

OT ZONE MANAGEMENT MODULE

INSTRUCTIONS FOR USE

SYMBOLS USED IN THE MANUAL

Pay special attention when reading this manual to the parts marked by the symbols:



DANGER!
Serious danger to safety
and health



CAUTION!
Possible dangerous situation for
the product and the environment



NOTE!
Tips for the user

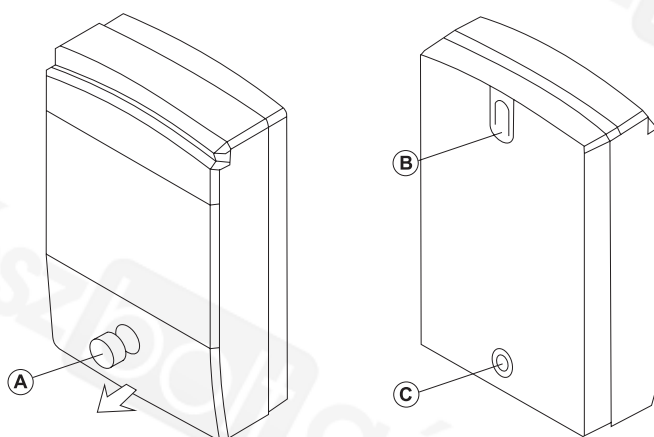
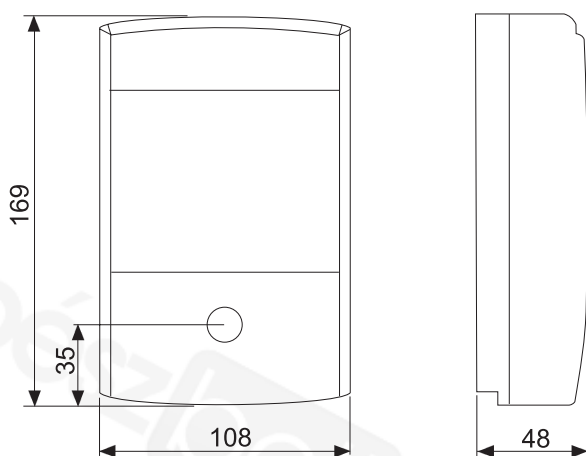
2 - DESCRIPTION

Thanks to this accessory, the boiler can manage heating circuits at different temperatures:

- 1 direct zone + 1 mixed zone

OR

- up to 4 direct zones



Wall fastening

1	Drill \sqcap 5 mm holes in the wall opposite B and C
2	Position the support screw and related plug in order to attach the module at point B .
3	Secure the module in place using the screw at point C .

Box contents:

-	Zone management module
-	Wall fastening plugs (2 x \varnothing 5)
-	Cable clamps (6)
-	Front screw cap (A)
-	Instruction manual

