Honeywell

Wired Heating Control Products

Timeswitches & Programmers
Programmable Thermostats
Thermostats & Frost Thermostats
Motorised Zone Valves
Cylinder Thermostats
Surface Mount & Immersion Thermostats

Introduction

Controlling domestic heating is not just a case of providing an on/off switch; With over 80% of domestic energy consumption coming from heating and hot water, it is vital that a heating system is provided with a control system that:

- Can be timed to suit the lifestyle of the user
- Can alter temperature to provide the most energy efficient solution without sacrificing comfort
- Can ensure that, if necessary, different areas of the property can be heated to different temperatures

Honeywell heating controls are designed to provide a high level of control, combined with a wealth of features that make controlling the heating system easy.

This brochure looks at the range of heating and hot water controls that can be wired into the heating system by heating engineers thereby providing you with:

Independent timing control of the heating and hot water

Temperature control of the heating

Combined time and temperature control of the heating

Temperature control of the hot water

Control of hot water to the heat source (radiator or stored hot water)

Heating controls

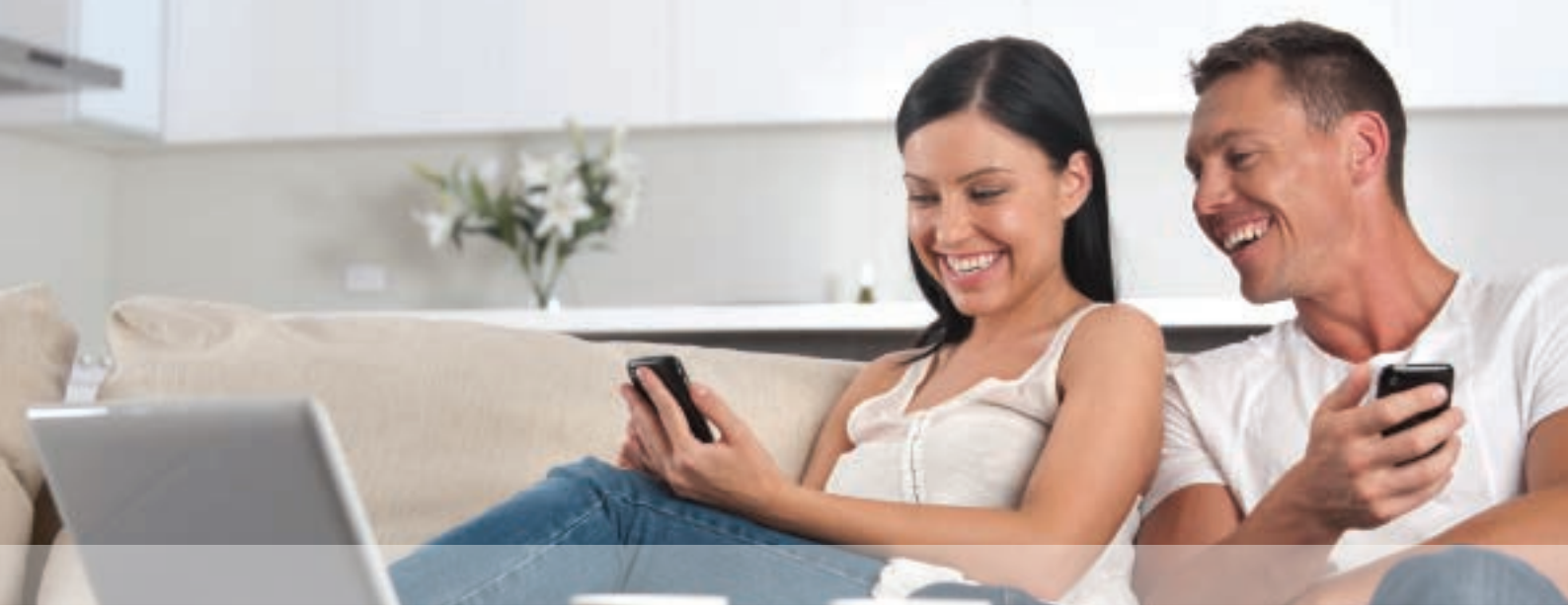
Whether you are the resident of the property or the installer of the heating system, choosing the control system is easy, once you consider the fundamental questions you have to answer.

