

# Honeywell



# Wiring GUIDE

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**ISSUE No.14**

GUIDE • SUNDIAL PLANS • WIRING  
PLANS • SUNDIAL  
GUIDE • WIRING  
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GUIDE

## Wiring Guide – Contents

### Wiring Plans

1. System Wiring Notes
2. Sundial S Plan
3. Sundial S Plan Plus
4. Sundial Y Plan
5. Sundial C Plan
6. Sundial C Plan Plus
7. Sundial W Plan
8. Boiler Selection
9. Programmer Selection
- 10-11. Sundial U Plan
12. Smartfit S Plan & Y Plan
13. Smartfit Boiler Junction Box

### Fault Finding

14. Sundial Y Plan Fault Finding
15. Sundial Y Plan Electrical Check Out
16. Sundial S Plan and S Plan Plus Fault Finding
17. Sundial S Plan and S Plan Plus Electrical Check Out
18. Sundial C Plan Fault Finding
19. Sundial C Plan Electrical Check Out
20. Sundial W Plan Fault Finding
21. Sundial W Plan Electrical Check Out

### Product Selection

22. Timers / Programmers
23. Thermostats and Valves
24. Wireless Room Thermostats and Wireless Zoning
25. Extra Wireless Functions
26. Bypass/Mixing Valves & Auto Air Vents
27. Radiator Valves
28. Frost Protection
29. Valve Compatibility Guide
30. Wiring Centre Information

### Training & Brochure Update

31. Honeywell Training Courses
32. Literature Request Form

Whilst Honeywell takes all reasonably practicable steps to design and manufacture its products to comply with the requirements of the Health and Safety at Work Act 1974, all products must be properly used and purchasers are reminded that their obligations under the Act are to ensure that the installation and operation of such products at a place of work should be safe and without risk to them.

## System Wiring Notes

The Sundial Y, S, C and W Plan diagrams in this guide are designed for ease of wiring to a ten-way junction box.

Using the ten-way junction box (Honeywell Part No: 42002116-001), connect the controls, pump, boiler and 230 Volt fused supply to the junction box terminals indicated by the arrows in the diagrams next to each control, or other electrical device or circuit.

A list of boilers can be found on page 8.

Boilers with built-in programmers must be wired in accordance with the manufacturers instructions.

All wiring should be carried out by a competent electrician or heating engineer.

### **ALL WIRING MUST BE IN ACCORDANCE WITH IEE & BUILDING REGULATIONS.**

The room thermostat and programmer are for use with fixed wiring only; the cylinder thermostat may be used with fixed wiring or flexible cable; the motorised valves are supplied fitted with a 1 metre length of heat resistant cable.

A switch (having contact separation of at least 3mm in all poles) must be incorporated in the fixed wiring as a means of disconnecting the mains supply.

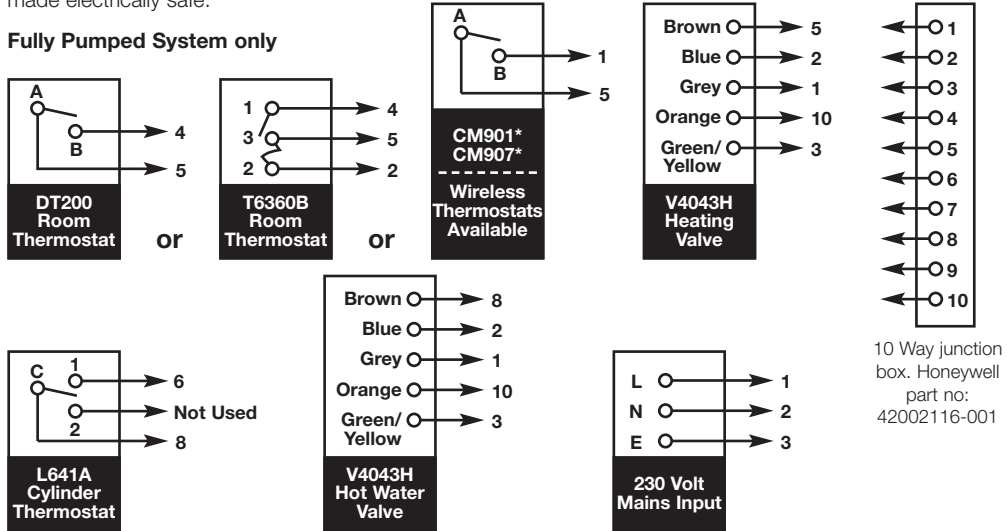
The heating system must be appropriately fused for gas appliances. A fuse rated at no more than 3 amps should be installed. The T6360B Room Thermostat, L641A Cylinder Thermostat and Honeywell range of programmers are Class II (double insulated) devices. Earth terminals, where provided, are for earth continuity purposes only. All earth conductors inside the programmer and room thermostat must be appropriately sleeved. The zone valves are Class I devices and must be connected to a suitable earth.

These wiring diagrams are for guidance only and at the time of printing represent the latest information available to us from other manufacturers. Honeywell reserve the right at any time and without notice to change any product, specification or any other information contained in this publication and cannot accept any responsibility for loss or damage arising out of any errors that may inadvertently be contained herein.

## Sundial S Plan

If using a 6-wire 28mm or 1" BSP V4043H on either circuit, the white wire is not needed and must be made electrically safe.

### Fully Pumped System only



For list of central heating boilers to attach to this circuit - see page 8.

\*If using a CM900 programmable thermostat, link terminal 1 to 4.

For list of programmers to attach to this circuit - see page 9.

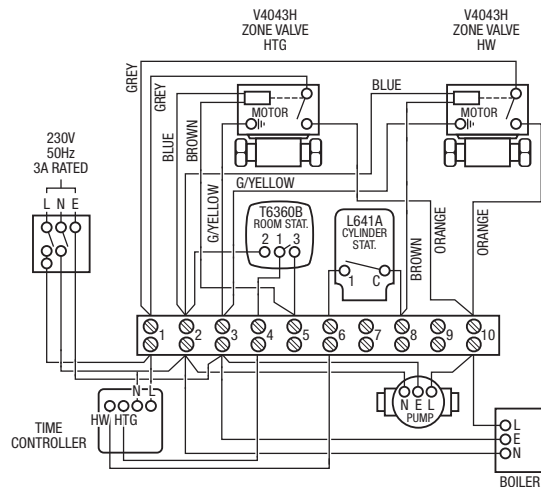
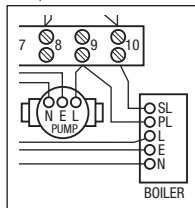
When circuit is wired as above: Completed wiring will be as line drawing below.

### NOTE:

1. It is recommended that either the 10 way junction box or Sundial Wiring Centre should be used to ensure first time, fault free wiring.

2. If using the V4043H1080 (1" BSP) or V4043H1106 (28mm), the white wire must be electrically isolated.

### Pump overrun

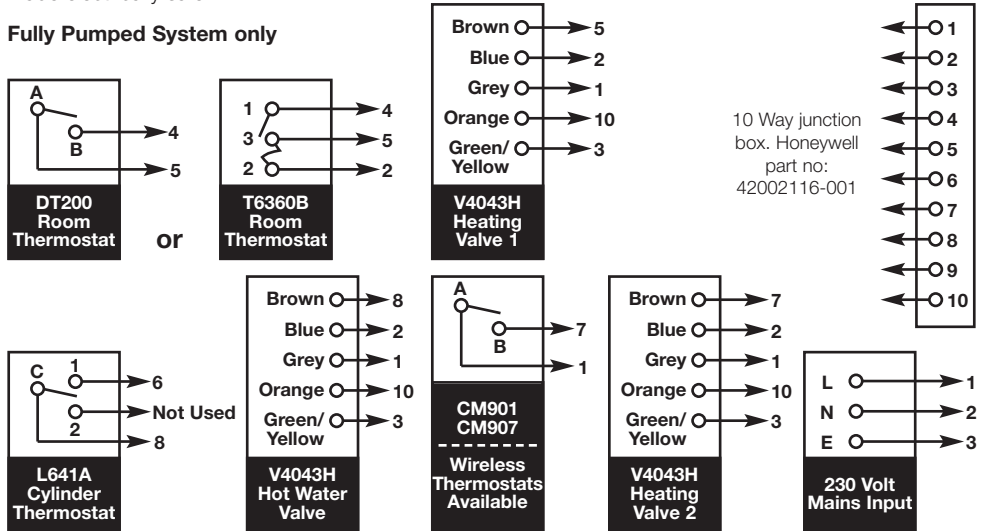


For Frost Protection information - see page 28

## Sundial S Plan Plus

If using a 6-wire 28mm or 1" BSP V4043H on either circuit, the white wire is not needed and must be made electrically safe.

### Fully Pumped System only



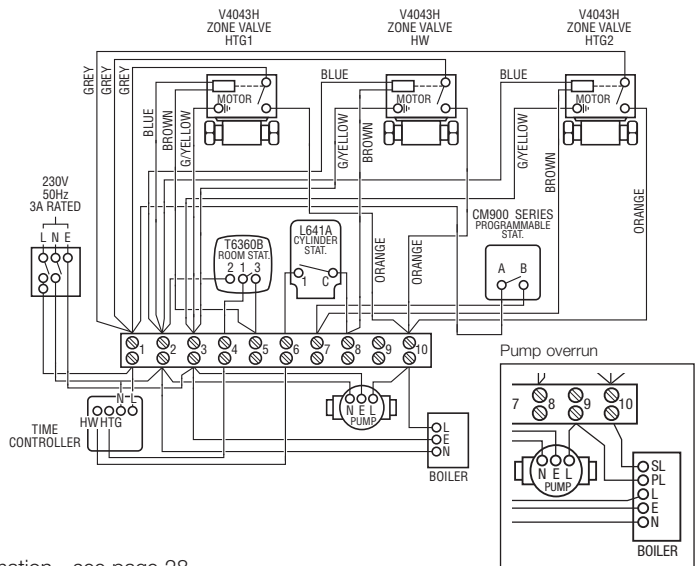
For list of central heating boilers to attach to this circuit - see page 8.

For list of programmers to attach to this circuit - see page 9.

When circuit is wired as above: Completed wiring will be as line drawing below.

