

# DC1100 & 1400

## Energy Controllers

Satchwell DC1100 & DC1400 for energy-efficient temperature control in smaller buildings.



# DC1100 & 1400 Energy Controllers

## Features



The DC1100 and DC1400 Energy Controllers are self-configuring optimiser/compensators, capable of controlling one or two boilers in sequence with HWS time control. Designed for easy installation and operation in small/medium commercial properties, they are a cost-effective option for achieving significant improvements in energy use.



### PRODUCT AT A GLANCE

- **Easy set-up** - these controllers are self-configuring, matching the connected sensors
- **Easy to use** - simple, intuitive user interface
- **Flexible application** - caters for a wide variety of control schemes
- **Energy efficiency** - optimiser function delivers consistent energy savings
- **Trouble-free operation** - proven reliability minimises problems and ensures peace of mind

### Self-Configuration

The DC1100 and DC1400 are self-configuring. The controller recognises the application by the sensors that are connected to it, and configures itself accordingly. The use of sensible default settings, and self-adaptive optimiser and compensator routines, means that the system can be set to work quickly after the required temperatures and times have been entered. The controller will automatically fine tune, matching the building's requirements.

To further reduce installation costs, a single outside sensor can pass information to other DC1100/1400's on the same site.

### Ease of Operation

The user interface is designed to make day-to-day operation of the controllers as easy as possible. The large LCD display shows current status at a glance. The front panel control switch provides easy selection options, including an override to allow the heating to be turned on and off without the need to change the settings at the controller. This can also be achieved by means of a remote switch unit.

# DC1100 & 1400 Energy Controllers

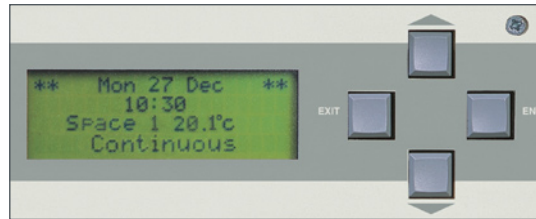
## Features (continued)

### Enhanced Boiler Performance

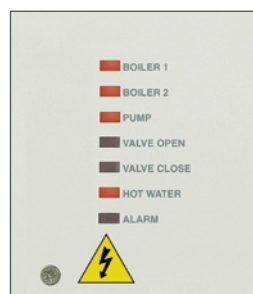
Boiler control in sequence with optional automatic weekly rotation provides stable control conditions, eliminating short cycling during light load conditions and enhancing boiler performance and life.

### Product Selection

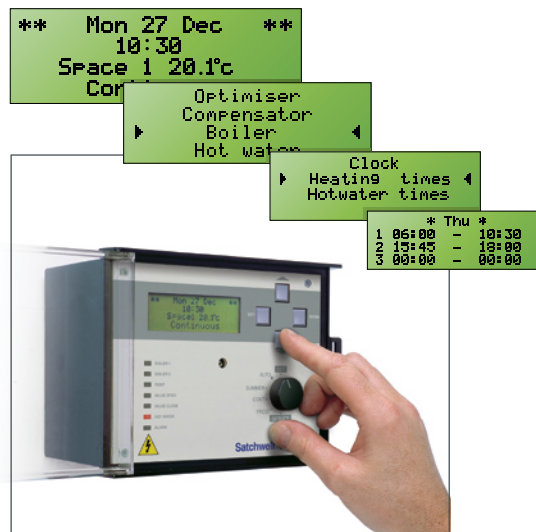
TAC offers a complete range of field devices to match the operating requirements of the DC1100 and 1400. Our regional sales office will advise you in choosing the right models for new projects and for upgrading CMC and CSMC installations.



The large four-line display normally shows the time, date, a selected temperature and the current operating status. It is also used to view alarms and change settings.



Bright LEDs indicate which functions are on, clearly showing the controller's output status. An alarm is included to display a number of operating faults.



An intuitive, menu driven, LCD display makes setting and commissioning easy.



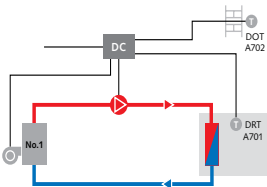
The control switch selects a choice of settings: normal automatic control of heating and hot water; summer operation of hot water only; constant heating; frost protection only; a set position to change times and temperatures. A service mode allows for plant maintenance without alteration of controller settings.

# DC1100 & 1400 Energy Controllers Applications

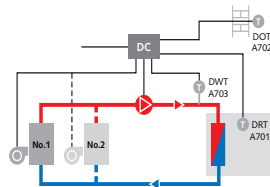
The DC1100 and DC1400 provide total heating control, controlling both the heat source and the heat emitters, whether conventional radiators, under-floor coils, fan convectors or other devices. Many different applications are possible.