Independent time and temperature control of the heating element of the system will mean that you can vary the times that the heating systems come on. In so doing ensuring that the system reacts to the temperature that the environment is at whilst the system is on during one of the set time periods. You can vary the time periods over 1 or 7-days, but you cannot vary the temperature settings over any of the time periods. This choice gives the easiest set of controls to understand and interact with on a regular basis.

Programmable time and temperature control of the heating system offers an added level of control, in that it allows you to vary the set temperature of the room, dependent on the time period of the day. If you need the property to be warmer early in the morning whilst people are getting up and cooler during the day when the property is occupied by fewer people, this can be programmed automatically. With a seven day timer that allows up to 6 variances in temperature per day, you can build up a sophisticated temperature profile that suits your lifestyle. This choice will offer a higher level of control, but will increase the need for users to fully understand how the programme works.

Controlling the temperature and availability of the hot water in the property is essential to ensure both energy efficiency and the ability to have hot water available when required. The sophisticated timing capabilities of our timers and programmers allow a high level of control and they are easy to set up and use on a daily basis.

At the heart of the fully controlled 'wet' domestic heating system is the ability to control both the boiler and the flow of the hot water to the radiators. Our market leading motorised zone valves provide a tried and tested quality solution and there are models available for all Sundial systems.



Energy saving features

TPI control

Time Proportional and Integral (TPI) control is a method of calculating the demand from a room thermostat, controlling the boiler so that it fires for shorter periods as the temperature approaches the set point. This can offer energy consumption savings of up to 10% (in a single cycle steady state test).

Optimisation

Optimisation allows for energy savings by varying the start up time of the boiler, depending on the weather. It then learns how the house reacts, so that the calculation can be more accurate the next day. Optimum Start, Delayed Start and Optimum Stop are all methods of optimisation.

- **Optimum Start**

To save energy: let the controls work out when to come on to suit when you want to be warm. Every day the boiler will start at the latest possible moment, depending on the weather.

- **Delayed Start**

Once you have programmed your earliest start time, the controls will delay the boiler firing time on warmer days, so saving energy.

- **Optimum Stop**

Saves energy and money by switching off before the normal programme time, whenever possible.

Line of Text display

Getting the best out of the heating system means that there are a number of important factors that have to be set within the programmer and thermostat to get the optimal performance. To assist in system set up and aid users in day-to-day operations, Line of Text display gives a clear display and text feedback to ensure you are always in control.

ErP Energy Efficiency Ratings

The ErP energy efficiency ratings shown in this brochure will provide installers and end users with the information required to both complete the ErP energy label and assess the benefits of the heating controls to the overall heating system in the property. These ratings apply to room thermostats (including programmable thermostats).

Contents

Heating control timeswitches & programmers

Control the timing of your heating or hot water system, with either a seven day or single day timer.

Single channel timeswitch controls

1-day single channel timeswitch ST9100A

7-day single channel timeswitch ST9100C

The ST9100 single channel timeswitches are designed for control of a single heating zone or combi boiler applications. The 3 timeswitches in the range are:

- ST9100A – 1-day timeswitch
- ST9100C – 7-day timeswitch to suit 7-day, and 5/2 day, timing profiles
- ST9100S – 1-day timeswitch with a service interval reminder (see page 5)

All of the models feature:

- Large clear high contrast display for easy set up
- On screen instructions (Line of Text display – see page 3), provide text feedback that gives help and programming hints. The unit has programme indicator lights so that in operation checks can easily be made
- Large backlit display which can be set to off, intermittent or on continuously, with no extra energy consumption
- Up to 3 On/Off periods per day can be set and a choice of 3 different built-in programmes make timing choices easy
- Factory-set clock and date with automatic daylight saving, 1-hour time change facility. Programmed settings are retained indefinitely in non-volatile memory if mains power is lost

Additional control is provided through:

- Holiday button allowing programme override for a variable number of days making it easier to set the system for extended absences
- Extra hour facility, for up to 3 hours boost or programme extension
- Temporary or permanent override facilities for total individual control

Installation is easy, as the unit fits onto industry standard back plates and is suitable for mains, low voltage or potential free switching.

