QUINTA PRO RANGE

Suggested Schematics with Control and Power Wiring Details

HIGH EFFICIENCY 108.9% NCV ΔT 50/30°C

FULLY MODULATING BOILER CONTROL

PREMIX BURNER CLEAN COMBUSTION

ULTRA LOW NOx BREEAM EXCELLENT

RECYCLABLE MATERIALS

High efficiency wall hung condensing boiler with ultra low NOx emissions

QUINTA PRO RANGE OUTPUTS

QP30:	8.0 - 31.4 kW
QP45:	8.0 - 43.0 kW
QP65:	12.0 - 65.0 kW
QP90:	14.1 - 89.5 kW
QP115:	16.6 - 114.0 kW

remeha commercial

Schematics with Control

	Page
Control Options for the Quinta Pro Series of Boilers	p3
External controls by others	
Simple Quinta Pro boiler domestic installation - Typical 'S' plan, heating and hot water	p4-5
Single Quinta Pro boiler, heating only	p6-7
Single Quinta Pro boiler, heating only with low loss header	p8-9
Single Quinta Pro boiler, heating and priority hot water using a low loss header and pump or valve kit	p10-13
Remeha supplied controls	
Single Quinta Pro boiler, heating only using the iSense controller (room/weather compensation)	p14-16
Single Quinta Pro boiler, heating and Priority DHW using the iSense controller (room or outside compensation)	p17-19
Multiple Quinta Pro boilers HTG only using a low loss header with the Celcia MC4 and iSense (room or outside compensation)	p20-21
Multiple Quinta Pro boilers HTG and Priority DHW using a low loss header with the Celcia MC4 and iSense (room or outside compensation)	p22-24
Multiple boilers, heating and hot water using a low loss header with the iSense Pro controller (optimising/weather compensated control for dual heating zone and hot water from all or single boilers)	p25-30
Connecting multiple boilers with external control interlocks and alarm and run signals	p31
Quinta Pro nominal flow rates and boiler resistances	p31

Note: We supply the Grundfoss 25/80 (Part No. S101621) as standard for the full Quinta Pro range. This will alter due to changes in EU regulations. The Quinta Pro 30 will operate on speed 1, the 45 and 65 will operate on speed 2, and the 90 and 115 will operate on speed 3. They are intended to act as a shunt pump. In the layouts illustrated, they are designed to operate on a 20ºC Delta TΔ. If using a pump without a low loss header, please take into account both the boiler and system resistance and also when being used in conjunction with a calorifier and low loss header. Contact our sales or technical departments for further assistance.

The hydraulic and control layouts illustrated in this brochure are for guidance only and must be used in conjunction with the Quinta Pro and iSense Pro installation and service manuals. They do not constitute a full system design. Remeha Commercial accept no liability for any loss or damage rising from any errors or omissions that may be inadvertently contained in this booklet.

When connecting a control cable to the OT terminals on the main control PCB, disconnect and remove the factory fitted lead connected to the IF- 01 PCB.

Some earths and neutrals are omitted for clarity.

All systems, mechanical and electrical, must be installed to the current regulations by a suitably qualified engineer.

Control Options for the Quinta Pro 30 / 45 / 65 / 90 and 115 series

The Remeha range of Quinta Pro boilers are supplied as standard with an "Open Therm" control interface which enables direct weather compensation using Remeha single and multi boiler controls. The customer can choose to use external control options supplied by others without affecting boiler performance.

Supplied by others

On/off control:

- Boiler requires a permanent 230v supply and is enabled using a volt free switch/relay. The boiler will modulate its output to maintain the flow temperature setpoint, normally 80ºC, but can be adjusted on the boiler between 20ºC and 90ºC

0-10 volt control:

- Boiler requires a permanent 230v supply and is enabled and modulated using a 0-10 volt signal from a Building Management System or quality panel mounted optimiser/ compensator. The control can be flow temperature or percentage output based
- Temperature based example: if 56ºC flow is required from the boiler, the control will need to supply 5.6v. The output will be modulated to maintain a flow temperature of 56ºC
- Percentage based example: if the control logic requires that a boiler should be running at 33%, the control will need to supply 3.3v to the boiler. The boiler will run at 33% output with a variable flow temperature
- Applications - domestic/commercial and industrial installations, with a variety of heat emitters, DHW via calorifiers or plate heat exchangers, and installations where a variety of different temperature zones are required at the same time

Supplied by Remeha Commercial as optional extras

iSense Controller - Single/multi boiler weather compensating controller

- A simple to operate room/boiler mounted thermostat/timer which can be used with a combination of outside/room and flow temperature sensors to vary the boiler output (flow temp) to suit weather conditions. The iSense can be installed in a reference room and can also be mounted in a boiler when used in weather compensated mode. It has a 7 day timer with multiple on/off and night setback periods, holiday function, frost protection and manual override

Celcia MC4

- Multiple boiler weather compensating controller with step control (up to 4 boilers) to be used in conjunction with the iSense controller
- The iSense can be mounted in a reference room, in the plant room or on the boiler
- The MC4 is mounted adjacent to the boiler group

iSense Pro - Multiple boiler weather compensating controller with sequence control (up to 8 boilers)

- Optimiser compensator which can provide 2 timed heating zones and uses a combination of outside, flow and room temperature to vary the boiler output (flow temp) to suit weather conditions. Can also provide time control to DHW circuit. The iSense Pro controller is mounted in a wall box when used with the Quinta Pro and is complete with timer, night setback, frost protection and pump cycling protection. The iSense Pro controller will sequence and rotate the lead boiler on multiple installations. This controller also has the ability to accept remote extension timers, supplied as an optional extra, which will allow the heating system to run on daytime compensation outside the normal timed settings without need for access or interference to the boiler or controller. Ideal for school lettings/night classes etc.

Note: We do not advise using a combination of external and built-in controls as in most cases there can be no interface between them; it is likely they will 'conflict' with each other and neither will work properly. The exception to this is when using the iSense Pro kit KT1154 in conjunction with a Remote BMS controller (see page 31).

Simple Quinta Pro boiler domestic installation
Typical 'S' plan, heating and hot water
(Time and temperature control by others)

Power Supply

- Boiler requires a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead

Boiler Control Settings

(see 5.7.2 in technical documentation)

- Set boiler code P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Boiler will recognise the control being used
- Use the zone valve end switches to provide the volt free switch pair on OT on the main control PCB to enable the boiler
- Boiler output will vary between 18% part load set point and 100% full load set point to achieve the boiler flow set point (code P1)

System Components

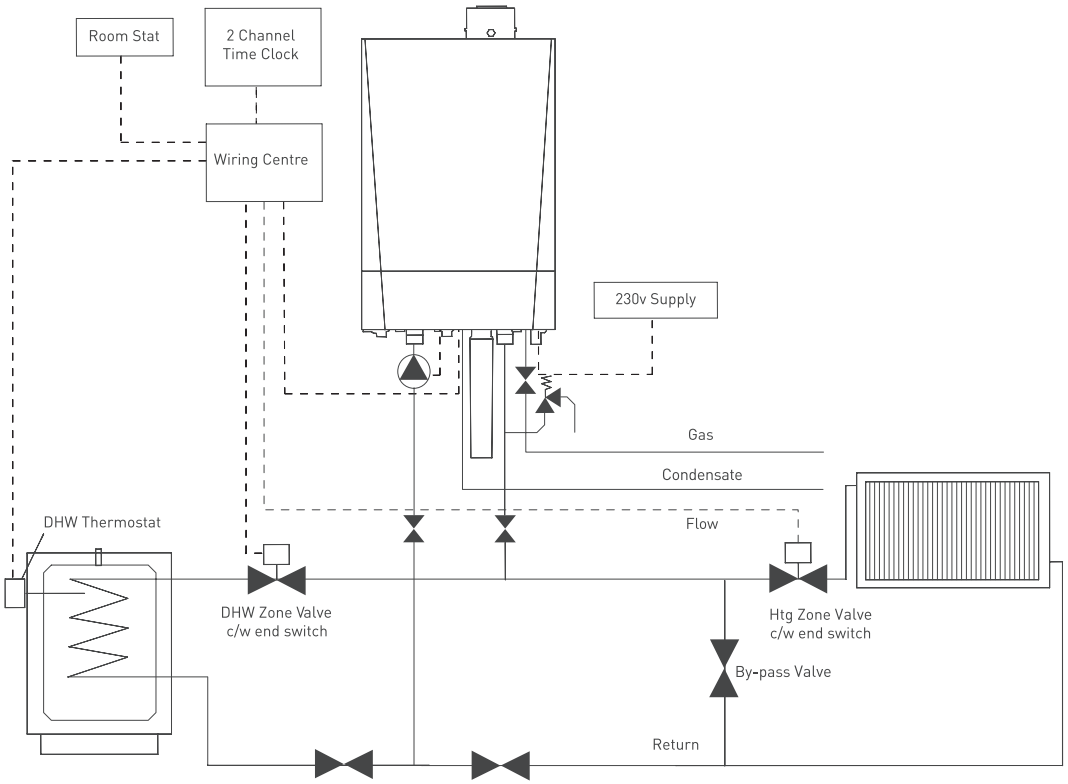
(not supplied)

- Simple two channel time clock providing 230v switched supplies to control heating and domestic hot water
- System pump
- Cylinder thermostat
- Room thermostat
- HTG and DHW zone valves c/w a single end switch (closes on valve fully open)
- Wiring centre

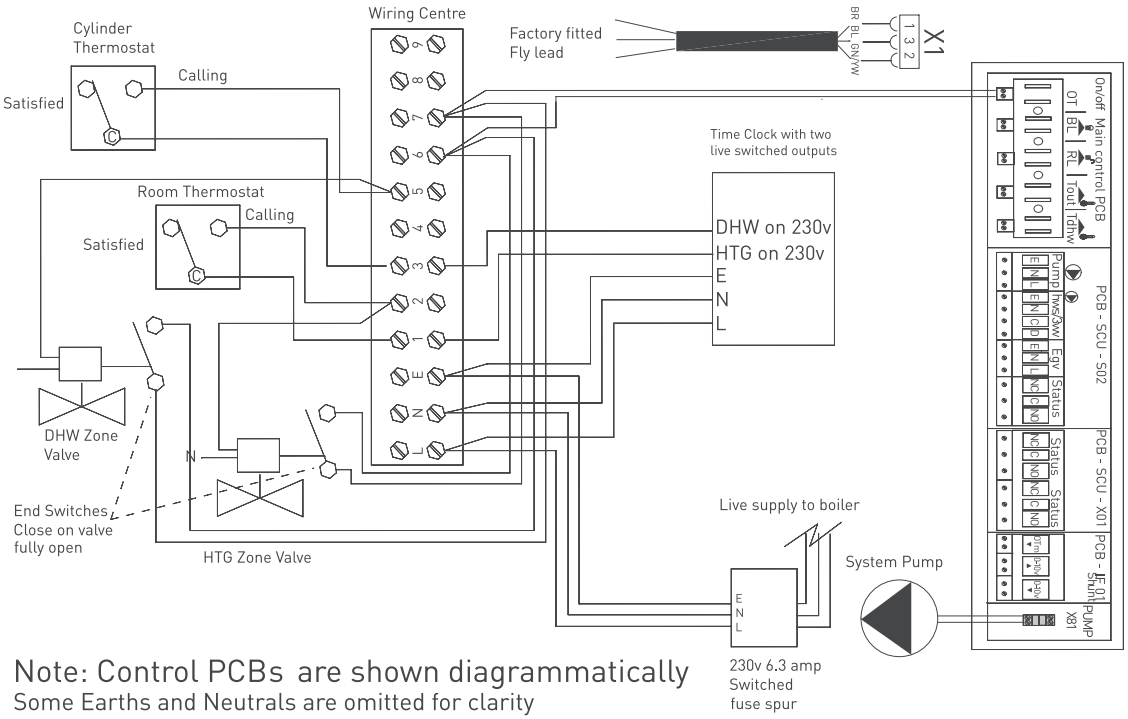
Note:

1. Maintain polarity on all connections
2. Some Neutral and Earth connections have been omitted for clarity
3. The schematic is for guidance only and does not constitute a design
4. Heating and hot water can be operated independently or simultaneously with this layout provided the control selected will allow it

Single Quinta Pro boiler, heating and domestic hot water, using a simple 'S' Plan



QP 001S



Note: Control PCBs are shown diagrammatically
Some Earths and Neutrals are omitted for clarity

QP 001SA

Single Quinta Pro boiler, heating only (Time and temperature control by others)

Power Supply

- Boiler requires a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead

Boiler Interlocks

(for pressure switches etc.)

