IMMERGAS

USER'S MANUAL

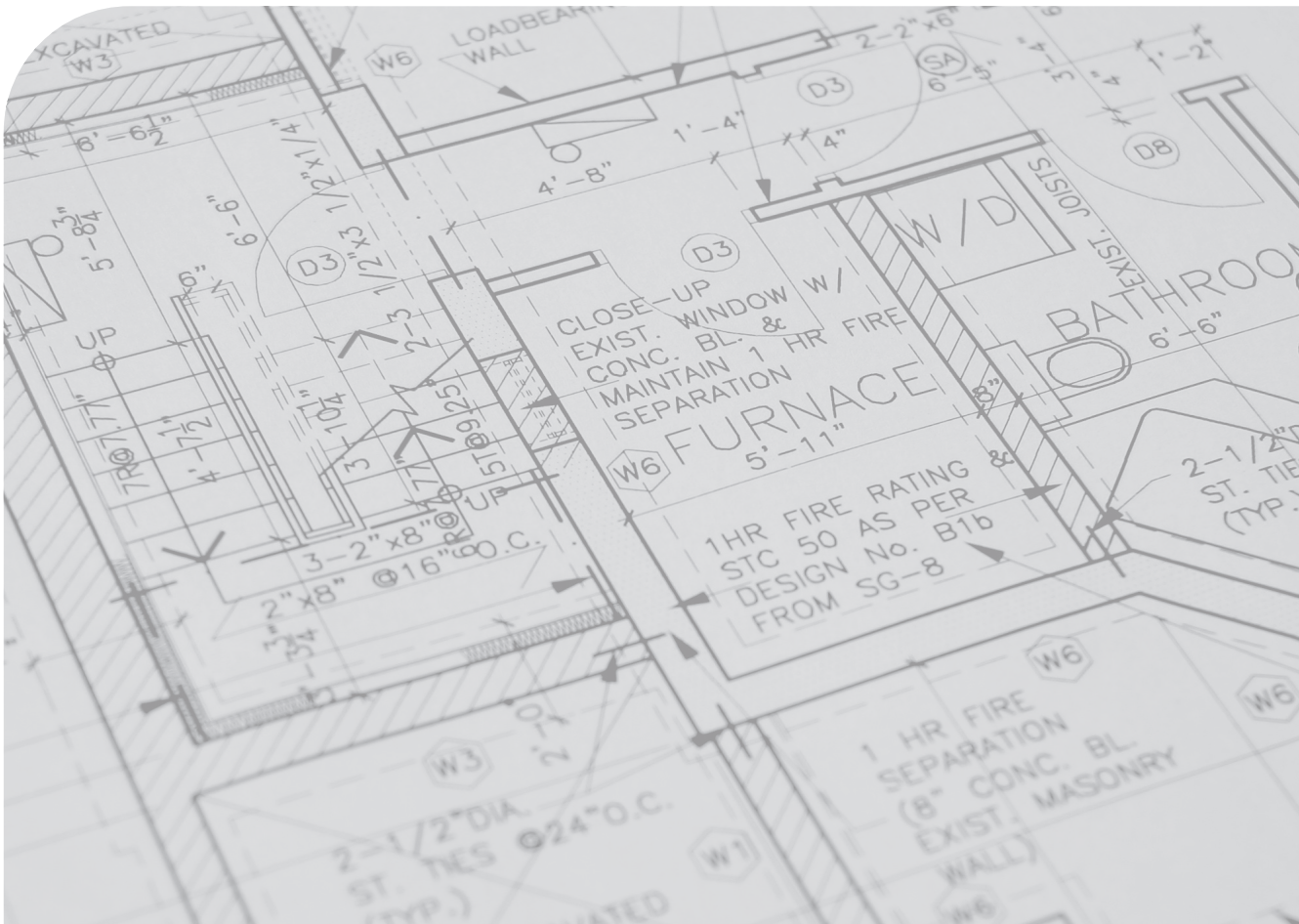
ERP MULTI-SYSTEM DISTRIBUTION MANIFOLD

DIM 2 ZONE ERP
DIM 3 ZONE ERP
DIM A-BT ERP
(1 direct zone and 1 mixed zone)
DIM A-2BT ERP
(1 direct zone and 2 mixed zones)

IE

Instructions and recommendations
Installer
User
Maintenance technician
Technical data

1.039170ENG



Dear Customer,

Our compliments for having chosen a top-quality Immergas product, able to assure well-being and safety for a long period of time. As an Immergas customer, you can also count on a qualified After-Sales Service, prepared and updated to guarantee the constant efficiency of your products. Read the following pages carefully: you will be able to draw useful suggestions regarding the correct use of the appliance. By respecting these suggestions, you will no doubt be satisfied with your Immergas product.

For assistance and scheduled maintenance, contact Authorised Immergas After-Sales centres: they have original spare parts and are specifically trained directly by the manufacturer.

General recommendations

All Immergas products are protected with suitable transport packaging.

The material must be stored in dry environments protected from bad weather.

The instruction book is an integral and essential part of the product and must also be given to the new user in the case of transfer or succession of ownership.

It must be stored with care and consulted carefully, as all of the warnings provide important safety indications for installation, use and maintenance stages.

This instructions manual provides technical information for installing Immergas appliances. As for the other issues related to the installation of appliances (e.g. safety in the workplace, environmental protection, injury prevention), it is necessary to comply with the provisions of the regulations in force and the principles of good practice.

In compliance with the legislation in force, the systems must be designed by qualified professionals, within the dimensional limits established by the Law. Installation and maintenance must be performed in compliance with the regulations in force, according to the manufacturer's instructions and by professionally qualified staff, intending staff with specific technical skills in the plant sector, as envisioned by the Law.

Improper installation or assembly of the Immergas appliance and/or components, accessories, kit and devices can cause unexpected problems for people, animals and objects. Read the instructions provided with the product carefully to ensure proper installation.

Maintenance must be carried out by skilled technical staff. The Authorised After-Sales Service represents a guarantee in terms of qualifications and professionalism.

The appliance must only be destined for the use for which it has been expressly declared. Any other use will be considered improper and therefore potentially dangerous.

If errors occur during installation, operation and maintenance, due to non-compliance with technical laws in force, standards or instructions contained in this book (or however supplied by the manufacturer), the manufacturer is excluded from any contractual and extra-contractual liability for any damages and the appliance warranty is invalidated.

For further information regarding legislative and statutory provisions relative to the installation of gas heat generators, consult the Immergas site at the following web address: www.immergas.com

The company **IMMERGAS S.p.A.**, with registered office in via Cisa Ligure 95 42041 Brescello (RE), whose design, manufacturing and after-sales assistance processes comply with the requirements of standard **UNI EN ISO 9001:2015**.

For further details on the product CE marking, request a copy of the Declaration of Conformity from the manufacturer, specifying the appliance model and the language of the country.

The manufacturer declines all liability due to printing or transcription errors, reserving the right to make any modifications to its technical and commercial documents without forewarning.

INDEX

1 Installing the device 5
1.1 Description of the device. 5
1.2 Installation recommendations. 5
1.3 Main dimensions. 6
1.4 Hydraulic connection. 8
1.5 Electrical connection. 8
1.6 Installation layouts. 9
1.7 Commissioning the device. 11
1.8 TACO circulation pump. 11
1.9 Sizing the systems. 12
1.10 Kits available on request. 12
1.11 Main components. 19

2 Use and maintenance instructions 21
2.1 General warnings. 21
2.2 Warnings for the user. 21
2.3 Cleaning the case. 21

3 Checks and maintenance 22
3.1 Schema elettrico DIM V2 zone ErP. 23
3.2 Wiring diagram DIM V2 3 zone ErP. 25
3.3 DIM A-BT ErP Wiring diagram. 27
3.4 DIM A-2BT ErP Wiring diagram. 29
3.5 DIM ERP connection to boiler via DIM BUS. 31
3.6 DIM ERP connection to boiler via zone signal state. 32
3.7 DIM ERP connections to ON/OFF room thermostats. .. 34
3.8 DIM ERP connection to ON-OFF room thermostats with shared zones. 35
3.9 DIM ERP connections to room thermostats and C.A.R.^{V2} on boilers other than Victrix Superior, Victrix Tera, Victrix Omnia. 37
3.10 DIM ERP connections to room thermostats and C.A.R.^{V2} on boilers other than Victrix Superior. 38
3.11 DIM ERP connections to room thermostats and remote zone panels - Eureka. 39
3.12 Victrix Superior and Eureka - DIM ERP connection with thermostats and dominus. 40
3.13 Victrix Superior and Eureka - DIM ERP connection with wireless probes and dominus 41
3.14 Victrix Superior - DIM ERP connection with C.A.R.^{V2} and wireless probes. 42
3.15 Eureka - DIM ERP connection with remote zone panels and wireless probes. 43
3.16 Connection between 2 DIM ERP with hydraulics in parallel. 44
3.17 DIM ERP connection to another DIM ERP or to Hercules zone kit with hydraulics in series. 47
3.18 DIM ERP connection to boilers in the Victrix Tera and Victrix Omnia ranges with C.A.R.v2, Smartech Plus and CRD Plus. 49
3.19 Description of main functions. 50
3.20 MLC34 Zone management P.C.B. 51
3.21 Mixed zone flow temperature adjustment. 52
3.22 External temperature probe (Optional). 52
3.23 Troubleshooting. 54

4 Technical data 55

1 INSTALLING THE DEVICE

1.1 DESCRIPTION OF THE DEVICE.

The "DIM ERP" code (Disgiuntore Idrico Multi-impianti) identifies a series of kits that Immergas proposes for the management of mixed zone central heating systems with large water capacities. In particular, they are kits that can only be coupled with some boiler models in the Immergas range, including an open manifold (distribution manifold) and are available in four different configurations:

- **DIM 2 zones ErP**, to be used to manage systems divided into 2 zones;
- **DIM 3 zones ErP**, to be used to manage systems divided into 3 zones;
- **DIM H-LT ErP**, for the management of mixed systems with differentiated temperature (e.g. a zone with radiators and one with radiant floor panels);
- **DIM H-2LT ErP**, for the management of mixed systems with differentiated temperature (e.g. a zone with radiators and two with radiant floor panels).

IMPORTANT: *the boiler models set up for coupling with the manifolds are Immergas boilers with P.C.B. designed for the management of zone systems.*

These kits are characterised by the possibility to be recessed into the wall, therefore they have no clearance.
Each zone served by the manifold is managed by a room chrono-thermostat connected to the DIM ERP. Whenever envisioned by the boiler, it is possible to use an Immergas Remote control to control one of the system zones (successively called *main zone*).

N.B.: *combined with the Victrix Superior range boiler, it is possible to use an Immergas Remote Control to control only zone 1 of the system and wireless room probes to control the temperature of the individual zones via the boiler panel.*

1.2 INSTALLATION RECOMMENDATIONS.

The place of installation of the appliance and relative Immergas accessories must have suitable features (technical and structural), such as to allow for (always in safe, efficient and comfortable conditions):

- installation (according to the provisions of the technical legislation and technical regulations);
- maintenance operations (including scheduled, periodic, routine and special maintenance);
- removal (outdoors in the place for loading and transporting the appliances and components) as well as their eventual replacement with appliances and/or equivalent components.

Only professionally qualified companies are authorised to install the Immergas Multi-System Distribution Manifold. Installation must be carried out according to regulation standards, current legislation and in compliance with local technical regulations and the required technical procedures. Before installing the device, ensure that it is delivered in perfect condition; if in doubt, contact the supplier immediately. Packing materials (staples, nails, plastic bags, polystyrene foam, etc.) constitute a hazard and must be kept out of the reach of children.

In the event of malfunctions, faults or incorrect operation, turn the device off immediately and contact an authorised company (e.g. the Authorised Technical Assistance Centre, which has specifically trained staff and original spare parts). Do not attempt to modify or repair the appliance alone. Failure to comply with the above implies personal responsibility and invalidates the warranty.

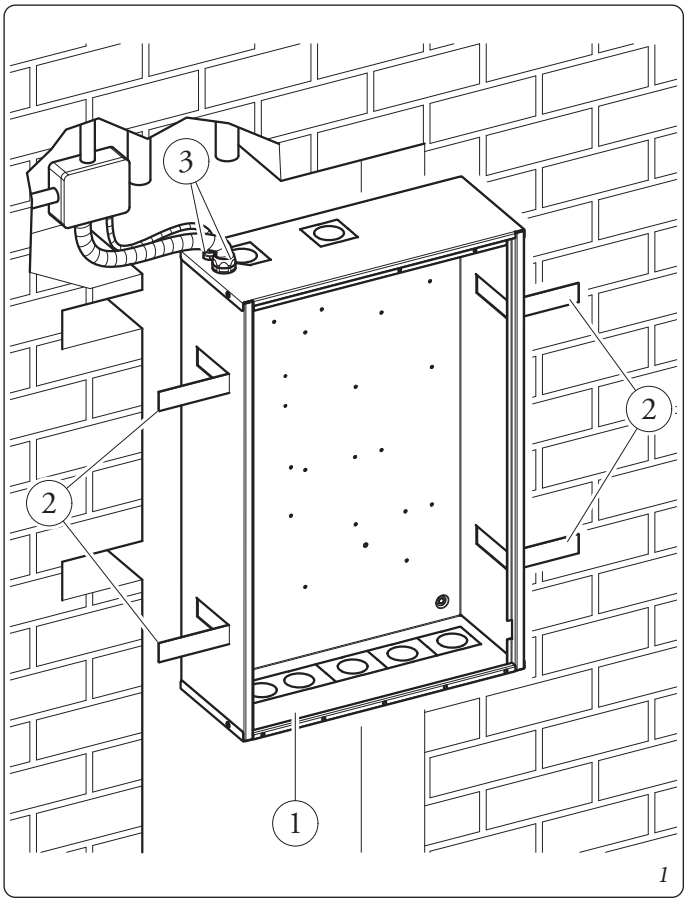
Recess installation.
Perform the masonry work, creating an opening in the wall suitable to contain the device (*See par. 1.3 "Main dimensions"*).
Insert the distribution manifold (1) into its seat, remembering to open the four support fins (2) before insertion (*Fig. 1*).
Protect the side edges and the front cover during recess preparation for the device.

IMPORTANT: the hydraulic and electrical connections must be made within the device unit; you must therefore position the frame first and then perform the connections.

Attention: the recessed frame is not a supporting structure and cannot replace the piece of wall removed. It is therefore necessary to check the correct positioning inside the wall.

Wall-hanging installation.
Fasten the frame to the wall using four expansion plugs, suitable for the type of wall and weight of the device (not supplied) and using the four drilled holes (*see Fig. 2 pos. X*).

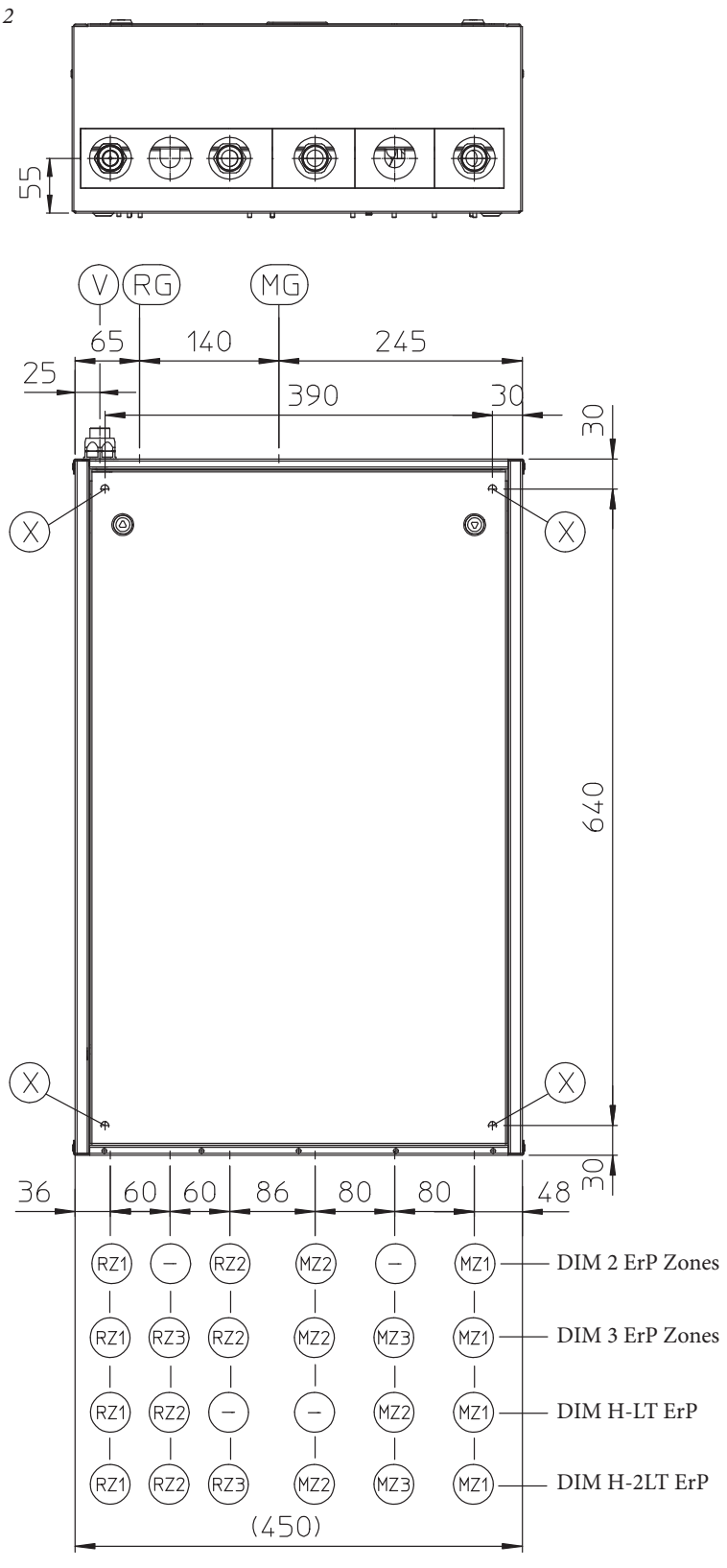
Use the fairlead and the sheath-holder (3) supplied to limit the infiltration of water inside the frame.

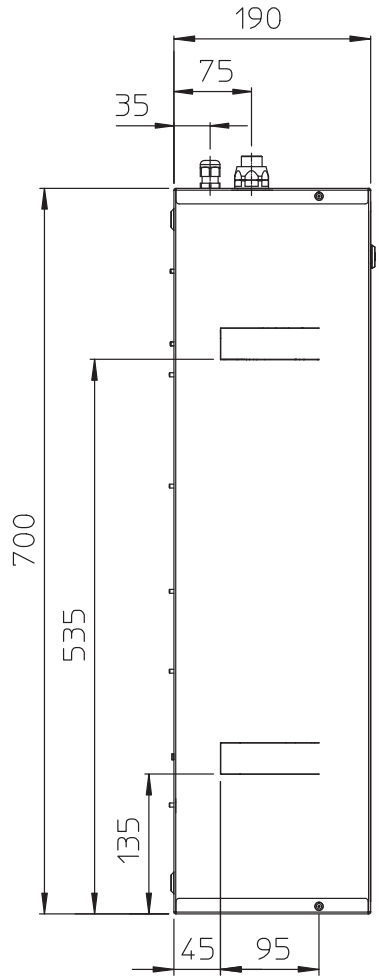


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1.3 MAIN DIMENSIONS.

2





Key:
RG - Generator return (G 3/4")
MG - Generator flow (G 3/4")
V - Electrical connection
X - Holes for DIM ERP wall-mounted fastening

Height (mm)	Width (mm)	Depth (mm)
700	450	190

CONNECTIONS DIM 2 ErP ZONES					
RZ1	-	**RZ2**	**MZ2**	-	**MZ1**
Zone return 1 (G 3/4”)	-	Zone return 2 (G 3/4”)	Zone flow 2 (G 3/4”)	-	Zone flow 1 (G 3/4”)
CONNECTIONS DIM 3 ErP ZONES					
RZ1	**RZ3**	**RZ2**	**MZ2**	**MZ3**	**MZ1**
Zone return 1 (G 3/4”)	Zone return 3 (G 3/4”)	Zone return 2 (G 3/4”)	Zone flow 2 (G 3/4”)	Zone flow 3 (G 3/4”)	Zone flow 1 (G 3/4”)
ALLACCIAMENTI DIM H-LT ErP					
RZ1	**RZ2**	-	-	**MZ2**	**MZ1**
High return temperature (G 3/4”)	Low return temperature (G 1”)	-	-	Low flow temperature (G 1”)	High flow temperature (G 3/4”)
ALLACCIAMENTI DIM H-2LT ErP					
RZ1	**RZ2**	**RZ3**	**MZ2**	**MZ3**	**MZ1**
High return temperature (G 3/4”)	Zone 2 low return temperature (G 1”)	Zone 3 low return temperature (G 1”)	Zone 3 low flow temperature (G 1”)	Zone 2 low flow temperature (G 1”)	High flow temperature (G 3/4”)

1.4 HYDRAULIC CONNECTION.

Attention: before making the appliance connections, clean the heating system thoroughly (pipes, radiators, etc.) with special pickling or de-scaling products to remove any deposits that could compromise the correct operation of the device.

A chemical treatment of the thermal system water is required, in compliance with the technical standards in force, in order to protect the system and the appliance from deposits (e.g., lime scale), slurry or other hazardous deposits.

The hydraulic connections must be made in a rational manner using the values as per *Fig. 2*.

IMPORTANT: remove all the protection caps from the system flow and return pipes before making the hydraulic connections.
The connections can be made directly using the female couplings on the distribution manifold or by inserting system cut-off cocks (optional). These cocks are particularly useful for maintenance as they allow you to drain the distribution manifold separately without having to empty the entire system.

N.B.: The manufacturer does not supply the G1" cocks to be installed in the low temperature zone.

Check that the expansion vessel in the boiler allows for the increase in volume of the water resulting from its central heating without opening the safety valve. If this is not the case, an expansion vessel with appropriately dimensioned capacity must be installed on the system.
The DIM ERP is set up for the insertion of the automatic "jolly" vent valve to be mounted on the manifold. This is recommended for better air venting inside the system.
If two DIM ERP devices are installed in parallel, two manual valves must be fitted in order to ensure the correct balance of the hydraulic circuit.

1.5 ELECTRICAL CONNECTION.

The appliance has an IPX5D protection degree; electrical safety of the appliance is achieved only when it is connected properly to an efficient earthing system, as specified by current safety standards.

Attention: Immergas S.p.A. declines any responsibility for damage or physical injury caused by failure to connect the boiler to an efficient earth system or failure to comply with the reference standards.

Moreover, ensure that the electrical installation corresponds to the maximum absorbed power specifications as shown on the recessed unit data plate. The distribution manifold is supplied complete with a special type "X" power supply cable without a plug. The power supply cable must be connected to a 230V ±10% / 50Hz mains supply respecting L-N polarity and earth connection; ⏚ this network must also have a multi-pole circuit breaker with class III over-voltage category.
To protect from possible dispersions of DC voltage, it is necessary to provide a type A differential safety device.
If the power supply cable is damaged, it must be replaced by a special cable or assembly, which are only available from the manufacturer or its After-sales Service. It is recommended to contact a qualified company (e.g. the Immergas Authorised After-Sales Technical Assistance Service) for replacement to avoid a hazard.

For the main power supply to the appliance, never use adapters, multiple sockets or extension leads.

Important: it is mandatory to prepare two electrical connection lines in order to separate the power supply of each distribution manifold from all other low-voltage connections, according to the standards in force regarding electrical systems. These lines must arrive inside the recessed frame via relevant sheaths or ducts, passing through the fairlead and the sheath-holder supplied and located on the upper side of the device.

- **Connecting the boiler P.C.B.** This connection (extra-low voltage) ensures the dialogue between the boiler and the DIM ERP. Make the connections as indicated in chapter 3, according to your appliance model.

  N.B.: the electrical connection between the electronic boards must be made using cables with a minimum section of 0.50 mm^2 and a maximum section of 2.5 mm^2; the length of these connections must not exceed 15 metres.

  N.B.: the appliance can be wall-mounted. An external sheath-holder must therefore be used to protect the electrical cables and prevent water ingress that could damage the PCB.
- **Room thermostat connection On - Off (optional).** The room thermostats to be connected to the DIM ERP must have a volt-free contact and must be connected to the respective zones as shown in *Figs. 29, 30, 31, 32, 33, 34, 35, 43 and 44.*
- **Immergas remote control connection (optional).** Connect the remote controls as indicated in *Figures 32, 33, 34* and as specified in the boiler instruction manual.
- **External probe connection (optional).** The external probe controls the flow temperature of the system and varies the operation mode and controlled zones depending on its connection (*see par. 3.22*).
  - The external probe must be connected to the boiler by connecting the manifold and the boiler via DIM BUS (see the boiler handbook). The temperature read by the external probe is sent to the manifold that will adjust the flow temperature of the various zones, according to the settings of the trimmer and area management probe.
  - When the distribution manifold and the boiler are connected via a status signal, the external probe must be connected to the distribution manifold; the external probe can then be used to adjust the flow temperature of the mixed zones. In these conditions, another probe must be connected to the boiler if it is necessary to correlate the direct zone flow with the external temperature (*see Fig. 28*).

1.6 INSTALLATION LAYOUTS.

If a Comando Amico Remoto^{V2} (C.A.R.^{V2}) is used, its electrical connection must be made directly to the boiler (see the instructions in the boiler instruction booklet).
The C.A.R.^{V2} remote control will control the zone, pre-defined as main on the manifold.
The C.A.R.^{V2} remote control must be set with on-off operation (see the relative instruction manual).

In this case, the T.A. electric connections of the zone, defined as the main zone of the manifold, must be left free.

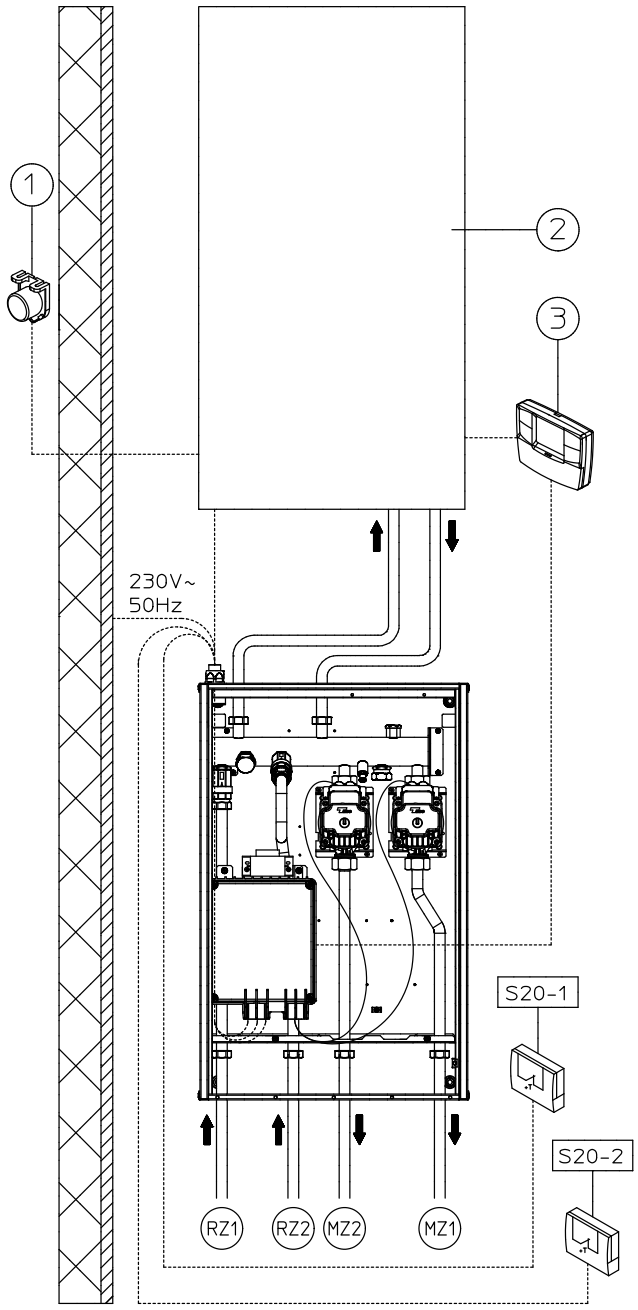
N.B.: *combined with the Victrix Superior range boiler and Eureka, the jumper on the RT connections of zone 1 (managed remotely) must be maintained (or used for contacts of zone shutter valves).*

N.B.: *combined with boilers other than Victrix Superior and Eureka, the jumper on the RT connections of the zone defined as main* ***must be eliminated****.*

N.B.: *when used with boilers in the Victrix Tera and Victrix Omnia ranges, the C.A.R.V2 can be connected directly to the DIM PCB (see Fig. 44, Par. 3.18).*

Installation layout of 2 homogeneous zones.

