



SIMPLY BETTER

Appliance and Controller Electrical Installation Guide.



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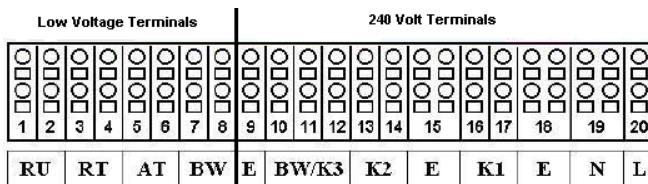
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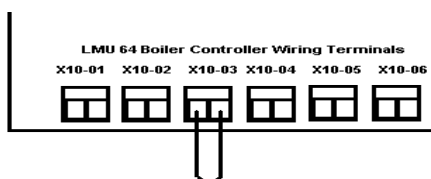
Please note that this document is intended as a quick reference guide.
Further detailed guidance should be sought from the respective boiler/controller technical manuals.

ProCon 16 – 77 Wall Mounted Condensing Boilers.

Boiler Wiring Terminals



Boiler Controller Mounted Terminals

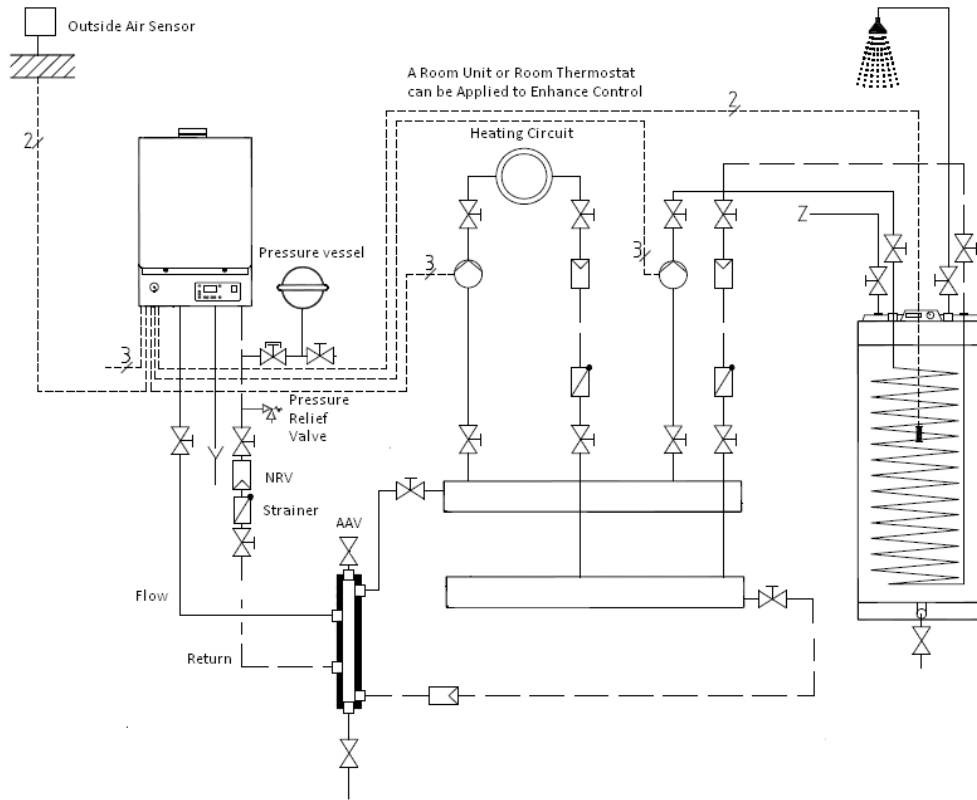


Terminal Designation

Tag	Terminal #s	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
RU	1 & 2 <small>(Not Polarity Sensitive)</small>	< 25V	Yes	QAA73 Opentherm Room Unit or Link to enable second heating zone time switch. <small>(AGU2.500 Communication Clip required to control second heating zone pump/valve.)</small>
RT	3 & 4 <small>(Not Polarity Sensitive)</small>	< 25V	Yes	Heating Volt Free Enable. <small>(Via Time Switch/Room Thermostat/BMS)</small>
AT	5 & 6 <small>(Not Polarity Sensitive)</small>	< 25V	Yes	Outside Air Sensor. (QAC34) <small>(Mounted on North Facing Wall) (Parameter alteration required if outside air sensor not connected)</small>
BW	7 & 8 <small>(Not Polarity Sensitive)</small>	< 25V	Yes	Hot Water Sensor (QAZ36) or Volt Free Enable. <small>(Via Time Switch/Calorifier Thermostat/BMS) (Parameter alteration required if Volt free enable used)</small>
BW/K3	10 <small>Perm Live</small> 11 <small>Neutral</small> 12 <small>Switched Live</small>	230V	-	Hot Water Charging Pump or 3 way Valve Output. <small>(Max 1 Amp)</small> <small>(Parameter alteration required if charging pump used with 16 & 31 and if 3 way valve used with 47 & 75.)</small>
K2	13 <small>Switched Live</small> 14 <small>Neutral</small>	230V	-	Models 16 & 31 External Heating Pump. <small>(Max 1 Amp)</small> Models 47 & 75 Internal Boiler Pump. <small>(Max 1 Amp)</small>
K1	16 <small>Neutral</small> 17 <small>Switched Live</small>	230V	-	Models 16 & 31 Internal Boiler Pump. <small>(Max 1 Amp)</small> Models 47 & 75 External Heating Pump. <small>(Max 1 Amp)</small>
E	9, 15 & 18	-	-	Common Permanent Earth
N	19	230V	-	Permanent Neutral
L	20	230V	-	Permanent Live <small>(Max 5 Amp)</small>
X10-03	-	<25V	Yes	Safety Interlock Volt Free Enable <small>(For use with ventilation interlocks/gas pressure switch etc.)</small>

For cascade control via a RVA47 cascade manager each boiler must be fitted with an OCI420 Clip. Refer to Page 13/14 for additional guidance.

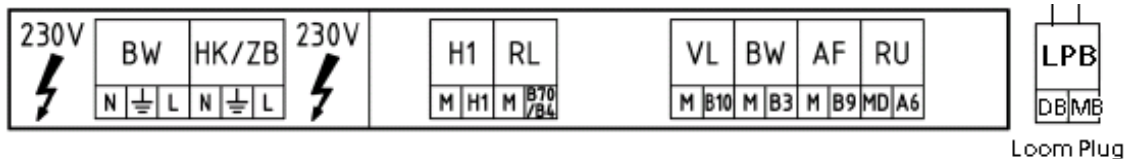
Generic Single Boiler Hydraulic Configuration



For BMS Run and Fault indication terminal allocation refer to the section
titled,
Boiler Controller Mounted Options.

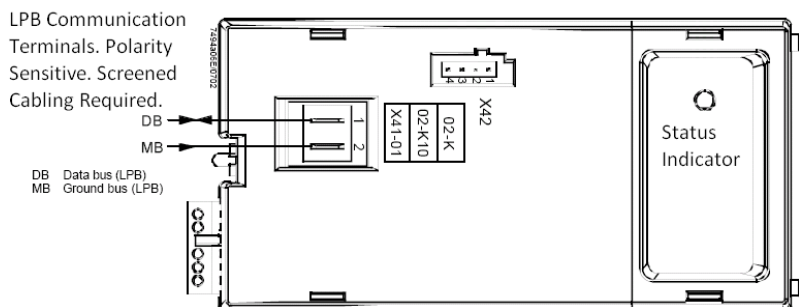
ProCon 75 & 77 Wall Mounted Condensing Boilers Cascade Manager.