### NOTE:

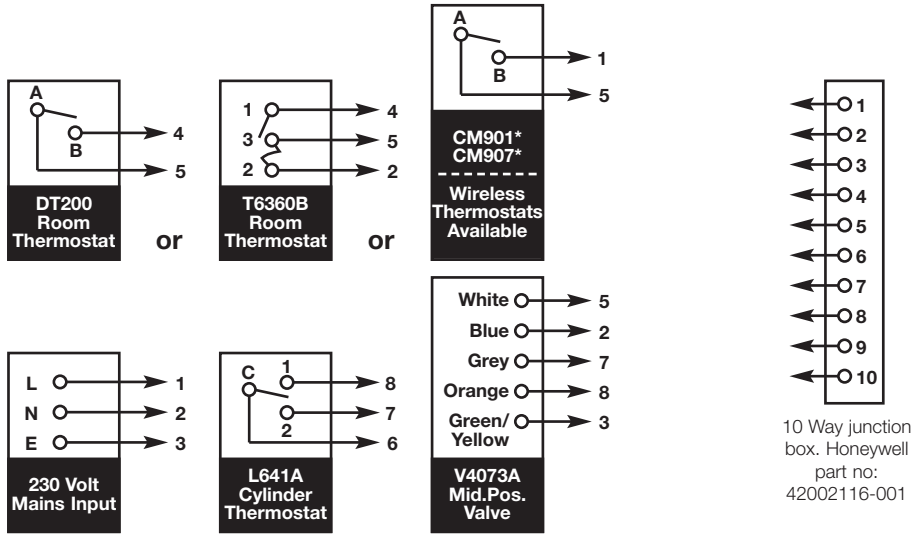
1. It is recommended that either the 10 way junction box or Sundial Wiring Centre should be used to ensure first time, fault free wiring.
2. If using the V4043H1080 (1" BSP) or V4043H1106 (28mm), the white wire must be electrically isolated.



For Frost Protection information - see page 28

# Sundial Y Plan

## Fully Pumped System only



For list of central heating boilers to attach to this circuit - see page 8.

\*If using a CM900 programmable thermostat, link terminal 1 to 4.

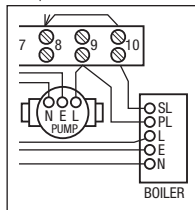
For list of programmers to attach to this circuit - see page 9.

When circuit is wired as above: Completed wiring will be as line drawing below.

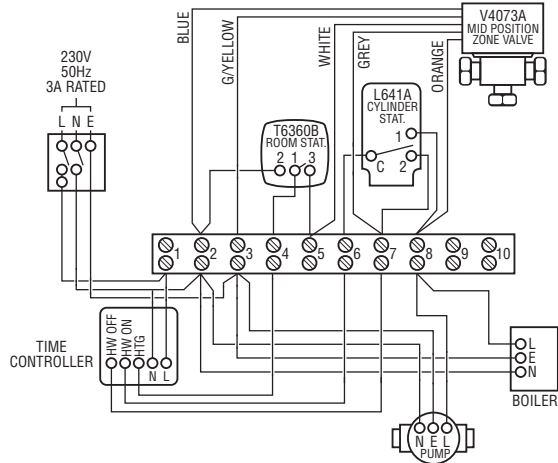
### NOTE:

It is recommended that either the 10 way junction box or Sundial Wiring Centre should be used to ensure first time, fault free wiring.

#### Pump overrun



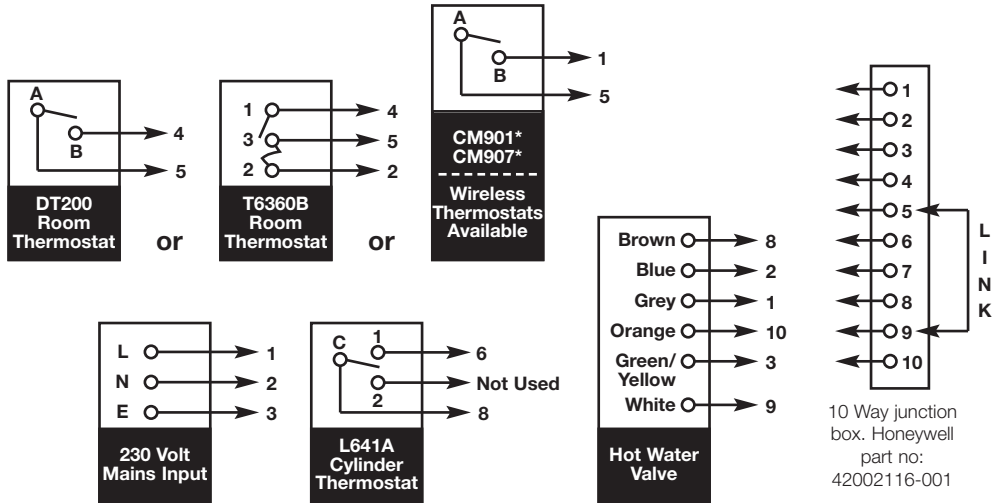
For Frost Protection information - see page 28



## Sundial C Plan

### Gravity Hot Water, Pumped Central Heating

Link terminals 5 - 9 in the 10 way junction box.



For list of central heating boilers to attach to this circuit - see page 8.

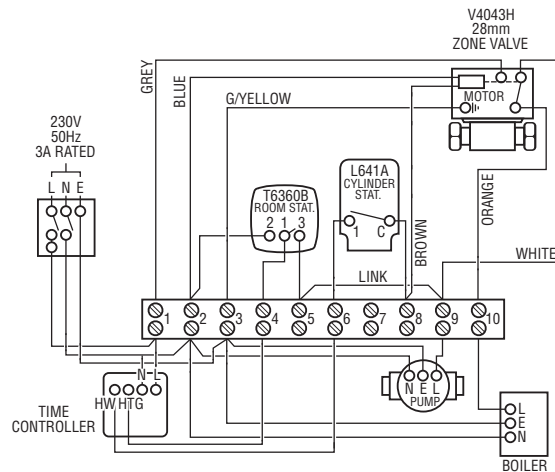
\*If using a CM900 programmable thermostat, link terminal 1 to 4.

For list of programmers to attach to this circuit - see page 9.

When circuit is wired as above: Completed wiring will be as line drawing below.

#### NOTE:

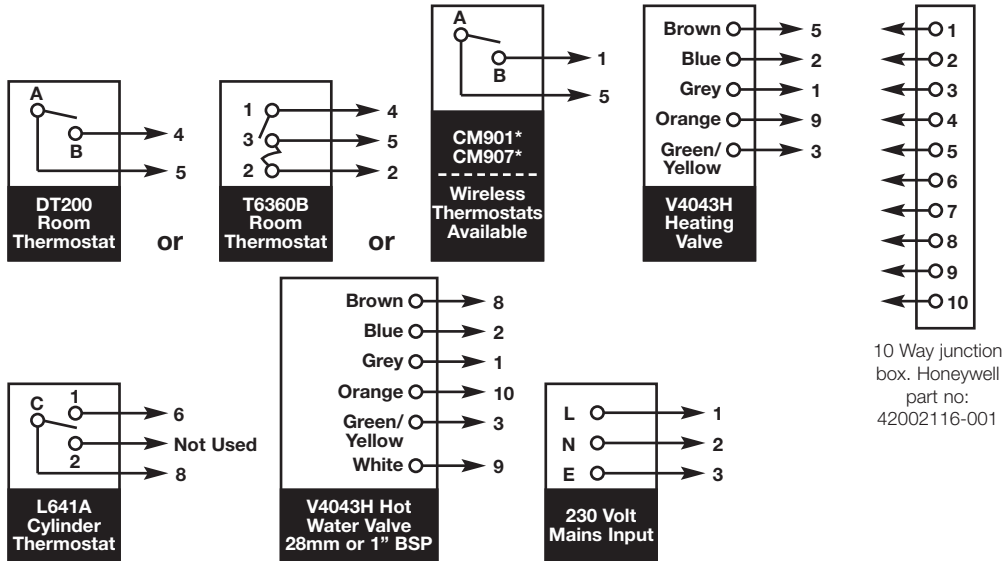
It is recommended that either the 10 way junction box or Sundial Wiring Centre should be used to ensure first time, fault free wiring.



For Frost Protection information - see page 28

## Sundial C Plan Plus

### Gravity Hot Water, Pumped Central Heating



For list of central heating boilers to attach to this circuit - see page 8.

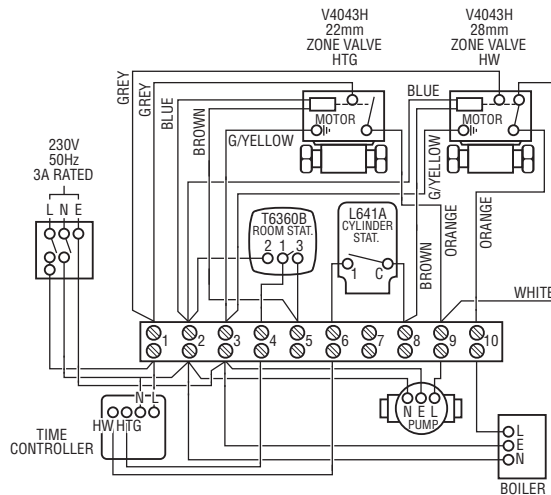
\*If using a CM900 programmable thermostat, link terminal 1 to 4.

For list of programmers to attach to this circuit - see page 9.

When circuit is wired as above: Completed wiring will be as line drawing below.

#### NOTE:

It is recommended that either the 10 way junction box or Sundial Wiring Centre should be used to ensure first time, fault free wiring.

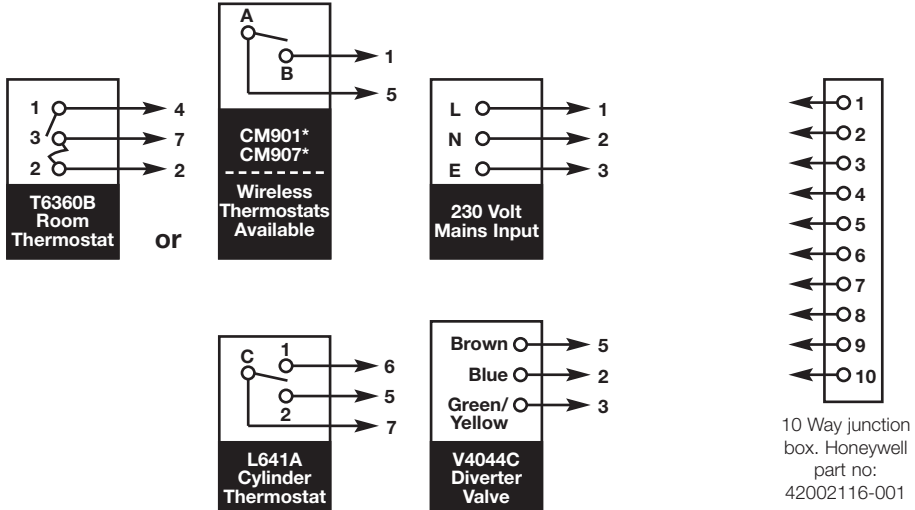


For Frost Protection information - see page 28



# Sundial W Plan

## Fully Pumped System only



For list of central heating boilers to attach to this circuit - see page 8.