1-day single channel timeswitch ST9100S with service interval reminder

Two channel programmers

ST9400A Two channel programmer

ST9400C Two channel programmer

ST9400S Two channel programmer with service interval reminder

Service Interval Reminder

The service timer facility is available on the ST9100S model. This is a reminder on the display when a heating system service is due each year. The service interval can be set to flag up a message, restrict the heating to manual control only, or disable the heating completely. The interval period is adjustable to between 1 and 400 days. All settings are protected by a PIN code that can be set by the installer. There is no difference in the appearance of the ST9100S, the ST9100A and the ST9100C.

Product code	Functions
ST9100A1008	1-day timeswitch, having two on/off periods per day
ST9100C1006	7-day timeswitch, having three on/off periods per day
ST9100S1007	1-day timeswitch, with service interval reminder, having two on/off periods per day

The ST9400 range of programmers are two channel programmers, with independent timing for control of heating and hot water zones. The 3 programmers in the range are:

- ST9400A – 1-day programmer with two channels
- ST9400C – 7-day programmer, two channels to suit 7-day or 5-day and 2-day timing profiles
- ST9400S – 1-day programmer, two channel model with a service interval reminder (see below)

All of the models feature:

- Large clear high contrast display for easy set up
- On screen instructions (Line of Text display – see page 3), providing text feedback that gives help and programming hints. The unit has programme indicator lights so that in operation checks can easily be made
- Large backlit display which can be set to off, intermittent or on continuously, with no extra energy consumption
- Up to 3 On/Off periods per day can be set and a choice of 3 different built-in programmes make timing choices easy
- Factory set clock and date with automatic daylight savings, 1-hour time change facility. Programmed settings are retained indefinitely in non-volatile memory if mains power is lost

Additional control is provided through:

- Holiday button allowing programme override for a variable number of days, making it easier to set the system for extended absences
- Extra hour facility, for up to 3 hours boost or programme extension
- Temporary or permanent override facilities for total individual control

Installation is easy as the unit fits onto industry standard back plates and is suitable for mains, low voltage or potential free switching.

Service Interval Reminder

The service timer facility is available on the ST9400S model. This is a reminder on the display when a heating system service is due each year. The service interval can be set to flag up a message, restrict the heating to manual control only, or disable the heating completely. The interval period is adjustable to between 1 and 400 days. All settings are protected by a PIN code that can be set by the installer. There is no difference in the appearance of the ST9400S, the ST9400A and ST9400C.

Two zone programmer

ST9500C Two zone, two channel programmer

ST9500C features and benefits:

- ST9500 is a 2 channel 7-day full programmer designed to control 2 heating zones. Zoning a house not only helps make the heating system more energy efficient, but can also improve comfort conditions, as each zone will only be heated when required
- Additional features are identical to the ST9400 models (see page 5)

Product code	Functions
ST9400A1002	1-day programmer, having two on/off periods per day
ST9400C1000	7-day programmer, having three on/off periods per day
ST9400S1001	1-day programmer, with service interval reminder, having two on/off periods per day
ST9500C1015	2 zone, two channel programmer having three on/off periods per day

Classic design time controls

These classic compact models have straightforward slider and button controls and are ideal for controlling small domestic heating systems, where minimum control is required.

1-Day classic programmer ST699

7-Day classic programmer ST799

These classic time controls (ST699/799) are not Building Regulations (Part L) compliant and we recommend that they are used only as like for like replacements. Consideration should be given to upgrading the control system to a more modern compliant programmer, such as the ST9000 range on pages 4-6 of this brochure.

These controls come in either a 1-day programmer version (ST699) or a 7-day programmer version (ST799).

