

# EVOSOL

EN USER MANUAL

Dear Customer,

We thank you for choosing our solar controller **EVOSOL**, a modern, top quality product able to ensure the maximum comfort for a long time, with high reliability and safety standards. In particular, if entrusted to a Technical Assistance Service – specifically qualified and trained to carry out scheduled maintenance – the product will be kept to the maximum level of efficiency, with lower operating costs and, in case of need, original spare parts will be available.

This instruction manual contains important information and recommendations for the best possible use of solar controller **EVOSOL**.

Please accept our renewed thanks for your purchase,

## CONFORMITY

**EVOSOL** solar controllers conform to:

- EN 61000-6-1:2007
- EN 61000-6-3:2007/A1:2011
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 60335-1:2012
- Electromagnetic Compatibility Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- Machinery Directive 2006/42/EC
- Directive 93/42/EEC concerning medical devices
- Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



At the end of its life, the product should be not be disposed of as solid urban waste, but rather it should be handed over to a differentiated waste collection centre.

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The following symbols are used in this manual:

 **CAUTION!** = Identifies actions that require caution and adequate preparation.

 **STOP!** = Identifies actions that you MUST NOT do.

This manual, Code 20122014 – Rev. 3 (06/2019) comprises 20 pages.

## 1 GENERAL INFORMATION

### 1.1 General Safety Information

- ⚠** The product's installation must be carried out by an authorised company that will issue a declaration of the installation's conformity to the product's owner once the work has been completed, indicating that the work has been carried out in accordance with the standards of good practice, the current National and Local regulations, and the indications provided by the manufacturer in the instruction booklet accompanying the device.
- ⚠** The product must be used for its intended purpose (as described by the manufacturer) for which it has been expressly manufactured. The manufacturer shall bear no responsibility, whether of a contractual or non-contractual nature, for any damage caused to people, animals, or property due to incorrect installation, adjustments, or maintenance, or improper use.
- ⚠** This booklet is an integral part of the device, and must therefore be carefully preserved, and must ALWAYS accompany the solar controller, even in the event that it is sold to another Owner or User, or is transferred to another system. If it is damaged or lost, another copy can be requested to Technical Assistance Service in your Area.

### 1.2 Precautions

- ⊖** Do not tamper with or adjust the safety or control devices without prior authorisation and instructions from the manufacturer.
- ⊖** Never pull, disconnect, or twist the electrical cables coming from the appliance even if it is disconnected from the mains electricity supply.
- ⊖** All maintenance and repairs must be carried out by a legally qualified heating engineer.
- ⊖** Do not use water to extinguish fire in the control panel. Switch power OFF at the mains power switch to isolate the control panel electrically first. Then use a class E fire extinguisher (marked "SUITABLE FOR LIVE ELECTRICAL ITEMS") to extinguish the flames.
- ⊖** Do not dispose of packaging material into the environment, or leave it within the reach of children, since it can become a potential hazard. Dispose of packaging material in compliance with applicable legislation.
- ⊖** Do not allow children or infirm persons to operate the system unsupervised.
- ⊖** It is forbidden to touch the device while barefoot or with wet or moist body parts.

### 1.3 Description of the appliance

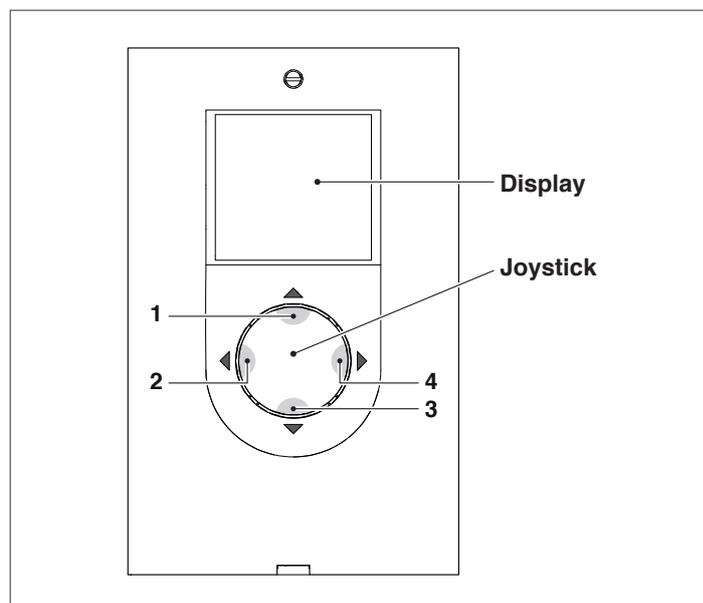
The solar regulator **EVOSOL** is suitable for regulating a solar integration system: it controls the heat transfer from the solar collectors to a storage system. It is responsible for the operation of the pump using the information collected from temperature probes. It can also control the integration.

The solar regulator provides 9 system layouts and advanced functions, such as adjustment of pump speed, thermal disinfection function, protection of solar collectors against overtemperature and too low temperatures (anti-freeze function), and operating hours counter.

Each advanced setting can be adjusted by the Technical Assistance Service.

## 2 USER INTERFACE

The solar controller is controlled through the joystick with 4 keys.

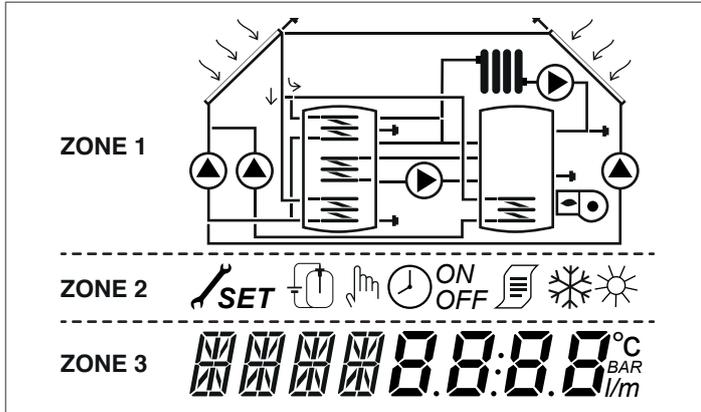


- Press "◀" (2) or "▶" (4) to scroll adjustment/display parameters; during a parameter change, press for a few seconds to confirm the value set and go back to the list of parameters.
- Press "▲" (1) for a few seconds to make the parameter displayed editable and increase its value.
- Press "▼" (3) to decrease the value of the selected parameter.
- Press "▼" (3) for a few seconds to edit time, day and display language.

## 2.1 Nr. displayed

The solar controller is provided with a backlit 2.8" LCD. The display can be divided into 3 areas:

- 1 System layout area
- 2 Symbol area
- 3 Parameter area



- 1 **System layout area**  
The system layout area shows the active layout stored through parameter SYSN. The symbols displayed flash, remain steady or disappear according to the current system status.
- 2 **Symbol area**  
The symbol area indicates the system status.
- 3 **Parameter area**  
In the lower display area it is possible to display solar controller parameters; the left area displays the parameter code, whereas the right area displays the value with the relevant unit of measurement or setting of the parameter.

During stand-by the display is turned off with an indication of the temperature of the upper part of storage (S3). Press any button to view the display.

