

# Product Catalogue

## Issue 20



BRITISH BUILT TO LAST

[draytoncontrols.co.uk](http://draytoncontrols.co.uk)

Life Is On

**Drayton**

by Schneider Electric

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07342 073598

AL	CB	CM	CO
E	EN	HA	IG
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NN	NW	RM	SS
SG	W		

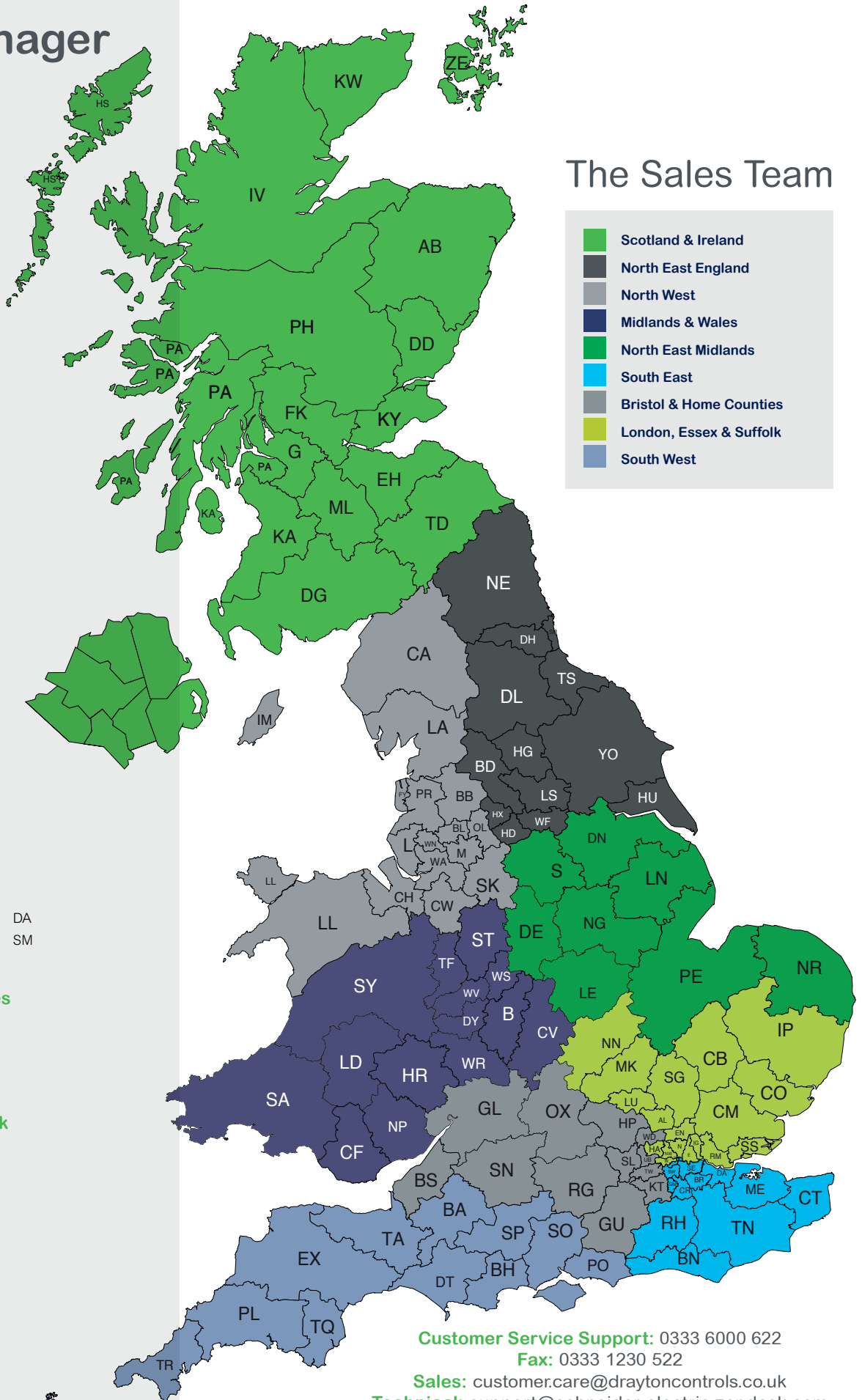
### South West

07967 777975

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## The Sales Team

- Scotland & Ireland
- North East England
- North West
- Midlands & Wales
- North East Midlands
- South East
- Bristol & Home Counties
- London, Essex & Suffolk
- South West



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## The Drayton Community

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# 2018 Part L

## Building Regulations - Boiler Plus

### Heating Controls

The Domestic Building Services Compliance Guide was amended in 2018. Informally referred to as 'Boiler Plus,' these amendments aim to improve the efficiency of installed heating systems, particularly through the installation of additional controls. The specific requirements that installers will now have to follow when replacing a boiler are as below:

1. All new installs and replacements of components installed in existing systems need to be fitted with time and temperature controls.

2. If the installation is a combination boiler there are some additional measures that need meeting. You'll need to select one of the following:

- Flue gas heat recovery
- Weather compensation
- Load compensation
- Smart heating controls

#### Unchanged requirements

##### For New systems:

1. It is a requirement for dwellings over 150m<sup>2</sup> to have at least two heating zones.
2. For dwellings under 150m<sup>2</sup> one heating zone is required.
3. TRVs (Thermostatic Radiator Valves) should be used on all radiators (except the room(s) with the room thermostat).
4. When changing a Hot Water Cylinder, a boiler interlock and separate timing for space heating and hot water is required.

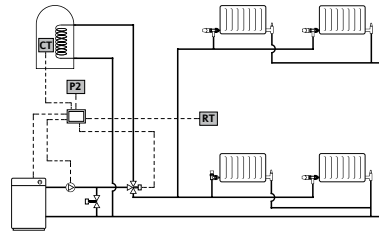
The Domestic Building Services Compliance Guide also contains specific recommendations for Good practice when only a part, or parts, of an existing system are being replaced, the following is considered good practice:

- i. Fit individual radiator controls such as TRVs on all radiators except those in a room with a room thermostat.

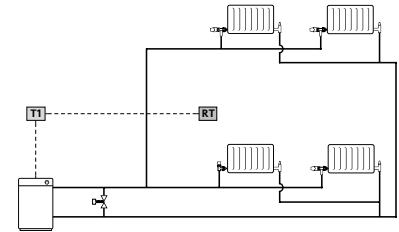
Example layouts for **new systems in dwellings up to 150m<sup>2</sup>** and for **replacement boilers in all dwellings** to ensure compliance.

#### Boiler with hot water cylinder

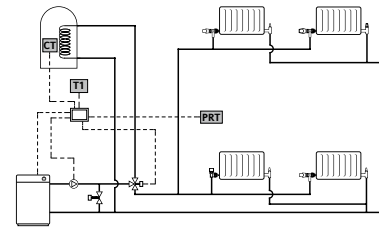
#### Combination boiler



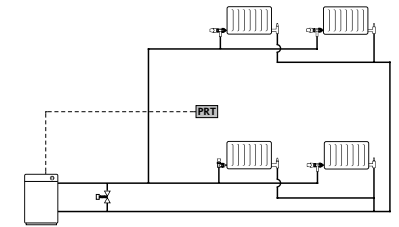
Programmer, room thermostat and TRVs



Timeswitch, room thermostat and TRVs



Programmable room thermostat and TRVs

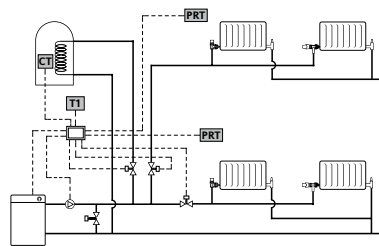


Programmable room thermostat and TRVs

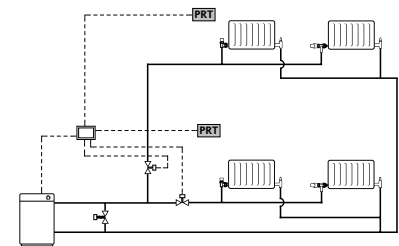
Example layouts for **new systems in dwellings over 150m<sup>2</sup>** to ensure compliance.

#### Boiler with hot water cylinder

#### Combination boiler

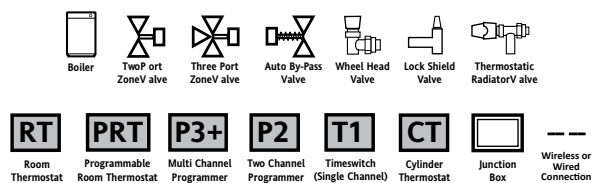


Timeswitch, room thermostat and TRVs



Programmable room thermostat and TRVs

#### Key To Symbols



These are just a small number of example layouts for the different systems impacted by the changes in Part L. For more information and examples of other layouts please see [www.beama.org.uk/heatingcontrols](http://www.beama.org.uk/heatingcontrols)



# Install Drayton controls to ensure your Boiler Plus compliance

Boiler Plus, which involved an update to the Domestic Services Compliance Guide came into effect last year. The revisions were introduced to help the government meet the EU's 2020 lower emission targets.

## WHY MAKE THESE CHANGES

The revisions set out new expectations for manufacturers and installers, to improve the energy performance standards for domestic heating in English homes, predominantly through the installation of heating controls.

### REQUIREMENT

All installations of gas boilers (both new and replacement) to have a minimum ErP efficiency of 92% and include both time and temperature controls.

### ADDITIONAL MEASURES

If the installation is a combi boiler (both new or replacement) ONE of these additional measures needs meeting.

- Flue gas heat recovery systems\*
- Smart controls featuring automation and optimisation
- Load compensation
- Weather compensation

## Drayton Compliance

### Weather Compensation

Wiser satisfies this measure because Eco Mode combines weather compensation and optimum stop



### Smart controls

Wiser satisfies this measure thanks to Eco Mode and Comfort Mode, both featuring optimisation and the 7 day scheduling within the app for automation.



Wiser Multi-zone or Thermostat Kits

### Load Compensation

Many Drayton products meet this measure due to the algorithms used in their software, including Wiser, the full Digistat range, plus the LP Clip-in controls



Wiser Multi-zone or Thermostat Kits

\*NB. Drayton doesn't offer a solution to meet the flue gas heat recovery measure since this is provided by the boiler manufacturers.

**The Drayton range of products offers a solution for both combi and non-combi boiler installations, meaning you can continue to fit the thermostats and time controls you know and love, safe in the knowledge that your installation will meet with the new Building Regulations. Visit the Boiler Plus page on our website for more information.**

# ErP What you need to know

The ErP regulations came into force in September 2015, defining the minimum energy performance criteria for a number of household products, including boilers, combination boilers, water heaters and other heating appliances up to 400kW.

ErP stands for 'Energy-related Products', and the ErP directive is a regulation set by the European Union. The regulations have been put in place in order to improve the efficiency of heating and hot water products.

The aim is to inform and educate homeowners about the efficiency of their appliances, by a placing a clearly displayed energy label on the product. Manufacturers must adhere to efficiency and emissions limits, which will be laid out in the ErP performance criteria.

## Energy labelling

As part of this, Europe-wide energy labelling requirements have been introduced for boilers, combination boilers, water heaters and other heating products in both the domestic and light commercial sectors up to 70kW.

## How will this affect the installer?

It is the installer's responsibility to ensure any heating appliance that they fit has the correct energy label, which is supplied with the item when it is purchased.

The installer needs to provide a package label too, when combining a heating appliance with another product such as a thermostat.

The package label must include the combined energy efficiency rating of the whole system, as opposed to just the individual ratings of each component.

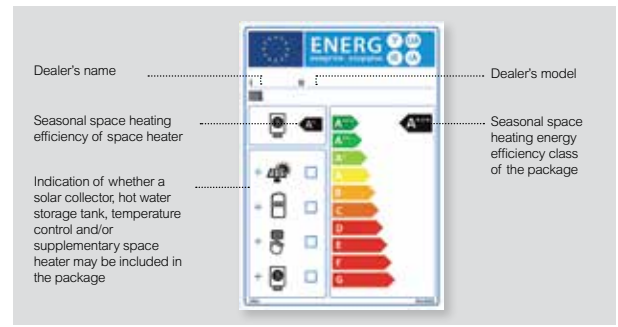
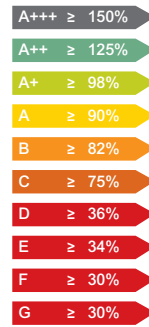
If the merchant is the one who puts together a package of products, they will be responsible for creating the package label. However, if the installer buys a suite of products separately, the onus is on them to produce the package label.

## Producing a package label

To calculate the overall package efficiency, the installer must record each product on a document known as a fiche. This document allows installers to clearly show their energy efficiency calculations, and to mark the package label with an arrow corresponding to the efficiency class.

It is then the installer's responsibility to alert the customer to the label and explain the calculations if required.

The package scale is defined as below.



The installer is responsible for providing the package label to the customer.

## Heating controls and packages

Installers need to recognise that heating controls have a big effect on boiler efficiency, and so this can affect the labelling requirements for packages.

An example of a simple package is a boiler and a thermostat, which is a very common installation in the UK. When creating the package fiche, the installer needs to complete the following calculation:

- Insert the energy efficiency % of the boiler, eg 88%
- Add the Temperature Control Class, eg 2%
- Add them both together = 90%
- 90% gives you an A rating for the package

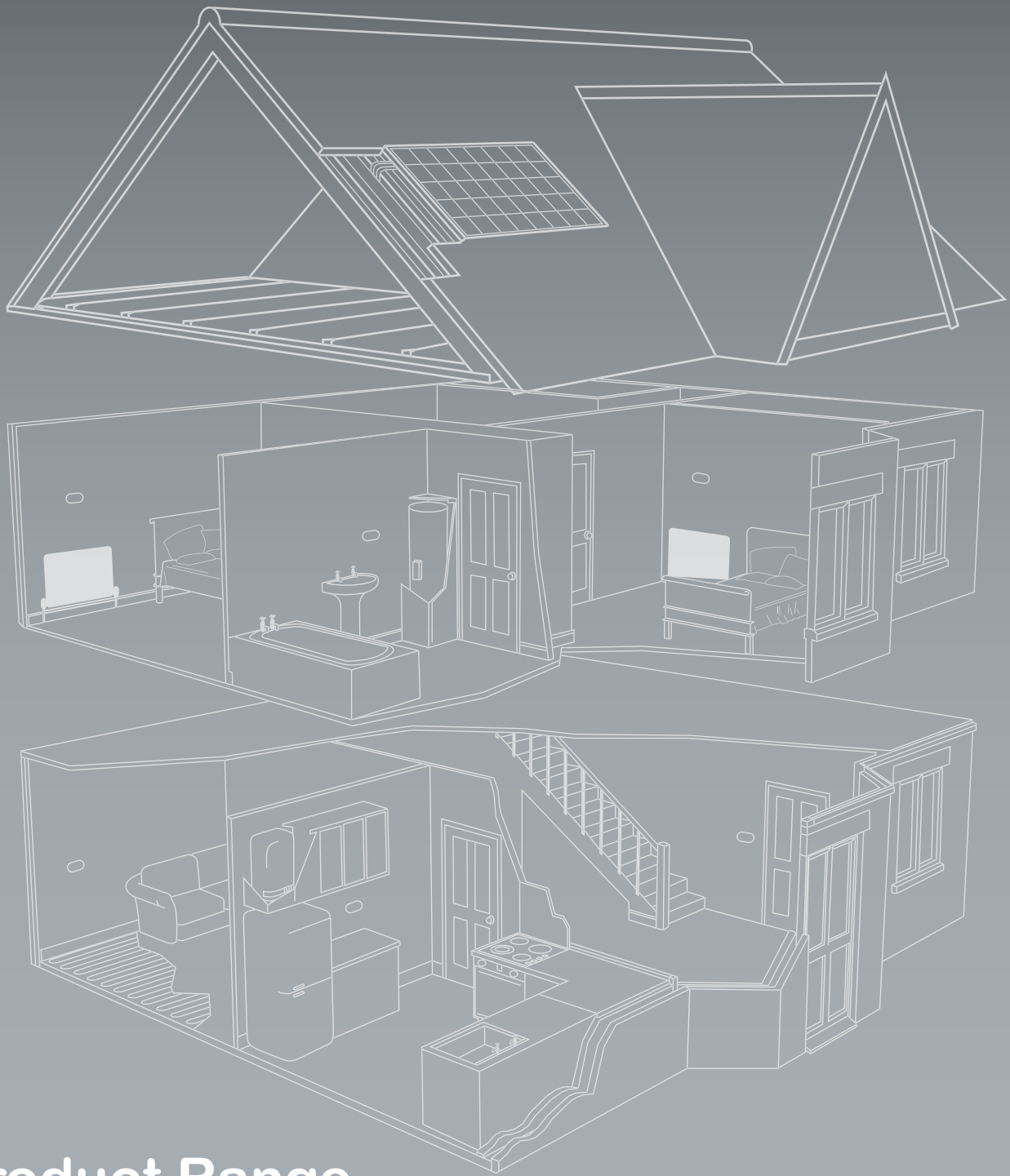
## Temperature control class

There are eight classes (1 to 8) with corresponding percentages that can be inserted into the package fiche. Drayton's range of thermostats span the whole range which means 1% - 5% is added to the fiche depending on the controls selected.



Drayton's role as a heating control manufacturer is to advise the installer of the class of each of its thermostats. The temperature class is found in the product instructions (in the box), in the catalogues and datasheets and on the website.





# Product Range

- Smart Thermostats
- Radiator Thermostats
- Room Thermostats
- Programmable Room Thermostats
- Time Controls
- Clip-in Controls
- Motorised Valves
- Radiator Valves
- Cylinder & Pipe Thermostats
- Control Packs
- Underfloor Heating Controls
- Accessories

## Drayton Product Range



# smart meet Wiser

**Introducing Wiser, the beautifully simple multi-zone heating system from Drayton. Easy to install from app to thermostat, Wiser is the altogether better, smarter, easier way to personalise home heating.**

Over 70 years of engineering expertise and manufacturing proficiency has culminated in the creation of Wiser, the heating system that makes smart technology simple and affordable.