Both models feature:

- Classic controls that include a simple set of button or slider interfaces to control the time programme
- Compact size, can be wall mounted in places where space is at a premium
- Double insulated and suitable for surface or switchbox mounting
- Single channel operation for either heating or hot water
- Simple control choices – up to two on/off sequences can be programmed in a 24-hour period, with the same setting time for heating and hot water, repeated every 24-hours. Unit can be operated in a manual setting
- 12-hour display with AM/PM indication and has indicator lights that denote the timed period is active or unit is manually switched to on
- Reset button – return the settings to the original built-in programme
- Battery back-up included – in the event of a mains electricity failure, the programmed information will be retained for up to 7-days
- 1-day or 7-day model (The ST799 can be installed as a 5-day/2-day unit, to allow for weekday/weekend timed programmes)

Product code	Functions
ST699B1002	1-day programmer with separate outputs for heating and hot water
ST799A1003	7-day programmer with separate outputs for heating and hot water

Programmable Thermostats

Combine time and temperature to give sophisticated levels of comfort and control. The CM range of programmable thermostats is designed to offer a high level of comfort and control, in all domestic heating situations. There is a wide choice of models dependent on property type and timing control required.

CM900 Range of programmable thermostats

CM901 – 1-day programmable thermostat

CM907 – 7-day programmable thermostat

Both models:

- Can be used to control the heating circuit in a Sundial S or Y Plan, and are particularly well suited to control combination boiler installations or additional zones

Both models feature:

- Fault diagnostic mode and automatic summer/winter time change to assist in maintenance
- Two wire, volt-free connections, ideal for use with combination boilers
- Slim, ultra modern design with a large backlit LCD screen and time and temperature display, making it simple to programme and use
- Auto, manual, holiday, override and off modes. Continuous temperature monitoring, even if off provides frost protection capability
- Up to six independent time and temperature settings per day, allow heating profiles that suit the residents lifestyle to be programmed
- Optimum Start feature (see page 3) works out when your boiler needs to start, so that the temperature is at the right level when you wake up
- Programmed settings that are retained indefinitely in non-volatile memory if mains power is lost
- Battery powered (with low-power indicator) & burner on symbol
- Two wire, volt-free connections, ideal for use with combination boilers
- Optional remote sensor (wired) and outside temperature sensor (wired) to extend control system

CM Programmable Thermostat range	
Product code & Functions	
CM700 Series	CMT701A1014 1-day programmable thermostat complete with batteries, fixing screws and instructions
	CMT707A1029 7-day programmable thermostat complete with batteries, fixing screws and instructions
CM900 Series	CMT901A1044 1-day programmable thermostat complete with batteries, fixing screws and instructions
	CMT907A1041 7-day programmable thermostat complete with batteries, fixing screws and instructions

Additional sensors for CM900 series		
Both models	F42010971-001 wired outside sensor to enable outdoor temperature display only	F42010972-001 wired room sensor to enable remote temperature control

CM700 Range

CM701 – 1-day programmable thermostat

CM707 – 7-day programmable thermostat

Both models feature

- Works straight from the box, allowing for easy installation for most central heating systems. Two wire, volt free connections are ideal for use with combination boilers
- Scheduled maintenance alert, fault diagnostic mode and automatic daylight savings time change to assist in maintenance
- Slim, ultra modern design with a large backlit LCD screen with time and temperature displayed making it simple to programme and use
- Service interval warning
- Auto, manual, holiday, override and off modes. Continuous temperature monitoring even if off provides frost protection capability
- Up to four independent time and temperature settings per day
- Optimum Start capability (see page 3) works out when your boiler needs to start so that the temperature is at the right level for when you want to wake up
- Programmed settings are retained indefinitely in non-volatile memory if mains power is lost
- Battery powered (with low-power indicator) & burner on symbol

CM Range Specifications

Feature	CM907	CM901	CM707	CM701
Suitable for systems with				
Combi boilers	✓	✓	✓	✓
Regular boilers	✓	✓	✓	✓
System boilers	✓	✓	✓	✓
Multiple zones	✓	✓	✓	✓
User interface				
Line of Text display	✓	✓		
OK button	✓	✓	✓	✓
Large display			✓	✓
Extra large display	✓	✓		
Backlight	✓	✓	✓	✓
Programme				
Number of days	7	1	7	1
Number of temperature changes/day	6	6	4	4
Time setting resolution min	1	1	1	1
Temperature setting resolution °C	0.5	0.5	0.5	0.5

