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HYDRONIC GAS SYSTEM BOILER 18kW

BOSCH CONDENS 5000W

ZSB18 - 2A



BOSCH

Installation and Servicing Instructions

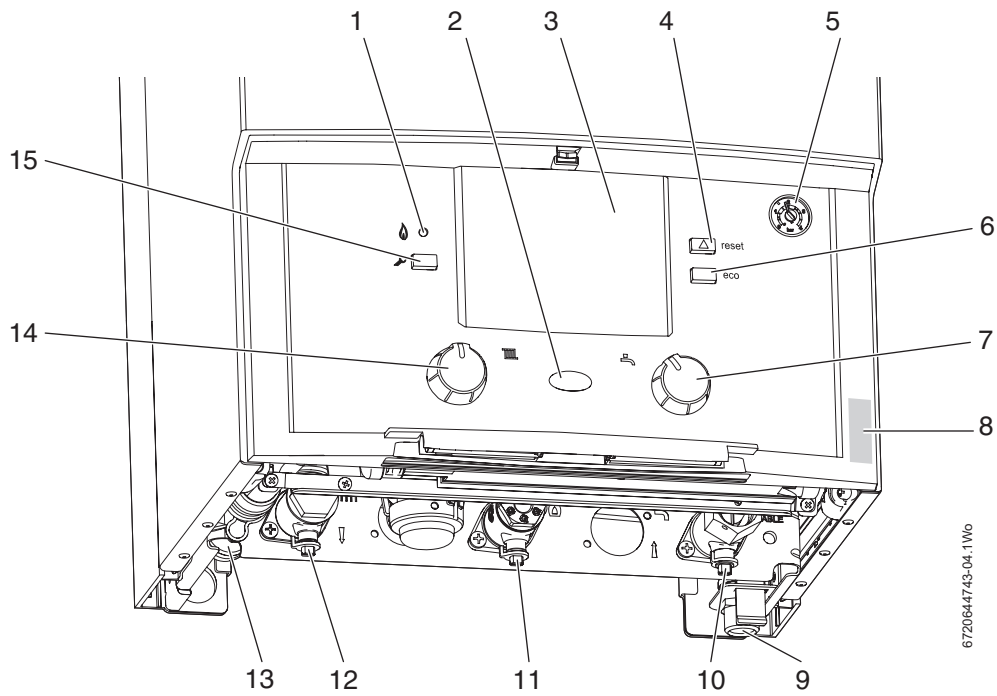


Fig. 4 Additional components

1	Burner ON indicator light (green)	9	PRV pipe connection point
2	Power ON/OFF indicator/fault diagnostic light (blue)	10	CH return isolator
3	Position for optional programmer	11	Gas inlet connection BSP $\frac{3}{4}$ inch thread
4	Reset button	12	CH flow isolator
5	System pressure gauge	13	Condensate connection
6	ECO button (not used)	14	CH temperature control
7	DHW temperature control*	15	Service mode button
8	Boiler identification label		

Tab. 7 Additional boiler components



* The DHW temperature control is only operational when the “optional internal diverter valve” is fitted.

5.4 Starting the boiler



CAUTION: Running the boiler

- ▶ Never run the boiler when the system is empty or partially filled.

