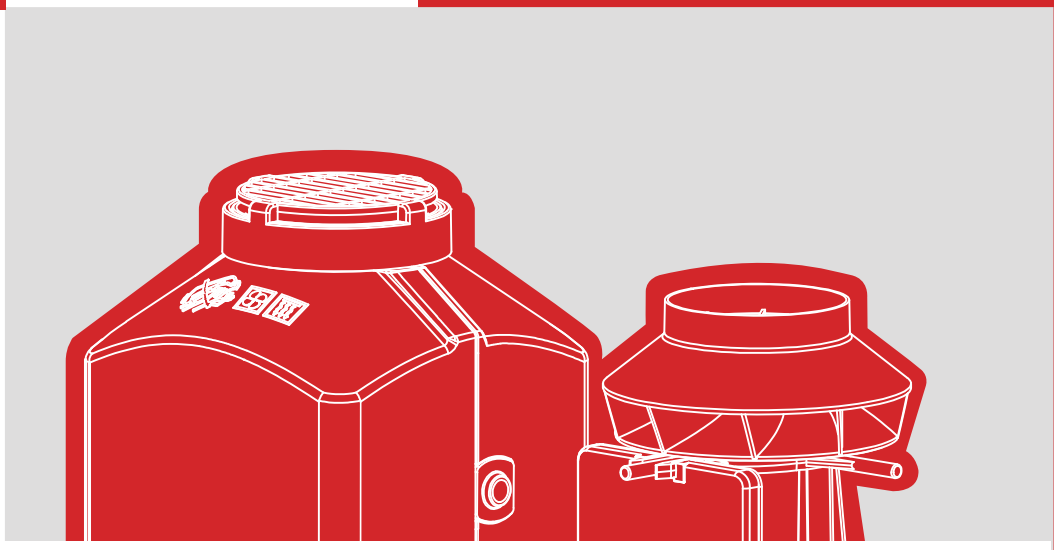
T4

QUICK START GUIDE

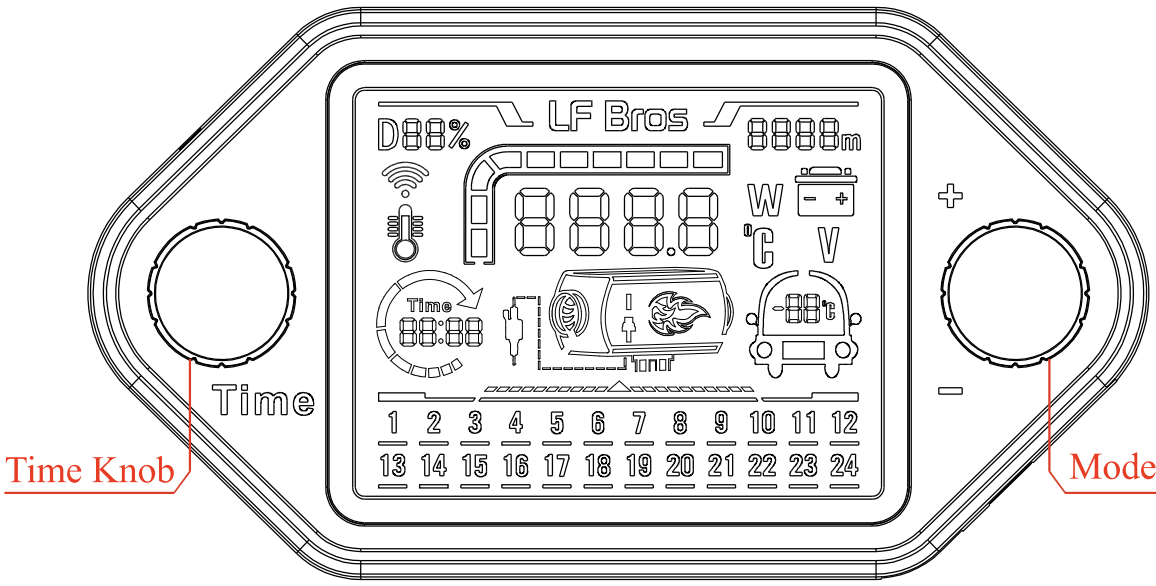


- Display Icon
- Switch Operation
- Fault Code
- Quick Installation Guide

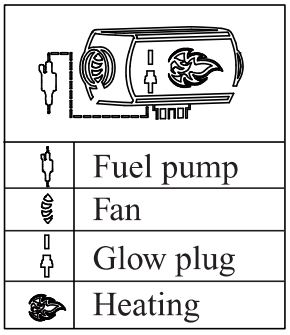
INSTRUCTIONS

PLEASE READ CAREFULLY BEFORE USE.

Display Icon Description



D Use time(days)	88% Combustion efficiency	8888m Altitude
Remote control signal	High temperature warning	
W Power	Voltage	°C Centigrade	V Voltage Volts
Time	Interior temperature	1 — 24 Hour

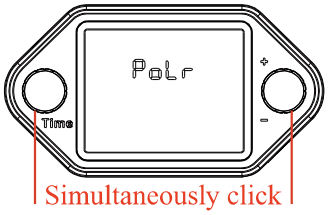


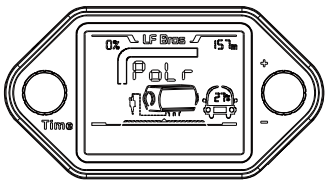
	Fuel pump
	Fan
	Glow plug
	Heating

Switch Operating Instructions

I Fuel Pumping Mode

After installation of the heater for the first time, the fuel pipe needs to be filled up with diesel. Only when the diesel entering the heater from the fuel tank, could the heater be operated successfully.





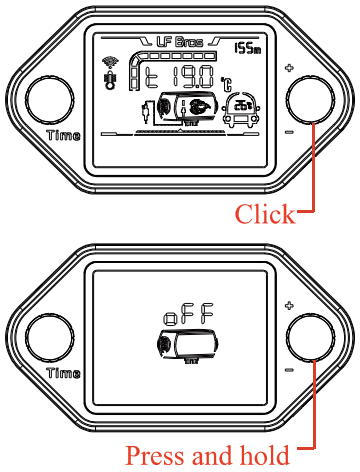
Operation method:
In the shutdown state, press TIME Knob + Power Knob simultaneously. When the screen lights up showing “Polr” and the buzzer sounds once (release the button) to enter the Fuel Pumping Mode.