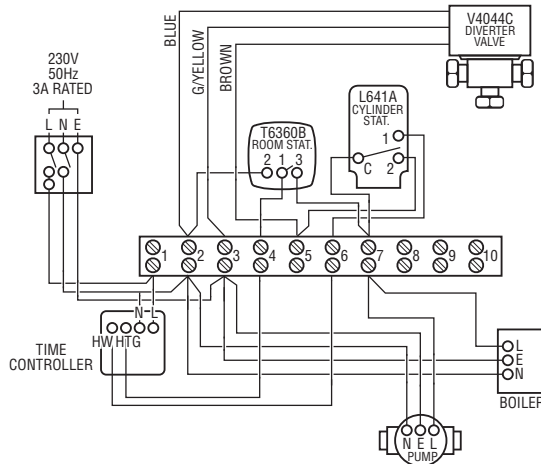
\*If using a CM900 programmable thermostat, link terminal 1 to 4.

For list of programmers to attach to this circuit - see page 9.

When circuit is wired as above: Completed wiring will be as line drawing below.

### NOTE:

It is recommended that either the 10 way junction box or Sundial Wiring Centre should be used to ensure first time, fault free wiring.



For Frost Protection information - see page 28

## Boiler Selection

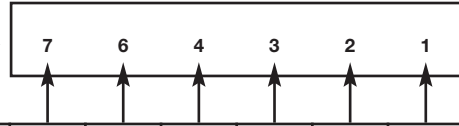
Terminal Block	BOILER					PUMP			
<b>S Plan</b>	9	10	3	2	1	9	10	2	3
<b>S Plan Plus</b>	9	10	3	2	1	9	10	2	3
<b>Y Plan</b>	9	8	3	2	1	9	8	2	3
<b>C Plan</b>	9	10	3	2	1	9	10	2	3
<b>C Plan Plus</b>	9	10	3	2	1	9	10	2	3
<b>W Plan</b>	9	7	3	2	1	9	7	2	3
<b>REGULAR BOILER</b>	↑	↑	↑	↑	↑	↑	↑	↑	↑
Basic Boiler		L	E	N			L	N	E
Baxi 45/4 & 57/4		SL	E	N			L	N	E
Baxi Bermuda		SL	E	N			L	N	E
Baxi Inset 2-50/4e		SL	E	N			L	N	E
Baxi Bermuda Inset 3		SL	E	N			L	N	E
Baxi Boston 2		SL	E	N			L	N	E
Baxi Solo 2 RS		PL	SL	E	N		L	N	E
Ferrol Roma 55FF		4	2	E	N	L	L	N	E
Ferrol Sigma		PL	Sw	E	N	L	L	N	E
		L							
Glow-Worm Energy 60		PL	SL	E	N	L	L	N	E
Glow-Worm Micron FF		Ls	E	N			L	N	E
Glow-Worm Ultimate 60FF		P	SL	E	N	L			
Glow-Worm Ultimate 70FF		7	SL	E	N	L	7	8	E
Grant Euroflame 50/70		1	3	2		L	N	E	
Grant Multipass 50/70		1	4	2		L	N	E	
Ideal Istor		L2	E	N	L3	L	N	E	
Potterton Kingfisher 50-100		PL	Sw	E	N	L	L	N	E
		L							
Potterton Osprey 2 CFL		PL	SL	E	N	L	L	N	E
Potterton Prima C		PL	Sw	E	N	L	L	N	E
		L							
Potterton Profile 40-80eL		PL	Sw	E	N	L	L	N	E
		L							
<b>SYSTEM BOILERS</b>	↑	↑	↑	↑	↑	↑	↑	↑	↑
Baxi 100HE		PF	SL	E	N		L	N	E
Baxi Barcelona		PF	SL	E	N	L	L	N	E
Ideal Icos		L2	E	N	L3	L	N	E	
Ideal Isar		L2	E	N	L3	L	N	E	
Keston Celsius		SL	E	N	PL				
Potterton Promax		PF	SL	E	N	L	L	N	E
Worcester Greenstar		Lr	E	N	L				
<b>OIL BOILERS</b>	↑	↑	↑	↑	↑	↑	↑	↑	↑
Boulter Bonus		L	E	N			L	N	E
Esse 60, 80, 100		10	E	3			L	N	E
Grant Multi Pass 50/70		1	4	2		L	N	E	
Potterton Statesman		L	E	N			L	N	E
Rayburn 368K Range		Blk	E	N	L		L	N	E
Rayburn Heatranger		PL	Sw	E	N	L	L	N	E
		L							

Terminal Block	COMBI					CM901 CM907 STAT	
<b>S Plan</b>			3	2	1	1	5
<b>S Plan Plus</b>			3	2	1	1	7
<b>Y Plan</b>			3	2	1	1	5
<b>W Plan</b>			3	2	1	1	7
<b>COMBI BOILERS</b>	↑	↑	↑	↑	↑	↑	
Alpha CB24/28			E	N	L	1	2
Baxi Combi 130HE			E	N	L	3	4
Baxi Combi 80Eco			E	N	L	1	2
Baxi Combi 80 Maxflue			E	N	L	1	2
Baxi Combi Instant			E	N	L	1	2
Boulter Camray 5 (Oil)			E	N	L	4	5
Ferrol Arena			E	N	L	1	2
Ferrol Domina			E	N	L	4	5
Ferrol Optima			E	N	L	4	5
Glow-Worm Compact			E	N	L	1	2
Grant Combi MK11			4	2	1	13	14
Ideal C80/C95FF			E	N	L	Bk	R
Ideal Response			E	N	L	R1	R2
Potterton Combi 80			E	N	L	3	4
Potterton Flowsure+			E	N	L	3	4
Potterton Performa			E	N	L	1	2
Potterton Puma			E	2	1	3	4
Range Powermax			E	N	L	10	9
Valliant Turbomax			E	N	L	3	4
Worcester CDI			E	N	L	Ls	Lr
Worcester Greenstar			E	N	L	Ls	Lr
Worcester Highflow			E	N	L		

Terminal Block	BOILER					PUMP			
<b>S Plan</b>	9	10	3	2	1	9	10	2	3
<b>S Plan Plus</b>	9	10	3	2	1	9	10	2	3
<b>Y Plan</b>	9	8	3	2	1	9	8	2	3
<b>C Plan</b>	9	10	3	2	1	9	10	2	3
<b>C Plan plus</b>	9	10	3	2	1	9	10	2	3
<b>W Plan</b>	9	7	3	2	1	9	7	2	3
<b>CONDENSING BOILER</b>	↑	↑	↑	↑	↑	↑	↑	↑	↑
Baxi 35/60 & 60/100			SL	E	N	L			
Baxi Solo 3 PFL			PL	SL	E	N	L	L	N
Boulter Bonus (Oil)				E	N	L			
Ferrol Temptra				SL	E	N	L		
Glow-Worm Compact 60				Ls	E	N	Lp		
Glow-Worm HXI				2	E	N	L		
Grant Multipass (Oil)				1	4	2			
Ideal Icos				L2	E	N	L3		
Outdoor Modules 50/70				1	4	3	2		
Valliant Ecotec				4	E	N	L		
Valliant Thermocompact				4	E	N	L		