## Your Wiser system

Wiser combines smart features with simplicity to bring you an altogether easier, wiser, better solution.

Wiser makes home personalisation affordable by allowing you to start with a smart room thermostat and build a full multi-zone system over time by adding radiator thermostats.

- Smart heating & hot water control
- Easy zoning with radiator thermostats
- Quick & easy installation
- Wireless thermostats
- An affordable & buildable system
- Schedule your electrical appliances by adding Wiser Plugs
- Boiler Plus compliant



# What makes Wiser wiser?

**Simplicity**  
Standard wallplate,  
wireless devices



**Flexibility**  
Up to 3 channels,  
16 rooms, 32 devices



**Multi-zoning**  
Build the perfect system by  
adding radiator thermostats



**App Control**  
Simple app with boost  
& Away Mode



**Eco Mode**  
Combines weather  
compensation & optimum  
stop for maximum savings



**Comfort Mode**  
Uses optimum start for  
maximum comfort



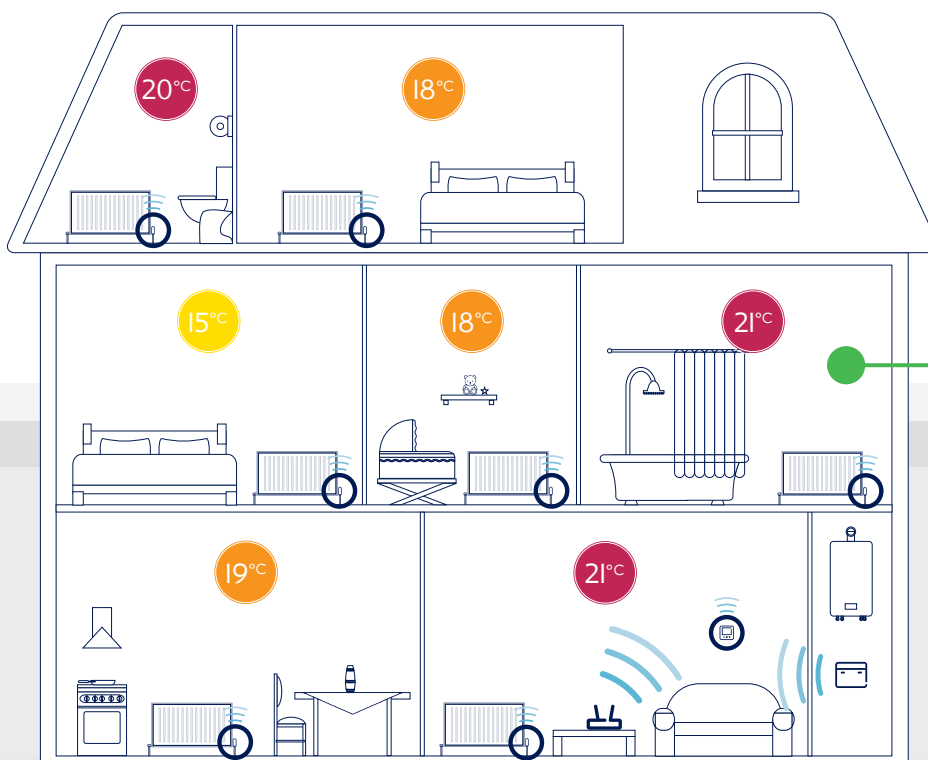
**Heat Report**  
View and compare temperatures  
across single or multiple rooms



**Geofencing**  
Enhanced control with  
geofencing through IFTTT



**OpenTherm®**  
Digital boiler interface enabling  
more efficient control











Set different  
temperatures in  
selected rooms



# The **Wiser** options

To make it simple we have bundled together the Wiser products into five core packs with the option to bolt on further devices to suit the property.

Product Pack	Pack Contents	Description	Part Number
<b>Wiser Thermostat Kit 1</b> 	1 x Room thermostat 1 x Thermostat stand 1 x Thermostat wall bracket 2 x AA batteries 1 x 1 channel Heat Hub <sup>R</sup> 1 x OpenTherm module 1 x Wallplate	One channel thermostat pack ideal for combi-boilers. Enables you to control heating via the Wiser Heat app.	WT714R9K0902
<b>Wiser Thermostat Kit 2</b> 	1 x Room thermostat 1 x Thermostat wall bracket 1 x Thermostat stand 2 x AA batteries 1 x 2 channel Heat Hub <sup>R</sup> 1 x OpenTherm module 1 x Wallplate	Two channel thermostat pack ideal for conventional systems. Enables you to control heating and hot water via the Wiser Heat app. Wire in existing cylinder thermostat for hot water control.	WT724R9K0902
<b>Wiser Thermostat Kit 3</b> 	2 x Room thermostats 2 x Thermostat wall brackets 2 x Thermostat stands 4 x AA batteries 1 x 3 channel Heat Hub <sup>R</sup> 1 x OpenTherm module 1 x Wallplate	Three channel thermostat pack ideal for properties with two heating zones. Enables you to control heating and hot water via the Wiser Heat app. Wire in existing cylinder thermostat for hot water control.	WT734R9K0902
<b>Wiser Multi-zone Kit 1</b> 	2 x Radiator thermostats 6x AA batteries 1 x Room thermostat 1 x Thermostat stand 1 x Thermostat wall bracket 1 x 1 channel Heat Hub <sup>R</sup> 1 x OpenTherm module 1 x Wallplate 2 x M30x1.5mm ring nuts 2 x Drayton valve adapters 2 x Danfoss RA valve adapters	One channel thermostat system with two radiator thermostats to start zoning your system. Suitable for combination boilers. Control the room thermostat and radiator thermostats via the Wiser Heat app. Add more radiator thermostats to create more independent zones.	WV714R9K0902
<b>Wiser Multi-zone Kit 2</b> 	2 x Radiator thermostats 6x AA batteries 1 x Room thermostat 1 x Thermostat stand 1 x Thermostat wall bracket 1 x 2 channel Heat Hub <sup>R</sup> 1 x OpenTherm module 1 x Wallplate 2 x M30x1.5mm ring nuts 2 x Drayton valve adapters 2 x Danfoss RA valve adapters	Two channel thermostat system with two radiator thermostats to start zoning your system. Suitable for conventional boilers. Set schedules for the room thermostat, radiator thermostats and hot water via the Wiser Heat app. Add more radiator thermostats to create more independent zones.	WV724R9K0902
<b>Radiator Thermostat</b> 	1 x Radiator thermostat 2 x AA batteries 1 x M30x1.5mm ring nut 1 x Drayton valve adapter 1 x Danfoss RA valve adapter	Add additional single radiator thermostats to any of the above packs to create more zones and benefit from maximum comfort and energy saving.	WV704R0A0902
<b>Room Thermostat</b> 	1 x Room thermostat 1 x Thermostat wall bracket 2 x AA batteries 1 x Thermostat stand	Additional room thermostat - add to rooms with radiator thermostats as a convenient way to view and change the room temperature. Works with all Wiser kits.	WN704R0S0902
<b>Wiser Plug</b> 	1 x Smart plug	Add up to 10 smart plugs to any system to enable remote scheduling of your home electrical appliances via the app.	WB704H1A0902

If radiator valves are not already present at the install, these are available to buy. See page 35.

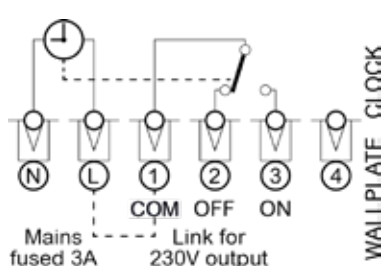
**ErP rating.** The rating values for all Wiser kits is Energy class VII = 3.5%

## Getting Technical

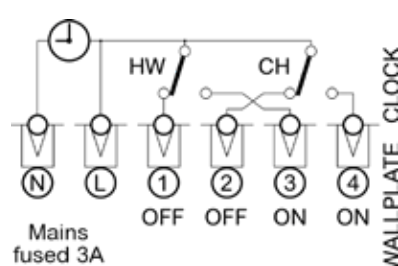
	Wiser Heat Hub <sup>R</sup>	Wiser Room Thermostat	Wiser Radiator Thermostat	Wiser Plug
Dimensions	148mm(w), 93mm(h), 31mm(d)	76mm(w), 76mm(h), 25mm(d)	93mm(h), 51mm (dia)	79.6mm(h), 67.9mm(w), 62.8mm(d)
Power supply	230V a.c. ±10% 50Hz	2x1.5V IEC LR6 (AA) alkaline batteries		230V a.c. ±10% 50Hz
Switch rating	2(1)A 230V a.c. each switch	N/A		13A Max / 3kW Max
Wiring	Fixed wiring only, to comply with current IET regulations (BS7671)	No wiring required		No wiring required
Interfaces	User: Push Button/LED; I/O: Mains Relays (1-3), Digital Boiler Interface	User: TFT display, touch buttons; I/O: None	User: Twist Cap, LED; I/O: None	User: Push Button/LED; I/O: Mains Relay
Operating temperature	0°C to 45°C			0°C to 40°C
Storage temperature	-10°C to 55°C			-10°C to 40°C
Maximum mounting surface temperature	N/A		93°C	N/A
Maximum water temperature	N/A		73°C continuous and 110°C max	N/A
Ingress protection	IP 30	IP 20	IP 30	IP X0
Ambient humidity (non-condensing)	Operating 25% to 90%, Storage 15% to 95%			5% to 85%
Set-point range	5°C to 30°C			N/A
Control accuracy	<0.6°C at 4°C/hour (with Room Thermostat)	Green Premium product		N/A
	<0.8°C at 4°C/hour (with Radiator Thermostat)			
Timing resolution	1 minute	N/A		
Temperature resolution	0.5°C			N/A
Ball pressure test	92°C	75°C		125°C
Pollution degree	2			
Software class	A			N/A
Without mains power	Display: LEDs off; Time: always kept; Programme times: always preserved	N/A		
Rated impulse voltage	2.5kV	N/A		2.5kV
Radio technology/frequency	2.4GHz (Bi-directional, Mesh)			
Radio signal range	30m			≤100m (in open air)
Mounting	Industry standard wall plate	Wall bracket or desk stand	Radiator Valve	Std. UK 3 pin socket
Maximum radio frequency power transmitted	+17dBm (50mW)	+13dBm (20mW)	+13dBm (20mW)	+8dBm (6.3mW)
Software version	6712093	6712090	6712089	V2.0
Relevant directives	Radio Equipment Directive (RED) 2014/53/EU, Batteries Directive 2006/66/EC, RoHS Directive 2011/65/EU			(RED) 2014/53/EU RoHS 2011/65/EU
Applied standards	EN60730-1; EN60730-2-7; EN60730-2-9, EN 300 328			EN 60950-1, EN 62479, EN 300 328, EN 301 489-1, EN 301 489-17
Sustainable offer status	Green Premium product			

## Wiring

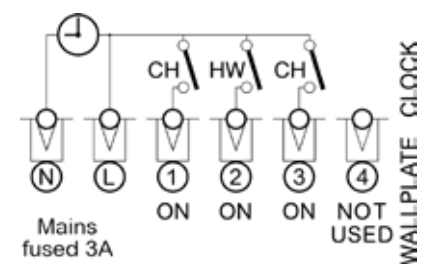
### Heat Hub<sup>R</sup> 1 Channel



### Heat Hub<sup>R</sup> 2 Channel



### Heat Hub<sup>R</sup> 3 Channel



# RTS

## Room Thermostat Range

The RTS range of thermostats utilise electronic sensing to provide accurate temperature control. Six models are available to suit all domestic applications including frost protection and combi boilers.



RTS2  
Led Indicator

RTS3  
Frost Thermostat

### Models

- RTS1: Standard model
- RTS2: With LED 'ON' indicator
- RTS3: Frost thermostat
- RTS4: Volt-free contacts (Suitable for combi boilers)
- RTS9: Volt-free heating/cooling change over switch with call for heat LED indicator

### Flexible Features

- Range limiting stops
- Set point locking
- Surface or conduit box mounting
- Double insulated

### Wiring:

Fig. 1 RTS1, RTS2, RTS3

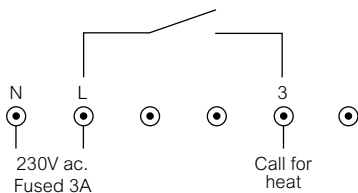
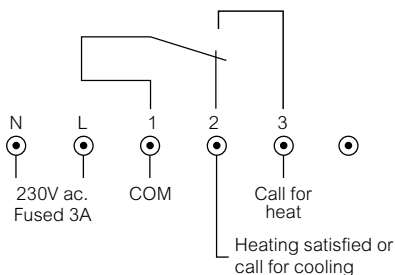


Fig. 2 RTS4, RTS9, RTS10



### Getting Technical

RTS1

Model:	RTS
Power supply:	230V ac 50Hz fused 3A
230V ac 50Hz fused 3A	Double insulated (no earth required)
Switch rating:	2(1)A 230V a.c.
Switch type: RTS1, 2 & 3: RTS4, 9 & 10:	S.P.S.T S.P.D.T. Volt-free
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).
Mounting:	Suitable for surface or conduit box mounting
Ambient temperature:	Operating 0°C to 40°C / Storage -20°C to 55°C
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% - 95%
Temperature range: RTS1, 2, 4 & 9: RTS10: RTS3 (Frost):	10 to 30°C 14 to 30°C 3 to 10°C
Control accuracy: RTS1, 2, 4, 9 & 10: RTS3:	<0.6°C at 4°/hour 1°C typical
Ball pressure test:	75°C
Pollution degree:	2
Energy class:	I = 1% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)
Relevant directives:	2014/35/EU Low Voltage Directive 2014/30/EU Electromagnetic Compatibility Directive 2011/65/EU RoHS Directive
Applied standards:	EN60730-1; EN60730-2-9

### RTS Room Thermostats

Product	Part No.	Product	Part No.
RTS1 SPST contacts	24001	RTS4 SPDT volt free contacts	24004
RTS2 SPST with LED indicator	24002	RTS9 SPDT volt free +LED	24030
RTS3 SPST frost thermostat	24003		



# CombiStat

## Room Thermostat

Using a simple, traditional dial, the CombiStat provides accurate temperature control, suitable for all 2 or 3 wire combination / conventional boilers (with current up to 6A).



### Application:

Suitable for 2 or 3 wire combination / conventional boilers

Ideal for 2 or 3 wire retro-fit applications

### Flexible Features:

- Range limiting stops
- Set point locking
- Surface or conduit box mounting
- Double insulated

### CombiStat

Product	Part No.
RTS8 CombiStat	24028

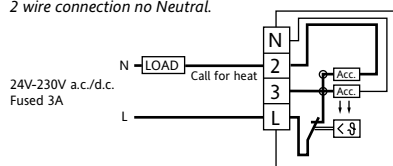
### Getting Technical

Model:	Combi-Stat
Power supply:	24-230V a.c./d.c. 50Hz fused 3A double insulated (no earth required)
Switch rating:	6(2)A 230V a.c./d.c.
Switch type:	S.P.S.T
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).
Mounting:	Suitable for surface or conduit box mounting
Ambient temperature:	Operating 0°C to 40°C / Storage -20°C to 55°C
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% - 95%
Temperature range:	10 to 30°C
Control accuracy:	1°C typical
Ball pressure test:	75°C
Pollution degree:	2
Energy class:	I = 1% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)
Relevant directives:	2014/35/EU Low Voltage Directive 2014/30/EU Electromagnetic Compatibility Directive 2011/65/EU RoHS Directive
Applied standards:	EN60730-1; EN60730-2-9

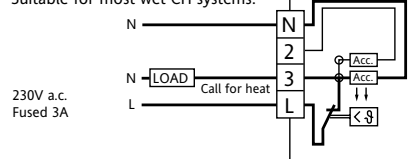
### Wiring:

2 wire connection. No neutral. **Load = 0.1A to 0.6A.**  
Suitable for most wet CH systems.

Note: Use this connection for gas CH systems, where there is no neutral wire, and follow set-up procedure. If current reading above 0.6 amps, wire as 2 wire connection opposite. 2 wire connection no Neutral.

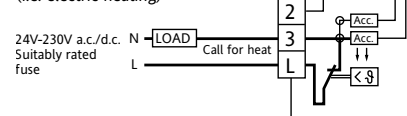


3 wire connection. **Max load = 2A.**  
Suitable for most wet CH systems.



2 wire connection. No neutral. **Load = 0.6A to 6A.**  
Typically for higher loads (i.e. electric heating)

24V-230V a.c./d.c. Suitably rated fuse



# Digistat+

## Wired Room Thermostat

Drayton's stylish Digistat+ with tactile, audible & visual feedback. Featuring a familiar dial control with a digital display to show that the temperature has been set accurately every time.

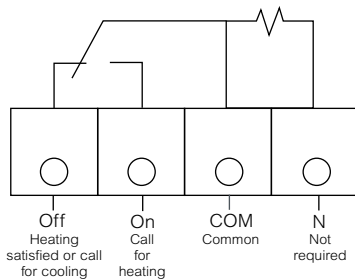
The product can be configured with a minimum temperature setting to protect the vulnerable.



### Digistat+ / +RF features:

- Conventional dial adjustment
- On/off load compensation
- Tactile dial
- 1°C setting steps
- Tactile & audible feedback via click of the dial
- Visual feedback via digital display
- Set-back feature
- Min/Max temperature setting
- Tamper-proof (set Min/Max the same)
- Battery powered
- Digital display situated above dial for ease of reading

### Wiring:



**FOR FIXED WIRING ONLY**

### Digistat+

Product	Part No.
Digistat+	30002

### Getting Technical

Model	Digistat+
Power supply:	2 X 1.5V IEC LR6(AA) alkaline batteries
Switch type & rating:	SPDT 2(1)A 12-230V a.c./d.c. Volt free
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).
Mounting:	Suitable for surface or conduit box mounting
Battery life:	2 years typical
Ambient temperature:	Operating 0°C to 40°C / Storage -20°C to 55°C
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% - 95%
Temperature range:	5 to 30°C
Temperature resolution:	1.0°C
Control accuracy:	+ 0.5K @ 20°C
Ball pressure test:	75°C
Pollution degree:	2
Energy class:	IV = 2% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)
Relevant directives:	2014/35/EU Low Voltage Directive 2014/30/EU Electromagnetic Compatibility Directive 2006/66/EC Batteries Directive 2011/65/EU RoHS Directive
Applied standards:	EN60730-1; EN60730-2-9

# Digistat+RF

## Wireless Room Thermostat

The Digistat+RF includes all the features of the Digistat+ with the added benefit of wireless connectivity.

