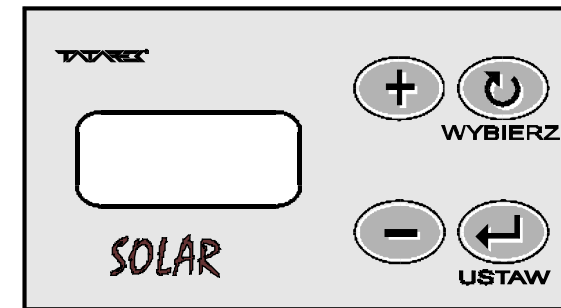


USER MANUAL

RT-08T

REGULATOR OF HEATING CIRCULATION WITH THE SOLAR COLLECTOR



The regulator controls the heating system in which a heat source is: solar collector and fireplace with the water jacket. The heat receiver is: the CWU container (Warm Applicable Water container) and the CO system (Central Heating system). The pump of the solar collector runs with a continuous control of its rotation, which enables a optimal use of the collector heat.

1. Basic parameters

Power supply	230V/50Hz
Power consumption without the load	5W
Max. connection power	750W
Operation conditions	0÷50°C, humidity 10÷90% no condensation
Housing protection class	IP41
Fuse	6,3A/250V
Number of outputs to control the pumps	2 * 250W/230V/50Hz
Number of outputs to control the pump/blower	1 * 1A/230V/50Hz (triac, continuous control of rotation)
Number of temperature sensors of the solar collector	1 * KTY84 (0...+200°C)
Number of water temperature sensors	2 * KTY81 (0...+100°C)
Temp. measurement precision	2°C
Temp. measurement resolution	0,5°C
Number of the time zones	4



Zakład elektroniczny TATAREK Jerzy Tatarek

50-559 Wrocław, 75 Swieradowska st.

ph. (071) 367-21-67, 373-14-88, fax 373-14-58; Tax index number 899-020-21-48;

Bank account: BZ WBK S.A. WROCLAW 6910901522-0000-0000-5201-9335

www.tatarek.com.pl.; E-mail: tatarek@tatarek.com.pl

CE CONFORMITY DECLARATION

Ref. No. 58.RT.01.2007/1/B

We, **ZAKŁAD ELEKTRONICZNY TATAREK Jerzy Tatarek**
 75 Swieradowska St. , 50-559 Wroclaw

declare under our sole responsibility that
 the product: **Regulator of heating circulation with the solar collector**

model: RT-08, RT-08T, RT-08K, RT-08P

is in conformity with the basic requirements included in Directive EMC 2004/108/WE of 15.12.2004 (the electromagnetic compatibility law of 13.04.07) and Directive LVD 2006/95/WE of 21.08.07 (Laws Journal of 2007 No. 155 pos. 1098) regarding the requirements for electric devices.

To the conformity evaluation the following harmonized standards were used:

PN-EN 60730-2-1: 2002 - Automatic electric regulators for house usage and the like. Part 2-1: Specific requirements regarding electric regulators for electric house devices

PN-EN 60730-1: 2002 - Automatic electric regulators for house usage and the like. Part 1: General requirements.

PN-EN 55022: 2000 - Electromagnetic compatibility (EMC)- IT devices Characteristics of radioelectric noises. Acceptable levels and measurement methods

Complementary information:

Laboratory IASE 51-618 Wroclaw, 1 Wystawowa st.

Test report No. 39/DL/I/07 of 22.06.2007
 41/DL/I/07 of 03.07.2007

Electronic Engineering Plant TATAREK
 has initiated management system and complies with the following standard :
 ISO9001: 2000 CERTIFICATE No. 133/2004 of 01.2004
 Polish Foreign Trade Chamber

The last two digits of the year in which the CE marking was affixed: 07

Place of issue:

Wroclaw

Date of issue:

08.2007

Manufacturer representative:

Miroslaw Zasepa
Zasepa

Position:

Konstruktor

KSL Solar collector
 CWU Warm applicable water container (boiler)
 KOM Fireplace with the water jacket
 CO Central heating

T1 Temperature sensor of the solar collector
 T2 Temperature sensor of the CWU container
 T3 Temperature sensor of the fireplace water jacket

P1 Feeding CWU pump from the fireplace
 P2 Feeding CWU pump from the solar collector (continuous control of rotation)
 P3 Circulating CO pump

3. Handling the regulator

Jeśli na danym ekranie jest więcej pól parametrów (np. ustawianie godzin i minut zegara) to przejdziemy między nimi przyciskiem WYBIERZ (3).

