

Dataterm

Intelligent Heating & Smart Control

**Dataterm can keep you snug & knock
a whole 25% off your heating bill.**

Wireless Option Now Available!

Be Part of It!

2022 Product Brochure



PRODUCTS
MILLENNIUM

Dataterm
IHC
A
Millennium
Product

**Control up to 4
Heating Zones
and Hot Water.**

Dataterm, *a totally new type of central heating controller,*

Dataterm gives you amazingly flexible control over your central heating system and saves money into the bargain.

Dataterm is designed to use only the exact amount of heating fuel you need for your comfort with no waste. This means real economies can be made - benefiting both your pocket and the environment.

Independent tests show that Dataterm can give average savings of 25% (18-36%) compared to conventional controllers.

In the past, central heating control systems relied on some version of a basic room thermostat and time clock to respond to varying heating needs. But technology has moved on since then. Now, using modern cutting edge technology, Dataterm gives you more flexible and economical heating control than you would ever have thought possible.

How does Dataterm *save you money and make life more comfortable?*

To start with Dataterm takes all the guess work out of heating control.

No matter how erratic the weather is, with Dataterm you don't have to guess how long your home will take to warm up in the morning.

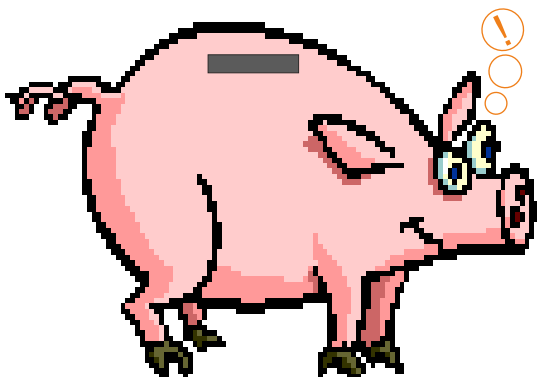
Just tell Dataterm the time you get up and the temperature you want (this can be a different time and temperature each day of the week). The house will reach the exact temperature at the right time. Not a degree higher or lower.

Dataterm's computer memory works it all out for you.

As the weather changes Dataterm decides what time it needs to switch on, this is done without the need for external sensors.

This is called Optimum Start.

It is one of Dataterm's major energy saving features, saving fuel and money even before you wake up.



The Department of the Environment Transport and the Regions" formerly the DoE says,

"Optimum Start can reduce
fuel consumption by as
much as 15%"

We guarantee 25% off your heating bills*

* Independent tests show that Dataterm gives fuel savings of 25-35% when its capability is used to the full compared with systems previously fitted with conventional programmers.

Dataterm uses modes to ensure you get the right mix of savings and comfort!

Modes put you in control of the right mix of comfort and energy savings based on your needs and responsiveness of the heating system.

Comfort Mode

If you have a large home or an old heating system that needs to be on for a while before your comfortable then the **Comfort Mode** might be the one you choose, this is the mode best suited to under floor heating as this type of heating has a slow response time.

Economy Mode

On the other hand you could live in a modern well insulated home where things warm up quickly so the **Economy Mode** would be more suitable, this is the default mode that all Dataterm systems are factory set.

Normal Mode

If you want a mix of comfort and energy savings then this mode is the one to go for but do try economy first, you might be surprised.

The different modes are based on the maximum allowed pre-heat time given to each set-point in order to achieve the required temperature.

This is based on a Maximum pre-heat window of 5 hours down to the minimum 1 hour so you will always have an element of comfort and energy savings.

All the reports point to the same thing, energy savings...

"Unless you try it you'll never know."

My old programmer allows me to boost the heating!

Active Boost

The Dataterm has a clever way of temporarily boosting the heating outside of your heating plan so that you get warm but don't waste fuel doing so.

Simply pressing and holding the plus button will give you a 1 hour boost, press again and its 2 hours, again and its 3 hours.

You then set the desired temperature and after the boost period it reverts back to where it should be so no more leaving the heating on when you go out!

This is a great feature if you unexpectedly come home from work or shopping and want the heating on just enough to take the chill off.

As soon as the set temperature is reached or boost period ends the heating goes off.

Summer Winter Time

The clock adjusts itself at that time of year so you know the heating will be on time whatever the weather.

