

| INSTRUCTION MANUAL |

DRIES

DOMESTIC RENEWABLE INTEGRATED ENERGY SOLUTION



vision on renewable
SHAREENERGY



DRIES

in your house!

DRIES has been developed by Share Energy in partnership with multiple well-known market players such as WTH floor heating and cooling and Honeywell. DRIES is an integrally approached solution for obtaining hot water and an as comfortable as possible temperature throughout your home. This in a manner with which our goal has been sustainability, efficiency, optimal adjustability, simplicity and a high comfort level for you.

DRIES has been selected by your thermal energy supplier or realised in your house in close cooperation with these. In this manual, you can read more about the operation and possibilities. This manual can also be found on www.share-energy.nl/DRIES, as well as the most recent information and developments.

We trust that you will appreciate the presence of DRIES in your home and that DRIES contributes to your living enjoyment.

In the home DRIES consists of:

1. **DRIES box**
2. **DRIES controls**
3. **DRIES temperature sensors**

1. DRIES box

1.1 Measuring Instrument or Delivery Kit

The uppermost part of the DRIES-box is equipped with a supply meter and belongs to the property of your thermal energy supplier. This property is often described as Measuring Instrument or Delivery Kit. It is not permissible for you as home owner or resident to open this upper part.

Your thermal energy supplier provides hot water in order to be able to heat your house with the floor heating present or cold water in order to be able to cool your house. High temperature heat is also provided in order to be able to prepare hot tap water in your house. With the DRIES-box, hot tap water comfort of 8 or 10 litres per minute is possible. Optionally there is hot tap water comfort of 12 litres per minute.

The quality, quantity and availability of heat and cold in your specific situation will be furnished by your thermal energy supplier. This also applies to your specific options regarding the hot tap water comfort.

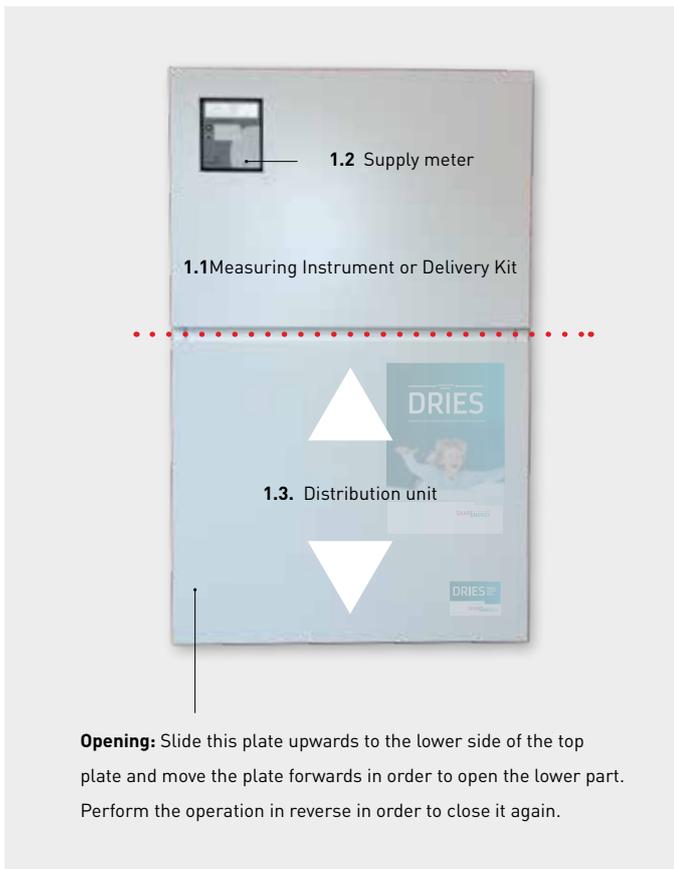


Figure 1:
DRIES-box in your house mounted in a storeroom/space or metre cabinet of your house

1.2. Supply meter

For registering the consumption of heat, cold and hot tap water, a supply meter used. This supply meter is the property of your thermal energy supplier and forms the basis for the consumption to be charged to you.

