

EN



COMFORT CONTROL

User's manual

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INTRODUCTION

Dear Customer!

Thank You for choosing control panel AUTOTERM Comfort Control! We are doing everything to make this product meet Your requirements, so its quality satisfies every customer.

Comfort Control is designed to be intuitive and comfortable to use, to ensure the best experience when it comes to controlling Your climate.

AUTOTERM Comfort Control is compatible with all AUTOTERM AIR and FLOW heaters.



Some older versions of AIR heaters may not support some of the functions.
In case of questions about compatibility with older products please contact Your local dealer or AUTOTERM Service center.

In case of any problems, we strongly recommend contacting certified service centers. Contact information and location of certified service centers can be found at our website www.autoterm.com.



Please read carefully this manual before operating the AUTOTERM heaters.
This manual contains the needful information to use this product correctly.
Disregard of these instructions can void the warranty of the product, lead to damage of product and/or property and be a risk to health.



If the heater is handled and/or installed improperly, there is a possibility of a fire hazard and damage to property because fuel and electrical components are being used. **That is why all safety precautions, operation and installation instructions must be observed.**

For other languages of this manual, please see www.autoterm.com/manuals.

SAFETY INSTRUCTIONS



Risk to health and/or damage of product

-
- The heater may only be used for the purposes specified in its respective operation manual.
 - DO NOT use the heater in closed and/or poorly ventilated places (e.g., garage, workshop, etc.).
 - Do not step on the heater or put any objects on it and in it.
 - Do not put any body parts or items into any of the air inlets or outlets of the heater.
 - For air heaters. Do not allow hot air to be blown directly at people, animals or heat sensitive objects.
 - To avoid burns, do not touch the exhaust lines and the heater while it is operating.
-



Risk of fire and explosion

- The heater is not designed for installation and use on any type of ADR transportation vehicle.
 - When refueling the heater must be shutdown. **Note: shutdown process can take up to 10 minutes.**
 - The vehicle where the heater is installed must be equipped with a fire extinguisher.
 - Do not cover the heater with clothing, pieces of fabric and so on, and do not place such objects in front of the air intake pipe or inlet and output of the heated air.
 - Do not use or install the heater in places where flammable vapors or gases or large amounts of dust may form and accumulate.
 - Do not use or install the heater in places where flammable and/or explosive items or substances are stored.
 - Avoid contact of any flammable objects with the heater's exhaust pipe.
-



Risk of damage due electrical nature

- Do not connect/disconnect any wiring of the heater while it is connected to the power supply or operating.
 - Do not connect the heater to the power circuit of the vessel when the engine is operating and there is no battery.
 - The heater can be switched on again in 15-20 seconds after disabling indications on the control panel, which means that the heater has shut down.
 - Length of the control panels wiring cannot exceed 15 meters.
-



Personnel certified by AUTOTERM is needed

- In case of faults in the operation of the heater, contact specialized repair organizations authorized by AUTOTERM.
-

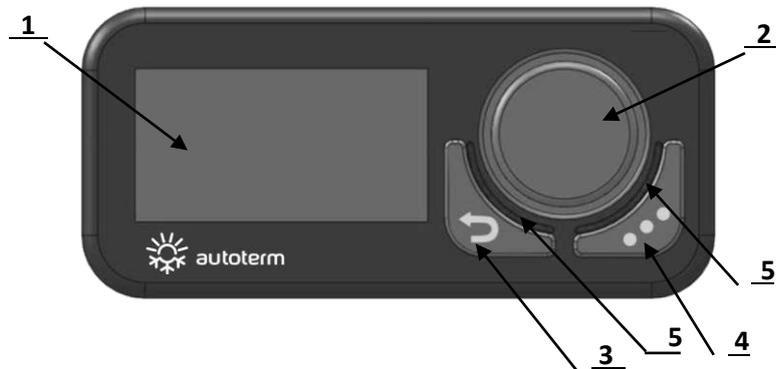
LIABILITY



Manufacturer is not liable for any damage as a result of installation and repairs by uncertified personnel and/or use of third-party parts and accessories without the approval of manufacturer.

In case of any problems, we strongly recommend contacting certified service centers. Contact information and location of certified service centers can be found at our website www.autoterm.com.

1. GENERAL INFORMATION



1. DISPLAY
2. ROTARY KNOB

3. BACK BUTTON
4. QUICK BUTTON

5. LED INDICATORS

1.1. DISPLAY



- While in sleep mode:
 - display is inactive;
 - screensaver shows:
 - temperature;
 - current time and date;
 - symbol of set operation mode, if active.

