Typical Displays

Normal

No Program active	2:32 PM
Off Peak Program active	6:05 AM PROG ON
Boost Button Pressed (Time left is shown)	0:56 BOOST
Boost program Active	5:37 PM PROG ON BOOST

Set/Review

Set/Review Clock	9:12 PM
Review Off peak Program On or Off time ***(On time shown)***	1:00 AM PROG ON
Set/Review Boost Program On or Off time ***(Off time shown)***	6:30 PM PROG BOOST OFF

NB: If time is flashing this indicates times may be altered.

Tariff Table

	Winter						Summer					
	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
Economy 7												
0	1.00 AM	5.00 AM					2.00 AM	6.00 AM				
1	12.00 AM	6.00 AM					1.00 AM	7.00 AM				
2	1.00 AM	6.00 AM					2.00 AM	7.00 AM				
3	1.00 AM	7.00 AM					2.00 AM	8.00 AM				
Eco 20:20												
4	10.00 PM	6.00 AM					11.00 PM	7.00 AM				
Economy 10												
5	1.00 AM	6.00 AM	7.30 PM	9.30 PM			1.00 AM	6.00 AM	7.30 PM	9.30 PM		
6	2.00 AM	7.00 AM	2.00 PM	4.00 PM	7.00 PM	9.00 PM	2.00 AM	7.00 AM	2.00 PM	4.00 PM	7.00 PM	9.00 PM
7	12.00 AM	5.00 AM	1.00 PM	3.00 PM	8.00 PM	10.00 PM	12.00 AM	5.00 AM	1.00 PM	3.00 PM	8.00 PM	10.00 PM
8	4.30 AM	7.30 AM	2.00 PM	4.00 PM	9.00 PM	11.00 PM	4.30 AM	7.30 AM	2.00 PM	4.00 PM	9.00 PM	11.00 PM
9	12.00 AM	7.00 AM	9.00 PM	12.00 AM			12.00 AM	7.00 AM	9.00 PM	12.00 AM		

SERVICE AND WARRANTY

Your Powersaver Dual controller is not user serviceable. PLEASE DO NOT TRY TO DISMANTLE THE UNIT. This product is guaranteed by your supplier for 5 years from the Date of Manufacture. If it should become defective, please contact your installer or supplier for a replacement unit.

CUSTOMER CARE POLICY

As part of Sangamo's continuous improvement program, the Company operates a Customer Care Policy. This means that we welcome your comments and complaints, as it can help us to improve our services to you, our customer.

Due to our policy of continuous product improvement and development, the specifications in this guide may be subject to change without prior notice.

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POWERSAVER DUAL

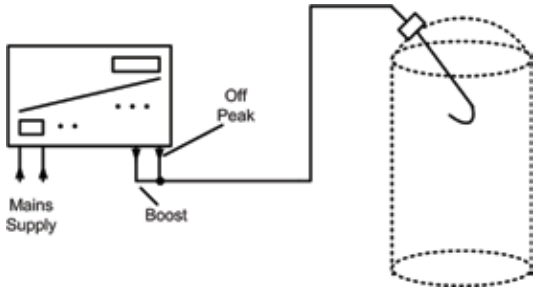
switched on solutions
SANGAMO

The Powersaver Dual is a Water Heater Controller that combines ease of use with the efficient control of your hot water tank during cheap rate electricity periods to provide hot water when required.

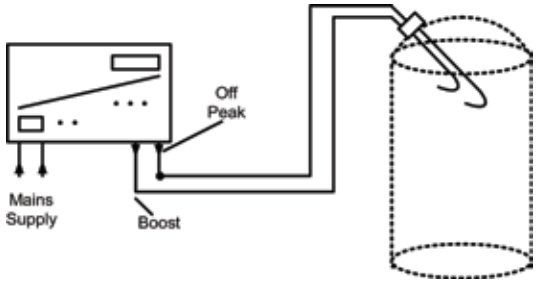
Should more hot water be required then pressing the 'boost' button will switch on the boost immersion element for ½, 1 or 2 hours to heat up part of the tank.

Where extra hot water will be required every day at the same time, a 'boost' program of up to 2 hours can be entered. Again this will operate the boost immersion element to heat up part of the tank.