- Safety Interlock - remove the existing link and fit volt free switch pair to BL on the main control PCB. If the circuit is open the boiler will go to a shut down mode displaying code 9 and will restart when the circuit is closed

Indication Controls

(to report actual function)

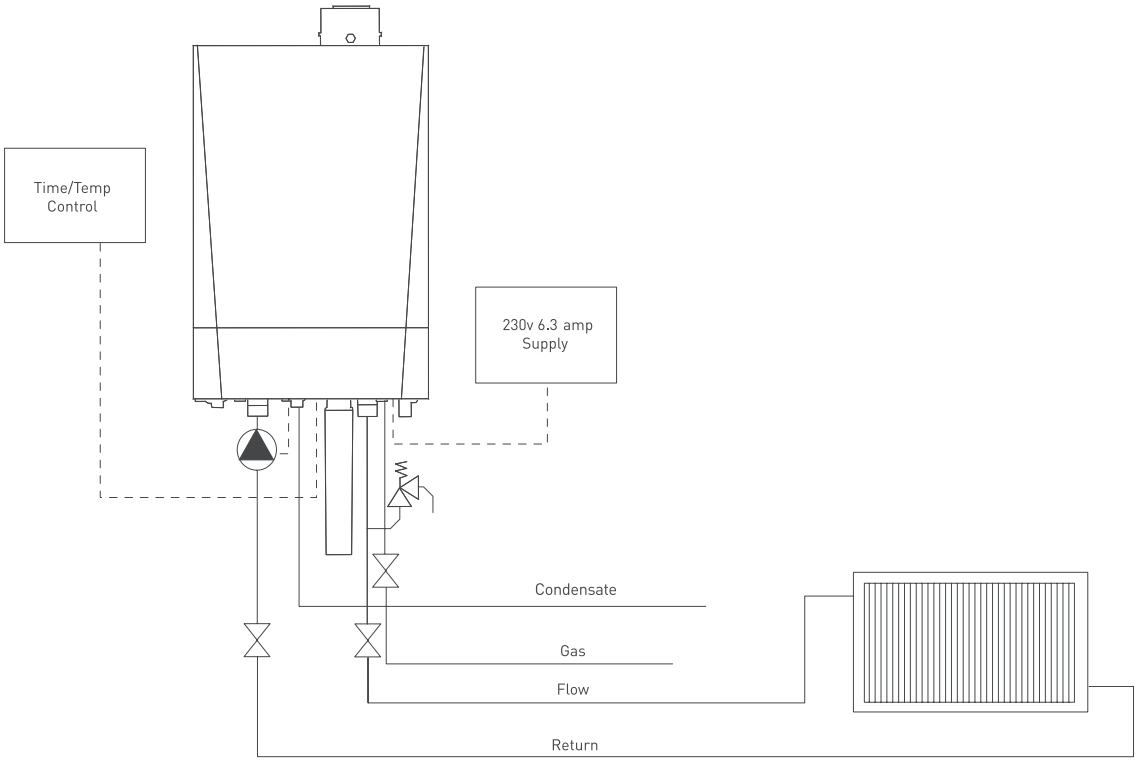
- Common Alarm - volt free relay on SCU-X01 (see boiler manual for full details)
- Boiler Run - volt free relay on SCU-X01 (see boiler manual for full details)

Boiler Control Settings

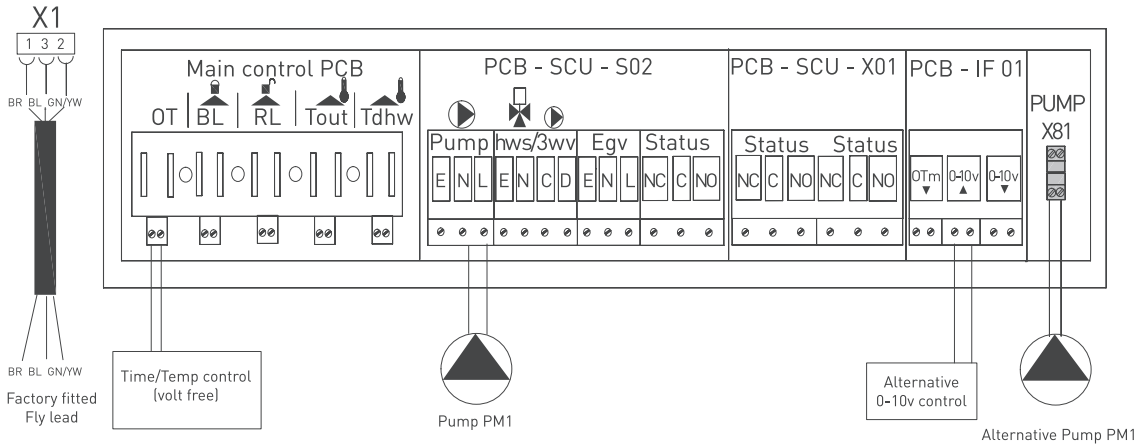
(see 5.7.2 in technical documentation)

- Connect the external controls (volt free) to the OT terminals on the main control PCB (on/off). Boiler will modulate to the set point set in P1 or the 0 -10v terminals on the IF-01. Control option based on temperature or output can be adjusted on the jumper on the IF-01. (See installation manual for full details)
- Boiler will recognise the type of control being used
- Set boiler code P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Pump: connect the heating pump to terminals shown on the PCB SCU - S02 max 400Va (1.5 amp). Alternatively, pump can be connected to the fly lead supplied with the boiler to plug X81; this a max duty of 200w (0.8 amp)

Single Quinta Pro boiler, heating only



QP 002



Note: Control PCBs are shown diagrammatically
Earths are omitted for clarity

QP 002A

Single Quinta Pro boiler, heating only with low loss header (Time and temperature control by others)

Power Supply

- Boiler requires a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead

Boiler Interlocks

(for pressure switches etc.)

- Safety Interlock - remove the existing link and fit volt free switch pair to BL on the main control PCB. If the circuit is open the boiler will go to a shut down mode displaying code 9 and will restart when the circuit is closed

Indication Controls

(to report actual function)

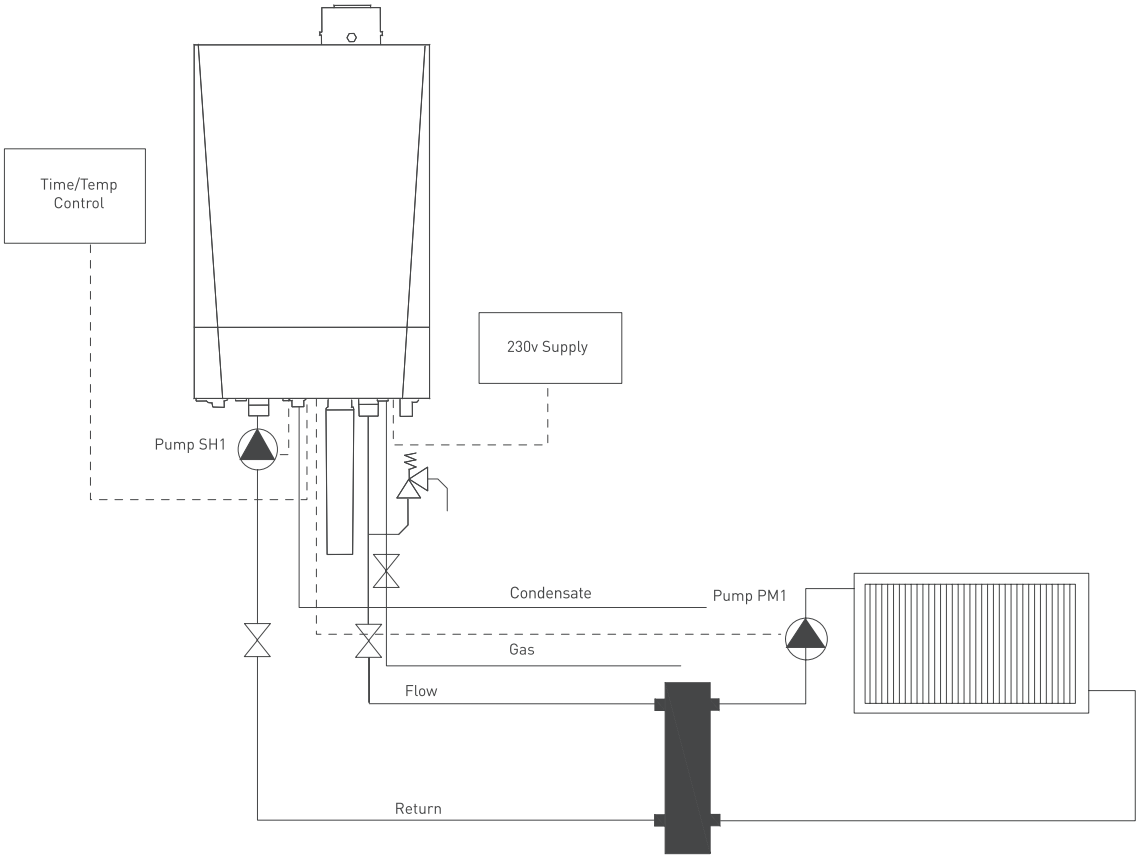
- Common Alarm - volt free relay on SCU-X01 (see boiler manual for full details)
- Boiler Run - volt free relay on SCU-X01 (see boiler manual for full details)

Boiler Control Settings

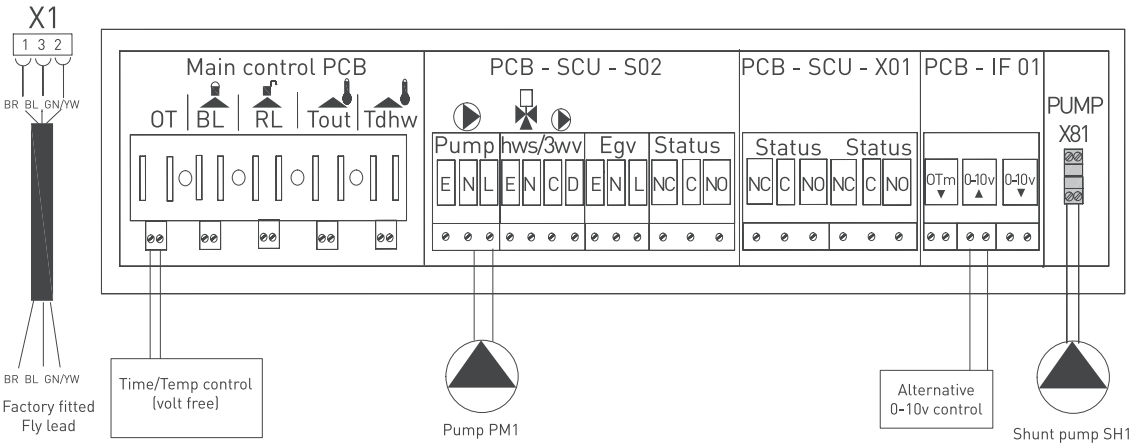
(see 5.7.2 in technical documentation)

- Boiler will recognise the type of control being used
- Set boiler code P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Connect the external controls (volt free) to the OT terminals on the main control PCB (on/off). Boiler will modulate to the set point set in P1 or the 0 -10v terminals on the IF- 01. Control option based on temperature or output can be adjusted on the jumper on the IF- 01. (See installation manual for full details)
- Pumps: connect pump PM1 to the heating pump terminals shown on the PCB SCU - S02 max 400Va (1.5 amp). Connect the shunt pump SH1 to the pump fly lead supplied with the boiler to plug X81

Single Quinta Pro boiler, heating only with low loss header



QP 003



Note: Control PCBs are shown diagrammatically
Earths are omitted for clarity

QP 003A

Single Quinta Pro boiler, heating with priority hot water using a low loss header and pump or valve kit (Time and temperature control by others)

Power Supply

- Boiler requires a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead

Boiler Interlocks

(for pressure switches etc.)

- Safety Interlock - remove the existing link and fit volt free switch pair to BL on the main control PCB. If the circuit is open the boiler will go to a shut down mode displaying code 9 and will restart when the circuit is closed

Indication Controls

(to report actual function)

- Common Alarm - volt free relay on SCU-X01 (see boiler manual for full details)
- Boiler Run - volt free relay on SCU-X01 (see boiler manual for full details)

Boiler Control Settings

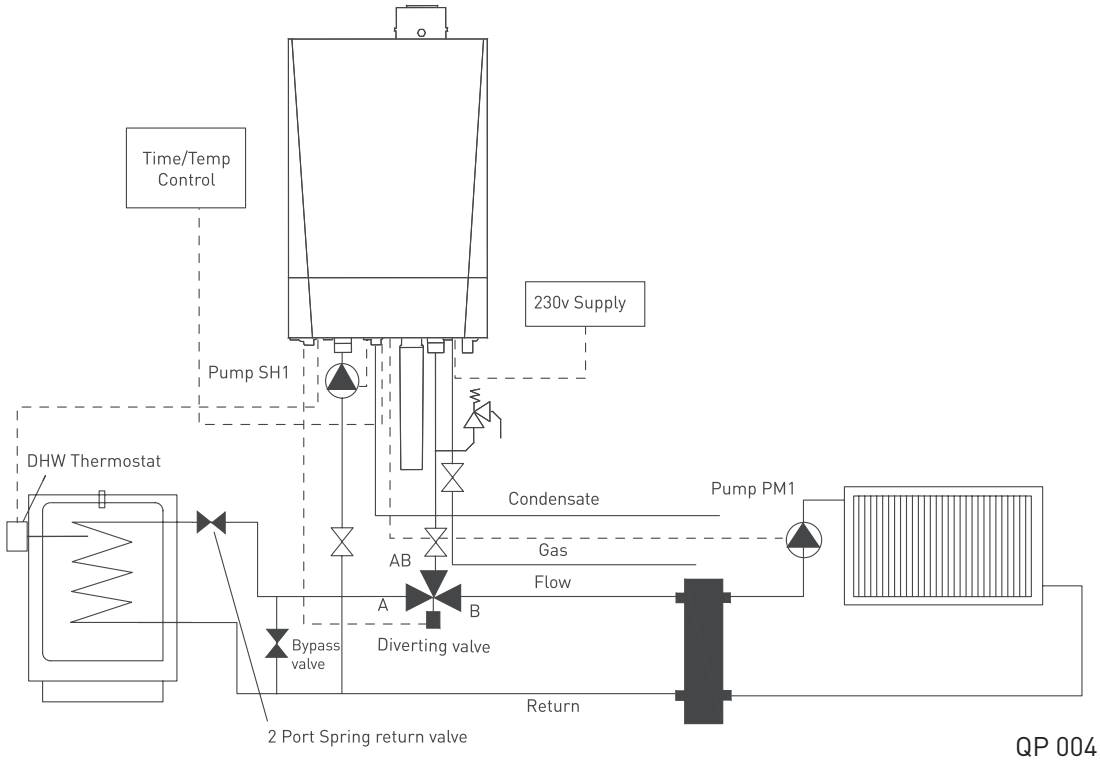
(see 5.7.2 in technical documentation)

- Boiler will recognise the type of control being used
- Set boiler code P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Connect the external controls (volt free) to the OT terminals on the main control PCB (on/off). Boiler will modulate to the set point set in P1
- Pumps: connect pump PM1 to the heating pump terminals shown on the PCB SCU - S02 max 400Va (1.5 amp). Connect the shunt pump SH1 to the fly lead supplied with the boiler to plug X81 max 200w (0.8 amp). On pump installations, connect the shunt pump to the terminals shown; a contactor or relay will be required if loading exceeds 1.5 amps
- 3-way valve: on the 3-way valve option, connect the valve to the terminals shown on the PCB SCU – S02

Important:

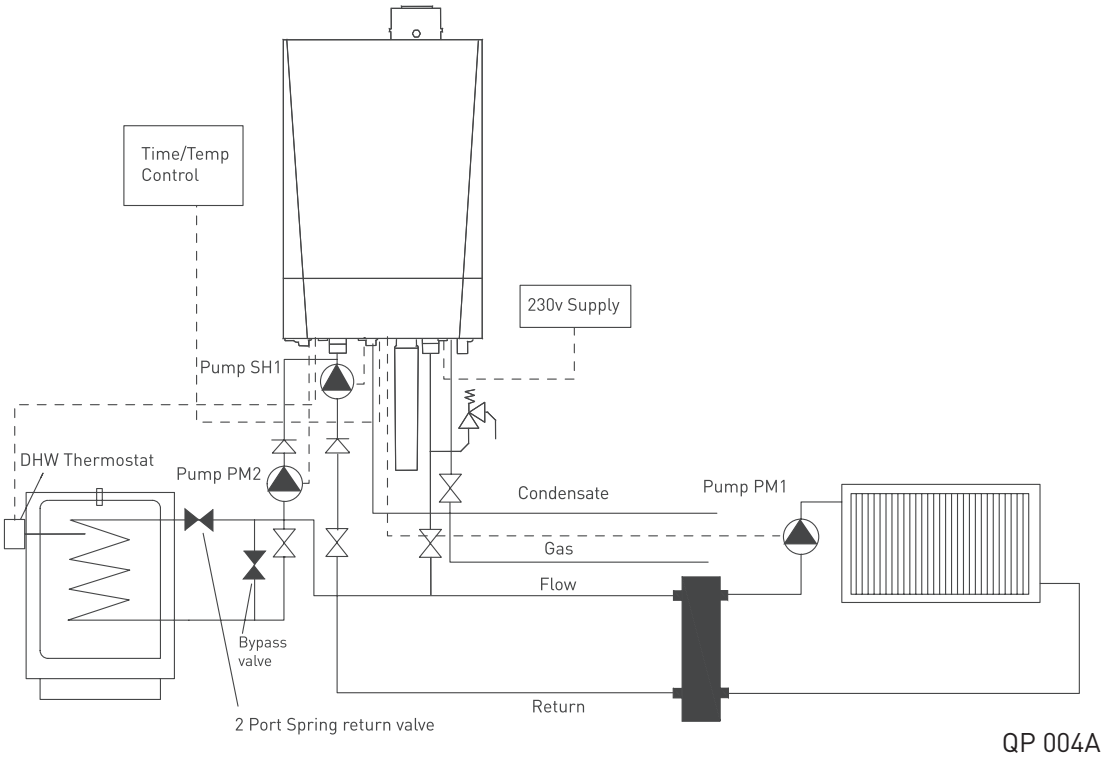
When using the Remeha supplied low loss header and pump kit and the DHW diverting valve or primary pump kit, the calorifier must be sited within 3M of the boiler. In both cases, the DHW cylinder must be a high recovery unit capable of accepting the full or adjusted DHW output of the boiler being used (reference parameter P18).