Control panel goes in to sleep mode after the time of inactivity set in display settings.



Sleep mode is cancelled by pressing the knob or the back button.



- While active display shows:
 - current time;
 - power supply voltage;
 - temperature;
 - set operation mode, if active;
 - active timers.

To access the main screen control panel has to be woken from sleep mode.



For air heaters, the temperature displayed depends on the temperature sensor selected.
 For liquid heaters, the temperature of the coolant is displayed.



Description of each symbol and screen layouts can be found in their respective sections of the manual.

When an operation mode is active, the respective symbol is displayed on the main screen (under the current time), and it works as a quick menu. By rotating the knob three options can be accessed:



- Active operation mode settings



- Shut off the heater



- Access the main menu

Confirm selection by pressing the knob.

1.2. ROTARY KNOB

The rotary knob is the main button for navigation through the interface.

- When the control panel is active, pressing the knob enters the main menu. After that, pressing the knob confirms the selected item or setting.
- Turning right selects the next item or increases the value of the selected setting.
- Turning left selects the previous item or decreases the value of the selected setting.
- While the control panel is in sleep mode, turning the knob to either side allows to change the set temperature/power level of the active mode. Changes are applied without confirmation.

1.3. BACK BUTTON

Back button is used to return to the previous screen by pressing it once.

1.4. QUICK BUTTON

Quick button can be used to start or stop the heater without entering the main menu or quickly enabling or disabling timers.

- While heater is off, pressing the button once opens the *"Heating"* menu.
- While the heater is off, long pressing the button for 2 seconds starts the heater with previous settings (Display message: *"Starting..."*).
- While the heater is operating, long pressing the button for 2 seconds switches off the heater (Display message: *"Switching off..."*).
- While the heater is operating (and in sleep mode), pressing the button once opens the settings of the active operation mode. Changes are applied after confirmation.
- In the menu *"Timers"* pressing the button once enables/disables the selected timer (for this action timer must be set beforehand).

1.5. LED INDICATORS

LED indicators are used to indicate the operating mode or status of the heater:

- RED – heater is working in heating mode;
- BLUE – heater is working in ventilation mode;
- GREEN – heater is switching off (purge mode);
- RED (blinking combined with display message) – an error has occurred;
- LIGHT GREEN (one blink every 5 seconds) – a timer has been enabled.

2. MOUNTING AND CONNECTION

Control panel can be mounted using screws or double-sided adhesive tape.

For mounting with screws, gently remove the back panel using a thin flat screwdriver by prying it from the middle of one of the sides. Then screw the back panel to your desired surface.

For mounting with double-sided adhesive tape, before installation, degrease the back of the control panel and the desired surface.

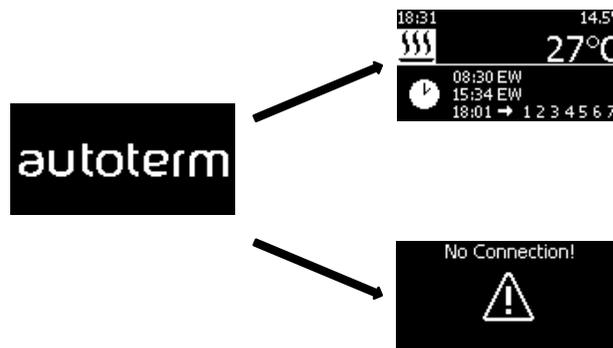


To increase the length of control panel wiring, use only designated extension wirings.

When connected to the power supply, the control panel turns on automatically.

When turned on, LED indicators light up while showing AUTOTERM logos on the display.

The connection process takes approx. up to 20 seconds. If the connection is established, the display shows the main screen. If the connection fails, message "No connection!" is displayed.



After disconnecting the control panel from the power supply, time and date must be reset. The rest of the settings, such as set timers, remain saved.

3. OPERATION AND SETTINGS

3.1. MAIN MENU

Main menu can be accessed from main the screen by pressing the rotary knob once. Navigate through the menu by turning the knob. To enter the selected menu, press the knob once.

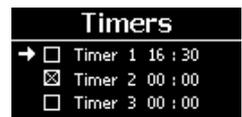
TIMERS		Is used to set and enable/disable up to 3 timers.
HEATING		Is used to set different heating modes, depending on the connected heater.
VENTILATION		Is used to set the ventilation mode (<i>except for AIR 8D and liquid heaters</i>).
SETTINGS		Is used to change the general settings of the control panel and heater.