3

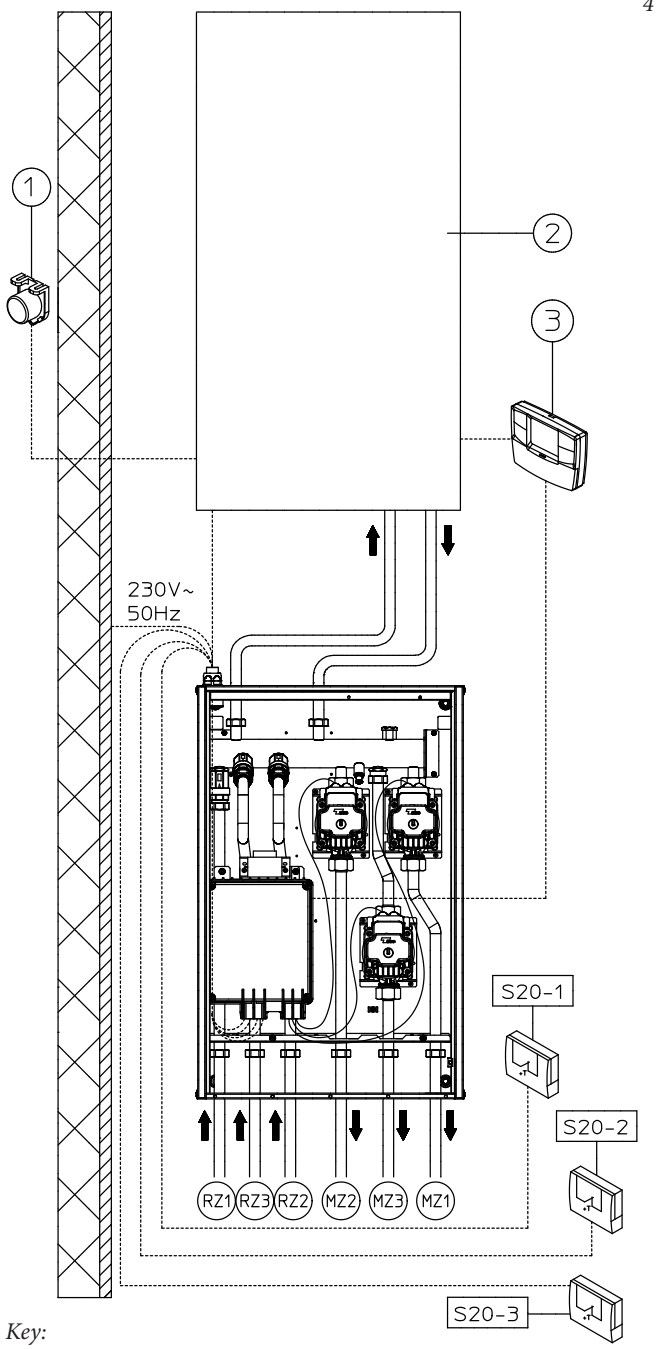


Key:
S20-1 - Direct zone 1 room thermostat (RT)
S20-2 - Direct zone 2 room thermostat (RT)
1 - External probe (optional)
2 - Boiler
3 - Comando Amico Remoto^{V2} (optional)
RZ1 - Direct zone 1 return
RZ2 - Direct zone 2 return
MZ2 - Direct zone 2 flow
MZ1 - Direct zone 1 flow

Factory settings define zone 1 as the main zone.
(See Fig. 19 for electrical connection and Fig. 20 for zones control unit setting)

Installation diagram with 3 zones in High Temperature or 3 zones in Low Temperature (3 direct zones).

4

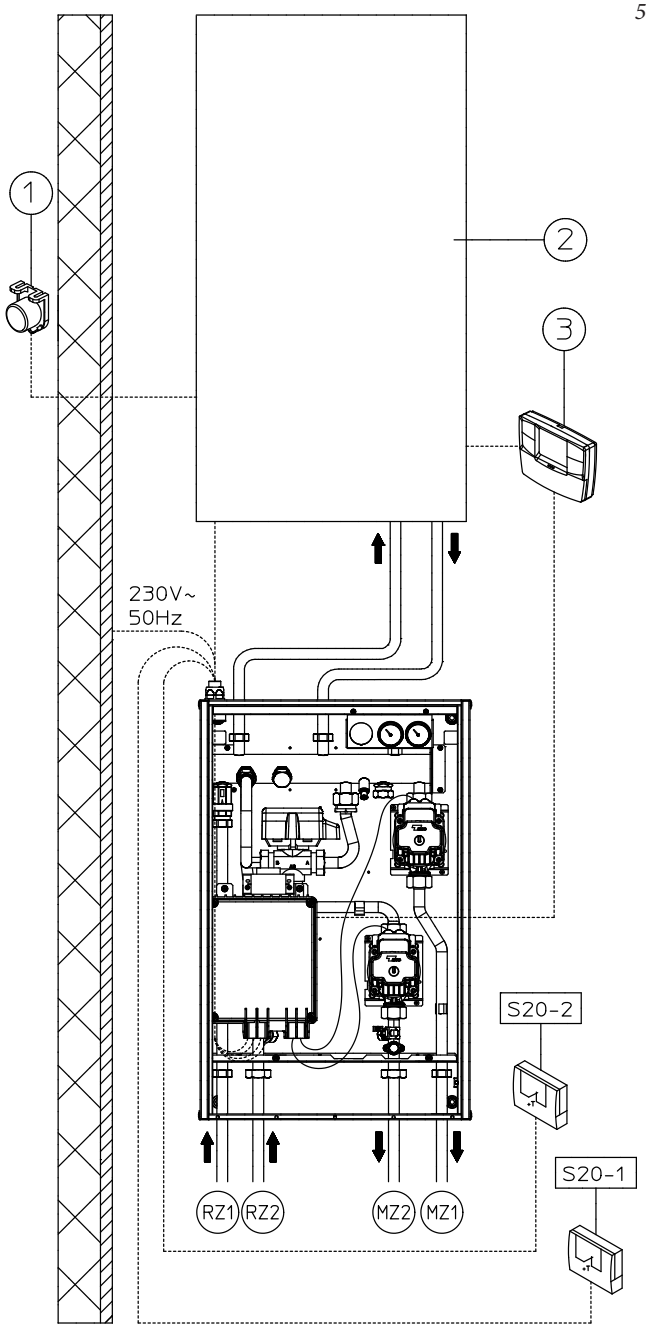


Key:
S20-1 - Direct zone 1 room thermostat (RT)
S20-2 - Direct zone 2 room thermostat (RT)
S20-3 - Direct zone 3 room thermostat (RT)
1 - External probe (optional)
2 - Boiler
3 - Comando Amico Remoto^{V2} remote control (optional)
RZ1 - Direct zone 1 return
RZ3 - Direct zone 3 return
RZ2 - Direct zone 2 return
MZ2 - Direct zone 2 flow
MZ3 - Direct zone 3 flow
MZ1 - Direct zone 1 flow

Factory settings define zone 1 as the main zone.
(See Fig. 21 for electrical connection and Fig. 22 for zones control unit setting)

DIM A-BT ERP Installation diagram (1 direct zone and 1 mixed zone).

5

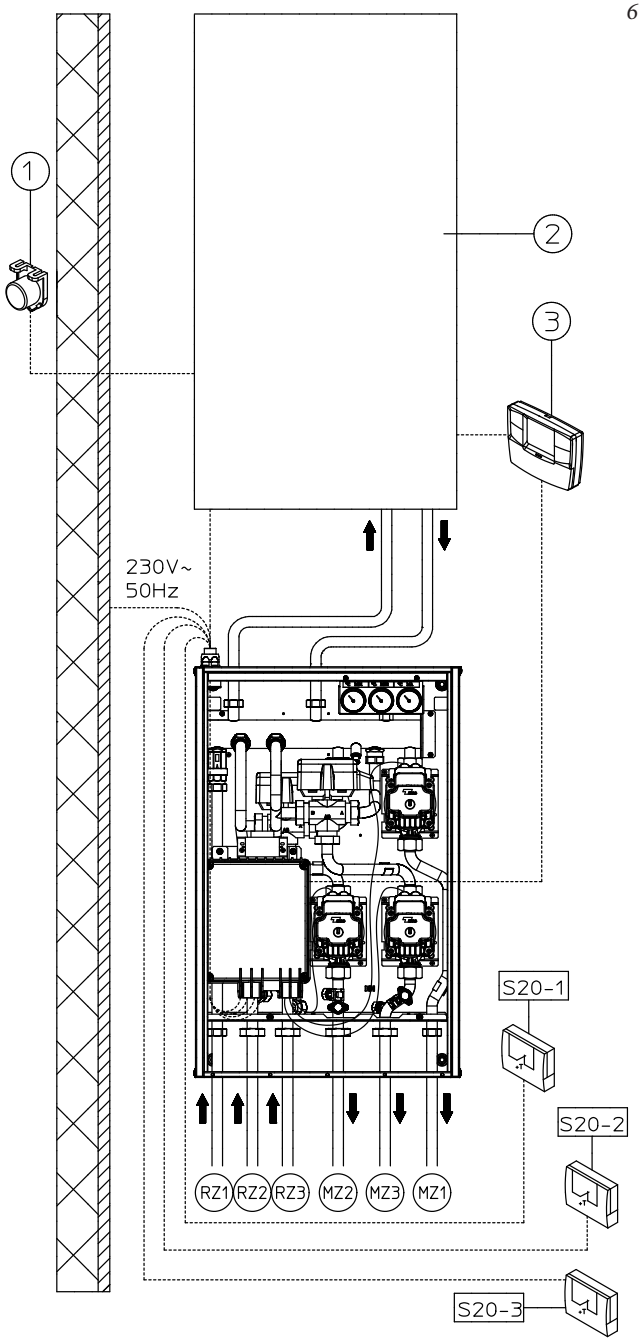


Key:
S20-1 - Direct zone 1 room thermostat (RT)
S20-2 - Mixed zone 2 room thermostat (RT)
1 - External probe (optional)
2 - Boiler
3 - Comando Amico Remoto^{V2} remote control (optional)
RZ1 - Direct zone 1 return
RZ2 - Mixed zone 2 return
MZ2 - Mixed zone 2 flow
MZ1 - Direct zone 1 flow

Factory settings define zone 2 as the main zone.
(See Fig. 23 for electrical connection and Fig. 24 for zones control unit setting)

DIM A-2BT ERP Installation diagram (1 direct zone and 2 mixed zones).

6



Key:
S20-1 - Direct zone 1 room thermostat (RT)
S20-2 - Mixed zone 2 room thermostat (RT)
S20-3 - Mixed zone 3 room thermostat (RT)
1 - External probe (optional)
2 - Boiler
3 - Comando Amico Remoto^{V2} remote control (optional)
RZ1 - Direct zone 1 return
RZ2 - Mixed zone 2 return
RZ3 - Mixed zone 3 return
MZ2 - Mixed zone 2 flow
MZ3 - Mixed zone 3 flow
MZ1 - Direct zone 1 flow

Factory settings define zone 2 as the main zone.
(See Fig. 25 for electrical connection and Fig. 26 for zones control unit setting)

1.7 COMMISSIONING THE DEVICE.

System filling. Once the device is connected, fill the system via the boiler filling valve.
Filling is performed at low speed to ensure the release of air bubbles in the water via the boiler and central heating system vents and the distribution manifold (if any).
Close radiator vent valves when only water escapes from them.
Close the filling cock when the boiler pressure gauge indicates approx. 1.2 bar.

IMPORTANT: during these operations, start the circulation pumps by acting on the main switch positioned on the boiler control panel after having activated the T.A. devices relating to the various zones.

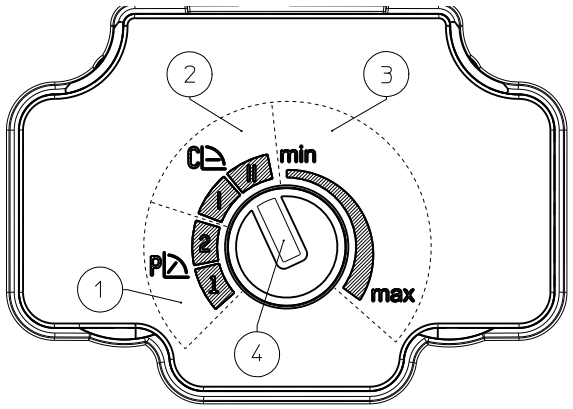
(Only for DIM H-LT and H-2LT ERP).
Act manually on the 3-way mixing vale using the relevant lever on the electric actuator, keeping the same opening in order to de-aerate the system and, if necessary, control the correct operating pressure.
Once these operations are complete, make sure that the lever on the electric actuator is free from the manual lock position.

1.8 TACO CIRCULATION PUMP.

Pump LED

- orange LED: constant head
- green LED: proportional head
- blue LED: fixed speed
- white LED: air detected. Run the venting routine.
- red LED: the circulator is locked but is still powered.

7



Key (Fig. 7):
1 - Proportional head adjustment area
2 - Constant head adjustment area
3 - Fixed speed adjustment area
4 - Selector with LED

Adjustments. Turn the selector and position it on the desired curve to adjust the circulator pump.

- P1 / P2;
- CI / CII (default);
- Min / Max.

Programmes P1 / P2 - Proportional head (green LED).

This allows the pressure level (head) to be proportionally reduced as the system heat demand decreases (flow rate reduction). Thanks to this function, the electric power consumption of the circulator pump is reduced further: the energy (power) used by the pump decreases according to the pressure level and flow rate. With this setting, the pump guarantees optimal performance in most heating systems, thereby being particularly suitable in single-pipe and two-pipe installations. Any noise originating from the water flow in the pipes, valves and radiators is eliminated by reducing the head. Optimal conditions for thermal comfort and acoustic well-being.

Programmes CI / CII - Constant head (orange LED).

The circulator pump maintains the pressure level (head) constant as the system heat demand decreases (flow rate reduction). With these settings, the circulator pump is suitable for all floor systems where all the circuits must be balanced for the same drop in head.

Programmes Min / Max - Fixed speed (blue LED).

The pump is distinguished by adjustable operating curves by positioning the selector in any point between the Min. and Max. positions, thereby satisfying any installation requirement (from a simple single-pipe to more modern and sophisticated systems) and always guaranteeing optimum performance. The precise working point can be selected in the entire field of use by gradually adjusting the speed.

Real-time diagnostics.

A lit LED (in various colours) provides information regarding the pump operating status, (*Part. 4 Fig. 7*).

Possible pump release.

Circulator lock-up is indicated by a steady red backlight on the LED knob.
If the motor locks, the circulator automatically runs a routine controlled internally by its software to attempt to release it.
The circulator automatically starts a routine that gradually increases the rotational torque, making up to 12 consecutive attempts.
During this procedure, the LED knob flashes, alternating between the colour of the selected curve and the red motor lock-up indication.
The procedure takes approximately 2 seconds per attempt (approximately 30 seconds in total).
If the automatic release attempt is unsuccessful, the LED knob remains steadily lit in red.
If the problem persists, release the circulator manually as described below:

- Disconnect the power to the boiler (the LED switches off).
- Close the system flow and return and allow the pump to cool down.
- Empty the system circuit via the relative cock.
- Remove the motor and clean the impeller.
- After releasing the circulator, refit the motor, tightening the screws to a torque of 3.3 ± 0.5 Nm.
- Fill the primary circuit; restore boiler power and set the desired curve.

1.9 SIZING THE SYSTEMS.

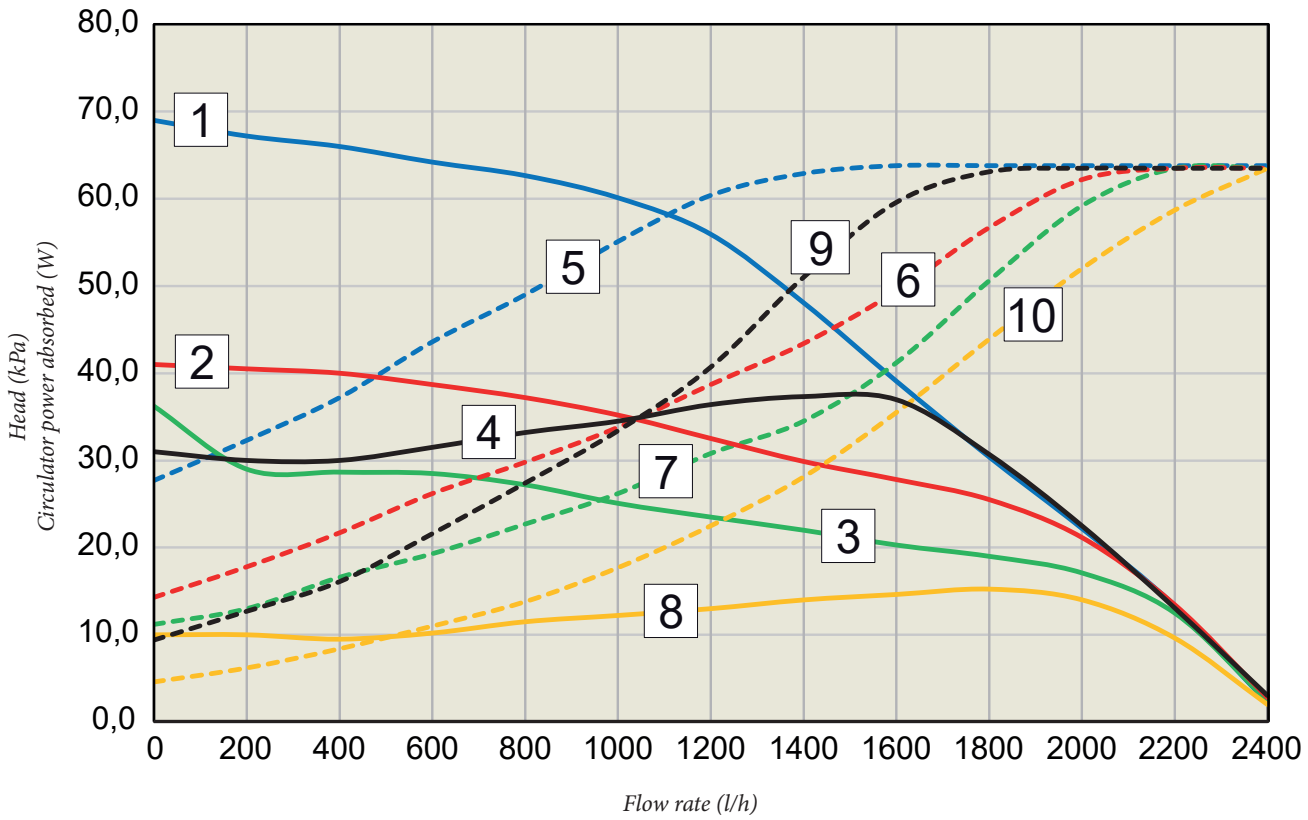
The flow temperatures to the various system zones may be reduced with respect to the boiler outlet temperatures, according to the mixture of the flow and return fluids inside the DIM ERP. In the event that the DIM ERP is used to feed Low-Temperature zones, check that the design parameters allow you to achieve a maximum surface temperature of the radiant floor in compliance with standard in force.

1.10 KITS AVAILABLE ON REQUEST.

For the complete list of kits available and compatible with the product, consult the Immergas website, the Immergas price list or the technical and commercial documentation (catalogues and technical data sheets).

Head available to the DIM 2-3 Zone system.

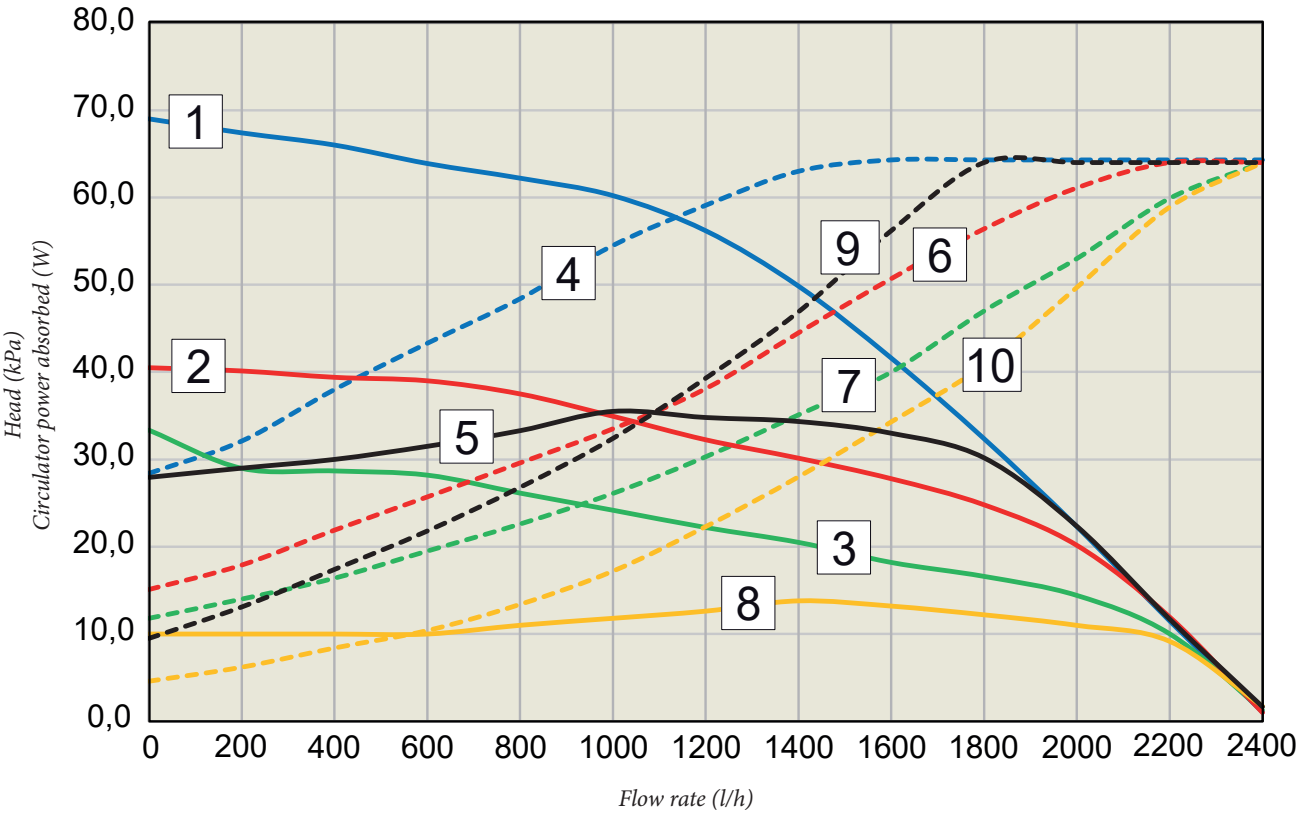
Direct zone 1 (DIM 2-3 Zone)



Key:

1 = Head available to the system at the maximum setting
2 = Head available to the system at settin C2
3 = Head available to the system at settin C1
4 = Head available to the system at settin P2
5 = Power absorbed by the circulator at the maximum setting
6 = Power absorbed by the circulator at setting C2
7 = Power absorbed by the circulator at setting C1
8 = Head available to the system at settin P1
9 = Power absorbed by the circulator at setting P2
10 = Power absorbed by the circulator at setting P1

Direct zone 2 (DIM 2-3 Zone)

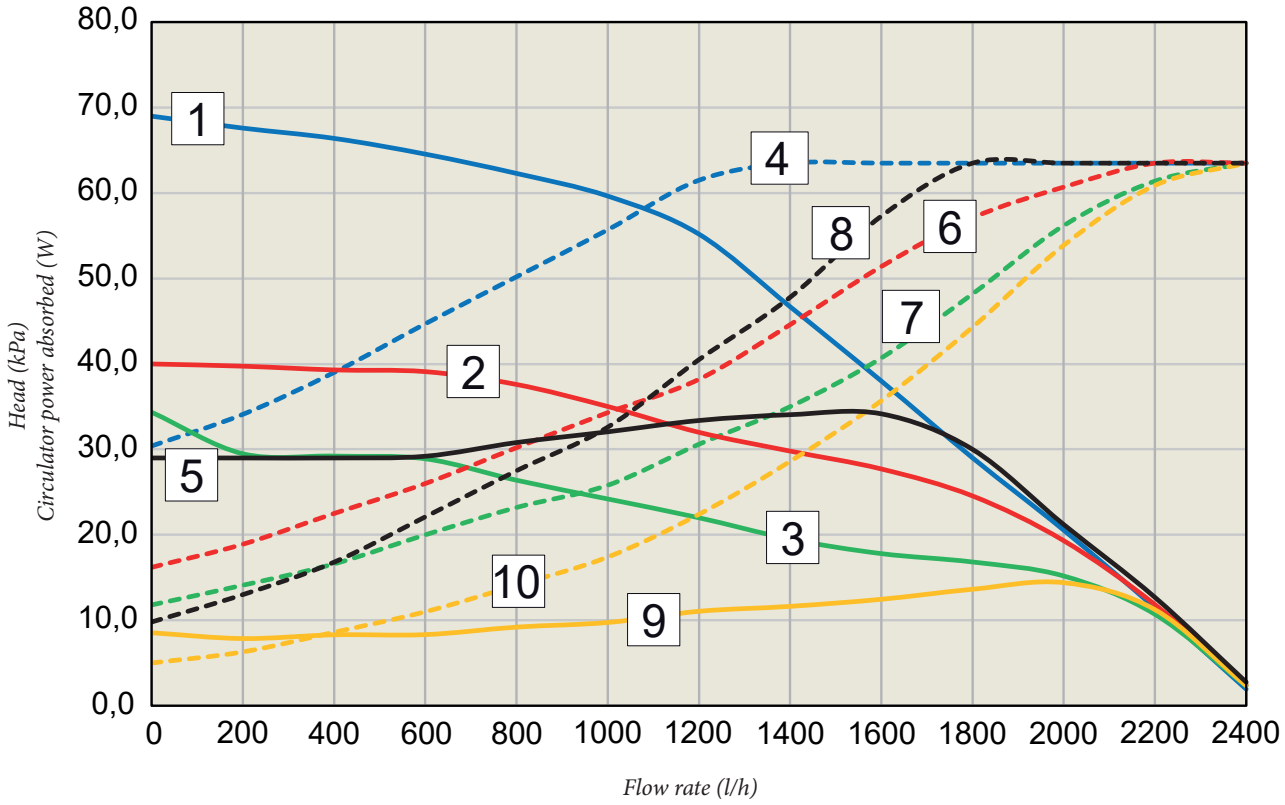


Key:

1 = Head available to the system at the maximum setting
2 = Head available to the system at settin C2
3 = Head available to the system at settin C1
4 = Power absorbed by the circulator at the maximum setting
5 = Head available to the system at settin P2
6 = Power absorbed by the circulator at setting C2
7 = Power absorbed by the circulator at setting C1
8 = Head available to the system at settin P1
9 = Power absorbed by the circulator at setting P2
10 = Power absorbed by the circulator at setting P1

9

Direct zone 3 (DIM 3 Zone)

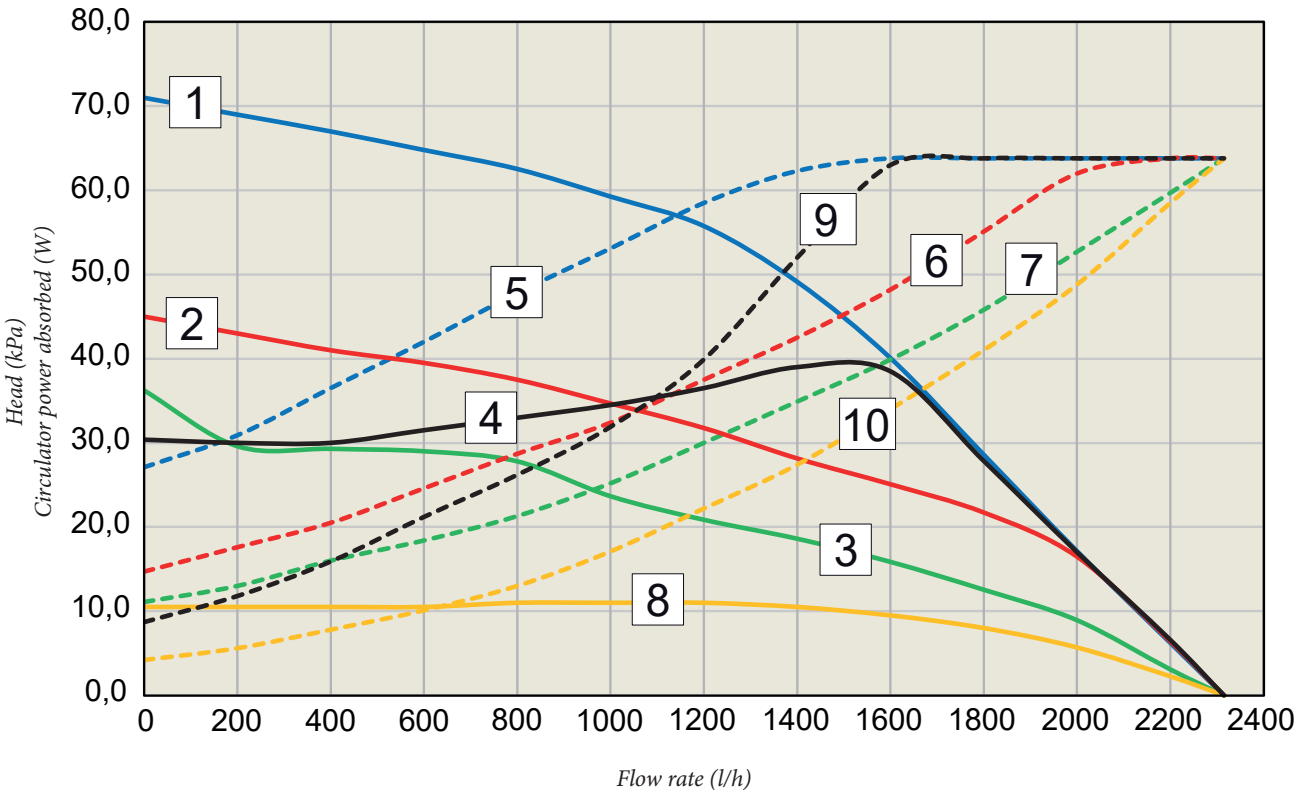


Key:

1 = Head available to the system at the maximum setting
2 = Head available to the system at settin C2
3 = Head available to the system at settin C1
4 = Power absorbed by the circulator at the maximum setting
5 = Head available to the system at settin P2
6 = Power absorbed by the circulator at setting C2
7 = Power absorbed by the circulator at setting C1
8 = Power absorbed by the circulator at setting P2
9 = Head available to the system at settin P1
10 = Power absorbed by the circulator at setting P1

Head available to the DIM A-BT and A-2BT system.

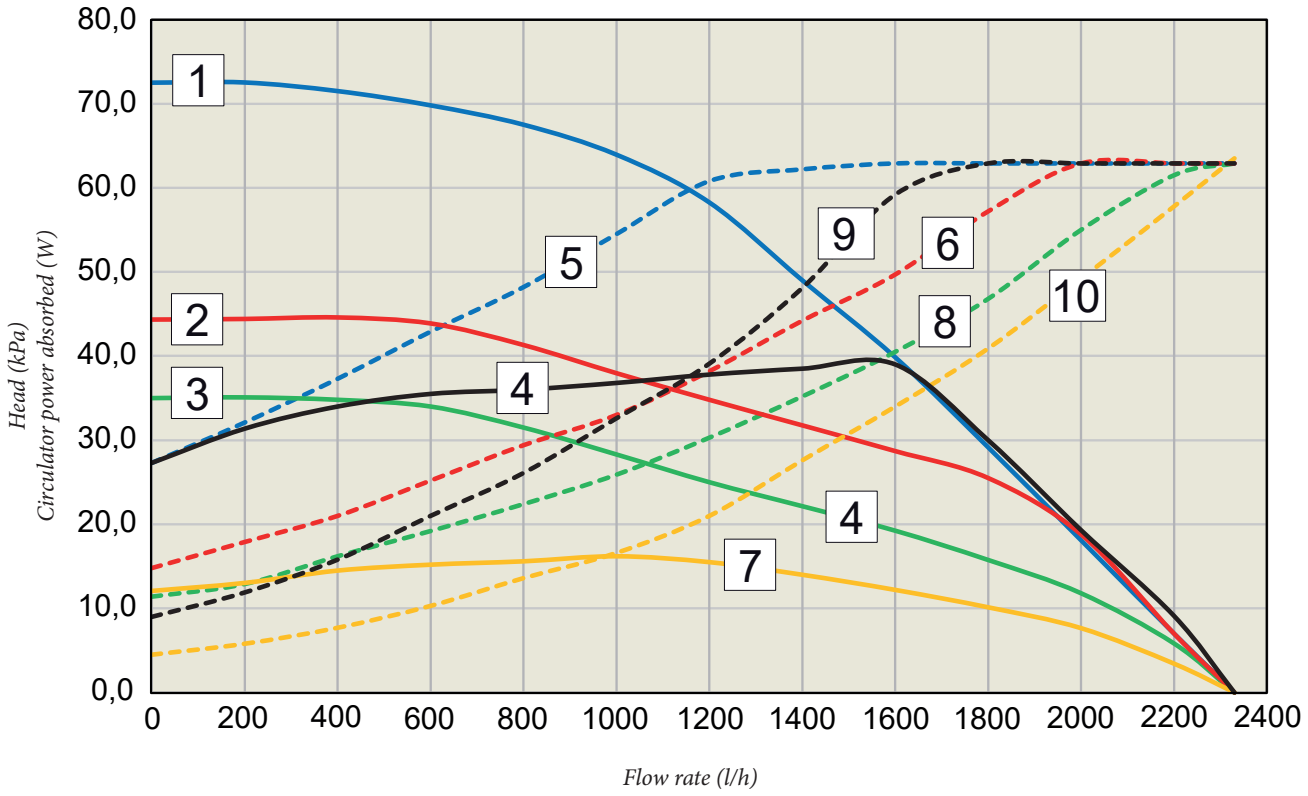
Direct zone 1 (DIM A-BT and A-2BT)



Key:

1 = Head available to the system at the maximum setting
2 = Head available to the system at settin C2
3 = Head available to the system at settin C1
4 = Head available to the system at settin P2
5 = Power absorbed by the circulator at the maximum setting
6 = Power absorbed by the circulator at setting C2
7 = Power absorbed by the circulator at setting C1
8 = Head available to the system at settin P1
9 = Power absorbed by the circulator at setting P2
10 = Power absorbed by the circulator at setting P1

Mixed zone 2 (DIM A-2BT)

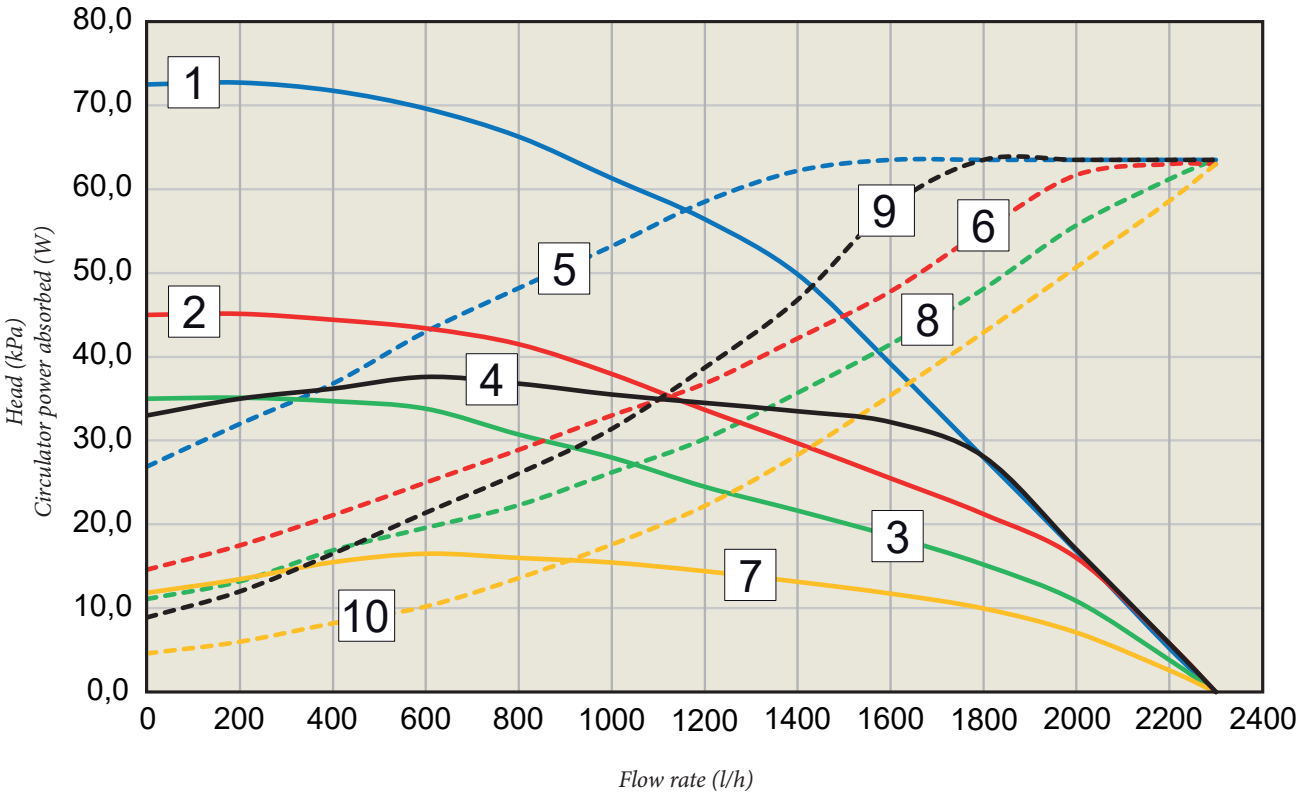


Key:

1 = Head available to the system at the maximum setting
2 = Head available to the system at settin C2
3 = Head available to the system at settin C1
4 = Head available to the system at settin P2
5 = Power absorbed by the circulator at the maximum setting
6 = Power absorbed by the circulator at setting C2
7 = Head available to the system at settin P1
8 = Power absorbed by the circulator at setting C1
9 = Power absorbed by the circulator at setting P2
10 = Power absorbed by the circulator at setting P1

12

Mixed zone 3 (DIM A-BT and A-2BT)



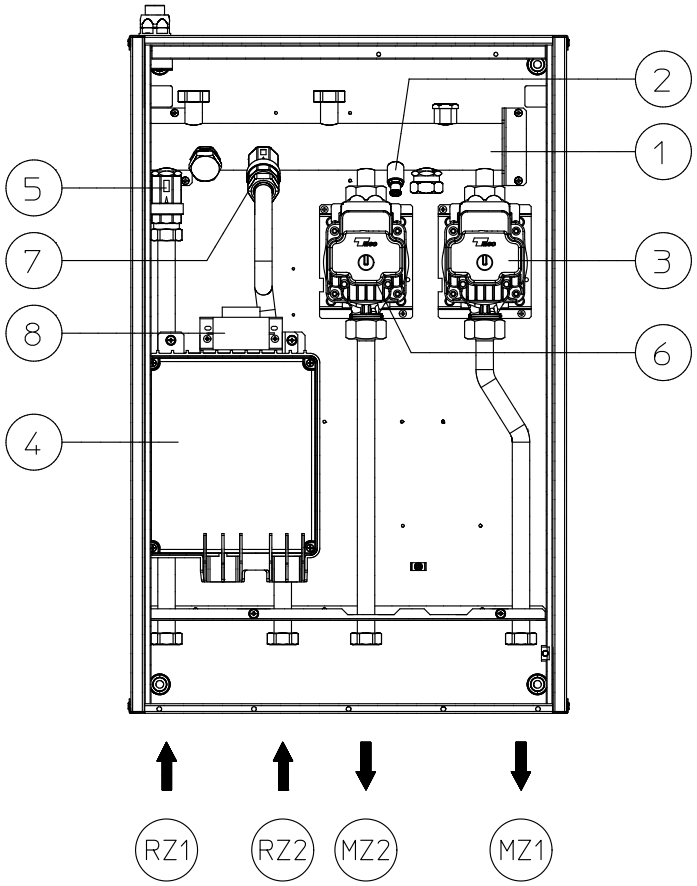
Key:

1 = Head available to the system at the maximum setting
2 = Head available to the system at settin C2
3 = Head available to the system at settin C1
4 = Head available to the system at settin P2
5 = Power absorbed by the circulator at the maximum setting
6 = Power absorbed by the circulator at setting C2
7 = Head available to the system at settin P1
8 = Power absorbed by the circulator at setting C1
9 = Power absorbed by the circulator at setting P2
10 = Power absorbed by the circulator at setting P1

1.11 MAIN COMPONENTS.

DIM ERP 2 Zone

14

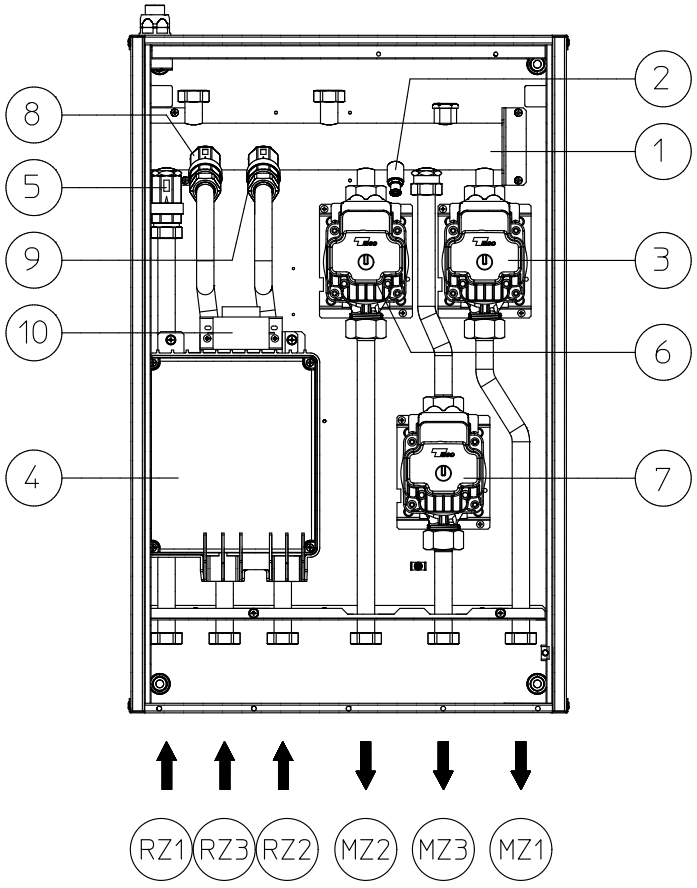


Key:

1 - Hydraulic manifold
2 - Drain fitting
3 - Zone 1 pump
4 - Electrical connection box
5 - Zone 1 "Europa" one-way valve
6 - Zone 2 pump
7 - Zone 2 "Europa" one-way valve
8 - Interference suppression filter
RZ1 - Direct zone 1 return
RZ2 - Direct zone 2 return
MZ2 - Direct zone 2 flow
MZ1 - Direct zone 1 flow

DIM ERP 3 Zone

15

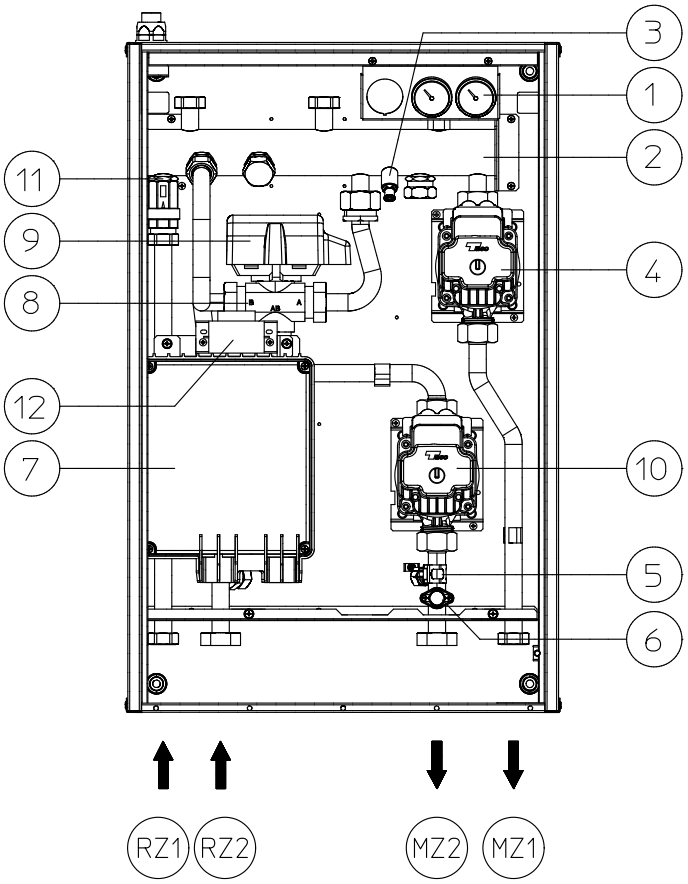


Key:

1 - Hydraulic manifold
2 - Drain fitting
3 - Zone 1 pump
4 - Electrical connection box
5 - Zone 1 "Europa" one-way valve
6 - Zone 2 pump
7 - Zone 3 pump
8 - Zone 3 "Europa" one-way valve
9 - Zone 2 "Europa" one-way valve
10 - Interference suppression filter
RZ1 - Direct zone 1 return
RZ3 - Direct zone 3 return
RZ2 - Direct zone 2 return
MZ2 - Direct zone 2 flow
MZ3 - Direct zone 3 flow
MZ1 - Direct zone 1 flow

DIM A-BT ERP

16

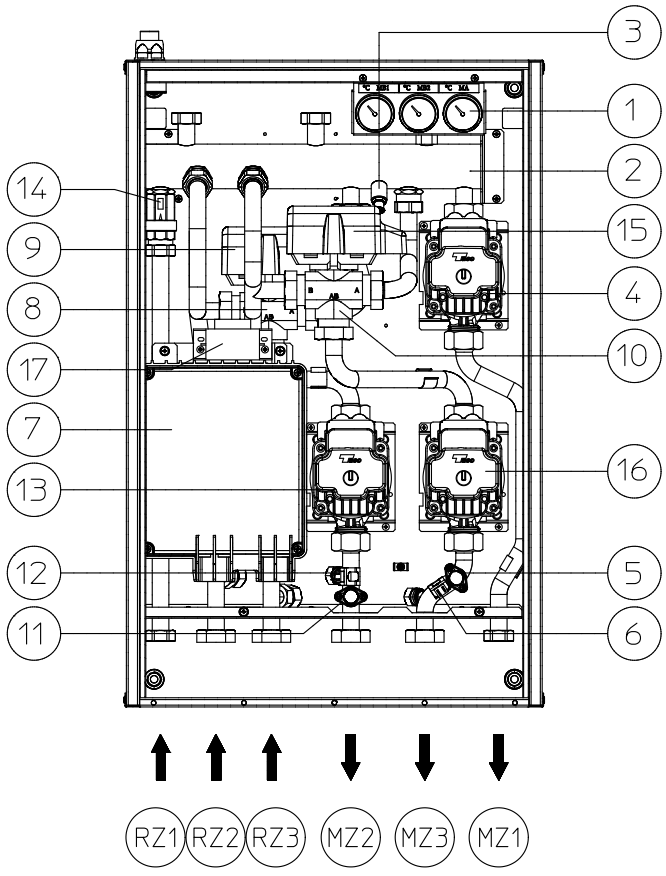


Key:

1 - Flow temperature thermometers
2 - Hydraulic manifold
3 - Drain fitting
4 - Zone 1 pump
5 - Zone 2 flow probe
6 - Zone 2 safety thermostat
7 - Electrical connection box
8 - Zone 2 3-way mixing valve
9 - Zone 2 mixing valve motor
10 - Zone 2 pump
11 - Zone 1 "Europa" one-way valve
12 - Interference suppression filter
RZ1 - Direct zone 1 return
RZ2 - Mixed zone 2 return
MZ2 - Mixed zone 2 flow
MZ1 - Direct zone 1 flow

DIM 1 zone A-2BT ERP

17



Key:

1 - Flow temperature thermometers
2 - Hydraulic manifold
3 - Drain fitting
4 - High-temperature zone pump
5 - Zone 2 low-temperature safety thermostat
6 - Zone 2 low-temperature flow probe
7 - Electrical connection box
8 - Low-temperature zone 1 3-way mixing valve
9 - Low-temperature zone 1 mixing valve motor
10 - Low-temperature zone 2 3-way mixing valve
11 - Low-temperature zone 1 safety thermostat
12 - Low-temperature zone 1 flow probe
13 - Low-temperature zone 1 circulator
14 - High-temperature zone "Europa" one-way valve
15 - Low-temperature zone 2 mixing valve motor
16 - Low-temperature zone 2 circulator
17 - Interference suppression filter
RZ1 - Direct zone 1 return
RZ2 - Mixed zone 2 return
RZ3 - Mixed zone 3 return
MZ2 - Mixed zone 2 flow
MZ3 - Mixed zone 3 flow
MZ1 - Direct zone 1 flow

2 USE AND MAINTENANCE INSTRUCTIONS

2.1 GENERAL WARNINGS.

If the device must be deactivated temporarily, act directly on the main switch to power off the system and work safely

- **Attention:** using any components that use electrical power requires the observation of some fundamental rules:

- do not touch the device with wet or moist parts of the body; do not touch when barefoot.
- if the device is wall-mounted: do not pull the electric cables, do not leave the device exposed to the elements (rain, sun, etc.);
- the device power cable must not be replaced by the user;
- in the event of damage to the cable, switch the device off and exclusively contact professionally qualified staff for replacement;
- if the device is not going to be used for a certain period, disconnect the main power switch.

N.B.: this equipment is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lacking the necessary experience and knowledge, unless they are supervised or have been instructed in its use by a person responsible for their safety. Children must be supervised to ensure that they do not play with the equipment.

2.2 WARNINGS FOR THE USER.

This device does not require any regulation or control by the user; *the opening of the device front lid is therefore prohibited.*
The only operation that the user must perform is that of periodically checking the water pressure of the system in the boiler. The boiler pressure gauge should read a value of between 1 and 1.2 bar. *If the pressure is below 1 bar (with the circuit cool), restore normal pressure via the filling valve located in the boiler (see boiler instruction book).*

N.B.: close the valve after the operation.
If pressure values reach around 3 bar, the boiler safety valve may be activated.
In this case, remove water from a radiator air vent valve until a pressure of 1 bar is achieved, or ask for assistance from professionally qualified personnel.

In the event of frequent pressure drops, contact qualified staff for assistance to eliminate any system leakage.

At the end of its service life, the appliance must not be disposed of like normal household waste nor abandoned in the environment, but must be removed by a professionally authorised company. Contact the manufacturer for disposal instructions.

2.3 CLEANING THE CASE.

Use damp cloths and neutral detergent to clean the manifold casing. Never use abrasive or powder detergents.

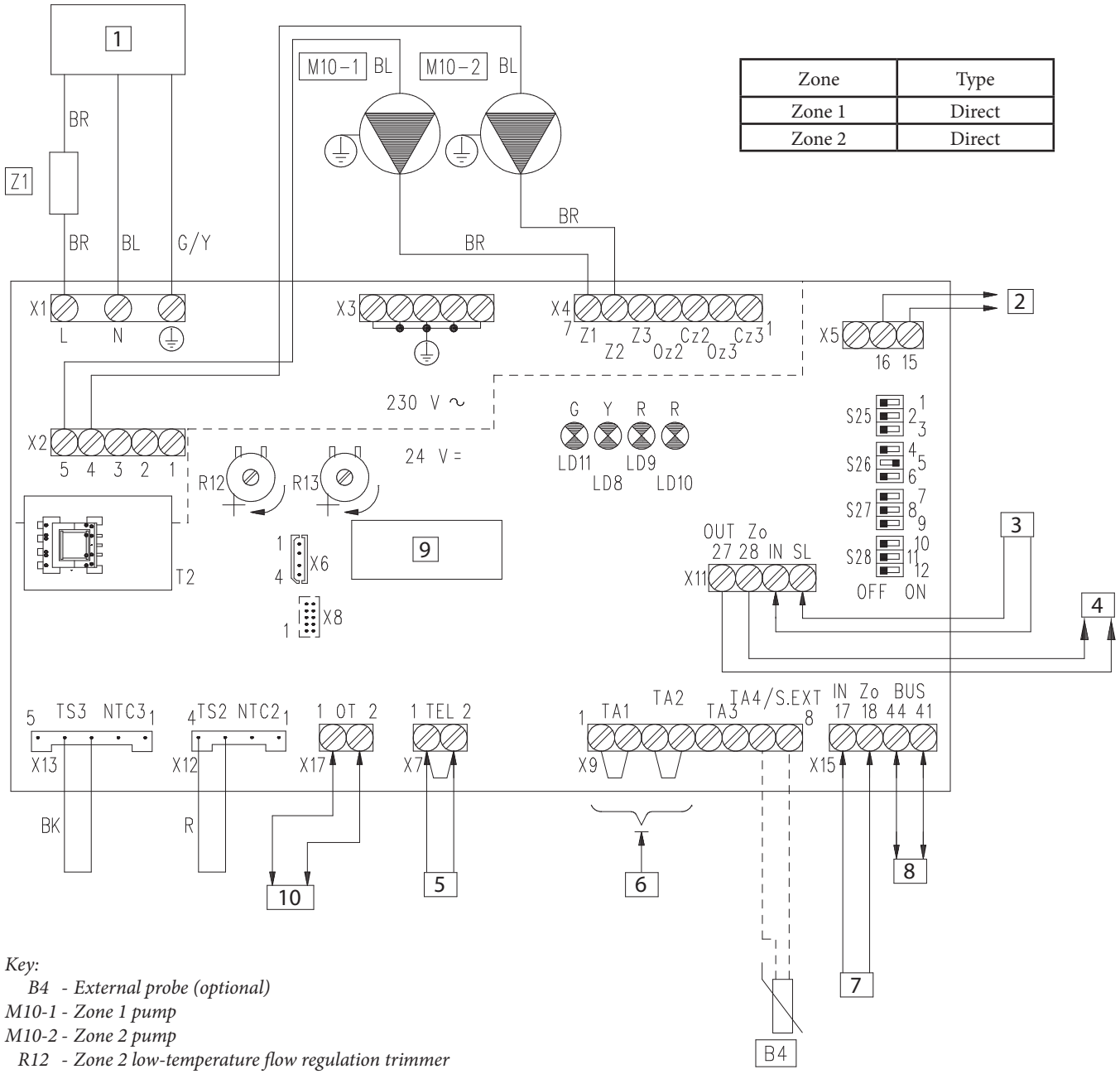
N.B.: children must not clean or maintain the appliance without adult supervision.