The supply meter used is provided with an option of reading at a distance via a network. Your thermal energy supplier is thus able to automatically regularly read your consumption. Also other data for the purpose of controlling the proper operation and the quality of the supply can be automatically read with this. You can also manually read the consumption and other interesting data yourself. The supply meter in your house is shown as below. Most important for you are the control button and meter number.

The meter number consists of 8 digits. In accordance with instructions from your thermal energy supplier, you need to state or check this meter number on your Supply Agreement.

By default, the meter reading for the amount of heat used for space heating is given in Gigajoules (GJ). Are you unable to see anything on your screen? Then press once briefly on the control button and the number of GJ taken is visible, as shown in figure 1.2.1 on the next page.



Figure 2:
Supply meter

Readout options of the supply meter:

1.2.1



Heat consumption in Gigajoules (GJ).

This is the meter reading for heat that you must mention on the Supply Agreement from your thermal energy supplier when moving into the property.



Press again for the amount of cold taken.

1.2.2



Cold consumption in Gigajoules (GJ).



Press again for the total amount of heating and cold water taken.

1.2.3



Total amount of heating and cold water taken.

Note! This is **not** hot tap water consumption and **not** relevant information!



Press again for the number of operating hours of the meter

1.2.4



Total number of operating hours
This information is not relevant.



Press again for the current supply temperature

1.2.5



Current hot or cold supply temperature in °C. This supply temperature should correspond with that stated with outside temperature by your thermal energy supplier.



Press again for the current return temperature

1.2.6



Current hot or cold return temperature in °C.



Press again for the current supply/return temperature difference.

1.2.7



Temperature difference between supply and return in Kelvin (K).



Press again for the current return volume flow

1.2.8



Current amount of heating or cooling water in litres per hour (l/h). Amount should correspond with that stated in appendix B.



Press again for the current power taken

1.2.9



Current power supplied in kilowatts (kW).



Press again for the following screen



Press again for the following screen

1.2.13



This information is not relevant!



Press again for the INFO code / Malfunction code

1.2.10



This information is not relevant!



Press again for the amount of hot tap water taken.

1.2.14



If the stated value/code is not "0" => then there is a malfunction!

In that case directly contact your thermal energy supplier.



Press again for the following screen

1.2.11



Hot tap water in cubic metres (m³).

This is the hot tap water meter reading that you must mention on the Supply Agreement from your thermal energy supplier when moving into your home!



Press again for the following screen

1.2.15



This information is not relevant!



Press again and you are back again at the beginning described in figure 1.2.1

1.2.12



This information is not relevant!

1.2.1



Heat consumption in Gigajoules (GJ).

This is the meter reading for heat that you must mention on the Supply Agreement from your thermal energy supplier when moving into your home!

1.3. Distribution unit

The bottommost part of the DRIES-box is the property of the house owner. For you as resident, this part may be opened. Indeed, we recommend that you to open this bottommost part once and look, so that you know what to do in case of emergencies.

You open and close this bottommost part as described in figure 1 of chapter 1.1. When you have removed the front plate, you will see what is shown and explained in Figure 3. There may be a slight deviation per house but the principle is always the same.

For you as a resident, the 6 valves with red levers **L** are the most important. If the levers are downward, as shown in Figure 3, then the supply and return pipelines are open. By pulling the lever towards you, they are then horizontal and the pipelines concerned are closed. By closing the valves, you disconnect your home as it were from the supplier and there is no longer heat and cold supply.

TRY AND SEE IF YOU CAN CLOSE AND OPEN THE VALVES AGAIN. YOU ARE NOW WELL PREPARED FOR POSSIBLE EMERGENCIES.