Feature	CM907	CM901	CM707	CM701
Special functions				
Automatic daylight savings time change	✓	✓	✓	✓
Holiday mode	✓	✓	✓	
Party function (timed override)	✓			
Day off function	✓			
Optimum Start	✓	✓	✓	✓
TPI control	✓	✓	✓	✓
Service reminder			✓	✓
Control output				
Relay output	✓	✓	✓	✓
Relay type	SPDT	SPDT	SPDT	SPDT
Relay load	8(3)A	8(3)A	5(2)A	5(2)A

Room & Frost Thermostats

Control the temperature of the property with room and frost thermostats. These wall mounted models provide sophisticated temperature measurement and accurate control.

Digital Thermostat

The DT90E battery powered digital room thermostat has been designed to provide automatic temperature control of gas or oil fired boiler systems, underfloor heating, electric heating and zoning systems.

DT90E Room Thermostat

- Slim modern design with a display featuring extra large easy to read text
- Energy saving TPI control (see page 3) allowing boilers to operate with greater efficiency
- ECO button for energy saving mode, giving timed setback or temperature boosts with countdown timer
- Simple user operation with one button up/down temperature adjustment over a 5 to 35°C set point range. The interface includes a room temperature inquiry and a heating on indicator
- Off setting with adjustable off set point so that frost protection can be achieved when in timed period
- Four year battery life with battery low warning
- Mains or low voltage switching
- Two wire, volt-free connections are ideal for use with combination boilers or heating zones
- Installer Mode that allows control to be matched to the system and user requirements, adapting minimum on or off times, set point controls etc
- Can be surface or wall box mounted

Digital Thermostat range	
Product code	**Functions**
DT90E1012	Digital room thermostat with Eco Energy saving feature

Mechanical Room Thermostat

The T6360 is a mains voltage room thermostat designed to give automatic temperature control of domestic wet central heating systems. It can be used to directly switch a circulating pump or boiler, or to operate spring return and motor open/motor close zone valves. The T6360 can switch electrical heating loads up to 16 amp and can also be used for cooling applications.

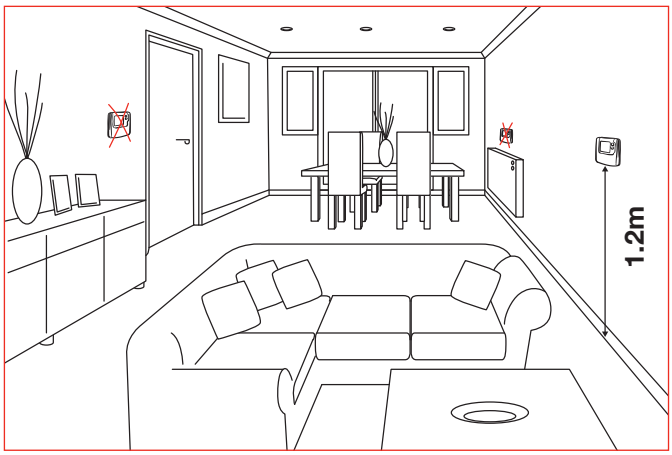
T6360B1028 Room Thermostat

T6360 Range Features:

- Double insulated, no earth wire required for operation
- Dual diaphragm temperature sensing element for accurate measurement
- Heat anticipator for close temperature control
- Simple dial for temperature setting
- 10 to 30˚C setpoint range
- Change over contact switching
- Easy to wire terminals with built-in conductor clamps to ensure wiring is retained securely for use in cooling and heating/cooling applications
- Suitable for surface or switch box mounting (fixing screws are supplied for either surface or flush mounting box)

T6360 Thermostat range	
Product code	**Functions**
T6360B1028	Standard model complete with heat anticipator and RFI suppressor to protect from external electrical interference.10 amp
T4360B1015	High current rated version with SPST switching and rated at 16A (resistive). This model is without a heat anticipator
T6360B1069	As standard model but with tamper-resistant cover and setting dial
T6360B1036	As standard model but with indicator lamp on front cover which is lit on a call for heat
T6360B1085	As standard model but with setting dial marked 1 to 5
T4360E1018	Model with temperature setback heater (fixed at 6°C) and SPST switching. Complete with anticipator heater and RFI suppressor