3 CHECKS AND MAINTENANCE

- Check connection to a 230V-50Hz power mains via an omni-polar disconnector (magnetothermal circuit breaker), correct L-N polarity and the earthing connection;
- check that the magnetothermal circuit breaker is working properly;
- make sure the central heating system is filled with water and that the pressure gauge indicates a pressure of 1-1.2 bar;
- make sure that the air valve cap (if present) is open and that the system is appropriately de-aerated;
- check the sealing efficiency of water circuits;
- check the correlation between the electric and hydraulic connections;
- **(only for DIM H-LT or H-2LT ERP)** with request for heat in the mixed zones, check the correct opening and closure of the mixing valve, opening the latter to check the system safety thermostat intervention (the boiler flow temperature must be set over 60 °C).

Even if just one single safety check provides a negative result, do not commission the system.

3.1 SCHEMA ELETTRICO DIM V2 ZONE ERP.



Zone	Type
Zone 1	Direct
Zone 2	Direct

Key:

B4 - External probe (optional)
M10-1 - Zone 1 pump
M10-2 - Zone 2 pump
R12 - Zone 2 low-temperature flow regulation trimmer
R13 - Zone 3 low-temperature flow regulation trimmer
S25 - Board setting selector
S26 - Board setting selector
S27 - Board setting selector
T2 - Zone control unit low-voltage feeder
Z1 - Anti-jamming filter
1 - 230 Vac 50 Hz power supply
2 - Central heating request outlet to boiler or other DIM
3 - Central heating request inlet from other DIM
4 - Zones signal state outlet for other DIM
5 - Connection to DIM safety thermostat
6 - Connections to ON/OFF room thermostats
7 - Zones signal state inlet from boiler or other DIM
8 - DIM BUS connection to boiler
9 - Zones control unit
10 - IMG BUS Possible alternative connections to:
-CAR V2
-CRD Plus
-Smartech Plus

Colour key:

BK - Black
BR - Brown
BL - Blue
R - Red
G/Y - Green/Yellow
G - Green
Y - Yellow

ZONE CONTROL UNIT SETTINGS		
N° SWITCH	OFF	ON
1	**Homogeneous zone control**	Mixed zone control
2	**N° 1 mixed zone (Z2)**	N° 2 mixed zones (Z2 and Z3)
3	**MASTER board**	SLAVE board
4	**Main zone = zone 1**	Main zone = zone 2
5	Super C.A.R.: main zone flow control	**Super C.A.R.: system flow control**
6	**Mixed zones max. temperature = 50°C**	Mixed zones max. temperature = 75°C
7	**Normal functioning**	Active testing function
8	**Not used**	Not used
9	**Mixed zones minimum temperature = 25°C**	Mixed zones minimum temperature = 35°C
10	**Standard operation**	Operation with Gateway Wi-Fi V2
11	**Not used**	Not used
12	**Not used**	Not used

N.B.: the default settings are highlighted in bold.

19

If the boiler requires it, the BUS connection can be made to the terminals as DIM BUS or 44-41, or 40-41 (see boiler instruction booklet).
On connecting the zone control Room Thermostats, it is necessary to eliminate the jumpers present in the zones control unit on terminal board X9.
On connecting the DIM safety thermostat, it is necessary to eliminate the jumper on X7.
When connecting a remote control device to IMG BUS, the room thermostat jumper for the zone to be controlled remotely (selected using switch 4) must be left in place.
Any C.A.R.^{V2}. zone control must be connected directly to the boiler.

N.B.: *for boilers other than Victrix Superior, it is possible to control Zone 1 or Zone 2 as the main zone, indifferently. By default (switch 4 on OFF) on the manifold set as Master will be controlled as the main Zone 1.*
For Victrix Superior range boilers, regardless of how switch 4 is set (ON or OFF), Zone 1 will still be controlled as the main one.

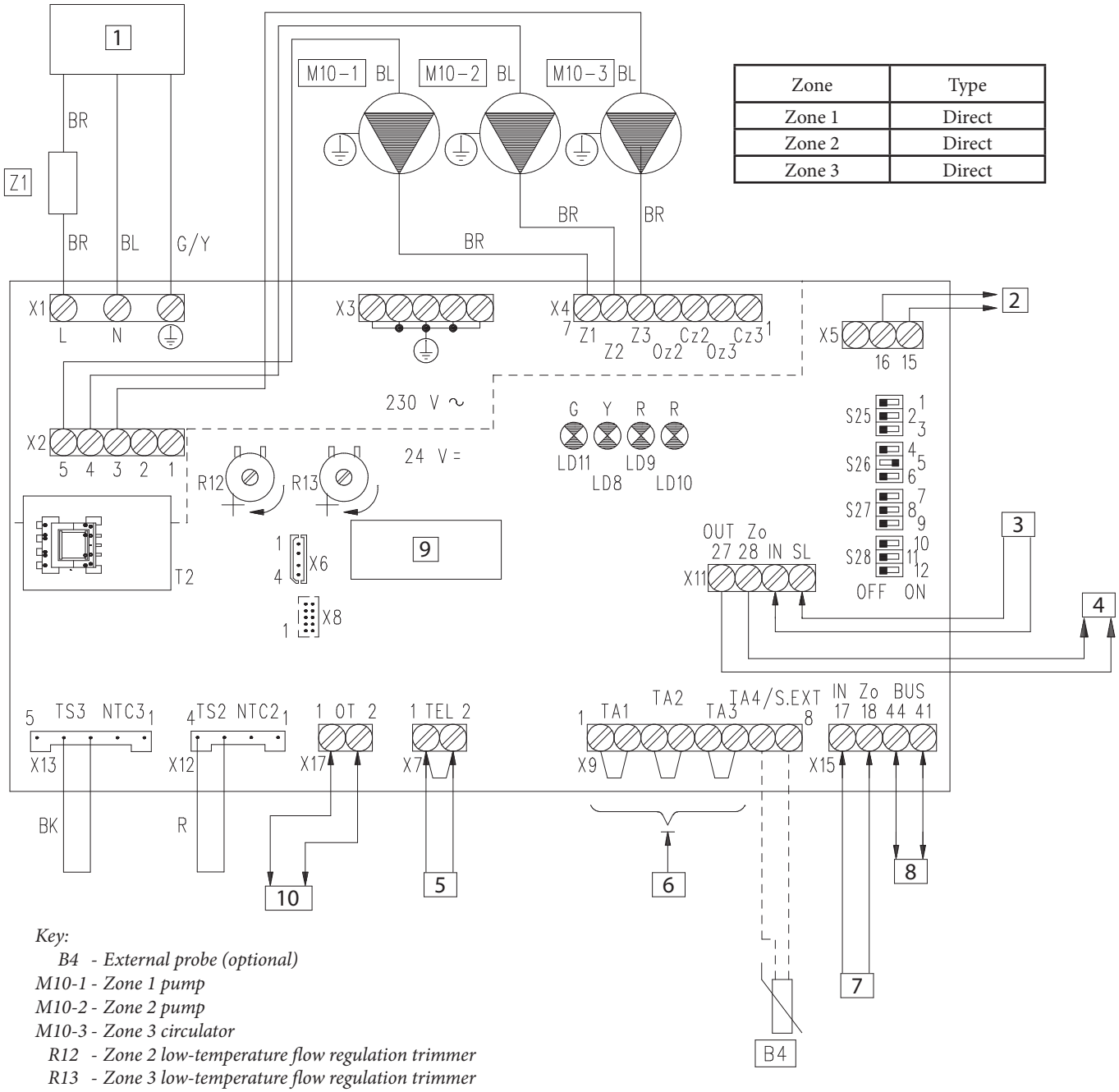
In the event that two or more zones are used, the C.A.R.^{V2} must be set with on-off operation (see instructions in the relative booklet).

The electrical connections of the RT inlets of the zones control unit relating to the zone controlled by the remote device, must be left free if the DIM is connected to boilers other than Victrix Superior.

N.B.: *combined with the Victrix Superior range boiler, the jumper of zone 1 (if remotely present) must be maintained (or used for contacts of zone shutter valves).*

N.B.: *connection of CAR^{V2} to terminal X17 is only permitted for boilers in the Victrix Tera and Victrix Omnia ranges.*

3.2 WIRING DIAGRAM DIM V2 3 ZONE ERP.



Zone	Type
Zone 1	Direct
Zone 2	Direct
Zone 3	Direct

Key:

B4 - External probe (optional)
M10-1 - Zone 1 pump
M10-2 - Zone 2 pump
M10-3 - Zone 3 circulator
R12 - Zone 2 low-temperature flow regulation trimmer
R13 - Zone 3 low-temperature flow regulation trimmer
S25 - Board setting selector
S26 - Board setting selector
S27 - Board setting selector
T2 - Zone control unit low-voltage feeder
Z1 - Anti-jamming filter
1 - 230 Vac 50 Hz power supply
2 - Central heating request outlet to boiler or other DIM
3 - Central heating request inlet from other DIM
4 - Zones signal state outlet for other DIM
5 - Connection to DIM safety thermostat
6 - Connections to ON/OFF room thermostats
7 - Zones signal state inlet from boiler or other DIM
8 - DIM BUS connection to boiler
9 - Zones control unit
10 - IMG BUS Possible alternative connections to:
- *CAR V2*
- *CRD Plus*
- *Smartech Plus*

Colour key:

BK - Black
BR - Brown
BL - Blue
R - Red
G/Y - Green/Yellow
G - Green
Y - Yellow

ZONE CONTROL UNIT SETTINGS		
N° SWITCH	OFF	ON
1	**Homogeneous zone control**	Mixed zone control
2	**N° 1 mixed zone (Z2)**	N° 2 mixed zones (Z2 and Z3)
3	**MASTER board**	SLAVE board
4	**Main zone = zone 1**	Main zone = zone 2
5	Super C.A.R.: main zone flow control	**Super C.A.R.: system flow control**
6	**Mixed zones max. temperature = 50°C**	Mixed zones max. temperature = 75°C
7	**Normal functioning**	Active testing function
8	**Not used**	Not used
9	**Mixed zones minimum temperature = 25°C**	Mixed zones minimum temperature = 35°C
10	**Standard operation**	Operation with Gateway Wi-Fi V2
11	**Not used**	Not used
12	**Not used**	Not used

N.B.: the default settings are highlighted in bold.

21

If the boiler requires it, the BUS connection can be made to the terminals as DIM BUS or 44-41, or 40-41 (see boiler instruction booklet).
On connecting the zone control Room Thermostats, it is necessary to eliminate the jumpers present in the zones control unit on terminal board X9.
On connecting the DIM safety thermostat, it is necessary to eliminate the jumper on X7.
When connecting a remote control device to IMG BUS, the room thermostat jumper for the zone to be controlled remotely (selected using switch 4) must be left in place.
Any C.A.R.^{V2} zone control must be connected directly to the boiler.

N.B.: *for boilers other than Victrix Superior, it is possible to control Zone 1 or Zone 2 as the main zone, indifferently. By default (switch 4 on OFF) on the manifold set as Master will be controlled as the main Zone 1.*
For Victrix Superior range boilers, regardless of how switch 4 is set (ON or OFF), Zone 1 will still be controlled as the main one.

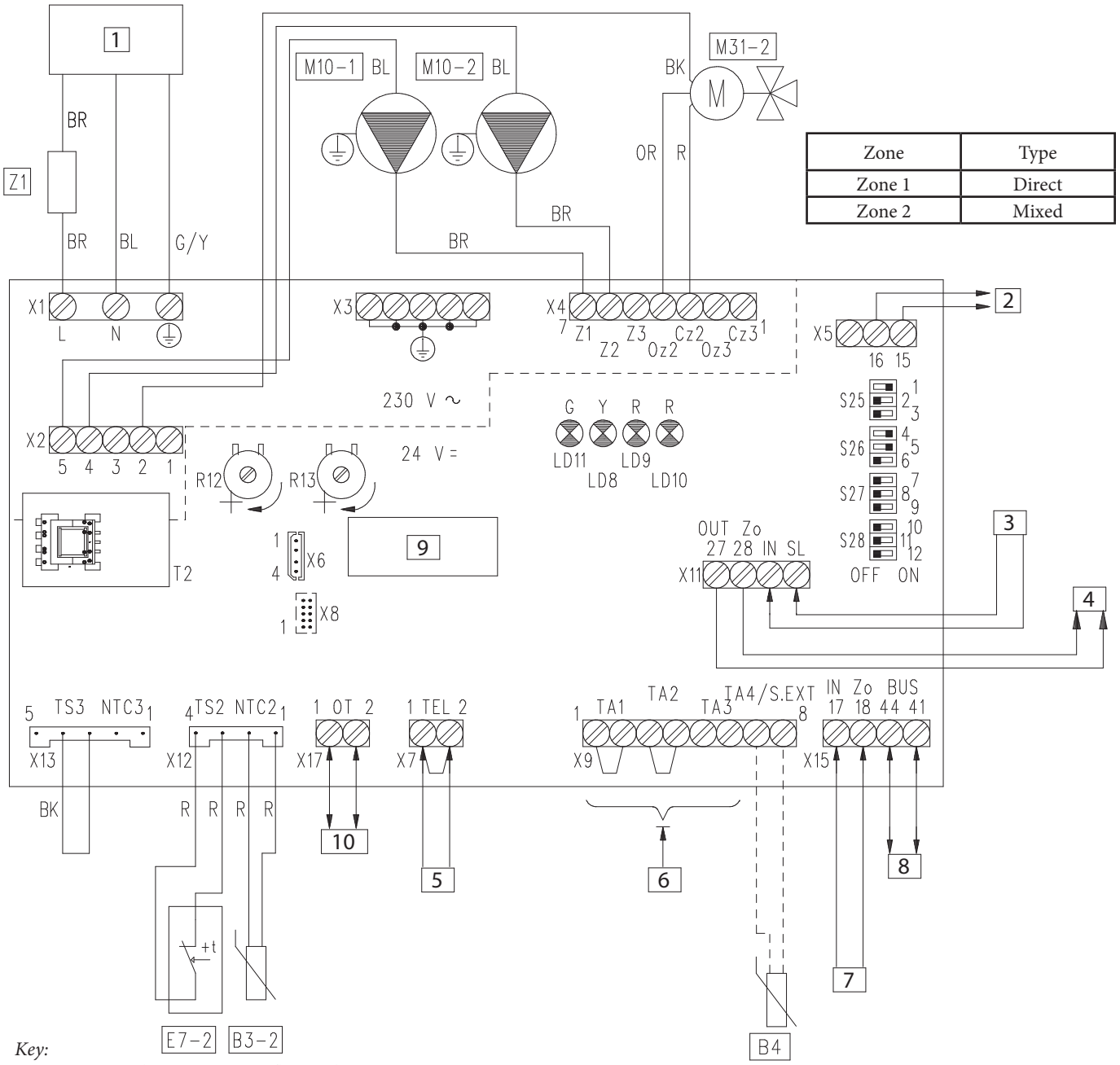
In the event that two or more zones are used, the C.A.R.^{V2} must be set with on-off operation (see instructions in the relative booklet).

The electrical connections of the RT inlets of the zones control unit relating to the zone controlled by the remote device, must be left free if the DIM is connected to boilers other than Victrix Superior.

N.B.: *combined with the Victrix Superior range boiler, the jumper of zone 1 (if remotely present) must be maintained (or used for contacts of zone shutter valves).*

N.B.: connection of CARV2 to terminal X17 is only permitted for boilers in the Victrix Tera and Victrix Omnia ranges.

3.3 DIM A-BT ERP WIRING DIAGRAM.



Zone	Type
Zone 1	Direct
Zone 2	Mixed

Key:

B3-2 - Zone 2 low-temperature flow probe
B4 - External probe (optional)
E7-2 - Zone 2 low-temperature safety thermostat
M10-1 - Zone 1 pump
M10-2 - Zone 2 pump
M31-2 - Mixing valve zone 2
R12 - Zone 2 low-temperature flow regulation trimmer
R13 - Zone 3 low-temperature flow regulation trimmer
S25 - Board setting selector
S26 - Board setting selector
S27 - Board setting selector
S28 - P.C.B. setting selector
T2 - Zone control unit low-voltage feeder
Z1 - Anti-jamming filter
1 - 230 Vac 50 Hz power supply
2 - Central heating request outlet to boiler or other DIM
3 - Central heating request inlet from other DIM
4 - Zones signal state outlet for other DIM
5 - Connection to DIM safety thermostat
6 - Connections to ON/OFF room thermostats
7 - Zones signal state inlet from boiler or other DIM
8 - DIM BUS connection to boiler
9 - Zones control unit
10 - IMG BUS Possible alternative connections to:
- CAR V2
- CRD Plus
- Smartech Plus

Colour key:

BK - Black
BR - Brown
BL - Blue
R - Red
OR - Orange
G/Y - Green/Yellow
G - Green
Y - Yellow

ZONE CONTROL UNIT SETTINGS		
N° SWITCH	OFF	ON
1	Homogeneous zone control	**Mixed zone control**
2	**N° 1 mixed zone (Z2)**	N° 2 mixed zones (Z2 and Z3)
3	**MASTER board**	SLAVE board
4	Main zone = zone 1	**Main zone = zone 2**
5	Super C.A.R.: main zone flow control	**Super C.A.R.: system flow control**
6	**Mixed zones max. temperature = 50°C**	Mixed zones max. temperature = 75°C
7	**Normal functioning**	Active testing function
8	**Not used**	Not used
9	**Mixed zones minimum temperature = 25°C**	Mixed zones minimum temperature = 35°C
10	**Standard operation**	Operation with Gateway Wi-Fi V2
11	**Not used**	Not used
12	**Not used**	Not used

N.B.: the default settings are highlighted in bold.

23

If the boiler requires it, the BUS connection can be made to the terminals as DIM BUS or 44-41, or 40-41 (see boiler instruction booklet).
On connecting the zone control Room Thermostats, it is necessary to eliminate the jumpers present in the zones control unit on terminal board X9.
On connecting the DIM safety thermostat, it is necessary to eliminate the jumper on X7.
When connecting a remote control device to IMG BUS, the room thermostat jumper for the zone to be controlled remotely (selected using switch 4) must be left in place.
Any C.A.R.^{V2} zone control must be connected directly to the boiler.

N.B.: *for boilers other than Victrix Superior, it is possible to control Zone 1 or Zone 2 as the main zone, indifferently. By default (switch 4 on ON) on the manifold set as Master will be controlled as the main Zone 2.*
For Victrix Superior range boilers, regardless of how switch 4 is set (ON or OFF), Zone 1 will still be controlled as the main one.

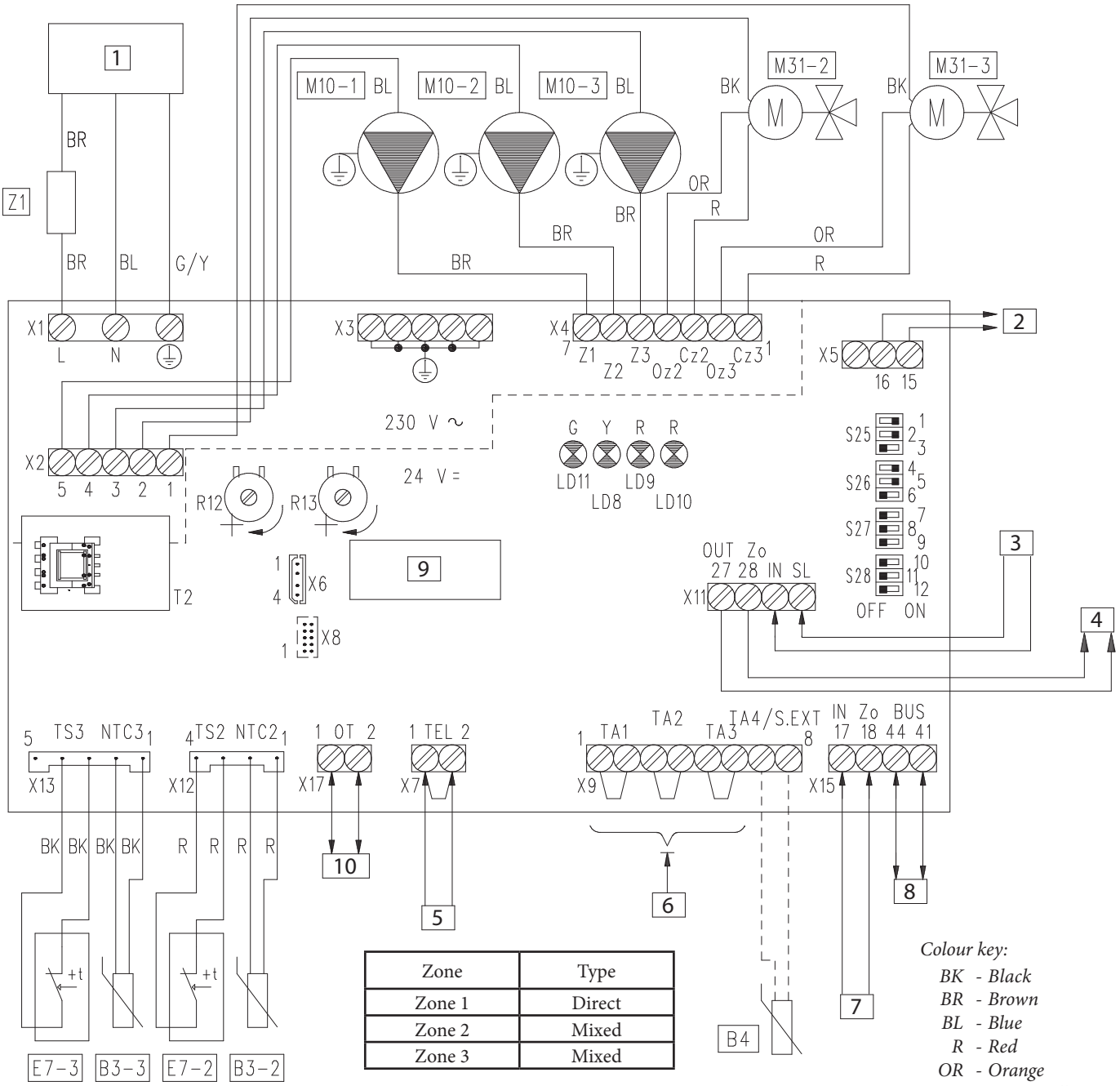
In the event that two or more zones are used, the C.A.R.^{V2} must be set with on-off operation (see instructions in the relative booklet).

The electrical connections of the RT inlets of the zones control unit relating to the zone controlled by the remote device, must be left free if the DIM is connected to boilers other than Victrix Superior.

N.B.: *combined with the Victrix Superior range boiler, the jumper of zone 1 (if remotely present) must be maintained (or used for contacts of zone shutter valves).*

N.B.: connection of CARV2 to terminal X17 is only permitted for boilers in the Victrix Tera and Victrix Omnia ranges.

3.4 DIM A-2BT ERP WIRING DIAGRAM.



Zone	Type
Zone 1	Direct
Zone 2	Mixed
Zone 3	Mixed

Colour key:

BK - Black
BR - Brown
BL - Blue
R - Red
OR - Orange
G/Y - Green/Yellow
G - Green
Y - Yellow

Key:

B3-2 - Zone 2 low-temperature flow probe
B3-3 - Zone 3 low-temperature flow probe
B4 - External probe (optional)
E7-2 - Zone 2 low-temperature safety thermostat
E7-3 - Zone 3 low-temperature safety thermostat
M10-1 - Zone 1 pump
M10-2 - Zone 2 pump
M10-2 - Zone 3 circulator
M31-2 - Mixing valve zone 2
M31-3 - Zone 3 mixing valve
R12 - Zone 2 low-temperature flow regulation trimmer
R13 - Zone 3 low-temperature flow regulation trimmer
S25 - Board setting selector
S26 - Board setting selector
S27 - Board setting selector
S28 - P.C.B. setting selector
T2 - Zone control unit low-voltage feeder
Z1 - Anti-jamming filter
1 - 230 Vac 50 Hz power supply
2 - Central heating request outlet to boiler or other DIM
3 - Central heating request inlet from other DIM
4 - Zones signal state outlet for other DIM
5 - Connection to DIM safety thermostat
6 - Connections to ON/OFF room thermostats
7 - Zones signal state inlet from boiler or other DIM
8 - DIM BUS connection to boiler
9 - Zones control unit
10 - IMG BUS Possible alternative connections to:
- CAR V2
- CRD Plus
- Smartech Plus

24

ZONE CONTROL UNIT SETTINGS		
N° SWITCH	OFF	ON
1	Homogeneous zone control	**Mixed zone control**
2	N° 1 mixed zone (Z2)	**N° 2 mixed zones (Z2 and Z3)**
3	**MASTER board**	SLAVE board
4	Main zone = zone 1	**Main zone = zone 2**
5	Super C.A.R.: main zone flow control	**Super C.A.R.: system flow control**
6	**Mixed zones max. temperature = 50°C**	Mixed zones max. temperature = 75°C
7	**Normal functioning**	Active testing function
8	**Not used**	Not used
9	**Mixed zones minimum temperature = 25°C**	Mixed zones minimum temperature = 35°C
10	**Standard operation**	Operation with Gateway Wi-Fi V2
11	**Not used**	Not used
12	**Not used**	Not used

N.B.: the default settings are highlighted in bold.

25

If the boiler requires it, the BUS connection can be made to the terminals as DIM BUS or 44-41, or 40-41 (see boiler instruction booklet).
On connecting the zone control Room Thermostats, it is necessary to eliminate the jumpers present in the zones control unit on terminal board X9.
On connecting the DIM safety thermostat, it is necessary to eliminate the jumper on X7.
When connecting a remote control device to IMG BUS, the room thermostat jumper for the zone to be controlled remotely (selected using switch 4) must be left in place.
Any C.A.R.^{V2} zone control must be connected directly to the boiler.

N.B.: *for boilers other than Victrix Superior, it is possible to control Zone 1 or Zone 2 as the main zone, indifferently. By default (switch 4 on ON) on the manifold set as Master will be controlled as the main Zone 2.*
For Victrix Superior range boilers, regardless of how switch 4 is set (ON or OFF), Zone 1 will still be controlled as the main one.