Single Immersion Heater



Dual Immersion Heater



Two Immersion Heater

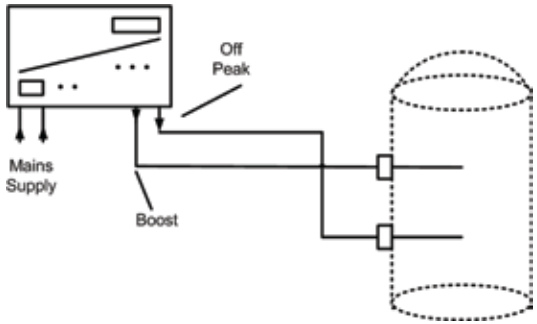


fig 1

Rating	13A, 230V, 50Hz, suitable for immersion heaters up to 3kW
Live Parts	Enclosed
Power Consumption	1.2W
Dirt Protection	IP30
Shock Protection	Class 1
Contacts	Micro-Disconnection
Temperature	0 – 35°C
Battery Reserve	Approx 2 years, Non Rechargeable Lithium
Clock Accuracy	+/- 5mins per year @23°C
Dimensions	HxWxD(mm) – 114x169x60
Program Cycle	24hour
Summer/Winter Time change	automatic
Off Peak Program	Installer Selectable - Up to 10 presets available covering low rate electricity tarrifs.
Boost Facility	User selectable – ½, 1 or 2 hours
Boost Program	User Selectable – Up to 2 hours

Installation Instructions

The installation should be carried out by a suitably qualified person in accordance with the current edition of the IEE wiring regulations.

Warning – Isolate mains before starting installation & servicing.

Provision must be made in the fixed wiring for a means of disconnection from the supply having a contact separation of at least 3mm on all poles. This can be provided by the consumer unit.

The Powersaver Dual is supplied with its own mounting box, which can be mounted over a single or double gang flush wall box.
This product is not suitable for mounting on unearthed metal or metalised surfaces.

Mounting

The Powersaver Dual should be removed from the mounting box by unscrewing the 2 captive pattress screws.

Conduit box mounting – Use either holes marked 'C' in fig 2 to secure to a single gang box or the two holes marked 'B' for a double gang box. Cable entry is through the rear break out.

Surface mounting – Use the two holes marked 'A' in Fig 2. Cable entry is through the most appropriate cut out.

Remove the appropriate cable entry cut outs before fixing the box, where possible drill the box to provide a close fitting entry for cables, taking care to remove sharp edges.

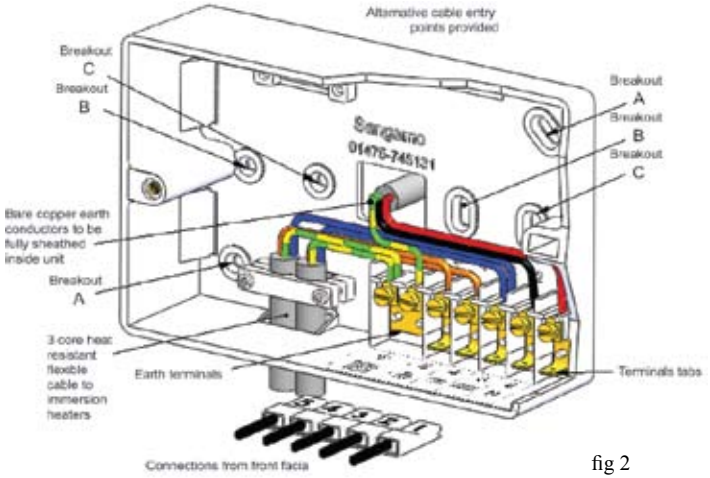


fig 2

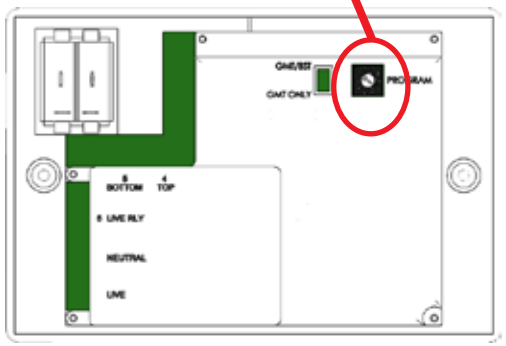
Ensure terminal screws including earth are securely tightened to a minimum torque of 0.75N

Ensure outgoing cables to the immersion heaters are securely clamped in the box. All surface wiring adjacent to the box should also be clamped appropriately or trunking used.

Commissioning

When the product leaves the factory, the Installer Switch (fig 4) is already set at program 0. The product settings may be reviewed/entered when not connected to a power supply. Pressing '-' or '+' button will activate the display and enable the review/settings to be made. (NB:- to conserve battery power, the display will die after approx 45 sec. when off power)
See user instructions section for operating details.

fig 4



You need to check with your Electricity Supplier to confirm the Off Peak Electricity times used in your area and whether these times change during Winter and Summer.

Use the slotted screwdriver supplied to set the installer switch to the required program times.

See table on back page.