3.2. TIMERS

In the “Timers” menu, up to 3 timers can be set to start the heater at a specific time in the desired mode for the desired duration. To set timers, select the “Timers” menu from the main menu by pressing the knob once.



Choose one of the 3 timers by rotating the knob and pressing the knob once to confirm the selected timer.



Default values of the timers are: 0:00 – ED – Heating.



The quick button () can be used to enable/disable previously set timers.

After selecting a timer, choose to enable or adjust the timer by rotating the knob and pressing the knob once to confirm one of the options.



Editing the timer

Set the time of day for heater to start:

- Set hours and confirm;
- Set minutes and confirm.



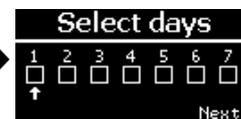
Set the working duration of the heater.

Duration can be set from 30min to 720min* with increasing step of 5min.
 * up to 120 min for liquid heaters.



Set the days for heater to start, where:

- **ED (Every Day)** – the heater starts every day of the week;
- **EW (Every Workday)** – the heater starts every day from Monday to Friday;
- **SEL (Select specific day)** – heater starts only on specified days, where:



- | | | | |
|-------------|---------------|--------------|------------|
| 1 – Monday | 3 – Wednesday | 5 – Friday | 7 – Sunday |
| 2 – Tuesday | 4 – Thursday | 6 – Saturday | |

Set the operation mode for **air heaters**:



- Heating mode



- Heat + Ventilation mode



- Ventilation mode

Set the operation mode for **liquid heaters**:



- Pre-heating mode



- ECO mode (*only for FLOW 14D*)

When all the parameters are set, the message “Saved” is shown on the display, and the timer is enabled automatically. Enabled timers can be seen on the bottom part of the main screen. LED indicators will blink light green once every 5 seconds when the timer is enabled.



3.3. HEATING

In the “Heating” menu, different operation modes for heating can be set, depending on the connected heater.



To set the heater modes, select the “Heating” menu from the main menu by pressing the knob once and then select one of the heating modes:

-  Temperature can be set in a range of 0°C up to 30°C, with a step of 1°C.
 Work time can be set by turning the knob in either direction, in a range of **30 min** up to **infinity** (or vice versa) by a step of:
 - 5min up to 2h;
 - 20 min up to 12h;
 - after 12h the next step is ∞.
-  It is impossible to switch to any of the heating modes while the heater is operating in a ventilation mode!
-  For Flow 5 and Flow 14D v2 liquid heaters, the maximum operation time in pre-heating mode is 8 hours instead of the regular 2 hours (only for Comfort Control v2 with 1.25 software version).

Heating modes for air heaters:

TEMPERATURE MODE	–	Heater will maintain the set temperature by reducing the heating power without shutting off the combustion process. (*)
POWER MODE	–	The heater will operate constantly at the set power level.
HEAT + VENTILATION	–	Heater will operate till the temperature reaches 1°C above the set temperature, shut off the combustion process, and start to ventilate till the temperature drops 5°C below the set temperature. When the temperature drops, heating starts again.
THERMOSTAT MODE	–	Heater will operate till the specified temperature is reached and then shut off the combustion process and ventilation. After the temperature drops by specified degrees, heating will start again.

Setting Temperature mode

Select “Temperature mode” from the menu.	
Set temperature and confirm. Set work time and confirm.	
When mode is active, respective symbol is shown on the main screen.	

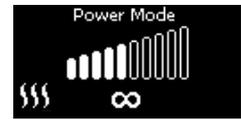
*The temperature mode for Air 2D 12/24V and 4D 12/24V heaters in the 6355, 6350, 6260, and 6265 series versions has a new algorithm. In this mode, the heater acts normally by lowering power when it gets near the set temperature. However, if it goes past the temperature setpoint, the heater will turn off and wait until the temperature drops by 3 degrees below the temperature setpoint before starting again.

Setting Power mode

Select "Power mode" from the menu.



Set power level and confirm.
 Set work time and confirm.



When mode is active, respective symbol is shown on the main screen.



Setting Heat + Ventilation mode

Select "Heat + Ventilation" from the menu.



Set temperature and confirm.
 Set work time and confirm.



When mode is active, respective symbol is shown on the main screen.



Setting Thermostat mode

Select "Thermostat mode" from the menu.



Set temperature and confirm.
 Set work time and confirm.