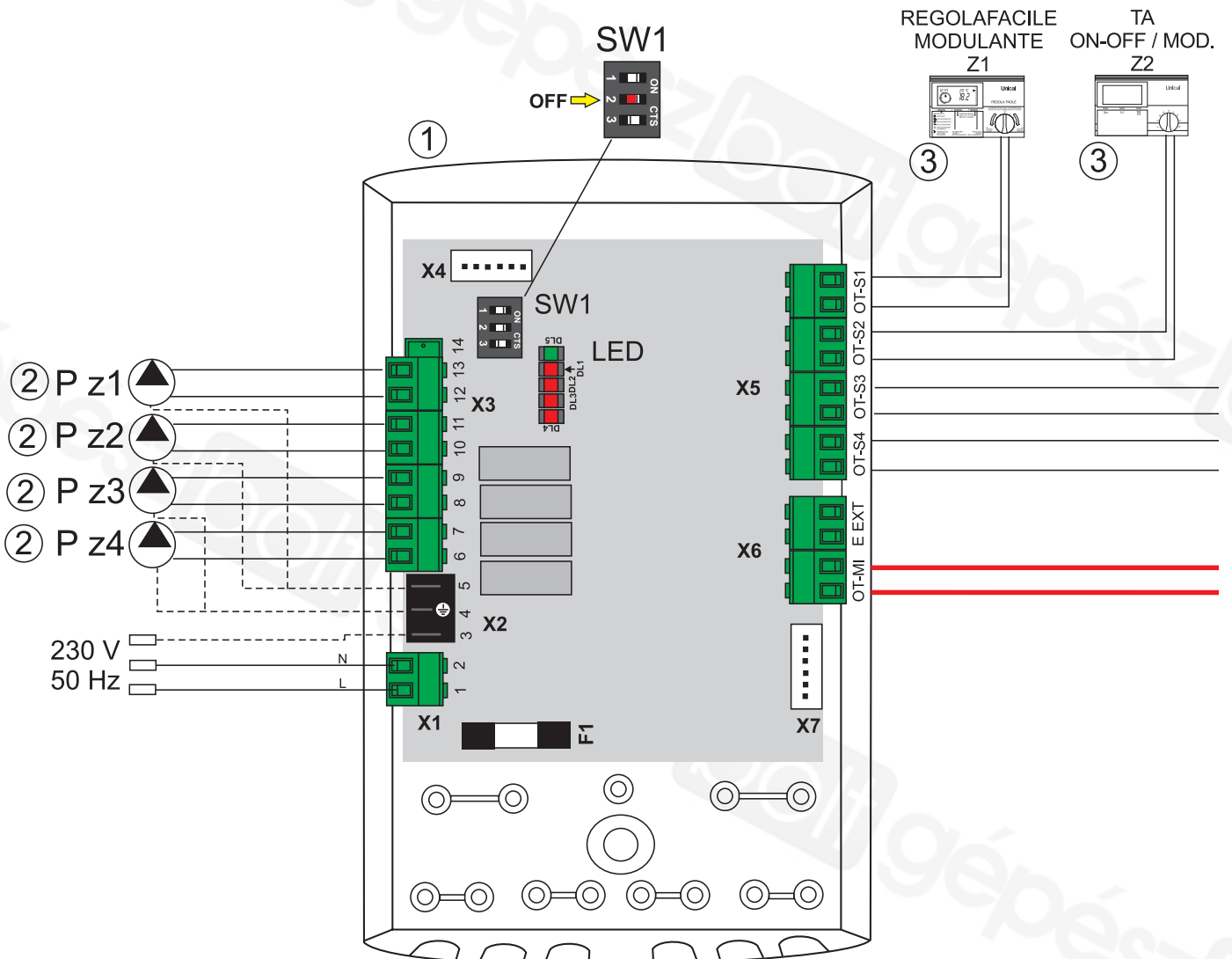
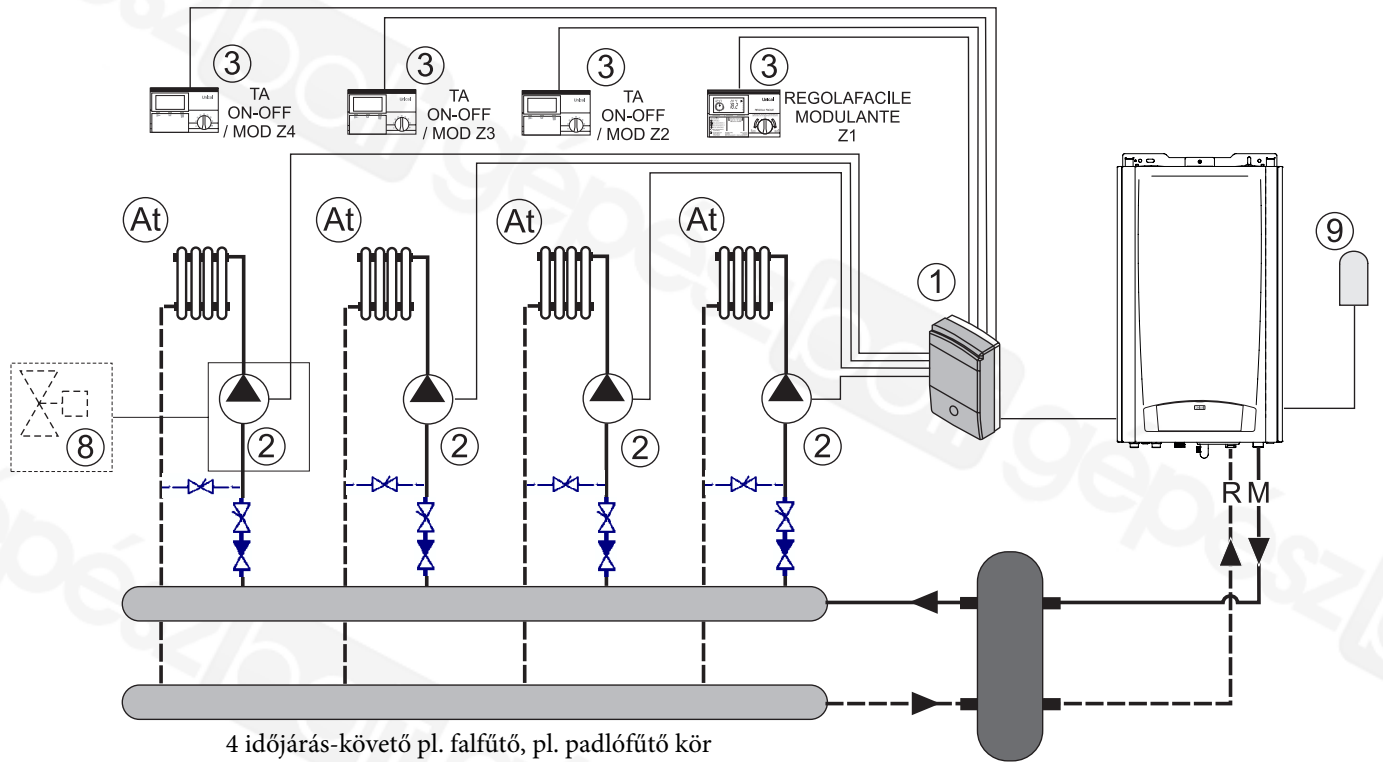
NOTE



1	To achieve the configurations described herein, the REGOLAFACILE easy-adjust device must be used and connected to the first zone (modify parameter settings)
2	Check whether the boiler is designed to accommodate this accessory (OT+ output)


2 - WIRING DIAGRAMS

2.1 - DIRECT ZONES (from 1 ÷ max. 4)




KEY	
1	OT zone management module
2	Zone pump
3	ON-OFF/Modulating room thermostat
8	Direct zone solenoid valve
9	External sensor

NOTE



In the presence of an external sensor, any REGOLAFACILE devices connected to the zones will calculate the temperature according to their external sensor compensation curve.