Single Quinta Pro boiler, heating with priority hot water using a low loss header. 3-way valve DHW priority Quinta Pro 30/45/65 only



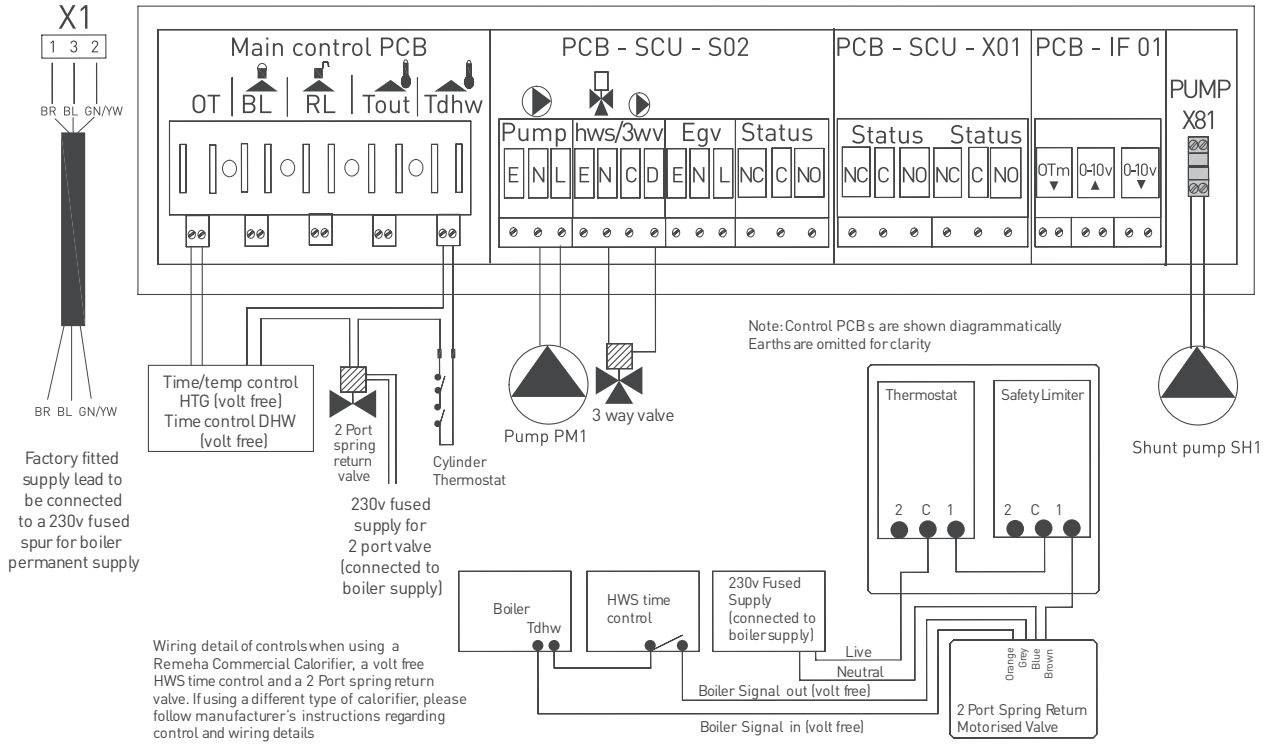
QP 004

Single Quinta Pro boiler, heating with priority hot water using a low loss header pump option. DHW priority can be used on all Quinta Pro range



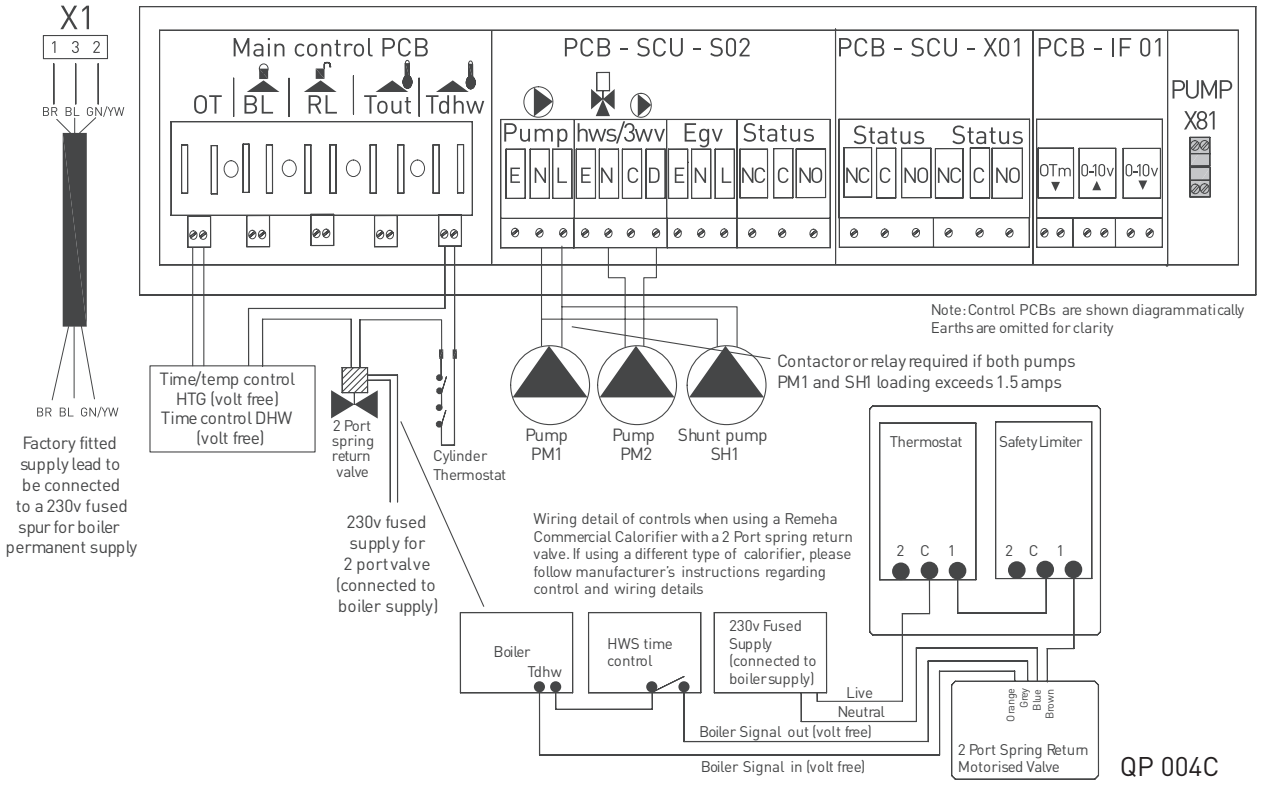
QP 004A

Single Quinta Pro boiler, heating with priority hot water using a low loss header (3-way valve option)



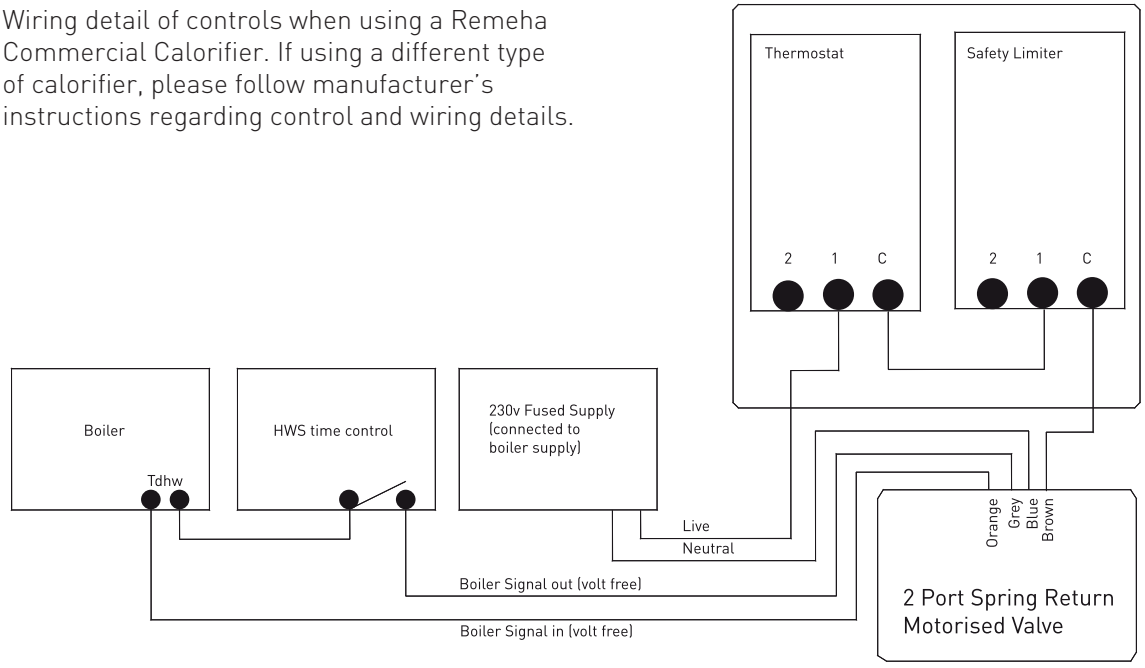
QP 004B

Single Quinta Pro boiler, heating with priority hot water using a low loss header (Pump option)



QP 004C

Wiring detail of controls when using a Remeha Commercial Calorifier. If using a different type of calorifier, please follow manufacturer's instructions regarding control and wiring details.

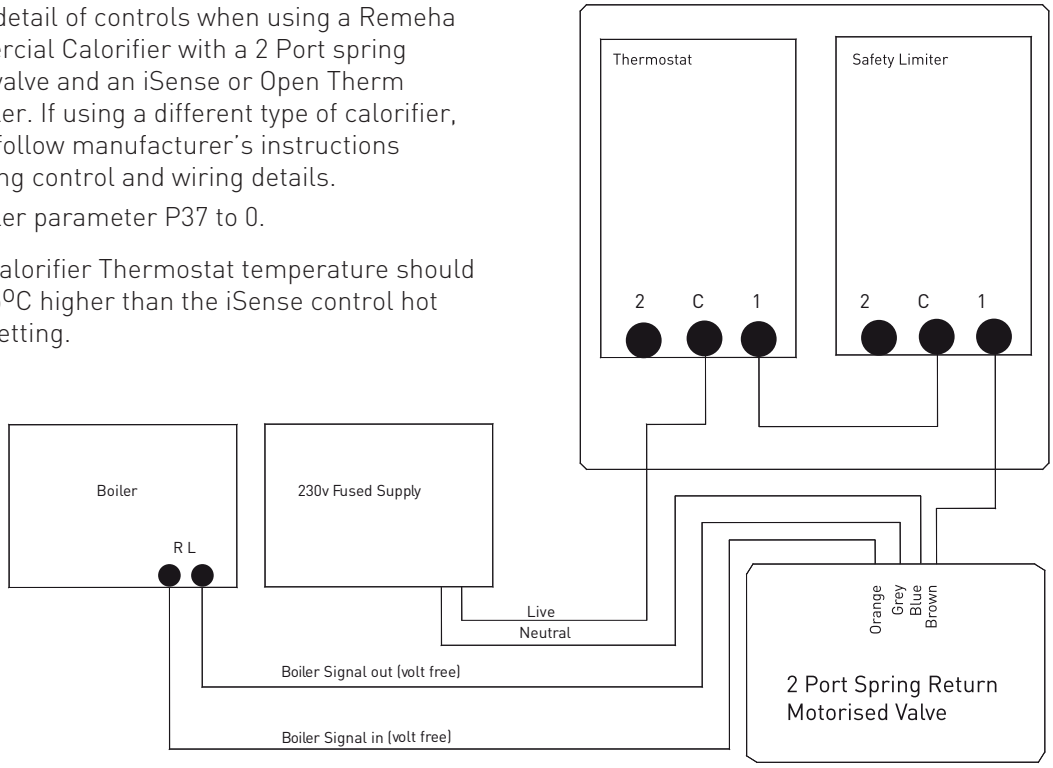


QP 004D

Wiring detail of controls when using a Remeha Commercial Calorifier with a 2 Port spring return valve and an iSense or Open Therm controller. If using a different type of calorifier, please follow manufacturer's instructions regarding control and wiring details.

Set Boiler parameter P37 to 0.

Note: Calorifier Thermostat temperature should be set 5^{o}C higher than the iSense control hot water setting.



QP 004E

Single Quinta Pro boiler, heating only using the iSense controller (room or weather or room/weather compensated)

Power Supply

- Boiler requires a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead

Boiler Interlocks

(for pressure switches etc.)