Holiday Plans

Enter your holiday dates and Dataterm will make sure you save fuel when your away and come back to a nice warm home.

Flexible Programming

With 11 pre-set plans and room for 12 personalised plans Dataterm is flexible enough to suit the harshest of lifestyles or multi use buildings.

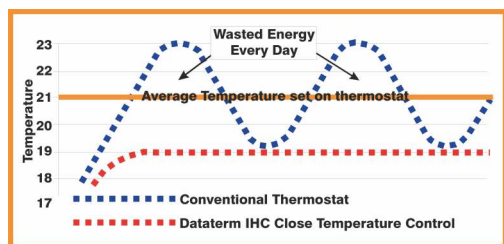
Multiple Zones

Dataterm can control up to 4 heating zones and hot water from a single control pad so no matter how large the building we have it covered

What else can Dataterm *do to help save fuel and money?*

Dataterm allows you to turn the temperature down a degree or two without any loss in room comfort.

To understand how Dataterm can do this and yet not make your room feel cooler we have to look at how an ordinary, old fashioned thermostat works.



If you are comfortable at 19°C and an ordinary room thermostat is fitted it may not turn off until it peaks at 20 or 21°C due to inaccuracies and drop to 17 or 18°C before the boiler comes back on.

This is wasteful and costs YOU money, it also makes you uncomfortable as the heat in the system goes on rising for a little longer, making the room hotter than necessary. Then as the room cools down past your thermostat setting, the boiler will fire again.

The temperature keeps falling making it less comfortable than you would like until the boilers heat has worked its way back to the radiators.

To allow for these wide swings in temperature levels we usually keep the thermostat at a degree or two higher than necessary, wasting heat and money.

The Department of the Environment Transport and the Regions" formerly the DoE says,

"Fuel bills can be cut by 6-10% for every 1°C reduction in temperature."

My old programmer *goes on and off twice a day!*

Dataterm has 8 time and temperature set-points per day allowing for much more than your average room thermostat and time clock.

Timing control like this is so flexible that it will suit even the most demanding of lifestyles.

No matter when you come and go, Dataterm is in the background tending to your heating needs.

For example, if you are active at home in the mornings, rushing around getting the children ready for school then you may be more comfortable asking for a lower temperature unlike in the evening when you relax or just sit down to enjoy your evening meal.

Whatever you require with Dataterm you can achieve it.

If at any time you want to raise or lower the temperature it couldn't be easier, simply press the plus or minus buttons. Don't worry about remembering to change it back because Dataterm will at the next set-point.

What about hot water?

Another one of Dataterm's many benefits, fully programmable hot water with up to 4 on and off settings per day and each day can be different too.

In addition there is a 1 hour boost button so you need never be without hot water.



Frost protection - Even when you are away!

Although Dataterm does not turn off completely, should there be an unexpected cold spell it will respond without any further intervention.

Even when your away, a minimum background temperature will be available just by setting one of the in-built holiday plans. These are based on lower temperatures high enough to combat frost and condensation.

You can even enter your holiday dates and Dataterm will turn back on once you return!

"It is less costly to maintain a low level of heating when a house is empty than to switch off completely and then reheat from cold".

Dataterm can prove that it saves fuel and money...

Dataterm provides you with a fuel check monitor. You can see at a glance the usage for the present day, yesterday and the total since installed.

Simply change the set-point time and temperatures to see how it affects the fuel usage.

Dataterm gives you noticeable and reliable savings right from the start...

Don't just take our word for it, independent tests show that Dataterm gives fuel savings of 18-36% when compared to systems previously fitted with conventional programmers and room thermostats.

Is Dataterm easy to install?

Yes, Dataterm is very easy to install, it is well documented and all parts are clearly labelled, a novice DIY enthusiast or professional tradesman should find the installation trouble free if the instructions are carefully followed. Dataterm's wireless option makes installation very easy as the majority of wiring is reduced.

Who is using Dataterm?

Dataterm is successfully saving fuel in the homes and offices of,

Spirit Group & Allied Domecq Pubs & Restaurants

Leicester City Council

Bracknell Forest District Council

High Wycombe District Council

Hyde Housing Association

The Guinness Trust

Presentation Housing Association

Charles Wells Public Houses

Thousands of Private Households

Elgar HA

Convergenx Home Automation

Festival HA

And many many more.

Frequently Asked Questions

What is Dataterm?