When mode is active, respective symbol is shown on the main screen.



The default value for MAX temperature rise is 1°C and MIN temperature drop is 2°C.

These settings can be changed in "Settings -> Heater -> Advanced -> Thermostat".

Heating modes for liquid heaters:

PRE-HEATING MODE	<p>The heater will operate till the certain coolant temperature is reached, then shut off the combustion process. After the temperature of the coolant drops, heating will start again.</p>
ECO MODE <i>(only for FLOW 14D)</i>	<p>Pre-heating mode with reduced power and fuel consumption. The temperature of the coolant is reached slower than in "Pre-heating mode".</p>
THERMOSTAT MODE <i>(only for Flow 5 and Flow 14D v2)</i>	<p>The heater will operate till the specified interior temperature is reached, then shut off the combustion process. After the temperature drops by specified degrees, heating will start again. Temperature is read by control panel.</p> <p><i>*For setting up "Thermostat mode" see instructions for AIR heaters.</i></p>



Default settings of the coolant temperatures are 88°C for Flow 5 / Flow 14D v2 and 80°C for Flow 14D. **The default value for Flow 14D cannot be changed.**

The temperature drop of the coolant is 18°C for Flow 5 / Flow 14D v2 and 20°C for Flow 14D.

Setting Pre-heating or ECO mode

Select "Pre-heating" or "ECO" from the menu.		
Set work time and confirm.		
When mode is active, respective symbol is shown on the main screen.		

3.4. VENTILATION

In the "Ventilation" menu, the heater can be set to ventilate air without the combustion process. Ventilation can be set at the desired power level and duration.



To set the ventilation mode select the "Ventilation" menu from the main menu by pressing the knob once.



Work time can be set by turning the knob in either direction, in a range of **30 min** up to **infinity** (or vice versa) by a step of:

- 5min up to 2h;
- 20 min up to 12h;
- after 12h the next step is ∞.



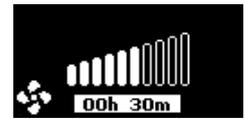
AUTOTERM FLOW liquid heaters and AUTOTERM AIR 8D air heaters do not support the ventilation mode!



It is impossible to switch to the ventilation mode while the heater is operating in one of the heating modes!

Setting Ventilation mode

Set power level and confirm.
 Set work time and confirm.



When mode is active, respective symbol is shown on the main screen.



4. SETTINGS

In the “*Settings*” menu, general settings for the control panel and advanced settings for the heater can be changed. The available settings are displayed depending on the connected heater.



To enter the “*Settings*” menu, select it from the main menu by pressing the knob once and select one of the options.

 Turn the knob to change the value; press the knob to confirm the set value.

4.1. TIME/DATE

- Set the current time and date.

4.2. DISPLAY

- **LANGUAGE** – change the display language of the control panel.
- **UNITS** – change the displayed format of units. Metric (24h time format, °C) or Imperial (12h time format, °F).
- **BRIGHTNESS** – change the brightness level of the display.
- **SLEEP MODE** – change the time after which the control panel goes to sleep mode. Enable/Disable screen saver.

4.3. HEATER (*for air heaters*)

- **TEMP. SENSOR** – change the temperature sensor by which the temperature is read:
 - **BY PANEL** – temp. sensor built in the control panel;
 - **BY HEATER** – temp. sensor built in the heater;
 - **EXTERNAL** – externally connected temp. sensor (*sold separately*). This option is visible only when the external temp. sensor is connected.

 The temperature sensor cannot be changed while the heater is operating in “*Power mode*” or “*Thermostat mode*”.

• ADVANCED	– change the advanced settings of the heater:
○ SHUTDOWN VOLTAGE	– set voltage and time for battery protection. If the actual voltage of the power supply is lower than the set voltage for the set duration, the heater shuts down, and operation modes cannot be activated.
○ THERMOSTAT	– change the default values for temperature rise and drop for thermostat mode. MAX from 1°C to 3°C, MIN from 1°C to 7°C.
○ INFO	– displays the information about serial numbers and software versions: <ul style="list-style-type: none"> ▪ Heater serial number (s/n) ▪ Heater software version (s/w) ▪ Total heater operating hours (w/t) ▪ Control panel serial number (s/n) ▪ Control panel software version (f/w)

 The „*INFO*” section cannot be accessed while the heater is operating.