Additional Wiring Terminals (This terminal rail is in addition to the standard rail.)



Terminal Designation

Tag	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
BW	230V	-	Hot Water Charging Pump Output. (Max 2 Amp)
HK / ZB	230V	-	Heating Circuit Pump Output. (Max 2 Amp)
H1	< 25V	Yes	Enabling Input Volt Free Enable or 0-10Volt or Operation Changeover (M = Ground & H1 = Positive)
RL	< 25V	Yes	Return Sensor (QAD21) (M = Ground & B70/B4 Positive)
VL	< 25V	Yes	Flow Sensor (QAD21) (M = Ground & B10 Positive)
BW	< 25V	Yes	Hot Water Sensor (QAZ21) or Volt Free Enable. (Via Time Switch/Calorifier Thermostat/BMS) (Parameter alteration required if Volt free enable used) (M = Ground & B3 Positive)
AF	< 25V	Yes	Outside Air Sensor. (QAC34) (Mounted on North Facing Wall) (Parameter alteration required if outside air sensor not connected) (M = Ground & B9 Positive)
RU	< 25V	Yes	Room Unit QAA70/50/10 (M = Ground & A6 Positive)
LPB	< 25V	Yes	LPB Cascade Communication. (Loom Mounted Plug.) (MB = Ground & DB = Data Bus)

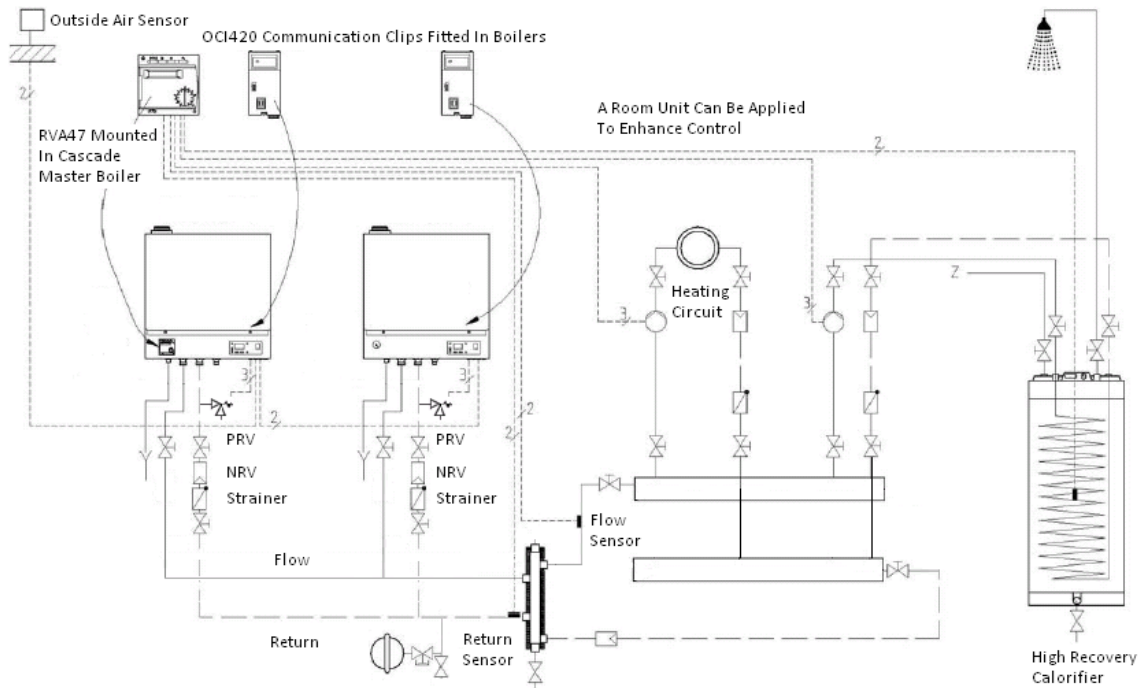


OCI420 LPB Communication Clip Mounted onto The LUM64 Controller.

Each boiler within the cascade including the master will have an OCI420 Communication Clip fitted.

The LPB communication wiring must be wired (X41) between each OCI420 Communication Clip in parallel.

Generic Multiple Boiler Hydraulic Configuration



For BMS Run and Fault indication terminal allocation refer to the section titled,
Boiler Controller Mounted Options.

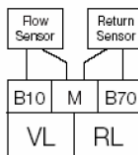
ProCon HT 150-225 Floor Standing Condensing Boilers.

Boiler Wiring Terminals

Low Voltage Terminals										240 Volt Terminals								
A6	MD	H1	M	B3	M	B9	M	DB	MB	N	Q3	⊕	⊕	Q1	N	N	⊕	L
RU		H1		BW		AF		BUS		BW		HK		230V				

Terminal Rail located under cover plate at rear face of boiler - top l/h

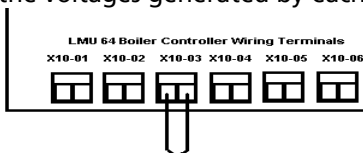
External Flow and return sensors (QAD21) are required for Cascade Manager Units only. The sensors must be wired to the terminal detailed below.



These terminals are located on the top left of the boiler frame when viewed from the front. (These terminals are pre-wired on Standalone FS units.)

Module Controller Mounted Safety Interlock Terminals (X10:03)(Low Voltage<25V)

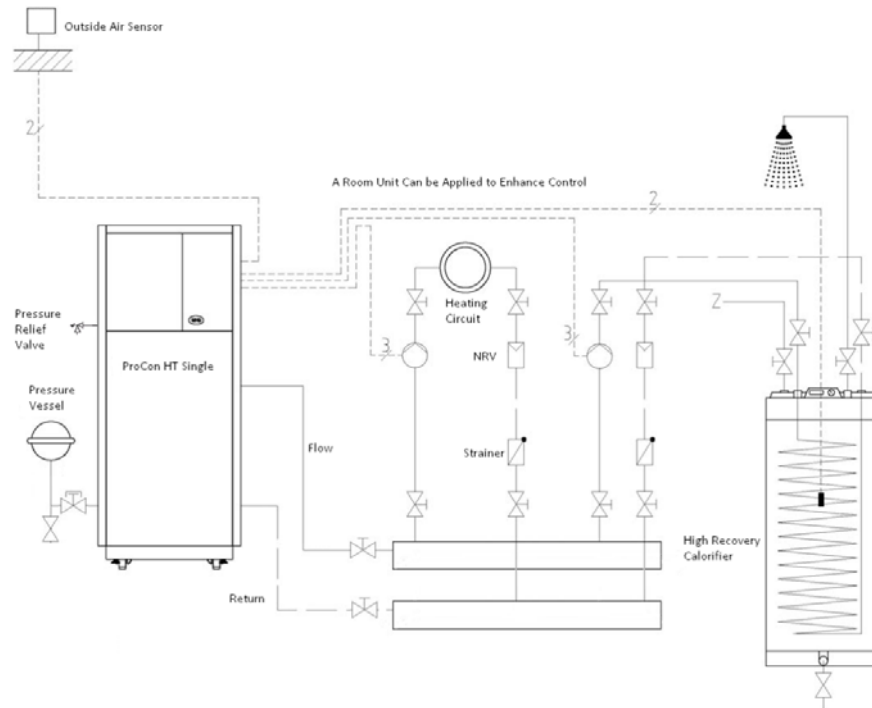
If required each module can be connected to an external safety device. A relay must be used to ensure separation of the voltages generated by each module controller. (X10:03)