In the event that two or more zones are used, the C.A.R.V2 must be set with on-off operation (see instructions in the relative booklet).

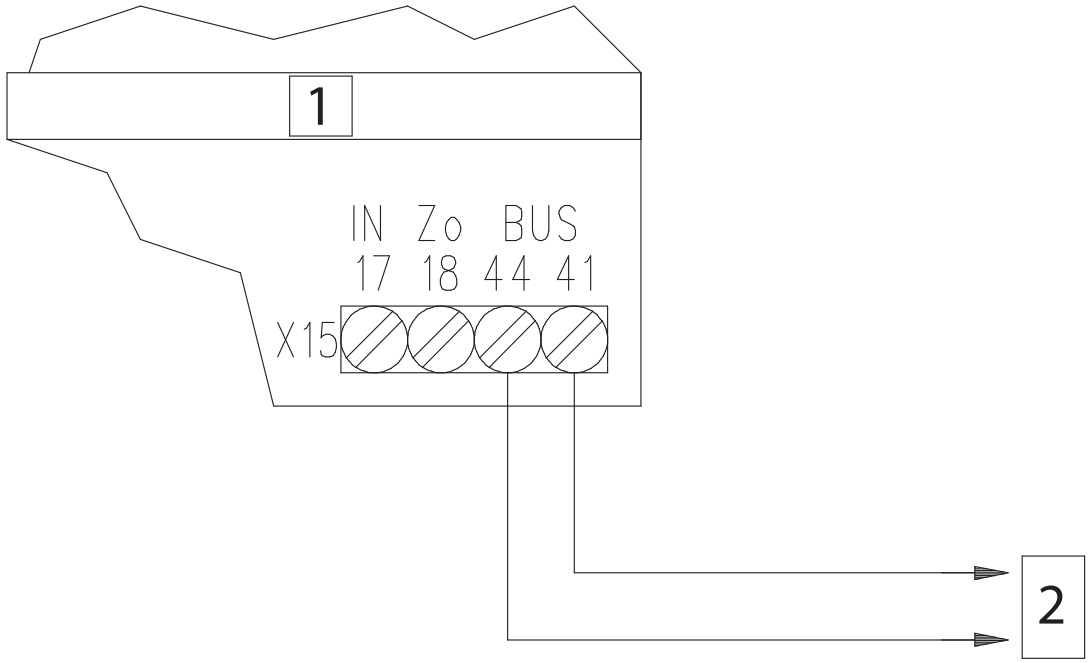
The electrical connections of the RT inlets of the zones control unit relating to the zone controlled by the remote device, must be left free if the DIM is connected to boilers other than Victrix Superior.

N.B.: *combined with the Victrix Superior range boiler, the jumper of zone 1 (if remotely present) must be maintained (or used for contacts of zone shutter valves).*

N.B.: connection of CARV2 to terminal X17 is only permitted for boilers in the Victrix Tera and Victrix Omnia ranges.

3.5 DIM ERP CONNECTION TO BOILER VIA DIM BUS.

ONLY FOR BOILERS SET UP FOR DIGITAL COMMUNICATION WITH ZONE CONTROL UNIT.



Key:

1 - Zones control unit

2 - DIM BUS connection to boiler

If the boiler requires it, the BUS connection can be made to the terminals indicated as DIM BUS or 44-41, or 40-41 (see boiler instruction booklet).

Eliminate jumper X40 on the boiler terminal board (see boiler instruction booklet).

On boiler models set up for digital communication with the zone control unit, the BUS dialogue can be activated with a wide exchange of interactions between boiler and Zones control unit, the main ones being:

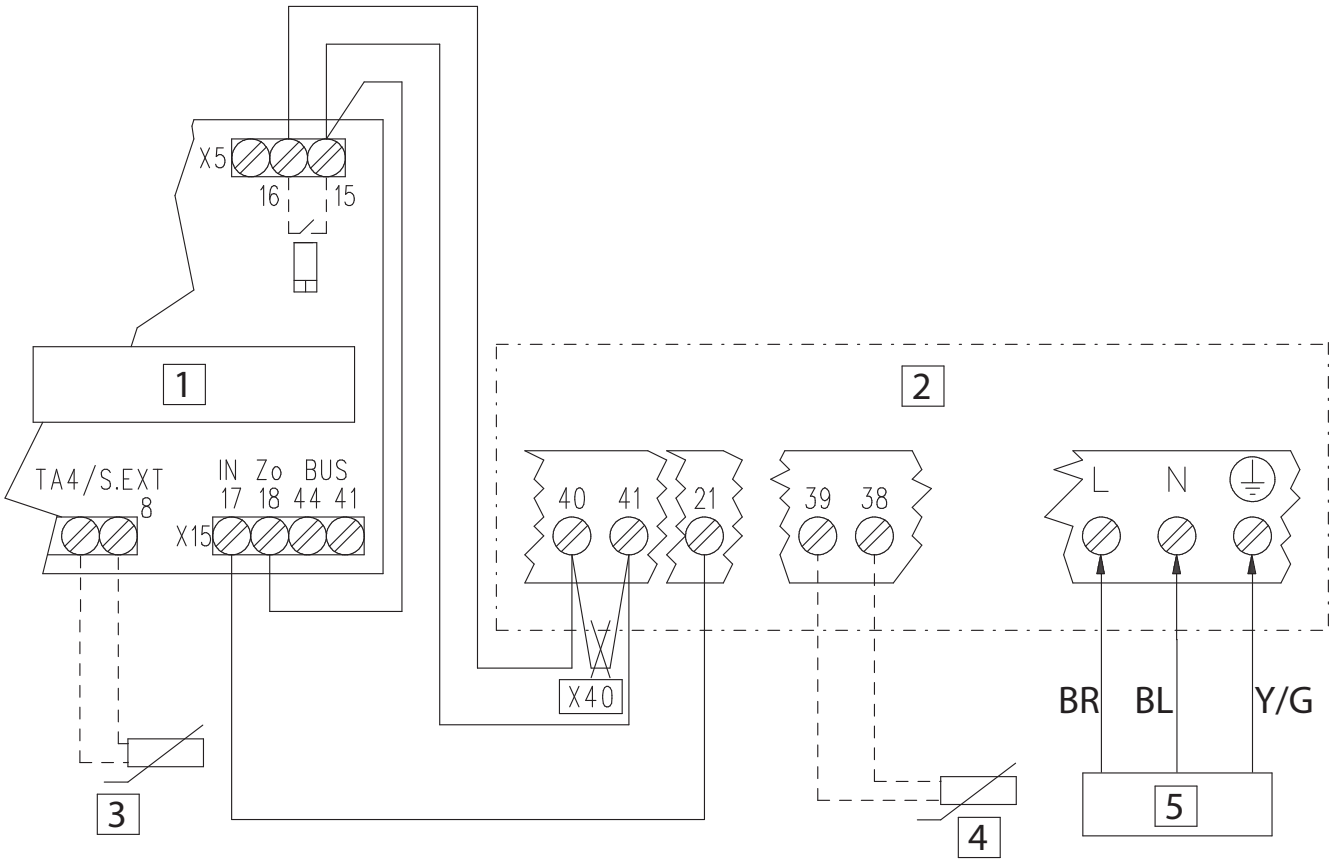
The Zones control unit will receive the following from the boiler:
- Enabling zone mode (Summer, Winter mode, etc.)
- Temperatures regulated on the boiler display for Low Temperature zones (where possible);
- External temperature probe connected to boiler;
- Zone activation request from external devices connected to the boiler (CAR, Wireless probes, etc.)

The boiler will receive the following from the Zones control unit:
- Central heating request from zones;
- Boiler flow temperature correlated to the zones request.
- Error codes of the faults present on the zone control unit.

3.6 DIM ERP CONNECTION TO BOILER VIA ZONE SIGNAL STATE.

N.B.: in this connection mode, when the boiler must be disconnected from the supply voltage, it is also necessary to power off the manifold.

IMMERGAS MODELS WITH ZONE SIGNAL STATE OUTLET



Key:

1 - Zones control unit
2 - Boiler terminal board
3 - External probe (optional)
4 - External probe (optional)
5 - Power supply 230Vac 50Hz

BR - Brown
BL - Blue
Y/G - Yellow/Green

Eliminate jumper X40 on the boiler terminal board (see boiler instruction booklet).

For combinations with Victrix Maior, Victrix Extra and Victrix Tera Vip V2 series boilers, parameter P.11 = 3 must be set (see boiler instruction manual).

On boiler models preset for communication with the zones control unit via a signal state, the Zones control unit can be connected to boiler terminals 40, 41 and 21.

The Zones control unit will receive the following from the boiler:
- Enabling zone mode (Summer, Winter mode, etc.);
- Zone activation request from external devices connected to the boiler.

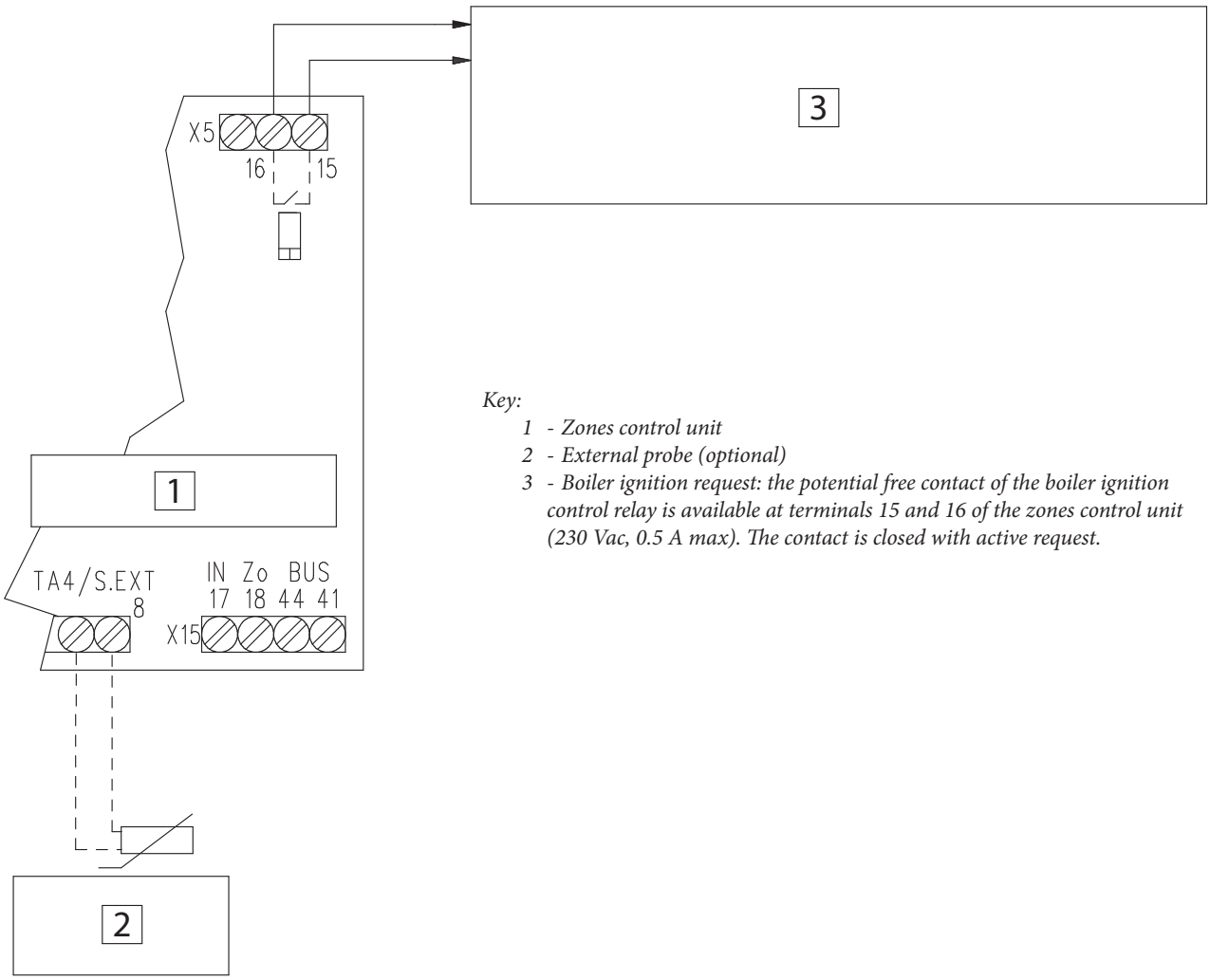
The boiler will receive the following from the Zones control unit:
- Central heating request from zones.

The Zones control unit must be connected to its own external probe (if necessary).

The mixed zone flow temperature must be adjusted on the zones control unit trimmers.

27

CONNECTION TO GENERAL BOILERS



Key:

1 - Zones control unit
2 - External probe (optional)
3 - Boiler ignition request: the potential free contact of the boiler ignition control relay is available at terminals 15 and 16 of the zones control unit (230 Vac, 0.5 A max). The contact is closed with active request.

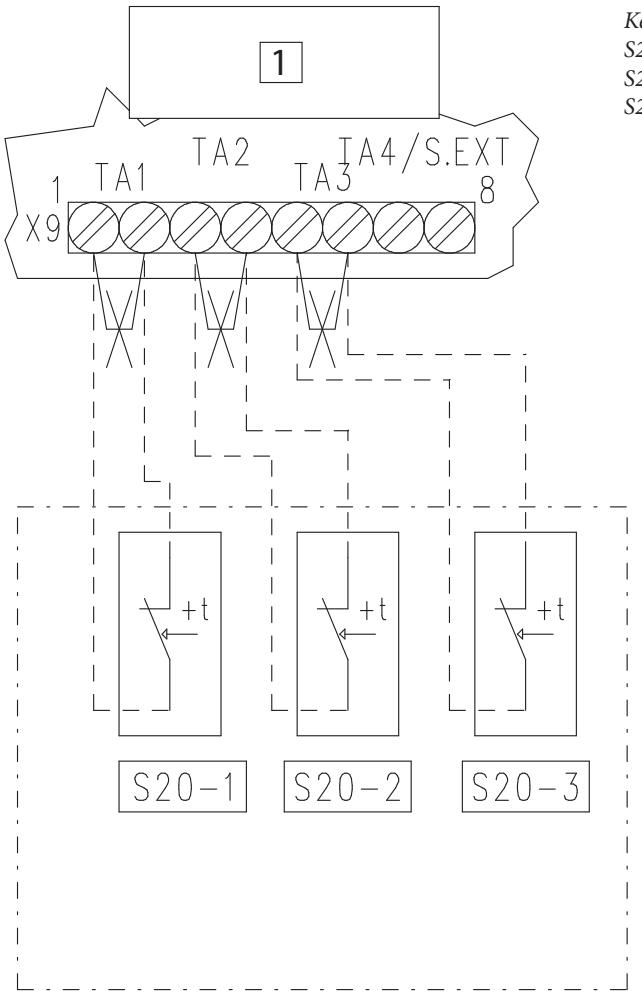
If the Zones control unit is connected to the boiler without the zone signal state or the BUS dialogue, the zone pumps are controlled only by the respective room thermostats. In this case, the pumps cannot be controlled from the boiler, activating them for example for post-circulations or deactivating them by selecting the "summer" function on the boiler.

The Zones control unit must be connected to its own external probe (if necessary).

The mixed zone flow temperatures must be adjusted on the Zones control unit trimmers.

3.7 DIM ERP CONNECTIONS TO ON/OFF ROOM THERMOSTATS.

WIRING DIAGRAM FOR DIM ERP CONNECTION TO ON-OFF ROOM THERMOSTATS.



Key:
S20-1 - Room thermostat zone 1
S20-2 - Room thermostat zone 2
S20-3 - Room thermostat zone 3
1 - Zones control unit

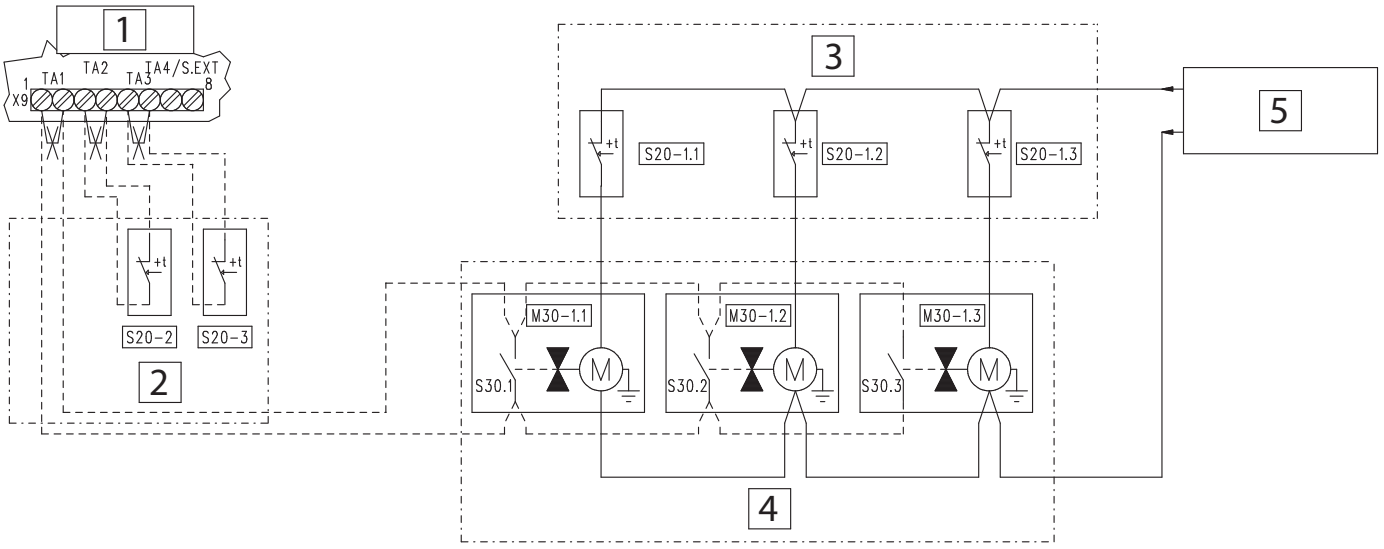
Note: *All components represented in this diagram are optional.*

Every zone can be controlled by the relative room thermostat.
On connecting the room thermostats, it is necessary to eliminate the jumpers present on the X9 terminal board of the zones control unit.

If the Zones control unit is connected via BUS to Victrix Superior boilers and Eureka, the activation of the zones is determined by the closure of the Room Thermostats and by the program on the Boiler menu (see boiler instruction booklet).

3.8 DIM ERP CONNECTION TO ON-OFF ROOM THERMOSTATS WITH SHARED ZONES.

WIRING DIAGRAM FOR DIM ERP CONNECTION TO ON-OFF ROOM THERMOSTATS WITH SHARED ZONES.



Key:

M30-1.1 - Portion valve 1 of zone
M30-1.2 - Portion valve 2 of zone
M30-1.3 - Portion valve 3 of zone
S20-2 - Room thermostat zone 2
S20-3 - Room thermostat zone 3
S20-1.1 - Portion 1 room thermostat of zone
S20-1.2 - Portion 2 room thermostat of zone
S20-1.3 - Portion 3 room thermostat of zone
S30.1 - Portion valve 1 of zone end run micro switch
S30.2 - Portion valve 2 of zone end run micro switch
S30.3 - Portion valve 3 of zone end run micro switch

1 - Zones control unit
2 - Zones control room thermostats
3 - Zone portion control room thermostats
4 - Zone shutter valves with micro limit switch
5 - Zone valve power supply

Note: *All components represented in this diagram are optional.*

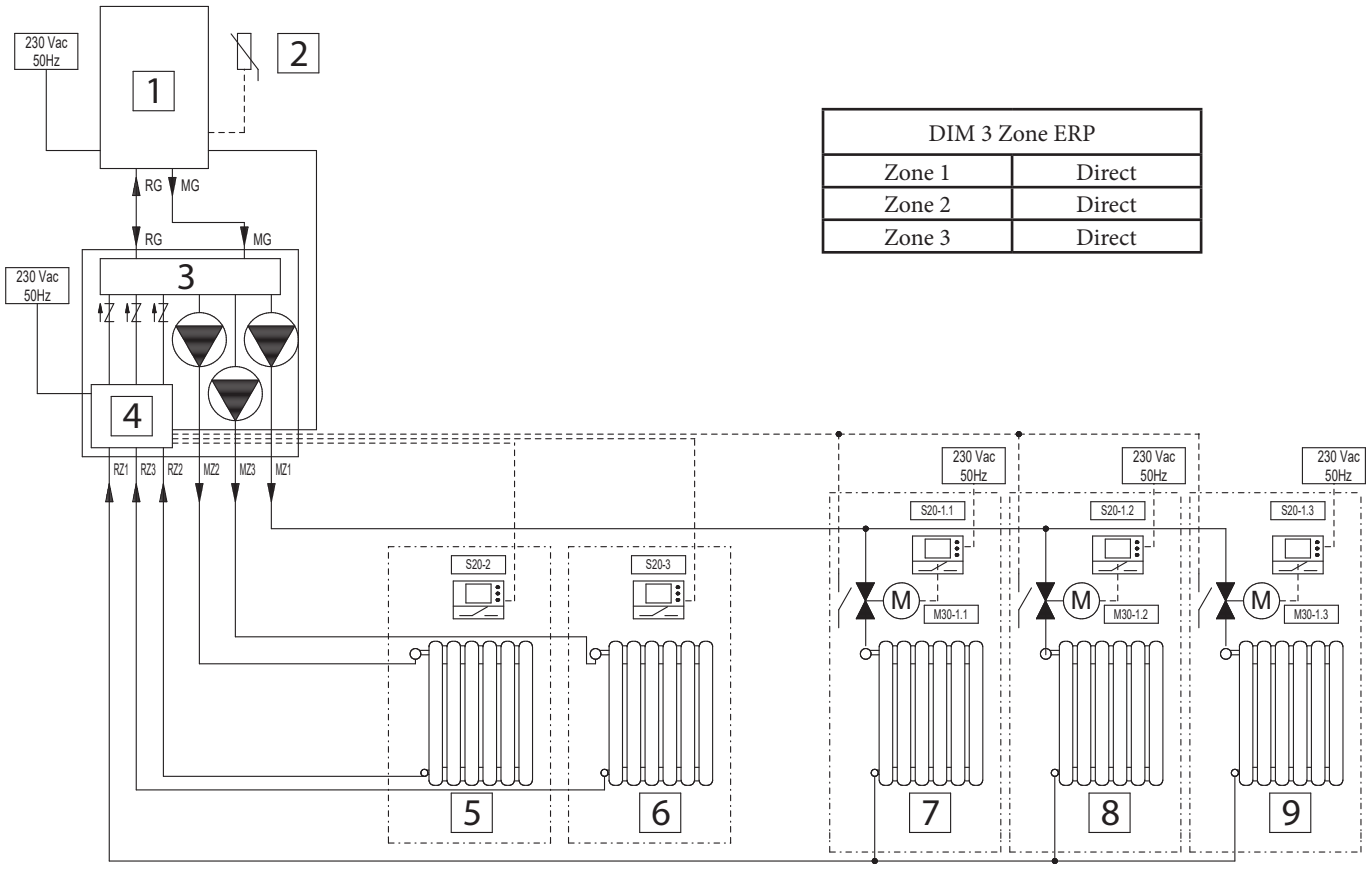
Every zone can be controlled by the relative room thermostat.
On connecting the room thermostats, it is necessary to eliminate the jumpers present on the X9 terminal board of the zones control unit.

The room thermostat contacts can be replaced by those of the end run micro-switches belonging to other zone valves inserted into the hydraulic circuit downstream from the zone pumps.

In the case of a single zone (controlled by a unique pump), it is divided into several portions (controlled by various zone valves); the wiring diagram shown above must be followed.

If the Zones control unit is connected via BUS to Victrix Superior boilers and Eureka, the activation of the zones is determined by the closure of the Room Thermostats and by the program on the Boiler menu (see boiler instruction booklet).

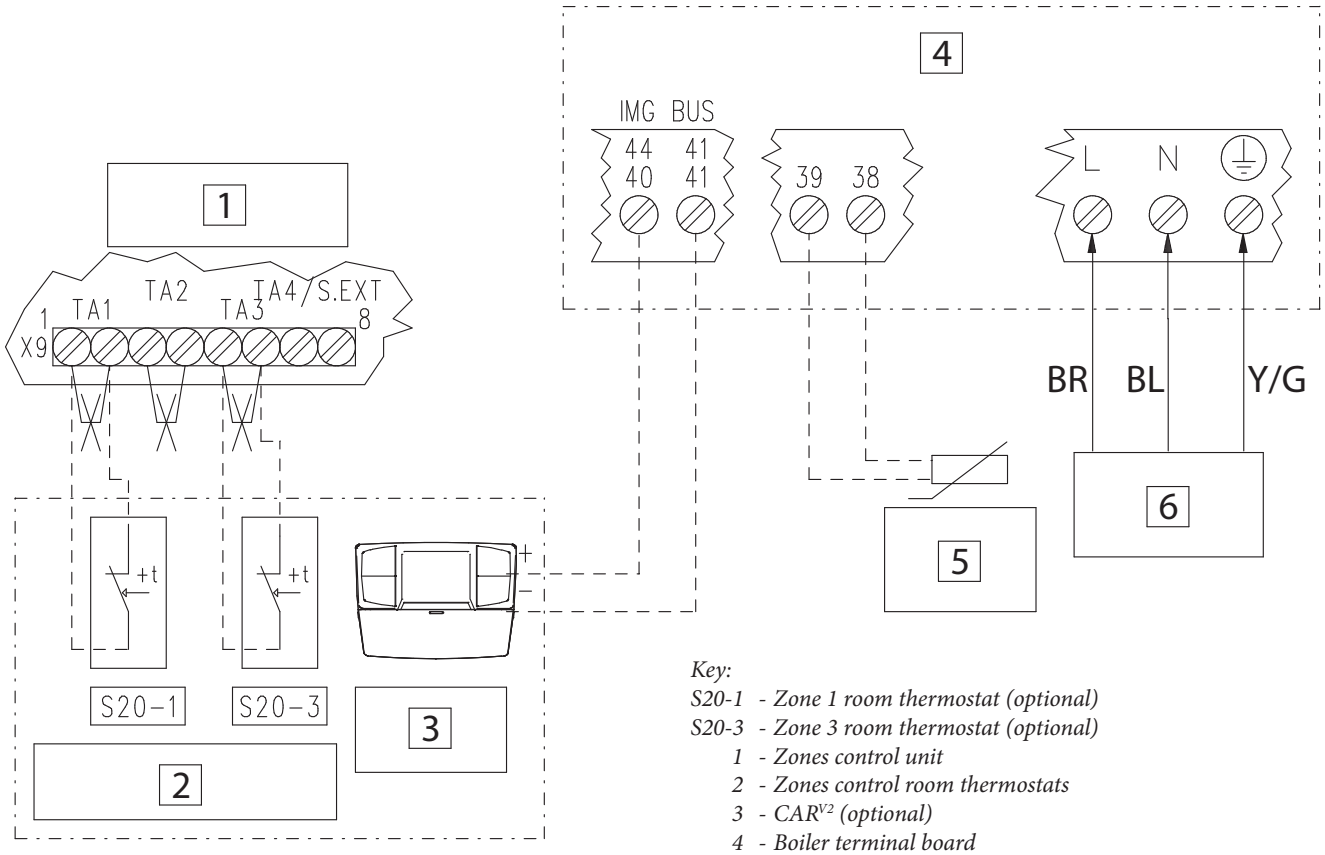
Example of hydraulic diagram for dividing zone 1 DIM ERP into three portions.