## 2.2 Display icons

**!** The symbols on display are made visible according to the selected system layout.

	Solar Collector
	Pump The symbol flashes during operation
	Accumulation tank
	Supplementary system The symbol flashes during operation
	Radiator/heating system
	Accumulation tank coil
	Temperature probe The symbol flashes when the relevant display parameter is selected
	Alarm presence (maintenance request)
	Anti-freeze symbol
	Panel overtemperature
<b>SET</b>	Parameter programming When the parameter displayed can be edited, the steady SET writing is displayed, when accessing edit mode, the writing starts flashing until confirmation
	"Automatic" schedule
	Manual mode (forced manual operation of pump or valve)
	Energy calculation (not used)
	These symbols start flashing when the thermal disinfection function (anti-legionella) is enabled

## 2.3 Menu structure

The solar regulator menu has a circular structure and does not contain any submenus. Press "▶" to scroll cyclically all the parameters present according to the associated system layout (any empty positions are not displayed, for example in layout 1 after parameter 2 the menu skips to parameter 59). Once the last parameter is reached, press "▶" to go back to the first one.

Press "◀" to scroll the parameters in reverse order. The visualisation will stop upon reaching the first parameter.

Key:  
**x** Parameter available in the relevant system diagram  
**VIS** Read-only parameter  
**SET** Settable parameter

Par. No.	Description	Initials	UM		Value				System layout									
					min.	max.	default	step	1	2	3	4	5	6	7	8	9	
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1	x	x	x	x	x	x	x	x	x	x
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1	x	x	x	x	x	x	x	x	x	x
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1	x	x	x	x	x	x	x	x	x	x
3	S4 probe S4 temperature display	S4	°C	VIS	-40	>260	/	0,1		x			x	x		x		
5	S6 probe S6 temperature display	S6	°C	VIS	-40	>260	/	1								x		x
56	SETPOINT B011 HIGH ZONE defines the water temperature setpoint for the high zone of STORAGE SYSTEM 1	B1HI	°C	SET	15	90	60	0,5				x					x	
59	SETPOINT B011 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1LO	°C	SET	15	90	60	0,5	x	x	x	x	x	x	x	x	x	x
64	SETPOINT B012 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 2	B2LO	°C	SET	15	90	60	0,5		x			x	x				
73	HEAT EXCHANGE THRESHOLD B011-B012 defines the temperature threshold at which heat exchange between STORAGE SYSTEM 1 and STORAGE SYSTEM 2 is permitted	ST12	°C	SET	15	90	50	0,5		x								
91	Supplement activation threshold defines the temperature threshold below which the burner/integration system starts within the set schedule.	SAB1	°C	SET	40	70	50	0,5			x							
94	Supplement deactivation threshold defines the temperature threshold above which the burner/integration system stops within the set schedule.	SSB1	°C	SET	45	70	55	0,5			x							
103	SUPPLEMENT BURNER SCHEDULE DAY1 programs the 48 Monday time bars.	DAY1	-	SET	0	48	1	/			x							
104	SUPPLEMENT BURNER SCHEDULE DAY2 programs the 48 Tuesday time bars.	DAY2	-	SET	0	48	1	/			x							
105	SUPPLEMENT BURNER SCHEDULE DAY3 programs the 48 Wednesday time bars	DAY3	-	SET	0	48	1	/			x							
106	SUPPLEMENT BURNER SCHEDULE DAY4 programs the 48 Thursday time bars	DAY4	-	SET	0	48	1	/			x							
107	SUPPLEMENT BURNER SCHEDULE DAY5 programs the 48 Friday time bars	DAY5	-	SET	0	48	1	/			x							
108	SUPPLEMENT BURNER SCHEDULE DAY6 programs the 48 Saturday time bars	DAY6	-	SET	0	48	1	/			x							
109	SUPPLEMENT BURNER SCHEDULE DAY7 programs the 48 Sunday time bars	DAY7	-	SET	0	48	1	/			x							
160	Output U2 activation temperature for solid fuel generator supplementary system defines the temperature threshold to activate heat exchange between stove and storage system	T10N	°C	SET	65	75	65	0,5										x

### 3 PARAMETER DESCRIPTION

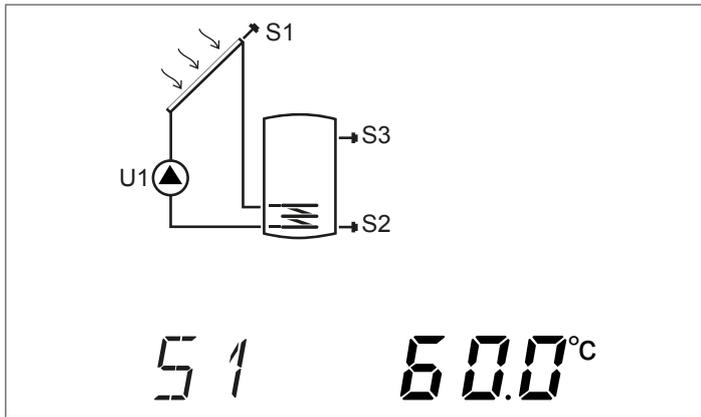
#### 3.1 Basic parameters

##### 3.1.1 Probe temperature display

S1-S2-S3-S4-S6 (par. no.: 0-1-2-3-5)

Indicates the temperature detected by the probe concerned (display only).

Only the probes concerning the system chosen are displayed.



##### 3.1.2 Weekly schedule

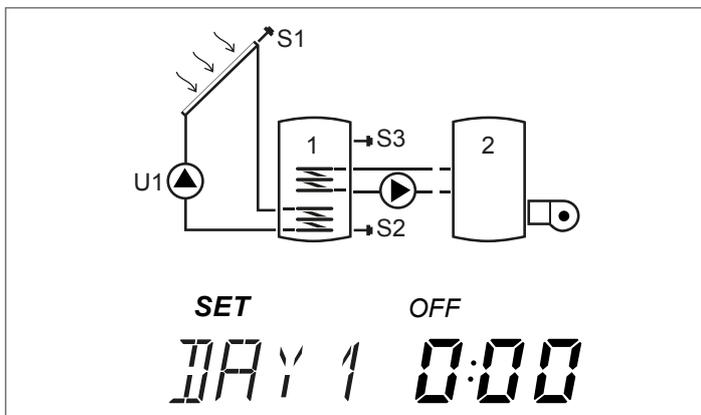
DAY1-DAY2-DAY3-DAY4-DAY5-DAY6-DAY7 (par. no.: 103-104-105-106-107-108-109)

With these parameters, it is possible to set the activation time intervals of the burner or thermal integration system for every day of the week and at intervals of 30 minutes in a 24 hour frame.

Within the intervals set, if the temperature detected by probe S3 is lower than the value set in parameter "SUPPLEMENT ACTIVATION THRESHOLD (par. no. 91)", the burner or thermal integration system is activated and remains operational until the temperature set in parameter "BURNER 1 DEACTIVATION THRESHOLD (par. no. 94)" is reached.