Wireless thermostats are quick and easy to install saving you, and your customer, time and hassle.



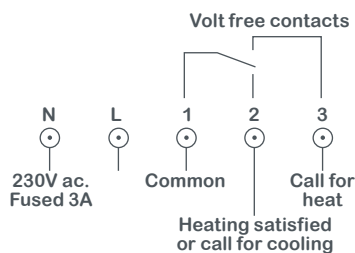
### Benefits of a cost effective wireless system:

The Digistat+ wireless system provides a cost effective solution to the problems encountered during the installation of a standard wired room thermostat.

### Consider the benefits of a wireless thermostat:

- No carpets and floor-boards to lift
- No damage to wall coverings
- No unsightly surface wiring
- Positioning no longer restricted to areas accessible by cable runs
- No brick or plaster work to chase out
- No damage to fabrics and furnishings in the process

### Wiring: SCR Receiver



### Digistat+ RF

Product	Part No.
Digistat+RF room thermostat & SCR	RF601
Digistat+RF room thermostat spare	31003
Digistat+ SCR spare	22149

### Getting Technical

Model	Digistat+RF	SCR (receiver)
Power supply:	2 X 1.5V IEC LR6(AA) alkaline batteries	230V a.c. 50Hz
Switch type and rating:	N/A	SPDT (voltage free) 2(1)A 230V a.c. or 24V a.c./d.c
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).	
Mounting:	Suitable for surface or conduit box mounting	Industry standard wall plate
Battery life:	2 years typical	N/A
Ambient temperature:	Operating 0°C to 40°C / Storage - 20°C to 55°C	
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% to 95%	
Temperature range:	5°C to 30°C	
Temperature resolution:	1.0°C	
Control accuracy:	+ 0.5K @ 20°C	
Ball pressure test:	75°C	
Pollution degree:	2	
Protection level:	IP30	
Software class:	A	
Radio frequency:	433 MHz	
Radio signal range:	30m typically. The range may be affected by the composition / density and number of walls between the thermostat and receiver.	
Energy class:	IV = 2% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)	
Relevant directives:	2014/53/EU Radio Equipment Directive 2006/66/EC Batteries Directive 2011/65/EU RoHS Directive	
Applied standards:	EN60730-1; EN60730-2-9 EN 300 220-2; EN 301 489-3	

# Digistat+1

## Wired Room Thermostat

Drayton's stylish Digistat+1. Featuring large buttons and an easy to read large and clear digital display to show that the temperature has been set accurately.

The product can be configured with a minimum temperature setting to protect the vulnerable.

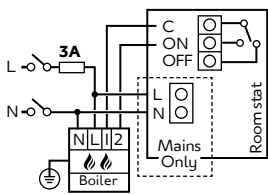


### Digistat+1/+1RF features:

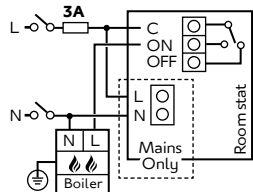
- Easy to use - only 4 buttons
- On/off load compensation
- Visual feedback via digital display
- Comfort feature
- Set-back feature
- Min/Max temperature setting
- Tamper-proof (set Min/Max the same)
- Battery powered
- Part L compliant (Part J in Scotland)

### Wiring:

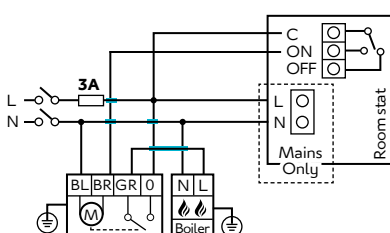
#### Combi Boiler



#### Basic Boiler



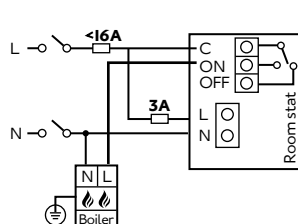
#### Basic Boiler with Zone Valve



### Getting Technical

Model	Digistat+1 (Battery)	Digistat+1 (Mains)
Power supply:	2 X 1.5V IEC LR6(AA) alkaline batteries	230V a.c. 50Hz
Switch type & rating:	SPDT 16(2)A 230V a.c. Volt free	
Min. recommended current:	10mA@24V a.c. (inductive)	
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).	
Mounting:	Suitable for surface or conduit box mounting	
Battery life:	2 years typical	N/A
Ambient temperature:	Operating 0°C to 40°C / Storage -20°C to 55°C	
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% to 95%	
Temperature range:	5 to 30°C	
Temperature resolution:	0.5°C	
Control accuracy:	+ 0.5K @ 20°C	
Ball pressure test:	75°C	
Pollution degree:	2	
Energy class:	IV = 2% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)	
Relevant directives:	2014/35/EU Low Voltage Directive 2014/30/EU Electromagnetic Compatibility Directive 2006/66/EC Batteries Directive 2011/65/EU RoHS Directive	
Applied standards:	EN60730-1; EN60730-2-9	

#### Electric Heat



### Digistat+1

Product	Part No.
Digistat+1 (Battery)	22192
Digistat+1 (Mains)	22193



# Digistat+1RF

## Wireless Room Thermostat

Digistat+1RF offers the same 'easy to use' features of Digistat+1 with the additional benefit of wireless connectivity making it even easier to install.



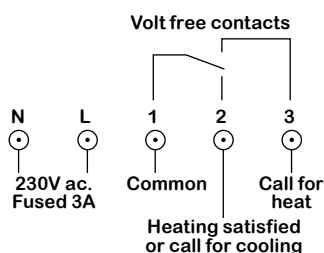
### Benefits of a cost effective wireless system:

The Digistat+ wireless system provides a cost effective solution to the problems encountered during the installation of a standard wired room thermostat.

### Consider the benefits of a wireless thermostat:

- No carpets and floor-boards to lift
- No damage to wall coverings
- No unsightly surface wiring
- Positioning no longer restricted to areas accessible by cable runs
- No brick or plaster work to chase out
- No damage to fabrics and furnishings in the process

### Wiring: SCR Receiver



### Digistat+1 RF

Product	Part No.
Digistat+1RF room thermostat & SCR	RF710
Digistat+1RF room thermostat spare	22190
Digistat+ SCR spare	22149

### Getting Technical

Model	Digistat+1RF	SCR (receiver)
Power supply:	2 X 1.5V IEC LR6(AA) alkaline batteries	230V a.c. 50Hz
Switch type and rating:	N/A	SPDT (voltage free) 2(1)A 230V a.c. or 24V a.c./d.c
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).	
Mounting:	Suitable for surface or conduit box mounting	Industry standard wall plate
Battery life:	2 years typical	N/A
Ambient temperature:	Operating 0°C to 40°C / Storage - 20°C to 55°C	
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% to 95%	
Temperature range:	5°C to 30°C	
Temperature resolution:	0.5°C	
Control accuracy:	+ 0.5K @ 20°C	
Ball pressure test:	75°C	
Pollution degree:	2	
Protection level:	IP30	
Software class:	A	
Radio frequency:	433 MHz	
Radio signal range:	30m typically. The range may be affected by the composition / density and number of walls between the thermostat and receiver.	
Energy class:	IV = 2% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)	
Relevant directives:	2014/53/EU Radio Equipment Directive Batteries Directive 2006/66/EC, 2011/65/EU RoHS Directive	
Applied standards:	EN60730-1; EN60730-2-9 EN 300 220-2; EN 301 489-3	

# Digistat +2/+3/Si

## Wired Programmable Room Thermostats

Drayton brings you a range of Digistat<sup>+</sup> programmable room thermostats. They are easy to install, easy to use and offer a supreme level of heating control and comfort. The range comes with a wealth of big pluses for both installers and users.



### Now with NEW Si features

#### Digistat+2/+3 & +2RF/+3RF features:

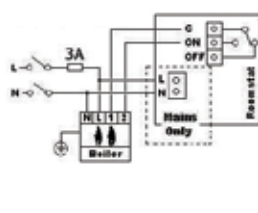
- Easy to use
- On/off load compensation
- Easy to programme using only 4 buttons
- Memory-saver programme and clock never needs resetting in the event of power loss
- Automatic summer, winter time change
- Pre-set clock
- 3 built-in standard pre-defined programmes
- A choice of 2, 4 or 6 time/temperature events/day (user selectable)
- Easy to read large LCD display (showing actual time and room temperature)
- Easy temperature override
- Holiday mode
- Manual mode
- Temperature limit locks (Min & Max)
- Tamper-proof (set Min/Max the same)
- 12/24 hour clock choice
- Contemporary design
- Part L compliant (Part J in Scotland)
- Suitable for combi boilers, electric heat, hydronic under-floor and zoning (Digistat<sup>+</sup>2 & Digistat<sup>+</sup>3)
- No wires needed between room unit & receiver (Digistat<sup>+</sup>2RF & Digistat<sup>+</sup>3RF)
- Suitable for combi-boilers and zone control (Digistat<sup>+</sup>2RF & Digistat<sup>+</sup>3RF)

### Getting Technical

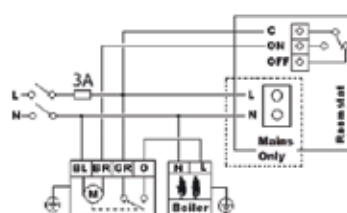
Model:	Digistat+3/+2	
	Battery	Mains
Power supply:	2 X 1.5V IEC LR6(AA) alkaline batteries	230V a.c. 50Hz
Switch type and rating:	SPDT 16(2)A 230V a.c. Volt free	
Min. recommended current:	10mA@24V a.c. (inductive)	
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).	
Mounting:	Suitable for surface or conduit box mounting	
Battery life:	2 years typical	
Ambient temperature:	Operating 0°C to 40°C / Storage -20°C to 55°C	
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% to 95%	
Temperature range:	5°C to 32°C	
Temperature resolution:	0.5°C	
Control accuracy:	+ 0.5K @ 20°C	
Timing resolution:	1 minute	
Ball pressure test:	75°C	
Pollution degree:	2	
Protection level:	IP30	
Software class:	A	
Energy class:	IV = 2% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)	
Relevant directives:	2014/35/EU Low Voltage Directive 2014/30/EU Electromagnetic Compatibility Directive 2006/66/EC Batteries Directive 2011/65/EU RoHS Directive	
Applied standards:	EN60730-1; EN60730-2-7; EN60730-2-9 EN 300 220-2	

### Wiring:

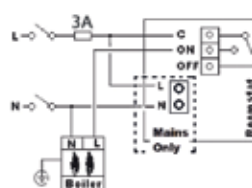
#### Combi Boiler



#### Basic Boiler with Zone Valve



#### Basic Boiler





# Digistat +2RF/3RF/Si

## Wireless Programmable Room Thermostats

In addition we have two wireless programmable room thermostats, each with an Si variant. Digistat+2RF/Si is 24 hour, while Digistat+3RF/Si offers 5-2day/7day scheduling.



### Benefits of a cost effective wireless system:

- No carpets and floor-boards to lift
- No damage to wall coverings
- No unsightly surface wiring
- Positioning no longer restricted to areas accessible by cable runs
- No brick or plaster work to chase out
- No damage to fabrics and furnishings in the process

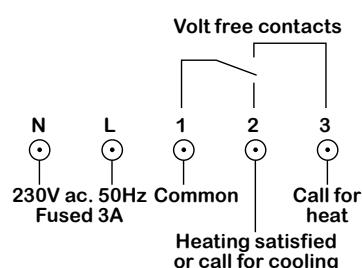
### NEW Si features

- Flexible service interval mode (reminder, reduced comfort or off)
- Adjustable warning period
- Adjustable service period
- Visual indication on LCD
- Selectable boost feature
- Selectable audible alarm
- Reset by installer selectable 4-digit code

### Getting Technical

Model:	Digistat +2RF/+3RF	SCR (receiver)
Power supply:	2 X 1.5V IEC LR6(AA) alkaline batteries	230V a.c. 50Hz
Switch type and rating:	N/A	SPDT (voltage free) 2(1)A 230V a.c. or 24V a.c./d.c
Wiring:	No wiring required	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).
Mounting:	Suitable for surface or conduit box mounting	Industry standard wall plate
Battery life:	2 years typical	N/A
Ambient temperature:	Operating 0°C to 40°C / Storage - 20°C to 55°C	
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% to 95%	
Temperature range:	5°C to 32°C	
Temperature resolution:	0.5°C	
Control accuracy:	+ 0.5K @ 20°C	
Timing resolution:	1 minute	
Ball pressure test:	75°C	
Pollution degree:	2	
Protection level:	IP30	
Software class:	A	
Radio frequency:	433 MHz	
Radio signal range:	30m typically. The range may be affected by the composition / density and number of walls between the thermostat and receiver.	
Energy class:	IV = 2% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)	
Relevant directives:	2014/53/EU Radio Equipment Directive 2006/66/EC Batteries Directive 2011/65/EU RoHS Directive	
Applied standards:	EN60730-1; EN60730-2-7; EN60730-2-9 EN 300 220-2; EN 301 489-3	

### Wiring: SCR Receiver



### Digistat +2/+3/+2RF/+3RF/Si

Product	Part No.	Si Part No.
Digistat+3 (Battery) 7 day / 5-2 day	22083	22104
Digistat+2 (Battery) 24Hr	22084	22102
Digistat+3 (Mains) 7 day / 5-2 day	22087	22105
Digistat+2 (Mains) 24Hr	22088	22103
Digistat+2RF (24hour) wireless system	RF700	RF703
Digistat+3RF (5-2day/7day) wireless system	RF701	RF704
Digistat+2RF (transmitter only) spare	22090	22111
Digistat+3RF (transmitter only) spare	22092	22110
Digistat+ SCR spare	22149	22149

# Time Controls





# SM1 & SM2

## Electro-mechanical Timeswitches & Programmers

The SM1 single channel timeswitch and SM2 twin channel programmer give style and ease of use to suit most domestic pumped and gravity heating systems.

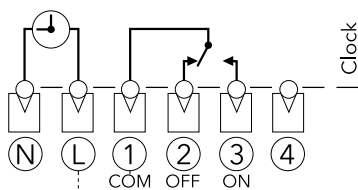


### Features:

- Single and dual channel
- Advance feature
- LED on indication
- Intuitive time setting for two ON/OFF periods per day
- Suitable for gravity and pumped systems
- All day option
- Industry standard wallplate

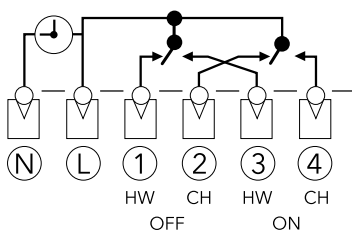
### Wiring:

#### Single Channel: SM1 Timeswitch



Link L and 1 for 230 V output

#### Dual Channel: SM2 Programmer



### Getting Technical

Model	SM1 and SM2
Power supply:	230V a.c. +10% -10% 50Hz
Switch rating:	2(1)A 230V a.c. each switch
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).
Mounting:	Industry standard wall plate
Output:	Programmers; 230V a.c. Timeswitches: according to supply to common terminal - volt-free contacts
Ambient temperature:	Operating: 0 to 45°C Storage: 0 to 50°C
Ambient humidity (non condensing):	Operating 25% to 90% Storage 15% to 95%
Programming resolution:	20 minutes
Ball pressure test temperature:	75°C
Pollution degree:	2
Rated impulse voltage:	2.5kV
Relevant directives:	2014/35/EU Low Voltage Directive 2014/30/EU Electromagnetic Compatibility Directive 2011/65/EU RoHS Directive
Applied Standards:	EN60730-1; EN60730-2-7

### SM1 and SM2

Product	Part No.
SM1	29205
SM2	29206

# Lifestyle LP and LPSi

## Electronic Timeswitches & Programmings

### Features:

- Easy to use
- Automatic summer/winter time change
- Memory saver – programme and clock never need resetting in the event of loss of power
- Easy to read, backlit screen
- Contemporary design
- Pre-set clock
- On/once/timed/off switching options
- 3 timing periods per day
- Programme advance buttons, with LCD indication
- Boost, giving 1, 2 or 3 hours with LCD indication
- Holiday Mode
- All programmers suitable for fully pumped or gravity heating systems
- Timeswitches are ideal for combination boilers and control of additional zones etc. (volt free contacts)
- Industry standard wallplate
- Part L Compliant (Part J in Scotland)
- Proven reliability

### Extra features for LPSi

- Service period selectable
- Reduces comfort level
- Warning period
- Visual indication on LCD
- Audible alarm
- Backlit display flashes providing visual warning
- Separate reset unit (sold separately)



With all the features of Drayton's market leading LP time controls, the LPSi features a service interrupter to alert householders when their boiler service is due. Thirty days before the boiler is due to be serviced the LPSi enters a warning period. During this time, the backlit display flashes providing a visual warning and the resident can read when the service is due on the display. All buttons/programming features are fully functional during this time. If the boiler is not serviced despite the warnings, the LPSi will then reduce the temperature level in the property to a safe but uncomfortable level, encouraging the resident to call an engineer to check their heating system.

