B Control panel

Package MA1 [Basic]



Instructions for use, Electrical connection, Start up





English

03/14/08

CONTENTS

1.	INTRODUCTION	5
2.	GENERAL	3
3.	PRESENTATION	3
4.	TECHNICAL CHARACTERISTICS	3
5.	ASSEMBLY, ELECTRICAL CONNECTIONS AND FITTER SETTINGS	ŀ
6.	USAGE)
7.	MESSAGES - ALARMS	
8.	SPARE PARTS	

CONFORMITY/ MARKING (€

This product complies with the requirements of the following European directives and standards:

- 73/23/EEC, Low Voltage Directive
 - Relevant standard: EN 60.335.1.
- 89.336/EEC, Electromagnetic Compatibility Directive

Generic standards: EN 61000-6-3 and EN 61000-6-1

1. INTRODUCTION



The boiler must be connected by a qualified professional. Strict compliance with these usage, electrical connection and start up instructions is a precondition for the correct operation of the boiler.

2. GENERAL

Electrical heating control panel, equipped with regulation with priority for domestic hot water production as original equipment.

The basic delivery for the B control panel comprises:

- 1 B control panel

- 1 boiler sensor to measure the water temperature in the boiler.

3. PRESENTATION

The B control panel includes a boiler thermostat, a domestic hot water thermostat, an electronic thermometer and a safety thermostat.

The boiler thermostat

to regulate the boiler operating temperature.

The safety thermostat

with manual reset to make the boiler safe in operation.

If the boiler temperature rises abnormally (110°C/230°F), the safety thermostat cuts off the burner electricity power supply.



In this case, you must call your fitter.

The B control panel is used on the following De Dietrich boilers:

- GT 120 A and GT 1200 A.

Options

The following options can be connected:

- DHW sensor (package FM 45) for the connection of a domestic hot water calorifier,

- remote room thermostat.

The domestic hot water thermostat

for the preparation of domestic hot water (GT 120 A connected to a calorifier and GT 1200 A), is used to adjust the average domestic hot water storage temperature giving priority to preparation of domestic hot water.

The domestic hot water priority trips the burner and the DHW load pump and stops the heating pump whenever a domestic hot water heating request is received. During summer conditions, the boiler temperature is not maintained between two hot water requests. The domestic hot water temperature is measured by the DHW sensor.

4. TECHNICAL CHARACTERISTICS

Electrical power supply: 120V - 60 Hz

- Value of water sensors (boiler and domestic hot water)

Temperature	Resistance	Temperature	Resistance
in °C / °F	in Ohm	in °C / °F	in Ohm
0°C / 32°F	32 014 Ω	50°C / 122°F	3 661 Ω
10°C / 50°F	19 691 Ω	60°C / 140°F	2 535 Ω
20°C / 68°F	12 474 Ω	70°C / 158°F	1 794 Ω
30°C / 86°F	8 080 Ω	80°C / 176°F	1 290 Ω
40°C / 104°F	5 372 Ω	90°C / 194°F	941 Ω

5. ASSEMBLY, ELECTRICAL CONNECTIONS AND FITTER SETTINGS

Assembling the control panel

Refer to the assembly sheet provided with the instructions for the boiler.

Installing the boiler sensor

Refer to the assembly sheet provided with the instructions for the boiler.

Electrical connections



Electrical connections shall be carried out by a qualified professional only. The electrical wiring has been carefully checked in the factory and the internal connections of the control panel must not be modified in any event.

All connections are made on the terminal blocks provided for this purpose at the back of the boiler control panel.

The connecting cables may be brought inside the boiler through the cut-outs provided in the boiler back panel, which may be used along with purchased cable channels.

Fasten the cables to the rear plate of the control panel by means of the cable clamps (cable clamps supplied in a separate pack) after mounting them on the plate.

IMPORTANT: The maximum current that can be switched per output is 2 A cos. $\varphi = 0.7$ (= 450 W inrush current less than 16 A).



Sensor cables must be separated from cables in 120V circuits.

- In the boiler: use two cable glands on each side of the boiler for this purpose.

- Outside the boiler: use two cable channels or cableways with a minimum distance of 10 cm between them.

Electrical connections shall be made respecting the information given on the electrical diagrams delivered with the equipment and the directives given in the instructions.

The electrical connection must comply with applicable standards and regulations in force. The equipment must be powered by a circuit with an omni-pole switch with an opening distance greater than 3 mm.



Basic connections



Sensor cables must be separated from cables in 120V circuits (see page 4).



"FITTER" SETTINGS



The settings defined below are applicable for various functions, and the installation configuration. They can only be modified by qualified professional.