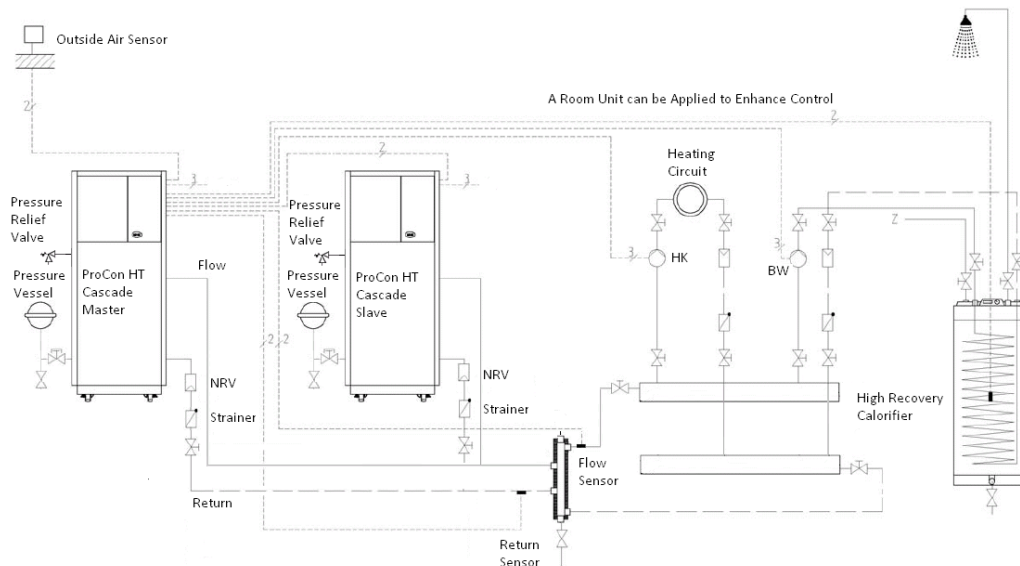
Terminal Designation

Tag	Terminal #s	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
RU	A6 & MD <small>(Not Polarity Sensitive)</small>	< 25V	Yes	QAA70/50/10 PPS Room Unit
H1	H1 & M <small>(Polarity Sensitive)</small>	<25V	Yes	0-10 Volt Input via BMS/Volt Free Enable via Room Thermostat/BMS
BW	B3 & M <small>(Not Polarity Sensitive)</small>	< 25V	Yes	Hot Water Sensor (QAZ21) or Volt Free Enable. <small>(Via Time Switch/Calorifier Thermostat/BMS) (Parameter alteration required if Volt free enable used)</small>
AF	B9 & M <small>(Not Polarity Sensitive)</small>	< 25V	Yes	Outside Air Sensor. (QAC31/32) or (620Ω Substitute Resistor = -1°C) <small>(Mounted on North Facing Wall)(Parameter alteration required if outside air sensor not connected)</small>
BUS	DB & MB <small>(Polarity Sensitive)</small>	< 25V	Yes	Boiler Communication to Slave Boilers. <small>(LPB DB Data & MB Ground)</small>
BW	N Neutral Q3 Switched Live	230V	-	Hot Water Charging Pump or 3 way Valve Output. <small>(Max 2 Amp)</small>
HK	11 Switched Live N Neutral	230V	-	Heating Pump Output <small>(Max 2 Amp)</small>
230V	N Perm Neutral L Perm Live	230V	-	Permanent 240 Volt Supply <small>(Max 10 Amp)</small>
VL	B10 & M	< 25V	Yes	System Flow Sensor (QAZ21/QAD21) <small>(Standalone boilers have an internal sensor. Cascade manager boilers required an externally mounted sensor)</small>
RL	M & B70	< 25V	Yes	System Return Sensor (QAZ21/QAD21) <small>(Standalone boilers have an internal sensor. Cascade manager boilers required an externally mounted sensor)</small>
X10-03	-	<25V	Yes	Safety Interlock Volt Free Enable <small>(For use with ventilation interlocks/gas pressure switch etc.)</small>

Generic Single HT Boiler Hydraulic Configuration



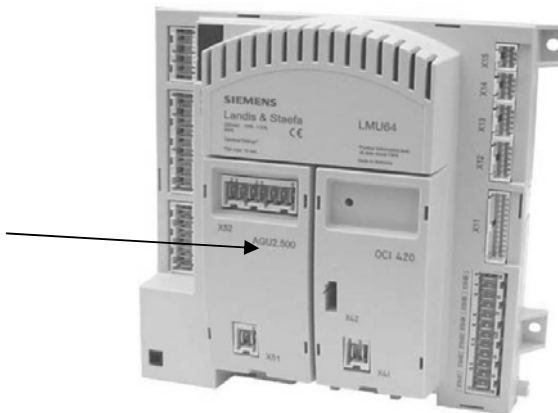
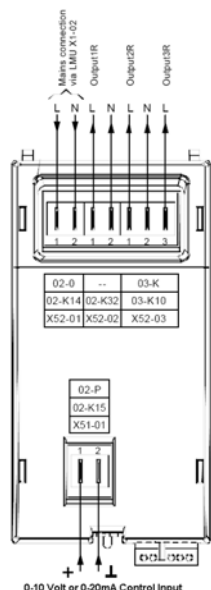
Generic Multiple HT Boiler Hydraulic Configuration (Indicating the location of the system mounted Flow and Return Sensors)



For Module BMS Run and Fault indication terminal allocation refer to the section titled,
Boiler Controller Mounted Option.

Boiler Controller Mounted Options.

AGU2.511 BMS Run & Fault 230V Outputs & 0-10Volt/0-20mA Input Clip.

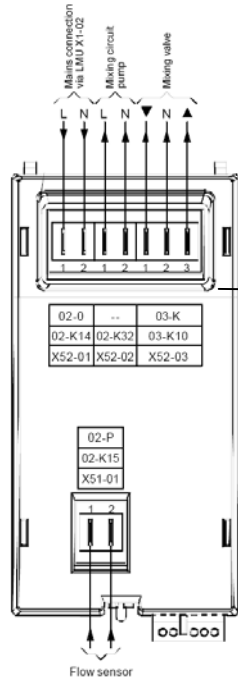


Terminal Designation

Tag	Terminal #s	Voltage	Description/Operation/Function
Switched Output Power Input X52-01	1 Live 2 Neutral	230V (Max)	Power Supply from X01-02 for switched live outputs. Power Supply from BMS can replace power supply from X01-02 (<230V/0.5Amp)
Output 1R X52-02	1 Live 2 Neutral	230V (Max)	Programmable Output Available Options Boiler Fault Output. Or Boiler Operating Output or SSOV.(Safety Shut Off Valve) (Max 1 Amp) (Parameter amendment required)
Output 2R X52-03	1 Live 2 Neutral	230V (Max)	Programmable Output Available Options Boiler Fault Output. Or Boiler Operating Output or SSOV (Max 1 Amp) (Parameter amendment required)
Output 3R X52-03	3 Live	230V (Max)	Programmable Output Available Options Boiler Fault Output. Or Boiler Operating Output or SSOV (Max 1 Amp) (Parameter amendment required)
Control Input X51-01	1 Control Input 2 Ground	0-10V Or 0-20mA	Programmable Control Input 0-10 Volt or 0-20mA Flow Temperature or % Power Control (Parameter amendment required)

Boiler Controller Mounted Options.