The number x that follows the parameter (DAYx) indicates the day of the week:

- 1 Monday
- 7 Sunday



Press "▲" or "▼" to scroll the 24 hours of the specified day and view the settings. "ON" and "OFF" icons indicate the status of the burner or thermal integration system in the relevant half hour:

Example:

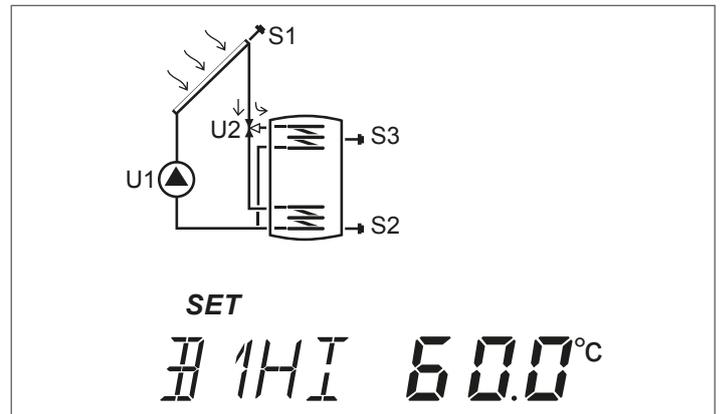
- If 0:00 and OFF appear, in the half hour from 12:00 a.m. to 12:30 a.m. the burner or thermal integration system is off even if activation conditions are met
- If 0:00 and ON appear, in the half hour from 12:00 a.m. to 12:30 a.m. the burner or thermal integration system is on even if activation conditions are met

#### 3.2 Expert user parameters

##### 3.2.1 Accumulation tank 1 high part setpoint

B1HI (par. no.: 56)

With this parameter, it is possible to set the water temperature setpoint for the high zone of storage system 1. The temperature is detected by probe S3.



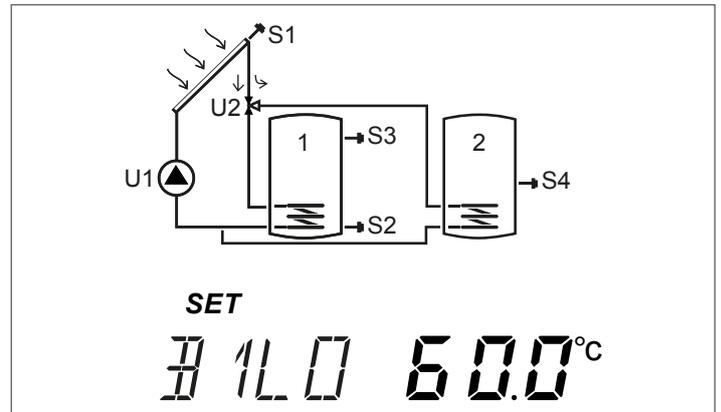
##### 3.2.2 Accumulation tanks 1 and 2 low part setpoint

B1LO-B2LO (par. no.: 59-64)

With these parameters, it is possible to set the water temperature setpoint for the low zone of storage systems 1 and 2.

The temperature is detected by probes:

- S2 for accumulation tank 1
- S4 for accumulation tank 2

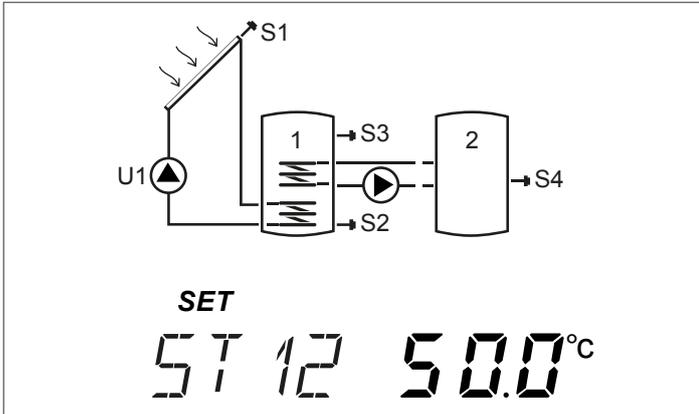


### 3.2.3 Heat transfer activation threshold between accumulation tank 1 and 2

**ST12** (par. no.: 73)

With this parameter it is possible to set the temperature at which heat exchange between accumulation tank 1 and accumulation tank 2 can be activated.

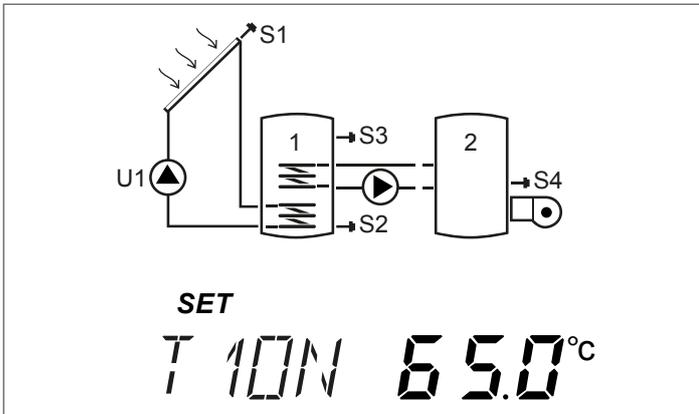
The reference temperature is detected by probe S3 through the differential between the temperatures detected by probes S3 and S4.



### 3.2.4 Solid fuel generator activation threshold

**T10N** (par. no.: 160)

With this parameter it is possible to set the minimum temperature, detected by probe S4, to start heat exchange between solid fuel generator and accumulation tank.



## 4 PUTTING INTO SERVICE

### 4.1 Initial startup

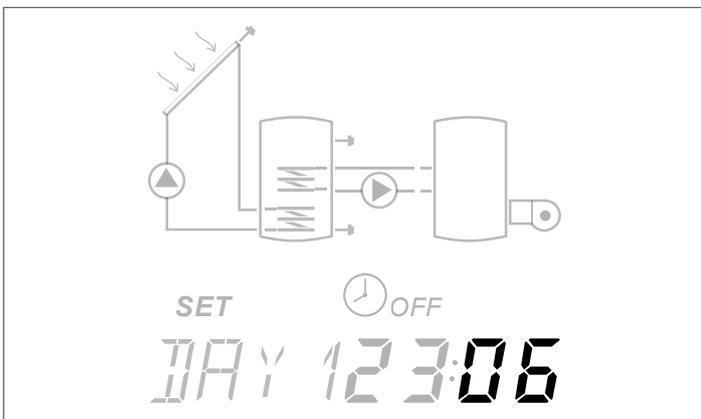
Commissioning of solar controller **EVOSOL** must be carried out by Technical Assistance Service. The User may need to change time, day or language.

#### 4.1.1 Current time and week day display

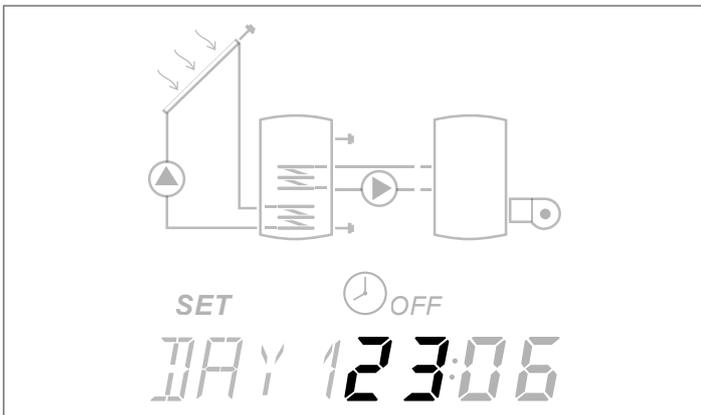
Press "▼" for 2 seconds to display time and week day  
Press "▶" or "◀" to exit the page

#### 4.1.2 Setting up current time, week day and language

Press "▼" for 5 seconds to edit time, week day and language  
- Press "▲" or "▼" to set minutes