## Applications

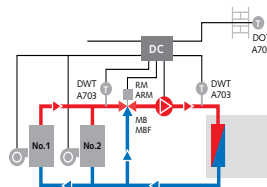
Optimisation Only



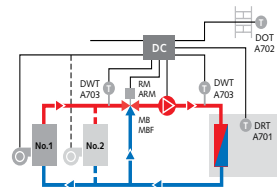
Optimisation with Boiler Compensation  
- one or two boiler control



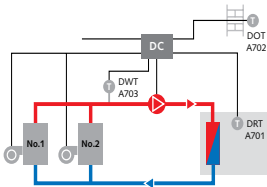
Valve Compensation only -  
fixed time start -  
boiler sequence control



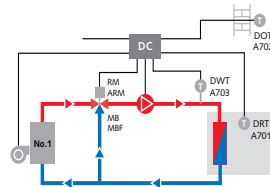
Optimisation and Valve/boiler  
Compensation - one or two boiler control



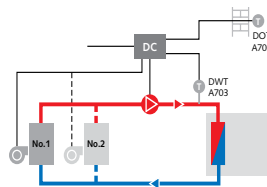
Optimisation and Boiler  
Sequence Control



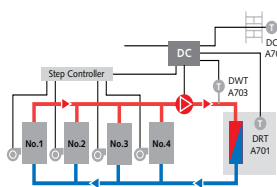
Optimisation with  
Valve Compensation



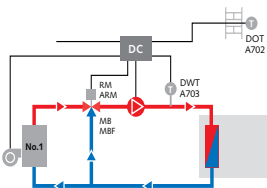
Boiler Compensation -  
fixed time start -  
one or two boiler control



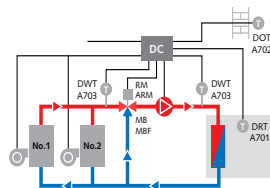
Optimisation with Boiler Compensation  
and sequence control



Valve Compensation only -  
fixed time start



Optimisation with Valve Compensation  
and boiler sequence control

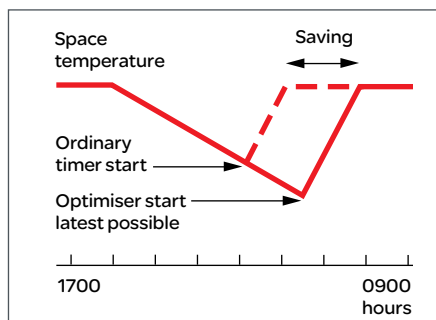


# DC1100 & 1400 Energy Controllers Functions

## Functions

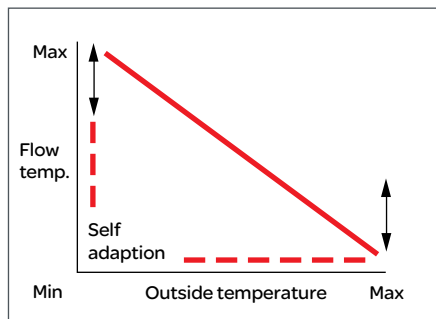
- Self configuring controller
- Self adaptive optimum start
- Self adaptive optimum stop
- Day economy switch off
- Boiler sequence control
- Weekly boiler rotation
- Valve compensation
- Boiler compensation
- Valve/boiler compensation
- Self-adaptive compensator option
- Adjustable space temperature reset on compensator
- Night set back (space or flow temperature)
- Variable pump overrun
- Hot water time channel
- Multi-stage frost protection
- Valve/pump summer exercise
- Holiday scheduling
- BST/GMT auto clock change
- Summer/winter operation
- Front panel selector AUTO / SUMMER / CONT / FROST / SERVICE
- Remote override facility
- Alarm indicator

### Optimum Start



The controller starts and stops the plant at the earliest or latest possible time to reduce energy consumption.

### Weather Compensated Control



The flow temperature is adjusted to the outside to match heat losses from the building, preventing overheating and maintaining comfort.

# DC1100 & 1400 Energy Controllers Specifications



CSC – DS 2.021  
CXT – DS 2.101  
CZT – DS 2.105  
CXR – DS 2.110

## DC1100 & 1400

### Types

**DC1100** – Energy Controller using 'A' series sensors

**DC1400** – Energy Controller using standard Satchwell sensors

### Electrical/Mechanical

#### Power supply

230 Vac, 15 VA (50/60 Hz)

#### Relay ratings

SPNO 230 Vac, 3 A resistive, 1 A inductive

#### Operating conditions

0 to 50° C, 5 to 95% rh non-condensing

### Construction

#### Case

Moulded polycarbonate plastic case,

Fire resistant to UL94-V-0

#### Dimensions

Controller – 191 x 144 x 106 mm

#### Protection class

IP40

#### Complies with EC directives

EMC, LVD

#### Mounting

Panel or surface mount

### Easy Installation

The separate wiring base unit allows easy wall or panel mounting and access to the terminals. A single screw secures the controller to the base. Gold plated pins ensure good contact between controller and wiring base.