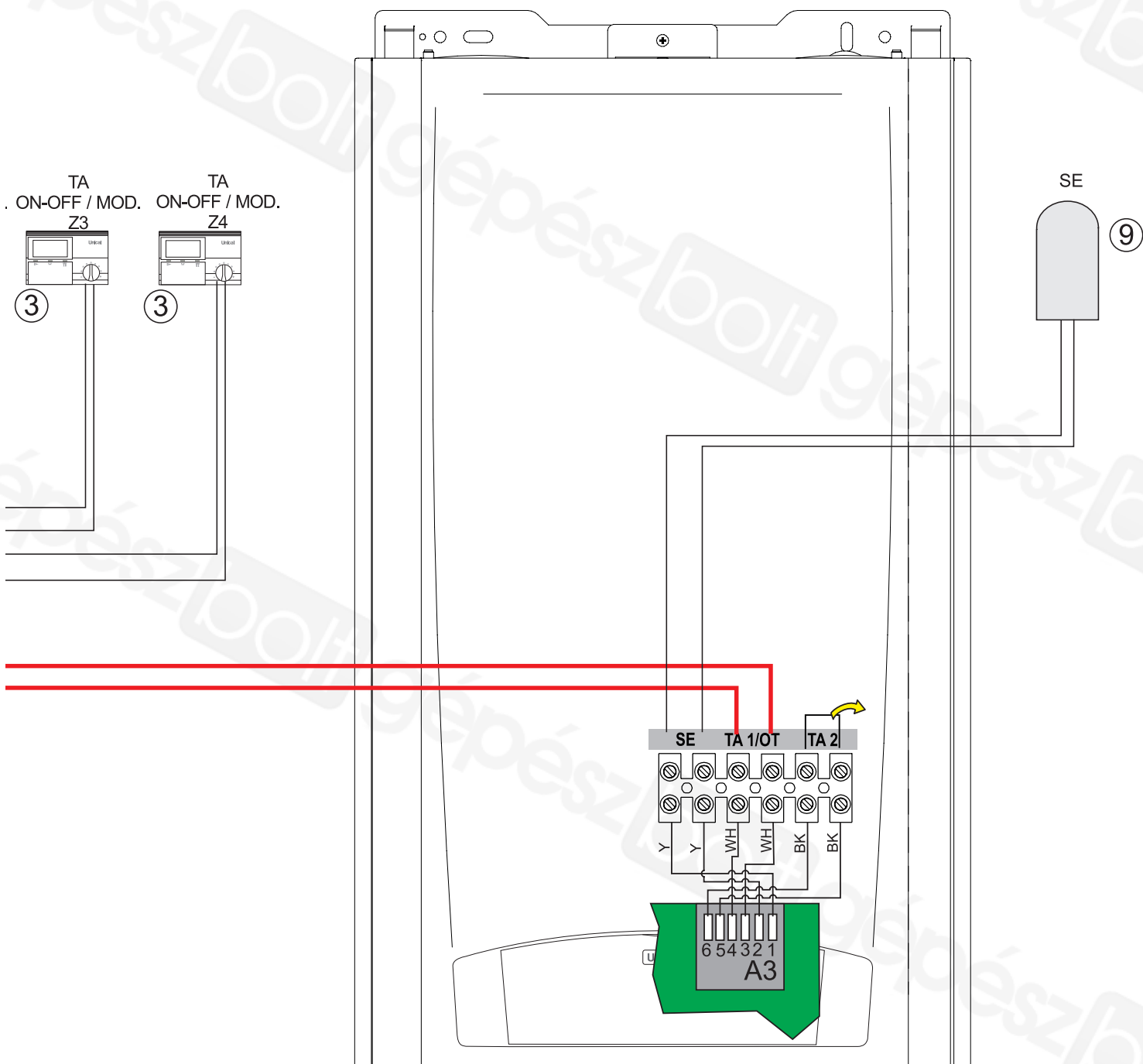
NOTE



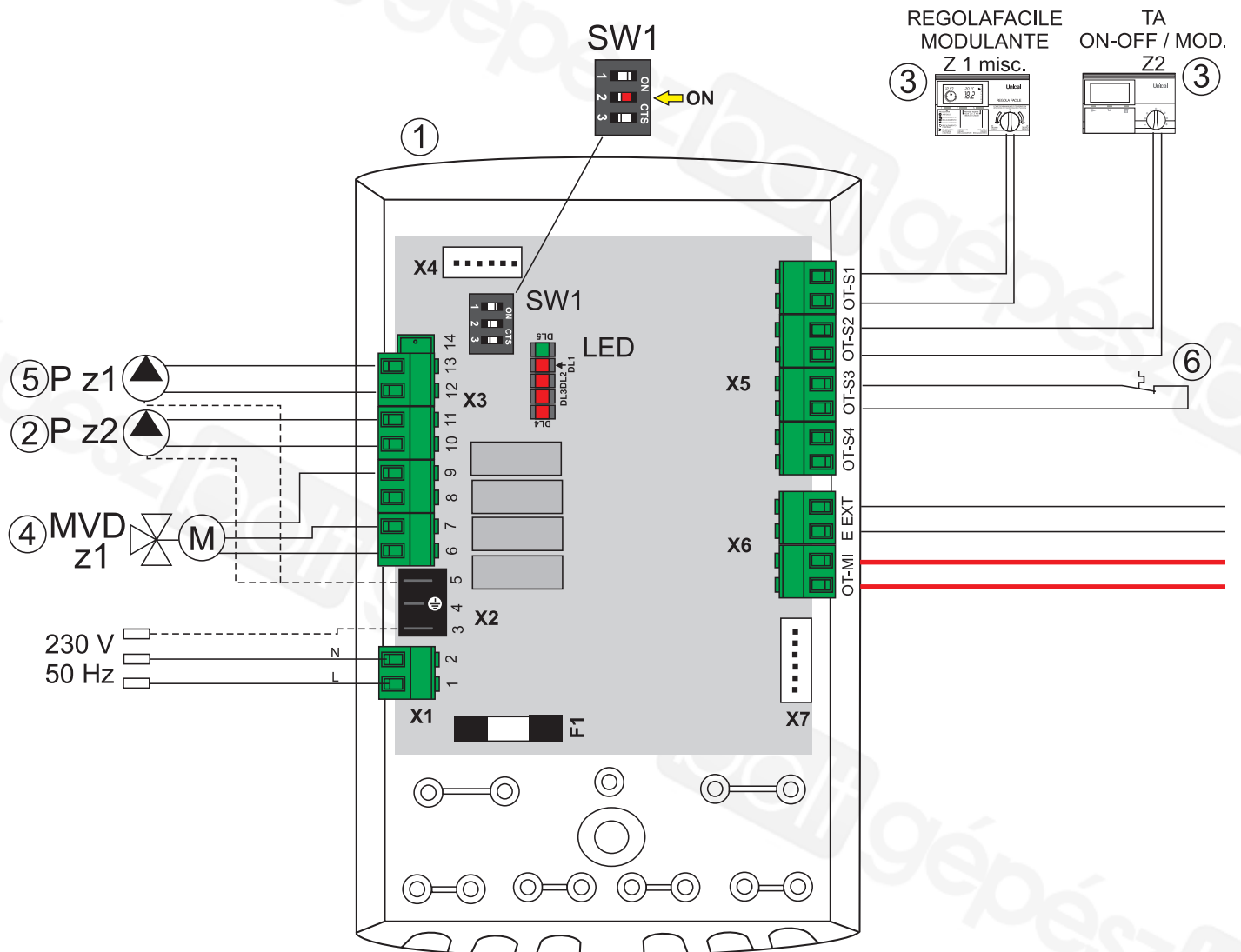
