

User Manual

TC 110-24-A-50

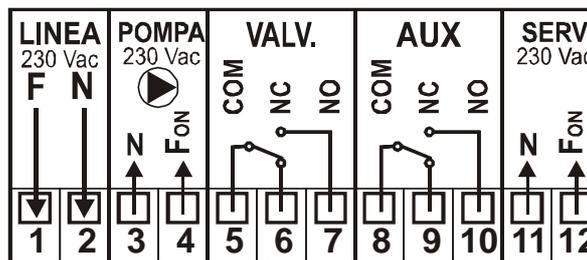
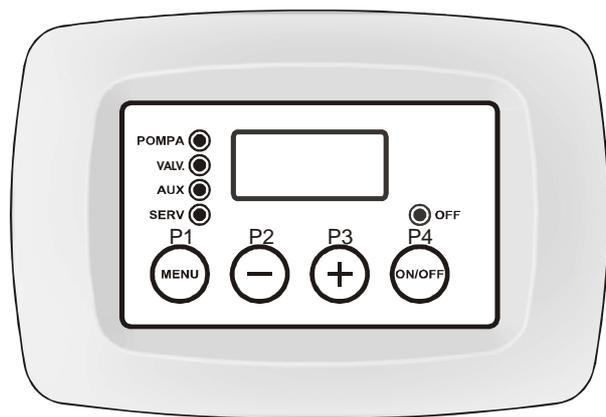


fig. 1 Aspetto esterno e schema collegamenti elettrici

Ingressi	SONDA	Fireplace Probe:	Temperature Range 0 – 100 °C			
	FLUX	Consent ON/OFF:	Flowswitch/ Boiler-Sanitary thermostat			
Uscite	POMPA	Pump:	230 Vac	Connectors	3(N) – 4(FON)	
	VALVOLA	ElectroValve:	Free Contacts	Connectors	5(COM) – 6(N.C.) – 7(N.O.)	
	AUX	Auxiliary:	Free Contacts	Connectors	8(COM) – 9(N.C.) – 10(N.O.)	
	SERV	THERMOSTAT Configuration				
		ElectroValve 2 wires:	Free Contacts	Connectors	11(N) – 12(FON)	
GRILL Configuration						
	Grill:	230 Vac:	Connectors	11(N) – 12(FON)		

⇒ FUNCTIONALITY

1. ON/OFF:

The ON/OFF of the controller is through the extended pressure of the button **P4 (ON/OFF)**

- The state OFF is signalled with the blinking led **OFF**

2. ALARM Function:

If the temperature read by the **PROBE** is over the value Alarm thermostat **A01**

- The acoustic and visual signal is activated
 - Function **SILENCE**: the acoustic signal could be deactivated for 5 minutes pushing a button
- After this time, if the alarm condition is active, the acoustic signal starts again.

3. ANTI FREEZING Function:

If the temperature read by the **PROBE** is under the value of the Anti Freezing thermostat **A03**

- The output **PUMP** is activated
- The display shows **ICE**

4. STANDBY Function:

If the system is **OFF**

in condition of **ALARM** or **ANTI FREEZING**

- The device starts **ON**

5. ANTI BLOCK PUMP Function:

If the **PUMP** is off for a time over Timer Anti block **T01 (about a week)**

- The output **PUMP** is activated for **T02 seconds**
- The display shows **bLP**

The function is ON also in **STANDBY**.

6. TEST PUMP Function:

Pushing the button **P3(+)**

- The output **PUMP** is activated for the time of the button's pushing
- The display shows **tSt**

7. SANITARY Function:

➤ Modality H__ = H0

Production of internal fireplace sanitary WITHOUT Sanitary Electro valve

In case of:

- Input FLUX = ON **Flowswitch contact close for Sanitary Water Request**
 - The **PUMP** is deactivated
 - The Function is signalled with the blinking led PUMP and high hyphen on the first digit of the display

The function is **NOT ACTIVE** when the PROBE's temperature is over the value of the security thermostat **A02**

➤ Modality H__ = H1

Production of internal sanitary or external boiler WITH Sanitary Electro Valve

In case of:

- Input FLUX = ON **Flowswitch contact close for sanitary water request**
Or contact boiler thermostat close for temperature not reached
- The temperature read by the PROBE is over the thermostat **T-VALV**
 - The output **VALV** is activated for the sanitary ElectroValve management
 - The activation of the **PUMP** is forced
 - The function is signalled with the high segment on the display's first digit

The Function is **NOT ACTIVE** when the PROBE's temperature is over the value security thermostat **A02**

➤ Modality H__ = H1b

Production of internal sanitary or external boiler WITH Sanitary Pump

In case of:

- Input FLUX = ON **Flowswitch contact close for sanitary water request**
Or contact boiler thermostat close for temperature not reached
- The temperature read by the PROBE is over the Thermostat **T-VALV**
 - The output **VALV** is deactivated
 - The output **PUMP** is activated for the sanitary Pump management
 - The function is signalled with the high segment on the display's first digit

The Function is **NOT ACTIVE** when the PROBE's temperature is over the value security thermostat **A02**

⇒ 'SERV' CONFIGURATION

It allows the functioning of the output **SERV**

- Function **GRILL**: button **P2(-)** Output= **OFF** button **P3(+)** = **ON**
- Function **THERMOSTAT** programmable
- To enter the **Menu** push **together** buttons **P2(-)** and **P3(+)** for about **5 seconds**
- The display shows the configuration: **Gri** or **tEr**
- Modify through buttons **P2(-)** and **P3(+)** **together to** button **P4(MENU)**
- To exit and memorise wait about 5 seconds.

⇒ MAIN Menu

❖ **Setting out of the functioning THERMOSTAT of the controlled outputs:**

T-PUMP: for the control of the PUMP functioning

T-VALV: for the control of VALVE

T-AUX: for integration of the gas boiler, ElectroValve or other application

T-SERV: for the controller of Electro Valve or other application

- Through the **click** of the button **P4(MENU)** is visualised the values of the setted thermostats signalled by the correspondent blinking led PUMP / VALV / AUX / SERV
 - **To modify:**
 - Chose the value to modify
 - Through buttons **P3(+)** e **P2(-)** increase/decrease the value
 - To memorise wait about 5 seconds or push button **P4(MENU)**

The Thermostat SERV is not available in case of configuration SERV = GRILL

See Menu 'SERV' CONFIGURATION

Main menu Parameters	U.M	Code	Min	Fabbrica	Max	Valori impostati
T-PUMP thermostat	[°C]	A 04	20	40	85	
T-VALV thermostat	[°C]	A 05	20	45	85	
T-AUX thermostat	[°C]	A 06	20	50	85	
T-SERV thermostat	[°C]	A 07	20	60	85	

⇒ INSTALLER Menu

The admission to this **Menu** is only for **INSTALLERS** or **EXPERT PERSONNEL**, because modified parameters could damage the product or could make the product not fit for the applications.

- To enter the MENU push **together** buttons **P4(MENU)** and **P1 (ON/OFF)** for about 5 seconds.
- To visualise the parameters use buttons **P3(+)** and **P2(-)**
- To Visualise the parameter push button **P4(MENU)**
- To modify the value push buttons **P3(+)** or **P2(-)** **together with** **P4(MENU)**
- To see the list of the parameters and memorise push button **P4(MENU)**
- To exit and memorise wait about 5 seconds.

INSTALLER Menu Parameters	U.m.	Code	Min	Default	Max	Set Values
Thermostat of activation ALARM Function	°C	A 01	85	90	99	
SAFETY Thermostat	°C	A 02	20	85	90	
ANTI-FREEZING thermostat	°C	A 03	4	6	8	
Thermostat T-PUMP Hysteresis	°C	i 04	1	2	15	
Thermostat T-VALV Hysteresis	°C	i 05	1	2	15	
Thermostat T-AUX Hysteresis	°C	i 06	1	2	15	
Thermostat T-SERV Hysteresis	°C	i 07	1	2	15	
Timer of Pump ANTI BLOCK	h	t 01	1	168	255	
Time of activation Pump in ANTI BLOCK	sec	t 02	0	20	99	
ANTIFREEZING Enable		P06	0	1	1	
SANITARY Modality		H__	0	0	1b	

⇒ FAILURE SIGNALLING OR ALARMS

The controller could signal the damage of the probe.