### LP & LPSi Electronic time controls

Product	Timing Periods	Part No.
LP111 Timeswitch	24 hour	25477
LP711 Timeswitch	7 day	25478
LP811 Timeswitch	Universal Timeswitch (24hr, 5day/2day, 7day)	25463
LP112 Programmer	24 hour (common timings for heating & hot water)	25473
LP241 Programmer	24 hour (separate timings for heating & hot water)	25474
LP522 Programmer	5 day/2 day (separate timings for heating & hot water)	25475
LP722 Programmer	7 day (separate timings for heating & hot water)	25476
LP822 Programmer	Universal Programmer (24hr, 5day/2day, 7day)	25464
LPSi Reset Unit		25489
LP241Si Programmer	24 hour (separate timings for heating & hot water)	25490
LP522Si Programmer	5 day/2 day (separate timings for heating & hot water)	25491
LP722Si Programmer	7 day (separate timings for heating & hot water)	25492
LP111Si Timeswitch	24 hour	25493
LP711Si Timeswitch	7 day	25494

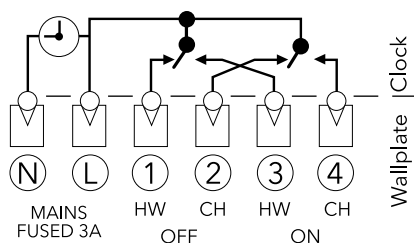
The Lifestyle LP and LPSi Range of programmers and time switches have a well established reputation for quality and reliability.

Now extra features make these popular products even easier to use for both installer and home-owner. The Lifestyle range has automatic summer/winter time adjustment, making the bi-annual summer/winter manual reset a thing of the past. In addition, the LP range has an accurate, preset clock, virtually eliminating the need for time adjustments through the product's life. The clock is pre-set at the factory, so installers can focus on completing other tasks instead of spending time setting or re-setting the clock during installation.

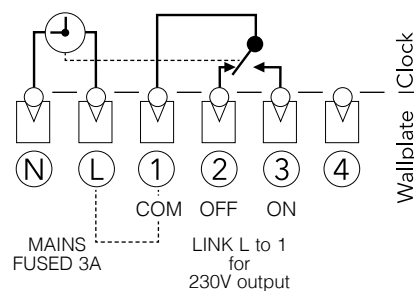


Available to suit most combination and conventional boiler systems, the time controls allow up to three time periods per day. LED's give an instant indication of the unit's operational status, while advance buttons allow additional control over the set programme. The LP range has large buttons and uncomplicated controls, and its streamlined design makes it one of the most visually appealing products in the market today. Lifestyle LP products are also supplied in Drayton's range of control packs for mid position or zone valve installations.

## Wiring: Programmer



## Wiring: Timeswitch



## Getting Technical

Model	LP and LPSi
Power supply:	230V a.c. +10% -10% 50Hz
Switch rating:	2(1)A 230V a.c. each switch
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).
Mounting:	Industry standard wall plate
Output:	Programmers; 230V a.c. Timeswitches: according to supply to common terminal - volt-free contacts
Ambient temperature:	Operating: 0 to 50°C / Storage: -20 to 50°C
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% to 95%
Timing resolution:	1 minute
Programming resolution:	1 minute
Ball pressure test temperature:	75°C
Pollution degree:	2
Software class:	A
Without mains power:	Display: Blank Time and Programme: Always retained
Rated impulse voltage:	2.5kV
Relevant directives:	2014/35/EU Low Voltage Directive 2014/30/EU Electromagnetic Compatibility Directive 2006/66/EC Batteries Directive 2011/65/EU RoHS Directive
Applied standards:	EN60730-1; EN60730-2-7

# LP Clip-in Controls

## For Worcester boilers

**Features:**

- Clip-in controls
- Suitable for Worcester boilers
- 4 pack options
- Simple wireless installation
- Wireless receiver built into the LP devices
- Signal strength indicator
- On/off load compensation
- 7 day programmes
- 3 on/off periods per day
- Automatic summer/winter time updates
- Pre-programmed on/off periods
- Dedicated advance buttons
- 12 or 24 hour back-lit digital display
- Holiday function
- Pre-wired with PCB connector

**LP20 Dual Channel Programmer**

The LP20 is a dual channel programmer that simply clips into the boiler providing control of central heating, and hot water if required.



Product	Part No.	Replaces Worcester product
LP20 Dual Channel Programmer	25039DR	7 716 192 038

**LP10RF Single Channel Programmer & Digistat +2RF**

Wirelessly bound, the LP10RF and Digistat+2RF provide control of heating and hot water. The 24 hour programmable room thermostat function of the Digistat+2 RF enables time and temperature control of the heating and the LP10RF offers 7 day hot water control.



Product	Part No.	Replaces Worcester product
LP10RF Single Channel Programmer & Digistat +2RF	RF560DR	7 716 192 052
LP10RF Single Channel Programmer spare	22589DR	8 716 106 667 0
Digistat+2RF thermostat spare	22090	-

**LP10RF Single Channel Programmer & Digistat +3RF**

Wirelessly bound, the LP10RF and Digistat+3RF provide control of heating and hot water. The Digistat+3RF enables flexible 5day/2day or 7 day time and temperature scheduling of the heating and the LP10RF offers 7 day hot water control.



Product	Part No.	Replaces Worcester product
LP10RF Single Channel Programmer & Digistat+3RF	RF561DR	7 716 192 053
LP10RF Single Channel Programmer spare	22589DR	8 716 106 667 0
Digistat+3RF thermostat spare	22092	-



## LP20RF DUAL CHANNEL PROGRAMMER & DIGISTAT +RF

The LP20RF is a dual channel programmer providing 7 day time control of heating and hot water. The LP20RF is wirelessly linked to the Digistat+RF which provides temperature control of the heating. The traditional dial on Digistat+RF makes it really simple for homeowners to adjust the temperature as required.

Product	Part No.	Replaces Worcester product
LP20RF Dual Channel Programmer & Digistat+RF	RF562DR	7 716 192 054
LP20RF Dual Channel Programmer spare	22590DR	8 716 106 669 0
Digistat+RF thermostat spare	31003	-



## Getting Technical

Model:	LP20	LP20RF Receiver	LP10RF Receiver	Digistat+RF Thermostat	Digistat +2RF Thermostat	Digistat +3RF Thermostat
Power supply:	24Vd.c. less than 65mA			2xAA 1.5V alkaline batteries		
Ambient operating temperature:	0°C to +50°C			0°C to +40°C		
Ambient storage temperature:	N/A			-20°C to 55°C		
Humidity operating range:	30 - 95% non-condensing up to 45°C			25 - 90% non condensing up to 45°C		
Temperature setting range:	N/A			5°C to 30°C	5°C to 32°C	
Control accuracy:	± 1 sec/day @ 25°C			+ 0.5°C @ 20°C		
Battery life:	N/A			approx. 2 years (with alkaline batteries)		
Battery backup time & date:	10 years min.					
Timing resolution:	1 minute					
Hot water &/or central heating programs:	7 days			N/A	1 day	7 days
Hot water pre-heat settings:	3 ON / 3 OFF			N/A		
Central heating settings:	3 ON / 3 OFF			N/A		6 per day
Radio frequency:	N/A	433 MHz				
Radio signal range:	N/A	30m typically. The range may be affected by the composition / density and number of walls between the thermostat and receiver.				
Mounting:	Boiler mounted			Suitable for surface mounting		
Wiring:	No wiring required					
Class of operation:	II			N/A		
Class of protection / Degree of protection:	IP20	IP24		IP30		
Pollution degree:	2					
Software class:	A					
Ball pressure test:	90°C					
Energy class:	N/A	IV = 2% (Acc. EU 811/2013, 812/2013, 813/2013, 814/2013)				
Relevant directives:	2014/53/EU Radio Equipment Directive 2006/66/EC Batteries Directive 2011/65/EU RoHS Directive					
Applied standards:	EN60730-1; EN60730-2-7; EN60730-2-9 EN 300 220-2; EN 301 489-3					

# Two Port & Mid Position Valves

## Motorised Valves

The Drayton 2 port, diverter and mid-position valves are available in 22mm and 28mm.

All models feature “snap-on” actuators and have industry-standard wiring and dimensions.



### Features:

- “Snap-on” actuators can be removed at the push of a button
- 2 Port, diverter and mid-position available in 22mm and 28mm
- 100% tight shut off
- Manual lever and valve position indicator
- Spring return
- Replaceable actuators
- Replaceable motors
- Simple industry-standard wiring
- Complete assembly easily replaces most makes

### Getting Technical

Model	Motorised Valves
Standard motor voltage	230V a.c. 5 watts
Valve operation 2 Port: Diverter: Mid-position:	Standard valves – energise to open Energise to open port A Heating, hot water or a combination of both
Operating time 2 Port: Diverter:	Motor 14 secs., spring return 6 secs. Motor 12 secs., spring return 6 secs.
Max. static pressure	8.6 bar
Max. differential pressure	0.7 bar
Water temperature	93°C max., 2°C min
Max. ambient temperature	52°C
Valve body	Brass forging
Connections	22mm compression; 28mm compression
Lead length	1 Metre
Switch ratings	24v – 230V a.c. 3(1)A

### Motorised Valves

Product	Part No.
<b>Complete valve and actuator</b>	
22mm 2 Port zone valve - 5 wire SPST switch	27100
22mm Mid-position valve - 5-wire SPST switch	27101
22mm 3 Port diverter valve - no switch	27102
22mm 3 Port diverter valve - 5 wire SPST switch	27111
28mm 2 Port zone valve - 6 wire SPDT switch	27205
28mm Mid-position valve - 6 wire SPDT switch	27206
28mm 3 Port diverter valve - no switch	27207

### Spare valve bodies

22mm 2 Port body	27600
22mm 3 Port body	27602
28mm 2 Port body	27601
28mm 3 Port body	27603
34" 2 Port body	27621
34" 3 Port body	27622
1" 2 Port body	27623
1" 3 Port body	27624

### Spare actuators

3 Wire Zone valve 230V actuator - no switch	27652
5 Wire Zone valve 230V actuator - SPST switch	27650
6 Wire Zone valve 230V actuator - SPDT switch	27653
3 Wire Zone valve 24V actuator - no switch	27654
5 Wire Zone valve 24V actuator - SPST switch	27656
5 Wire Zone valve 24V actuator - SPST switch	27657
Mid-position actuator 230V	27651

### Spare Motor

Synchronous motor pack 230V	27011
Synchronous motor pack 24V	06170002001

# Radiator Valves





# Thermostatic Radiator Valves (TRVs)

Drayton is a leading UK manufacturer of TRVs. Drayton has a comprehensive range to suit all applications from entry-level TRVs to top-of-the-range TRVs that offer the ultimate in accuracy, responsiveness and aesthetics.

## Why use TRVs?

Used to control the temperature in individual rooms, the TRV helps homeowners to be more energy efficient by preventing rooms from overheating, helping to reduce energy bills. Drayton TRVs all contain liquid-filled sensors to ensure optimum sensitivity, increasing the reaction speed to temperature changes, which in turn further reduces energy consumption and wastage.

According to research carried out at the University of Salford in 2013 adding TRVs to a heating system with an existing room thermostat will give a potential annual saving of £289.37.

### Key benefits:

- Keymark approved to EN215 ensuring quality, reliability, energy saving and safety
- Attractive design
- Full range of accessories; automatic by-pass valves, pushfit elbows and lockshield valves
- Drayton TRV heads are designed to be interchangeable with any other valve body in the Drayton TRV range
- All Drayton TRV sensing heads feature range limiting to prevent tampering
- Complete range to suit all budgets

### Valve body features common to all TRVs:

- Chrome surface-finish valves
- 15mm angle can be flow or return. mounted vertically or horizontally
- Supplied with compression fittings to EN1254-2

### Key features:

#### Classic & White TRV4

- Awarded Class I rating for efficiency
- Contemporary iconic design
- Ultra sensitive liquid filled chrome head
- Easy to clean – no dust traps
- Frost protection position
- Stylish all-chrome and anthracite options
- Chrome valve with presetting and non-stick internals

#### RT414

- Attractive head design
- Liquid-filled sensor
- Chrome valve with presetting and non-stick internals
- Frost and OFF positions
- Range-limiting pins

#### NEW RT212

- Entry-level offering
- Liquid sensor
- Chrome valve
- Compact head design
- Frost and OFF positions
- Range-limiting pins



**TELL**  
Thermostatic Efficiency Label

Manufacturer: Schneider Electric Controls UK Ltd  
Product: TRV4 and TRV4 All White  
Reg-No: 10624-20180102



www.tell-online.eu  
A label of United Valves  
European Valve Manufacturers Association

Top of the range TRV4



Mid Range RT414



Entry Level RT212





# RT414 & NEW RT212

## Thermostatic Radiator Valves

The Drayton TRVs are manufactured in our UK factory in Plymouth and are rigorously tested to conform to the Keymark EN215 standard which is recognised throughout Europe.

The 15mm angled valve can be mounted vertically or horizontally on flow or return.



### Common Features:

- Range limiting
- 8°C frost position
- Positive OFF position
- Double gland seal
- Reverse flow valve (15mm angle)
- White wheelhead caps available (part no. 07 35 123) – converts valve body into balancing/isolating valve to replace lockshield
- Chrome caps available, used to replace plastic decorator caps Part No 06222 09 00 01
- Range of adaptors available for plastic (PEX) and multi-layer pipe

### RT414

- Chrome valve with presetting
- Non-stick valve internals
- Radiators can be balanced from the TRV

### NEW RT212

- Entry-level TRV
- Chrome valve
- Liquid-filled sensor



### Getting Technical

Model	
Maximum sensor operating temperature	50°C
Setting numbers	1 to 6
* Frost protection	8°C
Temperature setting range	Approx. 12°C to 29°C
Sensitivity	0.22mm/°C

### EN215 Keymark Test

	RT212	RT414
Hysteresis	0.45K	0.35K
Water temp. influence	0.9K	1K
Differential pressure influence	0.15K	0.15K
Response time	20mins	22mins
Control Accuracy	0.6	0.6



The Keymark is a voluntary European quality mark for products and services, that demonstrates compliance with strict European Standards.

Particularly for consumers, the Keymark stands for real added value, it shows that an independent third party has certified the quality of these products.

The Keymark also complements CE marking in the case of those products for which this is a legal requirement, thus serving to boost consumer confidence throughout Europe.

## RT414

### Key Features:

- Accurate liquid-filled sensor
- Stylish head design
- Chrome valve with presetting and non-stick internals

### RT414 Thermostatic Radiator Valve

Product	Part No.
RT414 Sensing head only	10 10 099
RT414 with 15mm angle valve	10 10 015
RT414 with 15mm straight valve	10 10 115
RT414 with 15mm angle valve & lockshield	10 10 260
RT414 with 15mm angle DOTP lockshield	10 10 264



## NEW RT212

### Key Features:

- Entry-level model
- Accurate liquid-filled sensor
- Chrome valve

### RT212 Thermostatic Radiator Valve

Product	Part No.
RT212 with 15mm angle valve	08 09 015
RT212 with 15mm straight valve	08 09 115
RT212 with 15mm angle & lockshield	08 09 260
RT212 with 15mm angle & DOTP lockshield	08 09 264
RT212 with 10mm angle and lockshield	08 09 273



# TRV4

## Thermostatic Radiator Valve

Britain's best loved TRV4 range now includes a new Anthracite version to match the very popular anthracite radiators. The TRV4 Classic and TRV4 White have achieved the highest Class I rating for energy efficiency under the certification scheme of the European valve manufacturers association (TELL).

The rating is based on how quickly a TRV reacts to changes in room temperature; how effectively it maintains stable room temperature; and how it performs after changes in water temperature and system pressure. Replacing a less efficient TRV with the Drayton Class I rated TRV4 will show immediate and real saving in energy usage.

Over and above energy efficiency, the TRV4 sets the standards for design, performance and quality. The TRV4 range includes matching chrome lockshields and pushfit packs to suit most domestic and commercial heating systems.



### Getting Technical

TRV4 Classic and White Thermostatic Radiator Valve	Integral sensor	Remote sensor
Maximum sensor temperature	50°C	
Setting numbers	1 to 5 then MAX	1 to 7 then MAX
* Frost protection	Below 8°C	
Temperature setting range	1 to max = approx 10°C to 30°C	
Sensitivity	0.22mm/°C	
Hysteresis	0.4 K	0.6 K
Water temperature influence	0.8 K	0.4 K
Differential pressure influence	0.15 K	0.10 K
Response time	20 minutes	
Control accuracy	0.6	0.6

### Features:

- Contemporary slim-line design
- Ultra sensitive liquid-filled sensor
- Easy to clean smooth surfaces
- Half/full click stop settings
- Frost protection position
- Flow rate adjustment
- Four stylish options of Classic, Chrome, White and Anthracite
- Complete with chrome valve
- Non-stick internals
- Pre-setting as standard
- Double gland seal



TRV4 Classic and White only





TRV4 White



TRV4 Classic



TRV4 Chrome



TRV4 Antracite

Product	Part No.
<b>TRV4 White</b>	
Sensing head only	07 07 007
With 15mm angle valve	07 07 015
With 15mm straight valve	07 07 115
With 15mm angle valve and chrome lockshield	07 07 260

Product	Part No.
<b>TRV4 Classic</b>	
Sensing head only	07 25 006
With 15mm angle valve	07 05 150
With 15mm straight valve	07 05 151
With 15mm angle valve and chrome lockshield	07 05 180
Sensing head with 2m remote sensor	07 25 007
Sensing head with 6m remote sensor	07 25 008

Product	Part No.
<b>TRV4 Chrome</b>	
Sensing head only	07 03 013
With 15mm angle valve	07 05 150C
With 15mm straight valve	07 05 151C
With 15mm angle valve and chrome lockshield	07 05 174
With 15mm straight valve and chrome lockshield	07 05 175

Product	Part No.
<b>TRV4 Anthracite</b>	
With 15mm angle valve and chrome lockshield	07 05 210
With 15mm straight valve and chrome lockshield	07 05 211

## TRV4 Accessories and Adapters

Product	Part no.
16 x 2mm PEX/multi layer pipe adapter (5 Pack)	07 35 016
15mm to 8mm copper adapter (50 pack)	07 35 408
15mm to 10mm copper adapter (50 pack)	07 35 410
2m extension kit to mount head away from radiator	07 55 002
Tamper guard (6 Pack)	07 35 269
White manual wheel head/isolating cap	07 35 123
Presetting Key	07 35 162



Scan the QR code to view our TRV4 installation video

# Lockshields and Manual Valves

Suitable for domestic radiators and towel rails, available in chrome finish to suit the Drayton TRV range.