Dataterm is a computerised heating control. It has advanced abilities which a simple programmer and room thermostat do not have.

How does Dataterm differ from an ordinary room thermostat?

It learns how your building responds to weather changes and uses this memorized data to switch your heating on and off.

How does it work?

Dataterm does the thinking for you. It has 11 pre-programmed heating plans built in for immediate use, & room for 12 personal plans so you simply choose the one that suits your lifestyle. Just a couple of button presses get you going.

What if none of these plans suit me?

No problem, simply edit your own plan by choosing the time and temperature settings you require and let Dataterm do all of the hard work for you.

Will it work on my heating system?

Yes, Dataterm will work on most types of heating system, warm air, traditional wet systems with radiators and underfloor heating, regardless whether fuelled by gas, oil, solid fuel or electricity - it can even control the fans on some types of storage heaters, saving even more on Economy 7.

I have more than 1 heating zone?

Dataterm now has the ability to control up to 4 Heating Zones and Hot Water from a single programmer making it even easier to be in control and save even more!

Do I tell Dataterm when to turn the heating on?

No, simply tell it what time you would like it warm and Dataterm will work out the best time to switch on. This is known as "Optimum Start" and will save you money achieving your specified temperature within 1°C whatever the external temperature.

Can I over-ride the heating plan set?

Yes, just by pressing the plus or minus buttons you can over-ride the heating until the next set-point or extend it for up to 3 hours. The hot water can also be boosted as and when required.

What happens in a power cut?

Dataterm's memory is excellent, most power cuts are only minutes in length. When the power is resumed Dataterm will carry on where it left off displaying the correct time and temperature as set in the plan.

If I have a problem where do I turn?

The help button will guide you through programming and use issues, if you find it better to talk to someone a help line number will be displayed within the help messages.

Can you lock it?

Yes, Dataterm has a key lock to prevent tampering, it is a 3 stage lock to allow some or no access.

How much power does Dataterm use?

We are proud to say that Dataterm now uses much less power than previous versions as it reduces its consumption by going into standby seconds after use and dimming its backlit display, press a button and its bright again, don't worry though we are talking milliamps but every little helps...

Wireless Sensors are Now Available!



Dataterm IHC whole house controls come in a variety of options, shown left is the standard configuration for the majority of systems like Y or S Plan where there is a need to control heating and domestic hot water.

A version for heating only is the COMBI version and as the name states, it is suitable for combination boilers.

Our most common products are the standard as seen left and our Multizone 2 (see illustration below) that will control 2 heating zones and your domestic hot water from a single controller.

All of the Dataterm IHC range is available with wireless sensors for simple installation.

Save
£'s

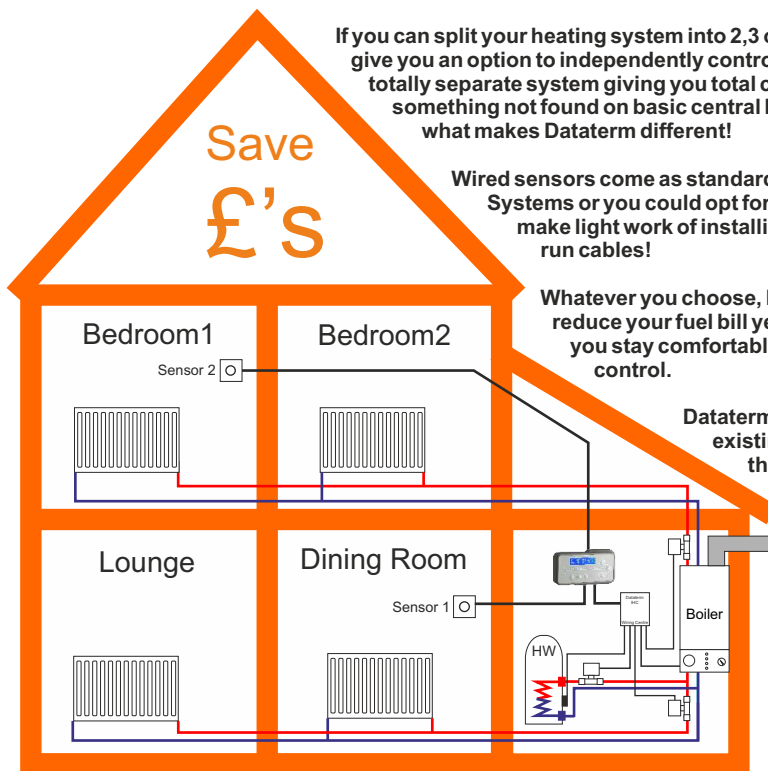
If you can split your heating system into 2,3 or even 4 zones we can give you an option to independently control each heating zone like a totally separate system giving you total control and flexibility, something not found on basic central heating controls and that's what makes Dataterm different!