- Safety Interlock - remove the existing link and fit volt free switch pair to BL on the main control PCB. If the circuit is open the boiler will go to a shut down mode displaying code 9 and will restart when the circuit is closed

Indication Controls

(to report actual function)

- Common Alarm - volt free relay on SCU-X01 (see boiler manual for full details)
- Boiler Run - volt free relay on SCU-X01 (see boiler manual for full details)

Boiler Control Settings

(see 5.7.2 in technical documentation)

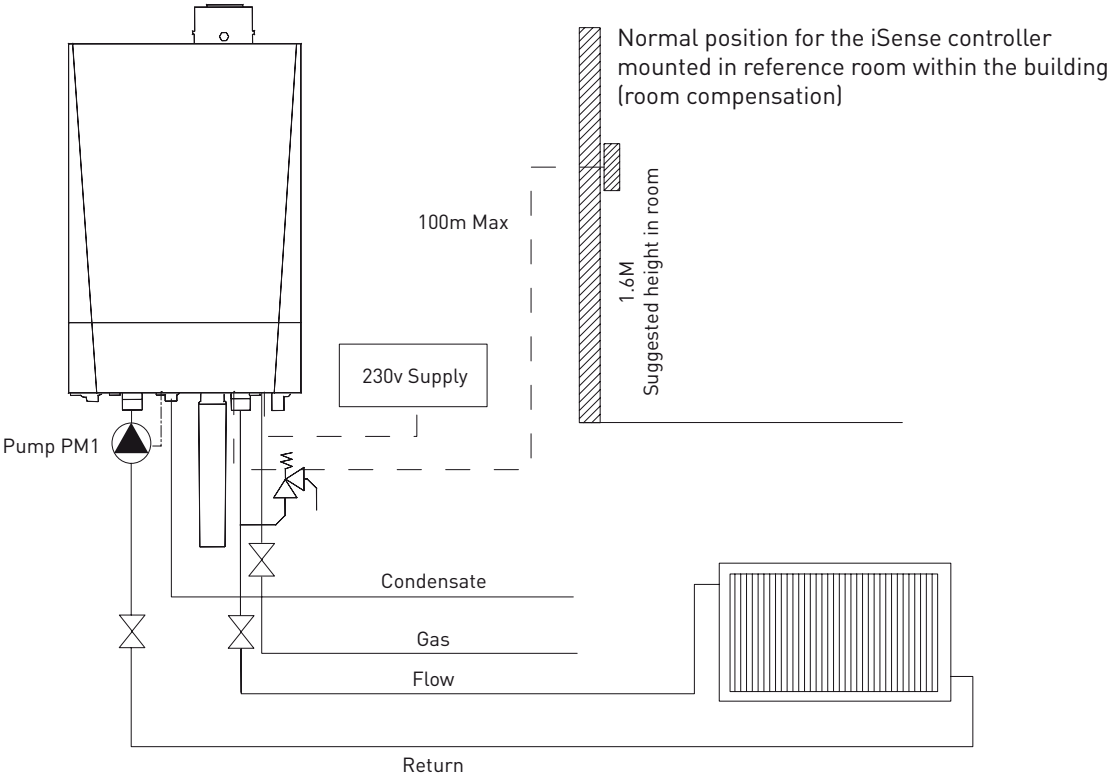
- Set boiler code P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Boiler will recognise the type of control setting used

Fitting the Control

- For room compensation, fit the control in a normally occupied reference room within the building being heated
- For room/weather compensation, an outside sensor can be fitted. If requiring weather compensation only, the iSense can be fitted into the boiler control panel. In this case an outside sensor must be fitted and connected to 'Tout' in the boiler on the main control PCB
- Connect the 2 wire control to the OT terminals on the main PCB. Please refer to the instructions supplied with the iSense controller package
- Set up the controller to suit the design requirements and occupancy times for HTG in accordance with the instruction documents supplied with the controller

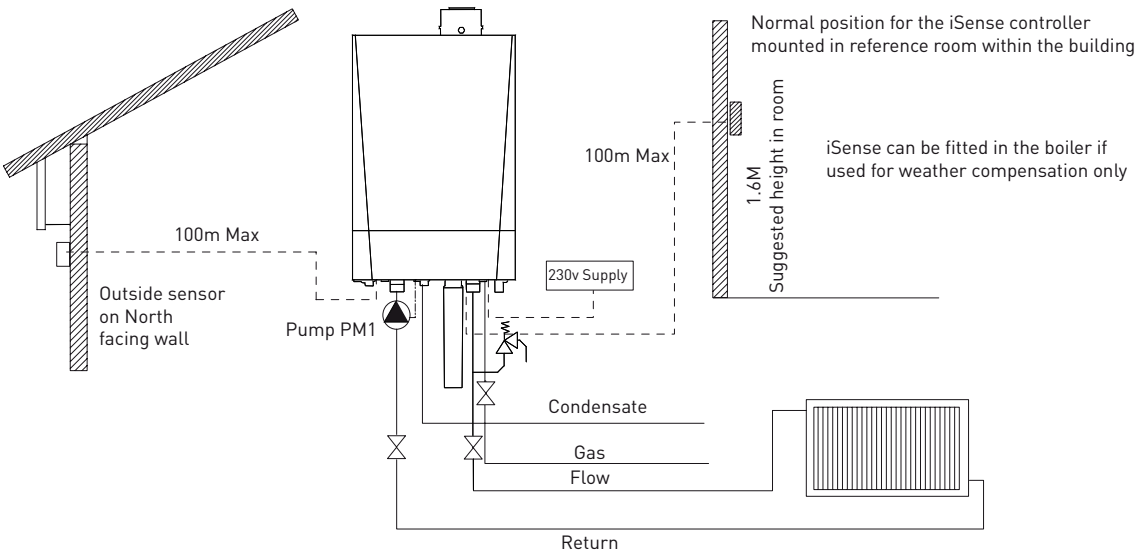
Note: The iSense controller can provide both room or weather compensation or room and weather compensation.
Room compensation = iSense fitted in a reference room, no outside sensor
Weather compensation = iSense fitted in a boiler or plant room, outside sensor required
Room/weather compensation = iSense fitted in a reference room, outside sensor required

Single Quinta Pro boiler, heating only, room compensation using the iSense controller



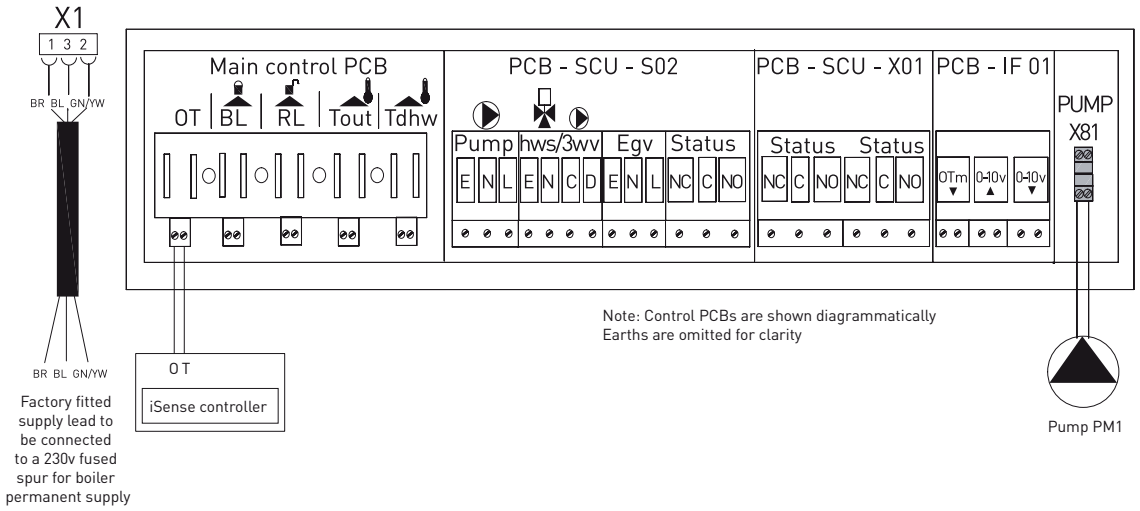
QP 005

Single Quinta Pro boiler, heating only, weather compensation using the iSense controller



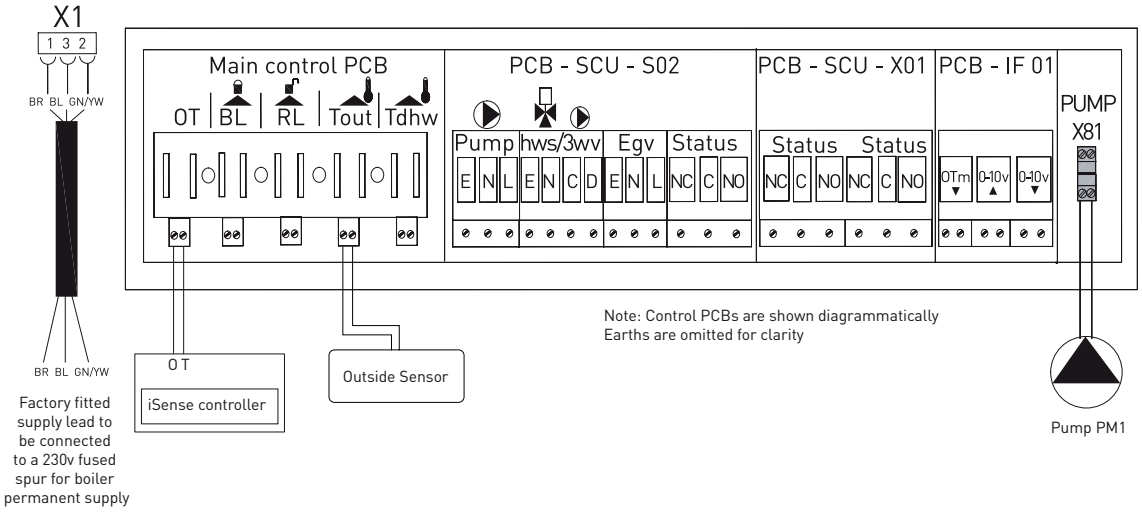
QP 005A

Single Quinta Pro boiler, heating only using the iSense controller



QP 005B

Single Quinta Pro boiler, heating only using the iSense controller (room/weather or weather compensation)



QP 005C

Single Quinta Pro boiler, heating with hot water priority, heating room or weather compensated with the iSense controller (Optimising/Weather compensated heating with timed hot water)

Power Supply

- Boiler requires a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead

Boiler Interlocks

(for pressure switches etc.)

- Safety Interlock - remove the existing link and fit volt free switch pair to BL on the main control PCB. If the circuit is open the boiler will go to a shut down mode displaying code 9 and will restart when the circuit is closed

Indication Controls

(to report actual function)

- Common Alarm - volt free relay on SCU-X01 (see boiler manual for full details)
- Boiler Run - volt free relay on SCU-X01 (see boiler manual for full details)

Boiler Control Settings

(see 5.7.2 in technical documentation)

- Set boiler code P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Boiler will recognise the type of control setting used
- Fit the control in a normally occupied reference room within the building being heated. Refer to the instructions supplied with the control package
- Set up the controller to suit the design requirements and occupancy times for heating and hot water in accordance with the instruction documents supplied with the controller
- Install the outside sensor on a North facing wall in a sheltered position and connect to terminals 'Tout' on the main PCB of the boiler

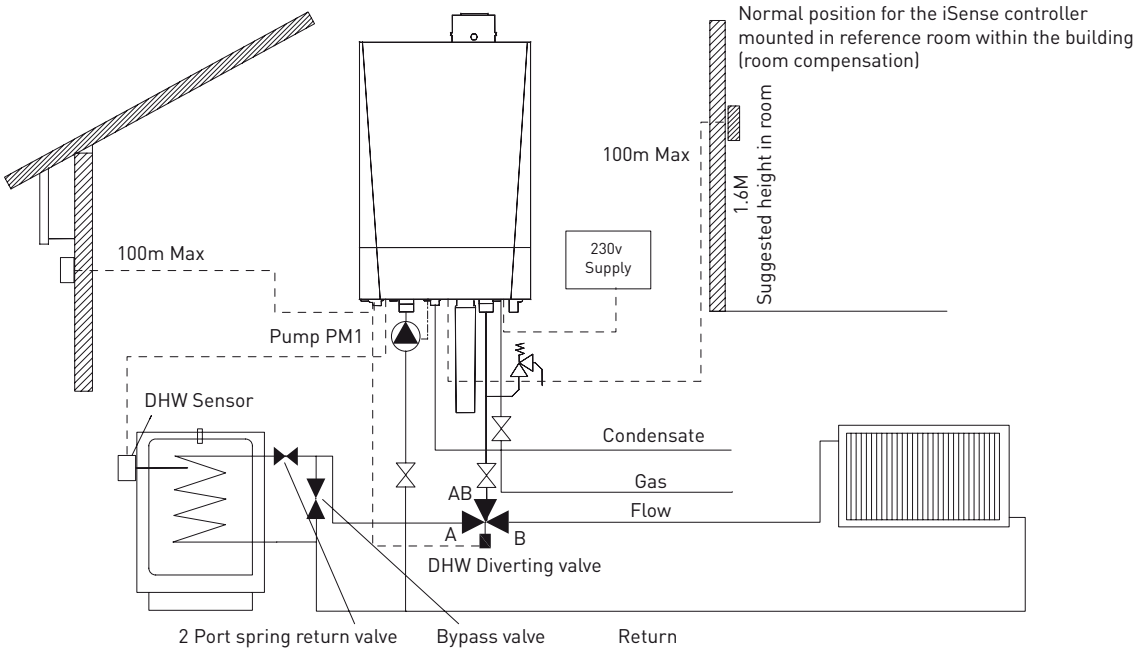
DHW Control

Diverting valve option:
Connect valve to the terminals shown, connect shunt pump PM1 to the terminals shown.
Connect valve ports AB, A and B as shown (AB = boiler, A = hot water, B = heating)

Primary Pump option:
Connect pump PM1 to the terminals shown
Connect shunt pump to the terminals shown

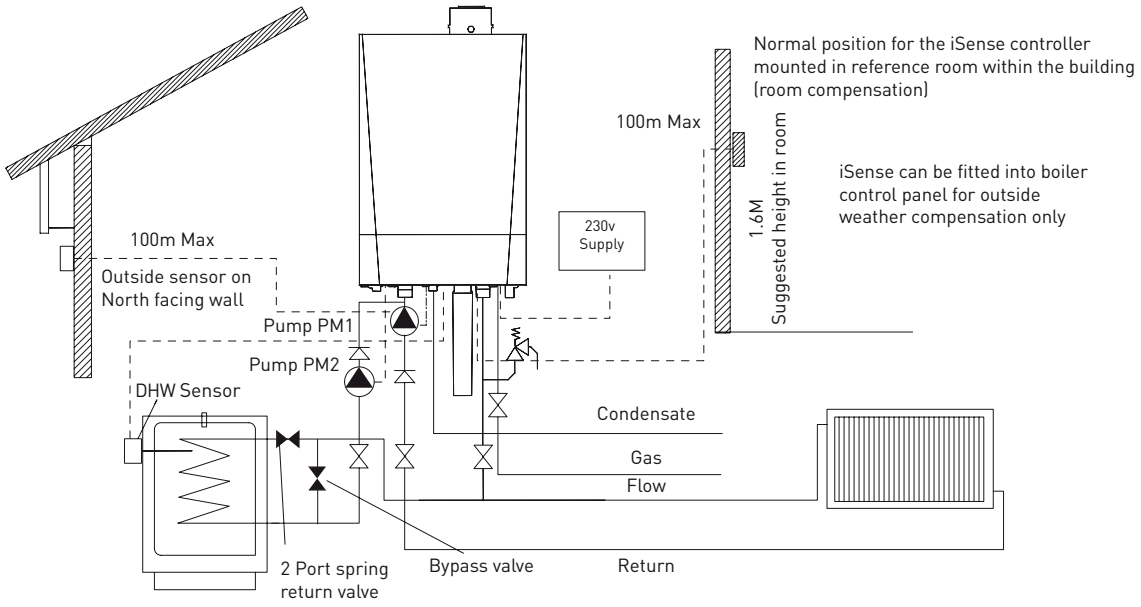
Note: This option will only operate with a calorifier sensor. This is to allow the iSense to control the hot water times.