DIM 3 Zone ERP	
Zone 1	Direct
Zone 2	Direct
Zone 3	Direct

Key
M30-1.1 - Portion valve 1 of zone 1
M30-1.2 - Portion valve 2 of zone 1
M30-1.3 - Portion valve 3 of zone 1
S20-2 - Room thermostat zone 2
S20-3 - Room thermostat zone 3
S20-1.1 - Portion 1 room thermostat of zone 1
S20-1.2 - Portion 2 room thermostat of zone 1
S20-1.3 - Portion 3 room thermostat of zone 1
RZ1 - Direct zone 1 return
RZ3 - Direct zone 3 return
RZ2 - Direct zone 2 return
MZ2 - Direct zone 2 flow
MZ3 - Direct zone 3 flow
MZ1 - Direct zone 1 flow
1 - Boiler
2 - External probe (optional)
3 - 1st DIM ERP 3 zone
4 - DIM ERP zones control unit
5 - Zone 2
6 - Zone 3
7 - Portion 1 of zone 1
8 - Portion 2 of zone 1
9 - Portion 3 of zone 1

3.9 DIM ERP CONNECTIONS TO ROOM THERMOSTATS AND C.A.R.^{V2} ON BOILERS OTHER THAN VICTRIX SUPERIOR, VICTRIX TERA, VICTRIX OMNIA.



Key:

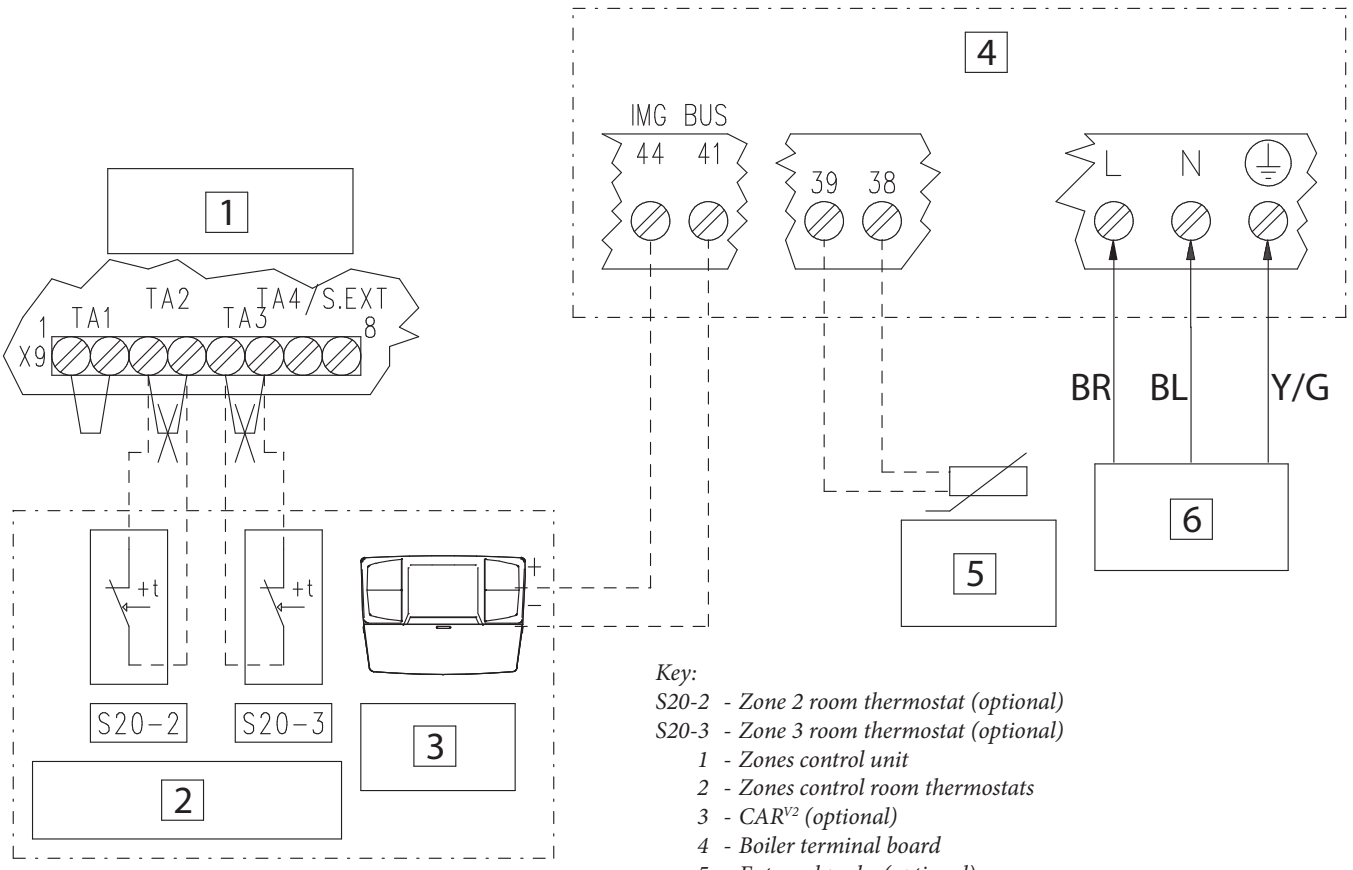
S20-1 - Zone 1 room thermostat (optional)
S20-3 - Zone 3 room thermostat (optional)
1 - Zones control unit
2 - Zones control room thermostats
3 - CAR^{V2} (optional)
4 - Boiler terminal board
5 - External probe (optional)
6 - 230 Vac 50Hz power supply
BR - Brown
BL - Blue
Y/G - Yellow/Green

Eliminate jumper X40 on the boiler terminal board (see boiler instruction booklet).

Example of CAR^{V2} connection or other Remote Control suitable for zone management connected to a boiler other than Victrix Superior via DIM BUS (see boiler instruction booklet) together with other Room Thermostats connected to the zones control unit.

The CAR^{V2} must be connected to the boiler terminals indicated as DIM BUS or 44-41, or 40-41 (see boiler instruction booklet).
The zones control unit must be connected to the boiler via DIM BUS or a zone signal state to receive the zone activation request from CAR^{V2}.
The CAR^{V2} will control the zone set as the main one on the zones control unit.
In this example, the zones control unit has set main zone = 2 (from switch 4 setting).
The jumper at the ends of X9, relating to the zone controlled by CAR^{V2} must be eliminated.
On connecting the room thermostats, it is necessary to eliminate the jumpers on the X9 terminal board of the zones control unit.

3.10 DIM ERP CONNECTIONS TO ROOM THERMOSTATS AND C.A.R.^{V2} ON BOILERS OTHER THAN VICTRIX SUPERIOR.



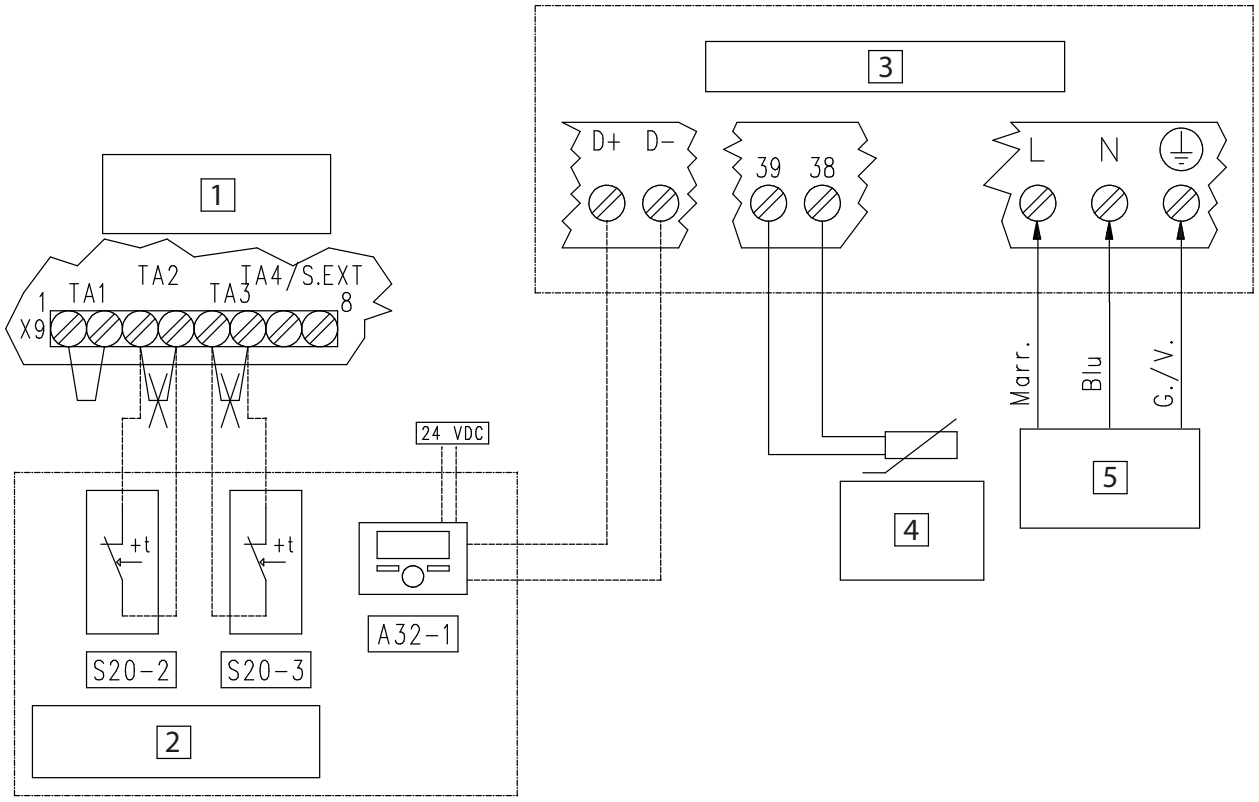
Key:
S20-2 - Zone 2 room thermostat (optional)
S20-3 - Zone 3 room thermostat (optional)
1 - Zones control unit
2 - Zones control room thermostats
3 - CAR^{V2} (optional)
4 - Boiler terminal board
5 - External probe (optional)
6 - 230 Vac 50Hz power supply
BR - Brown
BL - Blue
Y/G - Yellow/Green

Eliminate jumper X40 on the boiler terminal board (see boiler instruction booklet).

Example of CAR^{V2} connection or other Remote Control suitable for zone management connected to a Victrix Superior boiler via DIM BUS (see boiler instruction booklet) together with other Room Thermostats connected to the zones control unit.

The CAR^{V2} must be connected to the boiler terminals indicated as DIM BUS or 44-41 (see boiler instruction booklet).
The zones control unit must be connected to the boiler via DIM BUS to receive the zone activation request from CAR^{V2}.
The CAR^{V2} connected to Victrix Superior boilers can only control the request for zone 1 (regardless of the section on the zones control unit).
If the zones control unit is connected to the Victrix Superior boiler, the zone 1 RT jumper (controlled by CAR) must be kept on terminal board X9 of the zones control unit.
On connecting the room thermostats, it is necessary to eliminate the jumpers on the X9 terminal board of the zones control unit.
With the Zones control unit connected to Victrix Superior boilers, the activation of the zones is determined by the closure of the Room Thermostats and by the program on the Boiler Zones Menu (see boiler instruction booklet).

3.11 DIM ERP CONNECTIONS TO ROOM THERMOSTATS AND REMOTE ZONE PANELS - EUREKA.



Key:

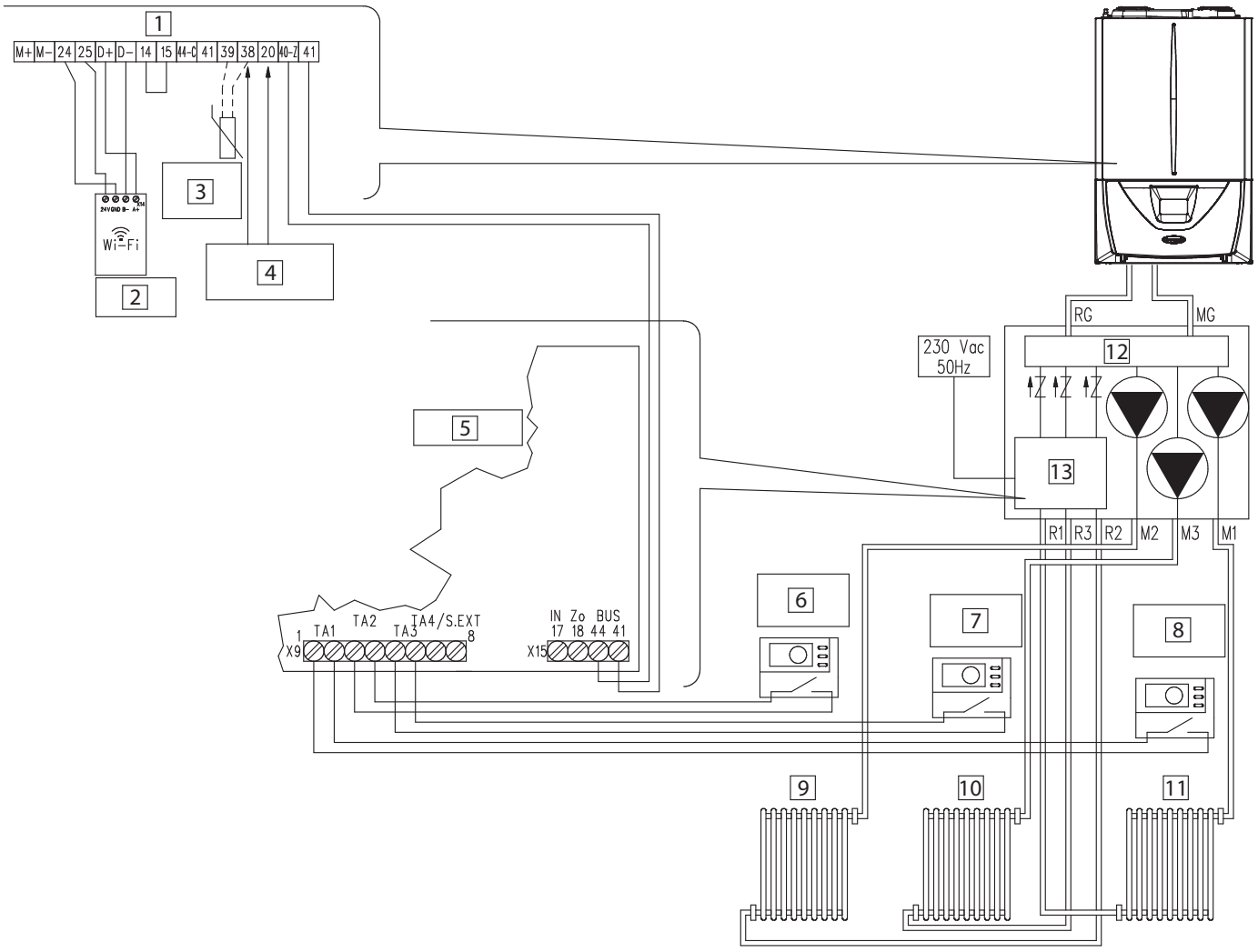
1 - Zones control unit
2 - Room thermostats for zone control
3 - Boiler terminal board
4 - External probe
5 - 230Vac 50 Hz power supply
A32-1 - Zone 1 remote panel (optional)
S20-2 - Zone 2 room thermostat (optional)
S20-3 - Zone 3 room thermostat (optional)

The TA jumper for the zone controlled by remote control A32 must be left in place (see the Eureka instruction booklet).

Remove jumper X40 from the boiler terminal board (see the boiler instruction booklet).
The CARV2 must be connected to the boiler terminals marked DIM BUS or 44 - 41 (see the boiler instruction booklet).
The remote zone panel controls the demand from zone 1 (configured using the dedicated menu on UCI Eureka).
The TA jumper for zone 1 (controlled by the remote zone panel) must be left in place on terminal board X9 of the zones control unit.
When connecting the room thermostats, remove the corresponding jumpers from terminal board X9 of the zones control unit.
With the zones control unit connected to Eureka, zone activation is determined both by closure of the room thermostat contacts and by the programme in the Zones Menu (see the instruction booklet).

34

3.12 VICTRIX SUPERIOR AND EUREKA - DIM ERP CONNECTION WITH THERMOSTATS AND DOMINUS.



Key:

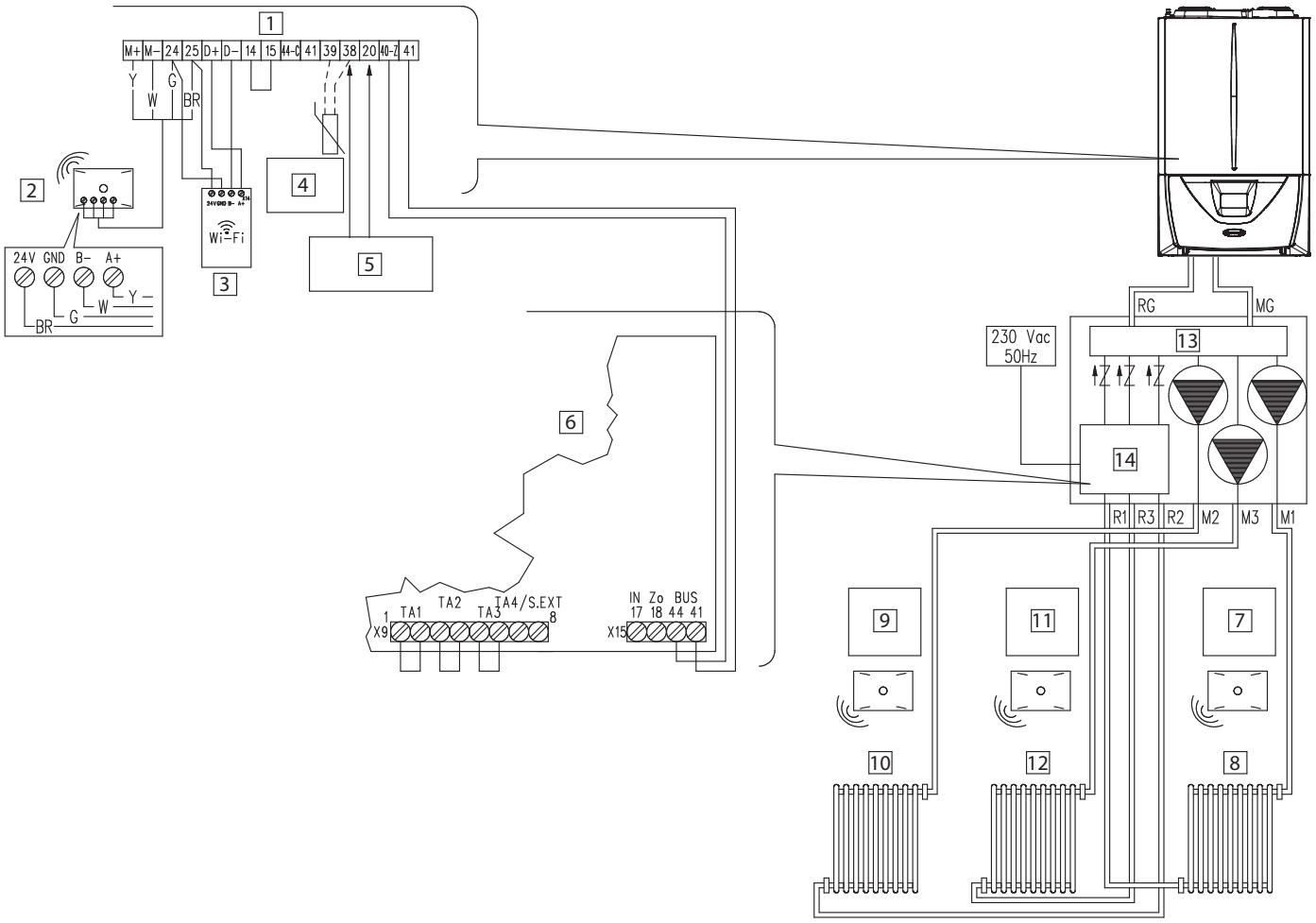
1 - Low voltage connection terminal board
2 - Dominus (optional)
3 - External probe (optional for Victrix Superior; standard for Eureka)
4 - System flow probe (optional)
5 - DIM ERP zones control unit
6 - Zone 2 room thermostat
7 - Zone 3 room thermostat
8 - Zone 1 room thermostat
9 - Zone 2
10 - Zone 3
11 - Zone 1
12 - DIM ERP 3 Zone
13 - DIM ERP zones control unit

On connecting the room thermostats, it is necessary to eliminate the jumpers present on the X9 terminal board of the zones control unit.

The Zones control unit will receive the following from the boiler:
- Enabling zone mode (Summer, Winter mode, etc.)
- Temperatures adjusted on the boiler panel for mixed zones (where possible);
- External temperature probe connected to boiler;
- Zone activation from boiler panel (or Dominus if present).

The boiler will receive the following from the Zones control unit:
- Central heating request from Room Thermostat;
- Boiler flow temperature correlated to the zones request.
- Error codes of the faults present on the zone control unit

3.13 VICTRIX SUPERIOR AND EUREKA - DIM ERP CONNECTION WITH WIRELESS PROBES AND DOMINUS



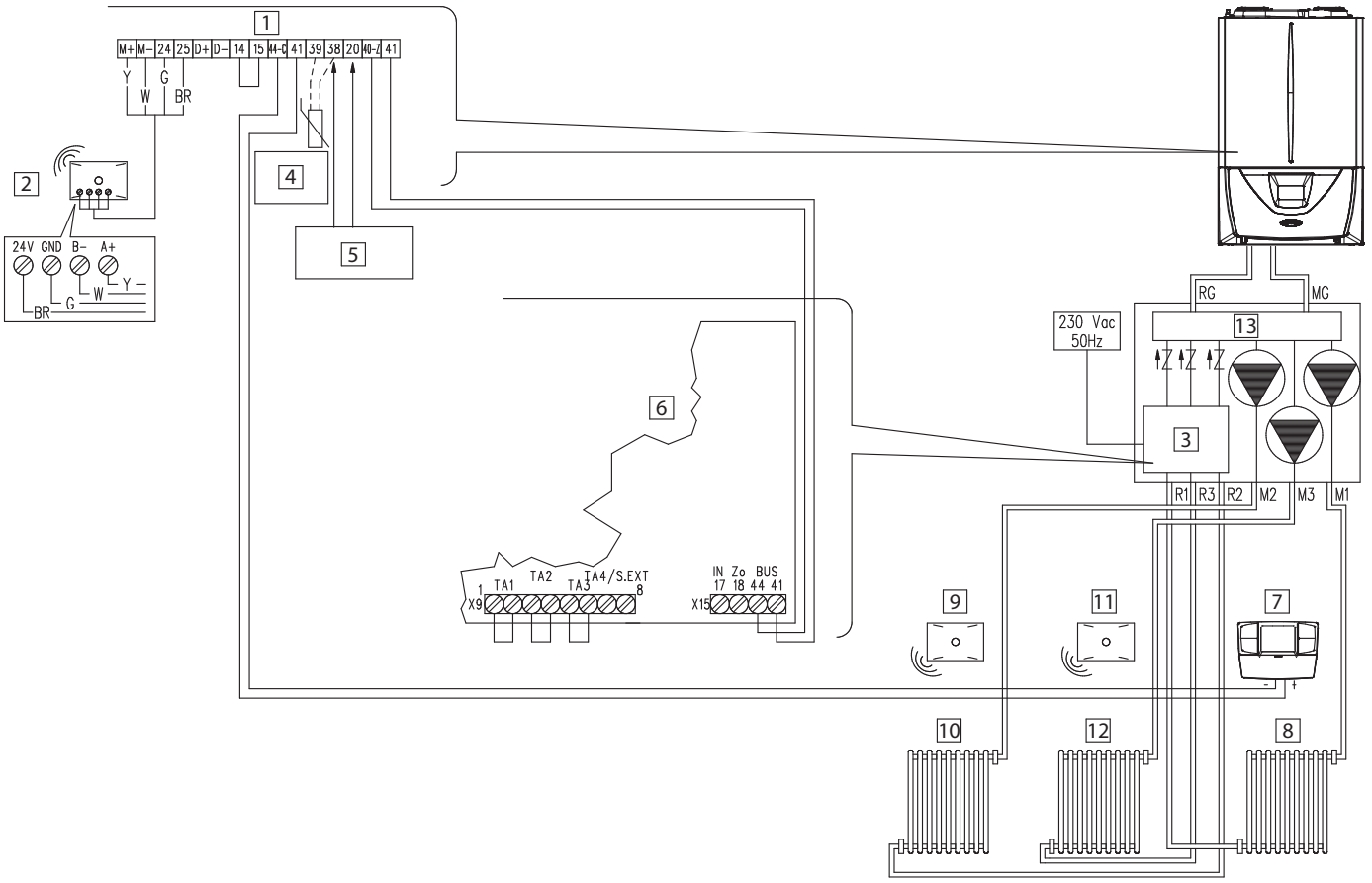
Key:

1 - Low voltage connection terminal board
2 - Wireless Concentrator
3 - Dominus (optional)
4 - External probe (optional for Victrix Superior; standard for Eureka)
5 - System flow probe (optional)
6 - DIM ERP zones control unit
7 - Zone 1 wireless room probe
8 - Zone 1
9 - Zone 2 wireless room probe
10 - Zone 2
11 - Zone 3 wireless room probe
12 - Zone 3
13 - DIM ERP 3 Zone
14 - DIM ERP zones control unit

The Zones control unit will receive the following from the boiler:
- Enabling zone mode (Summer, Winter mode, etc.)
- Temperatures adjusted on the boiler panel for mixed zones (where possible);
- External temperature probe connected to boiler;
- Zone activation from boiler panel (or Dominus if present).