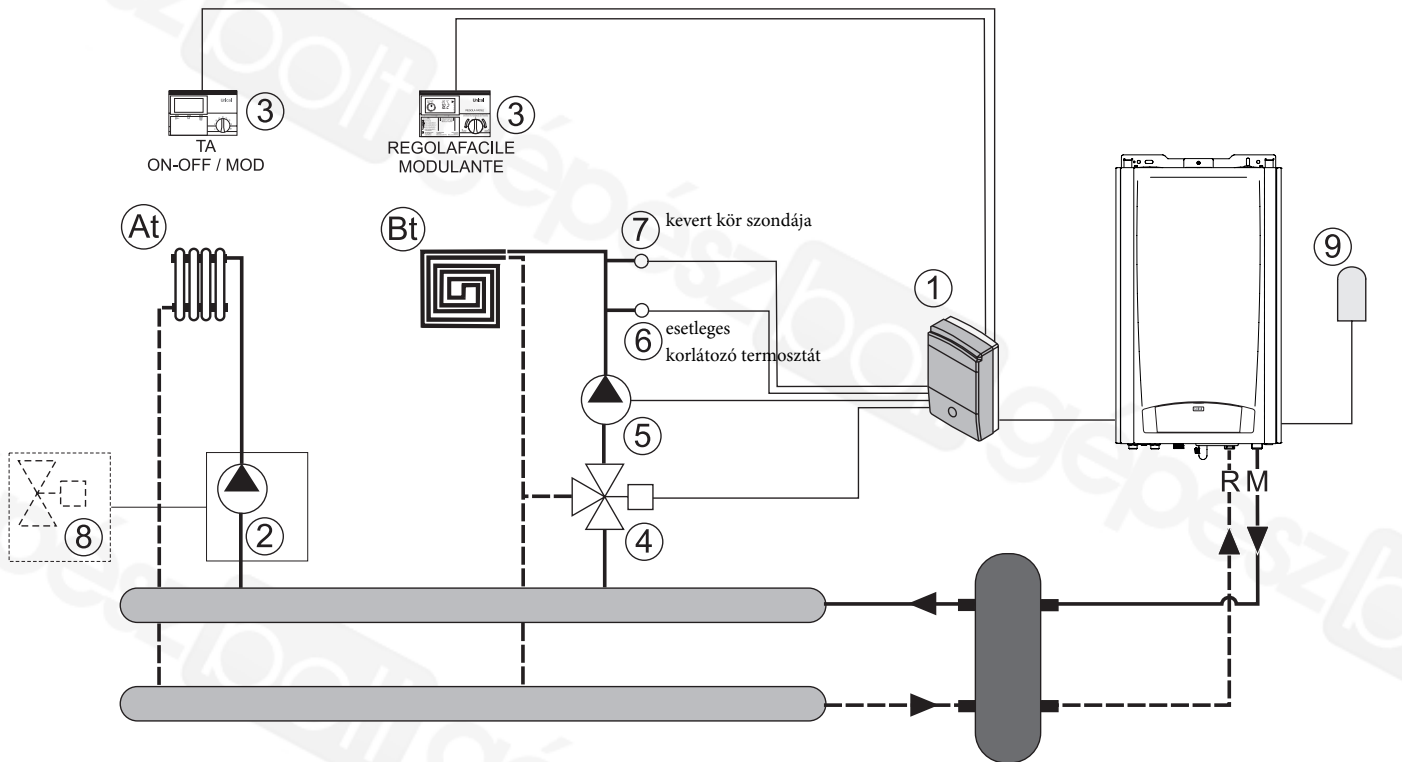
Electrical characteristics of the communication line:

- Number of wires: 2
- Cable type: bipolar (*)
- Max. line length: 50 m


(*) In the event of settings with high electrical noise levels, use a screened cable or twisted wire

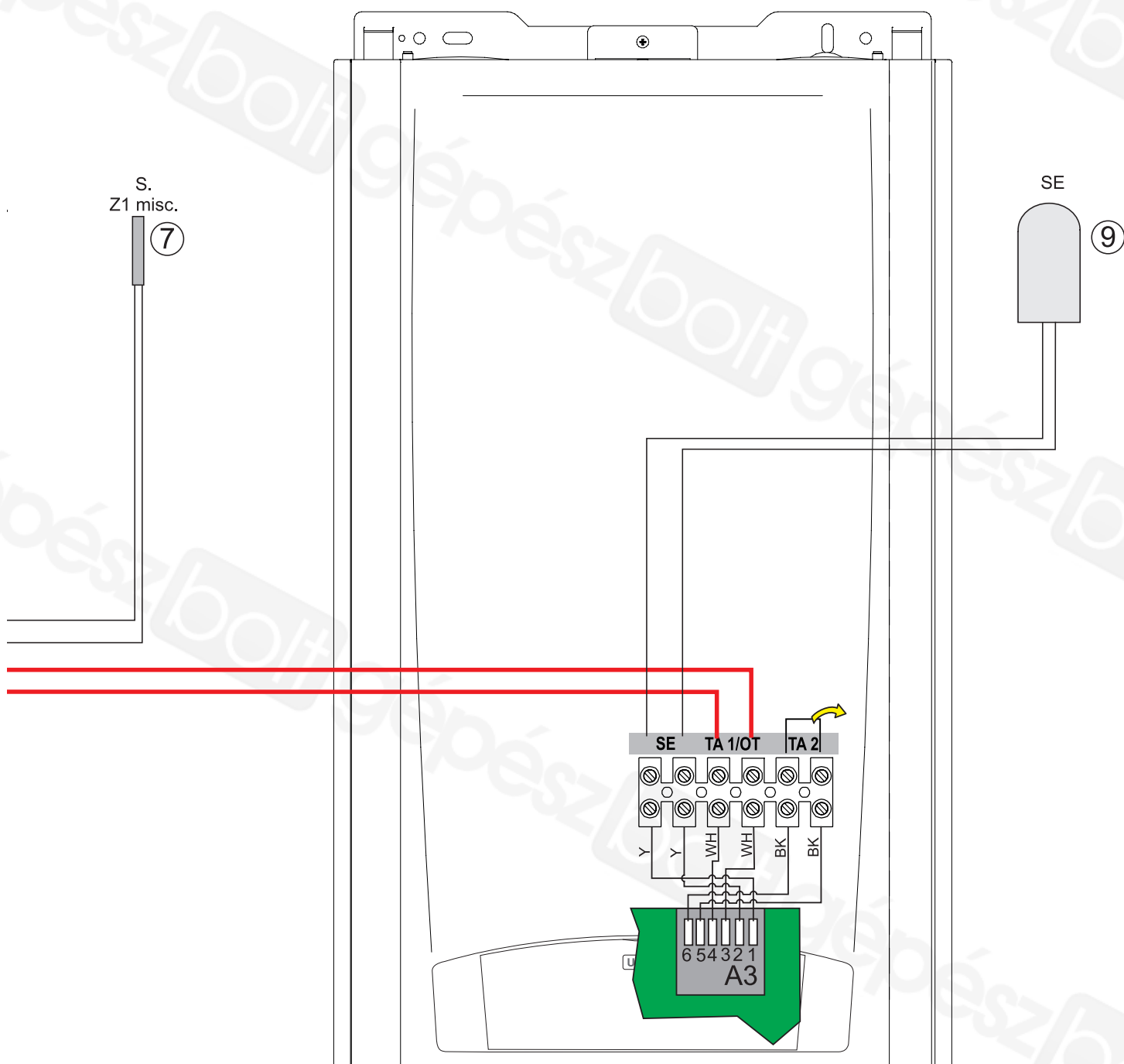


2.2 - 1 DIRECT ZONE (AT) + 1 MIXED ZONE (BT)



KEY	
1	OT zone management module
2	Direct zone pump (AT)
3	ON-OFF/Modulating room thermostat
4	Mixer valve
5	Mixed zone pump
6	Possible mixed zone limit thermostat (BT)
7	Mixed zone sensor (BT)
8	Direct zone solenoid valve (AT)
9 *	External sensor

NOTE	
	In the case of a BT+AT configuration, if you want low temperatures below 30°C, you need to modify parameter 24 in the REGOLAFACILE technical menu, setting it to the desired minimum value.
	In the presence of an external sensor, any REGOLAFACILE devices connected to the zones will calculate the temperature according to their external sensor compensation curve.



3 - PARAMETER SETTINGS

TSP Parameter Number		Paraméter leírása	Beállítható értékek	Gyári beállítás
0		Van-e 2-es szobatermosztát	0 ÷ 1 (0 <input type="checkbox"/> nincs - 1 <input type="checkbox"/> van)	0
1		Van-e 3-as szobatermosztát	0 ÷ 1 (0 <input type="checkbox"/> nincs - 1 <input type="checkbox"/> van)	0
2		Van-e 4-es szobatermosztát	0 ÷ 1 (0 <input type="checkbox"/> nincs - 1 <input type="checkbox"/> van)	0
3		Hibajeleket kiírjon-e az 1-es szobatermosztát (OT)	0 ÷ 1 (0 <input type="checkbox"/> ne - 1 <input type="checkbox"/> igen)	1
4		Hibajeleket kiírjon-e a 2-es szobatermosztát (TA2)	0 ÷ 1 (0 <input type="checkbox"/> ne - 1 <input type="checkbox"/> igen)	0