Wired sensors come as standard with all of our Multizone Systems or you could opt for the Wireless range and make light work of installing cancelling the need to run cables!

Whatever you choose, Dataterm will help to reduce your fuel bill year in year out ensuring you stay comfortable and more importantly in control.

Dataterm simply replaces your existing time clock and room thermostat if you have one!

The illustration on the left shows a typical setup for a 2 Zone system controlling upstairs & downstairs separately with different time and temperature set-points to suit the usage pattern of the property.



DATATERM IHC

Technical Specification

Dataterm IHC is a microprocessor based intelligent heating control system researched and developed to provide correct temperature management with minimised fuel burn. It replaces traditional wasteful room thermostats and programmers thus reducing harmful emissions.

Dataterm is self learning and fully automatic, it uses state of the art "fuzzy logic" techniques to achieve exceptionally close temperature control.

Functions

OPTIMUM START/STOP

This eliminates fixed start time for boiler firing. Instead, a start time is calculated to take into account prevailing weather conditions, preventing fuel waste. Dataterm optimizes off by allowing temperature to fall 1°C just before a set reduction.

COMPENSATING FOR WEATHER CHANGE

This eliminates the external sensor process, which cannot allow for wind chill factor. Dataterm monitors & memorizes speed of temperature response in a building when heating is switched on and off. This data is used in a self-educating process which produces stable chosen temperatures by adapting switching patterns to fluctuating thermal conditions.

11 BUILT-IN LIFESTYLE PLANS

Choice of ready-made central heating and hot water programmes, suitable for varying occupancy needs, all ready to go.

12 PERSONAL PLANS

Each can be custom-designed to suit the user's lifestyle. Every day of the week, eight time and temperature set points can be programmed with a desired temperature, or left unused. All personal plans remain in memory, with manual override always available.

HELP FUNCTION

A single Help key provides context-sensitive online help messages via the display screen.

HOT WATER CONTROL

Choice of any-time, any day, 4 on's & 4 off's per day, with cancellable one-hour boost at any time.

BOILER CYCLING PREVENTION

Dry cycling of boiler is eliminated, being under overall control of the system.

FROST PROTECTION

Dataterm will always monitor falling temperature and fire the boiler safely in time.

ADDITIONAL FEATURES

Celsius or Fahrenheit display, Wireless Sensors, Holiday Mode, Fuel Monitoring, Active Boost, Modes, & Inbuilt Test Feature and a crisp back lit display.



Active boost allows for a 1,2 or 3 hour heating boost at the selected temperature for when you just want a little extra heat, after the time period expires Dataterm reverts back to the plan loaded.

Applications

Any gas or oil-fired conventional wet central heating system with or without the requirement for hot water.

Ducted hot air systems

Underfloor heating

Electric-powered central heating systems

SUITS A WIDE RANGE OF BUILDING TYPES

Houses, flats, maisonettes, zoned larger residences, small commercial buildings, public houses, offices and shops, schools, libraries and churches.

MULTI ZONE SYSTEMS

Dataterm is available in 2, 3, 4 or as many zones as you require and we can build the control panel to the system requirement saving on installation time and complexity. Normal specification covers 2 port spring return motorized valves, motor open motor close, 24 volt and mains switching.

System compatibility

Compatible with all types of boiler or switchable heat sources even sequenced boilers.

Easy control of S-Plan and Y-Plan systems, mains pressure cylinders using hot water priority and combination boiler requirements.

Suitable for boilers with pump over run.

Compatible with mains or low voltage cylinder thermostats and Thermostatic Radiator Valves (TRV's).

External communications

Dataterm IHC has an external communications interface (USB) that will enable the end user to access special features showing the profile achieved over the past six days. This is a useful way of identifying faults on the system, simply study the down loaded graph to see what temperatures have been achieved and at what time.

