

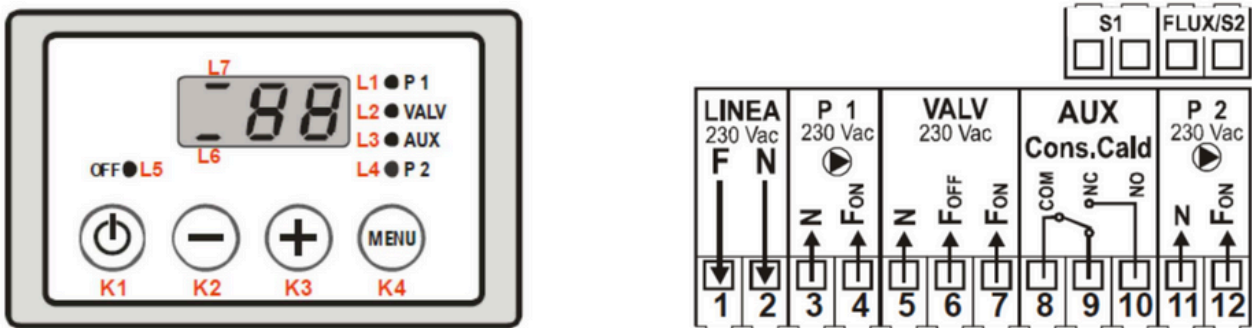
CONTROL UNIT





Function

E5AS is a product equipped with patented AsyMatrix® technology and optimized for the production of domestic hot water in boilers. Compared to symmetric heat exchangers, E5AS offers a much lower pressure drop. The product also provides a thermal length suitable for condensing boiler systems. E5AS features a group of active front and top plates that provide mechanical stability and contribute to active heat transfer. In this way, E5AS delivers higher heat transfer with a smaller amount of material.

Control unit connection diagram



Control unit settings

	Abbreviation	Terminals	Device	Characteristics		
INPUTS	S1	S1	Thermo-boiler sensor	Sensor NTC10K@25° -50+120°C Misura: 0+99°C ± 1°C		
	FLUX/S2	FLUX/S2	Flow switch	Contatto ON/OFF		
			Domestic hot water sensor	Sensor NTC10K@25° -50+120°C Misura: 0+99°C ± 1°C		
OUTPUTS	P1	3	N	Thermo-boiler pump	Supply 230 Vac Max 5A 230Vac	
		4				FON
	VALV	5	N	Domestic hot water valve(s)	Supply 230 Vac Max 5A 230Vac	
		6				FOFF
		7				FON
	AUX	8	COM	Auxiliary control	Clean changeover contacts Max 5A 230Vac	
		9	N.C.			
		10	N.O.			
P2	11	N	System pump	Supply 230 Vac Max 3A 230Vac		
	12				FON	
LINE		1	F	Main power supply	230 Vac ±10%, 50/60 Hz Protective fuse T3,15 A	
		2				N
Mechanical dimensions:			Termoregolatore da incasso: 120 x 80 x 50 mm			
Power consumption:			2VA			
Applicable standards:			EN 60730-1 50081-1 EN 60730-1 A1 50081-2			
TiEmme elettronica Marsciano (PG) Italia Tel: +39 075.8743.905 Fax: +39 075.8742239 info@tiemmeelettronica.it						

Control unit functionality

1) Switching on /switching off

The control unit is turned on/off by pressing and holding button K1.

- The **OFF** state is indicated by **LED L5** lighting up
- When the control unit is turned on, the following sequence of messages is displayed:
- Product code: 069
- Product revision: r1.0
- Kit configuration: CFG 50

2) Display

The display shows the value registered by the sensor **S1**
In settings Kit=**CFG 40** or **CFG 50**, by pushing the button **K4** for some seconds, you can see on the display the temperature registered by the sensor **S2** (the led L6 is on)

3) Alarm function

If the temperature registered by the sensor **S1** is higher than the temperature set on the Thermostat **A01**

- A visual and acoustic signal will start
- **SILENCE** function: the acoustic signal can be deactivated for 5 minutes by keeping any button pushed. If the alarm remains on, the acoustic signal will reactivate.

4) Anti-ice function

If the temperature registered by the sensor **S1** get below the temperature set on the thermostat A03:

- The pump connection **P1** is activated, on the display the word **ICE** appear.

5) STANDBY function

If the controller is **OFF** but with alarm or anti-ice on the controller automatically switches on.

6) ANTI BLOCKING function for Pump P1 and P2

In case the pumps P1 and P2 are kept off for more time than the value set on Timer **T01** (about a week)

- The pump **P1** or **P2** connection is activated for **T02** seconds and the display shows **blP**

This function is activated also when the controller is in **STANDBY**

7) TEST Pump P1 function

By keeping the button **K2** pushed

- The pump connection **P1** is activated as long as the button is kept pushed and the display shows the writing **tSt**

8) TEST Pump P2 function

By keeping the button **K3** pushed

- The **P3** connection is activated as long as the bottom is kept pushed and the display shows the writing **tSt**

9) Flow switch

The closure of the flow switch contact is shown by the led **L7** on the display

10) Failures OR ALARMS MESSAGES

The controller will report sensor failures.

Flashing message with failure report:

- **Lo** → indicates too low temperatures (temperature below 0°C); **Sensor interrupted**
- **Hi** → indicate too high temperatures (temperature over 100°C); **Short circuit**

11) Main menu

By clicking the button **K4** you can see the set flow switch values **P1/ VALV / AUX / P2** (the corresponding led will be on)

To change any set, get on the thermostat value you want to change

- Using the buttons **K3** e **K2** the value will increase or decrease
- To fix it please wait for about 10 seconds or scroll all the parameters with the button **K4**

MAIN MENU PARAMETERS				Cod.	Led	Min	Factory	Max	Configuration
Flow switch	P1	Sensor	S1	A04	L1	25	30	99	In all configurations
Flow switch	VALV	Sensor	S1	A05	L2	25	45	99	Configuration 50 excluded
Flow switch	VALV	Sensor	S2	A15	L2	25	50	99	Only in configuration 50
Flow switch	AUX	Sensor	S1	A15	L3	25	50	99	Only in configuration 40
Flow switch	P2	Sensor	S2	A06	L4	25	70	99	In all configurations

Installation menu

Access to this MENU is restricted to **EXPERT PERSONNEL** only, as modifying the parameters may render the product unsuitable for its intended application.

- To access the MENU, press buttons K1 and K4 simultaneously for 5 seconds.
- To scroll through the parameter labels, use buttons K3 and K2.
- To view the value of a parameter, press K4.
- To modify the value, press K3 and K2 simultaneously with K4.
- To view the parameter list again and save changes, press K4.
- To exit, wait approximately 5 seconds.

INSTALLER'S PARAMETER		U.m.	Symbol	Min	Factory	Max
Product configuration	On sensor S1	-	CFG	10	50	50
Flow switch to activate the alarm	On sensor S1	°C	A 01	80	90	99
Security flow switch	On sensor S1	°C	A 02	80	80	90
Anti-ice flow switch	On sensor S1	°C	A 03	4	6	8
Anti-condensing flow switch	On sensor S1	°C	A 07	25	40	85
Hysteresis PUMP 1	On sensor S1	°C	i 04	1	2	20
Hysteresis flow switch valve	On sensor S1	°C	i 05	1	2	20
Hysteresis flow switch PUMP P2	On sensor S1	°C	i 06	1	2	20
Hysteresis flow switch anti-condensing		°C	i 07	1	2	20
Hysteresis AUX su sonda S2 in CFG 40		°C	i 15	1	5	20