5		Hibajeleket kiírjon-e a 3-as szobatermosztát (TA3)	0 ÷ 1 (0 <input type="checkbox"/> ne - 1 <input type="checkbox"/> igen)	0
6		Hibajeleket kiírjon-e a 4-es szobatermosztát (TA4)	0 ÷ 1 (0 <input type="checkbox"/> ne - 1 <input type="checkbox"/> igen)	0
7		max. előremenő 2-es OT szobatermosztáthoz	20 ÷ 90 °C	60 °C
8	SW1-2 OFF	Vagy max. előremenő 3-as OT szobatermosztáthoz	20 ÷ 90 °C	60 °C
	SW1-2 ON	Vagy kazán előremenő mennyivel legyen melegebb kevert előremenőnél	5 ÷ 30 °C	10 °C
9	SW1-2 OFF	Vagy max. előremenő 4-es OT szobatermosztáthoz	20 ÷ 90 °C	60 °C
	SW1-2 ON	Vagy kevert előremenő maximuma	20 ÷ 70 °C	50 °C
10		Utócirk. zóna 1	1 ÷ 240 min	1 min.
11		Utócirk. zóna 2	1 ÷ 240 min	1 min.
12		Utócirk. zóna 3	1 ÷ 240 min	1 min.
13		Utócirk. zóna 4	1 ÷ 240 min	1 min.
14		Max. előremenő zóna 2 On/Off szobatermosztátnál	20 ÷ 90 °C	60 °C
15		Max. előremenő zóna 3 On/Off szobatermosztátnál	20 ÷ 90 °C	60 °C
16		Max. előremenő zóna 4 On/Off szobatermosztátnál	20 ÷ 90 °C	60 °C
17		Zóna 2 direkt körök fűtési görbéinek K értékei legyenek 3...25 között, lásd 6.8 (zone direkte) grafikonban	0 ÷ 90	60
18		Zóna 3 direkt körök fűtési görbéinek K értékei legyenek 3...25 között, lásd 6.8 (zone direkte) grafikonban	0 ÷ 90	60
19		Zóna 4 direkt körök fűtési görbéinek K értékei legyenek 3...25 között, lásd 6.8 (zone direkte) grafikonban	0 ÷ 90	60
20		Zóna 1 hőigény késleltetése	0 ÷ 255 sec	0
21		Zóna 2 hőigény késleltetése	0 ÷ 255 sec	0
22		Zóna 3 hőigény késleltetése	0 ÷ 255 sec	0
23		Zóna 4 hőigény késleltetése	0 ÷ 255 sec	0
24		Keverőszelep zárási ideje	0 ÷ 255 sec	120