Larger homes or work places usually have larger heating bills and with Part "L" of the building regulations and other legislation calling for zoning and better control Dataterm is highly suited for the larger building as well as the modest home alike!

With control of up to 4 heating zones and hot water all from one easy to use keypad Dataterm is the obvious choice for maximum fuel savings.

By controlling different zones separately you can control the heating in different areas at different times and temperatures dependant on usage saving £'s per annum and reducing the amount of harmful emissions you produce.

Remember our multi-zone package allows you to control up to 4 heating zones and hot water, this could be ground floor and upper floors, front and back of the home or different rooms in churches or offices, the possibilities are vast.

● Optimum Start / Stop

Each heating zone has the same characteristics of a single Dataterm system allowing for all the benefits of Optimum Start / Stop for each zone and set-point.

So instead of the whole building warming up at the same time you might find that due to usage it warms up at different times and rates to achieve its main goal, affordable warmth and energy savings.

● Close Temperature Control

Each zone has the ability to gently control the heat so that you maintain your comfort zone thus eliminating huge swings in temperature that increase fuel bills and leave you feeling uncomfortable.

● Summer / Winter Time

Dataterm automatically changes its clock to allow for summer and winter time changes so that's one less thing for you to worry about.

● Holiday Planning

Setting your departure and arrival dates will allow your heating to turn off whilst you are away then be back on for your return so its nice and snug when you return to the *Sunny UK!*

● Flexible Programming

Simply set the times and temperatures you require, Dataterm has the ability for up to 8 set-points per day and each day of the week can be different!

The same applies for the Hot Water too...



● Performance Monitoring

The Department of the Environment and the Building Research Establishment provide important energy efficiency statistics and usage data for Dataterm & can be found in the Green House Profile No. 7 (circa March 1995).

National Home Energy Rating (NHER)

In August 1996 the National Home Energy Services List was updated by the NHER to include a new intelligent heating control, Dataterm IHC.

It was solely created for Warmworld and its range of Dataterm intelligent heating controls and when the Standard Assessment Procedure (SAP) was updated in early 1999 by building regulations Dataterm was included and added 2 points to the SAP rating of any property containing it.

Dimensional Data	H x W x D
Dataterminal	85 x 160 x 29 mm
Standard Wiring Centre	200 x 165 x 55 mm
Multizone Wiring Centre	450 x 300 x 90 mm
Remote Sensor	80 x 80 x 29 mm
Power Rating	230VAC 50Hz 3.15 A

Height measurement does not include wiring gland protrusion, additional clearance required for cable entry.

Complies with Part L of the Building Regulations UK and SBSA Scotland.

Wireless Technology

The following pages cover our wireless technology, especially designed for ease of use, reliability, extended battery life and range.

Wireless Sensors make Dataterm much more flexible giving you the option to locate a sensor anywhere in the home to better control your heating with minimal disruption and upheaval as there are no unsightly cables to install!

Range and Reliability are key and with Dataterm you get this as standard, our wireless sensors have been tested in harsh surroundings and achieved a range of just under 100m.

This is so much more than required in the majority of homes so they should work just about anywhere and if it doesn't you can mix and match wired and wireless sensors seamlessly!

Battery Life is exceptional and currently in excess of 2 years, this is down to special code written in every sensor that wakes the transmitter often enough to update the temperature but not too often to deplete the batteries giving you close temperature control just like wired sensors.

We even supply the batteries too, 2 x AA Duracell batteries so that we know you will get the best from the system from day 1.

Up to 4 Sensors can be connected to every Dataterm allowing control of up to 4 central heating zones.

Wireless Cylinder Thermostat based on the same technology can control up to 2 cylinders via temperature sensors or conventional cylinder or pipe thermostats.

We have even given you the option to mix and match here too! you could have a cylinder with a thermostat and a cylinder with a sensor or you could have a cylinder with a winter / summer option, the choice is yours...

Wireless Switch is another option, wirelessly turn an output on or off, its not just limited to hot water, control parts of a system on different supplies for instance...

The Sky is the limit and restricted only by your imagination...

Wireless Sensor

Technical Specification

Dataterm is now even easier to install and use than ever before.

Using the latest radio technology it is possible to communicate with the Dataterm over large distances to allow temperature sensing any where in the home or workplace all without unsightly wires.