15mm angle lockshield with white cap 07 05 900



15mm straight lockshield with chrome cap 07 05 918

## Getting Technical

Model	Lockshield and Manual Valve
Maximum working pressure	10 bar
Maximum working pressure	3 bar (Push-fit)
Maximum differential pressure	0.6 bar
Recommended differential pressure	0.2 bar
Maximum ambient temperature	50°C
Maximum flow water temperature	120°C
Maximum flow water temperature	110°C (Push-fit)
Connections	Compression fittings meet EN 1254-2
Standards	Conforms to BS 2767-10

## NEW All chrome lockshields

Product	Part no.
15mm angle lockshield with chrome cap	07 05 917
15mm straight lockshield with chrome cap	07 05 918

## Chrome finish to match all Drayton TRVs

Product	Part no.
15mm angle lockshield with white cap	07 05 900
15mm angle lockshield with drain off tap	07 05 901
15mm drain off tap	07 05 902
10mm push-fit elbow	07 05 904
15mm push-fit elbow	07 05 905
15mm straight lockshield with white cap	07 05 906
10mm compression elbow	07 05 907
15mm compression elbow	07 05 908

15mm LS+integral DO part no 08 08 903



10mm PF elbow in chrome Part No 07 05 904

15mm DSO TP Chrome Part No 07 05 902



10mm Comp Elbow Part No 07 05 907  
15mm Comp Elbow Part No 07 05 908







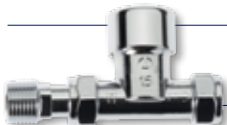
## EB Body Range

### Features:

- PES internals, these have proved resistant to sticking in systems that are installed in hard water areas
- Pre-setting as standard
- Attractive chrome finish
- Double gland seal, top seal replaceable without draining down
- Reverse flow 15mm angle body can be mounted on the radiator flow or return

## Metric Fittings

### Product Range

	Body type	Description	Part No.
	10mm angle	EB 10 A	07 15 182
	15mm angle	EB 15 A	07 15 180
	15mm straight	EB 15 S	07 15 181
	15mm corner angle left	EB 15 CAL	07 15 196
	15mm corner angle right	EB 15 CAR	07 15 197
	15mm angle with chrome cap	EB 15 AC	07 15 215
	15mm straight with chrome cap	EB 15 SC	07 15 216

# Commercial Radiator Controls

Drayton now offers a complete range of radiator controls for commercial applications. Typically using iron or steel pipe in imperial dimensions, these applications require a range of high-quality fittings with greater mechanical strength.

The Drayton range includes valves and lockshields for commercial applications as well as a RadPack containing TRV4 head, 1/2" angle valve and lockshield.

## TRV4 Commercial Packs



## Commercial Lockshields

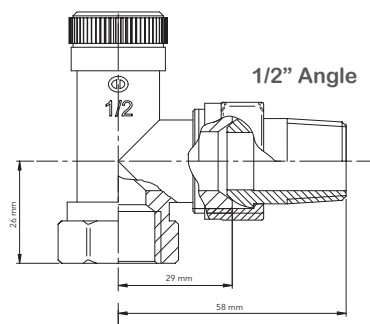
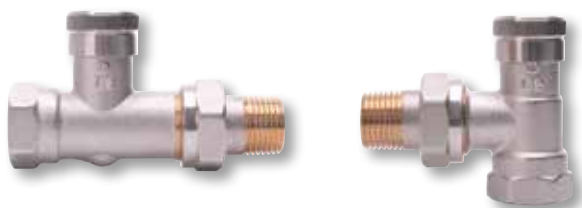
### Features:

- Superior mechanical strength in standard D-Series valve dimensions
- Satin-nickel finish to match EB valves
- 3/8" versions available on demand

## Getting Technical

Lockshields with manual adjustment via allen key

Finish:	Satin Nickel plated, EN12540
Maximum working pressure:	10 bar
Test Pressure:	16 bar
Maximum ambient temperature:	50°C
Maximum flow water temperature:	120°C



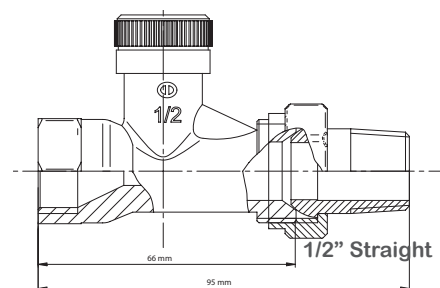
## Commercial Lockshields

### Product

TRV4 commercial radiator pack (TRV4 head with 1/2" angle valve and 1/2" angle lockshield)

### Part No.

1/2" Angle	08 08 920
1/2" Straight	08 08 921
3/4" Angle	08 08 924
3/4" Straight	08 08 925










## Max Flow (fully open) Kvs

		Connections		Flow Limitation: Kv-values (m <sup>3</sup> /h) for number of turns										
Type	Prod. No.	Sys.	Rad.	0.25	0.50	0.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	Kvs
DN 15 ang.	08 08 920	1/2"	1/2"	0.2	0.4	0.5	0.65	1	1.3	1.7	1.9	2.1	2.3	2.5
DN 15 Str.	08 08 921	1/2"	1/2"	0.2	0.4	0.5	0.65	1	1.3	1.7	1.9	2.1	2.3	2.5

## Commercial Valves







### Two-Pipe Systems

#### Product Range

	Body type	Description	Part No.	
	3/8" angle	EB 3/8" A	07 15 190	
	3/8" straight	EB 3/8" S	07 15 191	
	1/2" angle	EB 1/2" A	07 15 214	
	1/2" straight	EB 1/2" S	07 15 185	
	1/2" side angle	EB 1/2" SA	07 15 179	
	3/4" angle	EB 3/4" A	07 15 186	
	3/4" Straight	EB 3/4" S	07 15 187	

### Single-Pipe Systems

#### Product Range

	Body type	Description	Part No.	
	1/2" angle single pipe	EB 1/2" ASP	07 15 621	
	1/2" straight single pipe	EB 1/2" SSP	07 15 624	
	3/4" angle single pipe	EB 3/4" ASP	07 15 622	
	3/4" straight single pipe	EB 3/4" SSP	07 15 625	
	1" angle single pipe	EB 1" ASP	07 15 623	
	1" straight single pipe	EB 1" SSP	07 15 626	

# TRV Accessories

## Unlocking the secrets

Drayton have been manufacturing our market leading TRV4 in Britain for over 25 years. To ensure these really are a TRV for life, these accessories are now available to buy.



### Product Range

	Body type	Description	Part No.	
	Balancing key	To set flowrates and maintain valve health	07 35 162 (pack of 2)	
	Balancing key and gland seal kit	Replacement gland seals to maintain long-term valve health	07 35 009 (one key and 2 seals)	
	Range pin TRV4	Spare temperature range limiting pins	07 35 126 (pack of 10 pins)	
	Manual cap	To convert your TRV into a manual valve	07 35 123 (pack of 5)	
	Chrome decorative cap	To convert your TRV into a chrome manual valve	07 35 125 (pack of 2)	
	Decorator cap	To close the valve when decorating or removing a radiator	07 35 124 (pack of 5)	
	2m valve extension kit	To mount the TRV4 head away from the valve, for example when the TRV is sited behind curtains or furniture	07 55 002	
	TRV4 tamper guard	To prevent unwanted adjustment of the temperature setting in public spaces	07 35 269 (pack of 6)	

# Automatic By-Pass Valve

The automatic by-pass valve is designed to maintain a minimum flow rate in heating systems fitted with thermostatic radiator valves.

## Features:

- Maintains optimum flow
- Automatic operation
- Set and forget
- Ensures quiet operation
- High quality
- Reliable

## Application

The automatic by-pass valve is designed to maintain a minimum flow rate in heating systems fitted with thermostatic radiator valves. When all the TRVs are open the by-pass valve remains closed, allowing the full boiler output to circulate around the heating system.

As TRVs sense that selected room temperatures are reached and start to close, the by-pass valve starts to open, maintaining optimum flow through the boiler and so eliminating possible damage to the boiler and pump. Installation of the by-pass valve will minimise noise often experienced when flow through the boiler decreases.

## Getting Technical

Model	Automatic By-Pass Valve
Connections	22mm
Setting range	0.05 to 0.5 Bar
Working pressure	16 bar
Working temp.	120°C Intermittent

## Automatic Bypass Valve

Product	Part No.
22mm angle auto bypass valve	07 02 020

## Installation

The by-pass should be installed between the flow and return with flow in the direction of the arrow.

If a higher capacity is required for large installations it is possible to install two or more valves in parallel.

## Setting

The valve can be manually adjusted from 0.05 Bar to 0.5 Bar. A setting of 0.2 – 0.3 Bar is sufficient for most common installations. If the differential pressure is too low or the by-pass flow is too high, the pressure setting should be increased. If the differential pressure is too high or the by-pass flow too low, the pressure setting should be decreased.





# HTS3

## Cylinder Thermostat

The HTS3 cylinder thermostat controls the domestic hot water temperature to suit your lifestyle and gives energy savings when set between the recommended 60°C to 65°C. Positive On/Off for test purposes.



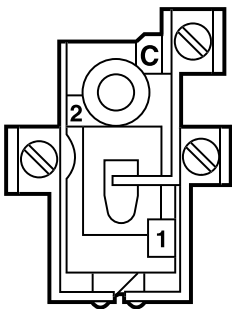
### Features:

- Easy fixing to hot water cylinders
- Suited to all systems
- Tamper resistant
- Double insulated

### HTS3 Cylinder Thermostat

Product	Part No.
HTS3	13007

### Wiring:



### Getting Technical

Model	HTS3
Sensing element	Bi-metal
Temperature range	50°C to 80°C
Switch rating	3 (1) A 230V a.c.
Switch type	S.P.D.T.
Differential	8°C approximately
Fixing	Plastic coated spring wire, hook and eye
Wiring	To comply with the current IET regulations

# Digistat+ CRF

## Wireless Cylinder Thermostat

Drayton's stylish wireless Digistat+CRF with tactile, audible & visual feedback. Featuring a familiar dial control with a digital display to show that the temperature has been set accurately every time.



- User adjustable Min/Max temperature setting
- Digital display situated above dial for ease of reading

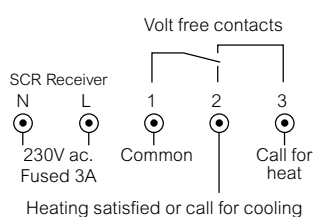
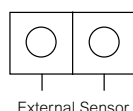
The Digistat+CRF cylinder thermostat controls the domestic hot water temperature to suit your lifestyle and gives energy savings when set between the recommended 60°C to 65°C.

### Features:

- Conventional dial adjustment  
Tactile dial
- 5°C setting steps
- Tactile & audible feedback via click of the dial
- Visual feedback via digital display
- Min/Max temperature setting
- Battery powered
- Digital display situated above dial for ease of reading

### Wiring:

Digistat+CRF Cylinder Thermostat



### Getting Technical

Model:	Digistat +CRF	SCR (receiver)
Power supply:	2 X 1.5V IEC LR6(AA) alkaline batteries	230V a.c. 50Hz
Switch type and rating:	N/A	SPDT (voltage free) 2(1)A 230V a.c. or 24V a.c./d.c
Wiring:	Designed for fixed wiring only, to comply with current IET wiring regulations (BS7671).	Ø 0.5mm <sup>2</sup> 2 core cable between sensor and thermostat
Mounting:	Thermostat: Suitable for surface or conduit box mounting Sensor: Direct mounting onto cylinder	Industry standard wall plate
Battery life:	2 years typical	N/A
Ambient temperature:	Operating 0°C to 50°C / Storage – 20°C to 55°C	
Ambient humidity (non condensing):	Operating 25% to 90% / Storage 15% to 95%	
Temperature range:	40°C to 70°C	
Control accuracy:	+0/-8°C	
Control algorithm:	On / Off	
Temperature resolution:	5°C	
Ball pressure test:	75°C	
Pollution situation:	Degree 2	
Protection level:	IP30	
Pollution class:	2	
Software class:	A	
Radio frequency:	433 MHz	
Radio signal range:	30m typically. The range may be affected by the composition / density and number of walls between the thermostat and receiver.	
Relevant directives:	2014/53/EU Radio Equipment Directive Batteries Directive 2006/66/EC, 2011/65/EU RoHS Directive	
Applied standards:	EN60730-1; EN60730-2-9 EN 300 220-2; EN 301 489-3	

### Digistat+CRF RF

Product	Part No.
Digistat+CRF cylinder thermostat & SCR & sensor	13616
Digistat+CRF SCR receiver spare	22598
Digistat+CRF transmitter spare	13618
Digistat+CRF sensor spare	13619

# PTS1

## Pipe Thermostats

The PTS1 Pipe Thermostat can be used in domestic or commercial installations for applications such as high or low limit.

It is typically used in conjunction with the Drayton RTS3 Air Frost Thermostat\*, to provide two stage frost protection for boilers and exposed pipework.



### Features:

- Frost protection solution when used in conjunction with the RTS3 air frost thermostat
- Changeover contacts
- Lockable setting knob
- High or low limit applications
- Conduit adaptor/gland seal
- Concealed cover fixing screw

### PTS1

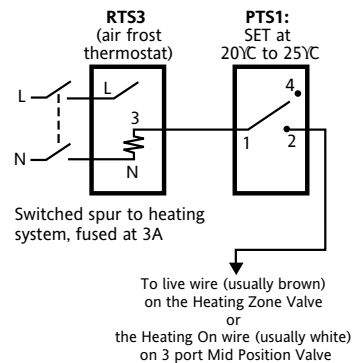
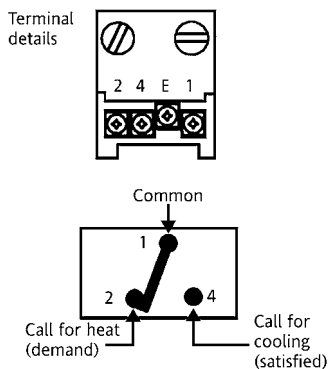
Product	Part No.
PTS1	03 01 260

### Getting Technical

Model	PTS1
Setting range	20°C to 90°C
Ambient temperature	-35°C to 120°C
Switching differential	8k
Sensitivity	1k/min
Switch type	SPDT (volt free)
Switch rating	15(2.5)A 230V a.c.
Sensing element	liquid
Knob locking device	Supplied
Fixing wire	Supplied
Enclosure protection rating	IP40

\* See page 12 for frost thermostat

### Wiring:



For boiler frost protection use PTS1 in conjunction with RTS3

# Tapstat

## Cylinder Controls

Self-acting tapstats control domestic hot water temperatures on gravity or pumped primary systems preventing scalding and fuel wastage.



### Features:

- High quality
- Self acting (non electric)
- Range limiting stops
- Remote sensor with 2m capillary
- Compression fittings for copper pipe
- Simple to install

### Tapstat Cylinder Controls

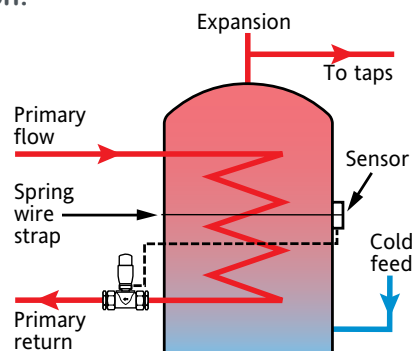
Product	Part No.
Tapstat Sensing head	07 45 012
15mm 2-way Tapstat (Pumped)	07 45 015
15mm 3-way Tapstat (Pumped)	07 45 016
28mm 2-way Tapstat (Gravity)	07 45 017

### Getting Technical

Model	Tapstat	
Max. static pressure	147 psi (10 bar)	
Max. primary flow temperature	100°C continuous 120°C intermittent	
Max. differential pressure*	15mm 2 way	59 psi (4 bar)
	15mm 3 way	29 psi (2 bar)
	28mm gravity	7 psi (0.5 bar)
KV value (fully open)	15mm 2 way	1.1
	15mm 3 way	1.1
	28mm gravity	4.6
Setting range	32°C to 72°C	

\* The differential pressures stated are maximum limits. It is not recommended that Tapstats are used at pressures above 8.8 psi (0.6 bar) as noise may be experienced in the system.

### Installation:



The gravity tapstat may be fitted in the primary flow line if preferred



## Biflo Control Packs

Part No.	Programmer	Room Stat	Cylinder Stat	Valve	Wiring Centre	ErP rating
PBBE66	LP241	RTS1	HTS3	22mm Mid Position*	LWC1	1%
PBBE66S	LP241Si	RTS1	HTS3	22mm Mid Position	LWC1	1%
PBBE669S	LP241Si	RTS9	HTS3	22mm Mid Position	LWC1	1%
PBBE68	LP241	RTS1	HTS3	22mm Mid Position*	LWC3	1%
PBBE86	LP522	RTS1	HTS3	22mm Mid Position*	LWC1	1%
PBBE86S	LP522Si	RTS1	HTS3	22mm Mid Position	LWC1	1%
PBBE869S	LP522Si	RTS9	HTS3	22mm Mid Position	LWC1	1%
PBBE88	LP522	RTS1	HTS3	22mm Mid Position*	LWC3	1%
PBBE96	LP722	RTS1	HTS3	22mm Mid Position*	LWC1	1%
PBBE969S	LP722Si	RTS9	HTS3	22mm Mid Position	LWC1	1%
PBBE98	LP722	RTS1	HTS3	22mm Mid Position*	LWC3	1%
SMBE362	SM2	RTS1	HTS3	22mm Mid Position	LWC1	1%
SMBE382	SM2	RTS1	HTS3	22mm Mid Position	LWC3	1%



## Twinzone Control Packs

Part No.	Programmer	Room Stat	Cylinder Stat	Valve	Wiring Centre	ErP rating
PBTE66	LP241	RTS1	HTS3	2 x 22mm 2-Port*	LWC1	1%
PBTE68	LP241	RTS1	HTS3	2 x 22mm 2-Port*	LWC3	1%
PBTE86	LP522	RTS1	HTS3	2 x 22mm 2-Port*	LWC1	1%
PBTE88	LP522	RTS1	HTS3	2 x 22mm 2-Port*	LWC3	1%
PBTE96	LP722	RTS1	HTS3	2 x 22mm 2-Port*	LWC1	1%
PBTE98	LP722	RTS1	HTS3	2 x 22mm 2-Port*	LWC3	1%
SMTE362	SM2	RTS1	HTS3	2 x 22mm 2-Port	LWC1	1%

Further pack options including untimed versions are available on request. \*For 28mm versions, add B to the end of the part number.