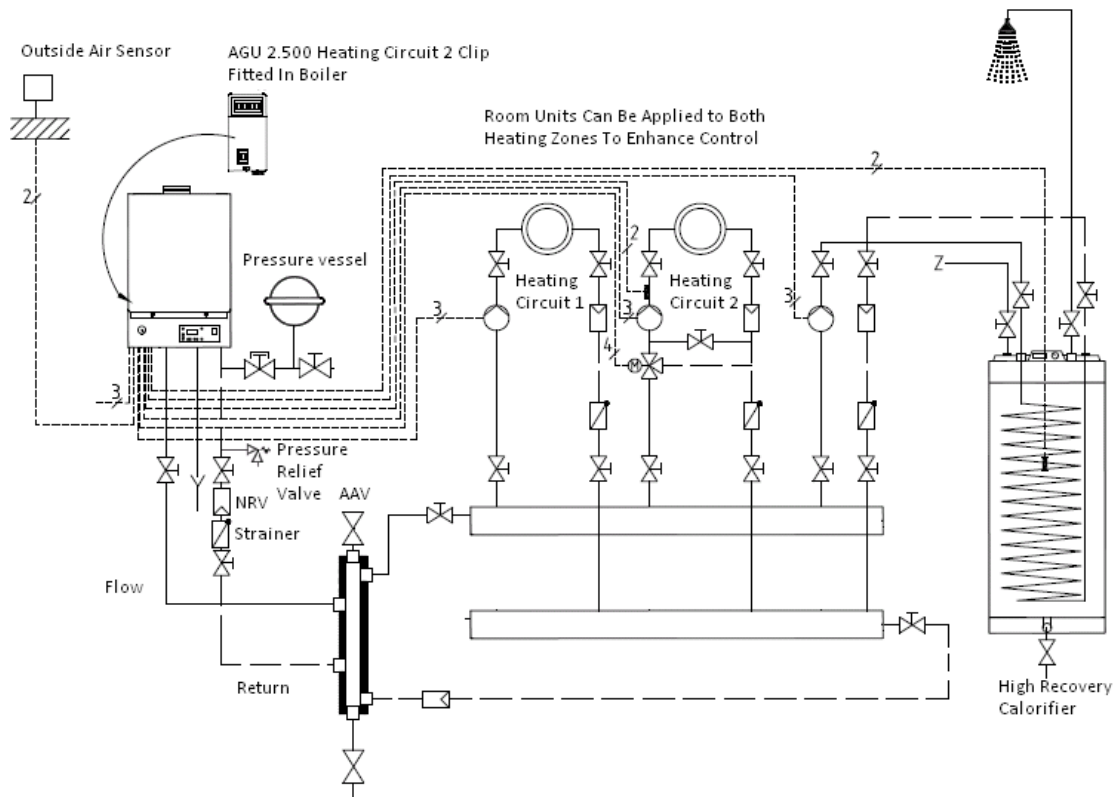
AGU2.500 Heating Zone 2 Pump/Mixing Valve/Sensor Clip.



Terminal Designation

Tag	Terminal #s	Voltage	Description/Operation/Function
Switched Output Power Input X52-01	1 Live 2 Neutral	230V	Power Supply from X01-02 for switched live outputs.
Pump Output X52-02	1 Live 2 Neutral	230V	Heating Zone 2 Pump Outputs (Max 1 Amp)
Mixing Valve X52-03	1 Close 2 Neutral 3 Open	230V	Heating Zone 2 Mixing Valve Outputs (Valve control is possible only when a zone flow sensor is connected) (Max 1 Amp)
Flow Sensor Input X51-01	1 & 2 (Not Polarity Sensitive)	<25V	Heating Zone 2 Flow Sensor Inputs. (QAD36)

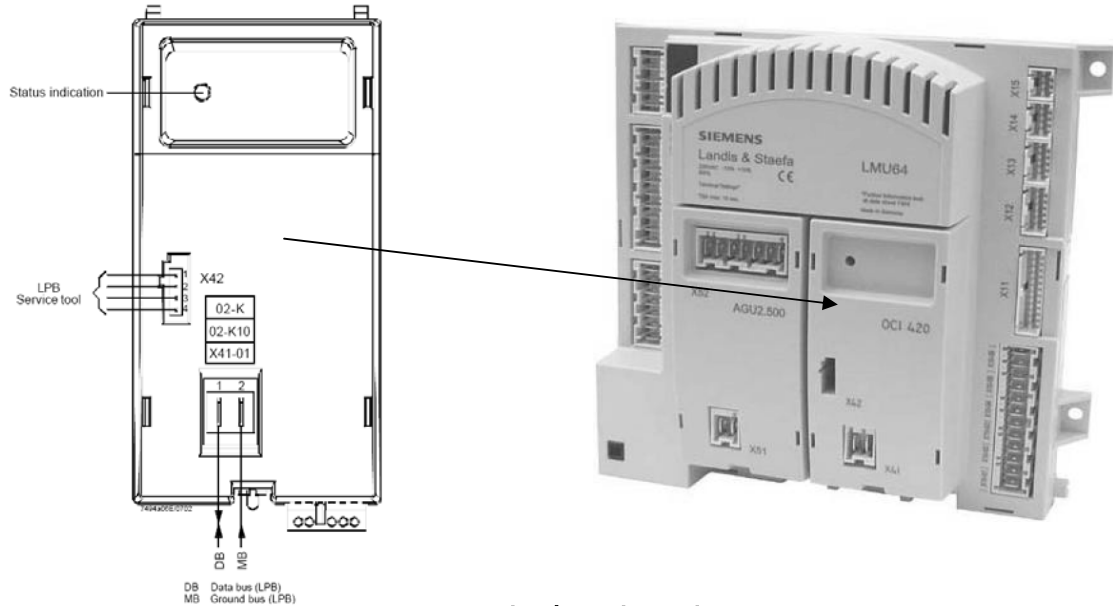
Generic Single Boiler (AGU2.500 Zoned) Hydraulic Configuration



Boiler Controller Mounted Options.

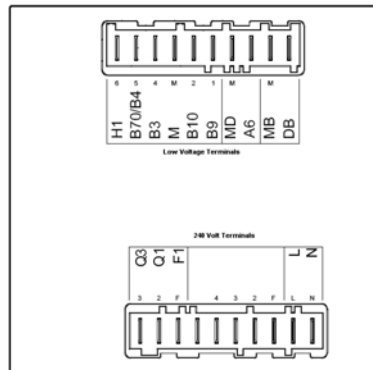
OCI420 LPB Cascade Communication Clip.

For use when control is provided via a RVA47 Cascade Manager or RVA63 Controller.