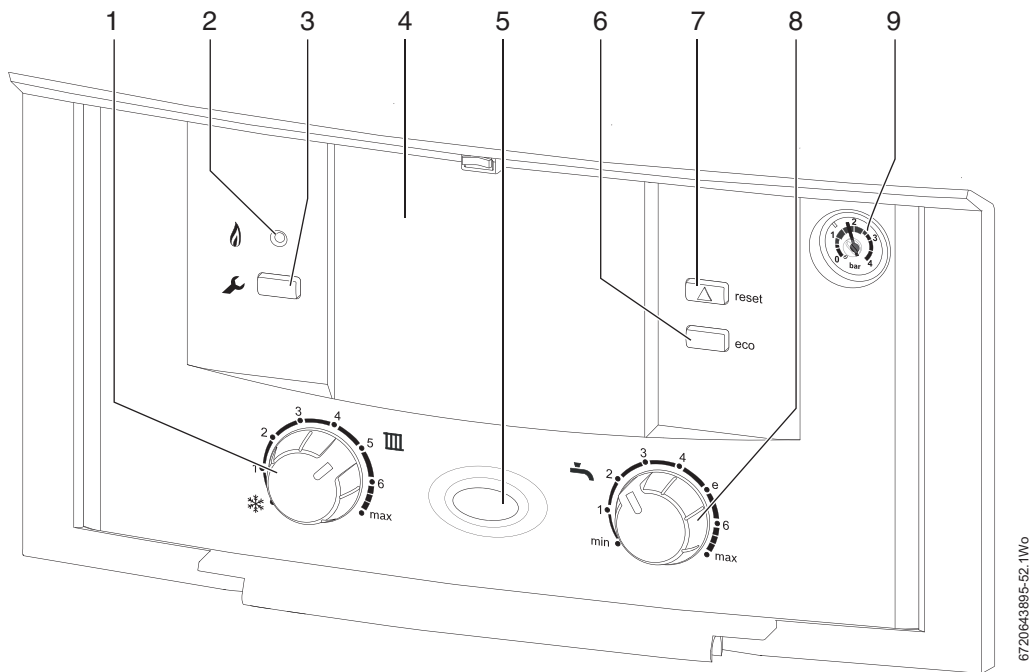


Fig. 56 Control panel

Switching the boiler on/off:

- ▶ Turn on mains power supply, the power on indicator (5) illuminates blue.
- ▶ Turn on any external controls
- ▶ Set the thermostatic radiator controls to maximum temperature
- ▶ Set the clock/programmer to continuously ON and the room thermostat to maximum temperature

1	Central heating temperature control
2	Burner indicator (green)
3	Service button
4	Cover or optional Programmer
5	Power ON and fault indicator (blue)
6	ECO button - not used
7	Reset button
8	DHW temperature control (only operational when option integral diverter valve is fitted)
9	System pressure gauge

Tab. 23 Control panel legend

Turn the boiler CH temperature control (1) to maximum. The burner on indicator (2) illuminates green when the burner has lit.

If the boiler fails to light, the blue power indicator (5) and reset button (7) will flash.



NOTE: Reset

- ▶ Do not press the blue power indicator (5) to reset the boiler.

To reset press and hold the reset button (7) for more than two seconds. The boiler will be reset.

7 Fault finding and diagnosis

7.1 Fault finding



This fault finding information is for guidance only. Robert Bosch cannot be held responsible for costs incurred by incorrectly diagnosed faults.

The electronic control system for this boiler incorporates a blue central indicator. This normally confirms the permanent mains supply but, by flashing at different rates during a fault, provides a guide to the cause as listed.

This fault finding system assumes that the boiler has been operating normally until the time of failure (i.e. not a first installation error).

Preliminary electrical system checks are the first electrical checks to be carried out during a fault-finding procedure. On completion of the Service/Fault-Finding task which has required the breaking and remaking of electrical connections, check:

- (a) Earth continuity,
- (b) Short circuit check,
- (c) Polarity and
- (d) Resistance to earth.