80 seconds later, the fuel pump will enter the state of rapid pumping (500 times of pumping diesel). When the fuel pumping is completed and the diesel enters the heater, it will ignite and run automatically. If the diesel doesn’t enter the heater, start the fuel pumping procedure again.

The start times of the fuel pumping mode depends mainly on the length of the oil circuit. When pumping diesel, you can observe the progress of the fuel filling in the fuel pipe to judge whether it is normal.

NOTE: This process is only for initial installation and when there is no diesel in the oil circuit. Do not use it at ordinary times to avoid flooding the combustion chamber.

II Startup/Shutdown



1.Click the Power Knob in the shutdown state,the screen lights up, the buzzer sounds once (release the button) and the heater is turned on.

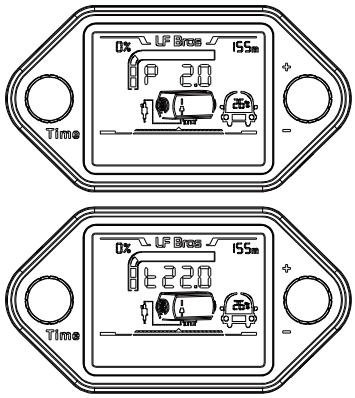
Then the screen will display the working status of the main components one after another. The fan works, the glow plug works, and the fuel pump starts to work 80 seconds later. When the flame mark appears in the outline of the screen host, the ignition is successful, and then it enters the preheating self-checking process.