Terminal Designation

Tag	Terminal #s	Screened Cable	Description/Operation/Function
LPB X41-01	1, DB LPB Data 2, MB LPB Ground (Polarity Sensitive)	Yes	LPB Control Communication From RVA47 Cascade Manager or RVA63 Boiler and zone controller. (Parameter amendment required)

RVA47 Cascade Manager.**Manager Wiring Terminals.(Rear of controller)(Housing available)****Terminal Designation**

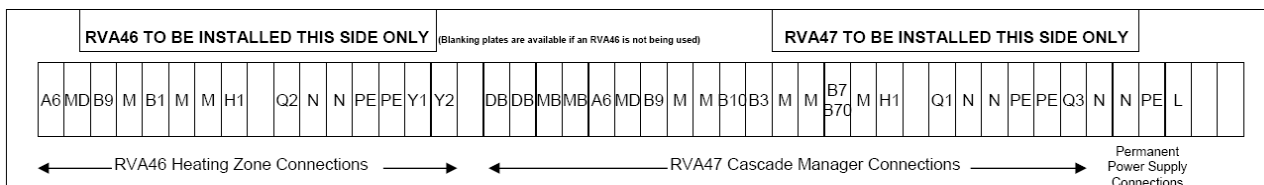
Tag	Terminal #s	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
H1	6 (Polarity Sensitive)	<25V	Yes	0-10 Volt Input via BMS/Volt Free Enable via Room Thermostat/BMS (M terminal used to create circuit)
B70/ B4	5 (Not Polarity Sensitive)	<25V	Yes	System Return Sensor (QAD21) (To be positioned on boiler side of system Low Loss Header)
B3	4 (Not Polarity Sensitive)	<25V	Yes	Hot Water Sensor (QAZ21)/Volt Free Enable via Calorifier Thermostat/BMS (Parameter alteration required if Volt Free Enable Used)
M	M	<25V	Yes	Ground Connection for all Sensors/Inputs
B10	2 (Not Polarity Sensitive)	<25V	Yes	System Flow Sensor (QAD21) (To be positioned on system side of system Low Loss Header)
B9	1 (Not Polarity Sensitive)	<25V	Yes	Outside Air Sensor (QAC31/32) or (620Ω Substitute Resistor = -1C) (Mounted on North Facing Wall)
MD	M (Not Polarity Sensitive)	<25V	Yes	QAA70/50/10 Room Unit (PPS Ground)
A6	- (Not Polarity Sensitive)	<25V	Yes	QAA70/50/10 Room Unit (PPS Data)
MB	M (Polarity Sensitive)	<25V	Yes	Boiler Communication (LPB Ground connected in parallel to boiler mounted OCI420 Clips)
DB	- (Polarity Sensitive)	<25V	Yes	Boiler Communication (LPB Data connected in parallel to boiler mounted OCI420 Clips)
Q3	3	230V	-	Hot Water Charging Pump/3 Way Valve Output (Max 2 Amp)
Q1	2	230V	-	Heating Pump Output (Max 2 Amp)
F1	F	230V	-	Power Input for Heating and Hot Water Pump Outputs (To be linked to Live Input)
L	L	230V	-	Permanent Live (Max 6 Amp)
N	N	230V	-	Permanent Neutral

For cascade control via a RVA47 cascade manager each boiler must be fitted with an OCI420 Clip. Refer to Page 13 for additional guidance.

RVA47 Cascade Manager.

Manager Wiring Terminals.(Housing)

(Housing designed for use with additional RVA46 Zone controller)



(RVA 46 Zone Controller wiring Information detailed later in document.)

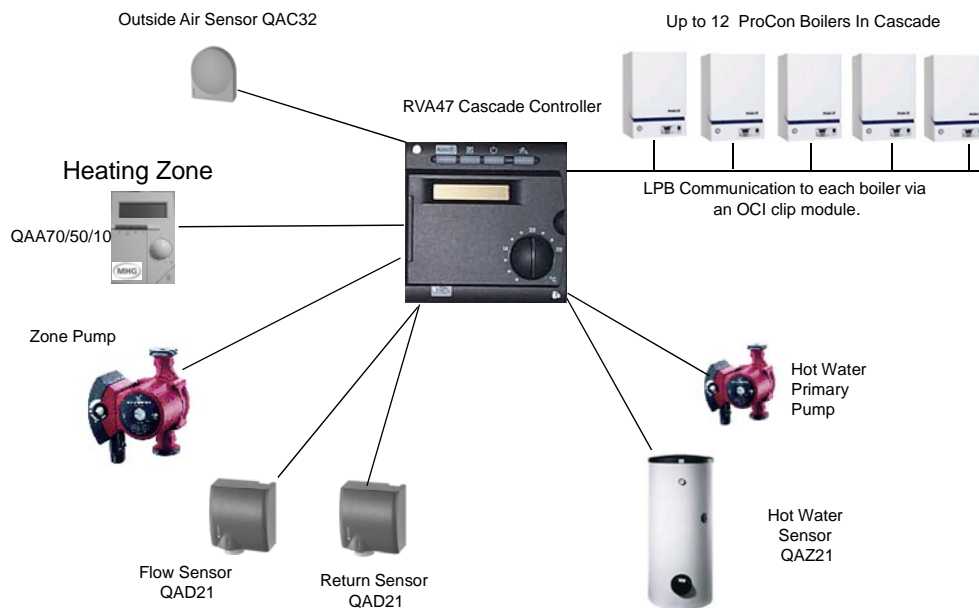
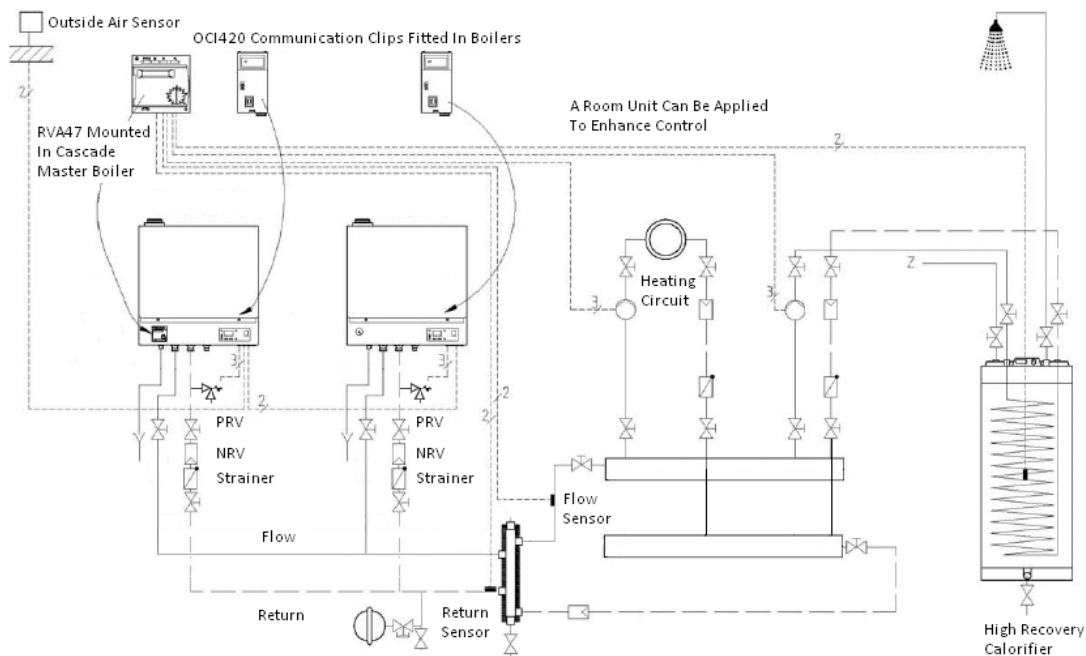
Terminal Designation