Access to d.h.w. pump timeout adjustment potentiometers and the d.h.w. load temperature limiter.



- Remove the top panel from the boiler.

Setting the d.h.w. pump timeout

The potentiometer **5** on the P.C.B. in the boiler is used to adjust the d.h.w. pump timeout.

The timeout can vary with an adjustment range from 0 to 10 minutes (factory setting 4 min.)



Setting the domestic hot water load temperature limiter

The potentiometer **6** on the P.C.B. in the boiler is used to adjust the boiler temperature while heating domestic hot water.

The load temperature setting can vary from 60°C to 90°C / 140°F to 194°F 60 (factory setting 75°C / 167°F).



Reassembly

At the end of the work, reassemble the P.C.B. protection plate and the top panel, in the same as for disassembly but in the reverse order. NOTE: do not omit the serrated washers



- Remove the P.C.B. protection plate



Deactivating the domestic hot water priority

When the domestic hot water priority is deactivated, heating is no longer cut off during domestic hot water heating phases.

- Switch off the boiler power supply.

- Remove the front panel, proceeding as follows:



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- 2 Loosen the two attachment screws on the side panels.
- ³ Pull the front panel clear from the clips and the notches in the top part, pulling it towards you.
- Detach the front panel from the notches near the bottom of the side panels.
 - Unscrew the attachment screw fastening the front of the control panel.







Tilt the front panel.

Remove the shunt (bridge).

Close the control panel and put the front panel back into position, using the same procedure as for disassembly in the reverse order.

Heating pump timeout

The heating pump timeout is fixed at 12 minutes after closing the room thermostat contact or changing to SUMMER mode.

SKELETON DIAGRAMS



6. USAGE



1. Main On/Off switch

Position ① , On

Position O, Off

2. Alarm light

This light comes On when the burner is in safety (out of order)

3. Summer/Winter switch

- "Winter" Position 🔆 Start the heating pump
- "Summer" position 茶 Note: The heating pump stops 12 minutes after the changeover to "summer" mode.
- 4. "Test-STB" push button

When held in the pressed position, tests the safety thermostat and cuts off the pump(s)

5. Safety thermostat with manual reset set to 110°C / 230°F

6. Timed circuit breaker (6 A)

7. Electronic thermostat

Adjustment of the boiler temperature

8. Light On

For preparation of domestic hot water.

9. Light On

Display domestic hot water temperature

10. Electronic thermostat

Setting the average domestic hot water storage temperature

Note:

When the system is switched On, it performs an automatic bleed sequence of the hot water calorifier exchanger lasting for 1 minute, by intermittently operating the domestic hot water load pump and the heating pump.

This bleed sequence is deactivated if the calorifier temperature is more than 25° C / 77° F.

7. MESSAGES - ALARMS

The display may show the following messages in the case of a malfunction:

MESSAGE	FAILURE	PROBABLE CAUSE	REMEDY
RL SO	Boiler sensor	The corresponding sensor	Inform the fitter.
AL S2	DHW sensor	is short circuited.	See comments below.

Notes

operating mode in case of fault:

RL **50** : The installation is stopped.

RL 52 : If there is a fault in the DHW sensor, the installation continues to operate but domestic hot water is no longer heated.

8. SPARE PARTS

See following page.

B control panel for GT 120 A - GT 1200 A

Note : when ordering spare parts, do not forget to provide the code number given in the list opposite the part reference.



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Mark	Code No.	DESCRIPTION	Mark	Code No.	DESCRIPTION
1	8578-7000	Complete standard control panel	13	8575-8019	Card supports GT 120, GT 1200V
2	8578-8501	Standard card cover	14	8578-4905	Diem Easy standard GT120 harness
3	9786-4061	Front panel with skin	15	8578-4906	Burner cable GT120
4	9532-5027	Green On/Off two pole switch	16	8806-5566	Basic relay card
5	8500-0035	Two pole switch	17	8575-4905	3-pin connector power supply
6	9532-5028	Moment inverter two pole switch	18	8575-4922	4-pin connector VA+CS
7	8500-0032	110°C Safety thermostat	19	8575-4924	Pump 3-pin connector A/VS
8	9534-0285	Circuit breaker 6A	20	8575-4920	2-pin connector TAM
9	9752-5181	Adjustment button	21	8575-4918	2-pin connector S.CH
10	9521-6220	Red light	22	9536-2446	Sensor KVT 60 LG 1 M
11	8806-5567	Basic display CPU card	23	8575-5520	Control panel screw bag GT120
12	9655-0352	WSBH-2 Harness attachment			

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