Single Quinta Pro boiler, heating and hot water priority. Heating room or outside weather compensated with the iSense controller. 3-way valve hot water priority Quinta Pro 30/45/65 only



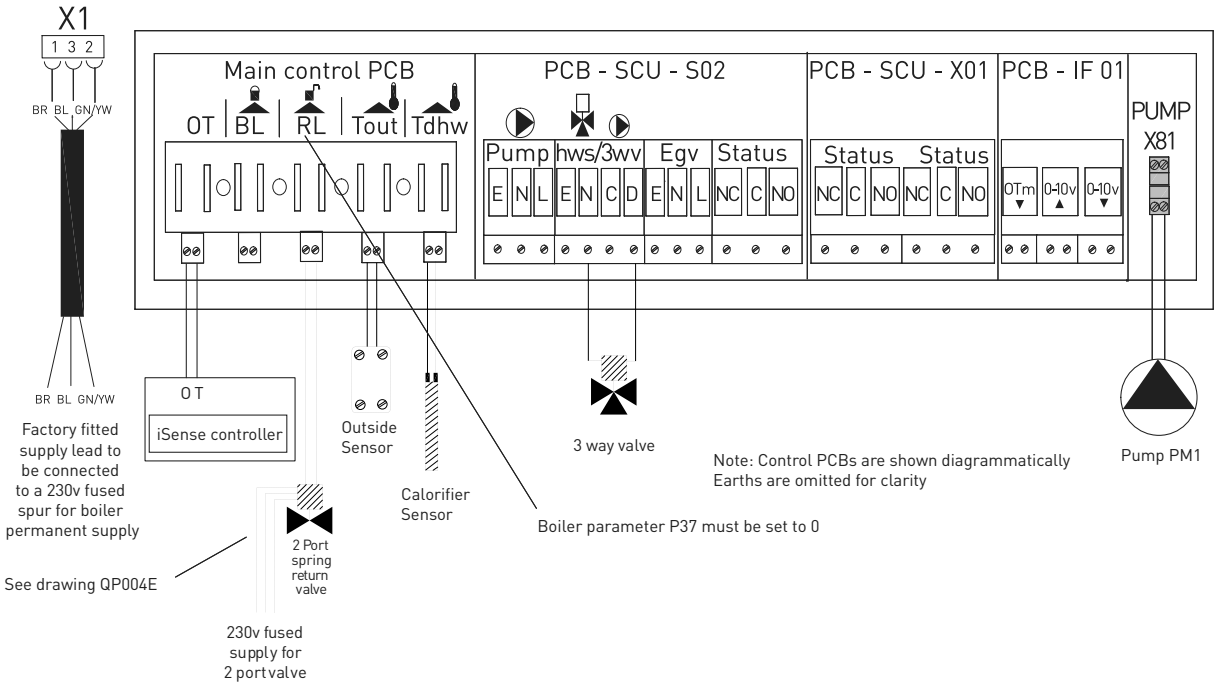
QP 006

Single Quinta Pro boiler, heating and hot water priority. Heating room or outside weather compensation with the iSense controller. Pump option hot water priority can be used on all Quinta Pro range



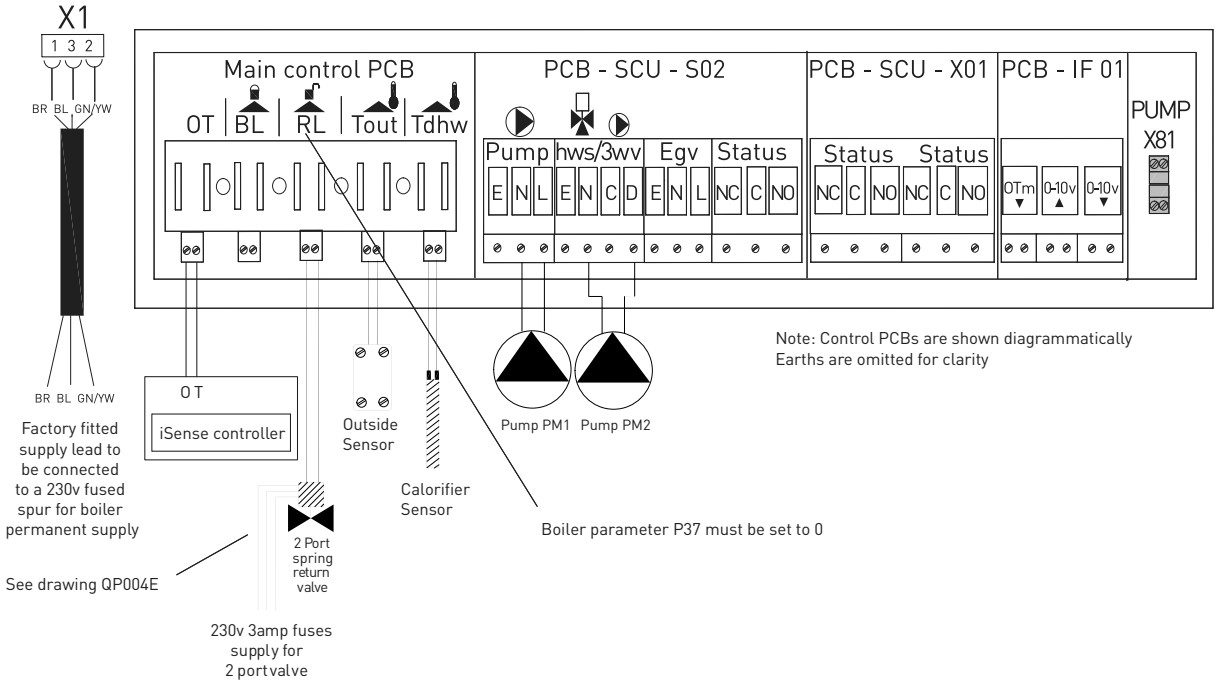
QP 006A

Single Quinta Pro boiler, heating and priority hot water using the iSense controller (3 Port valve option)



QP 006B

Single Quinta Pro boiler, heating and priority hot water using the iSense controller (Pump option)



QP 006C

Multiple Quinta Pro boilers, heating only, outside weather or room compensation with the Celcia MC4 and iSense controller with a low loss header (Optimising/weather compensated)

Power Supply

- Boilers require a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead

Boiler Interlocks

(for pressure switches etc.)

- Safety Interlock - remove the existing link and fit volt free switch pair to BL on the main control PCB. If the circuit is open the boiler will go to a shut down mode displaying code 9 and will restart when the circuit is closed

Indication Controls

(to report actual function)

- Common Alarm - volt free relay on SCU-X01 (see boiler manual for full details)
- Boiler Run - volt free relay on SCU-X01 (see boiler manual for full details)

Fitting the Controls

- Fit the iSense controller in a normally occupied reference room within the building being heated if room and weather compensation is required. If weather only is required, the iSense can be fitted in a boiler control panel. Install the MC4 controller adjacent to the boiler plant and connect as shown
- Install the outside sensor on a North facing wall, and connect to the MC4 (for weather compensation only)

Boiler Control Settings

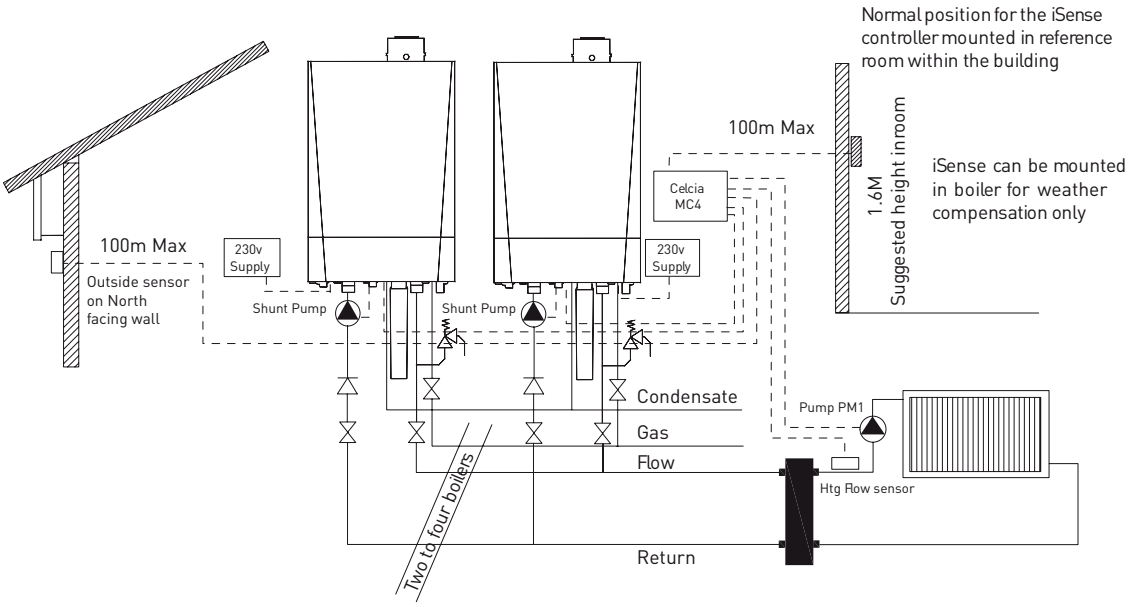
(see 5.7.2 in technical documentation)

- Set boiler code P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Boiler will recognise the type of control setting used
- Set up the controller to suit the design requirements and occupancy times for HTG in accordance with the instruction documents supplied with the controller

Note: Installation can be designed without the use of a low loss header. Omit the header and shunt pumps. A heating pump must be capable of overcoming the combined resistance of the boiler, system and pipe work.

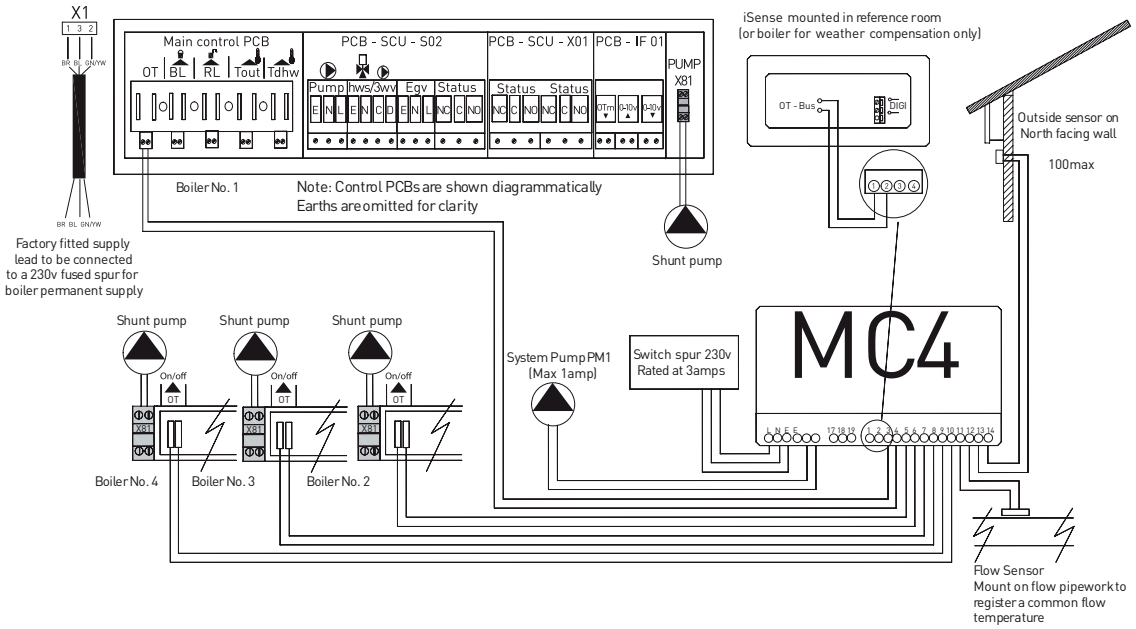
A reverse return with a common loop and single primary pump would be suitable.

Multiple Quinta Pro boilers, HTG only using a low loss header, outside weather/room compensation with the Celcia MC4 and iSense controller



QP 007

Multiple Quinta Pro boilers, heating only using a low loss header, outside weather or room compensation with the Celcia MC4 and iSense controller



QP 007A

Multiple Quinta Pro boilers, heating and hot water priority, outside weather or room compensation with the Celcia MC4 and iSense controller with a low loss header (Optimising/Weather compensated)

Power Supply

- Boilers require a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead

Boiler Interlocks

(for pressure switches etc.)