Tag	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
DB	<25V	Yes	Boiler Communication (LPB Data connected in parallel to boiler mounted OCI420 Clips)
MB	<25V	Yes	Boiler Communication (LPB Ground connected in parallel to boiler mounted OCI420 Clips)
A6	<25V	Yes	QAA70/50/10 Room Unit (PPS Data)
MD	<25V	Yes	QAA70/50/10 Room Unit (PPS Ground)
B9	<25V	Yes	Outside Air Sensor (QAC31/32) or (620Ω Substitute Resistor = -1C) (Mounted on North Facing Wall)
M	<25V	Yes	Ground Connection for all Sensors/Inputs
B10	<25V	Yes	System Flow Sensor (QAD21) (To be positioned on system side of system Low Loss Header)
B3	<25V	Yes	Hot Water Sensor (QAZ21)/Volt Free Enable via Calorifier Thermostat/BMS (Parameter alteration required if Volt Free Enable Used)
B70/ B4	<25V	Yes	System Return Sensor (QAD21) (To be positioned on boiler side of system Low Loss Header)
H1	<25V	Yes	0-10 Volt Input via BMS/Volt Free Enable via Room Thermostat/BMS
Q1	230V	-	Heating Pump Output (Max 2 Amp)
Q3	230V	-	Hot Water Charging Pump/3 Way Valve Output (Max 2 Amp)
N	230V	-	Permanent Neutral
PE	-	-	Permanent Earth
L	230V	-	Permanent Live (Max 6 Amp)

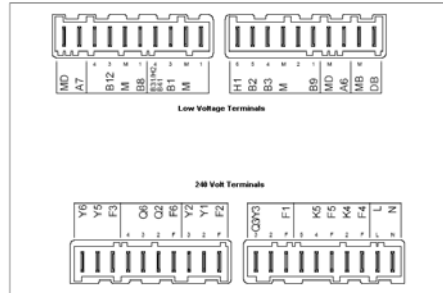
(All 'M' Terminals are Internally Linked)

For cascade control via a RVA47 cascade manager each boiler must be fitted with an OCI420 Clip. Refer to Page 13 for additional guidance.

Generic Multiple Boiler RVA47 Controlled Hydraulic Configuration



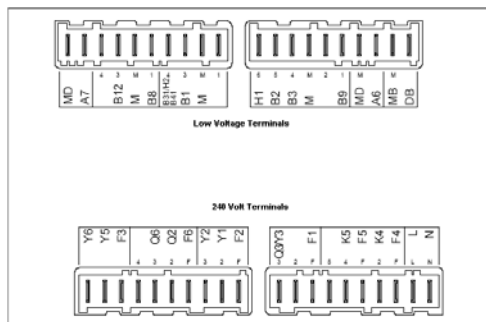
Component Control Capability of RVA47

RVA63 Boiler and Zone Controller.**Manager Wiring Terminals.(Rear of controller)(Housing available)****Terminal Designation (Low Voltage Terminals)**

Tag	Terminal #s	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
MD	- (Not Polarity Sensitive)	<25V	Yes	Zone 2 QAA70/50/10 Room Unit (PPS Ground)
A7	- (Not Polarity Sensitive)	<25V	Yes	Zone 2 QAA70/50/10 Room Unit (PPS Data)
B12	3 (Not Polarity Sensitive)	<25V	Yes	Zone 2 Flow Sensor (QAD21/26) (To be positioned on Zone side of 3 way mixing valve)
M	M (Not Polarity Sensitive)	<25V	Yes	Ground Connection for all Sensors/Inputs
B8	1 (Not Polarity Sensitive)	<25V	Yes	Flue Gas Sensor (Not Used)
B31/ H2/ B41	4 (Polarity Sensitive)	<25V	Yes	Volt Free Enable via Room Thermostat/BMS
B1	3 (Not Polarity Sensitive)	<25V	Yes	Zone 1 Flow Sensor (QAD21/26) (To be positioned on Zone side of 3 way mixing valve)
H1	6 (Polarity Sensitive)	<25V	Yes	0-10 Volt Input via BMS/Volt Free Enable via Room Thermostat/BMS
B2	5 (Not Polarity Sensitive)	<25V	Yes	Boiler Sensor (Not Used)
B3	4 (Not Polarity Sensitive)	<25V	Yes	Hot Water Sensor (QAZ21)/Volt Free Enable via Calorifier Thermostat/BMS (Parameter alteration required if Volt Free Enable Used)
B9	1 (Not Polarity Sensitive)	<25V	Yes	Outside Air Sensor (QAC31/32) or (620Ω Substitute Resistor = -1°C) (Mounted on North Facing Wall)
MD	M (Not Polarity Sensitive)	<25V	Yes	Zone 1 QAA70/50/10 Room Unit (PPS Ground)
A6	- (Not Polarity Sensitive)	<25V	Yes	Zone 1 QAA70/50/10 Room Unit (PPS Data)
MB	M (Polarity Sensitive)	<25V	Yes	Boiler Communication (LPB Ground connected in parallel to boiler mounted OCI420 Clip or RVA47 Manager)
DB	- (Polarity Sensitive)	<25V	Yes	Boiler Communication (LPB Data connected in parallel to boiler mounted OCI420 Clip or RVA47 Manager)

For zone control via a RVA63 zone controller the boiler must be fitted with an OCI420 Clip. Refer to Page 13 for additional guidance.

230 Volt Terminals shown on following page.

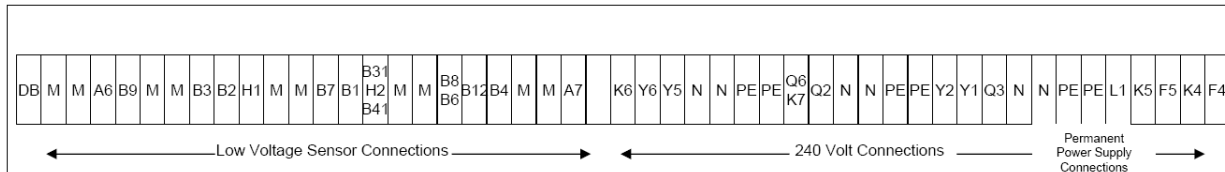
RVA63 Boiler and Zone Controller.**Manager Wiring Terminals.(Rear of controller)(Housing available)****Terminal Designation (230 Volt Terminals)**

Tag	Terminal #s	Voltage	Description/Operation/Function
Y6	-	230V	Zone 2 Mixing Valve Closing Output (Max 2 Amp)
Y5	-	230V	Zone 2 Mixing Valve Opening Output (Max 2 Amp)
F3	-	230V	Power Input for Zone 2 Valve Outputs (To be linked to Live Input)
Q6	3	230V	Zone 2 Pump Output (Max 2 Amp)
Q2	2	230V	Zone 1 Pump Output (Max 2 Amp)
F6	F	230V	Power Input for Zone Pumps Output (To be linked to Live Input)
Y2	3	230V	Zone 1 Mixing Valve Closing Output (Max 2 Amp)
Y1	2	230V	Zone 1 Mixing Valve Opening Output (Max 2 Amp)
F2	F	230V	Power Input for Zone 1 Valve Outputs (To be linked to Live Input)
Q3/Y3	3	230V	Hot Water Charging Pump/3 Way Valve Output (Max 2 Amp)
F1	F	230V	Power Input for Hot Water Pump/Valve Output (To be linked to Live Input)
K5	4	230V	Burner Enable Output Stage 2 (Not Used)
F5	F	230V	Power Input Burner Enable Stage 2 (Not Used)
K4	2	230V	Burner Enable Stage 1 (Not Used)
F4	F	230V	Power Input Burner Enable Stage 1 (Not Used)
L	L	230V	Permanent Live (Max 6 Amp)
N	N	230V	Permanent Neutral

For zone control via a RVA63 zone controller the boiler must be fitted with an OCI420 Clip. Refer to Page 13 for additional guidance.