2.In the standby state, press and hold the Power Knob for over 3 seconds, the screen will display “OFF” , and the heater will enter the shutdown cooling process. When the cooling is completed, the screen will turn off and the heater will stop running.

NOTE: Illegal power off is prohibited during the shutdown process.

III Mode Setting

In the standby state, click the Mode/Power Knob to switch modes. Turn the power knob clockwise to increase and counterclockwise to decrease.

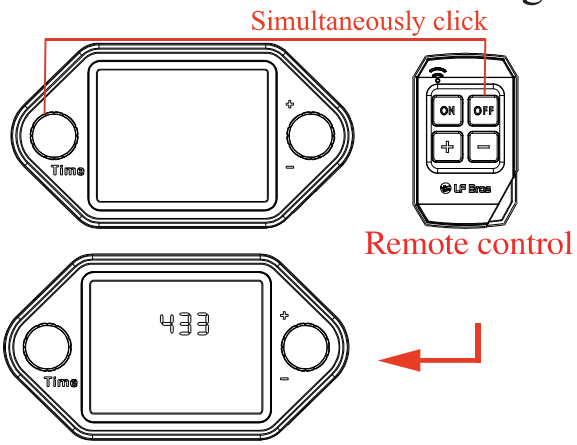


1.When the screen displays P 1.4Kw~P 5.0Kw, it is the power mode. After adjustment, the power will be fixed and the heater will continue heating.

2.When the screen displays t 10℃~35℃, it is the temperature mode. After setting the temperature, when it reaches the set temperature, the heater gradually stops working, and when it is about 2°C lower than the set temperature, the heater restarts to work.

NOTE: The two modes can only be switched and cannot coexist. The last setting shall prevail. For example, the previous setting of the power mode would be invalid if the temperature mode is set.

IV Remote Control Matching

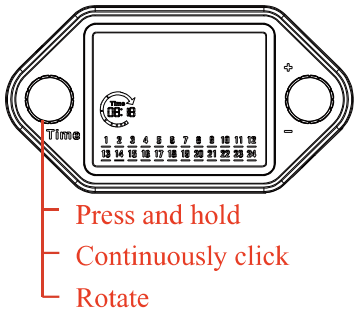


In the shutdown state, press and hold the TIME Knob of the control switch and the “OFF” key of the remote control at the same time.

The switch screen displays 433, the buzzer sounds once, and the remote control and the control switch are successfully matched.

NOTE: Normally the remote control matching has been completed before the heater leaving the factory, and no further operation is required.

V Timing Operation - Clock Synchronization

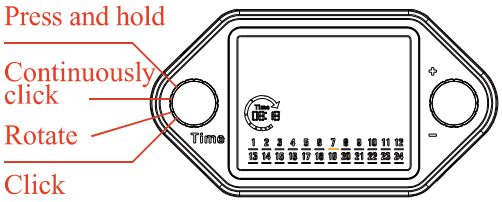


In the shutdown state, press and hold the "TIME" Knob to call out the clock icon. Click the "TIME" Knob 3 times quickly (operation within three seconds), Number 1-24 will appear and flash at the bottom of the screen. Then turn the "TIME" Knob to the left (1 bar). When the “CLOCK” icon starts to flash, press and hold the "TIME" Knob, and when the hour digit flashes, you can turn the "TIME" Knob left and right to adjust. After the adjustment, press and hold the "TIME" Knob. When the the minute digit flashes, turn the "TIME" Knob to adjust. After adjusting, wait for 5 seconds to complete the setting.

VI Timing Operation - Single-period Timing

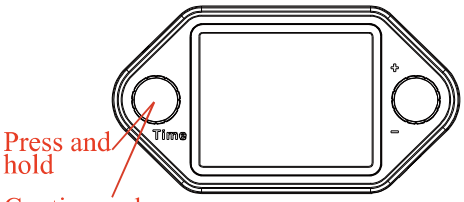
In the shutdown state, press and hold the "TIME" Knob to call out the clock icon. Click the "TIME" Knob 3 times quickly (operation within three seconds), and Number 1-24 will appear and flash at the bottom of the screen. Then turn the "TIME" Knob to the right, and the Number 1 to 24 would appear in sequence, representing 24 time periods. Set the time at what time the heater is required to work.