4 - SW1 SETTINGS

SW1	ON (CLOSED)	OFF (OPEN)
1	NO	ALWAYS protocol Open Therm SDT
2	Kevert körnél ON	Direkt körnél OFF
3	displays TSP MODULE parameters Működési üzemmód: OT doboz TSP paraméterei látszódnak	displays TSP BOILER parameters Szerviz üzemmód: kazán TSP paraméterei látszódnak

5 - JELZÉSEK

LED	OFF Kikapcsolt	ON Bekapcsolt	Villog lassan	Villog gyorsan
DL1 Piros	Nincs csatlakozás	Jelen van 1-es OT szobatermosztát	Zóna 1 hőigény van	Hiba a korlátozó termosztátnál
DL2 Piros	Működés ON/OFF 2-es szobatermosztáttal	Jelen van 2-es OT szobatermosztát	Zóna 2 hőigény van	
DL3 Piros	Működés ON/OFF 3-as szobatermosztáttal	Jelen van 3-as OT szobatermosztát	Zóna 3 hőigény van	Hiba a kevert kör szondánál
DL4 Piros	Működés ON/OFF 4-es szobatermosztáttal	Jelen van 4-es OT szobatermosztát	Zóna 4 hőigény van	
DL5 Zöld	Nincs kommunikáció a kazánnal	Van kommunikáció a kazánnal	Kazán HMV-t termel	
(*)	Keverőszelep nyit-meleg	(**)	Keverőszelep zár-hideg	

5.1 - LIST OF FAULTS DISPLAYED ON TA MOD (REGOLAFACILE)

Regolafacile code	Fault description
51	Safety thermostat triggered (in the presence of low temperature zone)
52	Fault: Low Temperature sensor interrupted or short-circuited
54	Communication between zone board and boiler interrupted
70	No communication between REGOLAFACILE and ZONE MANAGEMENT MODULE
71	No communication between TA2 and ZONE MANAGEMENT MODULE
72	No communication between TA3 and ZONE MANAGEMENT MODULE
73	No communication between TA4 and ZONE MANAGEMENT MODULE

6 - GENERAL NOTES

6.1 - DESCRIPTION

The board envisages:

Management of up to 4 Room Thermostat / REGOLAFACILE (OT+) inputs with automatic recognition;

Operation:

- up to 4 outputs for circulation pumps / zone valves or
- 2 outputs for circulation pumps and one mixer valve
- 3 (three) SW1 dip switches;
- Pump anti-seizure function;
- Mixer valve anti-seizure function;
- Status signal LED;
- Post-circulation on the last zone of origin of the request;
- Management of each individual zone via TA ON-OFF / REGOLAFACILE T MOD.

6.2 - OPERATION

The board automatically recognises the zones controlled by TA / REGOLAFACILE and manages the request according to the zone requesting heat. Connection via the open therm to the boiler guarantees the fluidity of the set-point since it is the ZONE MANAGEMENT MODULE that directly adjusts the flow temperature according to the active requests.

The functions differ depending on the type of system present, either high temperature only or high and low temperature.

6.3 - SYSTEM SYNCHRONISATION

The connection of the TA to the ZONE MANAGEMENT MODULE must always be made from number 1 to number 4 and system master number 1 (REGOLAFACILE) must never be missing otherwise the board triggers the corresponding fault.

During normal operation, it is the REGOLAFACILE that manages all the system functions, whereas the other TA 2 - TA 3 - TA 4 only operate for their own adjusted zone.

The REGOLAFACILE (system master) can disable heating throughout the system even if the other TAs have the parameter enabled.

This operating mode is used in summer when only the production of domestic hot water remains active. Again, REGOLAFACILE manages the transparent parameters, whereas the DHW set is synchronised on all the TAs, a function which allows the set point to be edited from each individual TA with the automatic update of the new value on all the others.

6.4 - HIGH TEMPERATURE ZONES ONLY

Operation of AT high temperature zones only is managed directly by the ZONE MANAGEMENT MODULE; in this condition, the pumps /zone valves are controlled directly by the relays on the board. In the event of a heat request, the boiler board is enabled, as well as the pumps/valves of the corresponding zones. The boiler is started and controlled and the delivery is set at the maximum set point of the active zones requesting heat. At the end of the request from all the zones, the boiler is stopped and the pump/valve of the last requesting zone remains active to perform post-circulation.