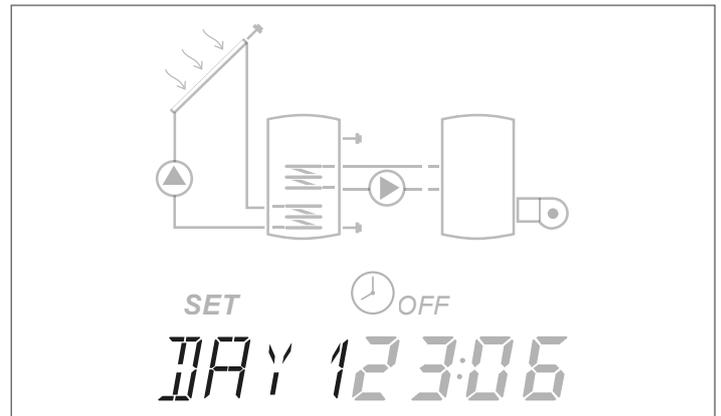


- Press key "◀" to confirm
- Press "▲" or "▼" to set hours

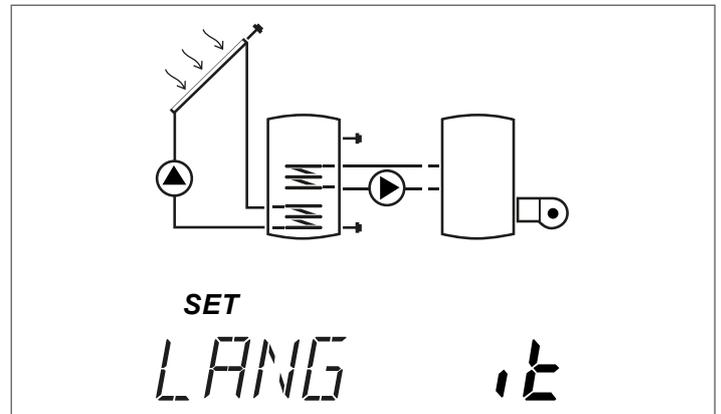


- Press key "◀" to confirm

- Press "▲" or "▼" to set the week day; **DAY1** corresponds to Monday – **DAY7** to Sunday



- Press key "◀" to confirm
- Press "▲" or "▼" to set the controller language !da duplicazione! (available languages are it-en-de-fr)



Press key "◀" to confirm and exit the change.

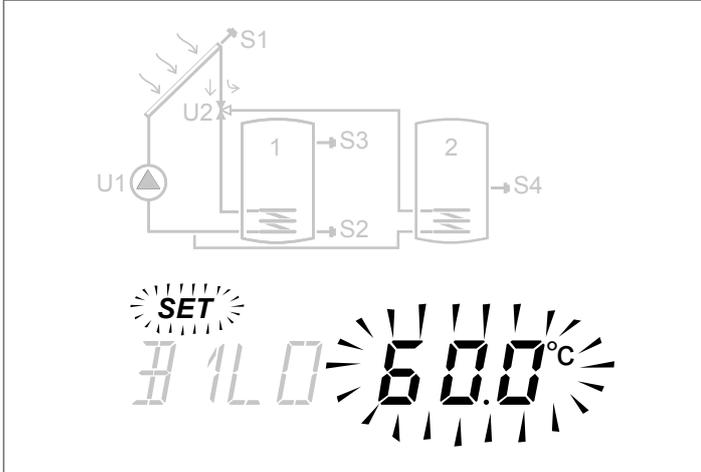
- ⚠ In case of power supply missing for longer than three days, only date and time must be reset.
- ⚠ It is possible to exit the setup mode at any stage (for example, after setting the minutes), pressing the "◀" button for at least 2 seconds.

### 4.1.3 Change user parameters

To edit the displayed parameter:

Press "▲" for a few seconds to enter edit mode, the icon SET and the parameter value start flashing.

Example:



Press "▲" or "▼" to edit.

Press "▶" or "◀" for at least 3 seconds to confirm the change and go back to the parameter list.

**⚠** In case of error in parameter editing, repeat the procedure.

For instructions and settings of the individual parameters refer to chapter "Parameter description".

For each system layout, chapter "Installation diagrams" contains the basic wiring diagram and the list of dedicated parameters, each with the default value and the allowed range.

### 4.1.4 Change weekly time schedule

Set up as follows:

- Press "▲" for at least 3 seconds, the icon SET starts flashing
- Press "▲" to activate, the time indicated and the icon ON flash to confirm the activation
- Press "▼" to deactivate, the time indicated and the icon OFF flash to confirm the deactivation

For convenience, press and hold "▲" or "▼" during programming to set sequentially the time intervals ON or OFF respectively. When user completes programming of the 48 half hours of the day, the parameter will go back to display status.

It is possible to exit the setting page before having programmed the whole 48 half hours by pressing "▶" for a few seconds.

For systems that use a supplementary heating system with a timer (system no.3), the following schedule is stored by default.

START	STOP	TIME BAR	MON	TUE	WED	THU	FRI	SAT	SUN
0:00	0:30	0							
0:30	1:00	1							
1:00	1:30	2							
1:30	2:00	3							
2:00	2:30	4							
2:30	3:00	5							
3:00	3:30	6				OFF			
3:30	4:00	7				OFF			
4:00	4:30	8				OFF			
4:30	5:00	9				OFF			
5:00	5:30	10				OFF			
5:30	6:00	11				OFF			
6:00	6:30	12				OFF			
6:30	7:00	13				OFF			
7:00	7:30	14				ON			
7:30	8:00	15				ON			
8:00	8:30	16				ON			
8:30	9:00	17				ON			
9:00	9:30	18				ON			
9:30	10:00	19				ON			
10:00	10:30	20				ON			
10:30	11:00	21				ON			
11:00	11:30	22				ON			
11:30	12:00	23				ON			
12:00	12:30	24				OFF			
12:30	13:00	25				OFF			
13:00	13:30	26				OFF			
13:30	14:00	27				OFF			
14:00	14:30	28				OFF			
14:30	15:00	29				OFF			
15:00	15:30	30				OFF			
15:30	16:00	31				OFF			
16:00	16:30	32				OFF			
16:30	17:00	33				OFF			
17:00	17:30	34				ON			
17:30	18:00	35				ON			
18:00	18:30	36				ON			
18:30	19:00	37				ON			
19:00	19:30	38				ON			
19:30	20:00	39				ON			
20:00	20:30	40				ON			
20:30	21:00	41				ON			
21:00	21:30	42				ON			
21:30	22:00	43				ON			
22:00	22:30	44				ON			
22:30	23:00	45				ON			
23:00	23:30	46				OFF			
23:30	0:00	47				OFF			