For example:
We need to set the heater to turn on at 7:00 in the morning. Turn the TIME Knob to the right to adjust it to the number "7", click the TIME Knob. At this time a solid yellow line will appear under the number "7". Five seconds later, the setting is complete.

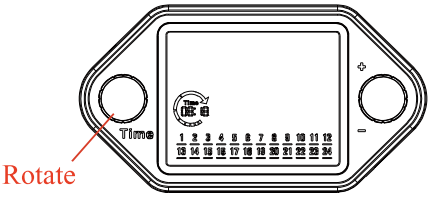


VII Timing Operation - Multi-period Timing

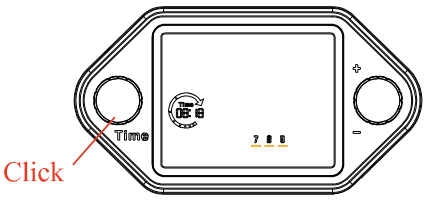
1. 1.Continuous period work: press and hold the "TIME" Knob in the shutdown state to call out the Clock Icon. Click the "TIME" Knob 3 times quickly (operation within three seconds), and Number 1-24 will appear and flash at the bottom of the screen, representing 24 time periods. Turn the TIME Knob to the right, Adjust the corresponding Number to the time. Click the "TIME" Knob, and a solid yellow line will appear below the Number. The Number will be selected five seconds later. It takes several hours to work, that is, to set several time periods.



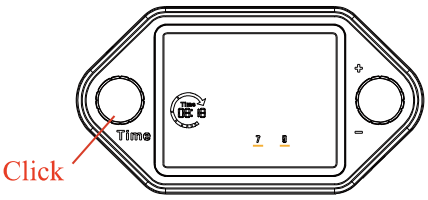
For example:
we need to set the heater to work continuously for three hours at 7, 8, and 9 in the morning. Turn the TIME Knob to the right to adjust to the number "7", click the TIME Knob, a solid yellow line appears below the number "7"", and then turn the knob to the right to adjust the numbers "8" and "9". Wait for five seconds, and the setting is successful.



2.Working at Intervals:
For example:
We need to cancel the 8 o'clock among 7, 8, and 9 periods. Find the number "8", and click the TIME Knob. The small yellow line disappears. Wait for 5 seconds, and the number "8" disappears, that is, the setting is successful. The heater will start working at 7am, and shut down at 8am and start again at 9am.

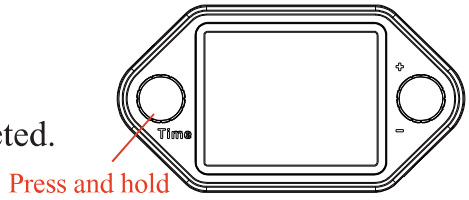


3.Cancel the timing: Move the time value to the yellow line again. Click the TIME Knob, the yellow line disappears, and the timing is canceled.



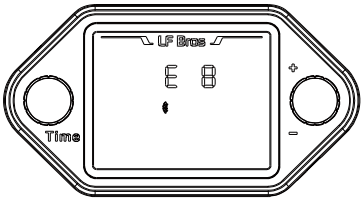
VIII Timing Close

In the clock state, press and hold the TIME Knob , the buzzer will sound once and the screen will turn off. The timing close is completed.