Positioning a room thermostat correctly



The performance of all room thermostats is affected by measured air flow across them. This air flow is dependent on the location of the room thermostat. If a room thermostat is poorly located, the air flow will not be representative of the rest of the room, and the temperature control will be adversely affected. Because every heating system must have a room thermostat, the decision of where to position it is very important. There are places where a room thermostat should never be found and require careful consideration before installing. The places that are left will be appropriate for locating the room thermostat.

So where should you put it? The diagram above gives good guidance on where a thermostat should be fitted. Generally, it is very difficult to suggest the perfect position, as every heating system is different.

Locate the room thermostat in the heated area (zone) requiring control on wall at a height of about 1.2m, where it has a free flow of air around it. But, do make sure that the thermostat is not suffering from any of the adverse factors in the following list.

Where you should never site a thermostat:

- In a room with another major heat source, e.g. an open fire, gas fire or cooker
- In an unheated room
- In a room fitted with radiator thermostats
- In direct sunlight
- Behind furniture or curtains
- In a warm draught
- In a cold draught
- Directly opposite a radiator, or other heat source
- Directly above a radiator, or other heat source (Don't forget that electrical appliances emit considerable amounts of heat. e.g. Television, DVD Player, Hi-fi etc)
- In a corner of two walls
- In a corner at the junction of the wall and ceiling

Some positions for a room thermostat may be perfectly acceptable, but exceptional problems may need to be considered.

On an external wall. The room thermostat may be on a cold wall, therefore overheating the living space. To overcome this, you may need to set the temperature at a lower point to compensate.

On a garage wall. Sometimes an electrician may surface mount the cable in the garage and then drill through the wall to access the back of the thermostat. This can allow a very cold draught directly into the back of the thermostat, reducing the sensed temperature and causing serious overheating of the living space. If the hole between garage and the property is competently filled, this should alleviate any temperature changing drafts.

It is, however, very easy to eliminate all of the inappropriate places to site the room thermostat.

Frost Thermostat

T4360 Frost Thermostat

The T4360 is a mains voltage frost thermostat designed to give automatic frost protection to boilers, pipework and the fabric of the building. The thermostat should be fitted in the coldest areas e.g. loft space, floor voids, garages etc.

- Dual diaphragm temperature sensing element for accurate temperature calculation
- 3 to 20˚C setpoint range
- Tamper proof cover
- Suitable for surface or switch box mounting
- Double insulated, no earth wire required for operation
- Change over contacts for use in cooling and heating/cooling applications
- Use in conjunction with low limit Pipe Thermostat (Frost Kit)

Frost Thermostat	
Product code	**Functions**
T4360A1009	Frost Thermostat
K42008628-001	Frost Kit including T4360 Frost Thermostat and L641B Low-Limit Pipe Thermostat

Wiring accessories

Designed to make wiring Honeywell products straightforward, these products help facilitate easier installation.

10 Way Junction Box

The 10 way Junction Box, designed to be used in conjunction with the numbered wiring diagrams provided in the Honeywell Wiring Guide. This is a universal box and can be used with any 5 amp rated wiring application.

- Compliant with current wiring regulations
- Strain relief on all entries
- Optimized sizing on terminals

Wiring Centre

The Sundial Plan Wiring Centre can be used with C, S and Y Plan systems and has single terminal connections which are clearly labeled. Provision is made for basic and pump overrun boilers.

- Dedicated terminal block for each system component
- One wire per terminal connection
- No wiring diagram or additional instructions required
- On the board fuse - plus spare
- Strong, fire retardant ABS box
- Cable clamps

Wiring Accessories	
Product code	**Functions**
42002116-002	10-way Junction Box
42005748-001	Sundial Plan Wiring Centre complete with fuse, spare fuse and cable clamps

Motorised Zone Valves

Controls the flow of hot water to the heat source (radiator or stored hot water).

