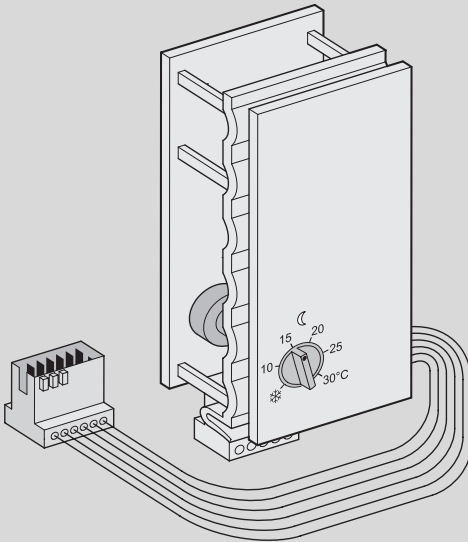


Room-temperature (economy/night) unit

TR 212 E



for boilers with Optimum Start-compatible Bosch Heatronic units



6 720 610 614-00.1R

Order no. 7 744 901 136

6 720 610 617 GB (01.05) OSW

 **WORCESTER**
Bosch Group

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Safety instructions

General

- ▶ Follow the instructions in order to ensure that the unit functions correctly.
- ▶ The TR 212 E should only be installed and commissioned by an approved installer.
- ▶ Install and commission the boiler in accordance with the appropriate instructions.

Usage

- ▶ Only use the TR 212 E in conjunction with the gas central heating boilers specified. Make connections as shown in the wiring diagram.

Electrics

- ▶ Never connect the TR 212 E to the 230-V mains power supply.
- ▶ Before fitting the TR 212 E: disconnect the boiler from the electricity power supply (230 V AC).
- ▶ Do not install the TR 212 E in damp rooms.

Symbols



Safety instructions in this document are identified by a warning-triangle symbol and are printed on a grey background.

Signal words indicate the seriousness of the hazard in terms of the consequences of not following the safety instructions.

- **Caution** indicates that minor damage to property could result.
- **Warning** indicates that minor personal injury or serious damage to property could result.
- **Danger** indicates that serious personal injury could result. In particularly serious cases, lives could be at risk.



Notes are identified by the symbol shown on the left. They are bordered by horizontal lines above and below the text.

Notes contain important information in cases where there is no risk of personal injury or damage to property.

1 Details of Unit



The TR 212 E may only be fitted in a boiler with an Optimum Start-compatible Bosch Heatronic unit and in conjunction with the TR 2 room thermostat and DT 2 fitted timer.

1.1 Standard specifications

Room-temperature (economy/night) unit
TR 212 E.

1.2 Technical data

Modulation range	approx. 5...30°C
Enclosure class	III
	CE

Table 1 Technical data

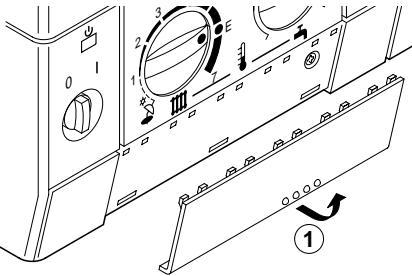
2 Installation

2.1 Fitting



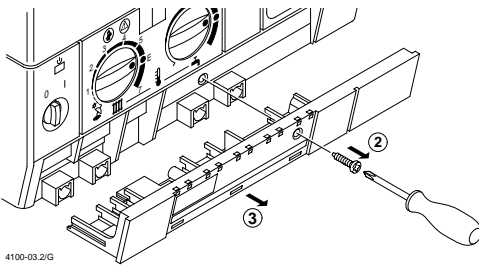
Danger: Risk of electric shock!

- ▶ Disconnect the central heating boiler from the power supply before fitting the programmer.