On the control panel (Fig.2) are the controls of the regulator. The regulator state is shown on the text display (1). The displayed screens inform about device operation, sensor temperature, enable changing the parameters etc.

The change of the screen is made by pressing the WYBIERZ button (2). If this is a screen that enables changing a parameter then you need to press the USTAW button (5). The parameter field starts blinking the value of which can be altered with the "+" (2) or "-" (4) button. If on the given screen is more parameter fields (e.g. setting the hour and the minutes of the clock) then you can go between them by pressing the WYBIERZ button (3).

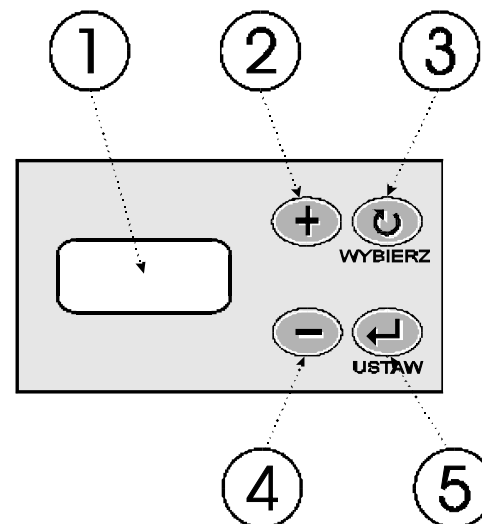


Fig.2 Control panel

1. Text display
2. Increase button
3. Parameter button
4. Decrease button
5. Confirmation button

With the USTAW button (5) you confirm the changes - the parameter field stops blinking. The changed parameter not confirmed for 10s is not stored by the regulator. The field stops blinking and the previous value is restored.

3.1 Time zones

The regulator is equipped with the clock, which enables an automatic change of the operation mode at different times of the day. The 24-hr is divided into 3 zones (\$1, \$2, \$3) and the time span when no zone is active that is STREFA 0 or BAZA. The time zone is defined by the start time (OD) and the end time (DO).

In the regulator the following zone default program is set:

STREFA 1	OD 6.00 DO 8.00
STREFA 2	OD 14.00 DO 17.30

3.2 Screens

The emergency screen is not visible till one of the following emergency situations takes place:

1. Damage of the sensor T1 (open) of the solar collector. The text "T1(KSL)r" shows up.
2. Damage of the sensor T2 (open) of the CWU container / „T2(CWU)r“
3. Damage of the sensor T3 (open) of the fireplace / „T3(KOM)r“
4. Damage of the sensor T1 (shorted) of the solar collector/ „T1(KSL)z“
5. Damage of the sensor T2 (shorted) of the CWU container/ „T2(CWU)z“
6. Damage of the sensor T3 (shorted) of the fireplace/ „T3(KOM)z“
7. Exceeding the limit temperature of the fireplace / "TEMP KOM"/ set by the T.ALARMU parameter.

ALARM !!
T1 (KSL) r

ALARM !!
TEMP KOM

The emergency situation is accompanied by a broken sound signal which can be cancelled with the USTAW button. When the limit temperature is exceeded the CO pump runs to cool off the fireplace. If the fireplace temperature exceeds 90 °C the alarm is accompanied by a steady sound signal.

The screen of temperature measurement of the fireplace water jacket shows the current temperature of the fireplace

WARRANTY

1. Warranty is valid [24] months from the date of sale.
2. Producer does not take responsibility for any mechanical damages made by user.
3. MAKING REPAIRS OR MODIFYING THE DEVICE BY USER IS FORBIDDEN AND CAUSES WARRANTY CANCELATION
4. Warranty card is valid only with date of sale, seller's signature and stamp
5. Warranty and after-warranty repairs should be done only by producer, damaged regulators should be sent to producer in order to make all repairs needed.
6. Warranty protection involves the EU
7. Warranty does not exclude, not restrict and not suspend buyer's rights coming from the incompatibility of the article with the agreement (Laws Journal No. 141 Pos. 1176)

WARNING !

ANY MODIFICATION OF THE REGULATOR MADE BY USER CAN BE THE CAUSE OF SAFETY CONDITIONS DETERIORATION AND CAN EXPOSE THE USER TO ELECTRIC SHOCK OR DAMAGE DEVICES SUPPLIED.

Connection cable of regulator may be replaced only by producer or his authorized service locations

WARNING!