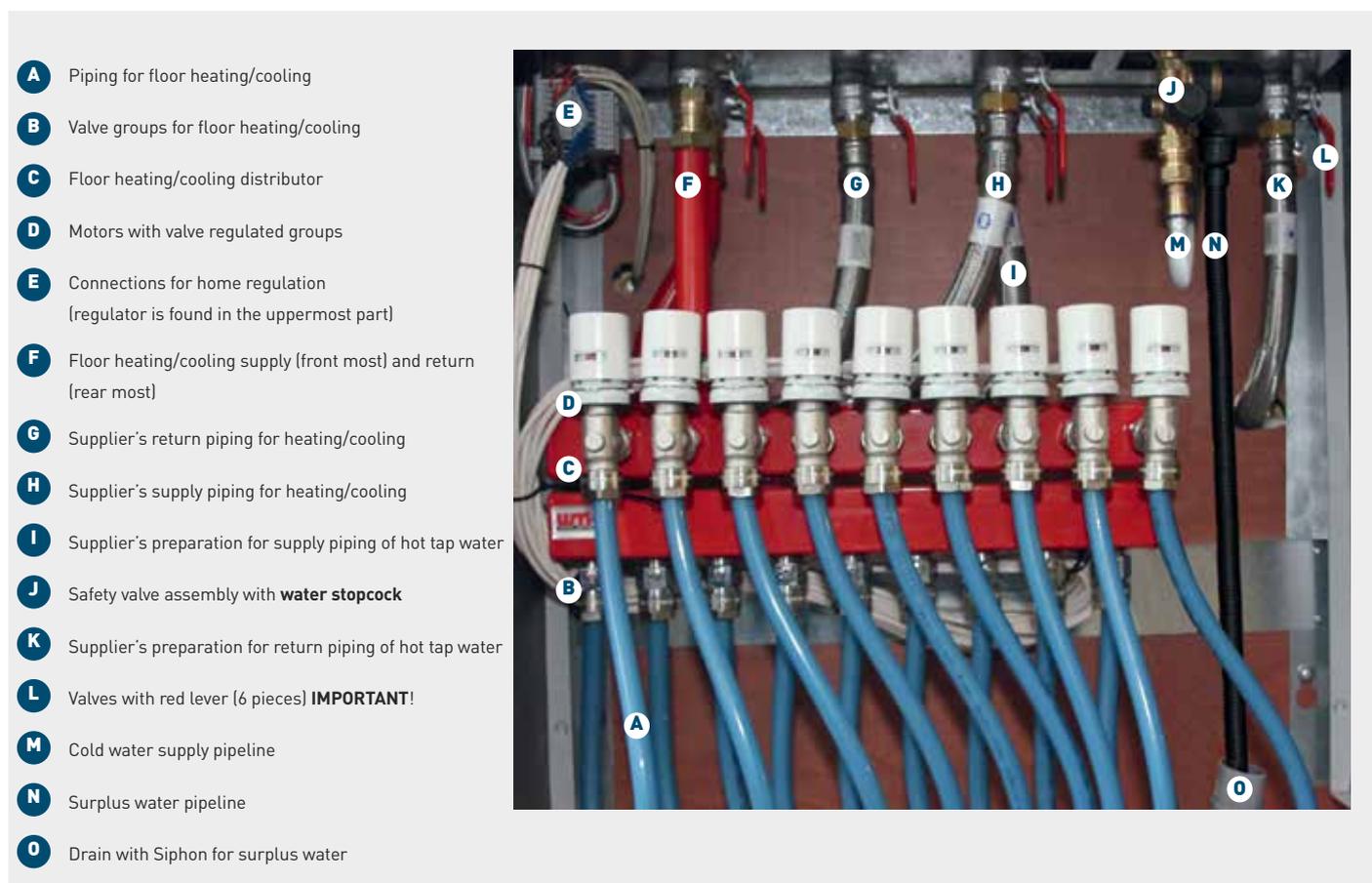


Figure 3: Content of bottommost part DRIES-box (distribution unit)