## Programmer Selection

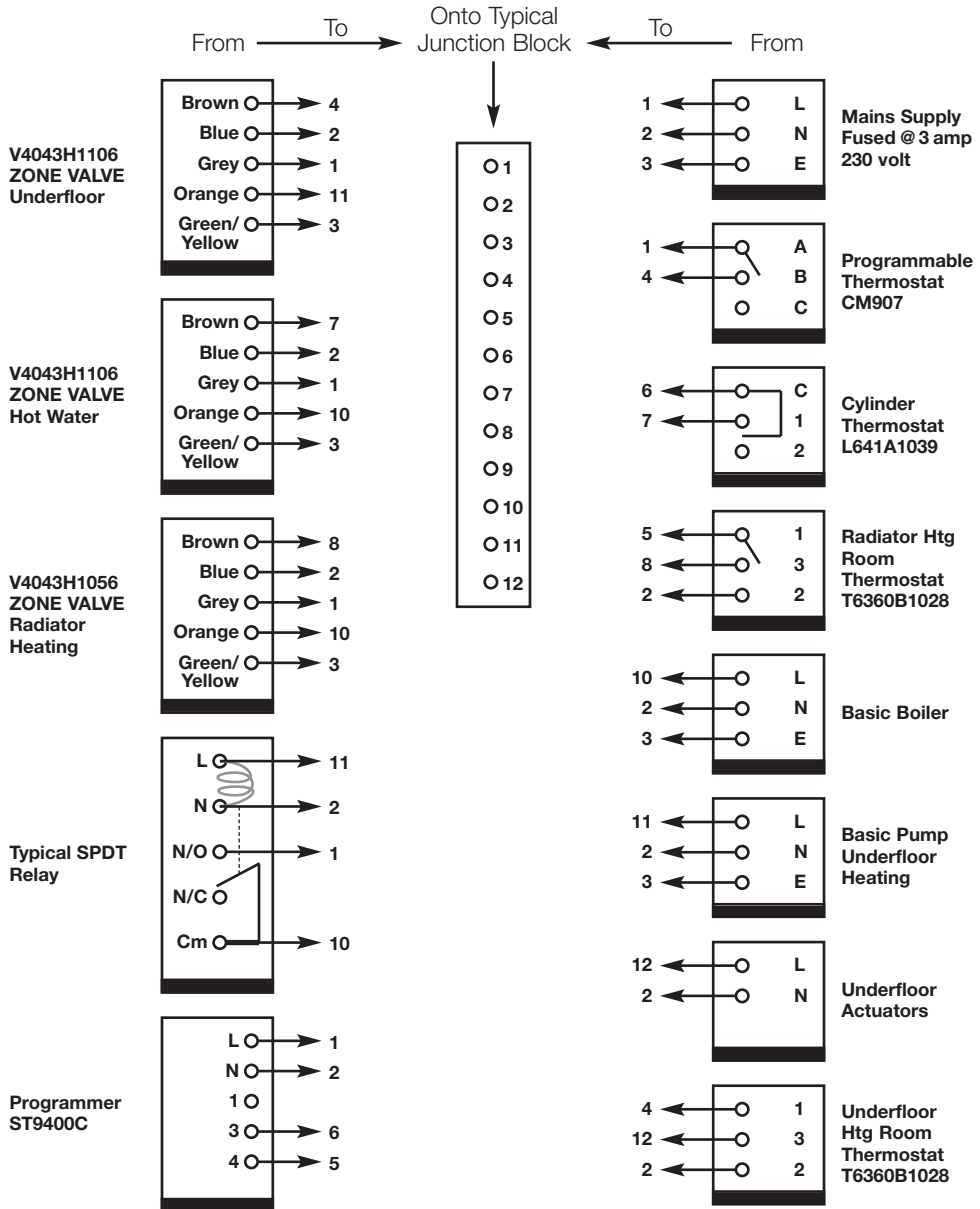
Connect onto terminal block numbers



Programmer Interchange	HW OFF	HW ON	CH ON	E	N	L
<b>Honeywell ST9400, ST9500</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>E</b>	<b>N</b>	<b>L</b>
<b>Honeywell ST6450, ST6400, ST6300</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>E</b>	<b>N</b>	<b>L</b>
<b>Honeywell ST6200</b>		<b>3</b>	<b>4</b>	<b>E</b>	<b>N</b>	<b>L</b>
<b>Honeywell ST699B, ST799A, (Link L-5-8)</b>	<b>7</b>	<b>6</b>	<b>3</b>		<b>N</b>	<b>L</b>
<b>Honeywell ST7100</b>	<b>7</b>	<b>8</b>	<b>5</b>	<b>E</b>	<b>N</b>	<b>L</b>
ACL Drayton LS522, LS722, LP112, LP241	1	3	4	E	N	L
Danfoss CP15, CP75, FP15, FP75, MP15, MP75, CP715, FP715	1	3	4	E	N	L
Glow-Worm Mastermind		3	4		N	L
Horstmann C21, C27, C121 & C127	1	3	4	E	N	L
Landis RWB2, RWB9, RWB20, 40, 102, 270	1	3	4	E	N	L
Landis RWB20, RWB200	1	3	4	E	N	L
Landis RWB252, Microgyr	1	3	4	E	N	L
Potterton Miniminder	1	3	4	E	N	L
Potterton EP2000/3000/6000 EP2001/3001 (Link L-5)	1	3	4	E	N	L
Sunvic Select 207	1	3	4	E	N	L
Horstmann 425, 525, 527, H21, H27, H121, Tiara, (Link L-2-5)	3	1	4	E	N	L
Randall 922, 972, (Link L-2-5)	1	3	6		N	L
Randall 4033 (Link 1-6)	5	4	2	E	7	6
Randall 102, 102E, 102E5, 102E7, (Link 3-6)		1	2	E	5	6
Randall 701, 702, (Link L-6-5)		4	2	E	N	L
Sangamo M5, (Link 1-6)		1	8	E	N	L
Sangamo Form 1, (Link 3-6)		1	8	E	N	L
Switchmaster Symphony	3	1	4		N	L
Switchmaster 400, 600, (No connection to terminal 4 on 600)		3	1		N	L
Switchmaster 805, 900, 905, 9001	4	3	1		N	L
Sunvic SP50, SP100, (Link L-3)	1	2	5	E	N	L
Sunvic ET1451, (Link 2-3-6)	8	7	4	E	1	2
Sunvic DHP2201	8	6	3	E	1	2
Towerchron FP, (Link 1-5 / 4-7-9)	8	6	10		N	L
Towerchron MP, (Link 1-4 / 6-11)		6	10		N	L
Danfoss Randall 3020P, 3060		4	2	E	7	6
Danfoss Randall SET2, SET2E, SET3EM, FP975, SET5, (Link L-2-5)	3	1	4	E	N	L
Grasslin Towerchron DP72, QE2	1	3	4		N	L
Myson Microtimer, (Link L-5-8)	7	6	3		N	L
Sunvic SP50, SP100, (Link L-3)	1	3	4		N	L