The range of leading motorised zone valves provide a full set of solutions to suit all domestic heating installations.

The two port motorised valve has a wide range of flow control applications in domestic and light commercial central heating systems.

The motorised mid position valves have been designed to control the flow of water in domestic central heating systems, where both radiator and hot water cylinder circuits are pumped. They are typically suited for small to medium sized installations.

The motorised diverter valves are replacement products and have been designed to control the flow of water between heating and hot water in domestic fully pumped central systems.

All Models offer:

- Spring return action
- Power head, replaceable without draining down
- Manual lever for filling/draining down
- Quiet operation, minimal power consumption

Motorised Zone Valve Spares – Honeywell Original Equipment

A comprehensive range of Zone valve spares is available:

- **Replacement Zone Valve Head**
  All the features and benefits of Honeywell zone valves—
  *makes like for like replacement simple**
- **Replacement Zone Valve Motors**
  Original Honeywell Equipment,
  replacement Zone Valve Motors—
  Drive the valve with the same motor
- **Replacement Zone Valve Components**
  Honeywell Original Equipment, replacement components—
  designed for the job

For a full list of different zone valve models and options please see the Honeywell catalogue.

This can be downloaded from the useful documents section within the downloads tab at www.honeywelluk.com

Motorised 2 Port Zone Valve

V4043 Zone Valve

- Motor open operation

Motorised Mid-Position Valve

V4073A Mid-Position Diverter Valve

- Three position operation
- Provides electrical output to boiler and/or pump

Motorised Diverter Valve

V4044C Diverter Valve

- Two position operation

*excluding V4043B model

Cylinder, Surface Mount & Immersion Thermostats

Our mechanical thermostats for Sundial systems and Mechanical Aquastat thermostats suit a wide variety of water heating control applications. Aquastats are liquid filled, sensitive, fast response thermostats, available as either surface mount or immersion versions and with standard control or manual reset to suit a wide range of requirements.

Sundial Hot Water Thermostats

The L641A cylinder thermostat is designed for surface mounting on domestic hot water cylinders. It can be used to switch directly a wet central heating circulating pump or boiler, or to operate spring return and motor open/close zone valves.

L641A1039

L641A Cylinder Thermostat features:

- Ideal for general applications
- Suitable for use on non insulated and foam lagged cylinders
- Can be installed either vertically or horizontally
- Surface mounted – easy to fit – no need to drain the system
- Dial or screwdriver slot temperature adjustment
- Double insulated
- Cylinder strap & hooks provided

Cylinder Thermostat range	
Product Code	**Application**
L641A1039	Cylinder Thermostat, setting 40 to 80°C, Diff. 10°C with strap
L6190B1014	Cylinder Thermostat, setting 25 to 95°C, Diff. 12°C with strap
L641B1004	Controller, setting 10 to 40°C, min. setting 2°C. With pipe fixing springs. Used with T4360A thermostat for Frost Protection Kit
L641B1012	Controller, setting 50 to 95°C. With pipe fixing springs

The L641B is a control thermostat designed to provide high or low limit or frost protection in heating and hot water systems.

L641B1012

L641B Surface Mounted (Pipe) Thermostat features:

- Ideal for pumped systems
- Tamperproof adjustment option
- High & low limit models
- Bi-metal strip sensor
- Surface mounted
- Designed for high or low limit control or frost protection

The L6190B is a high limit control thermostat, which has a tamperproof concealed adjustment. The liquid-filled probe means highly responsive temperature control.

L6190 Control Thermostat features:

- Commercial construction with a wide temperature range
- Surface mounted – can be installed either vertically or horizontally
- Large adjustment dial for easy temperature setting

Single Aquastat Immersion Thermostats

The L6188 Aquastat range is primarily designed for use on water-filled heating and hot water systems in domestic and commercial premises.

The liquid filled temperature probe is designed to be inserted into a well in a heat exchanger or pipework. This ensures highly responsive temperature control.