4.4. PRE-HEATER (*for liquid heaters*)

 Settings menu “*Pre-heater*” is disabled when Flow 5 / Flow 14D v2 is operating.
For Flow 14D in “*Advanced*” settings only “*Info*” and “*Shutdown voltage*” options are available.

• INFO	– displays the same information as for air heaters.
• AUXILIARY	– set and enable/disable auxiliary mode. When auxiliary mode is enabled, the pre-heater starts when the engine starts and maintains the set temperature of the coolant. The temperature range for auxiliary mode is 75°C to 95°C.
• TEMPERATURE	– set the default temperature for coolant in heating mode. Temperature range is 20°C to 95°C for Flow 5 and 20°C to 90°C for Flow 14D v2.
• ADVANCED	– change advanced settings of the pre-heater: <ul style="list-style-type: none"> ○ THERMOSTAT – enable/disable and configure thermostat mode: <ul style="list-style-type: none"> ▪ CIRCULATION – when heating in thermostat mode, the coolant pump will always continue to circulate the coolant, even when the heater is switched off. ▪ HYSTERESIS – change default values for temperature rise and drop for thermostat mode. MAX from 1°C to 3°C, MIN from 1°C to 7°C. ○ START PUMP – starts coolant pump for the purpose to bleed the system after installation. The pump is working while the message “<i>Pump enabled</i>” is displayed. Pressing the back button, switches the pump off. ○ SHUTDOWN VOLTAGE – set voltage and time for battery protection (<i>same as for air heaters</i>).

-
- **FAN** – set and enable/disable activation of the interior fan. Set the coolant temperature to which the interior fan of the vehicle will activate. Temperature can be set in a range of 30°C to 60°C. Default value is 40°C.
-



To activate the “*Fan*” function, after enabling it, heater must be disconnected and reconnected from the power supply.

An additional relay set is required for this option to work. Contact Your local dealer.

- **EXTERNAL START** – enable/disable external start. For this function to work, the grey and black wires of the control unit must be connected to the alarm system of the vehicle. See installation manual of the heater.

 - **COOLANT PUMP** – enable/disable operation modes of the coolant pump:
 - **WAIT MODE** – When enabled, the coolant pump will continue to operate after the heater in pre-heating mode has reached the set temperature and stops the heating process. If disabled, the heater coolant pump will stop the circulation when the heater stops the heating.
 - **WITH ENGINE** – When enabled, the coolant pump starts when the engine of the vehicle starts. This option improves the circulation of the coolant.

 - **PUMP TYPE** – select the type of the coolant pump depending on the coolant pump in use:
 - **BOSCH** – Pump operates using PWM signal.
 - **DC** – Pump operates using DC.
-

4.5. LED

- Turn on or off the LED indicators.

4.6. RESET

- Reset the control panel to factory settings.

5. ERRORS AND MAINTENANCE

In case of an error, LED indicators blink red once every 5 seconds, and an error message is displayed depending on the fault and the heater connected.

Full descriptions of the fault codes can be found in the respective manual of the heater.



Maintenance and repair of the heater should only be performed by personnel trained and qualified by AUTOTERM.

ERROR MESSAGE	FAULT CODE BY HEATER		
	AIR HEATERS	FLOW 5 / Flow 14D v2	FLOW 14D
Air Ducting or Outlet!	1; 2	-	
Service!	4; 5; 6; 9; 10; 13; 16; 27; 28		
	7; 11; 29; 32; 34; 36; 37	3; 24; 25; 26	3
Overvoltage!	12		
Undervoltage!	15		
Low voltage!	35	-	
Fuel pump!	17	17; 22	17
No connection!	20; 30	20; 30; 50	20
Overheating!	31	1	1; 2
Heater Locked!	33	37	-
Check fuel system!	8; 78	29; 78	
Coolant pump/circuit!	-	14	

REMINDER!



To ensure reliable operation of the heater, it is required to start it once in 30 days on max heating power for 30 minutes, including the warm seasons of the year, when the heater is out of operation.



This action is necessary to remove any viscous film sediments on moving parts of the fuel pump. Failure to do so may lead to premature failure of the heater.

That is why AUTOTERM Comfort Control has a built-in reminder to start the heater for 30 minutes if it has been out of operation for at least 30 days.

After 30 days of inactivity since the last start, the red LED indicators blink once every 5 seconds, and a message is displayed.

Accept the start by pressing the knob once. Decline the start by pressing the “Back” button once. In case of a decline, this message is repeated if the heater hasn’t been launched in any of the heating modes.





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air and liquid heaters