Connections (as labelled)

Use a three core heat resistant cable with minimum conductor size of 1.5mm connection to a 3kW heater. Connect the incoming wires to terminal block as follows

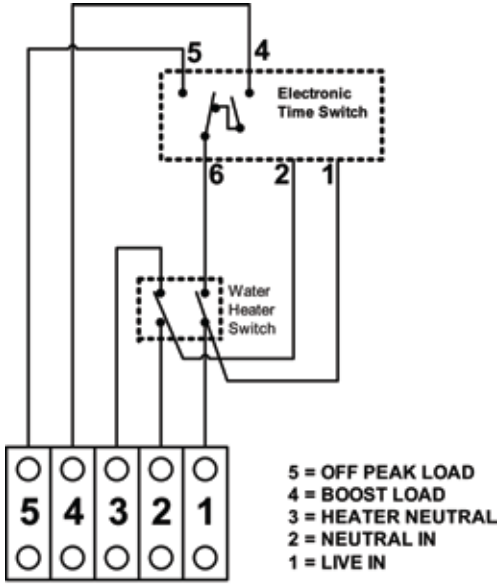


fig 3

NB: A program can comprise 1, 2 or 3 on/off's programs depending on the one selected. Some program times remain same from Winter to Summer. Some program times change with Winter and Summer. The actual displayed time will automatically adjust no matter which program selected.

To complete installation, take front panel and push connectors numbered 1-5 into the corresponding terminal in mounting base as per fig 2. Carefully secure the front panel to the mounting box and secure with fixing screws. Ensure no wiring becomes trapped or damaged in the process.

Switch on the mains supply and put the rocker switch in the TIMED position.

Boost Button - This boost button is used where on a random basis more hot water is required outwith any off peak program times.

Press 1 x = 30mins
Press 2 x = 1 hour
Press 3 x = 2 hour
Press 4 x = Cancel

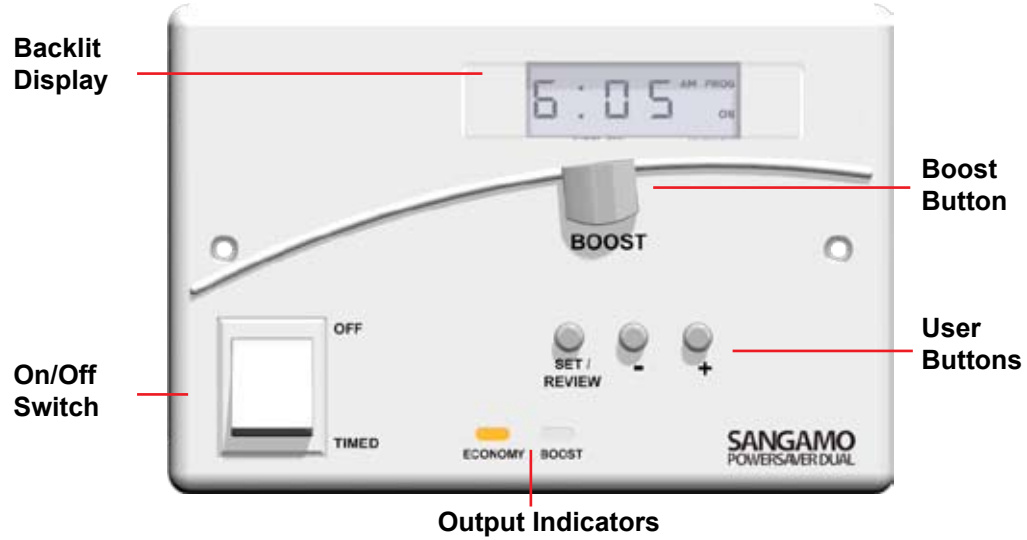
The display changes to show the time remaining in the Boost period.

Boost Program - Boost program times must be set outwith any off peak program times to a maximum duration of 2 hours.

Press Boost button x 1 = cancel.

N.B. Off peak programs always take priority over Boost functions.

User Instructions



On/Off Switch
In the OFF position, the electrical supply to the water tank immersion heaters is disconnected even though the display continues to operate normally. In the TIMED position, all programs and functions are active.

Backlit Display
Pressing any button will operate the backlight to improve display viewing. This is useful where a product is installed in cupboards or dark environments. (NB: to conserve battery power, this feature is disabled when unit is not connected to a power supply).

Output Indicators
The indicators confirm the status of the Powersaver Dual's switching relays for each immersion element.

Set/Review Button

Press 1 x	Time flashing ; Set time ; Press – or + to adjust time
Press 2 x	Off peak 1st on time ; Review only
Press 3 x	Off peak 1st off time ; Review only; If no more programmes, skip to press 8
Press 4 x	Off peak 2nd on time ; Review only;
Press 5 x	Off peak 2nd off time ; Review only; If no more programmes, skip to press 8
Press 6 x	Off peak 3rd on time ; Review only;
Press 7 x	Off peak 3rd off time ; Review only;
Press 8 x	Boost Program on time ; Press – or + to adjust time
Press 9 x	Boost Program off time ; Press – or + to adjust time; max 2hours
Press 10 x	Return to normal display