuration option can be used to choose the type of honey extractor (radial or cassette). After selecting the extractor type the controller will load manufacturer pre-set programs appropriate for the extractor. To change the extractor type is possible after entering an **access code** – see: Manufacturer – access code. Without access code entered the **Configuration** option is greyed out and is skipped (inaccessible) while navigating the menu.

• **3. Language.**

Option that allows to change the language used by the controller. It is necessary to enter an access code to be able to change the language (access code: 1111). Without access code entered the **Language** option is greyed out and is skipped (inaccessible) while navigating the menu

Access codes can be entered in **Manufacturer** menu (position 6).

- navigate the menu until **Manufacturer** is highlighted.
- Press „**START**” to select.
- An access code entering field is displayed.
- Press „**PLUS**” or „**MINUS**” to change.
- Press „**LEFT**” or „**RIGHT**” to move to the next one.
- Press „**START**” to confirm

• **4. Service.**

This option allows to display the counters of service time of the extractor's drive unit. One of the counters (upper one) can be reset by the user. The lower counter displays the total time of service since the production time and can be reset only by entering a specific access code.

• **6. Manufacturer**

Menu option used to enter access codes

• **7. Exit / Restart**

Press to exit the settings menu and resume honey extraction.

Error Codes

Sterownik HE-03 is equipped with advanced mechanism of error detection. If any error/fault is detected, it is immediately followed by emergency stop of motor and the error code is displayed. Error code message is continuously

displayed. Turn the power supply off, remove the fault and turn the power supply on again.

STW

ERROR REPORT			
1	CPU	OK	
2	RAM	OK	
3	Vcpu [V]	OK	
4	Vbus [V]	OK	
5	TEMP [°C]	OK	
6	STATUS	OK	
7	^	ERROR	
8	∨	OK	
9	>	OK	
10	<	OK	
11	PLUS	ERROR	
12	MINUS	OK	
13	START	OK	
14	STOP	ERROR	

			button has broken down (might have been pressed too hard)
8	↓	OK / ERROR	see above.
9	→	OK / ERROR	see above.
10	←	OK / ERROR	see above.
11	PLU S	OK / ERROR	see above.
12	MIN US	OK / ERROR	see above.
13	STA RT	OK / ERROR	see above.
14	STO P	OK / ERROR	see above.

#	Description	Indication	Error Message Meaning
1	CPU	OK / ERROR	„Error” indicates the error in the main controllers' processor. The most often indication of this type is due to electrostatic discharge.
2	RAM	OK / ERROR	ERROR indicates the lack of data coherence of RAM. This may happen when the controller is placed in the area with high level of various interference. The reason for this may be: faulty wiring, faulty inverter, faulty inverter's construction. The other reason may be the malfunction of main processor unit due to electrostatic discharge.
3	Vcpu [V]	OK / ERROR	ERROR indicates the the measured value of controllers' unit has exceeded the acceptable range. This may mean the malfunction or overloading the 5V power adaptor, faulty controller, or faulty connection between adapter and controller.
4	Vbus [V]	OK / ERROR	ERROR indicates that voltage measured at the data transmission interface has exceeded the acceptable level. This may mean faulty inverter, controller malfunction, or faulty cable connection between the inverter and controller.
5	TEMP [°C]	OK / ERROR	ERROR indicates that temperature measured inside the controller's housing has exceeded the acceptable range 5 °C - 60 °C. This may be caused by overloaded inverter or using the extractor in temperature conditions beyond the acceptable range.
6	STATUS	OK / ----	
7	↑	OK / ERROR	ERROR indicates the detection of pressed button just after powering the device up. If such situation was not intended, it may indicate that the

Technical Specification

CONTROLLER'S TECHNICAL PARAMETERS	
No. of manual modes:	2 – spinning (R/L)
Range of time adjusting of manual cycle:	15 – 900 sec. or ∞
Adjustment in manual cycle (step):	15 sec.
Speed range adjustment in manual mode:	10% - 100%, skok 5%
Number of automatic cycles:	8
Number of steps per cycle:	7
Duration of automatic mode cycle range:	60 - 960 sec. (16 min)
Regulation adjustment in automatic mode	5 sec
Speed range adjustment in automatic mode:	10% - 100%, step[5%
LCD display:	4,3” TFT, LED backlit, resolution 480x272
Number of languages:	32
Keyboard:	8 przycisków
Power supply:	5VDC ± 100mV, 1000mA
Safety features:	Integrated, PTC 750mA

Environmental conditions	
Temperature inside of controller during operation:	5°C...60°C
Temperature of surroundings of stored controller:	1°C...60°C
Air humidity for regulator in use:	Max 65% for 25°C

Languages

lp	skrót ISO639-1	język
1.	EN	English
2.	PL	Polish
3.	RU	Russian
4.	DE	German
5.	FR	French
6.	CS	Czech
7.	SK	Slovak
8.	RO	Romanian
9.	BG	Bulgarian
10.	AR	Arab
11.	ES	Spanish
12.	SV	Swedish
13.	FI	Finnish
14.	NO	Norwegian
15.	TR	Turkish
16.	IT	Italian
17.	HU	Hungarian
18.	EL	Greek
19.	NL	Dutch
20.	DA	Danish
21.	UK	Ukrainian
22.	BE	Belarussian
23.	LT	Lithuanian
24.	LV	Latvian
25.	ET	Estonian
26.	PT	Portugese
27.	SR	Serbian
28.	HR	Croatian
29.	BS	Bosnian
30.	SL	Slovenian
31.	ZH	Chinese
32.	JA	Japanese