This can reduce installation times immensely and reduce labour charges to boot.

The sensors, one for each heating zone have dedicated transceivers that regularly send data to the programmer so that the temperature is updated to aid temperature control and comfort.

Using the latest technology and advances in software and hardware design Warmworld have achieved excellent battery life and range with this wireless option.

For transmission problem areas the remote sensors can be wired for secure communication between the sensor and the programmer.



Technical Data

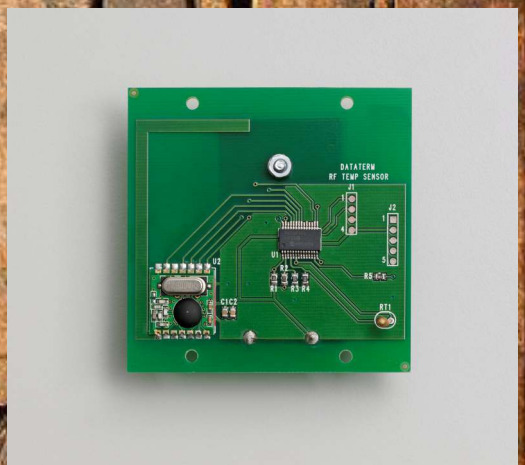
Frequency	868 MHz AM
Range	100 m Clear Sight
Power Supply	2 x AA 1.5V Cells (supplied)
Dimensions	H x W x D 80 x 80 x 29 mm
Colour	Cream / Off White
Installation Height	1.68 m from the floor finish
Battery Life	2 Years*

Product Reference

Description	Code
Wireless Sensor	RSW
Battery	Duracell AA
Programmer	D4IHC RF HD

Dataterm will accept up to 4 wireless sensors per Dataterm head unit allowing total control of up to 4 heating zones and hot water.

* Estimated battery life from tests carried out in average conditions - also dependant on location.



Boiler Sequencing

Sequencing Multiple Boilers is an important thing to do as it reduces fuel burn, thus reducing the cost of heating and helps to reduce maintenance cost's.

We have two options for sequencing or cascading boilers and they are our 2 or 3 boiler sequencer.

BS2CO is our popular 2 boiler sequencer that sits between the controls and boilers.

It decides whether to fire both boilers or just one, whilst it does this it is making sure that each boiler has a near to equal run time so that one boiler is not working harder than the other.

This promotes even wear and tear and helps to reduce maintenance cost's over the life of the plant.

All of our sequencers provide pump run on to allow latent heat to dissipate after the boilers have switched off.

Intelligent Too as the sequencer knows if there is a heating demand it will more than likely need all boilers to fire to get the system up to temperature, but what if it's a hot water demand?

You will probably not want all the boilers on to achieve your domestic hot water demands so it will only turn on the lead boiler at that time!

This saves much fuel and prevents dry cycling where the boilers reach their control temperature quickly and cycle on and off achieving very little in economy or heat up time.

BS3CO is exactly the same but will control 3 boilers in the same way as BS2co does.

It even looks the same and that's because it is, we keep our cost's low and use the same PCB for both types, we use different code for each so one size fits all.

BS2CO can be used to sequence twin head pumps too, cutting down on maintenance and ensuring frequent changeover.

BS2CO The Multi Boiler Sequencer, **A Step Controller that Saves you Money !**



Even Wear & Tear

Allows boilers to have similar run times so that maintenance costs are reduced and the load is evenly split between both boilers.

Promotes longer life expectancy of the boiler plant and lowers cost of ownership.

Fuel Economy (heating mode)

When in heating mode the boiler sequencer monitors the return water temperature to ascertain if 1 or 2 boilers are required to meet the load, if the lag boiler is required it will be called and fired.

As soon as the load decreases, due to return water temperature being high enough for the system to cope on just 1 boiler the lag boiler will oscillate on and off as and when required to help cope with the demand.

This mode of operation allows higher fuel savings and a more balanced output to the heating system.

Fuel Economy (hot water mode)

In hot water only mode the sequencer will allow only the lead boiler to fire, this will avoid unnecessary boiler short cycling and help to keep the system quieter in its operation as it will reduce the number of times the boiler has to go on and off on its high limit thermostat. This occurs because the heat cannot be transferred into the hot water cylinder at the rate it is being produced. If suddenly central heating is required both boilers will operate until the temperature is high enough to allow the system to operate on 1 boiler.

