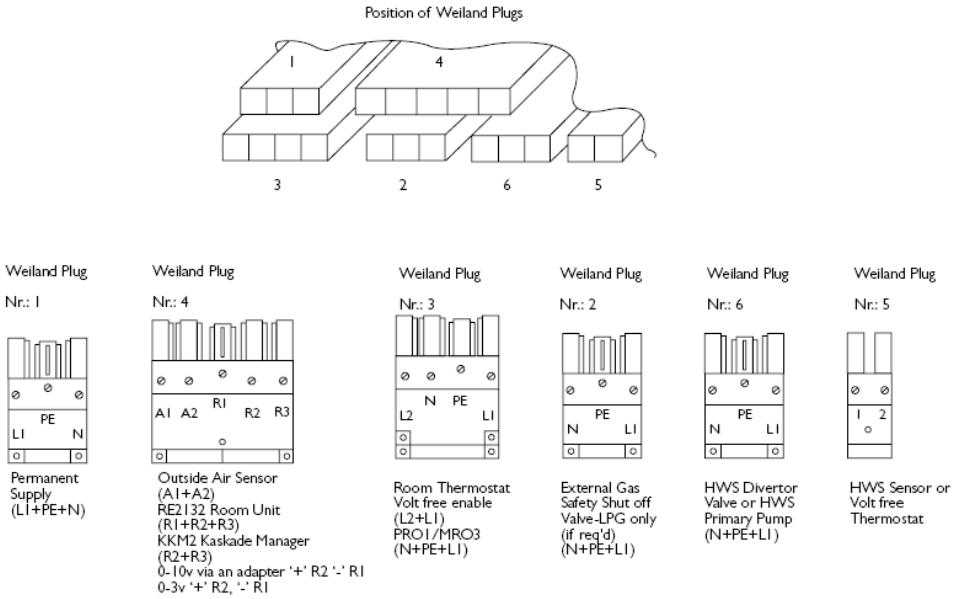
Control Wiring Options When Replacing a MicroMat with a ProCon 77.

The MicroMat Wiring/Control Configuration is undertaken via the Wieland plugs located at the base of the unit. In addition to these plugs a X9 fault indication plug is located in the centre of the control panel. (Voltage site dependant.)



Prior to removing the field wiring it is essential to determine the type of control being used.

Two plugs are used to provide control of the boiler.

Plug 3 Volt Free enable. 230 Volt output L1, 230 Volt input (enable) L2.

Prior to connecting this enabling circuit to the new ProCon 77 please ensure that no external voltage is being applied to the circuit as the ProCon 77s enabling circuit RT Terminals 3&4 are Low Voltage.

Plug 4 RE2132 PWM Room unit. 24 Volt Output/input R1, R2 & R3.

Regrettably the ProCon 77 cannot be directly connected to a RE2132.
A new QAA73 will be required and connected to RU terminal 1 & 2.

Plug 4 KKM2 Cascade Manager. 24 Volt Output/Input R2 & R3.

The KKM2 can control the new ProCon 77 following some rewiring and KKM2 updating.
Please refer to the respective quick reference guide for more details.

Plug 4 0-3 Volt or 0-10 Volt Input. 0-3 Volt R1 & R2. 0-10 Volt via an in line adapter, R1 & R2.

An additional AGU 2.511 communication clip will be required to allow a 0-3 Volt or 0-10 Volt input to control the ProCon 77. This clip is also used to produce a Run and Fault output.
Please refer to the respective quick reference guide for more details.

Basic electrical connection for the ProCon 77

1 2	3 4	5 6	7 8	9	10 11 12	13 14	15	16 17	18	19	20
RU	RT	AT	BW	E	BW/K3	K2	E	K1	E	N	L

Legend

Low Voltage Control terminals < 25 Volts		
RU	1	QAA73 Room Unit Not Polarity Sensitive < 24Volts
	2	(Link terminals to activate second heating zone control.)
RT	3	Heating Circuit 1 Volt Free Enable Not Polarity Sensitive (Room stat/BMS) < 24 Volts
	4	
AT	5	Outside Air Sensor (QAC34) Not Polarity Sensitive < 24Volts
	6	(Required to Activate Direct on Boiler Weather Compensation)
BW	7	Hot Water Sensor (QAZ36) or Hot Water Volt Free Enable (Thermostat/BMS).
	8	Not Polarity Sensitive < 24Volts
High Voltage Output and Input Terminals 230 Volts		
E	9	Common Earth Terminal
BW/K3	10	Permanent 230 Volt Output for Motor Open Motor Close Hot Water Diverter Valve
	11	Neutral Terminal for Hot Water Diverter Valve or Charging Pump
	12	230 Volt Output For Hot Water Diverter Valve or Charging Pump (Max 1Amp)
K2	13	230 Volt Output For Heating Circuit Pump (ProCon 16-27)/Boiler Pump ProCon 47, 75&77) (Max 1Amp)
	14	Neutral Terminal for heating/Boiler Pump
E	15	Common Earth Terminal
K1	16	Neutral Terminal for heating/Boiler Pump
	17	230 Volt Output For Boiler Pump (ProCon 16-27)/Heating Circuit Pump ProCon 47,75&77) (Max 1Amp)
E	18	Permanent Earth Terminal
N	19	Switched Fused Permanent Neutral
L	20	Switched Fused Permanent 230 Volt Live (Max 5Amp)

KKM 2 SEQUENCE CONTROLLER WIRING DETAILS