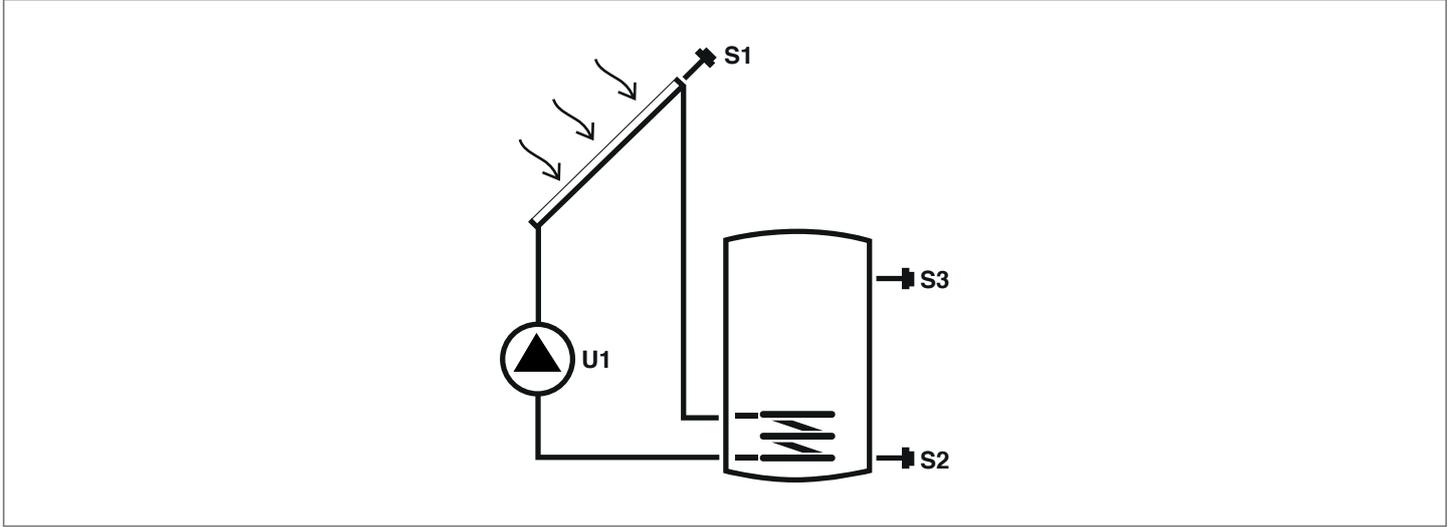
For the installer: in the boxes indicate the time schedule set.

## 5 INSTALLATION DIAGRAMS

### System 1 – SOLAR HEATING WITH 1 STORAGE SYSTEM

The system maximises the solar energy supply by working on the temperature difference between solar collector (S1) and the low zone of storage system (S2) to maintain the storage temperature set in parameter n°59 (B1L0 – SETPOINT BOILER1 LOW).

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**

**SET** editable parameter  
**VIS** read-only parameter  
**S** temperature probe

**U** pump/valve managed by regulator

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description".  
 To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

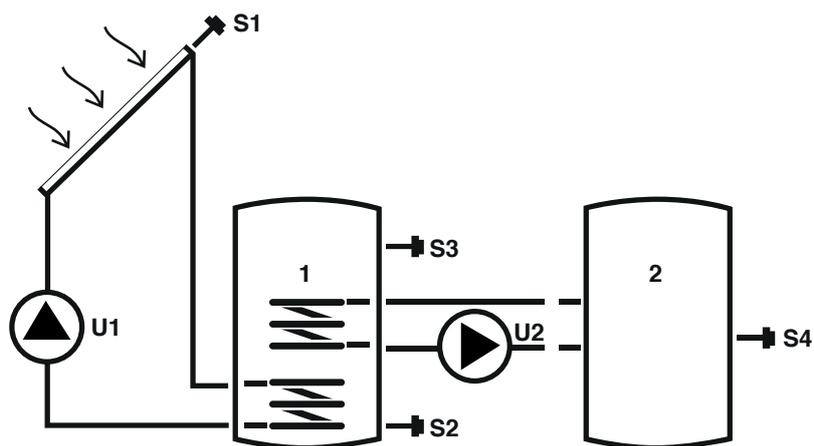
Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
59	SETPOINT B011 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1L0	°C	SET	15	90	60	0,5

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

**System 2 – SOLAR HEATING WITH HEAT TRANSFER**

The system maximises the solar energy supply by working on the temperature difference between solar collector (S1) and the low zone of the first storage system (S2) to maintain the storage 1 temperature set in parameter n°59 (B1LO – SETPOINT BOILER1 LOW). It also works on the temperature difference between the high zone of the first storage system (S3) and the low zone of the second storage system (S4) to maintain the storage 2 temperature set in parameter n°64 (B2LO – SETPOINT BOILER2 LOW). The heating of the second storage system is activated if the first one has already reached the desired temperature threshold, which can be set in parameter no. 73 (ST12).

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**  
**SET** editable parameter  
**VIS** read-only parameter  
**S** temperature probe  
**U** pump/valve managed by regulator

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description".  
 To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

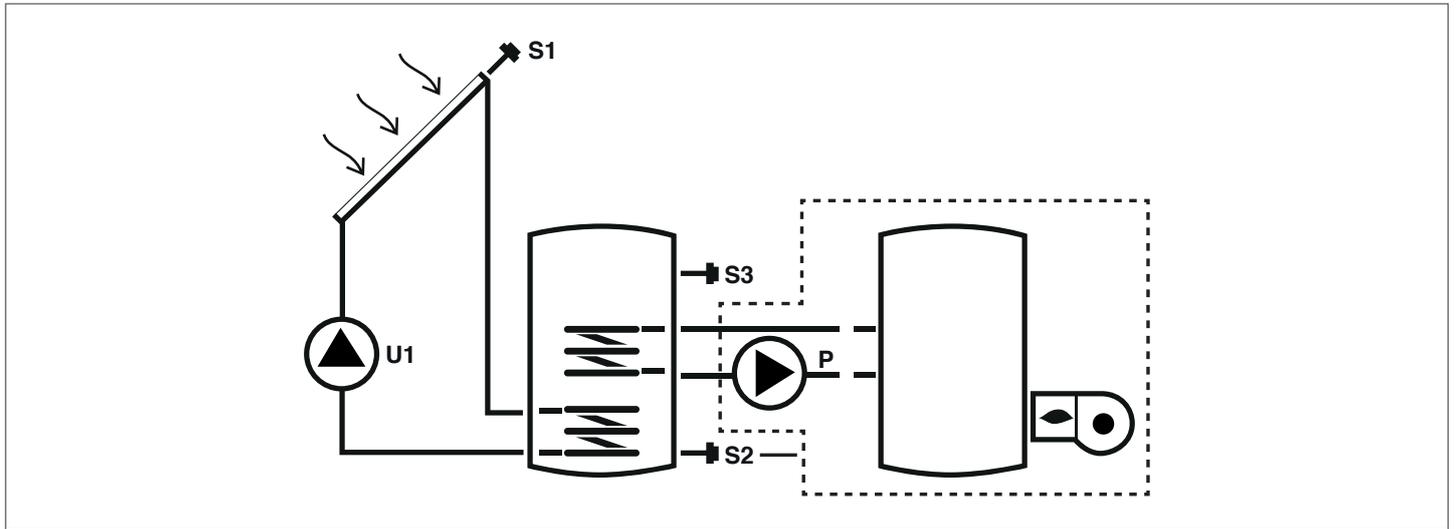
Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
3	S4 probe S4 temperature display	S4	°C	VIS	-40	>260	/	0,1
59	SETPOINT BO11 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1LO	°C	SET	15	90	60	0,5
64	SETPOINT BO12 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 2	B2LO	°C	SET	15	90	60	0,5
73	HEAT EXCHANGE THRESHOLD BO11-BO12 defines the temperature threshold at which heat exchange between STORAGE SYSTEM 1 and STORAGE SYSTEM 2 is permitted	ST12	°C	SET	15	90	50	0,5

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

**System 3 – SOLAR SYSTEM WITH SUPPLEMENTARY HEATING**

The system maximises the solar energy supply by working on the temperature difference between solar collector (S1) and the low zone of storage system (S2) to maintain the storage temperature set in parameter n°59 (B1L0 – SETPOINT BOILER1 LOW). If the solar heating is not sufficient, a supplementary heating system can be used with the schedule set in parameter DAYn.

