

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



Manufactured in the UK

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.

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.

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.

Boiler Sequencer Setup Options.

This Boiler Sequencer has an adjustable boiler cycle and pump run on time that can be set via the 8 way dip switch on the PCB.

Boiler Run Time / Swap Over ALL Boilers

Dip Switch 1 ON only = 6 hours to change over.

Dip Switch 2 **ON** only = 9 hours to change over.

Dip Switch 3 **ON** only = 12 hours to change over.

Dip Switch 4 **ON** only = 15 hours to change over.

Dip Switch 5 **ON** only = 18 hours to change over.

Dip Switch 6 **ON** only = 21 hours to change over.

Dip Switch 1+ 2 **ON** only = 24 hours to change over.

ANY OTHER COMBINATION WILL CAUSE ERRORS!

Pump Run On Timer D/S 7&8

Dip Switch 7+8 OFF - 30 Second Run On.

Dip Switch 7 **ON** & 8 **OFF** - 60 Second Run On.

Dip Switch 8 **ON** & 7 **OFF** 90 Second Run On.

Dip Switch 7+8 **ON** 120 Second Run On.

Pipe Thermostat Status

Pipe Thermostat Satisfied - Open Circuit - LED **D8 ON**.

Pipe Thermostat Calling - Closed Circuit - LED **D8 OFF**.

WARNING!

If an unlisted switch position is set the pipe thermostat LED will flash to indicate a problem!

IMPORTANT!

2 & 3 boiler PCB's are identical!

They run different code & will only operate as model purchased, if you've purchased a 2 boiler sequencer the relay for boiler 3 will not operate!

DEFAULT SETTING

All Boilers - 6 Hour Run Time

Pump Run On - 30 Secs



2 Boiler Sequencer Operation.

Boiler 1 and 2 will operate and swap over at even run times, Pipe Thermostat will turn lag boiler on and off as required.

In Hot Water only mode just 1 boiler will operate.

3 Boiler Change Over Sequence.

Hot Water Demand Only - 1 Boiler.

Heating Only or Heating + HW 2 - 3 Boilers depending on the frequency of the Pipe Thermostat.

On a full demand when the Pipe Thermostat is satisfied the sequencer will drop down to running 2 boilers, after 15 minutes without any demand from the Pipe Thermostat the sequencer will drop to run only 1 boiler.

Any demand on the Pipe Thermostat will call 2-3 boilers back in.

PLEASE KEEP THIS GUIDE INSIDE THE BOX FOR FUTURE REFERENCE!

WARMWORLD UK LTD March 2022



Warmworld UK Ltd
Unit 3, 6-10 Cater Rd
Bristol
BS13 7TW
0117 949 8800



Product: Boiler Sequencer

Voltage: 230vac

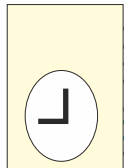
Hz: 50

Current: 5A

Year: 2022

Type: BS2CO-2 / 3

Existing Timer



Htg Zone Valve Link Wires as required



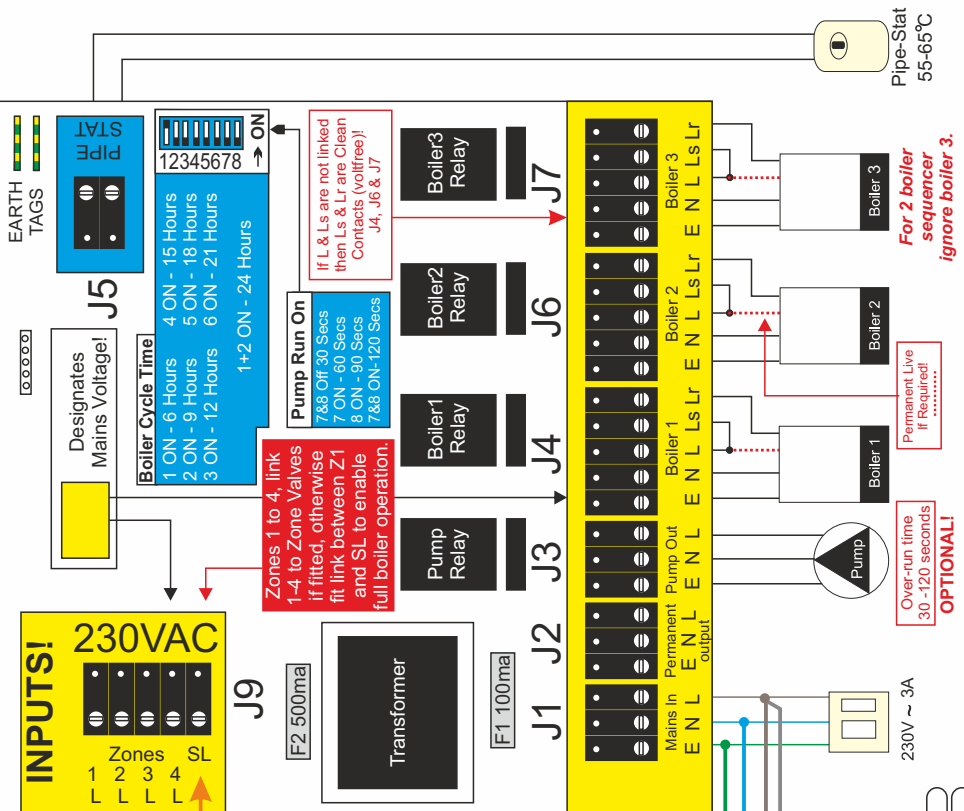
Htg Zones 1 to 4 Live Feed.