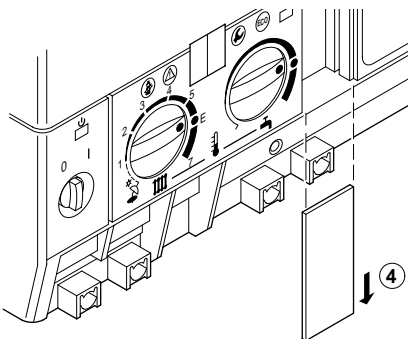
4100-02.2/G

Fig. 1 Remove flap



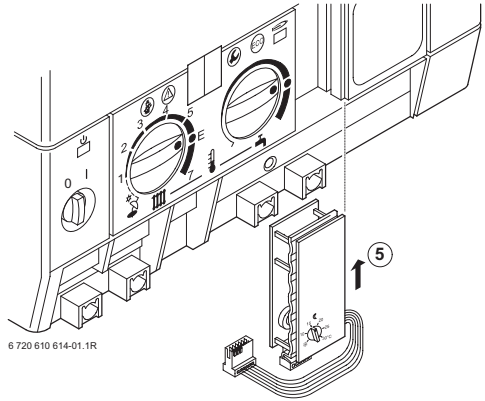
4100-03.2/G

Fig. 2 Remove screw and cover



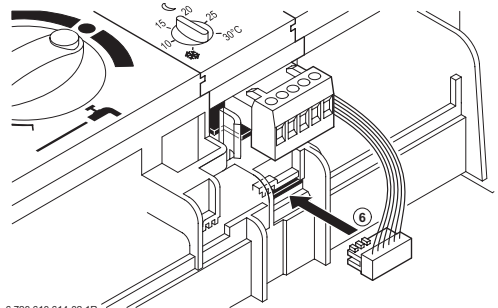
4100-04.2/G

Fig. 3 Withdraw blanking plate



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Fig. 4 Slide TR 212 E into the guide slots and push upwards until it locks into position.



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Fig. 5 Plug TR 212 E connector into socket (ST 9 TA module).

- ▶ Connect up the TR 2 (Fig. 6).
- ▶ Refit cover (Fig. 2) and flap (Fig. 1).

Fitting accessory units

- ▶ Fit accessory units for boilers without text display unit according to the statutory requirements and the installation instructions provided:
 - TR 2 room thermostat
 - DT 2 fitted timer

2.2 Electrical connections

- ▶ Connection from TR 212 E to TR 2:
Use electrical cable that conforms at least to BS6500:
 - up to 20 m cable length: 0.75 to 1.5 mm²
 - up to 30 m cable length: 1.0 to 1.5 mm²
 - over 30 m cable length: 1.5 mm²
- ▶ All low-voltage wiring (instrument wiring) should be routed separately from cables carrying

230 V in order to prevent inductive interference (minimum separation 100 mm).

- ▶ If there are external sources of inductive interference (e.g. high-power cables, overhead tram cables, transformer substations, radio and TV equipment, amateur radio equipment, microwaves, etc.): use screened cable.

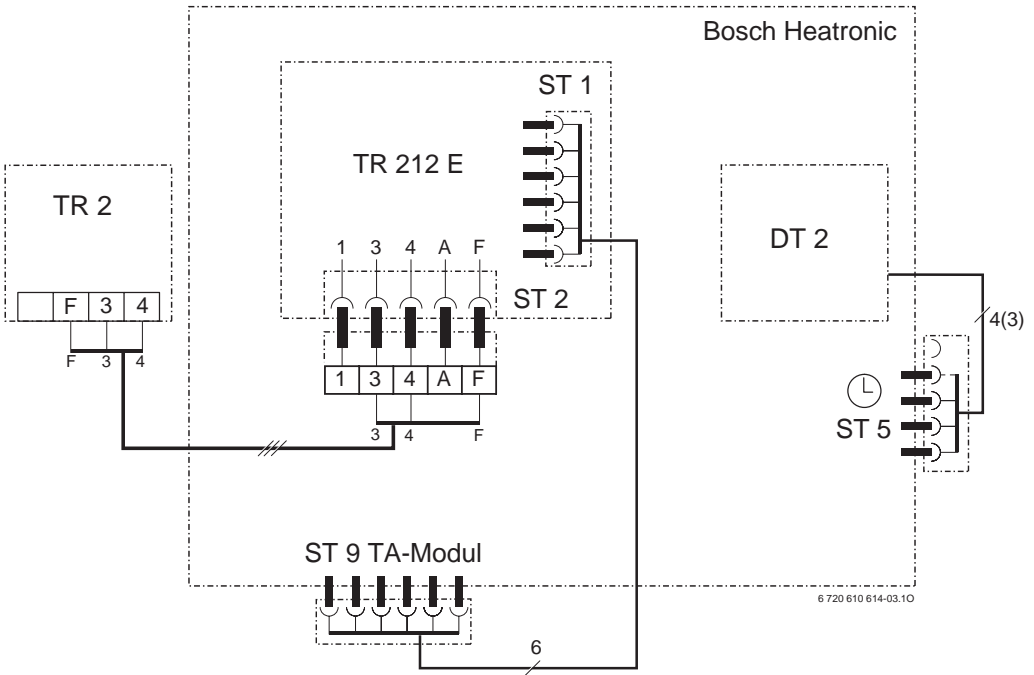


Fig. 6

3 Operation

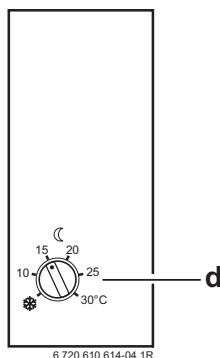


Fig. 7 Controls

- d** Control for **Off (Economy)** mode; for setting the desired room temperature