Auto Change Over

After a pre-set run time the lead and lag boilers will swap position and become lag and lead boilers. This enables the boilers to have similar run times and even wear, reducing maintenance costs and boosting economy by getting the most out of each boiler.

Feel the Difference,
Reap the reward,
Affordable heat...

Suits a wide range of building types:

Houses, flats, maisonettes, zoned larger residences, small commercial buildings, public houses, offices and shops, schools ,libraries & churches.

Dimensions: H200 W165 D55mm Weight Approx 1.5KG

Compatible with all types of boiler, built in Pump Run On for boilers with a low water content whether fuelled by gas, oil or electricity with or without the requirement for hot water.

The Warmworld BS2CO will promote efficiency and similar run times for each boiler, this will reduce wear and tear and system noise as a result. Every 6 hours (RUN TIME) the lead and lag boilers will swap over, this is adjustable to suit the individual needs of the system. The BS2CO has a built in pump over run facility for boilers that require pump run on, these connections are only to be used if required.

Controlling the lag boiler is a pipe thermostat, this should be set to break on temperature rise, a good starting point would be 60 °C. It will be necessary to adjust this to get the most out of the system in the way of heat requirement and fuel efficiency. It is to be located on the common return pipe work.

A 230Vac input is required at SL and any of the terminals Z1-4 if the boilers are to produce heating and hot water.

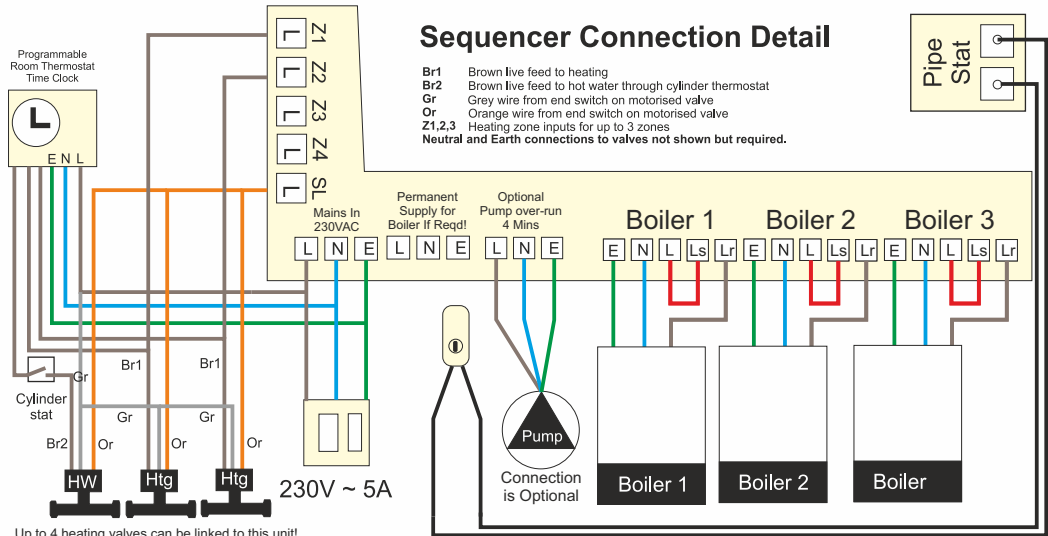
Z1-4 are individual heating zone control inputs and should be linked to the relevant motorised valve live wire (usually brown).

A single input of 230Vac to SL will produce an output to the lead boiler only as the sequencer will see this as a hot water only demand.

The installation of this unit must be carried out by a competent person and in conjunction with I.E.E. Regulations and any local legislation with regard to electrical safety. This appliance must be earthed.

Sequencer Connection Detail

- Br1 Brown live feed to heating
- Br2 Brown live feed to hot water through cylinder thermostat
- Gr Grey wire from end switch on motorised valve
- Or Orange wire from end switch on motorised valve
- Z1,2,3 Heating zone inputs for up to 3 zones
- Neutral and Earth connections to valves not shown but required.



Wiring detail may vary, adhere to accompanying documentation with product!

Additional Information
**All User and Technical Information both past
and present can be found on-line at,**

www.warmworld.co.uk

2022 Product Brochure



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THE INTELLIGENT HEATING DECISION

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