- Have you noticed a leak in the DRIES box or elsewhere in your floor heating/cooling, then first and foremost, close all valves **L**!
 → Contact your thermal energy supplier if the leakage is located in the uppermost part or in the 4 connection **G H I K** pipes of the supplier.
 → Contact your installation technician of the inside installations, DRIES services or if you are renting, follow the instructions of your landlord if the leakage is located in the bottommost part or elsewhere in your house.
- Is there a problem/leakage in the drain for surplus water **O**, in the cold water supply pipeline **M** or in the safety valve assembly **J**,
 → Contact the plumber to your home or if you are renting, follow the instructions of your landlord.

Other important points:

- 1 Always be careful with leaks. The water may be hot!
- 2 For safety reasons the DRIES-box is electrically powered with only 24V. This power supply is delivered by your home's electrician and does not belong to DRIES. In the event of a burning smell or electrical "scorching odour" you must interrupt this power supply and contact your thermal energy supplier or electrician. If you are renting, for this last, follow the instructions of your landlord.
- 3 It can be read on the group motors **D** as to whether the group is allowing through heating or cooling water or not. Appendix B describes how you can see this.
- 4 If there is little or no hot tap water, then check whether the valve of the inlet combination **J₁** is indeed fully opened. Is the problem is not resolved, and you indeed have sufficient cold water (pressure), please contact your thermal energy supplier. If you have little or no cold water (pressure) please contact the plumber to your home or if you are renting, follow the instructions of your landlord.



- 5 The hot tap water supply can be stopped by turning the safety valve **J₁** assembly shut. To this end, your potable water supplier's tap may also be used, whereby the cold water and the hot tap water is closed off.

Detail **J**

- 6 If there is a sewer/drain smell coming from the bottommost part of the DRIES box, it may be that the Siphon present **O** is dry resulting in an open connection to the sewer. Top up **J₂** the Siphon with a little water and the smell will disappear. Contact your home's plumber if the problem persists. If you are renting, follow the instructions of your landlord.

2. DRIES control for heating and cooling.

2.1 Control unit in your living room

The DRIES control unit is mounted in your living room. You can read the current temperature in your home and set the desired temperature for all controlled rooms in your home on this control unit.

The first controlled room is the living room for all houses (LR) where the control unit is mounted.

The name of the second controlled room is the bathroom (BR) and the other rooms are indicated with R3, R4, R5 and further. The room names for your house are listed in appendix A.

By default, the display shows the situation in the living room (LR). Press any button and the display is automatically illuminated and the main screen is **A** visible.

You can set the desired living room temperature by using the "Up" or "Down" key on this main screen.

Further, you can select from the functions **[VIEW MORE]** and **[OVERRIDE]**.

The operation is explained in the screens below.