HW Live
(do not link)

Sequencer PCB's are identical to each other!
The difference is in the code!
BS2CO = 2 Boiler Model
BS3CO = 3 Boiler Model
BS3CO MUST have 3 Boilers Connected To Work!



For 2 Boiler Sequencing IGNORE Boiler 3!



Pipe-Stat
55-65°C

For 2 boiler sequencer ignore boiler 3.

Permanent Live If Required!

Over-run time 30-120 seconds
OPTIONAL!

230V ~ 3A

Current:	5A
Year:	2022
Type:	BS2CO-2/3

Product:	Boiler Sequencer
Voltage:	230vac
Fz:	50

UK
CA

Warmworld UK Ltd
Unit 3, 6-10 Cater Rd
BS31 7TW
0117 945 8800

CE

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.

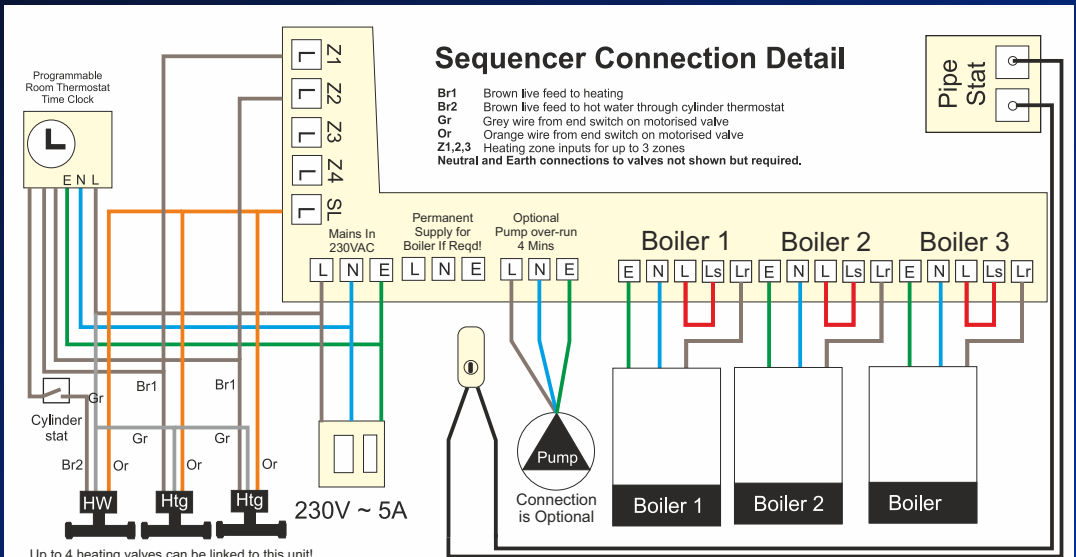
Controlling the lag boiler is a pipe thermostat, this should be set to break on temperature rise, a good starting point would be 60 °C. It will be necessary to adjust this to get the most out of the system in the way of heat requirement and fuel efficiency. It is to be located on the common return pipe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



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