IX. Abnormalities and Fault Reports

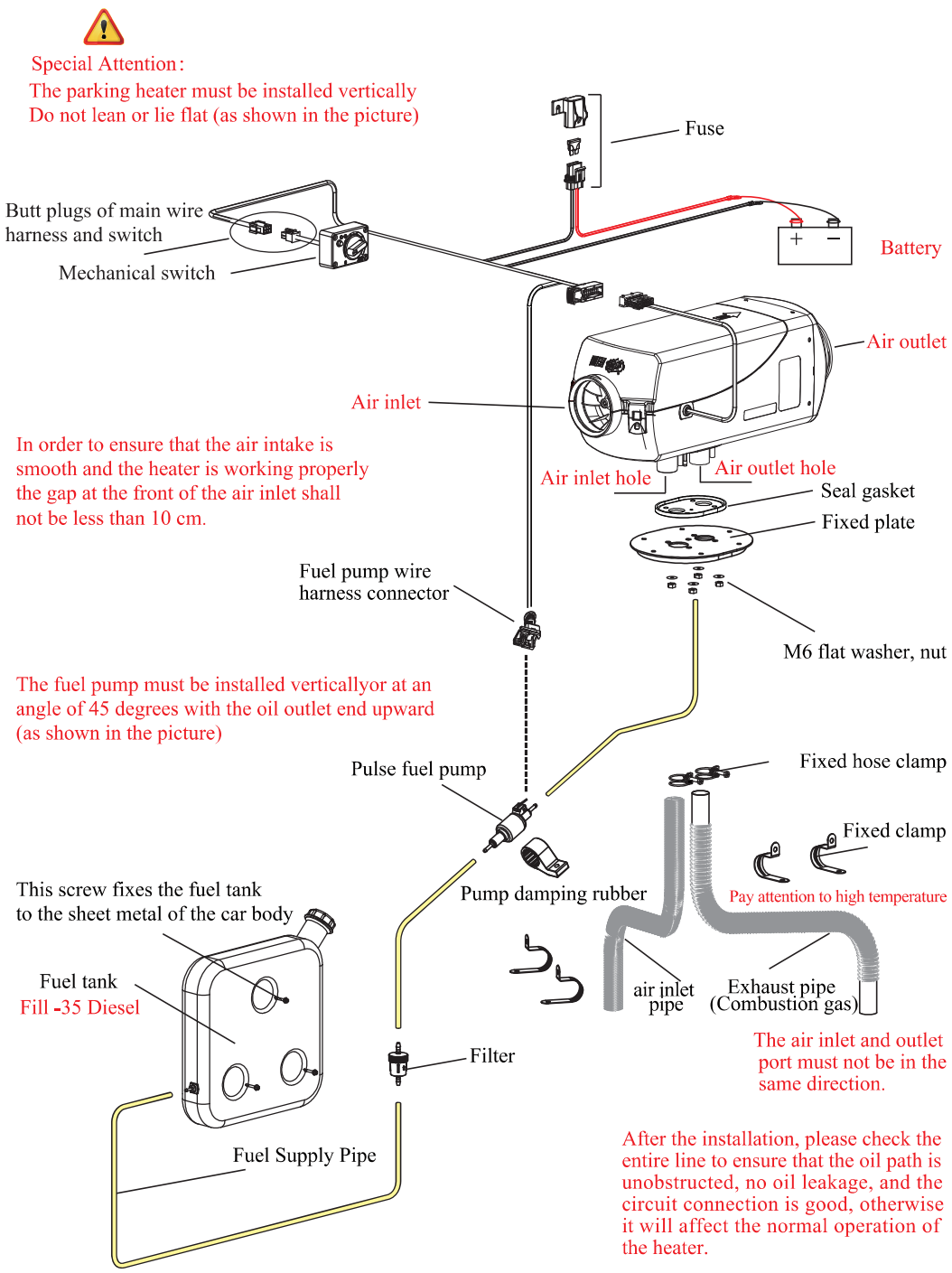
The fault code will be displayed, and the buzzer will sound E0 - E15 at a high frequency. Please refer to the fault code table for processing.