1. Producer does not take the responsibility for damage caused by atmospheric discharge
2. and overvoltage in the mains
3. Burnt fuses are not subject to warranty replacement

Date of sale

Seller's signature and stamp

Register No.. GIOS: E 0002240WZ

ARGO-FILM

Recycling Plant No. 6

180 Krakowska st., 52-015 Wrocław

ph.: 071 794 43 01,

0 515 122 142

Worn out electronic and electric devices must be transferred to the utilization collection place, where will be accepted for free



TATAREK®

Zakład elektroniczny TATAREK Jerzy Tatarek

50-559 Wrocław, 75 Swieradowska st
ph. (071) 367-21-67, 373-14-88, fax 373-14-58; tax index number 899-020-21-48;
Bank account : BZ WBK S.A. O/WROCŁAW 6910901522-0000-0000-5201-9335
www.tatarek.com.pl.; E-mail: tatarek@tatarek.com.pl

4 Installing the regulator

- ! THE REGULATOR IS SUPPLIED BY 230V/50HZ.
- ANY MOVES REGARDING INSTALLATION SHOULD BE MADE AT THE DISCONNECTED MAINS.
- ! THE REGULATOR HAS TO BE CONNECTED TO THE MAINS WITH THE ZERO-PIN THROUGH A DIFFERENTIAL DEVICE ACC. TO THE VALID LAWS
- ! THE REGULATOR SHOULD NOT BE EXPOSED TO WATER AFFECTING. ITS ENVIRONS OUGHT TO BE CLEAN.
- ! THE PRODUCER DOESN'T TAKE ANY RESPONSIBILITY FOR DAMAGES CAUSED BY WRONG USAGE OF THE REGULATOR.

Connection diagram of the elements of the regulator is presented on fig. 3

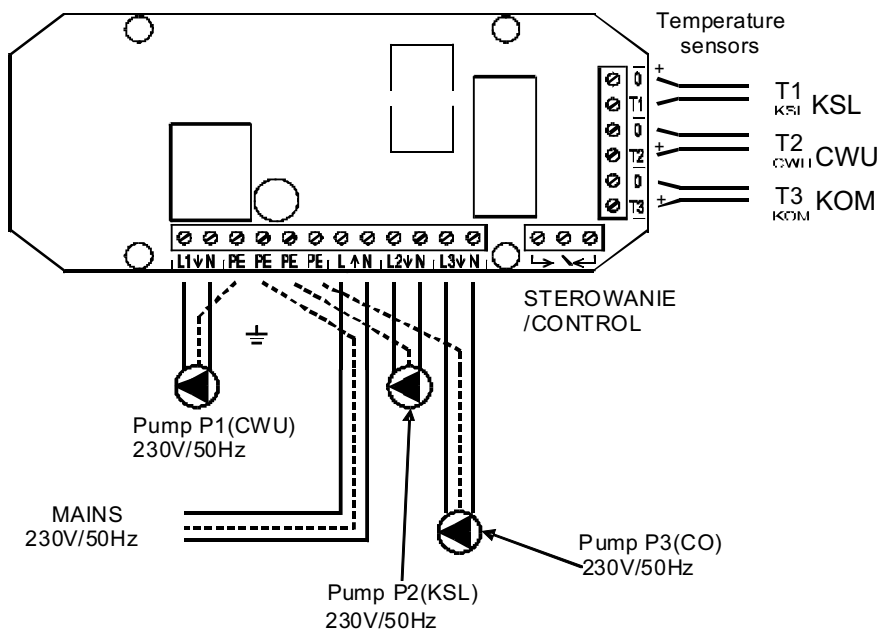


Fig.3 Electric wiring layout

KOMINEK
73.5°C

It's a stable screen ,that is to change it you have to press the WYBIERZ button
Screen of temperature measurement of the CWU container shows the current temperature of the CWU container

ZASO.CWU
66.0°C

It's a stable screen ,that is to change it you have to press the WYBIERZ button

Screen of temperature measurement of the solar collector shows the current temperature of the collector

KOL.SŁON
68.5°C

It's a stable screen ,that is to change it you have to press the WYBIERZ button.