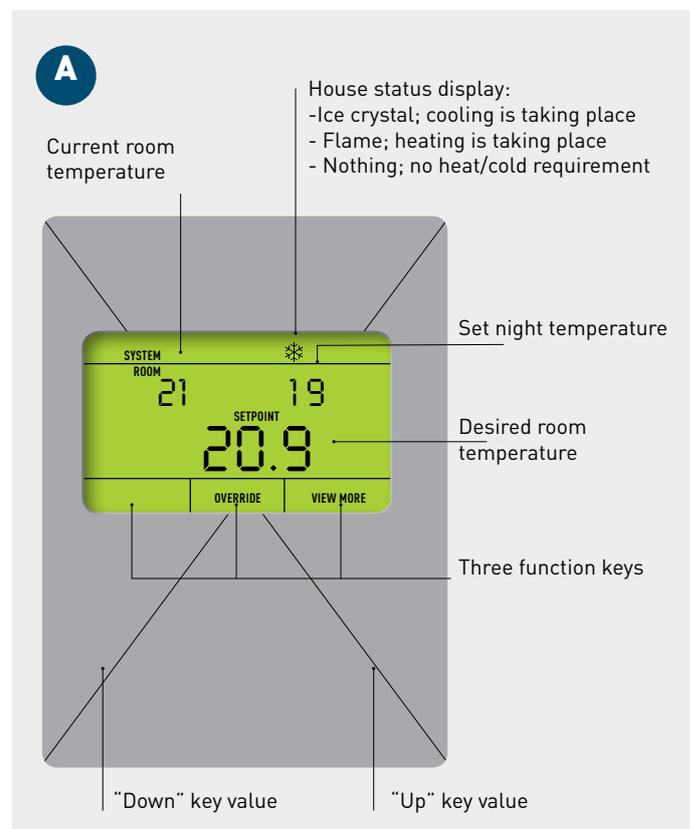


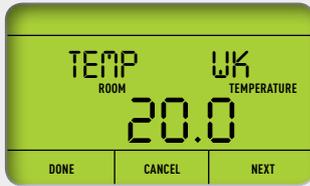
Figure 4:
DRIES control unit

READ MORE

from main screen

A pressed

B



TEMP (temperature) with room name and the current room temperature of this room is visible. You cannot set anything in this screen **[LOCKED]**. Using the **[DONE]** and **[CANCEL]** keys you return to **A**.

NEXT

pressed

C



SP (set-point) with room name is visible. The desired room temperature may be set here using the "Up" or "Down" key.

Press **[DONE]** if you wish to save the set value → back to **A**

Press **[CANCEL]** if you wish to return without saving the set value → back to **A**

Press **[NEXT]** in order to save and to control and change more settings.

NEXT

pressed

D



SP NT (nightset-point) with room name is visible. The desired night temperature or temperature when absent may be set here using the "Up" or "Down" key.

NOTE! The recommendation is never to set this night temperature lower than 2°C in relation to the desired set temperature **C**. This in order to avoid comfort problems and increased energy charges!

Press **[DONE]** if you wish to save the set value → back to **A**

Press **[CANCEL]** if you wish to return without saving the set value → back to **A**

Press **[NEXT]** in order to save and to control and change more settings.

NEXT

pressed

Screen **B** is visible again but then for the following room BK (bathroom). This is then the current room temperature in the bathroom.

After that you can do the same as with **C** and **D** listed for the bathroom. Next for all other rooms present in your house. Room names nominated in appendix A.

After you have controlled or set all rooms, screen is **E** visible.

E



SP STDBY (set point stand-by) is house temperature holiday mode. This is set to 16° C by default. You can change this temperature using the "Up" or "Down" key where 15°C is the minimum.

Press **[DONE]** if you wish to save the set value → back to **A**

Press **[CANCEL]** if you wish to return without saving the set value → back to **A**

Press **[NEXT]** → back to **B**

Activating night temperature:

OVERRIDE from main screen **A** pressed

F



HOURS is visible and this is the time that you can activate in order to set all controlled rooms to the set night temperature **D**.

By default, this screen is set to the minimum and 6:00 hours and this time can be corrected with the "Up" or "Down" key.

NOTE! The recommendation is to take into account at least 2 hours in order to return back to the desired temperature. This is the slowness of the system.

Press **[CANCEL]** if you wish to return without activating the night temperature → back to **A**. Press **[DONE]** in order to activate the night temperature and screen **A** is visible.

DONE pressed

A₁



The night temperature is activated and the remaining time that this night temperature is still active is displayed. It is a sort of "kitchen timer", and after the expiry of the set time the automatic program is active again and the screen **A** visible again.

This easy adjustable function is useful, for example, at night or when absent during from the house in the daytime.

Press **[CANCEL OVERRIDE]** if you want to turn off this function in the interim → press again return to **A**

Activating holiday temperature:

OVERRIDE from main screen **A** pressed

NEXT from screen **F** pressed

G



DAYS is visible and this is the period that you can activate in order to set all controlled rooms to the set holiday temperature **E**.