RVA63 Boiler and Zone Controller.

Manager Wiring Terminals. (Housing)



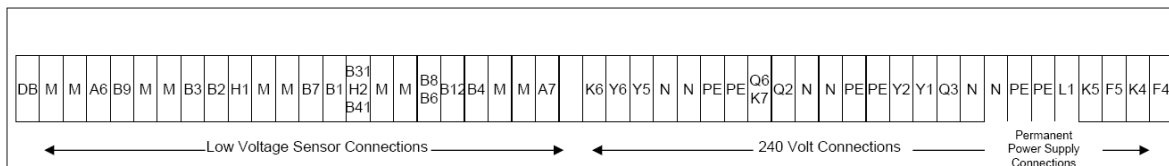
Terminal Designation (Low Voltage Terminals)

Tag	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
DB	<25V	Yes	Boiler Communication (LPB Ground connected in parallel to boiler mounted OCI420 Clip or RVA47 Manager)
M	<25V	Yes	Boiler Communication (LPB Data connected in parallel to boiler mounted OCI420 Clip or RVA47 Manager)
A6	<25V	Yes	Zone 1 QAA70/50/10 Room Unit (PPS Data)
M	<25V	Yes	Zone 1 QAA70/50/10 Room Unit (PPS Ground)
B9	<25V	Yes	Outside Air Sensor (QAC31/32) or (620Ω Substitute Resistor = -1°C) (Mounted on North Facing Wall)
M	<25V	Yes	Ground Connection for all Sensors/Inputs
B3	<25V	Yes	Hot Water Sensor (QAZ21)/Volt Free Enable via Calorifier Thermostat/BMS (Parameter alteration required if Volt Free Enable Used)
B2	<25V	Yes	Boiler Sensor (Not Used)
H1	<25V	Yes	0-10 Volt Input via BMS/Volt Free Enable via Room Thermostat/BMS
B7	-	-	Not Used with RVA63
B1	<25V	Yes	Zone 1 Flow Sensor (QAD21) (To be positioned on Zone side of 3 way mixing valve)
B31/ H2/ B41	<25V	Yes	Volt Free Enable via Room Thermostat/BMS
B8	<25V	Yes	Flue Gas Sensor (Not Used)
B12	<25V	Yes	Zone 2 Flow Sensor (QAD21) (To be positioned on Zone side of 3 way mixing valve)
B4	-	-	Not Used with RVA63
M	<25V	Yes	Ground Connection for all Sensors/Inputs
M	<25V	Yes	Zone 2 QAA70/50/10 Room Unit (PPS Ground)
A7	<25V	Yes	Zone 2 QAA70/50/10 Room Unit (PPS Data)

(All 'M' Terminals are Internally Linked)

For zone control via a RVA63 zone controller the boiler must be fitted with an OCI420 Clip. Refer to Page 13 for additional guidance.

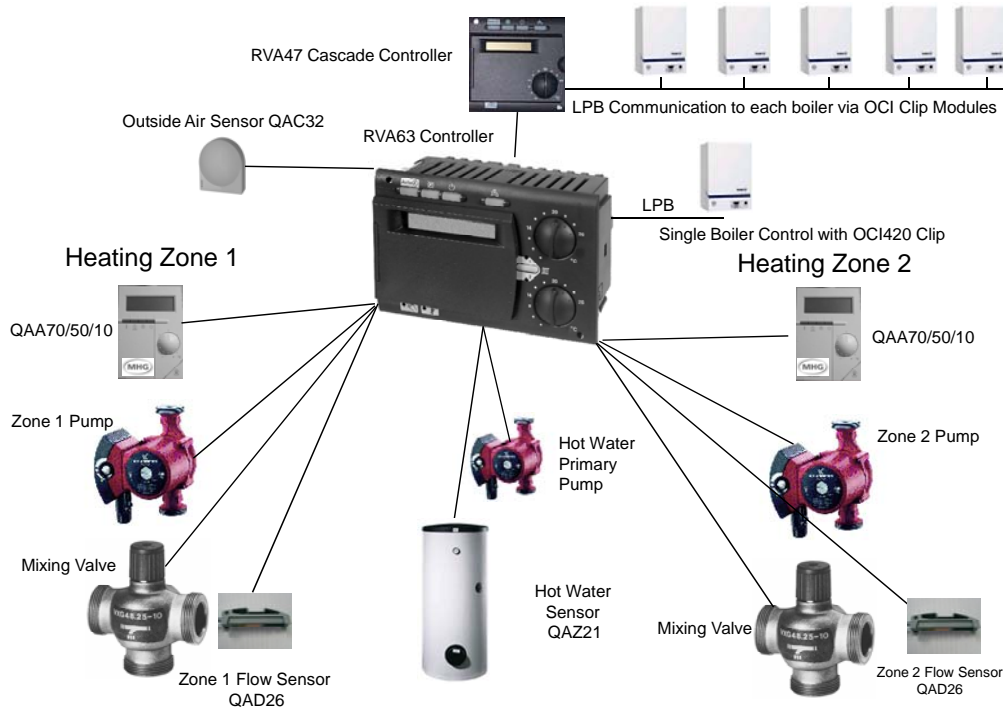
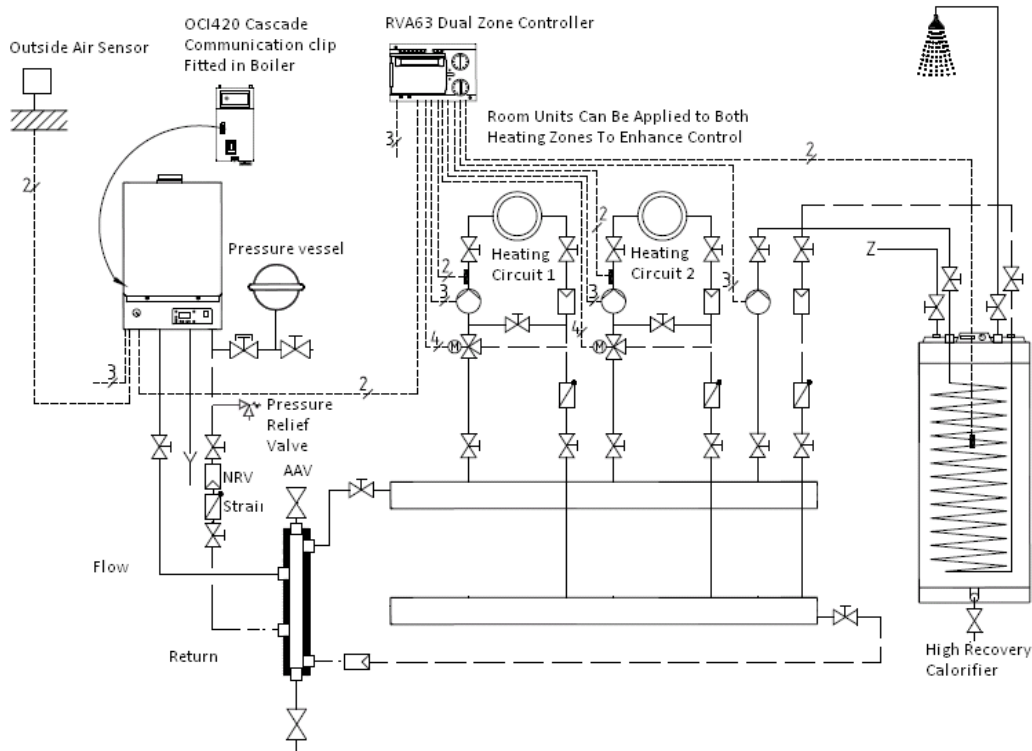
230 Volt Terminals shown on following page.