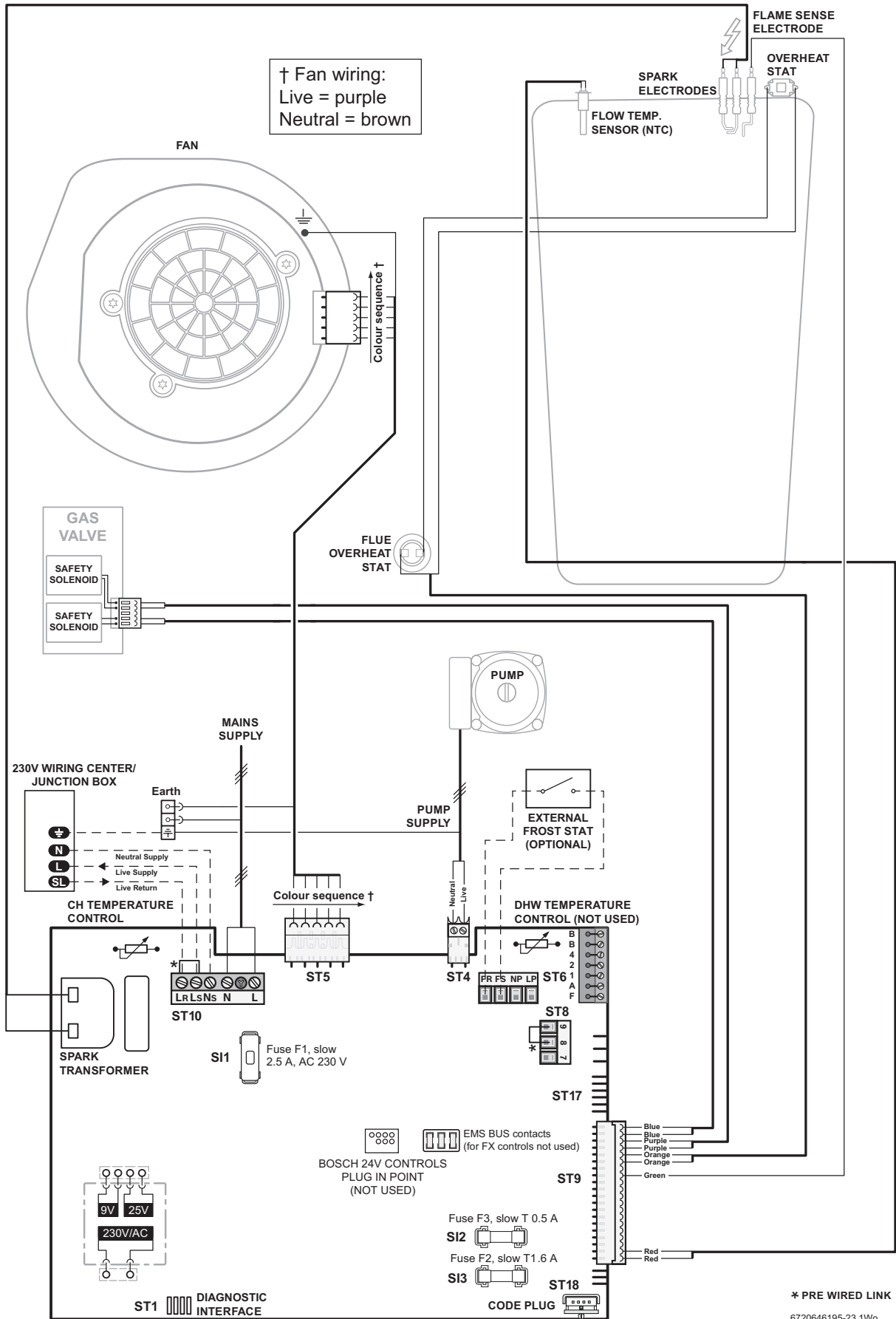
Blue light indication	Lockout reset button	Fault	Possible solution/check
Off	Off	No power at control board	Permanent mains supply to boiler. Fuse F1 - 2.5A or Fuse F3 - 0.5A. Transformer (primary coil below 60 Ω , both secondary coil below 10 Ω). Otherwise replace control board.
		Boiler not operating during central heating demand	Live demand at ST10-L _R (from external room thermostat/timer) Fascia mounted timer (if fitted) CH knob in winter position Control board
		Boiler operating without live demand at ST10-L _R (from external room thermostat timer)	Some older thermostats (containing capacitors) may give a low voltage return at ST10-L _R when the thermostat contacts are open. Check that there is no permanent live at ST10-L _R from another source.
On	Off	Boiler not operating during any demand.	Fan Control board

Tab. 28

Blue light indication	Lockout reset button	Fault	Possible solution/check
Slow flash (mostly off, flashes on)	Flashing (reset required)	Ignition lockout	<ul style="list-style-type: none"> ▶ Gas present and at correct pressure? ▶ Gas valve <ul style="list-style-type: none"> – Check that there is 35V d.c. to each solenoid – Check the resistance of each solenoid: Top solenoid = $380 \Omega \pm 10\%$ (342 - 418 Ω) Bottom solenoid = $190 \Omega \pm 10\%$ (171 - 209 Ω) ▶ Combustion CO₂ level. ▶ Flue condition. <ul style="list-style-type: none"> – Blocked flue? ▶ Blocked condensate pipe or frozen condensate. ▶ Gas valve adjustment. ▶ Ignition electrodes/harness/connections. <ul style="list-style-type: none"> – Check for condition and continuity ▶ Otherwise replace control board
Slow flash (mostly on, flashes off)	Flashing (reset required)	Flue overheat	<ul style="list-style-type: none"> ▶ Heat exchanger baffles removed and not refitted.
Fast flash	Off	Volatile lockout - Fan does not run	<ul style="list-style-type: none"> ▶ Temperature sensors <ul style="list-style-type: none"> – Check condition and continuity of leads/sensors ▶ Fan <ul style="list-style-type: none"> – 230V a.c. across the live (purple) and neutral (brown) ▶ Fan lead <ul style="list-style-type: none"> – Check continuity ▶ Code plug <ul style="list-style-type: none"> – Is code plug missing or not inserted properly.
2 pulses	No light	Not a fault code	Service mode selected to minimum, press service button to return to normal
5 pulses	No light	Not a fault code	Service mode selected to maximum, press service button to return to normal

Tab. 28

7.1.1 Circuit diagram





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