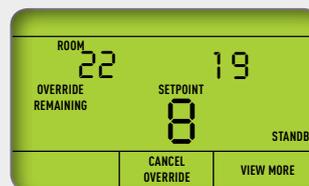
The number of days' holiday may be set using the "Up" or "Down" key.

NOTE! The recommendation is to take into 1 day in order to return back to the desired temperature. This is the slowness of the system.

Press **[CANCEL]** if you wish to return without activating the night temperature → back to **A**. Press **[DONE]** in order to activate the night temperature and screen **A** is visible.

DONE pressed

A₂



The holiday temperature is activated and the remaining time that this night temperature is still active is displayed. It is a sort of "kitchen timer", and after the expiry of the set number of days, the automatic program is active again and the screen **A** visible again.

2.2 Regulating heating and cooling

DRIES has a very modern and advanced control with which each controlled room departure can draw in heat or cold itself. This depending on the need and that which is made available by your thermal energy supplier. In technical terms this is also called a master/master control.

The DRIES control is also linked via a network to the energy supply of your thermal energy supplier. By means of this network DRIES know what is being supplied and the control can also be also remotely accessed. This can provide advantages in the provision of services and future possibilities.

Heating

If your thermal energy supplier has made heat available for heating, DRIES manages this and each controlled room will make use of this or not, as required. If the current room temperature in the room concerned is lower than the set temperature, then the groups associated with the room are opened. Heating water is tapped off as long as until the temperature set in the room is reached. When the temperature is achieved, the said groups are closed again. Appendix B lists which groups belong with which room and how much heating water will be used per room.

- During the night hours or when absent, you can temporarily lower you temperature for all rooms by only pressing three keys. This action is described with screen **F** in chapter 2.1
- If you go on holiday, you can set the whole house to the holiday mode temperature by only pressing 4 keys. This action is described with screen **G** in chapter 2.1

Cooling

If your thermal energy supplier has made cold available, DRIES manages this and each controlled room will make use of this or not, as required. Exceptions are are bathrooms that are excluded for cold supply. The tapping off of cooling water is fully automatic and so as a resident you have nothing else to set or to switch over!

Conditions for releasing room for cold:

- The available set cooling water has an average intake temperature of approx. 17°C. In order to be able to make meaningful use of this high-temperature cooling, the room temperature should be at least 4°C higher. DRIES accordingly only releases a room for cooling with a room temperature >21°C.
- DRIES looks at the period wherein heat was last supplied in a room and only releases this room for cold 6 hours after this heat supply. This DRIES intelligence prevents the heat in recently heated rooms from being destroyed by the cold supply, which would result in increased energy costs.

TOP 10 unique DRIES heat and cold benefits:

1. No room "readjustment", but each room itself determines whether heating water or cooling water is tapped off or not!
2. Clear and simple DRIES-control unit with illuminated display!
3. The temperature of all rooms can be read and set from one central location!
4. Extremely reliable wired design without batteries and radiation!
5. Clear naming of the controlled rooms and also stated on floor plan drawing of your House, see appendix A.
6. Switching from heating to cooling is fully automatic!
7. Holiday temperature or night temperature may be activated for the entire house with only a couple of keys.
8. Cold offtake only if this makes sense with an eye yo your comfort and purse.
9. Optimal coordination between various disciplines through integral approach and good understanding of what may be expected, see appendix B.
10. DRIES connected via network with advantages for provision of services and prepared for the future!

When a controlled room requires cold and has been released for cold supply, then the groups associated with this room are opened. Cooling water is tapped off as long as until the temperature set in the room or the said 21°C is reached. When the temperature is achieved, the said groups are closed again. Appendix B lists which groups belong with which room and how much cooling water will be used per room.