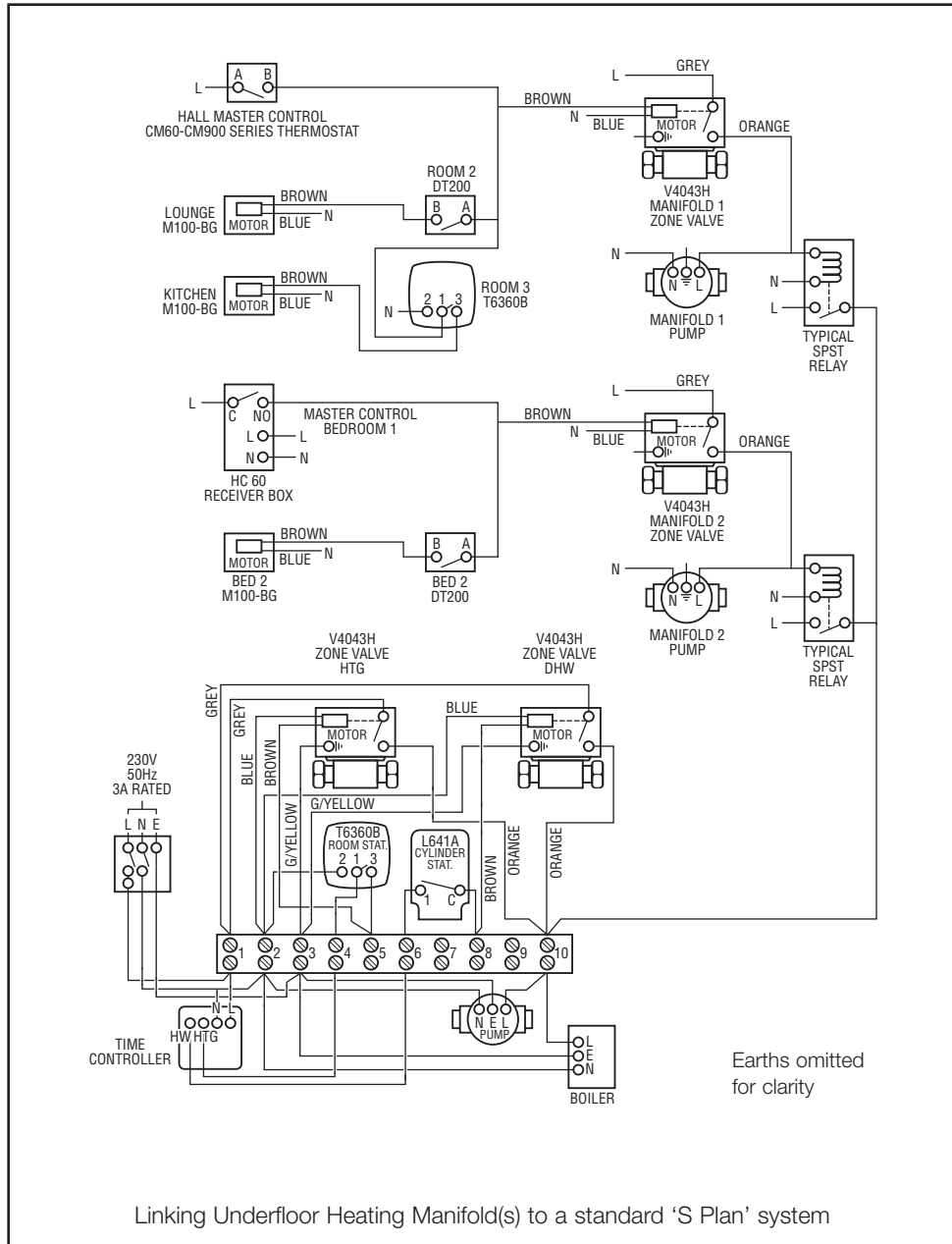
# Sundial U Plan

## Underfloor Wiring with S Plan System Using 2 Wire Actuators - Type M100



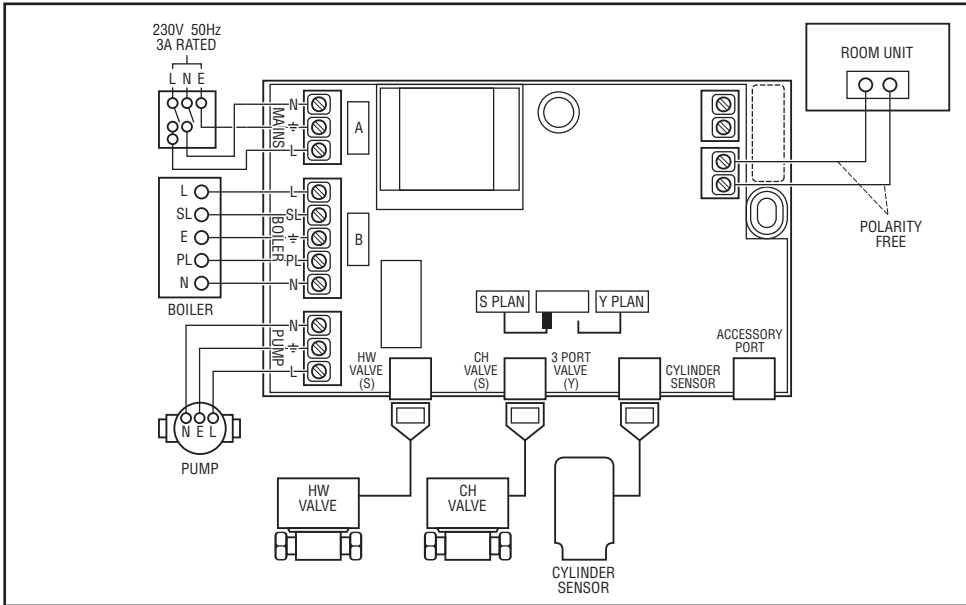
# Sundial U Plan Line Drawing

## Typical Multi-Manifold Schematic Wiring Diagram Using M100 - BG Actuators

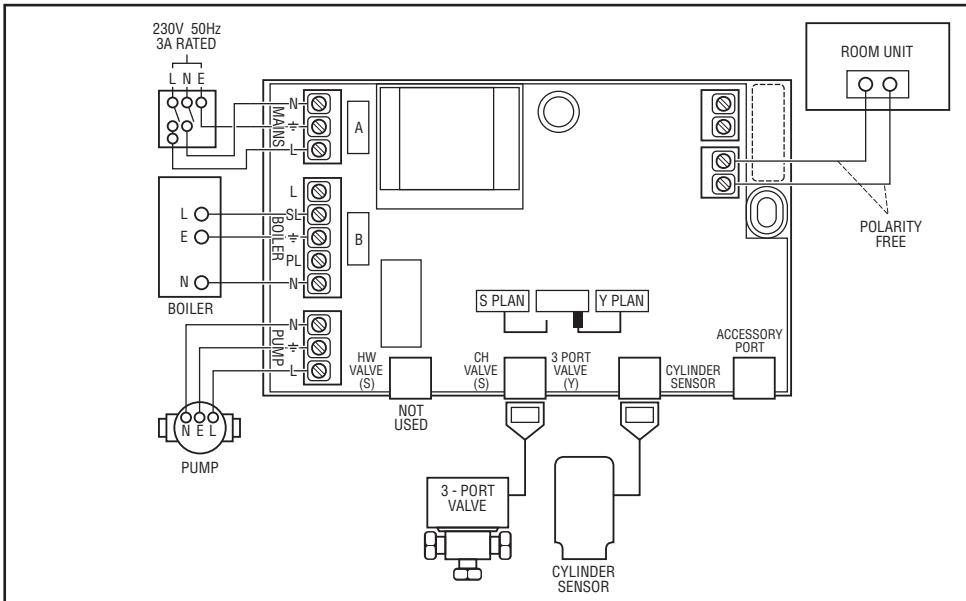


## Smartfit S Plan and Y Plan

### Smartfit 'S' Plan System

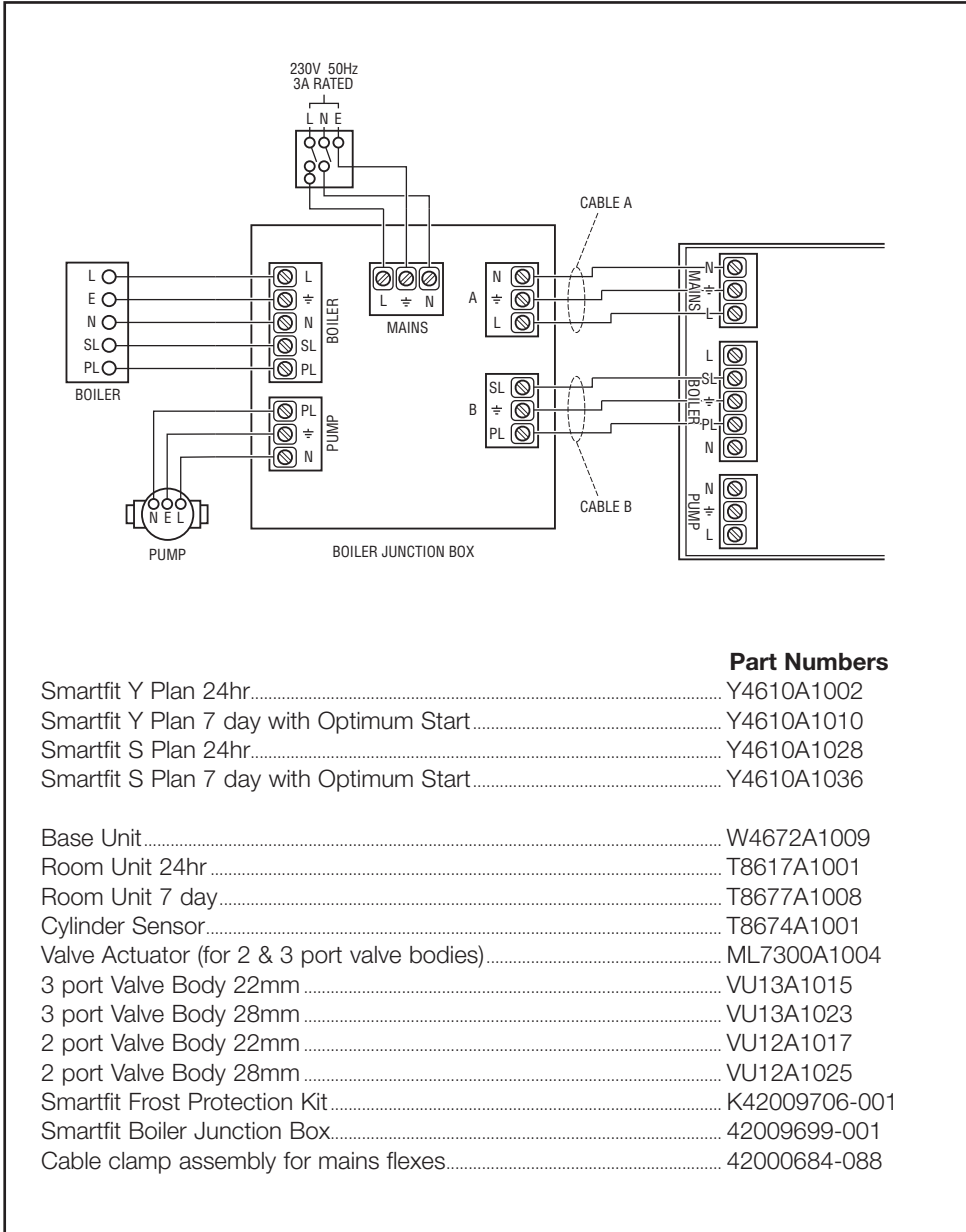


### Smartfit 'Y' Plan System



## Smartfit Boiler Junction Box

When the boiler & pump are remote from the rest of the controls, the boiler junction box (part no. 42009699-001) can be wired into the system as below:-



## Sundial Timed Y Plan – Fault Finding

The table opposite gives guidance on a quick electrical check for installed **Sundial Y Plans** to help in commissioning and to pin-point the source of any electrical problems.

Remember the **Golden Rule** when you have a problem. First of all **check your wiring**. Only start suspecting faulty components after you are satisfied all wiring is correct.

The following notes will help to identify faulty components.

### Cylinder Stat

First of all, make sure you have wired to the correct terminals.

Terminal C (common) is the **Left Hand** terminal.

Terminal 1 is the **Middle** terminal.

Terminal 2 is the **Right Hand** terminal.

Suspect the cylinder thermostat is faulty only if Terminal 1 does **not** become live when calling for Hot Water, or Terminal 2 does **not** become live when satisfied. (Make sure that Terminal C is live in both cases). While checking, disconnect Terminals 1 and 2 to prevent false readings due to backfeed.

### Room Stat

1) Remove wire from Terminal 3.

2) Live to Terminal 1.

3) Turn stat to call, if no live on 3 then faulty.

Suspect the room stat is faulty only if Terminal 3 is not live when calling for heat. (Make sure Terminal 1 is live). While checking, disconnect wiring from Terminal 3 to prevent false readings due to backfeed.

### Mid-Position Valve

Suspect the V4073A valve is faulty only if the valve does not operate as specified in the following checks (these should be done in order 1, 2, 3, 4, 5 and 6).

### Valve open for Heating only

1. **Switch off mains supply.** Disconnect **Grey** and **White** wires from appropriate junction box terminals. Reconnect both **Grey** and **White** wires to permanent live terminal in junction box.
2. Switch on mains supply. Valve motor should now move to fully open heating Port A. The motor should stop automatically when Port A is open, and stay in this position as long as power is applied to **White** and **Grey** wires. When Port A is fully open, the **Orange** wire becomes live, to start pump and boiler.

Double check by feeling that Port A outlet is getting progressively warmer.

### Valve open for D.H.W. only

3. Switch off mains supply. The valve should now automatically return to open D.H.W. Port B and close Heating Port A.
4. Isolate **Grey** and **White** wires and make safe. Remove cylinder stat wire from Terminal 6 in junction box and connect to permanent live. Switch on fused spur, cylinder thermostat must be set to call for heat, pump and boiler should start.

### Valve open for both D.H.W. and Heating

5. Switch off mains supply. Replace cylinder stat wire to Terminal 6. Isolate and make safe **Grey** wire and connect **White** wire to permanent live. Switch on mains supply, motor should now move to mid-position and stop automatically. Cylinder thermostat must be set to call for heat. Both ports A & B are now open for Hot Water and Heating. Boiler and pump should start. Double check by feeling that pipe outlets from ports A & B become progressively warmer.

6. Switch off mains supply, reconnect **White** and **Grey** wires to junction box terminals.

If this check completes satisfactorily, the problem is not the valve, but elsewhere in the circuit.

### Programmer

Suspect the programmer only:

- (a) After you have made sure that any links required are in place,
- (b) After you have made sure that the Programmer has power – to the correct terminal,
- (c) After you have made sure that the Programmer timing is set up correctly (see individual Programmer User Guide as appropriate),
- (d) If live does not appear at Heating ON Terminal when Heating only is selected on continuous or timed,
- (e) If live does not appear at Hot Water ON Terminal when Hot Water only is selected on continuous or timed,
- (f) If live does not appear on Hot Water OFF terminal with Hot Water OFF on programmer.



## Sundial Timed 'Y' Plan – Electrical Check Out

Programmer Switch Position	Heating only selected	Hot Water only selected	Hot Water and Heating selected
<b>Programmer</b>	Live on both 'CH ON' & 'HW OFF' Terminals.	Live on 'HW ON' Terminal.	Live on both 'CH ON' & 'HW ON' Terminals.
<b>T6360B Room Thermostat</b>	Set to call for Heat. Live on Terminals 1 & 3.	No live on any terminal. (See note 2 for Terminal 3).	Set to call for Heat. Live on Terminals 1 & 3.
<b>L641A Cylinder Thermostat</b>	Nominal 90 volts. Live on Terminals 1 & 2 (Note Terminal 1 only becomes 240 volt live after V4073A valve opens and Boiler fires). (See notes below).	Set to call for Hot Water. Live on Terminals C & 1. (See note 2 for Terminal 2)	Set to call for Hot Water. Live on Terminals C & 1. (See note 2 for Terminal 2)
<b>V4073A 3 Port Mid-Position Valve</b>	Live on <b>Grey, White</b> and <b>Orange</b> wires. Valve opens to Port A for Central Heating (C.H.).	Live on <b>Orange</b> wire only (See note 2 for <b>Grey</b> and <b>White</b> wires) Valve not energised. Port B open for Domestic Hot Water (D.H.W.).	Live on <b>White</b> wire and <b>Orange</b> wire. (See note 2 for <b>Grey</b> wire). Valve in mid position for C.H. and D.H.W.
<b>Boiler and Pump</b>	Boiler and pump fired via live feed from <b>Orange</b> wire.	Boiler and pump fired via live feed from Terminal 1 on cylinder stat.	Boiler and pump fired via live feed from Terminal 1 on cylinder stat and <b>Orange</b> wire.

### NOTES

1. Check **must** only be made by a suitably qualified electrician.
2. Low A.C. voltage may appear on specified wire or terminals due to back feed from V4073A valve. If in doubt, disconnect **Grey** or **White** wire as appropriate, or check with meter for full 240V.
3. **Blue** wire on valve **must** be connected to neutral.
4. Terminal 2 on room thermostat **must** be connected to neutral.
5. Ensure that any links required in programmer are in place.
6. Earth connection (**Green/Yellow**) **must** be made on valve.
7. Earth connection not needed on room stat or cylinder stat.

**SEE NOTES OPPOSITE IF YOU HAVE A PROBLEM**

## Sundial S Plan and S Plan Plus – Fault Finding

The table opposite gives guidance on a quick electrical check for installed **Sundial S Plan** and **S Plan Plus** to help in commissioning and to pin-point the source of any electrical problems.

Remember the **Golden Rule** when you have a problem. First of all **check your wiring**. Only start suspecting faulty components after you are satisfied all wiring is correct.

The following notes will help to identify faulty components.

### Cylinder Stat

First of all, make sure you have wired to the correct terminals.

Terminal C (common) is the **Left Hand** terminal.

Terminal 1 is the **Middle** terminal.

Terminal 2 is the **Right Hand** terminal.

Suspect the cylinder thermostat is faulty only if Terminal C **not** live when calling for Hot Water.

### Room Stat

- 1) Remove wire from Terminal 3.
- 2) Live to Terminal 1.
- 3) Turn stat to call, if no live on 3 then faulty.

Suspect the room stat is faulty only if Terminal 3 is not live when calling for heat. (Make sure Terminal 1 is live). While checking, disconnect wiring from Terminal 3 to prevent false readings due to backfeed.