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**

**SET** editable parameter  
**VIS** read-only parameter  
**S** temperature probe

**U** pump/valve managed by regulator  
**P** pump  
 --- integration system

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description". To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

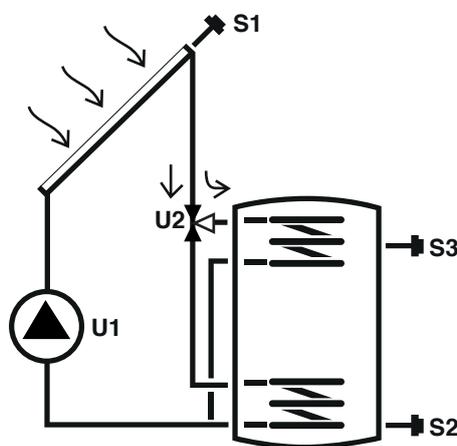
Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
59	SETPOINT B01 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1L0	°C	SET	15	90	60	0,5
91	Supplement activation threshold defines the temperature threshold below which the burner/integration system starts within the set schedule.	SAB1	°C	SET	40	70	50	0,5
94	Supplement deactivation threshold defines the temperature threshold above which the burner/integration system stops within the set schedule.	SSB1	°C	SET	45	70	55	0,5
103	SUPPLEMENT BURNER SCHEDULE DAY1 programs the 48 Monday time bars.	DAY1	-	SET	0	48	1	/
104	SUPPLEMENT BURNER SCHEDULE DAY2 programs the 48 Tuesday time bars.	DAY2	-	SET	0	48	1	/
105	SUPPLEMENT BURNER SCHEDULE DAY3 programs the 48 Wednesday time bars	DAY3	-	SET	0	48	1	/
106	SUPPLEMENT BURNER SCHEDULE DAY4 programs the 48 Thursday time bars	DAY4	-	SET	0	48	1	/

Par. No.	Description	Initials	UM		Value			
107	SUPPLEMENT BURNER SCHEDULE DAY5 programs the 48 Friday time bars	DAY5	-	SET	0	48	1	/
108	SUPPLEMENT BURNER SCHEDULE DAY6 programs the 48 Saturday time bars	DAY6	-	SET	0	48	1	/
109	SUPPLEMENT BURNER SCHEDULE DAY7 programs the 48 Sunday time bars	DAY7	-	SET	0	48	1	/

**System 4 - SOLAR SYSTEM WITH STRATIFIED FILLING OF THE STORAGE SYSTEM**

The system maximises the solar energy supply by working on the temperature difference between solar collector (S1) and the storage system both to heat the high zone (S3) and maintain the temperature set in parameter n°56 (B1HI - SETPOINT BOILER1 HIGH) as well as to heat the low zone (S2) and maintain the temperature set in parameter n°59 (B1LO - SETPOINT BOILER1 LOW). Thus, it is possible to manage the storage system heating, controlling the stratification between high zone (S3) and low zone (S2).

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**  
**SET** editable parameter  
**VIS** read-only parameter  
**S** temperature probe  
**U** pump/valve managed by regulator

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description".  
 To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

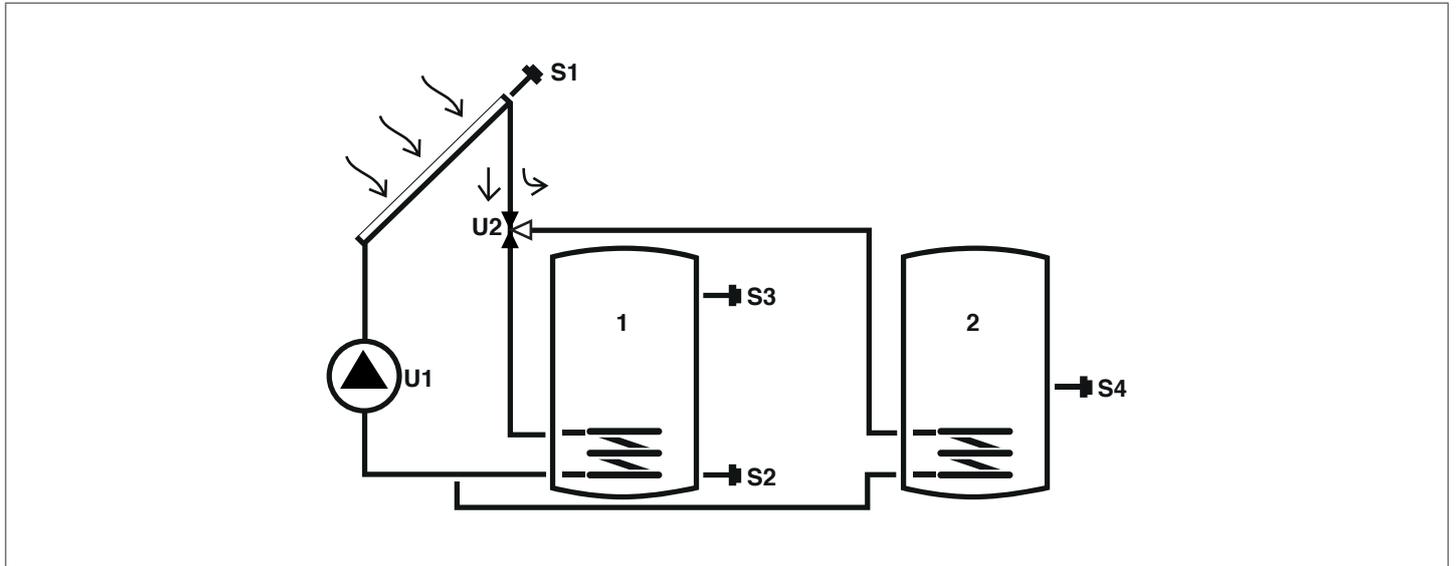
Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
56	SETPOINT B01 HIGH ZONE defines the water temperature setpoint for the high zone of STORAGE SYSTEM 1	B1HI	°C	SET	15	90	60	0,5
59	SETPOINT B01 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1LO	°C	SET	15	90	60	0,5

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

**System 5 – SOLAR SYSTEM WITH 2 TANKS AND PRIORITY LOGICS**

The system maximises the solar energy supply by working on the temperature difference between solar collector (S1) and the low zone of the first storage system (S2) to maintain the storage 1 temperature set in parameter n°59 (B1L0 – SETPOINT BOILER1 LOW). It also works on the temperature difference between solar collector (S1) and the low zone of the second storage system (S4) to maintain the storage 2 temperature set in parameter n°64 (B2L0 – SETPOINT BOILER2 LOW). The storage system priority is defined during commissioning.