- Safety Interlock - remove the existing link and fit volt free switch pair to BL on the main control PCB. If the circuit is open the boiler will go to a shut down mode displaying code 9 and will restart when the circuit is closed

Indication Controls

(to report actual function)

- Common Alarm - volt free relay on SCU-X01 (see boiler manual for full details)
- Boiler Run - volt free relay on SCU-X01 (see boiler manual for full details)

Fitting the Controls

- Fit the iSense controller in a normally occupied reference room within the building being heated if room and weather compensation is required. If weather only is required, the iSense can be fitted in a boiler control panel. Install the MC4 controller adjacent to the boiler plant and connect as shown.
- Install the outside sensor on a North facing wall in a sheltered position and connect to the MC4

Boiler Control Settings

(see 5.7.2 in technical documentation)

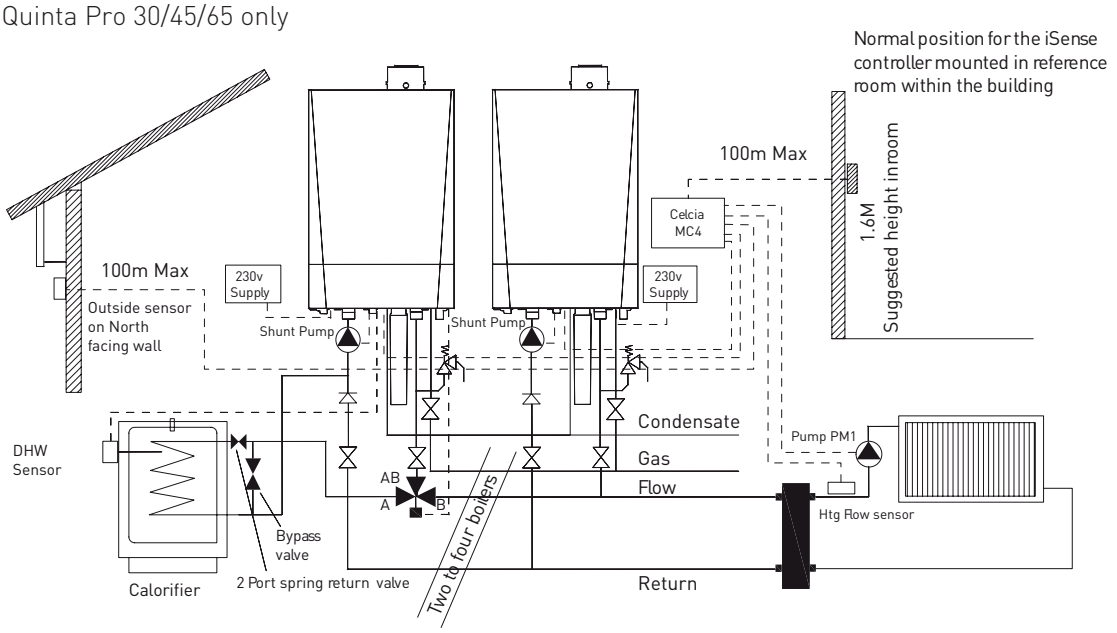
- Set boiler code P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Boiler will recognise the type of control setting used
- Set up the controller to suit the design requirements and occupancy times for HTG in accordance with the instruction documents supplied with the controller

Domestic Hot Water

- When using the Remeha supplied low loss header and pump kit and the hot water diverting valve or primary pump kit, the calorifier must be sited within 3m of the boiler. In both cases, the hot water calorifier must be a high recovery unit capable of accepting the full or adjusted hot water output of the boiler being used (reference parameter P18)
- Set up the controller to suit the design requirements for the hot water times and temperature

Multiple Quinta Pro boilers, heating and hot water priority using a low loss header, outside weather or room compensation with the Celcia MC4 and iSense controller (Hot water produce by single boiler only - 3 port valve)

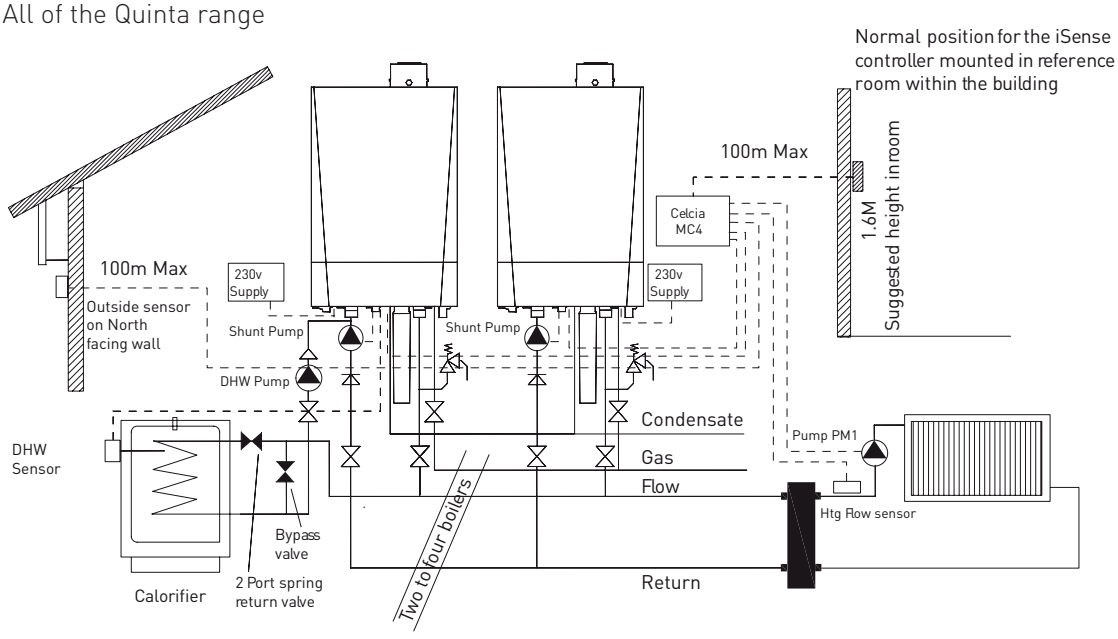
Quinta Pro 30/45/65 only



QP 008

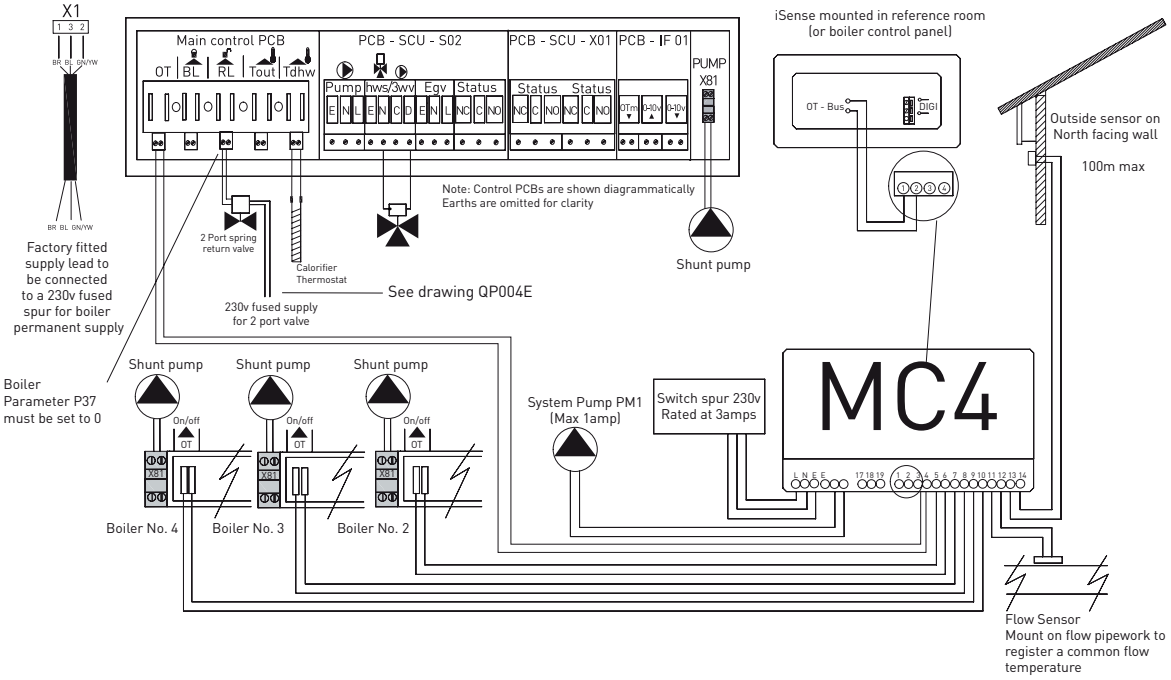
Multiple Quinta Pro boilers, heating and hot water priority using a low loss header, outside weather or room compensation with the Celcia MC4 and iSense controller (Hot water produce by single boiler only - pump option)

All of the Quinta range



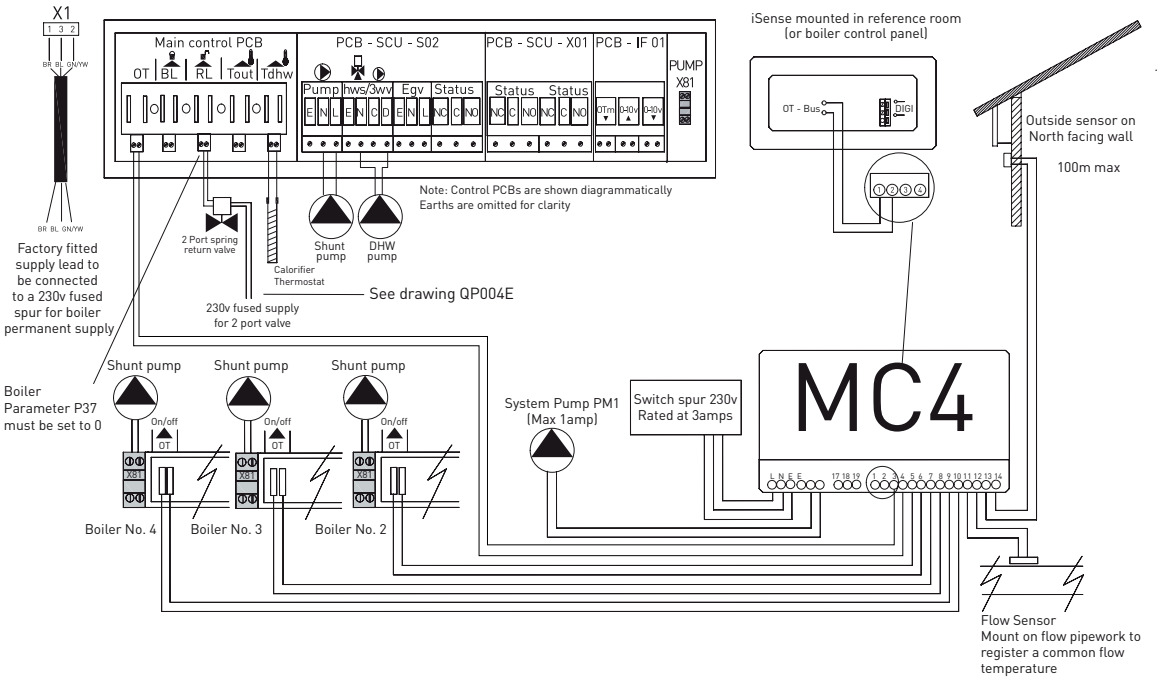
QP 008A

Multiple Quinta Pro boilers, heating and priority hot water using a low loss header, outside weather or room compensation with the Celcia MC4 and iSense controller (Hot water produced by single boiler only - 3 Port valve)



QP 008B

Multiple Quinta Pro boilers, heating and priority hot water using a low loss header, outside weather or room compensation with the Celcia MC4 and iSense controller (Hot water produced by single boiler only - pump option)



QP 008C

iSense Pro Multiple Boiler Controller

The iSense Pro kits listed below show the basic kits for two boilers. Any additional boilers (up to 8 boilers) will require an extra Open Therm (OT) interface (AD287) and a Bus Cable (1 x AD124 -1.5m). Systems with two circuits will require two extra flow sensors (AD199). All installations and fitting instructions are supplied with the iSense Pro kits or available via our website www.remeha.co.uk

Basic Two Boiler Kit: Quinta Pro Option AD244 Kit No. KT1089

1 x AD283: iSense Pro complete with wall box Part No. 100018256
1 x AD244: Room Sensor Basic (no control) Part No. 100012044
1 x AD287: Open Therm Interface (not required in first boiler) Part No. 100018921
1 x AD134: Bus Cable 12m (iSense controller to second boiler) Part No. 88017851
1 x AD199: Flow Sensor Part No. 88017017
1 x AF60: Outside Sensor Part No. 95362450
1 x KVT60: DHW Sensor Part No. 95362448

Basic Two Boiler Kit: Quinta Pro Option AD278 Kit No. KT1090

1 x AD283: iSense Pro complete with wall box Part No. 100018256
1 x AD278: Room Sensor Control (temperature control) Part No. 100017732
1 x AD287: Open Therm Interface (not required in first boiler) Part No. 100018921
1 x AD134: Bus Cable 12m (iSense controller to second boiler) Part No. 88017851
1 x AD199: Flow Sensor Part No. 88017017
1 x AF60: Outside Sensor Part No. 95362450
1 x KVT60: DHW Sensor Part No. 95362448

Basic Two Boiler Kit: Quinta Pro Option AD258 Kit No. KT1091

1 x AD283: iSense Pro complete with wall box Part No. 100018256
1 x AD258: Digital Room Sensor Control (remote control) Part No. 100013478
1 x AD287: Open Therm Interface (not required in first boiler) Part No. 100018921
1 x AD134: Bus Cable 12m (iSense controller to second boiler) Part No. 88017851
1 x AD199: Flow Sensor Part No. 88017017
1 x AF60: Outside Sensor Part No. 95362450
1 x KVT60: DHW Sensor Part No. 95362448

Basic Two boiler Kit: Quinta Pro Option 0 -10v Kit No. KT1154

1 x AD283: iSense complete with wall box Part No. 100018256
1 x AD199: Flow Sensor Part No. 88017017
1 x AD287: Open Therm Interface (not require for first boiler) Part No. 100018921
1 x Bus Cable 12m (iSense to second boiler) Part No. 88017836

iSense Pro Controller Kit Options

The options illustrated show the four types of controls available. The difference with the first three kits depends on which type of internal sensor/control is used.

KT1089: the basic internal sensor, no adjustment is available

KT1090: the inside sensor can be used to adjust the room temperature

KT1091: includes a digital remote control which not only acts as a sensor but changes can be made to the main controller which includes set point temperatures and it can also override the time settings on both heating and hot water

KT1154: can be used as a boiler sequencer. Will require a 0 - 10v input from a remote BMS controller

KT1152: required when using more than two boilers (one kit per added boiler up to eight boilers) e.g. six boilers will require four KT1152

Fitting and user instructions are supplied complete with the iSense Pro kits. The controller is suitable for 2 - 8 boilers and will time control two zones (optimising and compensating) and also control temperature and time hot water (note hws control is via a sensor not a thermostat).