Cold supply with high temperature cooling water made available by your thermal energy supplier cannot be compared with an air-conditioning installation! At high temperatures, the temperature in your home may be several degrees Celsius below this outside temperature, but cooling to below 21°C is not possible. This form of cooling is experienced by many residents as being very comfortable, partly because it is noiseless and available throughout the entire house.

Cooling and Heating

It is not possible to simultaneously cool and heat in your home. So for example the heating the living room heating and simultaneously cooling the bedroom does not belong to the options. Given the risk of unnecessary energy destruction and the high energy costs, this is not desirable.

However, it may be that your thermal energy supplier delivers cold while there is still a need for heat in your home. In such cases DRIES ensures that heating water heater for heating can still be supplied by making a small amount of use of the always available heat for hot water preparation. This way you can always have heat, regardless of whether your thermal energy supplier is supplying heating or cooling water at this time.

Conditions for heat supply in your house cooling water supplied by thermal energy supplier:

- The bathroom is not able to block the supply of cold for 1 or more rooms with a cold demand. The cold demand will be put into effect and nothing will be supplied in the bathroom.
→ The home system does not automatically switch from supplied cold to heat.
- With 2 or more rooms with a cold demand, 1 room with a heat demand cannot block the supply of cold. The cold demand will be put into effect and in the one room with a heat demand nothing will be supplied.
→ The home system does not automatically switch from supplied cold to heat.
- With two or more rooms with a heat demand, this heat demand prevails and heat is supplied. In the rooms with a cold demand, nothing is then supplied.
→ The home system does not automatically switch from supplied cold to heat.

DRIES

so thinks with you in relation to your comfort and purse!



3. DRIES temperature sensors

The DRIES control unit is mounted in the living room as mentioned in chapter 2. In all other rooms a temperature sensor is installed in one of the following design variants.



3.1 Temperature sensor integrated into your switchgear

Temperature sensor combined for example with a light switch and socket of your switchgear. You can eventually fit the colour definition of the switchgear to your interior as described in 3.2.



3.2 Single temperature sensor identical to your switchgear.

Inbuilt temperature sensor identical to your other switching equipment and usually incorporated in the wall obliquely above your switchgear.

You can eventually fit the colour definition and appearance of the switchgear to your interior. Within your switchgear line there are a lot of possibilities and just a limited number are shown here.



3.3 Surface mounted temperature sensor

Surface mounted temperature sensor usually mounted obliquely above your switchgear on the wall.

3.4 General

Depending on your personal situation and available switching equipment, it is possible to also eventually to modify the type of the temperature sensors. The swapping between option 3.2 and 3.3 is usually fairly easy.

For more information about the possibilities and consequences we refer you to the website.

www.share-energy.nl/DRIES

4. DRIES service provision

Maintenance

It's also good for DRIES if it is checked once per 2 years for proper functioning and issues are adjusted where necessary. This in the interest of your comfort and purse. It is therefore possible to conclude a DRIES maintenance contract or to have a DRIES service carried out. For more information about the possibilities and consequences we refer you to the website.

www.share-energy.nl/DRIES

Support

This manual describes the operation of DRIES. However if you still need support, for example, with setting the DRIES control unit or would you would like to have the set values changed beforehand, then you can make use of the DRIES support.

Providing that DRIES can be accessed via your thermal energy supplier's network, we can provide remote support for the control or about the functioning in general. For more information about the possibilities and consequences we refer you to the website.

www.share-energy.nl/DRIES

Emergencies or (acute) malfunctions

First and foremost limit any possible damage. Chapter 1.3 tells you how you can do this you this, with the most important actions like:

1. closing the 6 valves described 
2. shutting off the water supply on the safety valve assembly  
3. interrupting the electrical power supply.

In case of an emergencies or (acute) malfunctions always contact your thermal energy supplier or the installation technician of your house. If you are renting, follow the instructions of your landlord if the emergency or malfunction does not concern your thermal energy supplier.