## Unvented Control Packs

Part No.	Programmer	Room Stat	Cylinder Stat	Valve	Wiring Centre	ErP rating
UWH62	LP241	RTS1	-	22mm 2-Port*	LWC1	1%
UWH72	LP112	RTS1	-	22mm 2-Port*	LWC1	1%
UWH82	LP522	RTS1	-	22mm 2-Port*	LWC1	1%
UWH92	LP722	RTS1	-	22mm 2-Port*	LWC1	1%



## Frost Protection Pack

Part No.	Room Stat	Pipe Stat
FPP1	RTS3	PTS1

Our packs are designed to provide you with all the controls you need for your heating system installation.

Covering new build to retrofit and suitable for single zone combi boiler installs to multi-zone heating & hot water, all in one handy box



## New Build Packs

Part No.	Thermostat	Valve	Programmer	Wiring Centre	ErP rating
PBTE110	2x RTS1	2x 22mm 2-Port	-	LWC3	1%
PBTE112	2x Digistat+3 mains	2x 22mm 2-Port	-	LWC3	2%
PBTE410	2x RTS1	2x 22mm 2-Port	LP711	LWC3	1%
PBTE412	2x Digistat+3 mains	2x 22mm 2-Port	LP711	LWC3	2%
PBTE413	2x Digistat+3 battery	2x 22mm 2-Port	LP711	LWC3	2%
PBTE910	2x RTS1	2x 22mm 2-Port	LP722	LWC3	1%

Further pack options including untimed versions are available on request. \*For 28mm versions, add B to the end of the part number.

# TS Ultra Thermal Actuator

The ultimate in thermal actuators with more stroke, more power, faster response and compact enough to fit on the latest manifolds with 40mm valve centres.



TS Ultra

TS Ultra+

## Features:

### TS Ultra – the entry-level model

- 360° valve status indication
- IP44
- Closing force 100N
- Stroke 5.5mm
- Fast response – opening to 4mm in 2 minutes
- 230V and 24V options

### TS Ultra+ - the ultimate in design and performance

All the features of the TS Ultra and:

- IP55 ingress protection
- Closing Force 120N
- Plug-in cable
- Manual feature
- Suitable for mounting upside-down

## Getting Technical

Type	TS Ultra (230 V)	TS Ultra (24 V)	TS Ultra+ (230 V)	TS Ultra+ (24 V)
Supply voltage	230V ~ 50Hz	24V	230V ~ 50Hz	24V
Power consumption	2.5 W		2.5 W	
Actuator type	Open/closed		Open/closed	
Valve type	Normally closed		Normally closed	
Cable	Fixed cable, 2 x 0.75 mm <sup>2</sup> , 80 cm long, free cable ends with end sleeves		Plug-in cable, 2 x 0.75 mm <sup>2</sup> , 100 cm long, free cable ends with end sleeves	
Ingress protection	IP44		IP55	
Stroke	5.5mm		5.5mm	
Valve connection	M 30 x 1.5mm		M 30 x 1.5mm	
Dimensions	82 x 39 x 54mm (h x w x d)		82 x 39 x 54mm (h x w x d)	
Storage temperature	-20°C to 60°C		-20°C to 60°C	
Operating temperature	0°C to 50°C		0°C to 50°C	
Closing force	100 N		120 N	

Product	Part No.
230V TS Ultra+	0481 1105 1017
24V TS Ultra+	0482 1105 1017
230V TS Ultra	0483 1005 0817
24V TS Ultra	0484 1005 0817

# Wiring Centres

Wiring centres provide a safe and convenient method of system wiring. All controls can be neatly connected making operational testing a simple task.



### Features:

- Easy to use
- Simplifies wiring and circuit testing
- Suited to all popular heating systems
- A safe means of connection
- Large terminals
- Easy access
- Complies with BS EN 60670-22

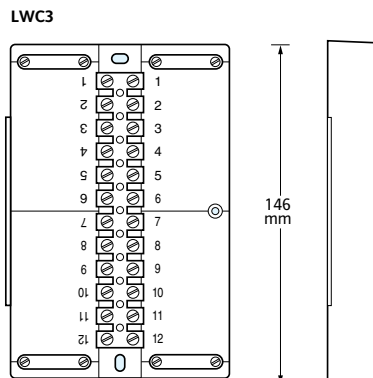
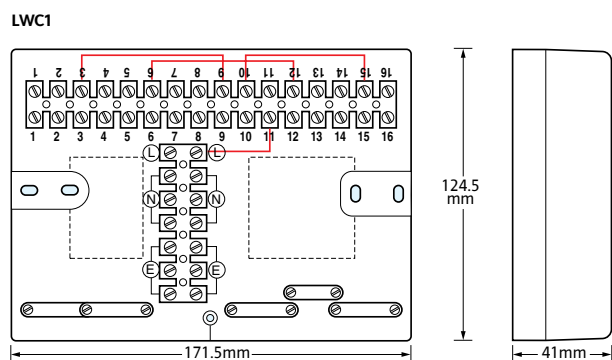
### Wiring Centres

Product	Part No.
LWC1 Wiring Centre	28001
LWC3 Junction Box	28003

### Getting Technical

Model	LWC1	LWC3
12 way junction box	-	✓
16 way wiring centre	✓	-
Manufactured in flame-retardant plastic	✓	✓
Cable clamps supplied	✓	✓
Top or bottom cable entry bays	-	✓
Large diameter wiring terminals	✓	✓
Wiring links provided to suit most systems	✓	-
Cable identification labels included – with full installation instructions	✓	-
Terminal rating	10A	10A

### Dimensions:



# Drain Easy Kit

A valuable time-saving kit to avoid system draining for repairs and replacements on open vented 'wet' central heating systems.

## Drain Easy kit

The Drayton Drain Easy kit comprises two durable rubber plugs, a tie and a radiator bleed key.

It is designed to facilitate removal of valves, repair of leaks etc. on an open vented wet central heating system without draining down, consequent loss of inhibitor, and risk of major air locks during refilling. It can only be used where the header (feed and expansion) tank is no more than 30ft (9 metres) above the lowest point in the system and only one break in the system is being made at a time.

The most important benefit of using the Drain Easy kit is to allow easy replacement of standard radiator valves with energy-saving TRVs. Thermostatic radiator valves such as the Drayton TRV4 offer substantial reductions in running costs over normal valves, coupled with improved comfort as room temperatures may be set individually.

It is also a valuable emergency kit which will allow various repair and maintenance jobs such as the replacement of failed pipes, valves, radiators etc. to be undertaken quickly and easily.

## Drain Easy Kit

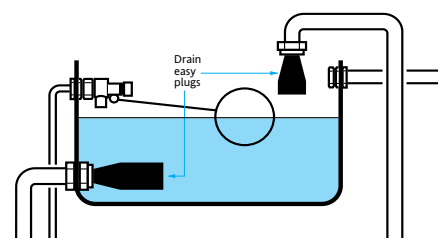
Product	Part No.
Drain Easy Kit	07 01 165



## Fitting

The specially-shaped Drain Easy plugs are fitted into the cold feed and the expansion pipe of the feed and expansion tank.

After releasing some inherent pressure in the system with the bleed key supplied, and building up a vacuum by allowing water to flow for about 1 minute, any single item such as a pump, valve or radiator may be removed without further loss of system water/inhibitor.



## Specification

### Kit contents

Two Rubber male plugs, radiator bleed key, 1m tiecord, full instructions.

### Materials

Plugs: Ethylene propylene  
Bleed key: Brass stamping

### Limitations

- Suitable for 15mm and 22mm pipework.
- Not to be used on direct, unvented or primatic systems or auto-vented systems.
- Not to be used on systems with a header tank more than 30ft (9 metres) above the systems lowest point.
- No lubricating oils to be applied.
- Only one section of pipework can be disconnected at a time e.g. No three-way valves – one two-way disconnection only.

# Décor Plate & Spacer Box

## Décor Plate Features:

- Simple to install
- Reduces the need for redecoration
- Covers the spaces left by the majority of competitor models
- Two-part construction allows fixings to be invisible
- Can be used in conjunction with "Spacer Box"

## Spacer Box Features:

- Simple to install
- Suitable for retrofit of LP, SM range & Wiser
- Suitable for single or double electrical wiring boxes
- Universal back plate fits directly onto using fixings provided
- Can be used in conjunction with "Décor Plate"



## Décor Plate

The decoration plate provides a simple and effective means to cover "bare patches" left in the décor when replacing other makes of time controls. It is designed with a two-part construction allowing all fixings to be invisible providing a clean and professional finish.

## Spacer Box

The Spacer Box provides a convenient way to house all wiring in installations where the existing programmer has been used as a wiring centre. The Spacer Box is also effective in installations where tiling is to be fitted around the time control allowing removal of the control to still be achieved.

## Décor Plate & Spacer Box

Product	Part No.
Décor Plate and Spacer Box	28011
RTS Pattress	24022



# Sustainability and Drayton's journey to net zero

**Net zero refers to achieving an overall balance between emissions produced and emissions taken out of the atmosphere of the earth by an organisation. As part of Schneider Electric, Drayton's aim for the site in Plymouth is to be carbon neutral in our ecosystem by 2025.**

Health & Safety is at the heart of the Drayton sustainability story, it's vital that we care for our people, customers and sites and strive for zero toxicity in our operations and products.

Schneider Electric is classed as an 'Industry Leader' by the Dow Jones Sustainability World and Europe. These high standards are evident in the factory in Plymouth where these certificates have been awarded:

- ISO9001 Quality Management System
- ISO14001 Environmental Management System
- OHSAS18001 Occupational Health & Safety Management System
- ISO50001 Energy Management System



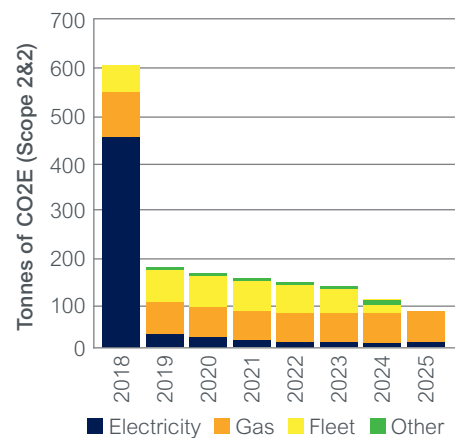
But Drayton's commitment to recycling goes beyond the requirements of the ISO14001 standard: since 2018 they have been operating with 'Zero to Landfill' - none of their waste ends up in landfill sites; everything is reused or recycled.

Energy usage is a major cause of carbon emissions and our aim is to reduce these by 10% year-on-year to reach the target of being carbon neutral by 2025. This will be achieved by using electricity from renewable sources, ensuring our car fleet work on EV charging and maximising the use of online or digital meetings.

Thanks to our continuous product and material improvements we now use only 100% recycled pallets and cardboard and we are working towards a fully circular supply chain economy. Our Green premium programme is ongoing and these products help our customers to save on their carbon footprint too, by using less gas. Work is also ongoing to remove all single use plastics from the operation of the factory, and where this is not possible, due to alternatives being unavailable, all plastic used in packing on site will contain a minimum of 30% recycled material.



Plymouth Carbon Footprint



At Drayton we are continually improving and adding to our extensive range of products.

Keep up to date on our latest innovations by visiting [www.draytoncontrols.co.uk](http://www.draytoncontrols.co.uk)

# Principles of Intelligent Delayed Start

## Benefits of Intelligent Delayed Start

- Can save in excess of 10% of heating fuel
- SAP and NHER rated
- Unique self-learning software that matches delay times to house and heating system characteristics
- Helps reduce harmful CO<sup>2</sup> emissions
- Adapts start up time to suit heating and building conditions
- No extra programming required

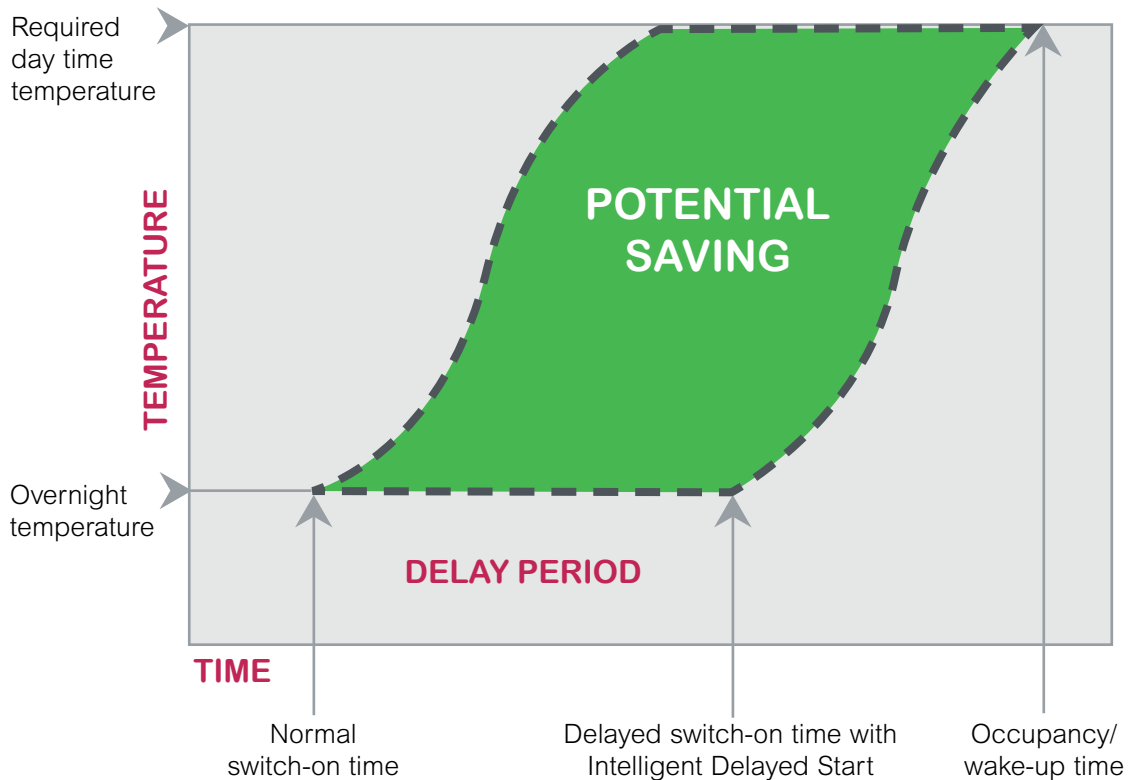
## Principle of Intelligent Delayed Start

The majority of people set their heating to come on one hour before they get up. This is usually long enough to ensure that the rooms are up to temperature, even in the coldest conditions.

During milder weather a full one hour preheat is probably not required. So in some cases, the boiler could be burning fuel unnecessarily for up to 1 hour.

The Intelligent Delayed Start feature saves this fuel wastage by measuring the room temperature when the heating is due to switch on. The unit then decides whether to switch on straight away, or delay the start for up to 1 hour. By using delayed start, savings in excess of 10% can be achieved without compromising comfort.

*Available on Digistat<sup>+</sup>2, Digistat<sup>+</sup>2 RF, Digistat<sup>+</sup>3 and Digistat<sup>+</sup>3 RF  
See page 18-19*



If a heating system is on for 8 hours per day, a 1 hour saving = 12.5%

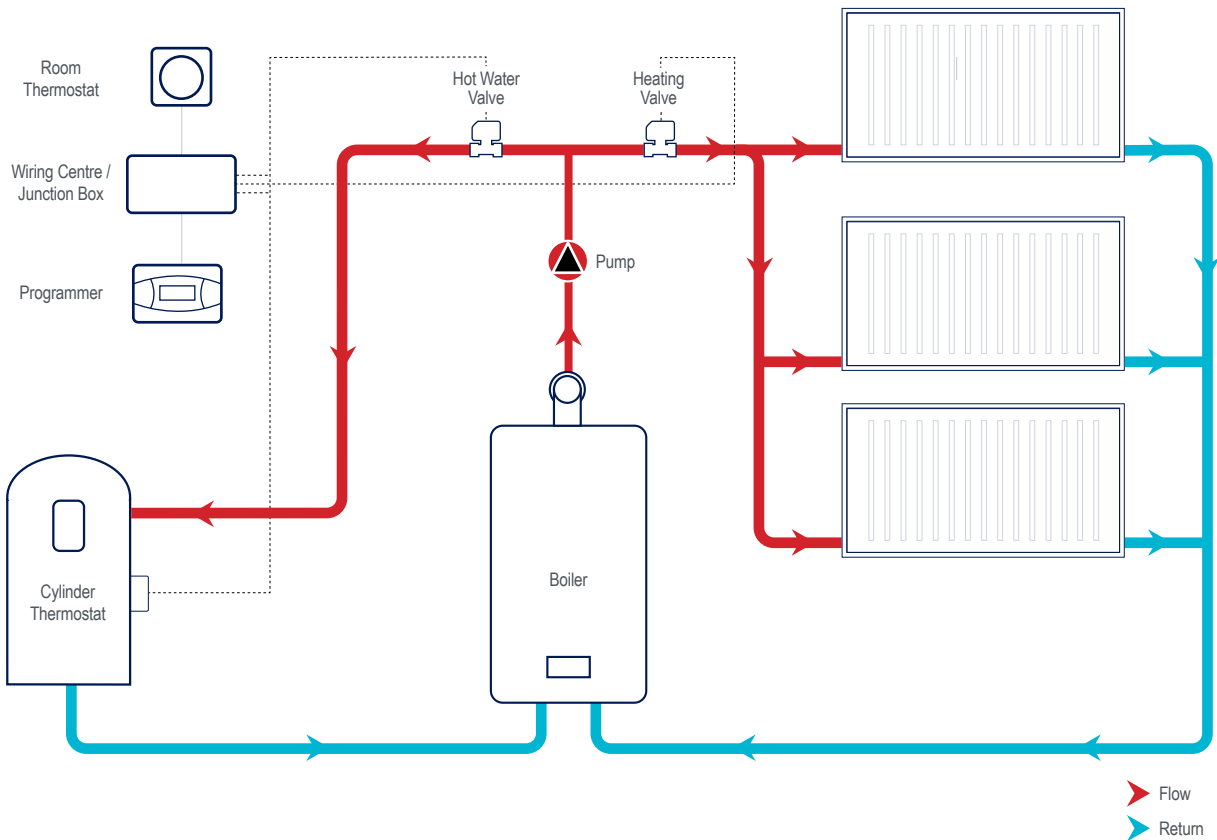
# Twinzone Control Systems

## For fully pumped systems

In a fully pumped zone system the boiler provides a common supply of heated water which is fed to the motorised valves by the pump. The two port valve on each circuit will open or close depending on demand from the thermostats – see table below.