Note: The OT cable between the iSense controller and the first boiler is not supplied. Cable should be 2 core .7mm² (screened when running with higher voltage cables)

iSense Pro Component Details

iSense Pro controller complete with wall box AD283 - Part No. 100018256
Room Sensor Basic AD244 - Part No. 100012044
Room Sensor Temperature Control AD278 - Part No. 100017732
Digtal Remote Room Control AD - Part No. 100013478
Open Therm Interface AD287 - Part No. 100018921
Strap on Temperature Sensor AD199 - Part No. 88017017
Outside Sensor AF60 - Part No. 95362450
DHW Sensor KVT60 - Part No. 95362448
Bus Cable AD134 - 12 metre cable - Part No 88017851
Bus Cable AD124 - 1.5 metre cable - Part No.88017836

The following accessories are not yet available for the iSense Pro.
Please contact our sales or technical departments for further information.

Digital Wireless Remote Control AD256 - Part No.100013475
Wireless Outside Sensor AD251 - Part No.100013306
Wireless Receiver AD252 - Part No.100013307
(must be used if AD256 and AD251 is used)

Note: The above kits and controls will also be suitable for the floor standing Gas 110 Boilers with the exception of the Quinta Pro Open Therm interface (AD287). This will be replaced by the Open Therm interface AD286 Part No.100018920. This interface fits external to the boiler.

Multiple boilers, heating and hot water using a low loss header with the iSense Pro controller (Optimising/weather compensated control for dual heating zone and hot water from all or single boilers)

Power Supply

- Boilers require a permanent 230v single phase supply fused at 6.3 amps connected to the factory fitted fly lead.

Boiler Interlocks

(for pressure switches etc.)

- Safety Interlock - remove the existing link and fit volt free switch pair to BL on the main control PCB. If the circuit is open the boiler will go to a shut down mode displaying code 9 and will restart when the circuit is closed

Indication Controls

(to report actual function)

- Common Alarm - volt free relay on SCU-X01 (see boiler manual for full details)
- Boiler Run - volt free relay on SCU-X01 (see boiler manual for full details)

Boiler Control Settings

(see 5.7.2 in technical documentation)

- Set boiler codes P1 to the required flow temp i.e. 80 = 80ºC (system design requirements)
- Boiler will recognise the type of control setting used

Fitting the controls

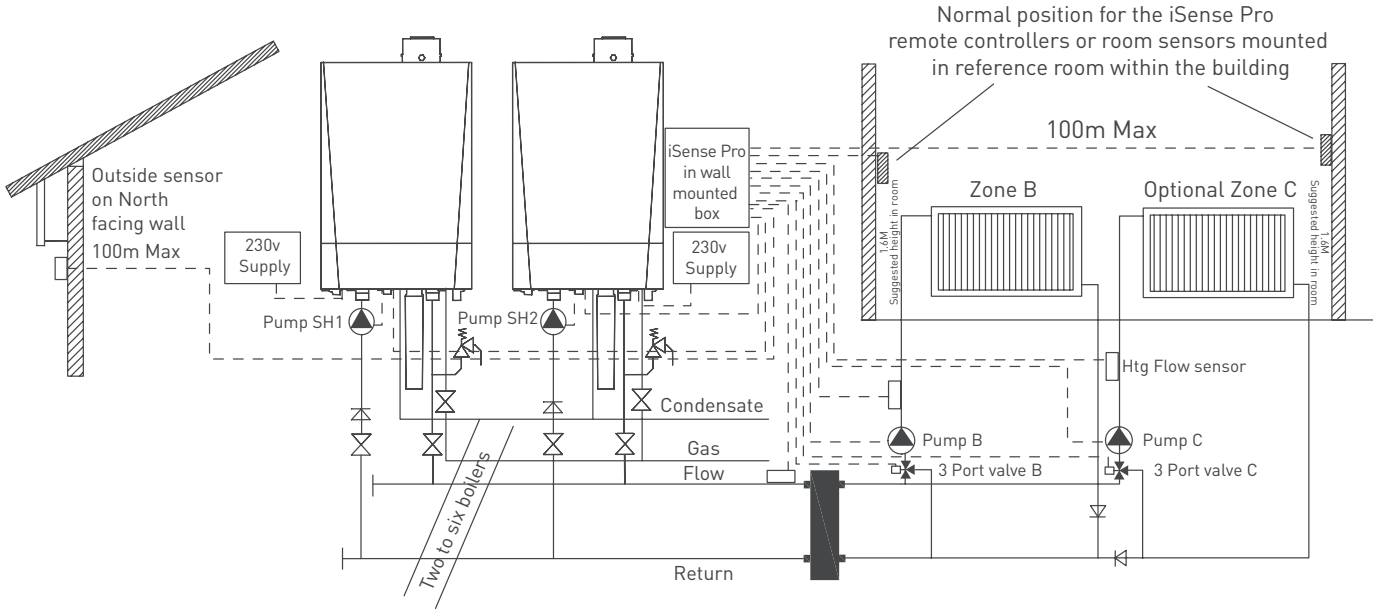
- Use the following hydraulic and wiring diagrams to best match the building requirements
- Fit the iSense Pro in the supplied wall mounted box adjacent to the boiler plant
- Connect all chosen auxiliary controls i.e. pumps, 3 way valves, outside sensor, flow sensors etc. as indicated

Control Logic

- Set up the iSense Pro controller in conjunction with the iSense Pro installation and service manual and to suit the installation and building heat loss response time. It will provide timed weather compensated heating with an optimum start facility (uses inside and outside sensors to delay the on time as dictated by weather conditions)
- Heating (all boilers available): during the timed on periods the heating will be daytime weather compensated (in accordance with the heating curve programmed). The controller will directly control each boiler, modulating their output and calling as many as are required to achieve the desired comfort conditions dictated by the compensation parameters
- Hot water: two hydraulic options are available as shown in the diagrams. When using the single boiler option, the hot water controls, i.e. the pump and sensor, are taken to the boiler controls. A separate volt free time control will have to be used (not supplied by Remeha Commercial)
- The following diagrams QP009 to QP009E show systems with two zones.
  If only using a single zone, use zone B controls and omit zone C controls

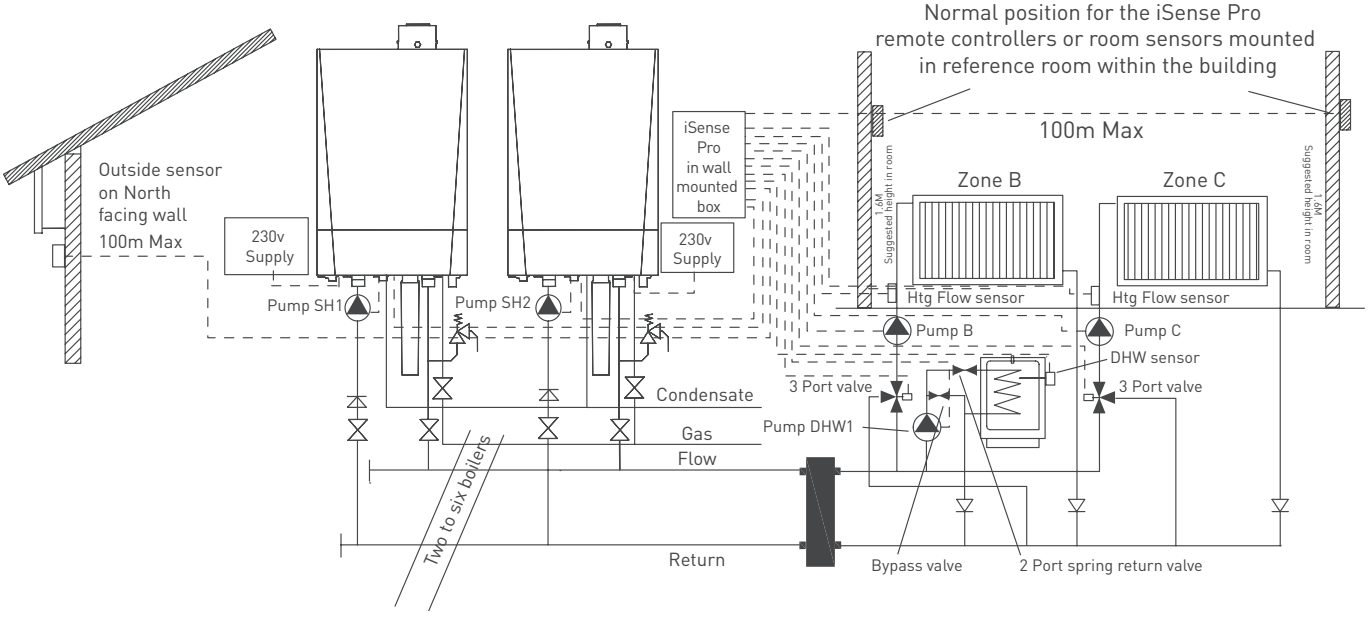
Kit KT1154 will enable the iSense Pro controller to operate as a boiler sequencer. This will require a 0 - 10v input from an external source i.e. BMS controller. The iSense Pro will control the boilers to achieve the setpoint temperature supplied from the BMS control i.e. 5v will equal 50ºC. How the iSense Pro will sequence the boilers (lead/lag etc) will depend on how the user control parameters are set within the iSense Pro controller.

Multiple Quinta Pro boilers, HTG only using a low loss header, outside weather/room compensation with iSense Pro controller



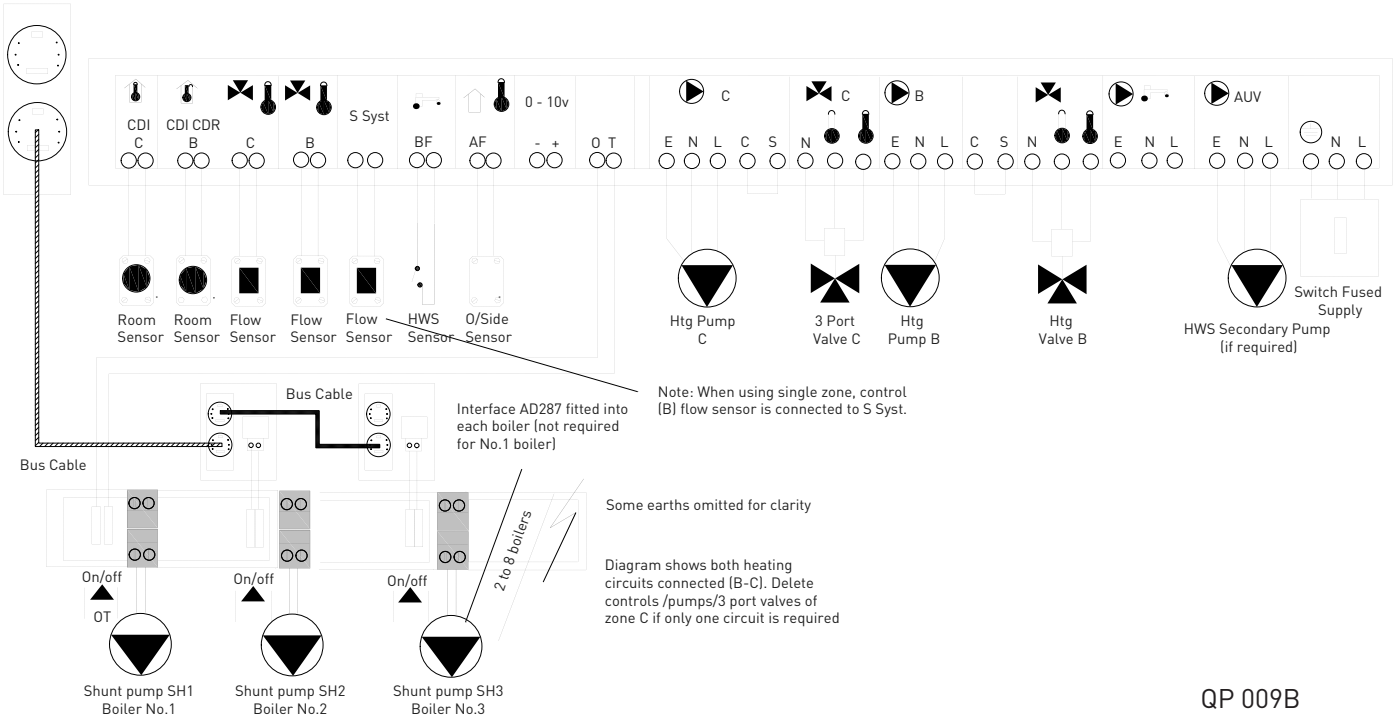
QP 009

Multiple Quinta Pro boilers, heating and HTG and DHW using a low loss header, outside weather/room compensation with iSense Pro controller (DHW via multiple boilers)



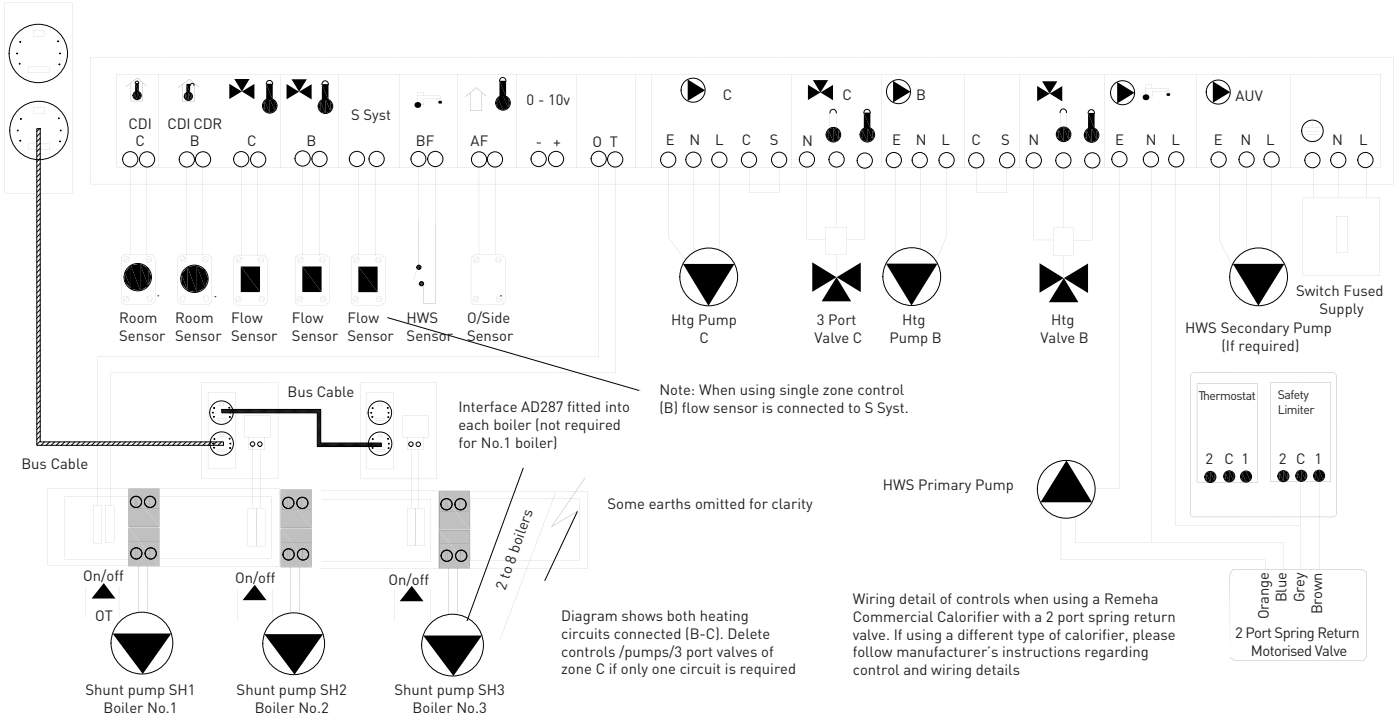
QP 009A

Multiple Quinta Pro boilers, HTG only using a low loss header, outside weather/room compensated with iSense Pro
(to be used in conjuction with QP009)