6.5 - ONE LOW TEMPERATURE ZONE AND ONE HIGH TEMPERATURE ZONE

For correct operation, the low temperature zone must be managed by a REGOLAFACILE. In the event of a request from the low temperature zone, the mixer is operated to open, the corresponding zone pump is enabled and the request is made from the

boiler; the set point calculated by REGOLAFACILE increased by the value of TSP 8 is sent to the boiler. During the request, the mixer is operated to open and close to reach the set point calculated by REGOLAFACILE and limited by the value of TSP9. A further limit to the Low Temperature is possible from REGOLAFACILE (USER menu -> BOILER T-MAX). A possible request from the high temperature zone is satisfied by enabling the corresponding pump/valve and setting a flow temperature equal to the maximum of the requesting set points. At the end of the request on the low temperature zone, the mixer valve is operated to close and the zone pump is disabled, whereas for the high temperature zone, the pump/zone valve is disabled. A post-circulation nonetheless continues on the last zone to have requested heat (when the board is powered on, the mixer valve is closed fully).

6.6 - SETPOINT RECOVERY FUNCTION

If there is no communication between REGOLAFACILE and TA (2 - 3 - 4) and the corresponding parameter is enabled, the setpoint recovery function is enabled.

This function enables a heating request with a fixed setpoint set using the corresponding TSP parameter (REGOLAFACILE).

The function is disabled if the communication be-

tween REGOLAFACILE and TA (2 - 3 - 4) is restored.

E.g.: No communication with TA 2 TSP1 = 1, the setpoint recovery function is enabled with the set point set in TSP 8 = 20 ÷ 90°C (see chapter 3. PARAMETER SETTINGS)

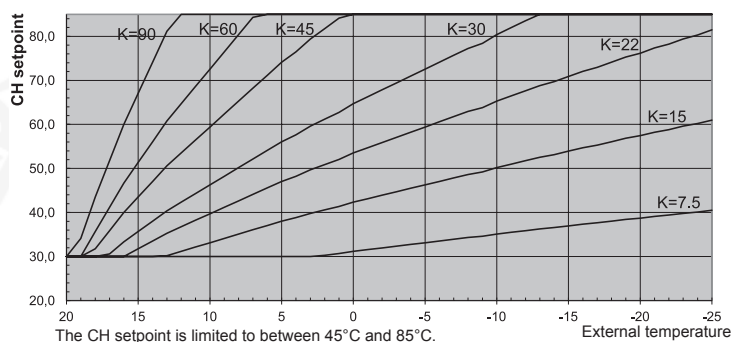
6.7 - SETPOINT WITH HIGH TEMPERATURE REQUEST

When a heat request is made via the closing of a TA contact in one of the zones, the boiler board is sent the zone setpoint relating to parameters TSP 14÷16 (see chapter 3. PARAMETER SETTINGS). The request stops when the TA contact opens.

6.8 - SETPOINT WITH HIGH TEMPERATURE REQUEST AND OTC FUNCTION.

If the boiler board is connected to the external temperature sensor and the parameter relating to the requesting zone is different from 0, CH mode with OTC is enabled. The CH set point is obtained from the value of the external temperature sensor and from the value of factor K (which can be set in the purpose-provided TSP relating to zones 2, 3 and 4 from 0 to 90).

GRAPH 6.8 (direct valves)



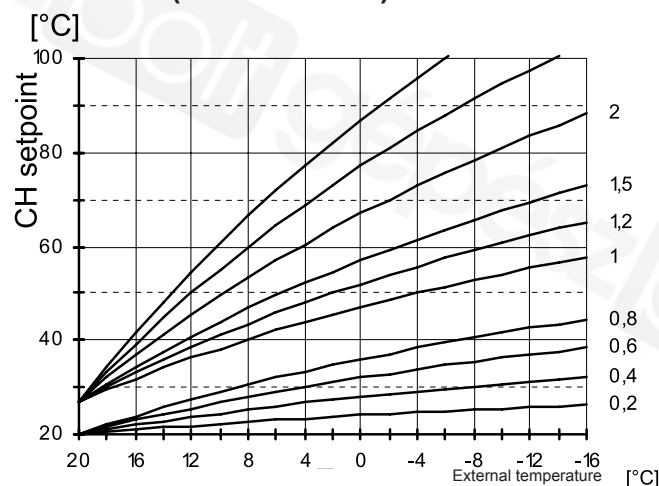
6.9 - COMMUNICATION FAULT DISPLAY ON REGOLAFACILE AND TA 2 - TA 3 - TA 4

Using parameters TSP 3 / 4 / 5 / 6, you can decide whether to display the fault codes on the corresponding REGOLAFACILE and TA 2 - TA 3 - TA 4 or not.

6.10 - CIRCULATION PUMP ANTI-SEIZURE MANAGEMENT

After 24 hours of inactivity, each circulation pump (or zone valve) is operated for 10 seconds to avoid it seizing. The circulation pump is

GRAPH 6.8 (mixed valves)



started in the absence of heating requests. The anti-seizure feature is managed individually for each circulation pump.

6.11 - MIXER VALVE ANTI-SEIZURE MANAGEMENT

After 24 hours of inactivity, the mixer valve is operated to open and close fully in order to avoid it seizing. The mixer valve is started in the absence of heating requests.

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