Fault Code

Fault Code	Fault Descriptin	Fault Analysis & Solutions
E 0	Control unit error	Replace the control circuit board.
E 1	Failed to start (already tried twice) / failed to form a flame	① Fuel exhaustion:Please check whether there is diesel in the fuel tank.
		② There are bubbles in the oil line and the oil supply is discontinuous.
		③ Fuel pump is failed to pump diesel:Replace the fuel pump.
		④ Air inlet and exhaust are blocked:Check if anything stuck the air inlet and exhaust outlet.
		⑤ White smoke at the startup time, black smoke, or too much carbon deposition. Unplug the oil inlet pipe, and start the heater to let it dry running till the heater reporting fault. Repeat such operations for 3-4 times.When no smoke out of the exhaust pipe,connect the oil inlet pipe to start the heater to see if the ignition issuccessful.
E 2	Flame off (already repeated 3 times)	① There are bubbles in the oil line and the oil supply is discontinuous.
		② Insufficient oil output of the fuel pump:Small volume of fuel pump is used. Replace the corresponding type of fuel pump.
		③ Poor air intake and exhaust (generally, it will cause carbon depositions) Check the air intake and exhaust to make the air duct smooth; It is recommended to clean up the carbon carbon deposition.
E 3	Undervoltage or overvoltage	① Confirm if the voltage of the power supply matches the voltage of the heater.
		② Poor power cord installation.
		③ Access to additional non-compliant power cord.
		④ Power converter can not provide enough current.
		⑤ Power converter output voltage is instable.
E 4	Premature ignition identification	The last illegal shutdown caused the heater to ignite in advance with the residual fuel. Restart the heater.
E 6	Open circuit or short circuit of Temperature sensor	① Small installation space caused overheat of the heater.
		② The temperature sensor of the circuit board is damaged. Replace the circuit board.
E 7	Open circuit or short circuit of fuel pump	① Poor contact betwen the wire harness and socket of the pump. Reconnect them.
		② Fuel pump failure:Replace the fuel pump.
		③ Control circuit board failure (rarely):Replace the circuit board.
E 8	Motor	① Motor fan blade is stuck:Reinstall the case of the heater; it's damaged due to shipping.
		② Defective motor:Replace the Motor.
		③ Motor stall starts and stops for 3 times continuously:Check if the Hall sensor on the circuit board is bent or damaged.
		④ Poor contact between the wire harness of motor and the socket of control circuit board. Reconnect them.
E 9	Glow plug failure	① Short circuit of glow plug:Replace the glow plug (Rare occur on Kyocera glow plug).
		② Unstable voltage:Check power connection position, fuse and battery voltage.
		③ Damaged circuit board (Rarely):Replace the circuit board.
		④Poor contact between wire harness of glow plug and the socket of the control circuit board. Reconnect them.
E10	Overheat	① A large flow of fuel pump is connected by mistake.
		② Air duct of air inlet or outlet of the heater is blocked.
		③ Temperature sensor failure:“Poor contact between the temperature sensor and the alluminium radiator; the temperature sensor is damaged.”
E11	Open circuit or short ciruit of temperature sensor	① Temperature sensor failure:Replace the temperature sensor.
		② Poor contact between the terminals of the temperature sensor and the circuit board ports, or the wire is disconnected.
E12	Open circuit of glow plug	① Poor contact betwen the terminal of the glow plug and port of the circuit board.
		② Unstable voltage:Check the power connection, fuse or the battery voltage.
		③ Damaged circuit board:Replace control circuit board.
E14	Incorrect location of temperature sensor	The temperature sensor is not installed properly (Till now no such warranty).
E15	Open Circuit of Setvalue Generator	Replace the control circuit board (Till now no such warranty).
C 4	Control Switch	Replace the control switch.
C2/C7	Control Switch	① Check whether the wire of the control switch is not connected well.
		② Replace the control switch.

Quick installation guide



INSTRUCTIONS

QUICK START GUIDE

PLEASE READ THIS MANUAL CAREFULLY BEFORE USE AND KEEP IT PROPERLY.

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