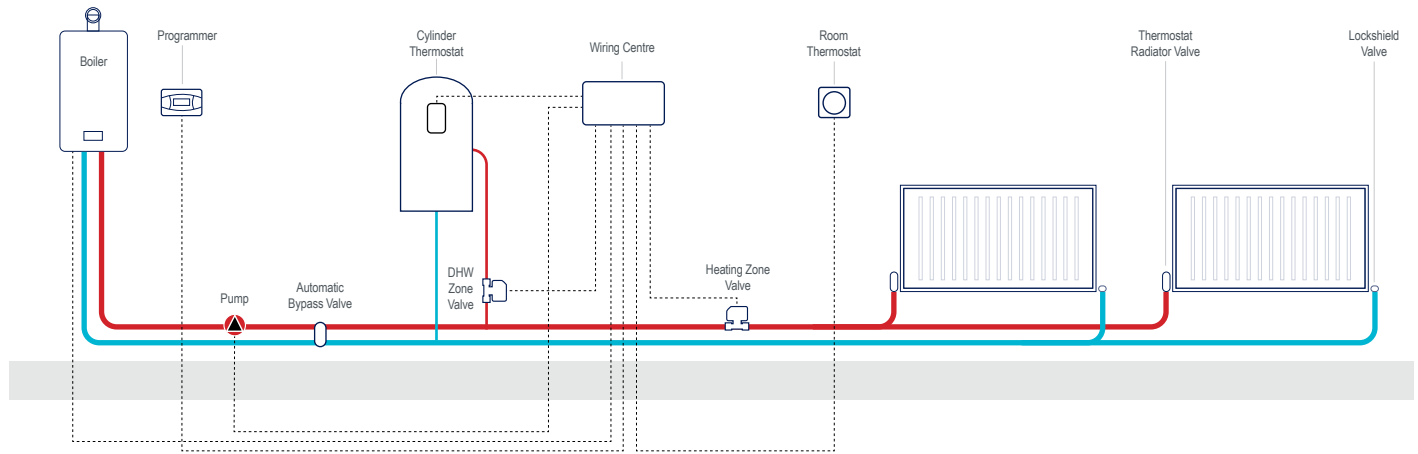
Each valve controls the flow of heated water to the heating or hot water circuits independently. The boiler and pump will continue running whilst there is a demand from one or both thermostats. If both thermostats become satisfied the pump and boiler will switch off to save fuel.

Room Thermostat	Cylinder Thermostat	Valve Positions
Calling for heat	Calling for heat	Both valves open
Calling for heat	Satisfied	Heating valve open
Satisfied	Calling for heat	DHW valve open



# Twinzone Control Systems

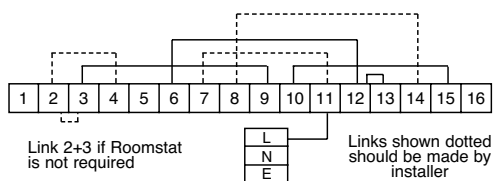
## Wiring Diagrams for LWC1 Wiring Centres



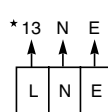
Room Thermostat			Time Control			TRV	Wiring Centre	Cylinder Thermostat	Motorised Valve (x2)
Non-programmable	Hard wired	RTS	Timer	Electronic	Lifestyle LP	RT212	LWC1	HTS3	22mm mid position
		Combi-Stat		Mechanical	SM1	RT414	LWC3	Digistat°C RF	
		Digistat*		Electronic	Wiser	TRV4			
Programmable	Hard wired	Digistat* RF	Programmer	Electronic	Lifestyle LP				
		Digistat* Range		Mechanical	SM2				
		Digistat* Range		Electronic	Wiser				
	Wireless	Wiser							

## Wiring Information for Twinzone Control Systems with LWC1 Wiring Centres

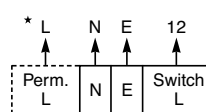
### Wiring Centre - BASIC LINKS



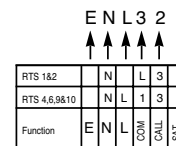
### Pump



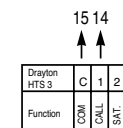
### Boiler



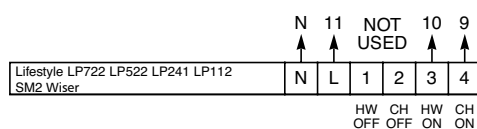
### Room Thermostat



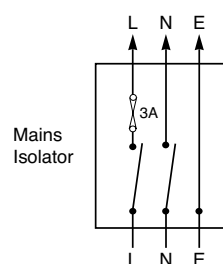
### Cyl. Thermostat



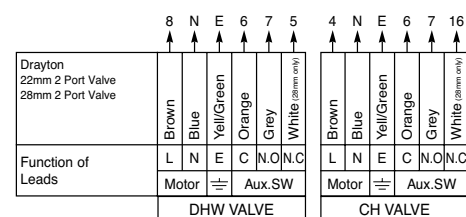
### Programmer



### Mains Input - 230V a.c.



### Motorised Valve



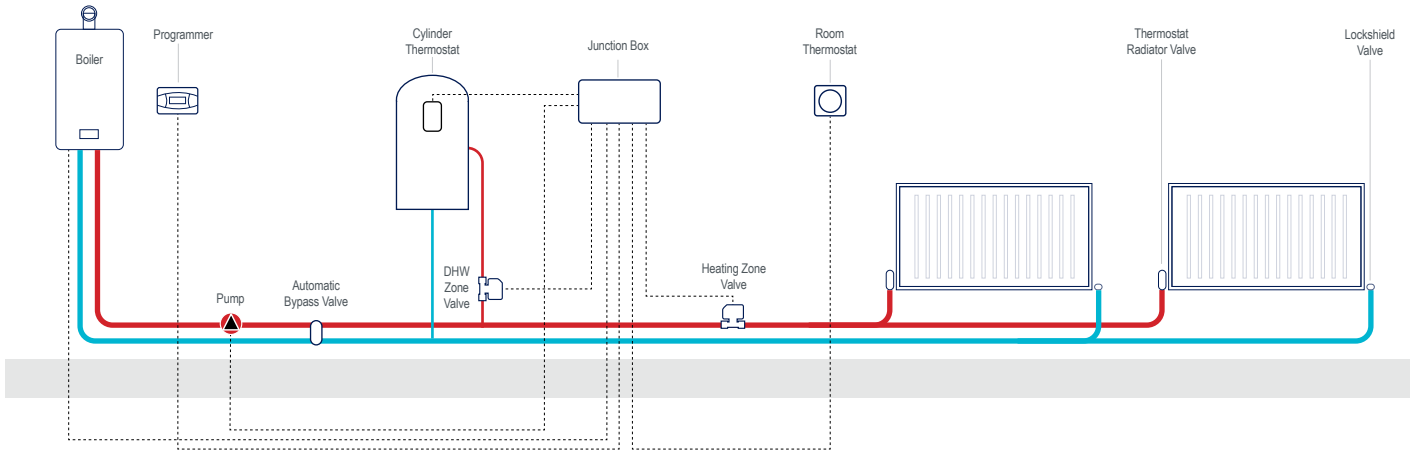
The white wire (28mm Valves) becomes live when the valve closes, it is not used and is wired to 'spare' terminals for safe isolation.

\*Refer to Boiler Handbook for wiring details of Pump Overrun boilers. Use boiler manufacturers instructions.

**Connections:** The numbers printed at the tip of each arrow represent the Wiring Centre Terminals to which those leads or terminals should be connected.

# Twinzone Control Systems

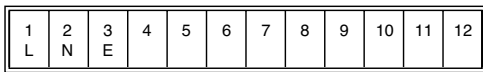
## Wiring Diagrams for LWC3 Junction Boxes



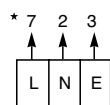
Room Thermostat			Time Control			TRV	Wiring Centre	Cylinder Thermostat	Motorised Valve (x2)
Non-programmable	Hard wired	RTS	Timer	Electronic	Lifestyle LP	RT212	LWC1	HTS3	22mm mid position
		Combi-Stat		Mechanical	SM1	RT414	LWC3	Digistat+C RF	
		Digistat+		Electronic	Wiser	TRV4			
Programmable	Wireless	Digistat+RF	Programmer	Electronic	Lifestyle LP				
		Digistat+ Range		Mechanical	SM2				
	Wireless	Digistat+ Range		Electronic	Wiser				
		Wiser							

## Wiring Information for Twinzone Control Systems with LWC3 Junction Boxes

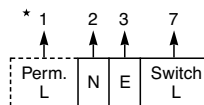
### LWC3 Junction Box



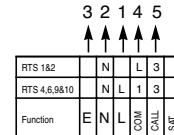
### Pump



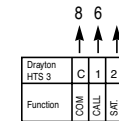
### Boiler



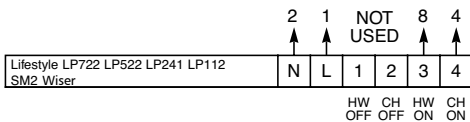
### Room Thermostat



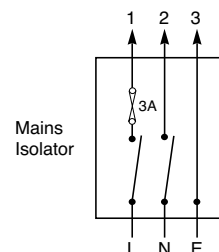
### Cyl. Thermostat



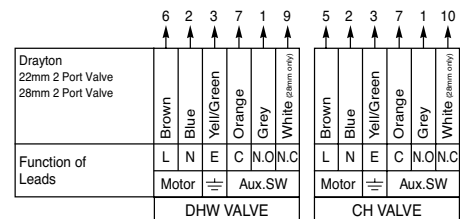
### Programmer



### Mains Input - 230V a.c.



### Motorised Valve



The white wire (28mm Valves) becomes live when the valve closes, it is not used and is wired to 'spare' terminals for safe isolation.

\*Refer to Boiler Handbook for wiring details of Pump Overrun boilers. Use boiler manufacturers instructions.

**Connections:** The numbers printed at the tip of each arrow represent the Junction Box Terminals to which those leads or terminals should be connected.



# Biflo Control System

For fully pumped systems

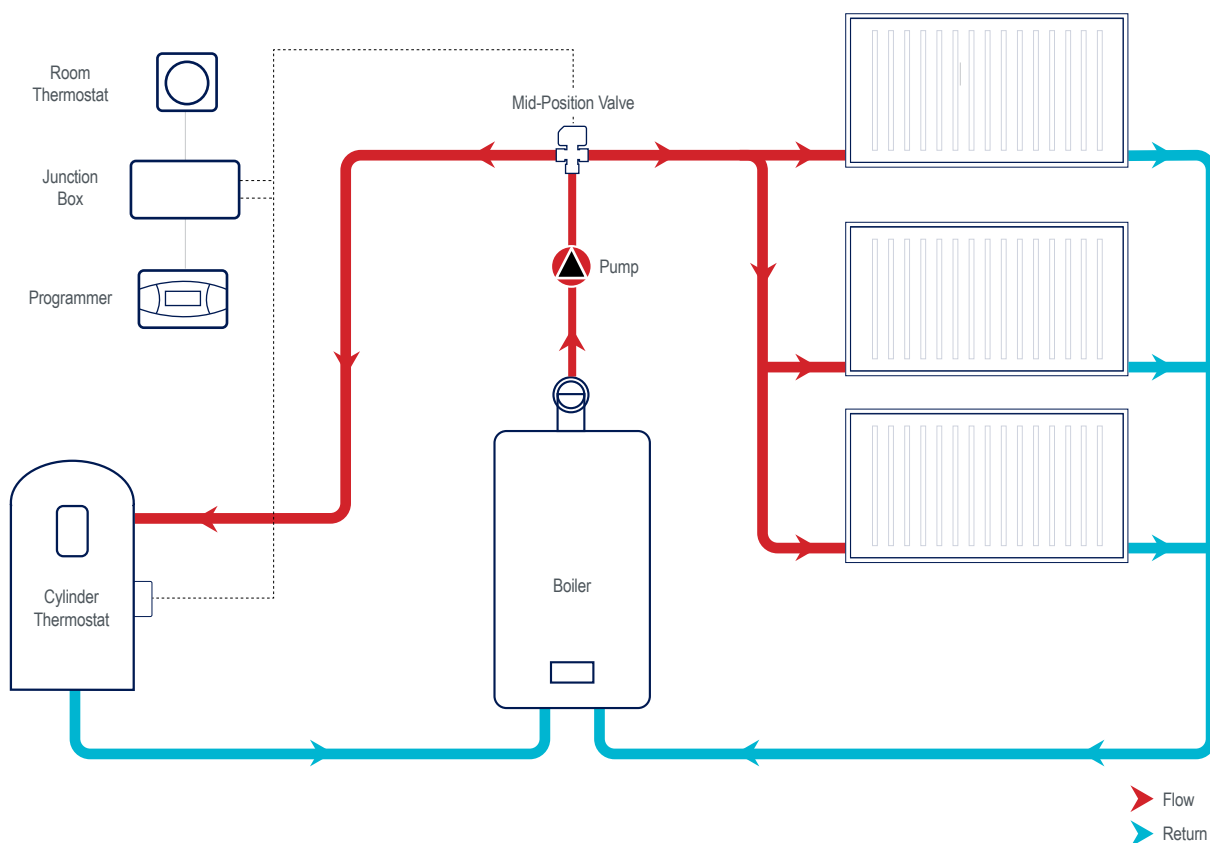
## Operation

In a fully pumped system the boiler provides a common supply of heated water which is fed to the motorised valve by the pump. The mid-position valve has three positions of operation, these depend on demand from the thermostats – see table below.

In 'mid-position' the valve directs the flow of heated water to both heating and hot water circuits.

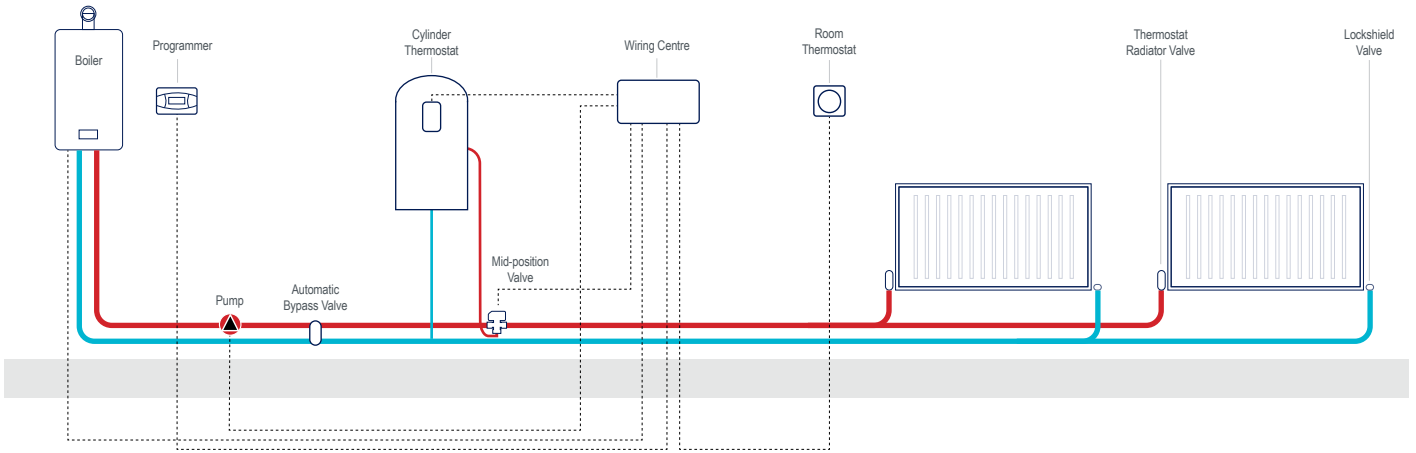
Should either thermostat become satisfied, the valve will move leaving only the heating or the hot water port open. The boiler and pump will continue running whilst there is a demand from one or both thermostats. If both thermostats become satisfied the pump and boiler will switch off to save fuel.