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**  
**SET** editable parameter  
**VIS** read-only parameter  
**S** temperature probe  
**U** pump/valve managed by regulator

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description". To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

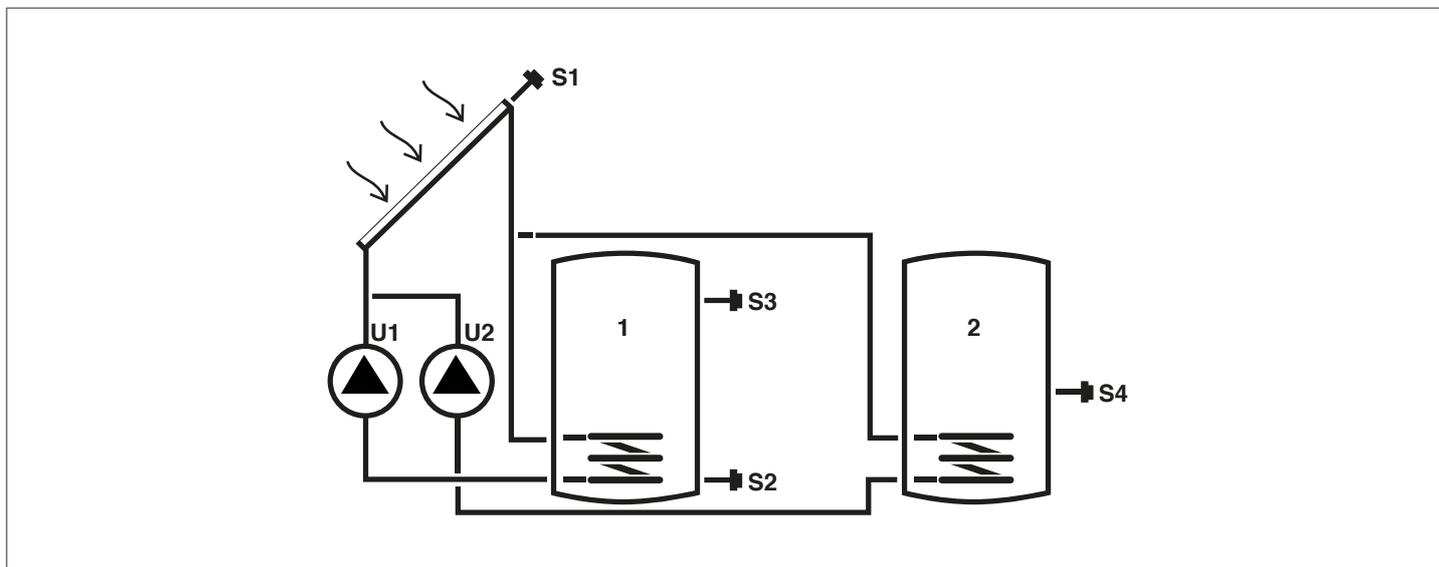
Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
3	S4 probe S4 temperature display	S4	°C	VIS	-40	>260	/	0,1
59	SETPOINT B011 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1L0	°C	SET	15	90	60	0,5
64	SETPOINT B012 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 2	B2L0	°C	SET	15	90	60	0,5

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

**System 6 – SOLAR SYSTEM WITH 2 TANKS AND OPERATION WITH PUMPS**

The system maximises the solar energy supply by working on the temperature difference between solar collector (S1) and the low zone of the first storage system (S2) to maintain the storage 1 temperature set in parameter n°59 (B1L0 – SETPOINT BOILER1 LOW). It also works on the temperature difference between solar collector (S1) and the low zone of the second storage system (S4) to maintain the storage 2 temperature set in parameter n°64 (B2L0 – SETPOINT BOILER2 LOW). The storage system priority is defined during commissioning.

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**  
**SET** editable parameter  
**VIS** read-only parameter  
**S** temperature probe  
**U** pump/valve managed by regulator

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description". To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

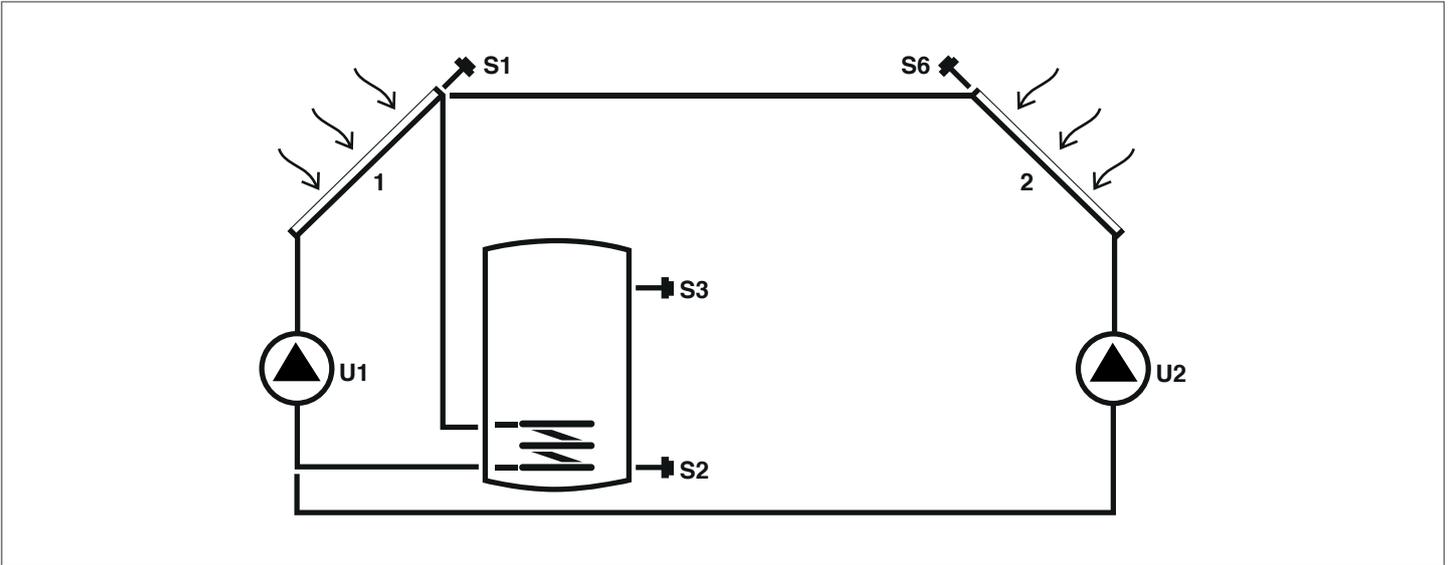
Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
3	S4 probe S4 temperature display	S4	°C	VIS	-40	>260	/	0,1
59	SETPOINT B011 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1L0	°C	SET	15	90	60	0,5
64	SETPOINT B012 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 2	B2L0	°C	SET	15	90	60	0,5

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

**System 7 – SOLAR SYSTEM WITH 2 COLLECTORS AND 1 ACCUMULATION TANK**

The system maximises the solar energy supply by working both on the temperature difference between the first solar collector (S1) and the low zone of storage system (S2) as well as on the temperature difference between the second solar collector (S6) and the same zone (S2) to maintain the storage temperature set in parameter n°59 (B1L0 – SETPOINT BOILER1 BASSO).

