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SEITRON TDST24M

Seitron Elios MIDI Control Unit

Model: TDST24M - User Manual

1. Introduction

The Seitron Elios MIDI control unit (Model TDST24M) is an innovative device specifically designed for the advanced monitoring and management of solar thermal panel systems. It offers intelligent control, ensuring optimal performance and reliability for your solar energy installation.

This manual provides essential information for the proper installation, operation, and maintenance of your Elios MIDI control unit, helping you maximize the efficiency and management of your solar thermal system.

2. Key Features

- **Intelligent Solar Energy Control:** Designed for advanced monitoring of solar thermal panel systems.
- **Advanced Technology:** Equipped with 3 relay outputs (2 for loads + 1 for alarm), one PWM output, one 0-10V output, and 3 sensor inputs, providing a versatile solution for various solar system types.
- **Intuitive Management:** Features 6 different plant schemes, allowing the control unit to automatically manage inputs and outputs for optimized solar thermal system performance.
- **Detailed Visualization:** A backlit LCD display provides a comprehensive overview of the hydraulic scheme, output status, sensor readings, and other essential monitoring and management information.
- **Optimal Performance:** Operates on 230V~ 50Hz with power consumption less than 2 VA, ensuring efficient and reliable operation across a wide range of temperatures and environmental conditions.
- **Sensor Compatibility:** Supports 3 x NTC 10K @ 25°C ±1% sensors.
- **Wide Operating Limits:** Sensor operating limits are -50°C to +200°C for the collector and -50°C to +110°C for the boiler.

3. Setup and Installation

Proper installation is crucial for the optimal functioning of the Elios MIDI control unit. It should be installed by a qualified technician in accordance with local electrical codes and regulations.

3.1 Mounting

Mount the control unit in a dry, protected location, away from direct sunlight, excessive heat, or moisture. Ensure adequate ventilation around the unit.

3.2 Electrical Connections

The Elios MIDI control unit requires a 230V~ 50Hz power supply. Connect the power according to the wiring diagram provided in the full installation guide (not included in this manual). Ensure all connections are secure and properly insulated.

Connect the NTC 10K sensors to the designated input terminals. Pay close attention to the correct assignment of sensors to collector, boiler, and other measurement points as per your system's hydraulic scheme.

Connect the relay outputs, PWM output, and 0-10V output to the respective loads (pumps, valves, etc.) as required by your solar thermal system design.

Figure 3.1: Rear view of the Elios MIDI control unit, illustrating the various connection terminals for power, sensors, and outputs. This view is crucial for proper wiring during installation.

4. Operating Instructions

The Elios MIDI control unit features an intuitive interface for easy operation and monitoring.

4.1 Display Overview

Figure 4.1: Front view of the Elios MIDI control unit, highlighting the backlit LCD display. The display shows the selected hydraulic scheme (e.g., SCH 09) and current system status, along with navigation buttons.

The backlit LCD display provides real-time information about your solar thermal system. It typically shows the active hydraulic scheme, current temperatures from connected sensors, and the status of outputs (e.g., pump running).

4.2 Navigation Buttons

The control unit features several buttons for navigation and parameter adjustment:

- **Up/Down Arrows:** Used to navigate through menus, adjust values, or scroll through information.
- **SET Button:** Used to confirm selections or enter a menu.
- **ESC Button:** Used to exit a menu or cancel an operation.

4.3 Scheme Selection

The Elios MIDI supports 6 different hydraulic schemes. To select or change a scheme, navigate through the main menu using the arrow buttons and confirm with the SET button. Refer to the detailed programming manual for specific instructions on configuring each scheme.

4.4 Monitoring Parameters

From the main display, you can view various parameters such as:

- Collector temperature
- Boiler temperature
- Auxiliary temperatures (if applicable)
- Pump status
- Alarm status

Use the arrow buttons to cycle through the available information screens.

5. Maintenance

The Seitron Elios MIDI control unit is designed for reliable operation with minimal maintenance. However, periodic checks can help ensure its longevity and continued performance.

- **Cleaning:** Gently wipe the unit's exterior with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Sensor Check:** Periodically verify that sensor cables are securely connected and free from damage. Ensure sensors are properly positioned in their respective locations (collector, boiler).
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent damage to the electronics.
- **Firmware Updates:** Check the Seitron official website periodically for any available firmware updates that might improve performance or add new features. Consult a qualified technician for any firmware update procedures.

6. Troubleshooting

If you encounter issues with your Elios MIDI control unit, refer to the following common problems and solutions before contacting technical support.