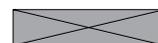
Information and developments

Not only new developments from DRIES, but also experiences with DRIES will be notified on the website. It's possible that the answer to your question is therefore already described on the website.

We have made every effort to ensure that DRIES in your home will contribute to your living enjoyment.

Please send us your experiences with DRIES. Your positive feedback will also enable DRIES to grow further.

www.share-energy.nl/DRIES



Appendix A: Design and lay-out drawing with room names.

Your home is equipped with a floor heating and cooling system. This appendix shows the design of the floor heating and cooling and in your house. The room names are also listed by which these therefore again correspond with the room names on the DRIES control unit (chapter 2.1) and room names in appendix B.

Appendix B: Lay-out and set-up of floor heating and cooling

Your home is equipped with a floor heating and cooling system.

This appendix specifies how the floor heating and cooling system for your house is laid out and controlled.

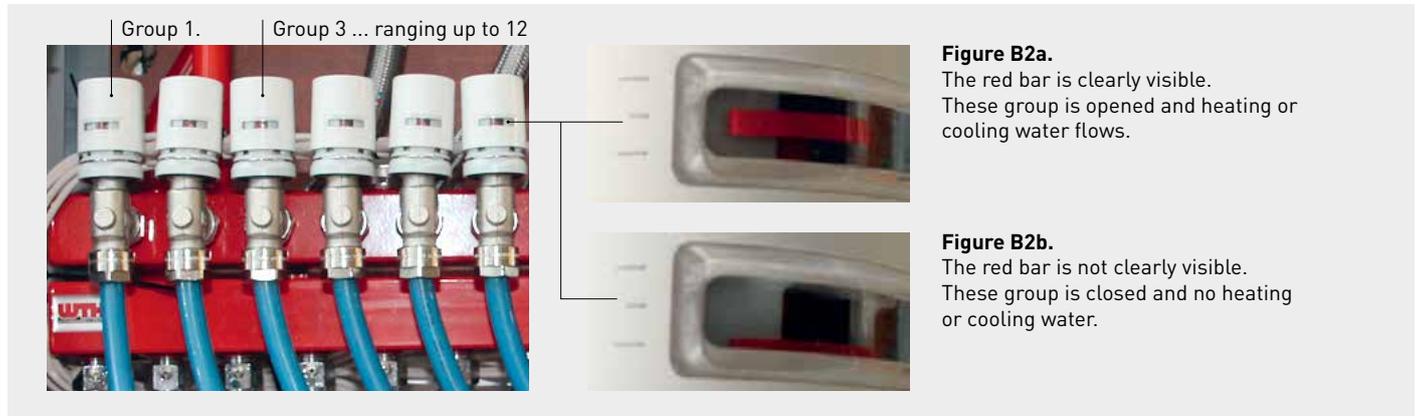


Figure B1. Floor heating/cooling distributor present in your house. Number of groups present may vary per house.

Explanation of X, Y en Z

X. stands for the required heat power connection for your house in Watts. This power at least will be made available by your energy supplier. Using this power connection you can also get your house pleasantly warm with cold outside temperatures.

Y. shows the amount of heating water in litres per hour that corresponds with the power connection (X)

The amount of heating water taken may also be checked by you with the available supply meter listed in chapter 1.2, figure 1.2.8. The amount cooling water is identical to the amount heating water.

Note! For the purpose of checking the amount heating or cooling water per room, or for your entire house, the concerned groups must be opened. Figures B2a and B2b state when the group is opened or closed. For the purpose of checking the power connection, all groups must be opened. If the amount

of water made available for all opened groups (the power connection) is too little, then contact your thermal energy supplier.

Z. Lists the maximum amount of heating or cooling water. Too much is not good either as an inaccurate adjustment is at the expense of your comfort and purse. Has the stated maximum amount per room or for the whole been exceeded, then contact your installation technician or DRIES service provision. If you are renting, follow the instructions of your landlord.