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**

- SET** editable parameter
- VIS** read-only parameter
- S** temperature probe

**U** pump/valve managed by regulator

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description".  
To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

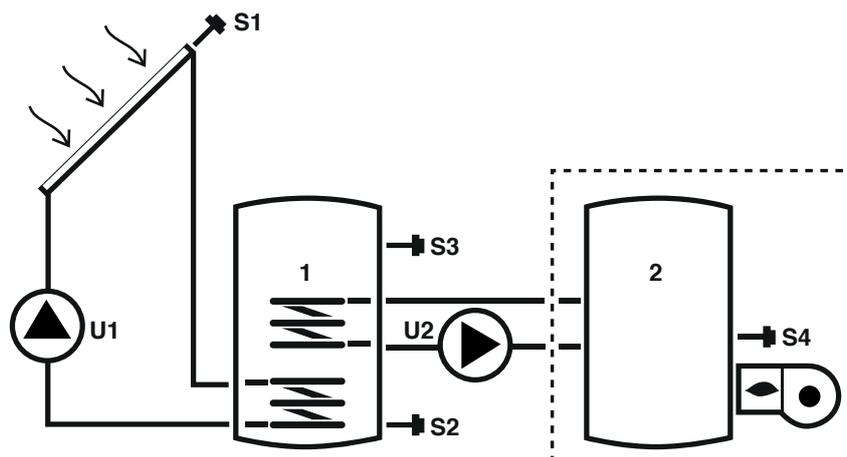
Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
5	S6 probe S6 temperature display	S6	°C	VIS	-40	>260	/	1
59	SETPOINT BO11 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1L0	°C	SET	15	90	60	0,5

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

**System 8 – Solar system with supplementary heating through pump acting on solid fuel generator**

The system maximises the solar energy supply by working on the temperature difference between solar collector (S1) and the low zone of storage system (S2) to maintain the temperature set in parameter n°59 (B1LO – SETPOINT BOILER1 LOW). It manages a supplementary system (2), for example a stove, by working on the temperature difference between said system (S4) and the high zone of storage system (S3) to maintain the temperature set in parameter n°56 (B1HI – SETPOINT BOILER1 HIGH). The activation occurs when the temperature of the high zone of storage system (S3) is greater than the value set in parameter n°160 (T1ON – STOVE ACTIVATION THRESHOLD).

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**  
**SET** editable parameter  
**VIS** read-only parameter  
**S** temperature probe  
**U** pump/valve managed by regulator  
 --- integration system

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description". To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

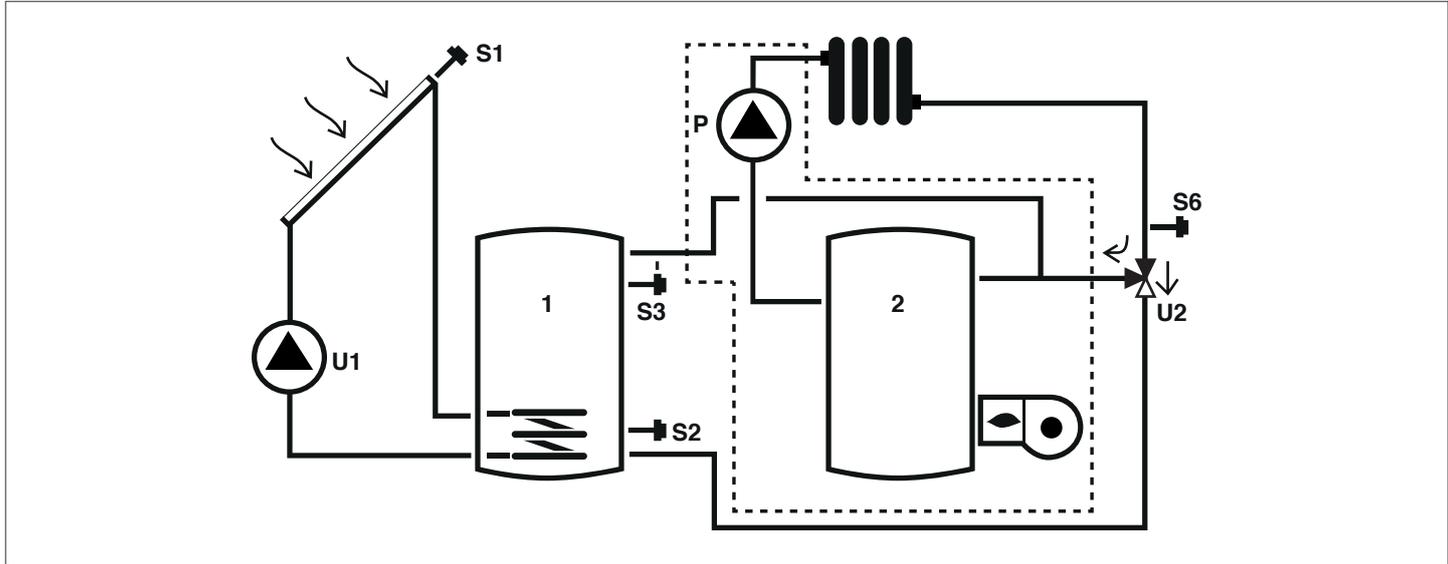
Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
3	S4 probe S4 temperature display	S4	°C	VIS	-40	>260	/	0,1
56	SETPOINT B011 HIGH ZONE defines the water temperature setpoint for the high zone of STORAGE SYSTEM 1	B1HI	°C	SET	15	90	60	0,5
59	SETPOINT B011 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1LO	°C	SET	15	90	60	0,5
160	Output U2 activation temperature for solid fuel generator supplementary system defines the temperature threshold to activate heat exchange between stove and storage system	T1ON	°C	SET	65	75	65	0,5

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

**System 9 – SOLAR SYSTEM WITH TEMPERATURE INCREASE SYSTEM IN HEATING CIRCUIT RETURN**

The system maximises the solar energy supply by working on the temperature difference between solar collector (S1) and the low zone of storage system (S2) to maintain the storage temperature set in parameter n°59 (B1L0 – SETPOINT BOILER1 LOW). It also checks the temperature difference between the high zone of storage system (S3) and the return circuit of heating system (S6) to integrate such system in case the storage system is sufficiently heated.

 CROSS THE SET-UP SYSTEM (TO BE DONE BY THE INSTALLER)



**Key:**

- SET** editable parameter
- VIS** read-only parameter
- S** temperature probe

- U** pump/valve managed by regulator
- P** pump

For operating instructions on how to modify adjustable parameters, refer to chapter "Parameter description".  
To modify the date, time and week day, refer to the instructions outlined in chapter "Putting into service".

Par. No.	Description	Initials	UM		Value			
					min.	max.	default	step
0	S1 probe S1 temperature display	S1	°C	VIS	-40	>260	/	0,1
1	S2 probe S2 temperature display	S2	°C	VIS	-40	>260	/	0,1
2	S3 probe S3 temperature display	S3	°C	VIS	-40	>260	/	0,1
5	S6 probe S6 temperature display	S6	°C	VIS	-40	>260	/	1
59	SETPOINT BO1 LOW ZONE defines the water temperature setpoint for the low zone of STORAGE SYSTEM 1	B1L0	°C	SET	15	90	60	0,5

 The set setpoint may not be reached due to a safety function. The parameters defining the safety and regulation functions are set up by a qualified technician. Contact your local Technical Assistance Service for any further needs.

## 6 TROUBLESHOOTING

FAULT	CAUSE	SOLUTION
<b>The control unit does not turn on.</b>	Lack of power supply.	<ul style="list-style-type: none"> <li>- Check the presence of electric power supply</li> <li>- Contact your local Technical Assistance Service</li> </ul>
<b>The temperature of probe Sx is not displayed (x = 1, 2, 3, 4, 6).</b>	Cable of sensor Sx not connected to the control unit.	<ul style="list-style-type: none"> <li>- Contact your local Technical Assistance Service</li> </ul>
	Probe Sx faulty.	

## 7 RECYCLING AND DISPOSAL

The solar controller includes the ABS casing and the electronic board. At the end of the device's useful life, these components must be separated and disposed of according to current regulations in the country of installation.

The manufacturer strives to continuously improve all products. Appearance, dimensions, technical specifications, standard equipment and accessories are therefore liable to modification without notice.