RVA63 Boiler and Zone Controller.**Manager Wiring Terminals. (Housing)****Terminal Designation (230 Volt Terminals)**

Tag	Voltage	Description/Operation/Function
K6	-	Not Used with RVA63
Y6	230V	Zone 2 Mixing Valve Closing Output (Max 2 Amp)
Y5	230V	Zone 2 Mixing Valve Opening Output (Max 2 Amp)
N	230V	Permanent Neutral
Q6	230V	Zone 2 Pump Output (Max 2 Amp)
Q2	230V	Zone 1 Pump Output (Max 2 Amp)
N	230V	Permanent Neutral
Y2	230V	Zone 1 Mixing Valve Closing Output (Max 2 Amp)
Y1	230V	Zone 1 Mixing Valve Opening Output (Max 2 Amp)
Q3/Y3	230V	Hot Water Charging Pump/3 Way Valve Output (Max 2 Amp)
PE	-	Permanent Earth
N	230V	Permanent Neutral
L1	230V	Permanent Live (Max 6 Amp)
K5	230V	Burner Enable Output Stage 2 (Not Used)
F5	230V	Power Input Burner Enable Stage 2 (Not Used)
K4	230V	Burner Enable Stage 1 (Not Used)

For zone control via a RVA63 zone controller the boiler must be fitted with an OCI420 Clip. Refer to Page 13 for additional guidance.

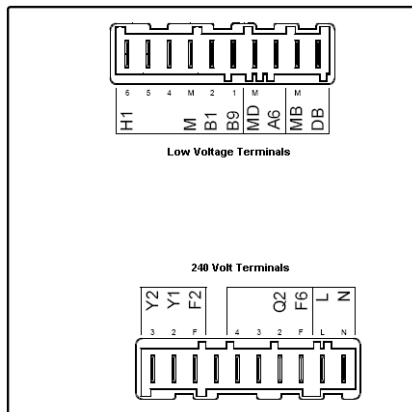
Generic Single Boiler RVA63 Controlled Hydraulic Configuration



Component Control Capability of RVA63

RVA46 Zone Controller.

Controller Wiring Terminals.(Rear of controller)(Housing available)



Terminal Designation

Tag	Terminal #s	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
H1	6 <small>(Not Polarity Sensitive)</small>	<25V	Yes	Volt Free Enable via Room Thermostat/BMS
M	M	<25V	Yes	Ground Connection for all Sensors/Inputs
B1	2 <small>(Not Polarity Sensitive)</small>	<25V	Yes	Zone Flow Sensor (QAD21) <small>(To be positioned on Zone side of 3 way mixing valve)</small>
B9	1 <small>(Not Polarity Sensitive)</small>	<25V	Yes	Zone Outside Air Sensor (QAC31/32) or (620Ω Substitute Resistor = -1 C) <small>(Mounted on North Facing Wall) (Not required if using RVA47 O/S Sensor)</small>
MD	M <small>(Not Polarity Sensitive)</small>	<25V	Yes	Zone QAA70/50/10 Room Unit (PPS Ground)
A6	- <small>(Not Polarity Sensitive)</small>	<25V	Yes	Zone QAA70/50/10 Room Unit (PPS Data)
MB	M <small>(Polarity Sensitive)</small>	<25V	Yes	RVA47/63 Communication (LPB Ground connected in parallel to RVA47 Manager or RVA63 Zone controller)
DB	- <small>(Polarity Sensitive)</small>	<25V	Yes	RVA47/63 Communication (LPB Data connected in parallel to RVA47 Manager or RVA63 Zone controller)
Y2	3	230V	-	Mixing Valve Closing Output <small>(Max 2 Amp)</small>
Y1	2	230V	-	Mixing Valve Opening Output <small>(Max 2 Amp)</small>
F2	1	230V	-	Power Input for Zone Valve Outputs <small>(To be linked to Live Input)</small>
Q2	2	230V	-	Zone Pump Output <small>(Max 2 Amp)</small>
F6	F	230V	-	Power Input for Zone Pump Output <small>(To be linked to Live Input)</small>
L	L	230V	-	Permanent Live <small>(Max 6 Amp)</small>
N	N	230V	-	Permanent Neutral

RVA46 Zone Controller.**Controller Wiring Terminals.(Housing)**

(Housing designed for use with primary RVA47 Cascade Manager.)

(RVA 47 Cascade Manager wiring Information detailed earlier in document.)

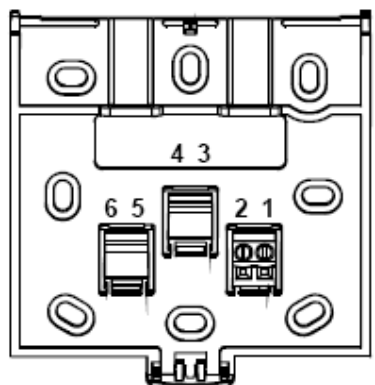
Terminal Designation

Tag	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
A6	<25V	Yes	Zone QAA70/50/10 Room Unit (PPS Data)
MD	<25V	Yes	Zone QAA70/50/10 Room Unit (PPS Ground)
B9	<25V	Yes	Zone Outside Air Sensor (QAC31/32) or (620Ω Substitute Resistor = -1.C) <small>(Mounted on North Facing Wall)(Not required if using RVA47 O/S Sensor)</small>
M	<25V	Yes	Ground Connection for all Sensors/Inputs
B1	<25V	Yes	Zone Flow Sensor (QAD21) <small>(To be positioned on Zone side of 3 way mixing valve)</small>
H1	<25V	Yes	Volt Free Enable via Room Thermostat/BMS
Q2	240V	-	Zone Pump Output <small>(Max 2 Amp)</small>
Y1	240V	-	Mixing Valve Opening Output <small>(Max 2 Amp)</small>
Y2	240V	-	Mixing Valve Closing Output <small>(Max 2 Amp)</small>

(All 'M' Terminals are Internally Linked)

QAA73 Single Boiler Opentherm Room Units

Room Unit Mounting Plate Wiring Terminals

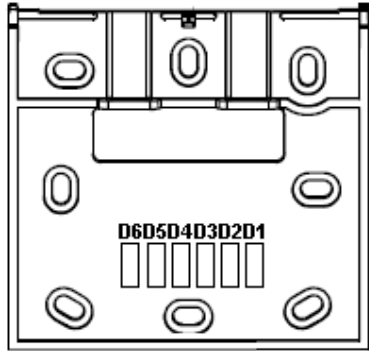


Terminal Designation

Terminal #s	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
1 & 2 (Not Polarity Sensitive)	<25V	Yes	Opentherm communication to Single Boiler Installation
3 & 4	-	-	Not Used
5 & 6	-	-	Not Used

QAA70/50/10 PPS Cascade or System Controller Room Units

Room Unit Mounting Plate Wiring Terminals



Terminal Designation

Terminal #s	Voltage	Screened Cable (Earthed Screening)	Description/Operation/Function
D1 & D2 (Not Polarity Sensitive)	<25V	Yes	PPS communication to RVA47/46/63 Controlled Installation
D 3 & D4 (Not Polarity Sensitive)	<25V	Yes	Tamperproof QAW44 Remote Sensor or Volt Free Enable
D5 & D6	-	-	Not Used