Room Thermostat	Cylinder Thermostat	Valve Positions
Calling for heat	Calling for heat	Mid-position 'M'
Calling for heat	Satisfied	Heating only 'H'
Satisfied	Calling for heat	Hot water only 'W'



# Biflo Control Systems

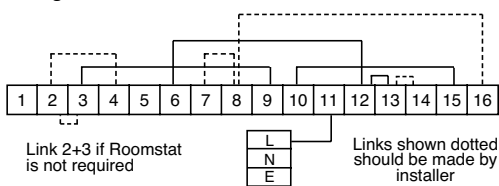
## Wiring Diagrams for LWC1 Wiring Centre



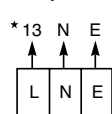
Room Thermostat			Time Control			TRV	Wiring Centre	Cylinder Thermostat	Motorised Valve (x2)
Non-programmable	Hard wired	RTS	Timer	Electronic	Lifestyle LP	RT212	LWC1	HTS3	22mm mid position
		Combi-Stat				RT414	LWC3	Digistat+C RF	
		Digistat+				TRV4			
Programmable	Hard wired	Digistat+ RF	Programmer	Electronic	Lifestyle LP				
		Digistat+ Range				Mechanical	SM2		
	Wireless	Digistat+ Range	Electronic	Wiser					
		Wiser							

## Wiring Information for Biflo Control Panels with LWC1 Wiring Centres

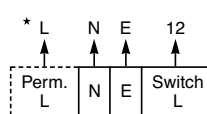
### Wiring Centre - BASIC LINKS



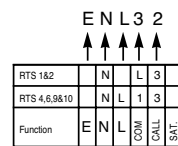
### Pump



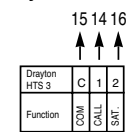
### Boiler



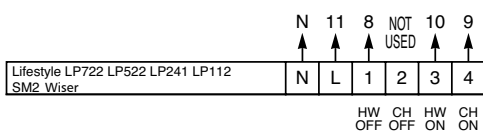
### Room Thermostat



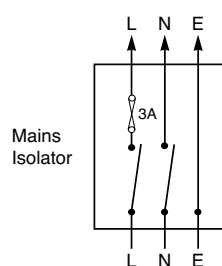
### Cyl. Thermostat



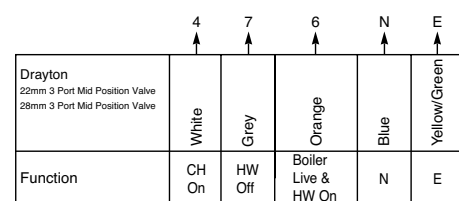
### Programmer



### Mains Input - 230V a.c.



### Motorised Valve

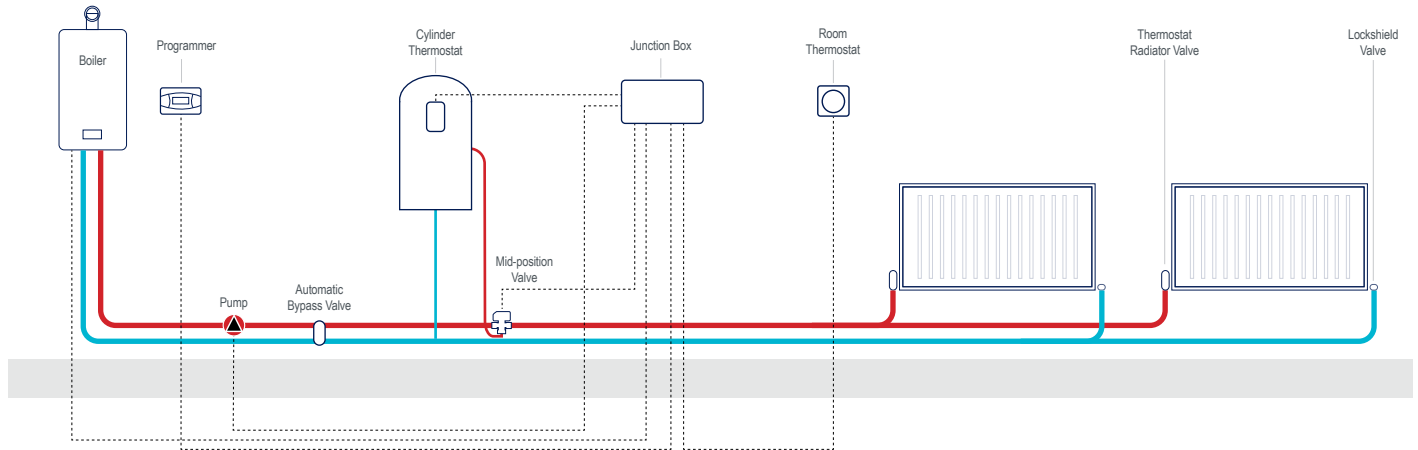


\*Refer to Boiler Handbook for wiring details of Pump Overrun boilers. Use boiler manufacturers instructions.

**Connections:** The numbers printed at the tip of each arrow represent the Wiring Centre Terminals to which those leads or terminals should be connected.

## Biflo Control Systems

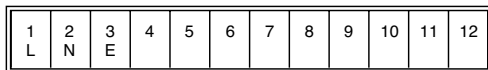
### Wiring Diagrams for LWC3 Junction Boxes



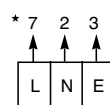
Room Thermostat			Time Control			TRV	Wiring Centre	Cylinder Thermostat	Motorised Valve (x2)
Non-programmable	Hard wired	RTS	Timer	Electronic	Lifestyle LP	RT212	LWC1	HTS3	22mm mid position
		Combi-Stat		Mechanical	SM1	RT414	LWC3	Digistat+C RF	
		Digistat+		Electronic	Wiser	TRV4			
Programmable	Hard wired	Digistat+ RF	Programmer	Electronic	Lifestyle LP				
		Digistat+ Range		Mechanical	SM2				
	Wireless	Digistat+ Range	Electronic	Wiser					
		Wiser							

### Wiring Information for Biflo Control Panels with LWC3 Junction Boxes

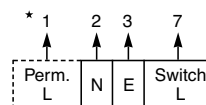
#### LWC3 Junction Box



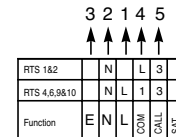
#### Pump



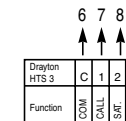
#### Boiler



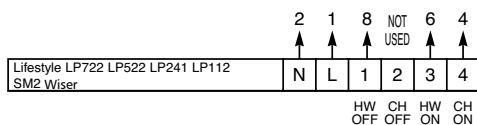
#### Room Thermostat



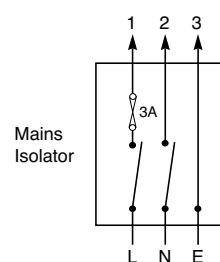
#### Cyl. Thermostat



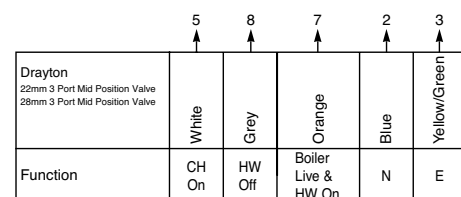
#### Programmer



#### Mains Input - 230V a.c.



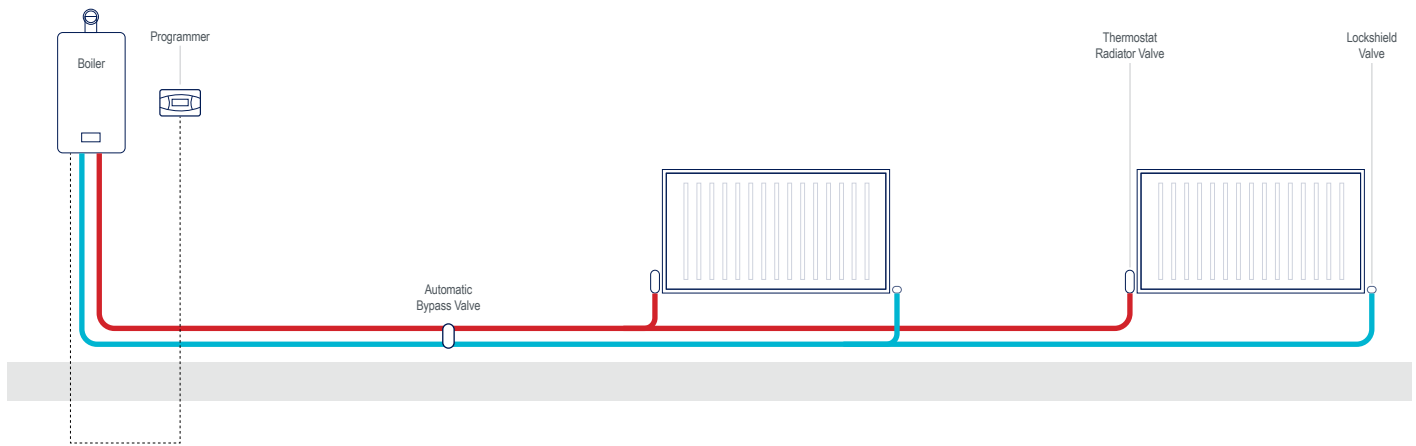
#### Motorised Valve



\*Refer to Boiler Handbook for wiring details of Pump Overrun boilers. Use boiler manufacturers instructions.

**Connections:** The numbers printed at the tip of each arrow represent the Junction Box Terminals to which those leads or terminals should be connected.

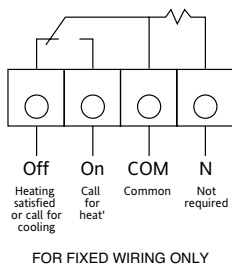
# Combi Boiler System



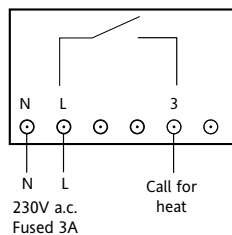
Room Thermostat			Time Control			TRV
Programmable	Hard wired	Digstat+ Range	Timer	Electronic	Lifestyle LP	RT212
	Wireless	Digstat+ Range		Electronic	Wiser	RT414
Non-Programmable	Hard wired	RTS	Programmer	Electronic	Lifestyle LP	TRV4
		Combi-Stat		Electronic	Wiser	
		Digstat+				
	Wireless	Digstat+RF				
		Wiser				

## Wiring Information for Combi Boiler Systems

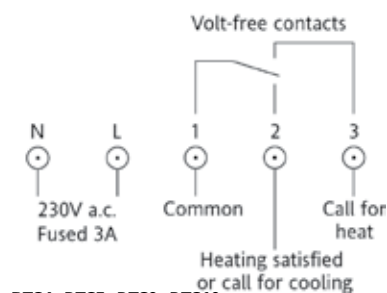
### Room Thermostat (applicable to Digistat+ Range)



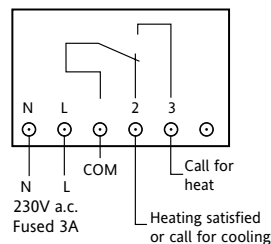
### RTS1, RTS2, RTS3



### SCR Receiver (applicable to Digistat+ RF Range)



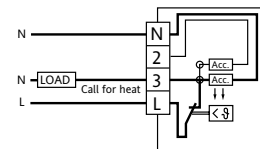
### RTS4, RTS5, RTS9, RTS10



### Combi-Stat

3 wire connection. **Max load = 2A.**  
Suitable for most wet CH systems.

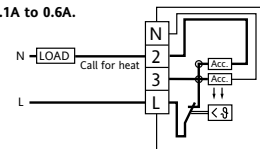
230V a.c.  
Fused 3A



2 wire connection. No neutral. **Load = 0.1A to 0.6A.**  
Suitable for most wet CH systems.

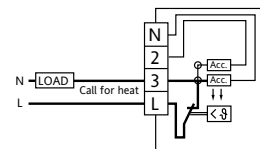
*Note: Use this connection for gas CH systems, where there is no neutral wire, and follow set-up procedure. If current reading above 0.6 amps, wire as 2 wire connection opposite. 2 wire connection no Neutral.*

24V-230V a.c./d.c.  
Fused 3A



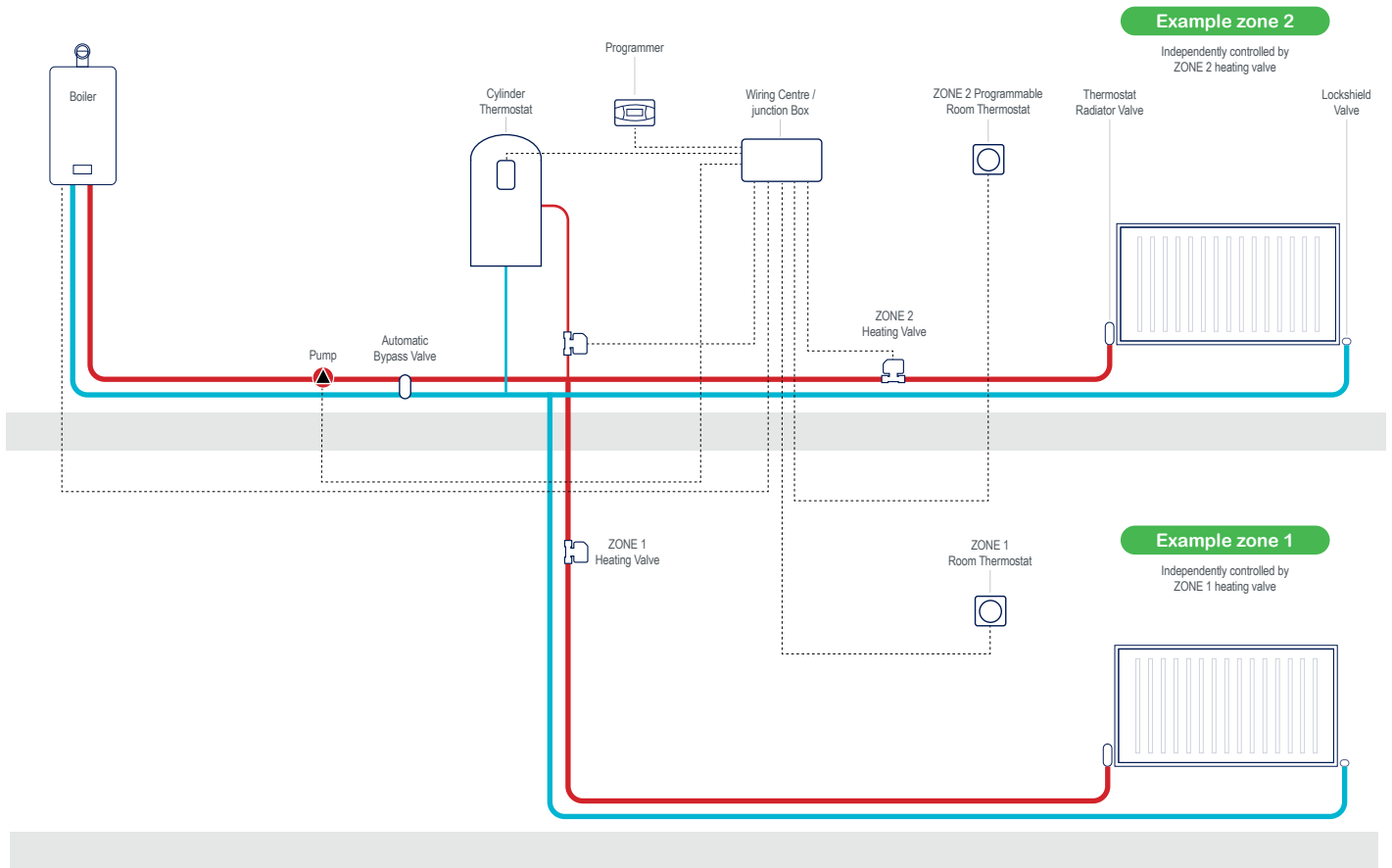
2 wire connection. No neutral.  
**Load = 0.6A to 6A.**  
Typically for higher loads (i.e. electric heating)

24V-230V a.c./d.c.  
Suitably rated fuse

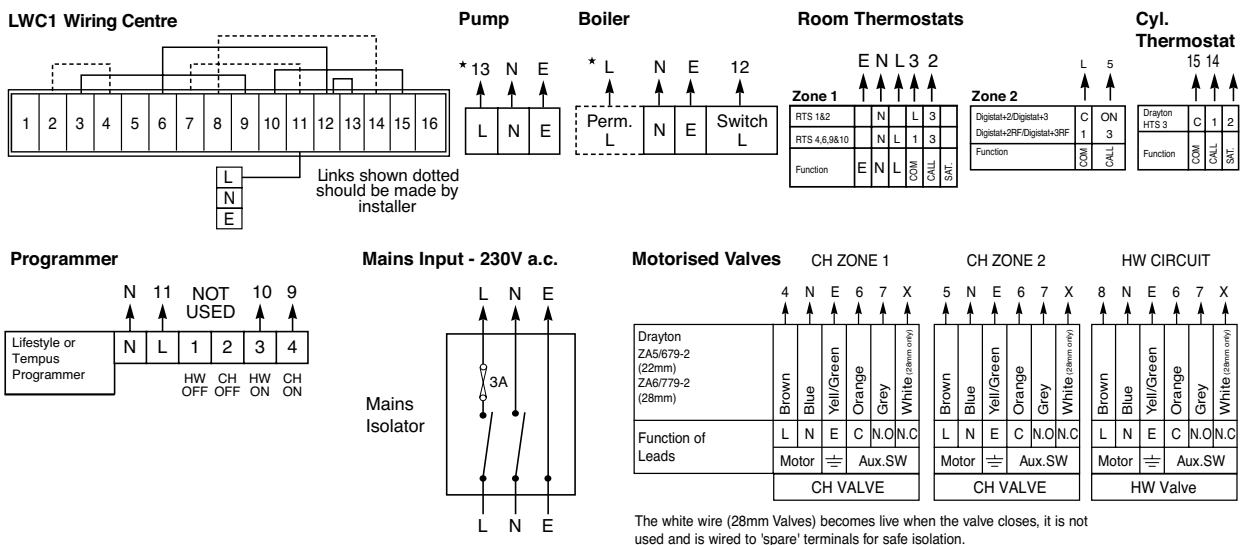


\*Refer to Boiler Handbook for wiring details of Pump Overrun boilers. Use boiler manufacturers instructions.

## Twinzone System with Additional Heating Zone



### Wiring Information for Two Port Zone Valve Systems with LWC1 Wiring Centre



\*Refer to Boiler Handbook for wiring details of Pump Overrun boilers. Use boiler manufacturers instructions.

**Connections:** The numbers printed at the tip of each arrow represent the Junction Box Terminals to which those leads or terminals should be connected.





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