modBMW - Thermostat mod

Thank you for choosing our product!

What is in the box: a thermostat mod module with control wire attached; 3 pin power supply connector; instructions for use; packaging.

How it works: your thermostat is equipped with an internal heater which is designed to be turned ON and OFF by your DME on specified conditions. When your car's DME turns the heater ON, it makes the thermostat open early, not after 105°C reaching, but around 94°C, that's how your DME can control your car's coolant temperature.
Your DME turns on thermostat's heater only after reaching one of the following conditions:
1. Coolant temperature above 110°C.
2. Full load range (sporty driving).
Here is the Control characteristics of characteristic map cooling of your (how it works from the factory):

1	Characteristic curve of a 110 ° C thermostat
2	Characteristic curve of a characteristic map thermostat
3	Characteristic curve of an 85 ° C thermostat
4	Partial load range
5	Full load range
6	Partial load range

Thermostat mod shares similar method of controlling coolant temperature, it turns ON/OFF your thermostat internal heater, but it turns it ON much early and continuously. You can choose when (after what condition) would you like to get your heater turned on: after user defined time delay since applying 12V to Thermostat mod OR after reaching specified coolant temperature read out via IBUS. If you choose "time delay" option, you can even miss the step with IBUS connecting, the module will control your thermostat heater even without IBUS supplying. But if you choose Thermostat mod to turn on thermostat heater on temperature reaching, you definitely need to supply Thermostat mod with IBUS, otherwise it won't know what's your coolant temperature.

Thermostat mod installation into your car:
To install your Thermostat mod, you must connect its wires to 4 wires from your car's wire harness: 12V; GND (ground); I/K-BUS; GND controlled wire of your thermostat connector.
Please use the following wiring diagram to connect Thermostat mod into your car:
Thermostat mod----------Car wire harness:

RED wire----------12V*.
*If using IBUS method (function3 option2), connect the red wire to terminal R (12V ACC).
**If using TIME delay method (function3 option1), connect the red wire to terminal15 (12V switched).

Brown wire----------Ground
Ground source in E-series is usually brown wire or brown wire with black stripe, but please confirm with multimeter.

Thin white wire----------I-BUS
I-BUS wire in E-series is usually white wire with gray stripe and yellow dots.

Thick white wire----------GND controlled wire of your thermostat connector X6279 pin1 (brown-white or yellow-blue on M62; white or yellow-blue on M62TU). Please cut that wire and then connect Thermostat mod control wire to that part of the wire which will stay connected to the thermostat. You may leave the other end of the wire (the one that goes to your DME) disconnected or you can put 1Kohms/25W resistor to 12V switched (terminal15) to avoid DME error storing.
Once you attach Thermostat mod to its 3pin connector the LEDs will start blinking for around 2 seconds. This means that your Thermostat mod is properly supplied with 12V and GND.

Operating with the module settings:

Your Thermostat mod has some functions that you can set up as you like. Its settings storage is in a non-volatile memory, so it won't lose its settings if you disconnect it or if your remove your car's battery.

The right button of your Thermostat mod plays the role of „up" or „scroll", i.e. each press on it leads you to the next function/option.

The left button plays the role of "enter", which you will usually use to select or confirm the selection done by the right button. In order to change the setting of a certain function, you will just have to program a different option for it and the easiest way to explain this is by giving you an example.

Example: if you wish to de-activate the Welcome message function, you have to set function1 on option3 (OFF), which is done in the following way:

1. Press the right button once to select function1. On every pressing of the button, the green indicator will light up for a moment to show you that you have pressed the button successfully.
2. After pressing the right button once, please press the left button (enter) once, which will make the red indicator to light-up for a moment. Now you have selected "Function1".
3. Immediately after selecting "function1", press the right button 3 times to select option3.
4. Press the left button (enter) once to confirm the selected option. Now you selected "Option3"
5. After successfully selection of function1 to option3, you will see the red indicator turn on and the green one counting the function we are changing. After counting it, i.e. after the green indicator blinks once in this case, the red one will turn off and the green one will count the option we have selected, i.e. it will blink 3 times. That's how you are notified that Function1 (welcome message) was set to option3 (OFF).

Function1 – Welcome message "Temp. module: ON".

Option1 = ON IGN(default); Option2 = on module turn on; Option3 = OFF; Option5 = Factory defaults (resets all functions to default state).

Function2 – PWM duty cycle of Thermostat mod control wire:

Option1 = 100% (default) Option2 = 90% Option3 = 80%
Option4 = 70% Option5 = 60% Option6 = 50%

Usually the default state works pretty well.

Function3 – Heater activation method - **IBUS temperature** or **time delay since last power on**:

Option1 = TIME delay (heater activation after user pre-defined TIME delay since turning module on.
Option2 = IBUS temperature (heater activation on temperature reaching of 60°C (default).

*If you choose option1, Thermostat mod will turn on the heater in your thermostat few minutes after it has been turned ON (by applying 12V on its red wire). On this option IBUS connection will be only used for Welcome message. Thermostat mod will control your thermostat's heater even if you don't supply it with IBUS connection.
You can choose how long to be the TIME delay in function4.

** If you choose option2, Thermostat mod must be connected to IBUS, because this is the only way it can get information about coolant temperature. The internal heater does not heat up very quickly, that's why we don't start it on 90°C reaching, but earlier, just to provide time the internal heater to heat up.

Function 4 –TIME delay between 12V applying to Thermostat mod and heater activation:

Option1 = 90seconds (default) Option2 = 180s
Option3 = 300s Option4 = 420s Option5 = 600s

Function 5 – When would you like to stop heater:

Option1 = on module turn off; Option2 = once coolant temperature drops below user defined level (default);
Option3 = After 5 minutes of IBUS inactivity.

Please note that your thermostat's heater is supplied with 12V switched, so even if you never stop the GROUND to the heater, it will not heat or consume current unless you are on key pos2 or engine running.

Function 6 – Below what temperature would you like Thermostat mod to deactivate internal heater:

Option1 = 95°C Option2 = 90°C Option3 = 85°C (default) Option4 = 80°C

Usually the internal heater integrated into M62 thermostat is not powerful enough to drop the temperature below 93-94°C, but if your does, you can choose when would you like to stop the internal heater. If the temperature drops down below this level, Thermostat mod stops the heater and it will start it again once the temperature goes above the level chosen in this function.

Please follow this link to see more detailed wiring diagram: **modbmw.com/mod**

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