The boiler will receive the following from the Zones control unit:
- Central heating request from Room Thermostat;
- Boiler flow temperature correlated to the zones request.
- Error codes of the faults present on the zone control unit

3.14 VICTRIX SUPERIOR - DIM ERP CONNECTION WITH C.A.R.^{V2} AND WIRELESS PROBES.



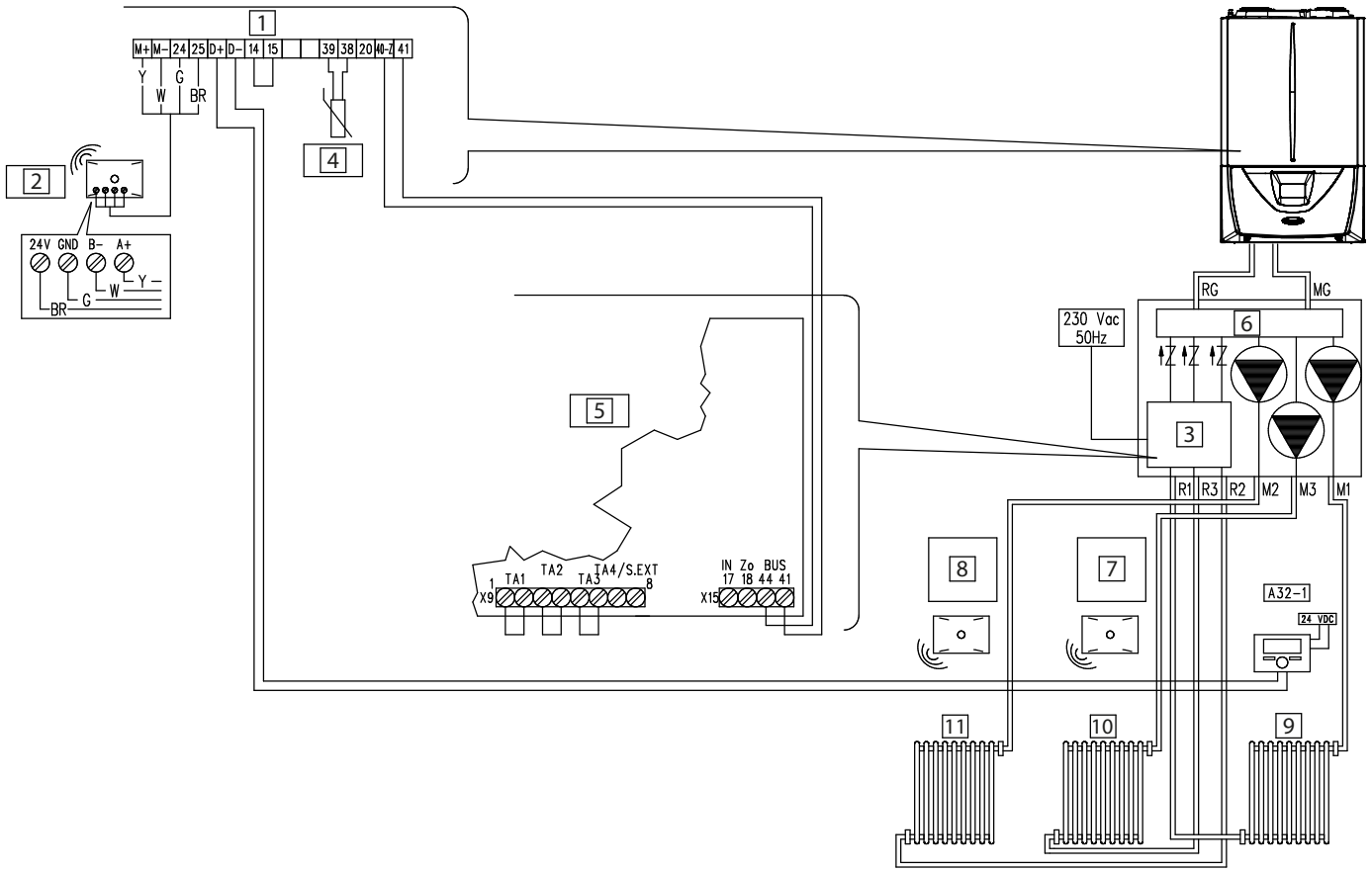
Key:

- *1 - Low voltage connection terminal board*
- *2 - Wireless Concentrator*
- *3 - DIM ERP zones control unit*
- *4 - External probe (optional)*
- *5 - System flow probe (optional)*
- *6 - DIM ERP zones control unit*
- *7 - Zone 1 CAR^{V2}*
- *8 - Zone 1*
- *9 - Zone 2 wireless room probe*
- *10 - Zone 2*
- *11 - Zone 3 wireless room probe*
- *12 - Zone 3*
- *13 - DIM ERP 3 Zone*

The Zones control unit will receive the following from the boiler:
- Enabling zone mode (Summer, Winter mode, etc.)
- Temperatures adjusted on the boiler panel for mixed zones (where possible);
- External temperature probe connected to boiler;
- Zone activation from boiler panel (or Dominus if present).
- Zone 1 activation from CAR^{V2}.

The boiler will receive the following from the Zones control unit:
- Central heating request from Room Thermostat;
- Boiler flow temperature correlated to the zones request.
- Error codes of the faults present on the zone control unit

3.15 EUREKA - DIM ERP CONNECTION WITH REMOTE ZONE PANELS AND WIRELESS PROBES.



Key:

1 - Low voltage connection terminal board
2 - Wireless concentrator
3 - DIM ERP zones control unit
4 - External probe (optional)
5 - DIM ERP zones control unit
6 - DIM ERP 3 Zone
7 - Zone 2 wireless room probe
8 - Zone 3 wireless room probe
9 - Zone 1
10 - Zone 2
11 - Zone 3

LThe zones control unit will receive the following from the boiler:
- Zone operation enable signal (Summer, Winter mode ...)
- Temperatures set on the boiler control panel for mixed zones (where possible);
- Temperature from the external probe connected to the boiler;
- Zone activation from the boiler control panel (or Dominus, if present).
- Zone 1 activation from the remote zone panel.

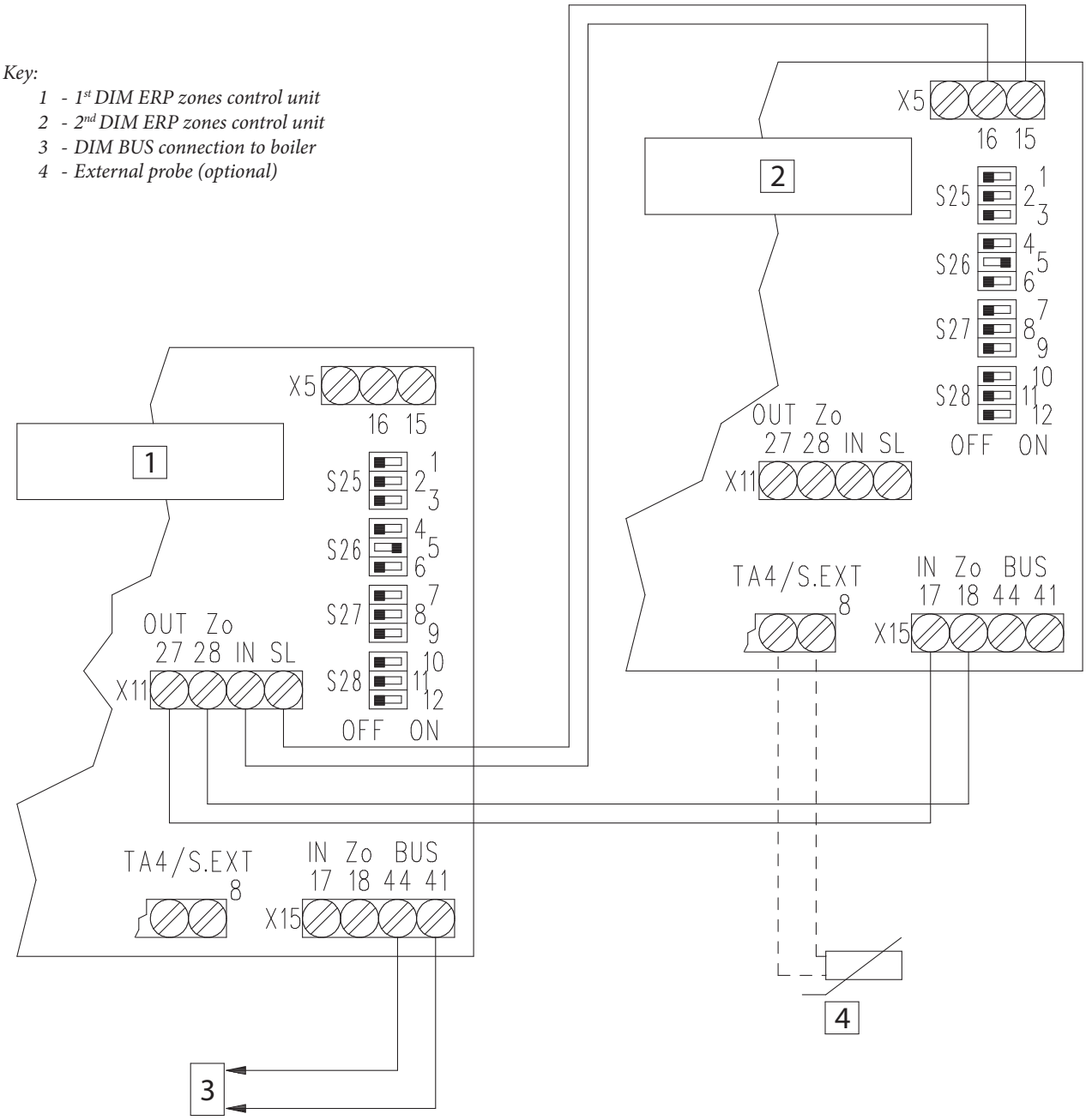
The boiler will receive the following from the zones control unit:
- Heating demand from any room thermostats;
- Boiler flow temperature corresponding to the demand from the zones.
- Error codes for faults on the zones control unit.

3.16 CONNECTION BETWEEN 2 DIM ERP WITH HYDRAULICS IN PARALLEL.

DIM ERP TO BOILER BUS CONNECTION WIRING DIAGRAM. *39*

Key:

1 - 1st DIM ERP zones control unit
2 - 2nd DIM ERP zones control unit
3 - DIM BUS connection to boiler
4 - External probe (optional)



If the boiler requires it, the BUS connection can be made to the terminals indicated as DIM BUS or 44-41, or 40-41 (see boiler instruction booklet).

Eliminate jumper X40 on the boiler terminal board (see boiler instruction booklet).

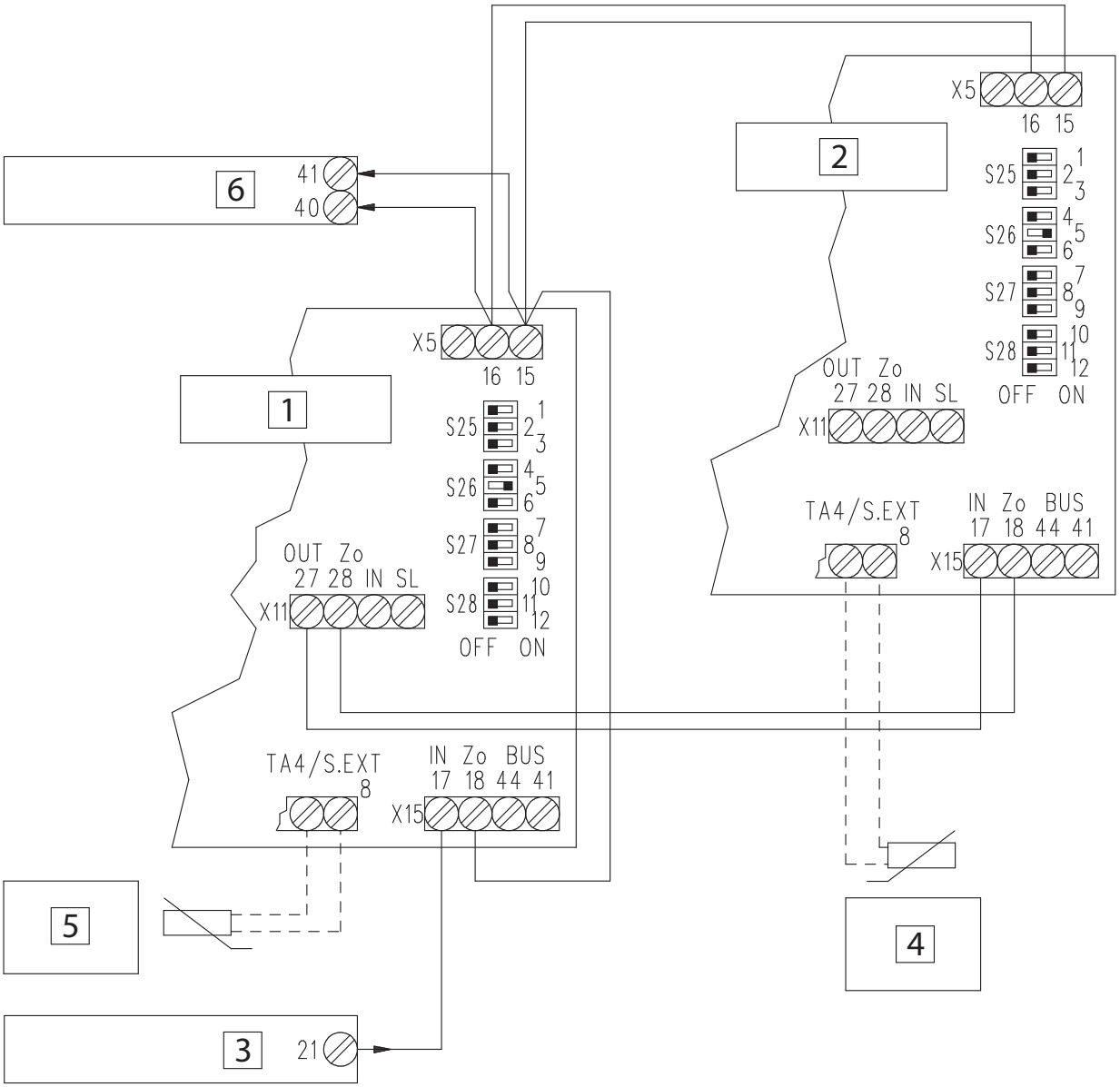
If the first DIM ERP is connected to the boiler via DIM BUS and a second one is to be connected in parallel, connect the central heating request of the second DIM to the first one using input X11.

The first DIM ERP can receive the external probe value from the boiler.

The mixed zone flow temperatures of the first DIM ERP will be set on Superior, Victrix Maior, Victrix Extra and Victrix Tera Vip V2 series boilers connected via DIM BUS, or on DIM ERP zones control unit trimmers when the same is connected to boilers other than those mentioned above.

The second DIM ERP receives only the zone signal state from the first DIM ERP and it must be connected to its own external probe (if required), the relative mixed zone flow temperatures of the second DIM ERP must be adjusted on its trimmers.

DIM ERP TO BOILER STATE SIGNAL CONNECTION WIRING DIAGRAM.



Key:

1 - 1st DIM ERP zones control unit
2 - 2nd DIM ERP zones control unit
3 - Zones signal state from boiler
4 - External probe (optional)
5 - External probe (optional)
6 - Boiler ignition request

If the first DIM ERP is connected to the boiler via zone signal state and a second one is to be connected hydraulically in parallel, connect the central heating request of the second DIM to the first one using input X5.

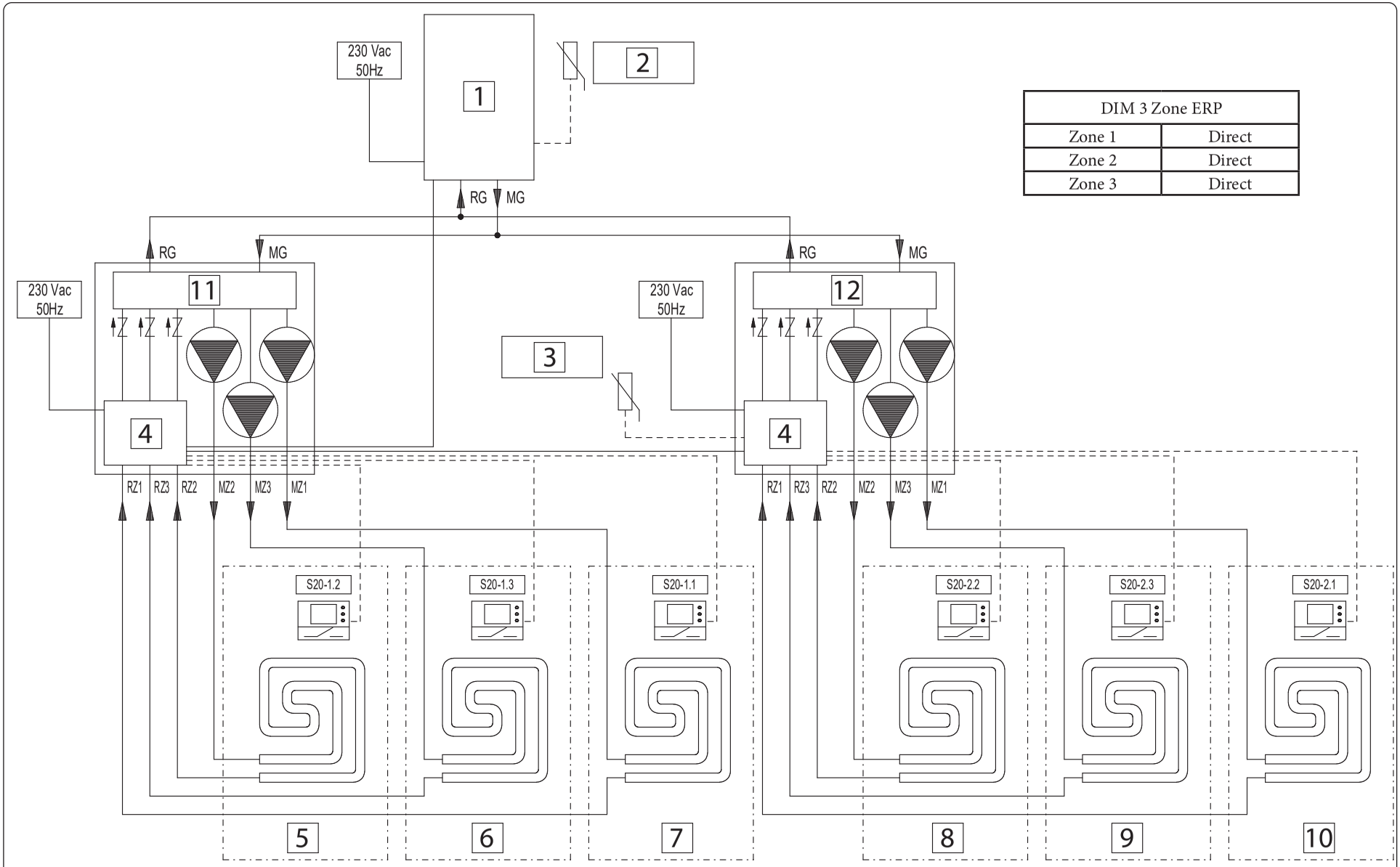
The first DIM ERP must be connected to its own external probe (if necessary).

The mixed zone flow temperatures of the first DIM ERP must be regulated by its trimmers.

The second DIM ERP receives only the zone signal state from the first DIM ERP and it must be connected to its own external probe (if required), the relative mixed zone flow temperatures of the second DIM ERP must be adjusted on its trimmers.

40

Example of hydraulic diagram for parallel connection of 2 DIM ERP.



DIM 3 Zone ERP	
Zone 1	Direct
Zone 2	Direct
Zone 3	Direct

Key:

S20-1.1- Zone 1 room thermostat 1st DIM ERP
S20-1.2- Zone 2 room thermostat 1st DIM ERP
S20-1.3- Zone 3 room thermostat 1st DIM ERP
S20-2.1- Zone 1 room thermostat 2nd DIM ERP
S20-2.2- Zone 2 room thermostat 2nd DIM ERP
S20-2.3- Zone 3 room thermostat 2nd DIM ERP

RZ1 -Direct zone 1 return
RZ3 -Direct zone 3 return
RZ2 -Direct zone 2 return
MZ2 -Direct zone 2 flow
MZ3 -Direct zone 3 flow
MZ1 -Direct zone 1 flow

1 -Boiler
2 -External probe (optional)
3 -External probe (optional)
4 -DIM ERP zones control unit
5 -First DIM ERP zone 2
6 -First DIM ERP zone 3

7 -First DIM ERP zone 1
8 -2nd DIM ERP Zone 2
9 -2nd DIM ERP Zone 3
10 -2nd DIM ERP Zone 1
11 -1st DIM ERP 3 zone
12 -2nd DIM ERP 3 zone

3.17 DIM ERP CONNECTION TO ANOTHER DIM ERP OR TO HERCULES ZONE KIT WITH HYDRAULICS IN SERIES.

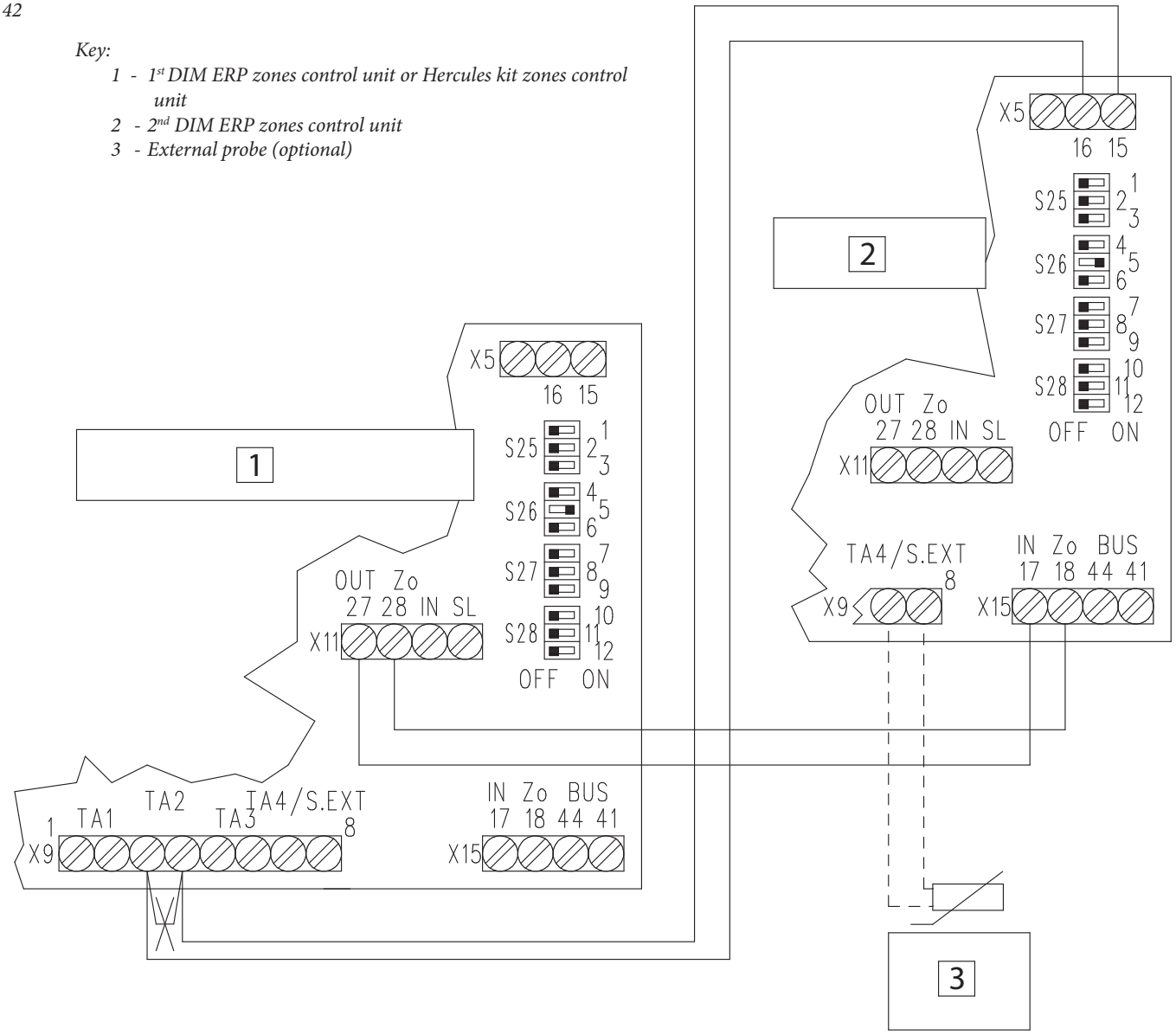
42

Key:

1 - 1st DIM ERP zones control unit or Hercules kit zones control unit

2 - 2nd DIM ERP zones control unit

3 - External probe (optional)



With two DIM ERP connected to each other in series and hydraulically, connect the central heating request of the 2nd to the RT input of the 1st on the zone, which it has been connected into.

In the example it is supposed that the 2nd DIM ERP is connected on the outlet of zone 2 of the 1st.

All considerations shown in this layout are valid also if a DIM ERP is connected to a Hercules boiler with zone kit.

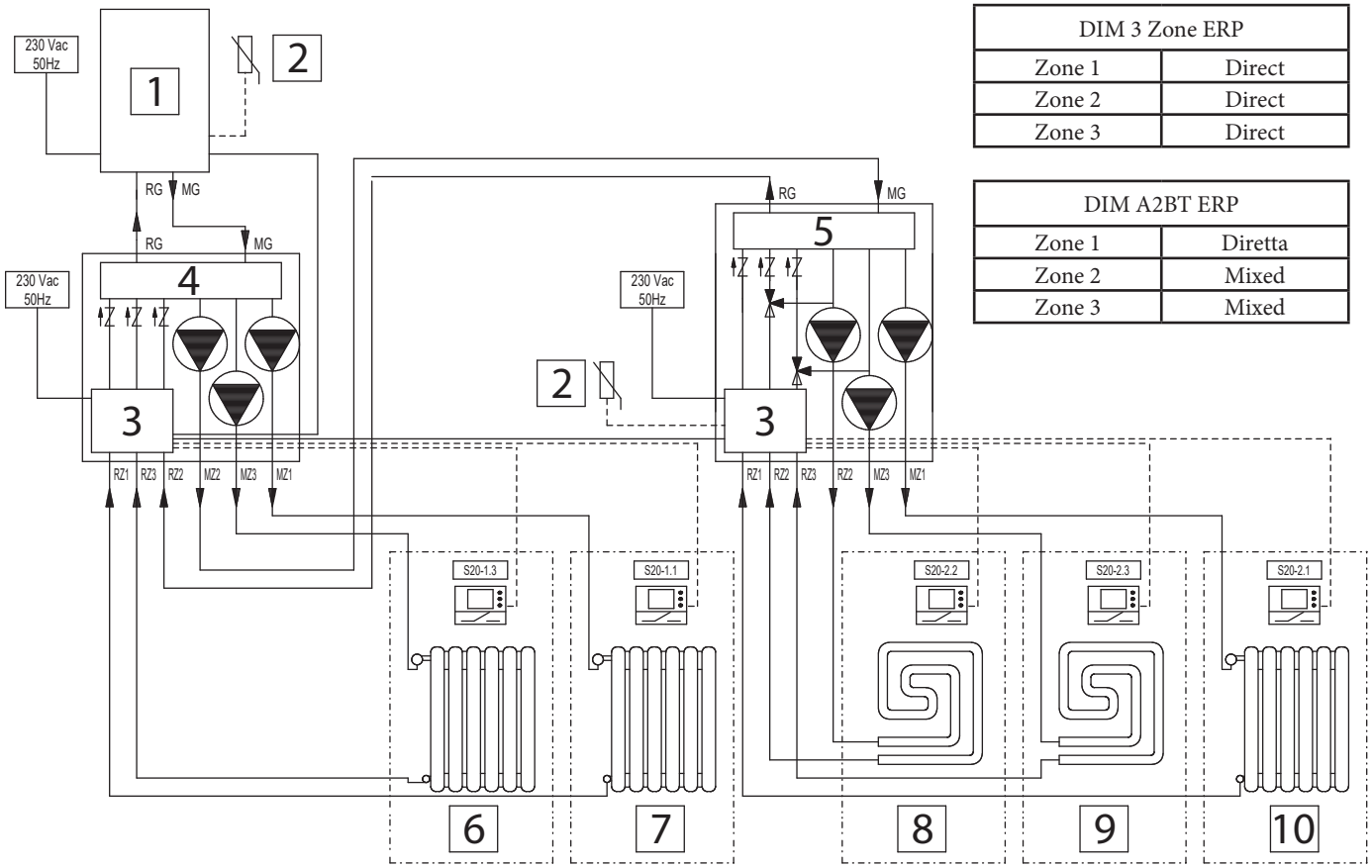
The first DIM ERP must be connected to the boiler via zone signal state or DIM BUS (where allowed).

The first DIM ERP can only receive the external probe value from the boiler if the DIM BUS communication is present.