### Zone Valves

Suspect a motorised valve is faulty only:

1. If the motor fails to rotate with live applied to the **Brown** wire and neutral to the **Blue** wire. (Motor can be viewed with valve cover removed).

Note that the motor stops automatically when the valve is fully open and stays in this condition as long as live is applied to the **Brown** wire.

The valve automatically closes under spring return when live is removed from the **Brown** wire.

2. The **Orange** wire only becomes live after the valve has fully opened (Make sure the **Grey** wire is live).
3. If the boiler and pump continues to run when the cylinder stat and room stat is satisfied and the clock is in OFF position.

### Programmer

Suspect the programmer only:

- (a) After you have made sure that any links required are in place.
- (b) After you have made sure that the Programmer has power – to the correct Terminal.
- (c) After you have made sure that the Programmer timing is set up correctly (see individual Programmer User Guide as appropriate).
- (d) If live does not appear at Heating ON Terminal when Heating is selected on continuous or timed.
- (e) If live does not appear at Hot Water ON Terminal when Hot Water only is selected on continuous or timed.

## Sundial S Plan and S Plan Plus – Electrical Check Out

Programmer Switch Position	Heating only selected	Hot Water only selected	Hot Water and Heating selected
<b>Programmer</b>	Live on 'CH ON' Terminal.	Live on 'HW ON' Terminal.	Live on both 'HW ON' & 'CH ON' Terminals.
<b>T6360B Room Thermostat</b>	Set to call for Heat. Live on Terminals 1 & 3.	No live on any terminal.	Set to call for Heat. Live on Terminals 1 & 3.
<b>L641A Cylinder Thermostat</b>	No live on any terminal.	Set to call for Hot Water. Live on Terminals C and 1.	Set to call for Hot Water. Live on Terminals C and 1.
<b>V4043H Heating Zone Valve</b>	Live on <b>Brown</b> , <b>Grey</b> and <b>Orange</b> wires.	Live on <b>Grey</b> and <b>Orange</b> wires.	Live on <b>Brown</b> , <b>Grey</b> and <b>Orange</b> wires.
<b>V4043H Hot Water Zone Valve</b>	Live on <b>Grey</b> and <b>Orange</b> wires.	Live on <b>Brown</b> , <b>Grey</b> and <b>Orange</b> wires.	Live on <b>Brown</b> , <b>Grey</b> and <b>Orange</b> wires.
<b>Boiler and Pump</b>	Boiler and pump fired via live feed from <b>Orange</b> wire.	Boiler and pump fired via live feed from <b>Orange</b> wire.	Boiler and pump fired via live feed from <b>Orange</b> wire.

### NOTES

1. Check **must** only be made by a suitably qualified electrician.
2. **Grey** wire on both Heating and Hot Water zone valves **must** be connected to permanent live.
3. **Blue** wire on both Heating and Hot Water zone valves **must** be connected to neutral.
4. Terminal 2 on room thermostat **must** be connected to neutral.
5. Ensure that any links required in programmer are in place.
6. Earth connection (**Green/Yellow**) **must** be made on valve.
7. With 28mm or 1 inch V4043H valves the **White** wire is not used and **must** be made electrically safe.

**SEE NOTES OPPOSITE IF YOU HAVE A PROBLEM**

## Sundial C Plan – Fault Finding

The table opposite gives guidance on a quick electrical check for installed **Sundial C Plans** to help in commissioning and to pin-point the source of any electrical problems.

Remember the **Golden Rule** when you have a problem. First of all **check your wiring**. Only start suspecting faulty components after you are satisfied all wiring is correct.

The following notes will help to identify faulty components.

### Cylinder Stat

First of all, make sure you have wired to the correct terminals.

Terminal C (common) is the **Left Hand** terminal.

Terminal 1 is the **Middle** terminal.

Terminal 2 is the **Right Hand** terminal.

Suspect the cylinder thermostat is faulty only if Terminal C is **not** live when calling for Hot Water.

### Room Stat

- 1) Remove wire from Terminal 3.
- 2) Live to Terminal 1.
- 3) Turn stat to call, if no live on 3 then faulty.

Suspect the room stat is faulty only if Terminal 3 is not live when calling for Heat. (Make sure Terminal 1 is live). While checking, disconnect wiring from Terminal 3 to prevent false readings due to backfeed.

### Zone Valve

Suspect the valve is faulty only:

1. If the motor fails to rotate with live applied to the **Brown** wire and neutral to the **Blue** wire. (Motor can be viewed with valve cover removed).

Note that the motor stops automatically when the valve is fully open and stays in this condition as long as live is applied to the **Brown** wire.

2. If the boiler continues to run when the cylinder stat and/or room stat is satisfied and/or the clock is in OFF position.

3.
  - (a) SWITCH OFF mains supply.
  - (b) Disconnect **Brown** wire to valve, and terminate safely.
  - (c) Disconnect **White** wire and re-connect to permanent live terminal at junction box.
  - (d) Disconnect pump live connection at junction box and re-connect to permanent live terminal.
  - (e) SWITCH ON mains supply.
  - (f) Valve should remain closed, **Orange** wire should become live to fire boiler.
4.
  - (a) SWITCH OFF mains supply.
  - (b) Restore **White** wire and pump live connections to original positions at junction box.
  - (c) Connect **Brown** wire to permanent live terminal at junction box.
  - (d) Ensure **Grey** wire is connected to permanent live.
  - (e) SWITCH ON mains supply.

Valve should now motor open. When fully open, **Orange** wire should become live to fire Boiler.

SWITCH OFF mains supply. Restore **Brown** wire to original Terminal on junction box.

If these checks complete satisfactorily, the problem is not on valve but elsewhere in circuit.

**Note that a V4043H1106 (28mm) or V4043H1080 (1 inch BSP) valve is required for the 'C' Plan.**

### Programmer

Suspect the programmer only:

- (a) After you have made sure that any links required are in place.
- (b) After you have made sure that the Programmer has power – to the correct terminal.
- (c) After you have made sure that the Programmer timing is set up correctly (see individual Programmer User Guide as appropriate).
- (d) If live does not appear at Heating ON Terminal when Heating only is selected on continuous or timed.
- (e) If live does not appear at Hot Water ON Terminal when Hot Water only is selected on continuous or timed.

## Sundial C Plan – Electrical Check Out

Programmer Switch Position	Heating only selected	Hot Water only selected	Hot Water and Heating selected
<b>Programmer</b>	Live on 'CH ON' Terminal.	Live on 'HW ON' Terminal.	Live on both 'HW ON' & 'CH ON' Terminals.
<b>T6360B Room Thermostat</b>	Set to call for Heat. Live on Terminals 1 & 3.	No live on any terminal.	Set to call for Heat. Live on Terminals 1 & 3.
<b>L641A Cylinder Thermostat</b>	No live on any Terminal.	Set to call for Hot Water. Live on Terminals C & 1.	Set to call for Hot Water. Live on Terminals C & 1.
<b>V4043H Hot Water Zone Valve</b>	Live on <b>Grey, White</b> and <b>Orange</b> wires.	Live on <b>Brown, Grey</b> and <b>Orange</b> wires.	Live on <b>Brown, White, Grey</b> and <b>Orange</b> wires.
<b>Boiler and Pump</b>	Boiler fired via <b>Orange</b> wire, room stat Terminal 3 runs pump.	Boiler fired via <b>Orange</b> wire.	Boiler fired via <b>Orange</b> wire, room stat Terminal 3 runs pump.

### NOTES

1. Check **must** only be made by a suitably qualified electrician.
2. **Grey** wire on both Heating and Hot Water zone valves **must** be connected to permanent live.
3. **Blue** wire on both Heating and Hot Water zone valves **must** be connected to neutral.
4. Terminal 2 on room thermostat **must** be connected to neutral.
5. Ensure that any links required in programmer are in place.
6. Earth connection (**Green/Yellow**) **must** be made on valve.
7. With 28mm or 1 inch V4043H valves the **White** wire is not used and **must** be made electrically safe.

**SEE NOTES OPPOSITE IF YOU HAVE A PROBLEM**

## Sundial W Plan – Fault Finding

The table opposite gives guidance on a quick electrical check for installed **Sundial W Plans** to help in commissioning and to pin-point the source of any electrical problems.

Remember the **Golden Rule** when you have a problem. First of all **check your wiring**. Only start suspecting faulty components after you are satisfied all wiring is correct.

The following notes will help to identify faulty components.

### Cylinder Stat

First of all, make sure you have wired to the correct terminals.

Terminal C (common) is the **Left Hand** terminal.

Terminal 1 is the **Middle** terminal.

Terminal 2 is the **Right Hand** terminal.

Suspect the cylinder thermostat is faulty only if Terminal 1 is **not** live when calling for Hot Water, or Terminal 2 is **not** live when satisfied. (Make sure that Terminal C is live in both cases). While checking, disconnect Terminals 1 and 2 to prevent false readings due to backfeed.

### Room Stat

- 1) Remove wire from Terminal 3.
- 2) Live to Terminal 1.
- 3) Turn stat to call, if no live on 3 then faulty.

Suspect the room stat is faulty only if Terminal 3 is not live when calling for heat. (Make sure Terminal 1 is live). While checking, disconnect wiring from Terminal 3 to prevent false readings due to backfeed.

### Diverter Valve V4044C

Suspect the V4044C valve is faulty only if the valve does not operate as specified in the following checks (these should be done in order 1, 2, 3 and 4).

### Valve open for Heating only

1. Switch off mains supply. Disconnect **Brown** wire from appropriate terminal and connect to permanent live Terminal in junction box.
2. Switch on mains supply. Valve motor should now rotate to fully open heating Port A.

### Valve opens for D.H.W. only

3. Switch off mains supply. The valve should automatically spring return to open D.H.W. Port B and close Port A.
4. Reconnect **Brown** wire to Terminal 5.

### Programmer

Suspect the programmer only:

- (a) After you have made sure that any links required are in place.
- (b) After you have made sure that the Programmer has power – to the correct terminal.
- (c) After you have made sure that the Programmer timing is set up correctly (see individual Programmer User Guide as appropriate).
- (d) If live does not appear at Heating ON Terminal when Heating is selected on continuous or timed.
- (e) If live does not appear at Hot Water ON Terminal when Hot Water only is selected on continuous or timed.

## Sundial W Plan – Electrical Check Out

Programmer Switch Position	Hot Water only selected	Hot Water and Heating selected
<b>Programmer</b>	Live on 'HW ON' Terminal.	Live on both 'CH ON' and 'HW ON' Terminals.
<b>T6360B Room Thermostat</b>	No live on Terminals 1 or 3.	Set to call for Heat. Live on Terminals 1 & 3.
<b>L641A Cylinder Thermostat</b>	Set to call for Hot Water. Live on Terminals C & 1.	Set to call for Hot Water. Live on Terminals C & 1.
<b>V4044C Diverter Valve</b>	Valve not energised Port B open for Domestic Hot Water.	Live on <b>Brown</b> wire only. When D.H.W. satisfied.
<b>Boiler and Pump</b>	Boiler and pump fired via live feed from Terminal C on cylinder stat.	Boiler and pump fired via live feed from Terminal C on cylinder stat and 3 on room stat.

