

# Digital Timer Modulator With Diagnostic Readout



Operating Instructions (701 10 Series)

Eberspächer

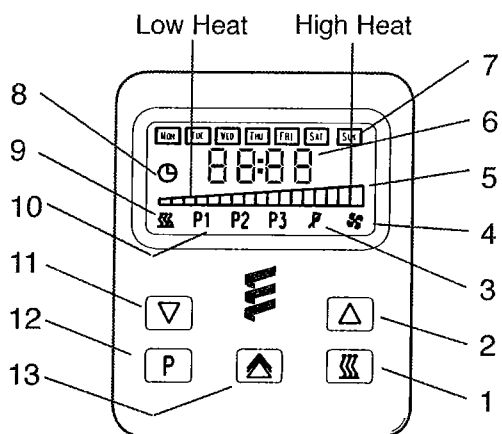


Part Number:

701 10 007

For use with Eberspächer water heaters  
with diagnostic readout display  
and battery backup

## 701 Series Timer / Modulator With Diagnostic Readout Instructions



- |   |                                  |
|---|----------------------------------|
| 1. Instant Heat ON/OFF key  | 7. Day selected indicator boxes. |
| 2. Adjustment Up key  | 8. Clock symbol.                 |
| 3. Disengaged pre-set symbol  | 9. Heater operation symbol.      |
| 4. Ventilation symbol   | 10. Preset Programme symbols.    |
| 5. Temperature ramp. N/A  | 11. Adjustment Down key.         |
| 6. Current Time, Preset Time, Heating Time, Run Time and Diagnostics. | 12. Programme key.               |
|   | 13. Set/Programme key.           |

**Please Note:** The temperature ramp (Item 5) has no effect on heater operation or control of the vehicle blower for speed or temperature control.

### Introduction

Your Timer/Modulator offers manual and programmable control. When the heater is switched on by the Timer/Modulator in a programmed mode it will run for 1 hour or for the duration time that you have selected e.g Heater on at 0700, duration time of 1 hour, which means heater will be switched off automatically at 0800.

### Clock Settings:-

Press and hold key until the symbol begins to flash. Use the and keys to set correct time. Press and release the key and the day box will begin to flash. Use the and keys to set the correct day. Press and release the key again to reset the clock to the start of the minute displayed. This may be used to coincide with a known time signal.

**Please Note:** These adjustments are not possible when the heater is in operation. To set the heater's programmable switch on timer, see "Setting Program Times".

### Switching on the Heater (Manually)

Press the key and the symbol will appear on the display. The heater will commence its startup cycle. The display will change to show a default of one hour

heating countdown time. This can be extended in increments of 10 minutes, 30 minutes, 1 hour, 1 hour 30 minutes, 2 hours up to eight hours or to continuous running operation (shown as C-: -- on display) by repeatedly pressing the key while the heater is in operation. Current time will be displayed every 5 seconds.

### Switching off the Heater (Manually)

The heater may be switched off at any time by pressing the key. The cooling down cycle will then be initiated.




### Diagnostic Readout (Optional)

With the heater switched on, press and hold key until the display shows "dAtA". Release key and display then shows "AF--" and alternatively displays the current fault code. Each press of the key will scroll through the last 5 previously stored fault codes.

### Typical fault codes -

- 10 = Over voltage - Check battery charging system.
- 11 = Under voltage - Check battery voltage.
- 12 = Overheating.
- 52 = Safety time exceeded - Check fuel supply.







For other codes consult your local dealer.

Press  and  keys together to erase stored faults and display shows “EEEE”. To exit diagnostic mode, press and release the  key. If stored faults cannot be erased consult your local dealer.



## Heater Run Time


Press and hold the  key until the display shows the heater run time in hours.

## Setting Programme Times



Press the  key and the P1 symbol will begin to flash. Pressing the  key will alternate the display between a preset time display and “OFF”. With P1 flashing in the time display mode the desired programme time can be set using the  and  keys. Once the desired time has been selected and if no keys are depressed for 8 seconds the display will revert to the clock mode. During this 8 second period pressing the  key will select P2 which can be used to select another programme time or be set to “OFF” if not required. A further pressing of the  key will select the P3 symbol which can be set or turned off in the same manner as above.

## Setting Programme Days

Having set programme times P1, P2 or P3 or all three, press the  key, all the ‘P’ symbols that have been selected will start flashing and a box will appear around one of the days. Press the  key to select “ON” if you require the selected day to be programmed, or “OFF” if you do not wish it to be selected.

To move onto the following day press the  key once again and select “ON” or “OFF” as before. Repeat this procedure for all seven days. To store these settings in the Timer / Modulator memory, wait for 8 seconds and the display will revert to the clock mode.



## Setting Programme Duration


To set the desired heater duration, press and hold the  key and whilst holding repeatedly press the  key to select the desired time in increments of 10 minutes, 30 minutes, 1 hour, 1 hour 30 minutes, 2 hours up until 8 hours.





**Please Note:** Continuous operation is not selectable in this programme mode. Once stored the preset duration time cannot be adjusted during heater “ON” operation.

## Switching on the Heater

(Programmed)

To activate your selected program settings, press the  key to show the P1,P2,P3 (to determine when the heater will switch on) or symbol  to turn off all settings.

**Please Note:** If all presets and days have been selected to “OFF” pressing the  key will have no effect.

When the heater has been switched on manually, it is possible to view which of the programmed times have been set and whether or not they have been activated. Press the  key to view and if any programmed time has been activated, its corresponding  will flash. If no programmed times have been activated then  flashes. Press the  key to activate or de-activate the programmed times as required. Wait 8 seconds and the display will revert to manual operation countdown.



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