The mixed zone flow temperatures of the first DIM ERP will be set on Superior, Victrix Maior,Victrix Extra and Victrix Tera Vip V2 boilers connected via DIM BUS, or on DIM ERP zones control unit trimmers when the same is connected to boilers other than those mentioned above or not using DIM BUS dialogue.

The second DIM ERP receives only the zone signal state from the first DIM ERP and it must be connected to its own external probe (if required), the relative mixed zone flow temperatures of the second DIM ERP must be adjusted on its trimmers.

Example of hydraulic diagram for connection in series of 2 DIM ERP.



DIM 3 Zone ERP	
Zone 1	Direct
Zone 2	Direct
Zone 3	Direct

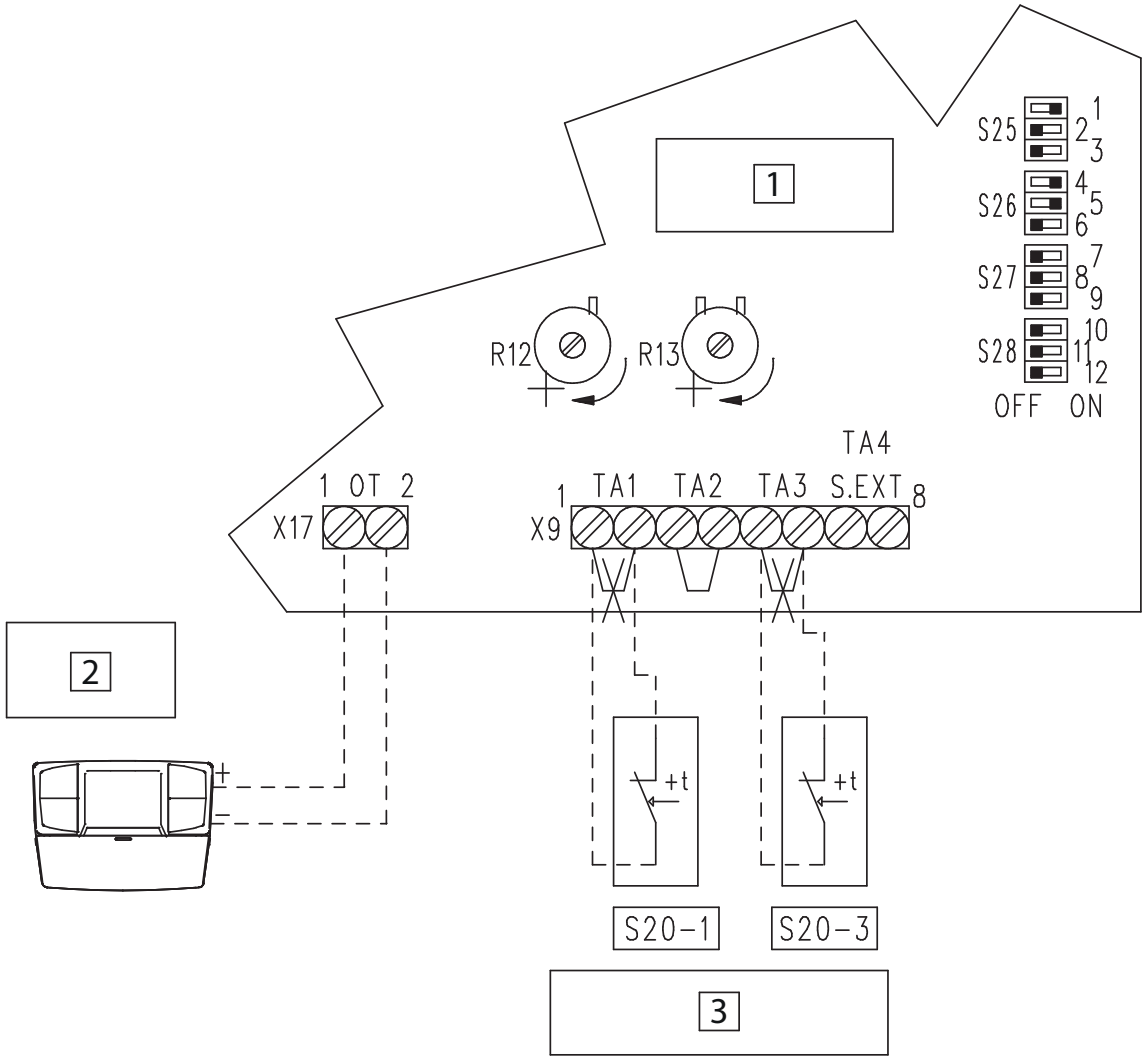
DIM A2BT ERP	
Zone 1	Diretta
Zone 2	Mixed
Zone 3	Mixed

Key:

S20-1.1- Zone 1 room thermostat 1st DIM ERP
S20-1.3- Zone 3 room thermostat 1st DIM ERP
S20-2.1- Zone 1 room thermostat 2nd DIM ERP
S20-2.2- Zone 2 room thermostat 2nd DIM ERP
S20-2.3- Zone 3 room thermostat 2nd DIM ERP
RZ1 -Direct zone 1 return
RZ3 -Direct zone 3 return (mixed A2BT)
RZ2 -Direct zone 2 return (mixed A2BT)
MZ2 -Direct zone 2 flow (mixed A2BT)
MZ3 -Direct zone 3 flow (mixed A2BT)
MZ1 -Direct zone 1 flow

1 -Boiler
2 -External probe (optional)
3 -DIM ERP zones control unit
4 -1st DIM ERP 3 zone
5 -2nd DIM A-2BT ERP
6 -First DIM ERP zone 3
7 -First DIM ERP zone 1
8 -2nd DIM ERP Zone 2
9 -2nd DIM ERP Zone 3
10 -2nd DIM ERP Zone 1

3.18 DIM ERP CONNECTION TO BOILERS IN THE VICTRIX TERA AND VICTRIX OMNIA RANGES WITH C.A.R.V2, SMARTECH PLUS AND CRD PLUS.



Key:
IMG BUS Possible alternative connections to:
- *CAR V2 (optional)*
- *CRD Plus (optional)*
- *Smartech Plus (optional)*

R12 - Trimmer for adjusting the flow temperature of low-temperature zone 2
R13 - Trimmer for adjusting the flow temperature of low-temperature zone 3
S20-1 - Zone 1 room thermostat (optional)
S20-3 - Zone 3 room thermostat (optional)
S25 - Board configuration selector
S26 - Board configuration selector
S27 - Board configuration selector
S28 - Board configuration selector

44

ZONE CONTROL UNIT SETTINGS		
N° SWITCH	OFF	ON
1	Homogeneous zone control	**Mixed zone control**
2	N° 1 mixed zone (Z2)	**N° 2 mixed zones (Z2 and Z3)**
3	**MASTER board**	SLAVE board
4	Main zone = zone 1	**Main zone = zone 2**
5	Super C.A.R.: main zone flow control	**Super C.A.R.: system flow control**
6	**Mixed zones max. temperature = 50°C**	Mixed zones max. temperature = 75°C
7	**Normal functioning**	Active testing function
8	**Not used**	Not used
9	**Mixed zones minimum temperature = 25°C**	Mixed zones minimum temperature = 35°C
10	**Standard operation**	Operation with Gateway Wi-Fi V2
11	**Not used**	Not used
12	**Not used**	Not used

N.B.: the default settings are highlighted in bold.

45

When connecting a remote control device, such as the C.A.R.V2 shown above, the room thermostat jumper on X9 for the zone managed by the C.A.R.V2, selected using switch 4, must be left in place.

When a heating set point is set using a remote device connected via the IMG BUS port (X17), the set value will always apply to the flow temperature of the direct zones or to the OTC curves if an external probe is connected. The set points for the mixed zones can still be configured using trimmers R12 and R13 on MLC34.

Example.

When Main Zone = 2 (SW4 = ON) is set with mixed zone control (SW1 = ON), room control for Z2 and its associated heating demand will be handled by the remote control (e.g. C.A.R.V2), while the various zone heating set points will be adjusted as follows:

- Zone 1 heating set point (direct) = managed by the remote control
- Zone 2 heating set point = trimmer R12.
- Zone 3 heating set point = trimmer R13.

At switch-on, it will take a few minutes before the boiler starts managing the heating set point set using the remote device.

When connecting the room thermostats for zone control, remove the jumpers on terminal board X9 of the zones control unit.

3.19 DESCRIPTION OF MAIN FUNCTIONS.

Three-way valves/anti-block pumps.
The device is supplied with a function that makes the pumps start (according to the model installed) at least 1 once every 24 hours in order to reduce the risk of pump blocking due to prolonged inactivity. In the case of the H-LT and H-2LT versions, the same function also acts on the mixing valve in order to prevent and avoid the risk of blocking due to prolonged inactivity.

Post-circulation.
System post-circulation can be performed, controlled by the boiler, in the system zone selected as the main zone (see installation layout).

Summer DHW/functioning priority.
In the case of DHW or boiler functioning priority in Summer mode, all active pumps are deactivated and any mixing valves are closed (**only for L-HT and H-2LT versions**). Normal functioning of the DIM ERP re-starts at the end of the DHW phase, taking the boiler switch to the Winter position.

Mixing valve initialisation.
(Only for DIM ERP H-LT and H-2LT).
Every time that the the appliance is powered, initialisation of the mixing valves is carried out, closing them for three minutes. This way, synchronisation is performed between the P.C.B. and the mixing valve. The transfer of heat energy to the Low-Temperature zone can only take place at the end of this initialisation phase.

Anti-freeze.
(Only for DIM ERP H-LT and H-2LT).
The P.C.B. is supplied with a function that protects the Low-temperature system if the system water drops below 5°C.

3.20 MLC34 ZONE MANAGEMENT P.C.B.

The zone control unit can be configured using the selector switches on the unit (*2 Fig. 46*), via which you can choose between the following options:

	n°	OFF	ON
S25	1	Homogeneous zone control	**Mixed zone control**
	2	**N° 1 mixed zone (Z2)**	N° 2 mixed zones (Z2 and Z3)
	3	**Master board**	Slave board
S26	4	Main zone = zone 1	**Main zone = zone 2**
	5	Super CAR: main zone flow control	**Super CAR: system flow control**
	6	**Mixed zones max. temperature = 50°C**	Mixed zones max. temperature = 75°C
S27	7	**Normal functioning**	Test function active
	8	**Not used**	Not used
	9	**Mixed zones minimum temperature = 25°C**	Mixed zones minimum temperature = 35°C
S28	10	**Standard operation**	Operation with Gateway Wi-Fi V2
	11	**Not used**	Not used
	12	**Not used**	Not used

N.B.: the switch settings to be configured when adding the second mixed zone are shown in bold.

- S26 (4): this setting is disabled throughout the Superior range; regardless of the setting selected, the main zone always remains zone 1.
- S26 (6) in the event of the setting with max. flow temperature of 75°C, the relative safety thermostat must be replaced with one suitable for supporting this temperature.

Warnings. Various LEDs are present on the board to display the functioning status and to indicate any anomalies.
The LEDs from 1 to 7 (*1 Fig. 46*) identify the activation of the relative relay:

- LED H1 direct zone 1 activation
- LED H2: activation of mixed zone 2
- LED H3: activation of mixed zone 3 (optional)
- LED H4 mixed zone 2 mixer opening
- LED H5 mixed zone 2 mixer closure
- LED H6 mixed zone 3 mixing valve opening (optional)
- LED H7 mixed zone 3 mixing valve closing (optional)

The LED H11 signals that the zone management board is powered.

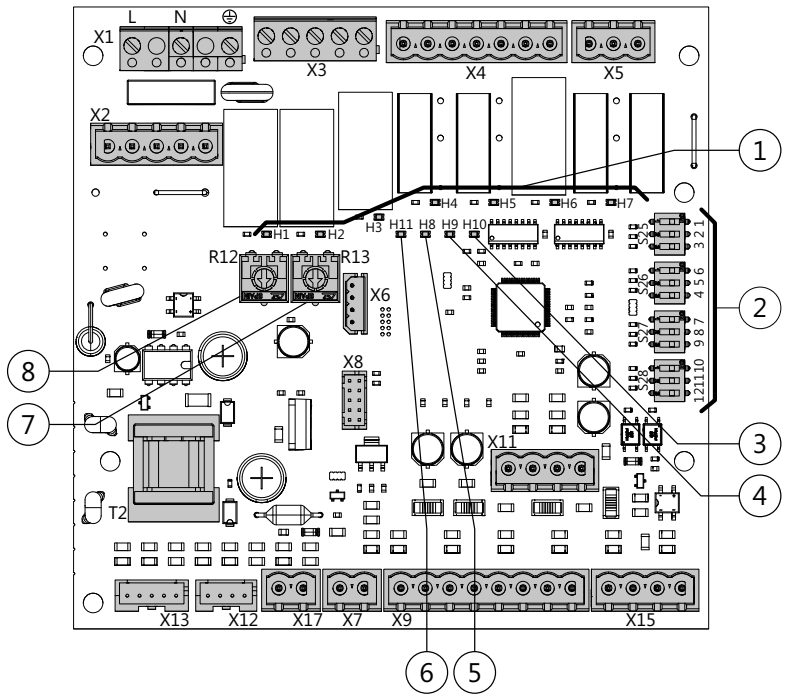
LEDs 9, 9 and 10 indicate the functioning status of the board:

Warning	H8	H9	H10
CH request presence	ON	OFF	OFF
Disabling of active zones	ON L	OFF	OFF
Zone 2 safety thermostat intervention	OFF	ON	OFF
Mixed zone 2 probe fault	OFF	ON L	OFF
Zone 3 safety thermostat intervention	OFF	OFF	ON
Mixed zone 3 probe fault	OFF	OFF	ON L
IMG BUS Anomaly	OFF	ON A	ON A
IMG BUS communication present	OFF	OFF	ON F

Key:
ON = ON
OFF = OFF
ON L = Slow flashing (0.6 s on, 0.6 s off)
ON F = Flash flashing (0.2 s on, 1 s off)
ON A = Alternate flashing

Important: several LEDs lit simultaneously may indicate several operating states.

Zone management P.C.B.



Key:

1 - *Relay functioning signal LED (**H1 ÷ H7**)*
2 - *Zone management board functioning mode selectors*
3 - *Board functioning status signal LED (**H10**)*
4 - *Board functioning status signal LED (**H9**)*
5 - *Board functioning status signal LED (**H8**)*
6 - *Board power supply signal (**H11**)*
7 - *Mixed zone 3 flow temperature adjustment trimmer*
8 - *Mixed zone 2 flow temperature adjustment trimmer*

46

3.21 MIXED ZONE FLOW TEMPERATURE ADJUSTMENT

If the zones control unit is connected to the boiler via a signal state or if it is connected via BUS to boilers other than Victrix Superior and Eureka, Victrix Maior, Victrix Extra and Victrix Tera Vip V2 and the external temperature probe is missing, the temperatures of the mixed zones (see tables below) can be set on the R12 and R13 trimmers (*Fig. 44*).

Trimmer position R12 or R13	Mixed zone flow (25 ÷ 50 °C)	Mixed zone flow (25 ÷ 75 °C)
1	25 °C	25 °C
2	34 °C	43 °C
3	38 °C	50 °C
4	42 °C	59 °C
5	50 °C	75 °C

Trimmer position R12 or R13	Mixed zone flow (35 ÷ 50 °C)	Mixed zone flow (35 ÷ 75 °C)
1	35 °C	35 °C
2	40 °C	49 °C
3	43 °C	55 °C
4	45 °C	62 °C
5	50 °C	75 °C

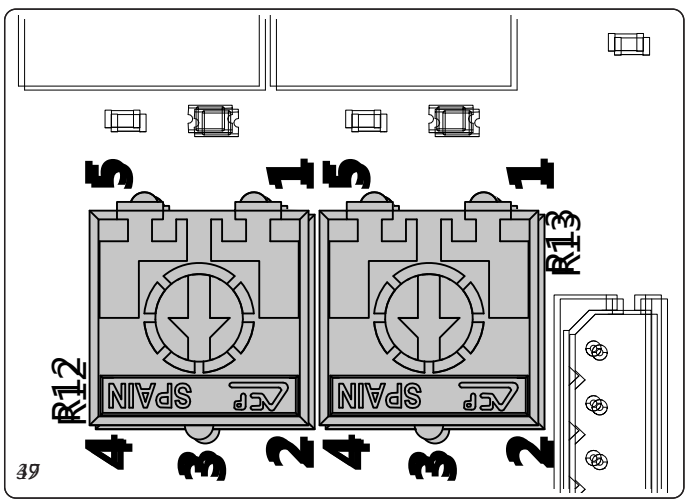
N.B.: using a DIM BUS connection to the the Victrix Superior and Eureka, Victrix Maior, Victrix Extra and Victrix Tera Vip V2 boilers the mixed zones are regulated on the boiler display.

N.B.: when the external probe is connected, the OFFSET action can be regulated **(only with Victrix Superior and Eureka, Victrix Maior, Victrix Extra and Victrix Tera Vip V2 boilers).**

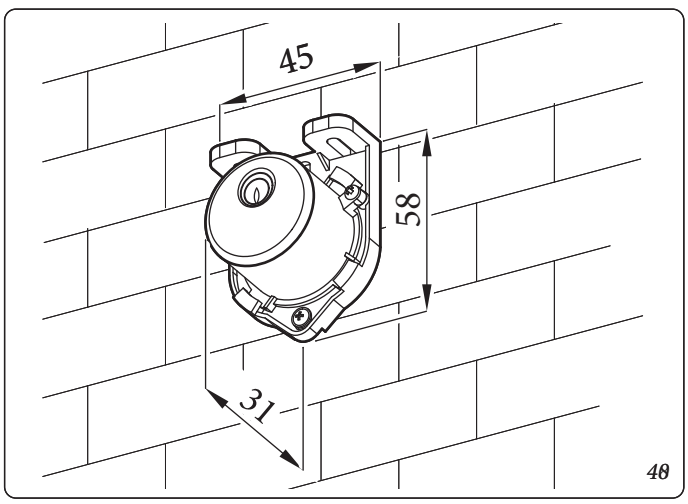
3.22 EXTERNAL TEMPERATURE PROBE (OPTIONAL).

The manifold is preset for the application of the external probe *(Fig. 48)*, which is available as an optional kit. The probe can be connected directly to the manifold P.C.B. or to the boiler electrical system and allows the max. system flow temperature to be automatically decreased when the external temperature increases, in order to adjust the heat supplied to the system according to the change in external temperature. The external probe always operates when connected, regardless of the presence or type of room chrono-thermostat used, and can work in combination with Immergas timer thermostats. The electrical connection of the external probe must be made in the boiler when the DIM ERP is connected via DIM BUS to the boiler itself or to the zones control unit, as indicated in *Fig. 28* in the other cases.

- **Direct zone check.** The correlation between flow temperature to the system and external temperature is determined by the parameters set on the boiler. See boiler instructions manual.
- **Mixed zone check.** The correlation between flow temperature to the system and external temperature is determined by the trimmer position *(7 or 8 Fig. 46)* present on the zones control unit according to the curve represented in the diagram *(Fig. 49)*.



47

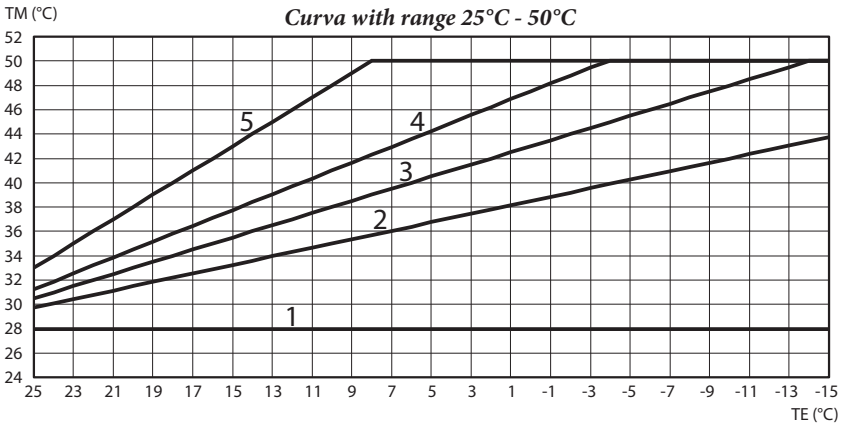


48

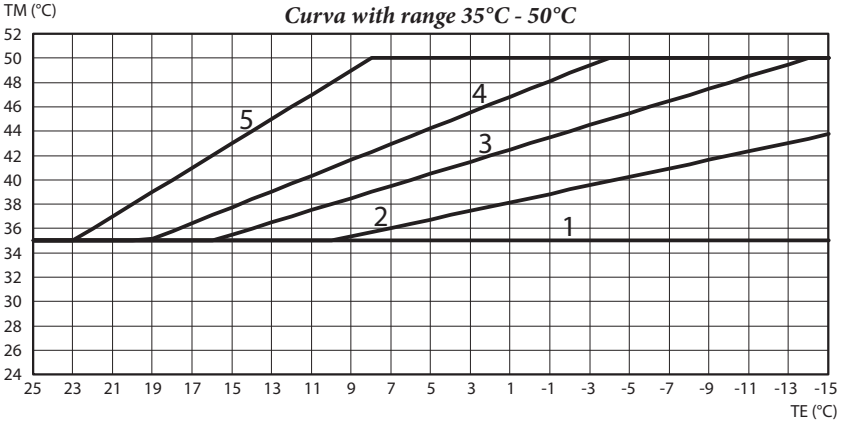
Low-temperature zone

Correction law of the flow temperature depending on the external temperature and user adjustments of the central heating temperature.

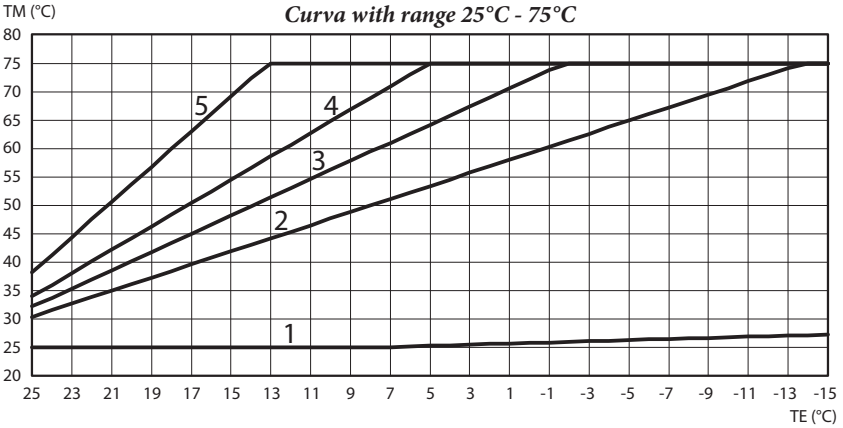
Curva with range 25°C - 50°C



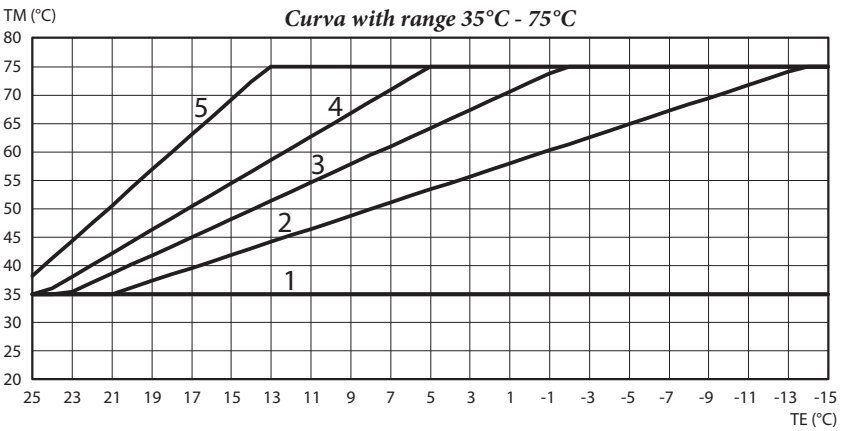
Curva with range 35°C - 50°C



Curva with range 25°C - 75°C



Curva with range 35°C - 75°C



TM = Low-temperature zone Flow Temperature
TE = External temperature
1-2-3-4-5 = Position of the trimmer zone P.C.B.

49

3.23 TROUBLESHOOTING.

- **Presence of air in the system.** Check the opening of the boiler vents, the central heating system and the DIM ERP, act on the 3-way mixing valve, keeping it open for de-aeration (**only for H-LT and H-2LT version**). Make sure the system pressure and expansion vessel factory-set pressure values are within the set limits; the factory-set value for the expansion vessel must be 1.0 bar, and system pressure between 1 and 1.2 bar.
- **Mixed zone safety thermostat intervention.** It can depend on the blocked pump, the blocked mixing valve or an anomaly on the P.C.B. Check the correct operation of the components indicated above, making sure that the anomalies signalled by flashing of the LEDS H9 or H10 (according to the cases) on the P.C.B. disappear.
- **Mixed zone flow adjustment NTC probe anomaly.** Replace the component and/or check its correct operation, making sure that the anomaly signalled via switch-on of the LEDS H9 or H10 (according to the cases) on the P.C.B. disappears.
- **Mixed zone flow temperature insufficient or too low.** It can depend on an incorrect regulation of the trimmer (R12 or R13) present on the P.C.B. from the blocked or broken mixing valve (only for H-LT and H-2LT version), or on the temperature set on the lower boiler with respect to that requested in the low-temperature circuit (only for boilers connected without DIM BUS). Check the correct regulation of the trimmer, check the correct operation of the mixing valve (only for H-LT and H-2LT versions). Make the boiler function with a flow temperature over that set for the low-temperature zone (only for boilers connected without DIM BUS).
- The table below identifies the errors displayed on the boiler, when the manifolds are connected with the DIM BUS:

Code	Description
32	Mixed zone 2 probe anomaly
33	Mixed zone 3 probe anomaly
34	Safety thermostat intervention Mixed zone 2
35	Safety thermostat intervention Mixed zone 3
36	DIM BUS communication loss
46	DIM ERP safety thermostat intervention (optional)

4 TECHNICAL DATA

		DIM 2 zone ErP	DIM 3 zone ErP	DIM A-BT ErP	DIM A-2BT ErP
Appliance features					
Maximum pressure of the appliance	bar	3	3	3	3
Maximum operating pressure	°C	90	90	90	90
Appliance dimensions (WxHxD)	mm	700x400x190	700x400x190	700x400x190	700x400x190
Empty weight of the appliance	kg	17,3	19,0	18,0	20,5
Appliance water content	l	1,2	1,5	1,4	1,8
Full weight of the appliance	kg	18,5	20,5	19,4	22,3
Empty weight + packaging	kg	19,3	21,0	20,0	22,5
Electrical parameters					
Electrical connection	V/Hz	230/50	230/50	230/50	230/50
Power absorbed	W/A	125/1,12	180/1,61	125/1,12	180/1,61
Power absorbed in stand-by	W	1,3	1,3	1,3	1,3
Degree of IP protection	-	X5D	X5D	X5D	X5D
Ambient temperature range	°C	0,5 ÷ 40	0,5 ÷ 40	0,5 ÷ 40	0,5 ÷ 40
Zone 1 heating set point adjustment	°C	-	-	-	-
Zone 2 BT heating set point adjustment	°C	-	-	-	37
Zone 3 BT heating set point adjustment	°C	-	-	37	37
Safety thermostat adjustment	°C	-	-	55	55

Immergas S.p.A.
42041 Brescello (RE) - Italy
Tel. 0522.689011
immergas.com

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