### NOTES

1. Check **must** only be made by a suitably qualified electrician.
2. **Blue** wire on diverter valve **must** be connected to neutral.
3. Terminal 2 on room thermostat **must** be connected to neutral.
4. Ensure that any links required in programmer are in place.
5. Earth connection (**Green/Yellow**) **must** be made on valve.

**SEE NOTES OPPOSITE IF YOU HAVE A PROBLEM**

## Timer & Programmers



The new ST9000 range of programmers and timers is easy to fit, easy to set and easy to use. The extra large screen uses the Line of Text (LoT™) display to help programming and use without the need for instructions. ST9000 gives you a choice of quality time controls for every installation, from combi boilers to multi zone heating systems.

### ST9000 range

ST9100A – 1 day time switch  
ST9100C – 7 day time switch  
ST9400A – 1 day full programmer  
ST9400C – 7 day full programmer

ST9100S – 1 day Service Interval timer  
ST9400S – 1 day Service Interval programmer

ST9500C – 7 day 2 zone programmer



### ST699

Honeywell's third generation of the original electronic programmer, ST699, provides full control of heating and hot water. It is possible to select on either channel, once a day, twice a day, or continuous operation. Both channels have 'change' switches to advance the system to the next programmed period – whether it be an 'ON' or an 'OFF' period. A built in rechargeable battery will preserve the time and programmes for up to seven days in the event of mains power failure. *NOTE: for use on 230V systems.*



### ST799

ST799 offers all the benefits of ST699 with the added features of illuminated display and 7 day or 5/2 day programming. Complete backplate interchangeability means that ST799 can be used to upgrade existing ST699 installations quickly and easily.



## Thermostats & Valves



### Zone Valves

Honeywell's motorised zone valves – the most popular in Britain – have never been better. With the well established removable powerheads, replacement is possible without needing to drain down the system. The head is lifted on and off two locating pegs where it is held firmly in place by two retaining screws. Valves are still supplied as single, fully assembled and tested units, providing the removable head feature without the need for any on site assembly.



### Cylinder Thermostat

L641A is a compact thermostat suitable for domestic hot water cylinders fitted with loose jacket or pre-formed insulation. L641A maintains DHW temperature at the desired level, with economy and reliability. Tamperproof screwdriver slot adjustment or knob adjustment.



### T6360B Room Thermostat

T6360B provides air temperature control for domestic applications. The room thermostat incorporates heat anticipation to give accurate temperature control. Designed with large clearly marked terminals and break-outs on three sides to enable simple fitting, the thermostat benefits from modern styling making the T6360B ideal for a majority of installations.

*Note, see page 28 for Frost Protection*



### DT200 - Digital Thermostat

The DT200 has a large clear display, allowing users to view the actual or set temperatures easily. The two buttons allow changing between these temperatures or altering the set point. Digital technology ensures that the DT200 controls accurately to  $\pm 0.3^{\circ}\text{C}$ , providing a vital part of the boiler interlock for either traditional or combi boilers. DT200 can also be installed where only two wires are fitted for a room thermostat and no neutral connection is available.

## Wireless Thermostats



### **Y6630D Wireless room thermostats**

Simple wireless room thermostat for refurbished homes, or new systems, heating zones can be controlled effectively and efficiently using wireless thermostats. Every zone can have a thermostat fitted for the Building Regulations minimum standard, either on installation, or to improve a poorly controlled, energy wasting system.



### **CM720 Wireless programmable room thermostats**

Advanced control in a simple form, a large clear display helps householder by laying out the information clearly about each heating zone, the time of day, the temperature required and when the boiler fires.

Carefully laid out buttons enable easy programming and adjustment. P+I control techniques ensure efficient control of condensing boiler. The ability to control to

different temperatures at different times of day reduces boiler demand further, so that Carbon emissions are reduced.



### **CM920 Wireless programmable room thermostats**

The easiest control to fit, set and use, CM920 models use the latest P+I control techniques to offer efficient control of condensing boilers and load compensation by controlling with intermittent boiler demand.

The unique Line of Text (LoT™) display provides clear plain English prompts on the extra large backlit display to guide users through setting, using and adjusting. Installer set enhancements offer advanced control features such as Optimum Start, Temperature range limits, a Holiday programme and Party function to provide temporary overrides of the regular programme.

### **Wireless zoning**

Every zone valve can be controlled by its own wireless thermostat, whether programmable or single temperature.

This uses the wireless signals instead of wiring around the home to each zone. By dividing the house into zones, the heating will only heat the areas where heat is required, instead of the whole house. This is always going to save energy. It's a bit like introducing individual light switches into each area of the house, instead of switching all of the lights from a single switch in the hall.

## Extra Wireless Functions



### Synchronised multi zones

Extra energy savings with no effort. Simply by adding one extra wireless receiver to act as a master control, the demands from zones can be synchronised to increase efficiency.

When zoning ordinarily, although the heat demand is reduced to warm only the areas required, as one zone switches off, another can call for heat, keeping the boiler switched on. The Honeywell synchronised zone control makes sure that all of the off times are synchronised, so the time that the boiler is switched off, and the savings are increased. This has no effect on the programmed times.



### Wireless underfloor heating

Underfloor heating control with no wiring, using the HCE80 Wireless underfloor heating manifold controller, multiples of 5 or 8 zones can be controlled.

When setting up the system, each zone can be assigned to a wireless control profile and a wireless temperature sensor. So they can be grouped together to be controlled in similar heating profiles, or, if the householder wants, every room (zone) differently.



### Wireless radiator zones

CM920 can even control wireless radiator thermostats. Make your house operate as you want to live, don't just accept what was chosen several years ago.

Generally, the zones that can be controlled within the home are determined by the layout of the pipework that was fitted some years previously. But now, CM920 programmable room thermostats can also control Honeywell HR80 wireless radiator thermostats, creating zones, even within the restrictions of the pipework. In effect, each radiator thermostat becomes the control valve for a zone and forms part of a Multi Point Boiler Interlock. Zones can be added, moved or changed easily, without needing to alter the pipework.

### CM Zone

Two wireless zones with independent control from a single point. Reduced number of controls mounted on the walls, but with greater flexibility, more efficiency and bigger savings.

CM Zone combines many of the above control methods. Two zones of radiators can be controlled from a single CM Zone programmer. One of these zones can be underfloor, one radiators. Both zones can be radiators, but the homeowner gets the choice of which zone each radiator should be in.

## Bypass / Mixing Valves & Auto Air Vents



### EA122 Automatic Air Vent

The EA122 Automatic Air Vent is suitable for heating systems and other hot water systems which require the efficient and automatic removal of air from water, so reducing noise and corrosion. The air vent can be fitted anywhere on the positive pressure of the system where air is likely to be trapped. If this position is inaccessible fit the Q122A adapter and a small drain off route.



### DU146 and DU145 Automatic Bypass Valves

The DU146 and DU145 are for use on systems fitted with radiator thermostats or multi zones and for boilers with pump overrun. These valves prevent a rise in differential pressure and thus reduce noise in the system and protect the pump. In Building Regulations, if a bypass is fitted, an automatic bypass valve must be used.



### TM200VP Thermostatic Mixing Valve

The TM200VP is designed to reduce the risk of scalding in bidets, washbasins, showers and baths. It has been approved for use under the TMV3 Scheme and independently tested by WRc. No other valve of this type has been approved for more applications. For easier installation in cramped situations use the RK200 flexible connector.

\*See NHS guidance note 'Safe' Hot Water and Surface Temperatures (1998).



### D05F Pressure Regulating Valve

The D05F incorporates a balanced valve, which allows better regulation under varying inlet pressure, and a drop tight seat which ensures a positive shut off under no flow conditions, so maintaining preset downstream pressure. Has lockable setting, gauge point and optional gauge. WRAS Approved.

## Radiator Valves



### VT117E Radiator Thermostat

The Honeywell VT117E Radiator Thermostat incorporates the innovative reversible flow feature and can be fitted in any orientation with the flow through the body in either direction. VT117E

also incorporates an economy button, which reminds the user when the valve is being adjusted beyond the most economical temperature.



### VH117E Manual Radiator Valve

The Honeywell VH117E is a manual radiator valve with a difference. VH117E has integral balancing and can therefore be used either as a wheelhead or lockshield valve. The same style valve can therefore be used at both ends of the radiator to improve the looks of every installation. VH117E has a high quality stem valve body which is proven leak free. The manual radiator valve can be upgraded to thermostatic simply by replacing the actuator without draining down. VH117E has an optional locking facility to make the valve tamper resistant – particularly suited to public areas.

A chrome bodied manual radiator valve, VH200, is also available to match VT200.



### VT200 Classic Radiator Thermostat

The VT200 Classic Radiator Thermostat also incorporates the reversible flow feature and can be fitted in any orientation with the flow through the body in either direction. The VT200 features a chrome valve and sensing dome together with a smooth, brilliant white body. Designed to appeal to homeowners who appreciate stylish simplicity, VT200 also has large clear numbers and a gentle ratchet movement to make the valve easy to use.

The VT200 Classic, together with the VT117E, provides the heating installer with a choice of radiator thermostats for every installation. VT200 and VT117 are for use on two pipe wet central heating systems and are particularly suitable for taking advantage of uncontrolled heat gains thus providing energy saving for the homeowner.

Based on proven Honeywell valve design, the VT200 and VT117 are available with 15mm, 10mm and 8mm compression fittings. They incorporate integral balancing for easy application and an adjustable tailpiece for simple retrofit.

## Frost Protection

### T4360 Frost Thermostat and L641B Pipe Thermostat

To reduce the risk of frozen pipework during severe cold weather, Frost Protection can be installed to protect either the whole central heating system or the boiler and localised pipework. These controls are designed to override the Programmer and Room Thermostat controls.



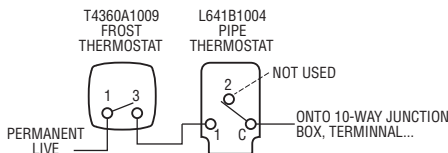
If a Frost Thermostat only is to be installed to protect the central heating system, it must be sited where a rise and fall in heated air temperature can be detected, i.e. in a room with a radiator, and set to 12-16°C.

If the Frost Thermostat is installed outside the heated area, i.e. in a boiler room, garage or attic space, it is strongly recommended that a Pipe Thermostat be used as well to ensure that overheating of the property does not occur. The Frost Thermostat should be set to 5°C. The Pipe Thermostat will sense a rise in water temperature in the pipework and then switch the system off. It should be sited on the boiler return, set at 25°C and wired as below.