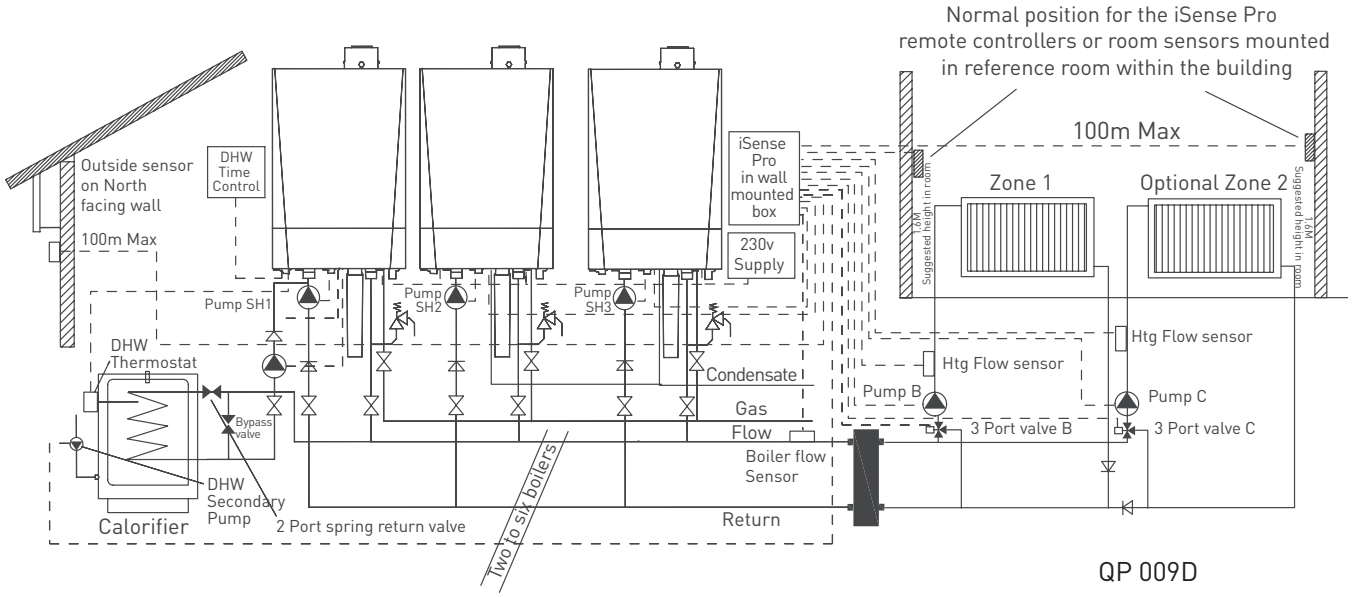
QP 009B

Multiple Quinta Pro boilers, heating and HTG and DHW using a low loss header, outside weather/room compensation with the iSense Pro controller (DHW via multiple boilers)
(to be used in conjuction with QP009A)



QP 009C

Multiple Quinta Pro boilers, HTG and DHW using a low loss header, outside weather/room compensation with the iSense Pro controller (DHW from single boiler)



QP 009D

Multiple Quinta Pro boilers, heating and priority hot water using a low loss header, outside weather or room compensation with the iSense controller (Hot water produced by single boiler only - pump option)

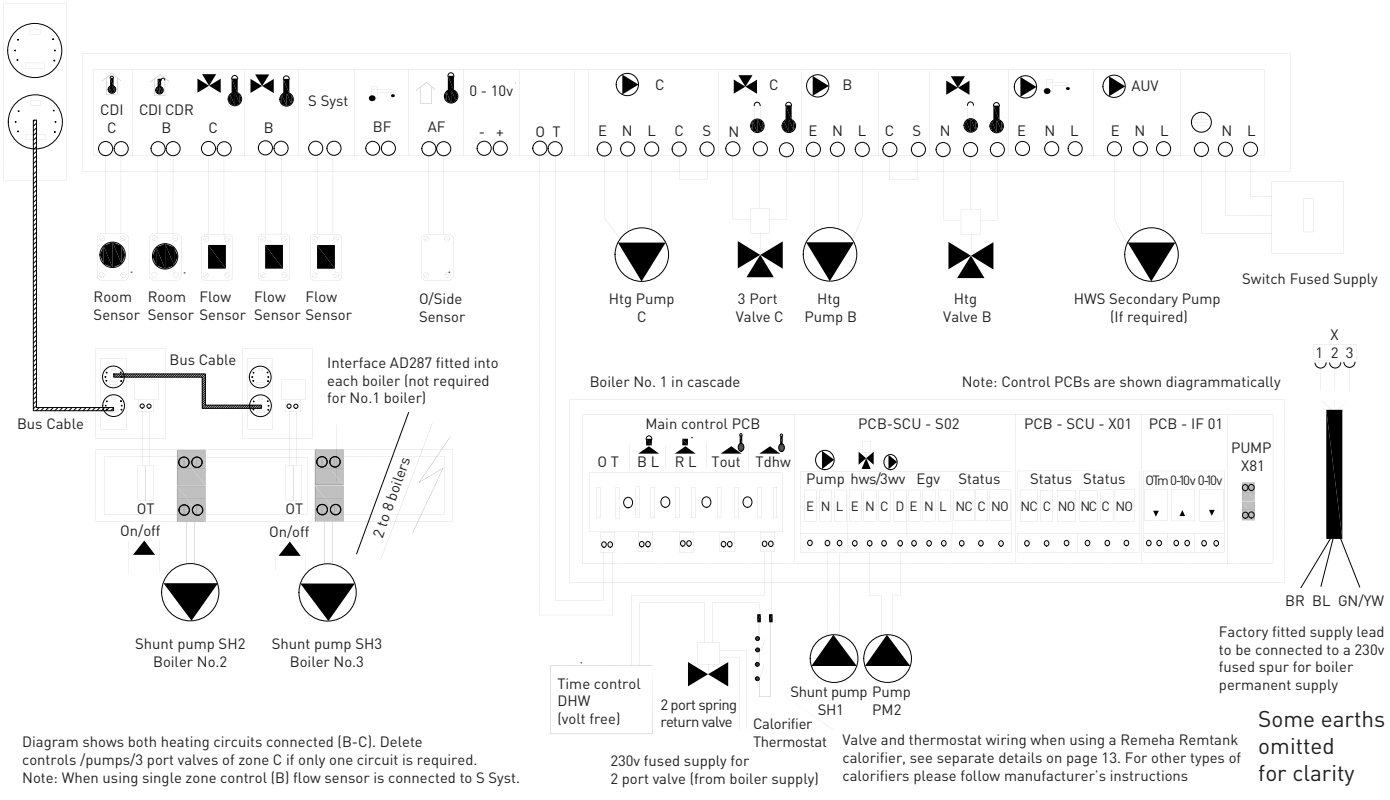
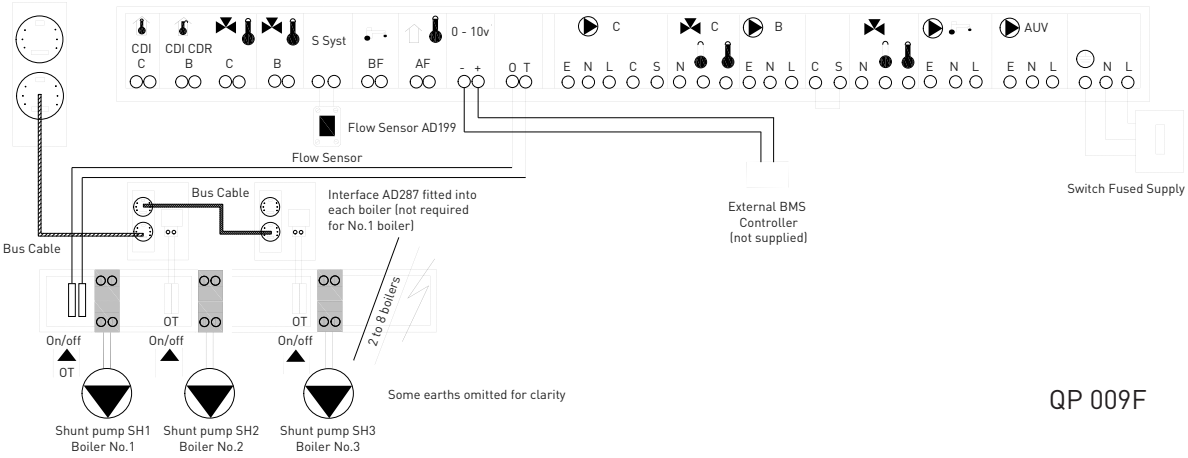


Diagram shows both heating circuits connected (B-C). Delete controls /pumps/3 port valves of zone C if only one circuit is required.
Note: When using single zone control (B) flow sensor is connected to S Syst.

Valve and thermostat wiring when using a Remeha Remtank calorifier, see separate details on page 13. For other types of calorifiers please follow manufacturer's instructions

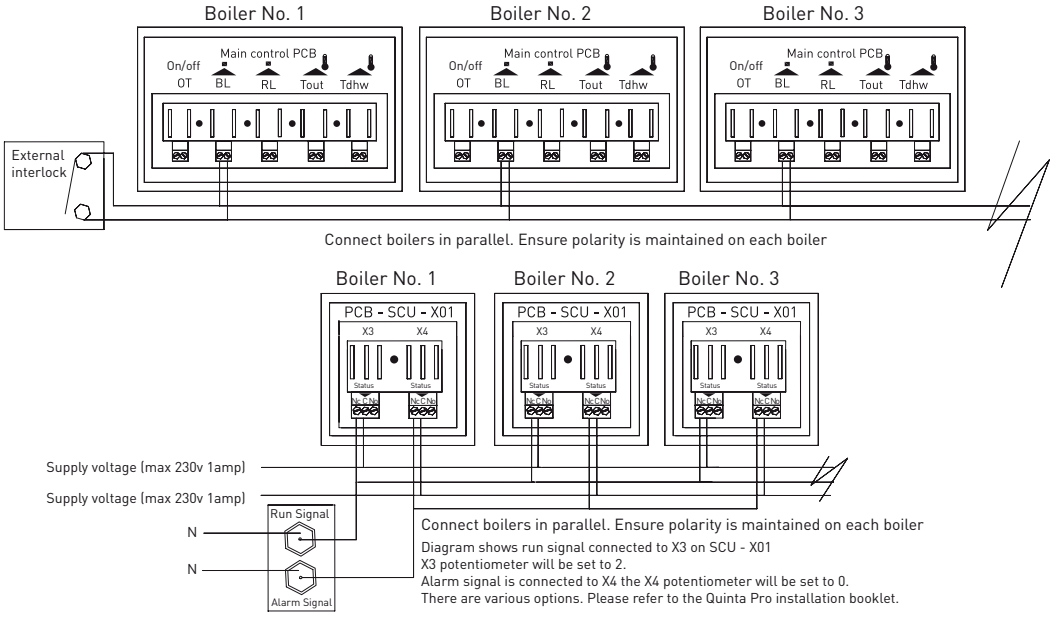
QP 009E

Quinta Pro multiple boilers, HTG only using a 0-10v input from a remote BMS control



QP 009F

Connecting multiple boilers with external control interlocks and alarm and run signals



QP 010

Quinta Pro Nominal flow rates and boiler resistances

	Quinta Pro 30 output 29.3kW @ 80/60ºC		Quinta Pro 45 output 40kW @ 80/60ºC		Quinta Pro 65 output 61kW @ 80/60ºC		Quinta Pro 90 output 84.2kW @ 80/60ºC		Quinta Pro 115 output 107kW @ 80/60ºC	
System Δt	Nom flow l/s	Boiler resistance mbar	Nom flow l/s	Boiler resistance mbar	Nom flow l/s	Boiler resistance mbar	Nom flow l/s	Boiler resistance mbar	Nom flow l/s	Boiler resistance mbar
20	0.35	70.00	0.48	90.00	0.73	130	1.00	140	1.28	250
19	0.37	77.56	0.50	99.72	0.77	144	1.06	155	1.35	277
18	0.39	86.42	0.53	111.1	0.81	160	1.12	173	1.42	309
17	0.41	96.89	0.56	124.5	0.86	180	1.18	194	1.51	346
16	0.44	109.38	0.60	140.6	0.91	203	1.26	219	1.60	391
15	0.47	124.44	0.64	160.0	0.97	231	1.34	249	1.71	444
14	0.50	142.86	0.68	183.6	1.04	265	1.44	286	1.83	510
13	0.54	165.68	0.74	213.0	1.12	308	1.55	331	1.97	592
12	0.58	194.44	0.80	250.0	1.22	361	1.68	389	2.13	694
11	0.64	231.40	0.87	297.5	1.33	430	1.83	463	2.33	826
10	0.70	280.00	0.96	360.0	1.46	520	2.01	560	2.56	1000

The data published in this technical sales leaflet is based on the latest information (at date of publication) and may be subject to revisions. It should be read in conjunction with our full technical brochure (available on request). We reserve the right to continuous development in both design and manufacture, therefore any changes to the technology employed may not be retrospective, nor may we be obliged to adjust earlier supplies accordingly.
Issue 2 date: Nov 2012

PART OF BDR THERMEA

Printed on Recycled Paper

Remeha Commercial
Head Office

Remeha House
Molly Millars Lane
Wokingham
Berkshire RG41 2QP
T: 0118 978 3434
F: 0118 978 6977
E: boilers@remeha.co.uk

www.remeha.co.uk

remeha commercial

TreadLightly ON THE PLANET

ISO 9001 since 1998 CE climatecare

Remeha is committed to carbon offsetting

Designed and produced by Sans Frontiere Marketing Communications – 01273 487 800 – www.sansfrontiere.co.uk