Set the CH flow temperature control on the heating boiler to the maximum required CH flow temperature.

3.1 Setting the room temperature for “Off (Economy)” mode (d)

- ▶ Set the control (d) to the desired room temperature between ❄ (5°C) and 30°C.

As soon as **Off (Economy)** mode calls for heat, the heating switches on and continues running until the set room temperature has been reached.

3.2 Setting the room temperature for “On (Comfort)” mode

- ▶ Set the desired room temperature for **On (Comfort)** mode on the TR 2 room thermostat (refer to operating instructions).

As soon as the TR 2 calls for heat, the heating switches on and continues running until the set room temperature has been reached.

3.3 Selecting operating mode

- ▶ Select the desired operating mode on the TR 2 room thermostat (see TR 2 operating instructions).

3.4 Frost protection

There are three possible frost protection modes:

- Frost protection while **Off (Economy)** mode is active (control (d) set to position ❄).
- Frost protection while **On (Comfort)** mode is active (control on TR 2 set to position ❄).
- Constant **frost protection** mode (mode selector switch on TR 2 set to position ❄).

In all frost protection modes, the room in which the TR 2 is fitted is protected against frost. If the ambient temperature is above 5°C, the heating (pump) remains switched off.

3.5 Entering the heating programme

- ▶ Enter the switching times for the heating programme on the DT 2 fitted timer (see timer operating instructions).

4 General instructions

... and tips on saving energy:

- The temperature in the primary room (room in which TR 2 is fitted) serves as the reference for the entire heating system. For that reason, the radiators must be adjusted to balance the system.
 - With **manual valves**, they should be pre-set.
 - With **thermostatic valves**, they should be set to maximum and the adjustment made using the return unions.
If the thermostatic valves in the primary room are not turned up to the maximum setting, they could restrict the supply of heat even though the TR 2 is calling for heat.
- Adjust the temperature in the remaining rooms by means of thermostatic valves.
- If the primary room is heated by external sources (e.g. sunshine, stove, etc.) the other rooms may not heat up adequately (central heating may not cut in).
- Save energy by reducing the room temperature during the day or at night: reducing the room temperature by 1 °C: can achieve up to 5% energy savings.
Energy-inefficient: allowing the temperature of rooms that are heated daily to fall below +15 °C because the walls will become cold, the room temperature will have to be raised and thus more energy consumed than if an even temperature were maintained.
- If the building is well insulated: the temperature may not drop as low as the set economy temperature. Nevertheless, you will still save energy because the heating will not switch on. In such cases, set the start time for “Off (Economy)” mode earlier.
- To air a room, do not leave windows constantly slightly open. This will result in continuous heat loss without significantly improving the quality of air in the room.
- Air the room for a short time, but thoroughly (windows fully open).
- While airing, turn off the thermostatic valve or set TR 2 to ☺ .

5 Fault finding

Problem	Cause	Remedy
Desired room temperature is not reached	Thermostatic valve(s) in primary room set too low	Turn up thermostatic valves to maximum or replace with manual valve(s)
	CH flow temperature control on boiler set too low	Turn up CH flow temperature control
	Air trapped in heating system	Bleed radiators and heating system
Desired room temperature is exceeded by large amount	Bad choice of installation site for TR 2, e.g. on external wall, near window, in draught, ...	Choose better installation site for TR 2
Excessive fluctuations in room temperature	Periodic effect of external source of heat on room, e.g. due to sunshine, lighting, TV, fire, etc.	Choose better installation site for TR 2
Temperature rises instead of falling	Time set incorrectly on timer	Check time setting
Room temperature too high in Off (Economy) mode	Building stores heat well	Set "Off (Economy)" mode to start earlier
Incorrect or non-existent modulation	TR 2 wired incorrectly	Check wiring conforms to wiring diagram and correct as necessary

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