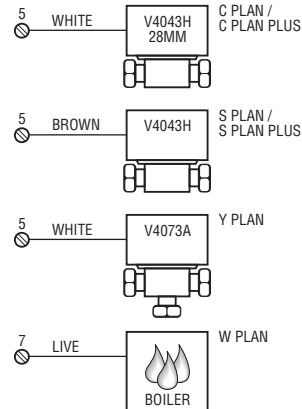
#### Mains Voltage Frost Kit: K42008628-001

T4360 Frost Thermostat and L641B Low-Limit Pipe Thermostat

(Recommend 1mm<sup>2</sup> 240Vac rated cable)

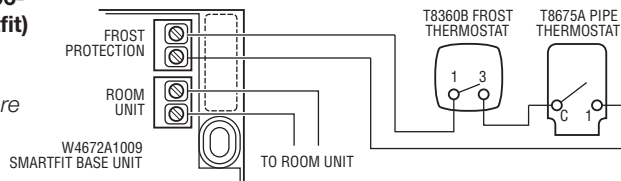


(Mains Voltage Frost Kit cannot be used on Smartfit)



#### Smartfit Frost Kit: K42009706-001 (Only suitable for Smartfit)

T8630B Frost Thermostat and T8675A Low-Limit Pipe Thermostat (Recommend 2-core Doorbell 10Vdc rated wire)



When a Frost Thermostat is installed on a central heating system, the fused spur should only be switched off for servicing and maintenance. If the heating system is to be switched off for any other reason, eg. holiday, then switching must only be carried out at the Programmer or Timeswitch, otherwise the Frost Protection is disabled.

# Valve Compatibility Guide

## Replacement Wiring Guide for the old V4073A1005 to all new V4073A models

The old valve had 6 wires and a relay plugged into one end.

When replacing this old model with the newer model, wire the new valve colour-for-colour apart from the **Brown** wire which is missing from the new valve.

### ON SINGLE OUTPUT TIME SWITCHES

Omit **Brown** wire and reverse C & 1 on the cylinder thermostat.

### ON DOUBLE OUTPUT TIME SWITCHES i.e. separate switching outputs for Heating and Hot Water circuits.

Omit **Brown** wire and reverse C & 1 on the cylinder thermostat.

1. For programmers capable of selecting heating only: **Run extra cable from the Grey wire on the valve to the HOT WATER OFF terminal on the programmer.**

2. For programmers NOT capable of selecting heating only: **This extra cable is NOT required and MUST NOT be included.**

### EXCEPT:

#### 1. ON RANDALL 4033 PROGRAMMER

Remove wire that connects to cylinder thermostat 1 at JUNCTION BOX end and re-connect to **Orange** wire connection of mid-position valve. Disconnect wire at Terminal 1 on programmer, isolate and make safe. Add link in programmer back plate between Terminals 1 and 6.

NB. If the Randall 4033 has been used as a junction box, any wires going into terminal 1 should be removed and re-connected into a spare terminal connector (not supplied by Honeywell).

#### 2. ON SANGAMO 410 FORM 1 PROGRAMMER

Follow instructions for Randall 4033, except on programmer base plate, disconnect wire on Terminal 3 and add link between 3 and 6 on baseplate of Programmer.

## MOTORISED VALVE INTERCHANGEABILITY GUIDE

MODEL	No.	E	N	S/L	HW ON	CH ON	HW OFF
<b>HONEYWELL V4073A</b>		<b>GY</b>	<b>BL</b>	<b>OR</b>		<b>WH</b>	<b>GR</b>
ACL	679H340	GY	BL	OR		WH	GR
ACL	679B340	GY	BL	OR		WH	GR
Danfoss/Randall	DVM-3M	GY	BL	OR		WH	GR
Danfoss/Randall	HSA3	GY	BL	OR		BR	GR
Drayton Flowshare	2	GY	BL	OR		WH	GR
Grasslin/Tower	MP 22C	GY	BL	OR		WH	GR
Landis & Gyr	MAV322	GY	BL	OR		WH	GR
Pegler/Sunvic	SD2701	GY	BL	OR		WH	GR
Pegler/Sunvic	SDV2211	GY	BL	OR		WH	GR
Pegler/Sunvic	SD1701	GY	BL	OR		BR	GR
Potterton/Myson	PMV3	GY	BL	OR		BR	GR
Potterton/Myson	MSV322		BL	OR		WH	GR
Sopac	ZV20-EB	GY	BL	RE		WH	GR
Switchmaster	MIDI	GY	BL	RE	OR	YE	WH
Danfoss Heatshare		GY	BL	RE	OR	YE	WH

ADD LINK

MODEL	No.	E	N	S/L	Motor	PL
<b>HONEYWELL V4043H</b>		<b>GY</b>	<b>BL</b>	<b>OR</b>	<b>BR</b>	<b>GR</b>
ACL	679H308-30L1	GY	BL	OR	BR	GR
ACL	679B308-30L1	GY	BL	BK	BR	WH
Danfoss/Randall	DVM-2C	GY	BL	OR	BR	GR
Danfoss/Randall	HP2A		BL	OR	BR	GR
Drayton		GY	BL	OR	BR	GR
Landis & Gyr	ZAV222	GY	BL	OR	BR	GR
Pegler/Sunvic	SZV 1212		BL	OR	BR	GR
Potterton/Myson	PMV43	GY	BL	OR	BR	GR
Randall	HPA2	GY	BL	OR	BR	GR
Sopac	ZV20-2-EB	GY	BL	RE	WH	GR
Switchmaster	Auto Z	GY	BL	OR	BR	GR
Tower/Grasslin	MV2-22C	GY	BL	OR	BR	GR

#### Sunvic V\*203

(White wire - make electrically safe)

Connect Grey wire on V4043H to permanent live.

GY = Green/Yellow

YE = Yellow

BK = Black

BL = Blue

BR = Brown

RE = Red

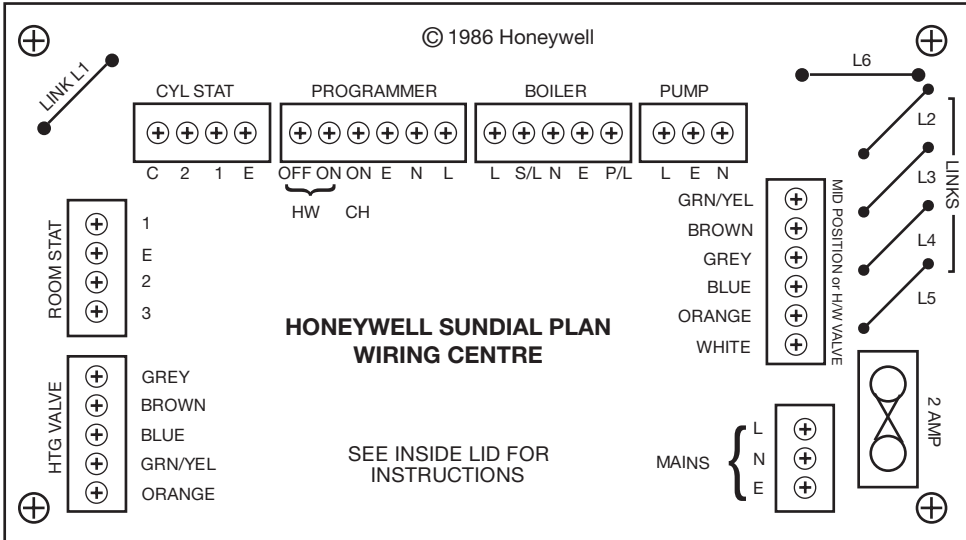
OR = Orange

WH = White

GR = Grey

## Wiring Centre

A simple alternative to using this guide and a conventional junction box, is the Honeywell Sundial Plans Wiring Centre. This provides a clearly marked terminal block for each component in the system with each wire having its own terminal.



### COMPONENTS LAYOUT

**If using Programmer (not basic Time Clock) Cut link 1.**

#### FOR FULLY PUMPED SYSTEMS

**FOR 'S' PLAN** (two zone valves) Cut links L2 and L4.

If boiler requires pump overrun Cut link L3 also.

If using a **28mm or 1" BSP V4043H** the **WHITE** wire must be isolated and made safe. Do not connect to a terminal.

**FOR 'Y' PLAN** (mid position valve) Cut links L4 and L5.

If boiler requires pump overrun Cut link L6 also.

#### FOR GRAVITY PRIMARY SYSTEMS

**FOR C-PLAN** (one 28mm zone valve) Cut links L2 and L3.

If Room Thermostat is not being used, link terminals 1 and 3 at the **ROOM STAT** connector block.

For frost protection connect the FROST THERMOSTAT T4360A as follows:

#### S Plan

Frost thermostat Terminal 1 to HW OFF on programmer block. Frost thermostat Terminal 3 to WHITE on MID POS/HW VALVE terminal block.

#### Y Plan

Frost thermostat Terminal 1 to GREY and frost thermostat Terminal 3 to BROWN on HTG VALVE terminal block.

#### C Plan

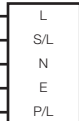
Frost thermostat Terminal 1 to GREY and Frost thermostat Terminal 3 to ORANGE on HTG VALVE terminal block.

### BOILER CONNECTIONS

#### Pump Overrun Boilers

Permanent Live  
Switch Live  
Neutral  
Earth  
Pump Live

#### Wiring Centre



#### Basic Boilers

Switch Live  
Neutral  
Earth



## Training Courses

### One Day Installer Training (Course A)

#### Agenda

- Theory of Control
- Control Plans and Wiring Techniques
- Controlling Combi Boilers
- Smartfit
- 2005 Building Regulation requirements
- Programmable Room Thermostats:-
  - Installation
  - Programming
  - Use
  - RF Controls
- Non-Electric Controls
- Practical Wiring Exercises and fault finding - both traditional and Smartfit controls

### Part L1 Building Regulations

- Includes **Part L Building Regulations** awareness.
- **CM Zone** - Providing the right temperature in the right place at the right time - without requiring any change to the pipework.

### See Dates on Web!

Visit: [www.honeywelluk.com](http://www.honeywelluk.com) and click on 'Training' or write to address below

The course fee includes lunch, refreshments, course manual and certificate. ***Please mail your cheque, payable to Honeywell C S*** and return with your booking slip to **Honeywell, Arlington Business Park, Bracknell, Berks RG12 1EB** and mark as "Installer Training Courses", F.A.O. Mrs Ann-Marie Tibbles.

We need a minimum of 10 days notice to make arrangements and will write to confirm your booking. Joining instructions will be sent approximately 2 weeks prior to the course date. **YOUR CHEQUE MUST ACCOMPANY THE SLIP BELOW TO RESERVE A PLACE or you can fax back with your Credit Card details.**

Contact: \_\_\_\_\_ Company: \_\_\_\_\_

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Postcode: \_\_\_\_\_

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