Blinking damage messages:

- **Lo:** out of range to the low temperature (under 0°C): **Probe broken**
- **Hi:** out of range to the high temperature (over 100°C): **Probe in short circuit**

Power Supply:	230 Vac ±10%~ 50HZ:	
Protection:	Internal fuse T3,15 A	
Temperature Probe:	Functioning Temperature range -50°C / 130 °C Measure Range: 0 – 99 °C: ± 1°C	
Outputs:	PUMP: 230 Vac 5A Max VALVE: Free Contacts 5A Max AUX: Free Contacts 5A Max SERV: 230 Vac 5A Max	
Mechanical dimensions:	Inbox Controller: 120 x 80 x 50 [mm]	
Norme applicate:	EN 60730-1 50081-1 EN 60730-1 A1 50081-2	

Technical characteristics

In the view of a constant development of their products, the manufacturer reserves the right for changing technical data and features without prior notice. The consumer is guaranteed against any lack of conformity for 24 months from the delivery time, according to the European Directive 1999/44/EC. The full text of guarantee is available on request from the seller.

The company does not answer for damages due to a wrong wiring or improper use of the device!

TiEmme elettronica Marsciano (PG) Italy
Tel: +39 075.8743.905 Fax: +39 075.8742.239
info@tiemmeelettronica.it

DIMOSTRAZIONE DIAGRAMS

Here are some examples of demonstrative systems and the configuration of the parameters: thermostats, **H**, **SERV**, for the management of the Heating, Sanitary circuit and Integratio Boiler.

H	0	30 < S1 < 45 °C:	PUMP=ON e VALV= OFF	<p style="text-align: center;">Internal Sanitary with PUMP Stop</p>
T-PUMP	30°C	S1 > 45 °C:	PUMP e VALV = ON	
T-VALV	45°C	If FLUX=Close	PUMP = OFF	
A02	85°C	S1 > 85 °C:	PUMP e VALV = ON	
T-AUX	45°C	S1 > 45°C:	Gas Boiler Integration =OFF	

H	1	30 < S1 < 45 °C:	PUMP e VALV= ON	<p style="text-align: center;">Internal Sanitary with circulation / Valve management</p>
T-PUMP	30°C	S1 > 45 °C:	PUMP=ON e VALV = OFF	
T-VALV	45°C	If FLUX=Close	VALV =ON	
A02	85°C	S1 > 85 °C:	VALV =OFF	
T-AUX	45°C	S1 > 45°C:	Gas Boiler Integration =OFF	

H	1	30 < S1 < 45 °C:	PUMP e VALV= ON	<p style="text-align: center;">Sanitary with external exchanger / Valve management</p>
T-PUMP	30°C	S1 > 45 °C:	PUMP=ON e VALV = OFF	
T-VALV	45°C	If FLUX=Close	VALV =ON	
A02	85°C	S1 > 85 °C:	VALV =OFF	
T-AUX	45°C	S1 > 45°C:	Gas Boiler Integration =OFF	

H	1b	30 < S1 < 45 °C:	PUMP=ON e VALV= OFF	<p style="text-align: center;">Sanitary with external exchanger / Pump management</p>
T-PUMP	30°C	S1 > 45 °C:	PUMP=OFF e VALV=ON	
T-VALV	45°C	If FLUX=Close and S1 > 30°C:	PUMP=ON e VALV=OFF	
A02	85°C	S1 > 85 °C:	PUMP e VALV =ON	
T-AUX	45°C	S1 > 45°C:	Gas Boiler Integration =OFF	

H	1b	30 < S1 < 45 °C:	PUMP=ON e VALV= OFF	<p style="text-align: center;">Internal Sanitary with circulation / Pump management</p>
T-PUMP	30°C	S1 > 45 °C:	PUMP=OFF e VALV=ON	
T-VALV	45°C	If FLUX=Close and S1 > 30°C:	PUMP=ON e VALV=OFF	
A02	85°C	S1 > 85 °C:	PUMP and VALV =ON	
T-AUX	45°C	S1 > 45°C:	Gas Boiler Integration =OFF	