There are three types available:

Model	Features
L6188A	Aquastat with external control dial
L6188B	Aquastat with tamper-proof internal setting
L6188C	Aquastat with tamper-proof internal setting and manual reset

L6188A

Single Aquastat Immersion Thermostats					
Part Number	**Temperature Range**	**Switching Differential (ºC)**	**Setting Method**	**Manual reset**	**Note**
L6188A2002U	25-95 ºC	4-10 adjustable	External Dial	No	With Well Assembly
L6188A2010U	40-110 ºC	4-10 adjustable	External Dial	No	With Well Assembly
L6188A2028U	25-95 ºC	4-10 adjustable	External Dial	No	1.5m Capillary
L6188A2036U	70-140 ºC	4-10 adjustable	External Dial	No	With Well Assembly
L6188B2018U	70-140 ºC	4-10 adjustable	Internal Setting	No	1.5m Capillary
L6188B2034U	25-95 ºC	4-10 adjustable	Internal Setting	No	With Well Assembly
L6188C2008U	70-140 ºC	-	Internal Setting	Yes	1.5m Capillary
L6188C2016U	25-95 ºC	-	Internal Setting	Yes	With Well Assembly

Aquastat Immersion Well Assembly	
45.900.409-003	Well Assembly for Single Immersion Aquastats. 1/BSPT thread. Length 105mm
45.900.409-007B	Well Assembly for Dual Immersion Aquastats. 1/2“ BSPT thread. Length 105mm

Dual Aquastat Immersion Thermostats

The L6191 Dual Aquastat combines both the controller and limit thermostats into one common unit, requiring only one direct immersion well. The controller and limit heads are provided with a jumper to minimise wiring.

The controller has an external adjustment, while the limit has concealed adjustment with manual reset feature.

- Fast thermal response
- Combined controller and limit
- Double insulated easy-to-wire terminals
- Optional gold-plated limit contacts for use in thermocouple/ECO applications

L6191B

Dual Aquastat Immersion Thermostats

Part Number	Thermostat	Temperature Range	Switching Differential (ºC)	Setting Method	Manual reset	Note
L6191A2007U	Control	40-110 ºC	4-10 adjustable	External Dial	No	With Well Assembly
	Limit	40-110 ºC	4	Internal Setting	No	
L6191A2015U	Control	25-95 ºC	4	External Dial	No	Gold Limit contacts for Thermocouple applications
	Limit	101 ºC (fixed)	4	Internal Setting	No	
L6191A2023U	Control	50-95 ºC	4	External Dial	No	Gold Limit contacts for Thermocouple applications
	Limit	101 ºC (fixed)	4	Internal Setting	No	
L6191B2005U	Control	25-95 ºC	4	External Dial	No	With Well Assembly
	Limit	40-110 ºC	-	Internal Setting	Yes	
L6191B2013U	Control	40-110 ºC	4-10 adjustable	External Dial	No	With Well Assembly
	Limit	40-110 ºC	-	Internal Setting	Yes	
L6191B2021U	Control	70-140 ºC	4-10 adjustable	External Dial	No	With Well Assembly
	Limit	70-140 ºC	-	Internal Setting	Yes	

Surface Mount Aquastat Thermostats

Two Aquastat thermostats are available:

The L6190B is a control thermostat, which has a tamperproof concealed adjustment. The liquid-filled probe means highly responsive temperature control, ideal for solid fuel applications.

The L6190C is a high limit thermostat which requires manual resetting each time the contacts break when temperature rises. Typically used on unvented cylinder applications.

L6190B **L6190C**

L6190 Surface Mount Thermostat Features

- Ideal for solid fuel applications
- Fast thermal response
- Large temperature range
- Double insulated
- Manual reset model
- Adjustable switching differential
- Surface mounted

Single Aquastat Immersion Thermostats

Part Number	Temperature Range	Switching Differential (ºC)	Setting Method	Manual reset	Note
L6190B2014U	25-95 ºC	12	External Dial	No	2m mounting strap
L6190B2030U	25-95 ºC	4-10 adjustable	Internal Setting	No	250mm mounting strap
L6190C2004U	25-95 ºC	-	Internal Setting	Yes	2m mounting strap

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