Screen of the operation of the whole system

On the screen are the symbols of the devices
 KSL solar collector CWU Warm Applicable Water container
 KOM fireplace CO CO system (Central heating)
 The symbols every couple of seconds (or after pressing the USTAW button) are replaced with the number indicating the temperatures of those devices.
 The blinking arrows indicate the current flow of heat as a result of the pumps operation:
 KSL->CWU --the pump P2 feeds the CWU container from the solar collector
 KOM->CWU-- the pump P1 feeds the CWU container from the fireplace
 KOM->CO-- the CO pump P3 is turned on.
 xCO the pump P3 is turned off in the CWU priority mode

KSL? CWU
? KOM xCO

68? 66
? 40 xCO

It's a stable screen ,that is to change it you have to press the WYBIERZ button.

Screen of operation mode of the solar collector

TrybKSL
AUTO

the pump P2 (KSL) can operate in the mode:

AUTO pump runs in the function of the temperatures difference between KSL and CWU
 MAN pump turns on with maximum efficiency no matter what the KSL and CWU temperature are (e.g. for venting the system). The switch-on lasts for the time determined by the "CzasMan" parameter (see PARAMETER LEVEL 1). After the time the AUTO mode is restored.

It's a unstable screen, that is after 10s from the last pressing of any button the screen switches to that of temperature measurement of the fireplace. All the next screens are unstable.

Screen of operation mode of the CO pump P3

TrybCO
AUTO

The CO pump P3 can run in the mode:

AUTO pump runs if the fireplace temperature is higher than the "ZAŁ CO" parameter
 PRIO CWU pump is turned off to faster heat up the CWU water (CWU priority)
 ZEGAR outside of the time zones the pump runs like at the AUTO mode and at the selected times the CO pump P3 is turned off when the feeding CWU pump P1 runs. Additionally the operation time of the CWU pump P1 is limited by its switching off when the CWU temperature exceeds the "T.wylCWU" parameter

Screen of the clock

ZEGAR \$1
17:15

The screen shows the current time and number of active time zone. The time corection (independently the hours and minutes) is possible after pressing the USTAW button according to the rules of changing the parameter value.

Screen of setting the parameters

PoziomUS
0

Normally the level of setting is 0, which means the parameters are not available. After switching to the level 2 the subsequent screens show the parameters. The last screen displays "*****" after which the comeback to the previously described screens follows.

PARAMETER LEVEL 1			
TITLE	RANGE	FACTORY SETTING	FUNCTION
ZaŁ CO	40...60 °C	60 °C	Minimum temperature of the fireplace at which the CO pump P3 turns on.
ZaŁ CWU	20...85 °C	50 °C	Minimum temperature of the fireplace at which the CWU pump P1 turns on.
DeltaCWU	1...10 °C	10 °C	Minimum temperature difference between the fireplace and the CWU container needed for the CWU pump P1 to run
DeltaKSL	1...20 °C	10 °C	Temperature difference between the solar collector and the CWU container needed for the KSL pump P2 to run with max rotation
MinKSL	0...20 °C No more than DeltaKSL	2 °C	Temperature difference between the solar collector and the CWU container causing the switch-off of the KSL pump P2

PARAMETER LEVEL 2			
TITLE	RANGE	FACTORY SETTING	FUNCTION
T.wylCWU	30...100 °C	75 °C	Switch-off temperature of the CWU pump P1 when the regulator operates in the mode "TrybCO=ZEGAR"
STRF1 od	0:00...23:45	6:00	Start time of the 1st time zone
STRF1 do	0:00...23:45	8:00	End time of the 1st time zone
STRF2 od	0:00...23:45	14:00	Start time of the 2nd time zone
STRF2 do	0:00...23:45	17:30	End time of the 2nd time zone
STRF3 od	0:00...23:45	20:00	Start time of the 3rd time zone
STRF3 od	0:00...23:45	22:30	End time of the 3rd time zone

PARAMETER LEVEL 3			
TITLE	RANGE	FACTORY SETTING	FUNCTION
T.ALARMU	80...89 °C	85 °C	Fireplace temperature the exceeding of which the emergency occurs
T.maxKSL	80..180 °C	95 °C	Maximum temperature of the solar collector the exceeding of which turns on the KSL pump P2, protecting the collector against overheating
T.maxCWU	80..110 °C	95 °C	Maximum temperature of the CWU container the exceeding of which turns off the feeding pumps, protecting the container against overheating. The KSL protection has a higher priority than the CWU protection
ObrotMIN	10...100%	30%	Minimum rotation of the pump guaranteeing a stable operation. The setting 100% enforces the ON/OFF operation.
CzasMAN	1...30min	5min	Operation time of the pump P2(KSL) in the MAN mode