6.1 No Display / Unit Not Powering On

- **Check Power Supply:** Ensure the unit is properly connected to a 230V~ 50Hz power source and that the circuit breaker or fuse is not tripped.
- **Wiring:** Verify all power connections are secure and correctly wired.

6.2 Incorrect Temperature Readings

- **Sensor Connection:** Check that the NTC 10K sensors are securely connected to the correct terminals on the control unit.
- **Sensor Placement:** Ensure sensors are correctly installed in their respective locations (e.g., collector sensor in the collector, boiler sensor in the boiler).
- **Sensor Damage:** Inspect sensor cables for any visible damage or kinks. A damaged sensor may need replacement.

6.3 Outputs Not Activating (e.g., Pump Not Running)

- **Scheme Configuration:** Verify that the selected hydraulic scheme and its parameters are correctly configured for your system's operation.
- **Temperature Differential:** Ensure the temperature differential between the collector and boiler is sufficient to trigger the pump according to the programmed settings.
- **Load Connection:** Check the wiring to the pump or other loads connected to the relay outputs.

For persistent issues or problems not covered here, please contact Seitron technical support or a qualified service technician.

7. Technical Specifications

Figure 7.1: Side profile of the Elios MIDI control unit, illustrating its compact design and dimensions.

Parameter	Value
Brand	SEITRON

Model	Elios MIDI (TDST24M)
Color	White
Voltage	230V~ 50Hz (AC)
Power Absorption	< 2 VA
Display Type	LCD (Backlit)
Sensor Type	3 x NTC 10K @ 25°C ±1%
Sensor Operating Limits (Collector)	-50°C .. +200°C
Sensor Operating Limits (Boiler)	-50°C .. +110°C
Precision	±2°C
Dimensions (L x H x P)	156 x 108 x 47 mm

8. Warranty and Support

For information regarding the product warranty, please refer to the warranty card included with your purchase or visit the official Seitron website. The warranty typically covers manufacturing defects under normal use conditions.

For technical support, service, or spare parts, please contact your authorized Seitron dealer or visit the Seitron official website for contact information. When contacting support, please have your product model (TDST24M) and serial number (if applicable) ready.

Website: www.seitron.com

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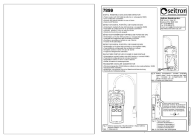
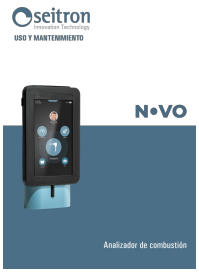
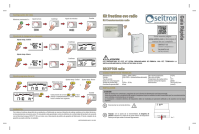
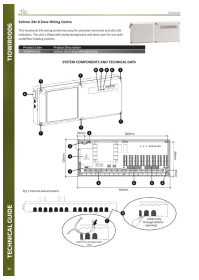
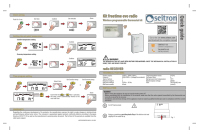
Related Documents - TDST24M

	Manuel d'Utilisation et d'Entretien Analyseur de Combustion Seitron NOVO Guide complet pour l'analyseur de combustion Seitron NOVO. Couvre le fonctionnement, la sécurité, l'entretien, les mesures de gaz, la connectivité et les spécifications techniques pour les professionnels du CVC et de l'industrie.
	Seitron 7899 Digital Handheld Gas Leakage Detector Manual User manual and technical specifications for the Seitron 7899 digital handheld gas leakage detector, covering operation, features, and safety information.

	[Seitron NOVO: Manual de Uso y Mantenimiento del Analizador de Combustión] Manual detallado de Seitron para el analizador de combustión NOVO. Cubre operación, mantenimiento, especificaciones técnicas y solución de problemas para profesionales.
	[Kit Seitron Freetime Evo Radio: Guía Rápida e Instalación] Guía concisa para la instalación y configuración del Kit Seitron Freetime Evo Radio (Cronotermostato radio), incluyendo configuración del reloj, ajuste de temperatura, programación horaria, instalación del receptor y cronotermostato, especificaciones técnicas e información de garantía.
	[Seitron 24v 8 Zone Wiring Centre | TIOWIR0006 Technical Guide] Technical guide for the Seitron 24v 8 Zone Wiring Centre (model TIOWIR0006) by Tio. Learn about its features, installation, operation, electrical wiring, and troubleshooting for underfloor heating systems.
	[Seitron Freetime Evo Radio Wireless Programmable Thermostat Kit Quick Guide] Quick guide for the Seitron Freetime Evo Radio wireless programmable thermostat kit, covering clock setting, temperature setting, time program setting, installation, and warranty information.