

WLM2-SIP-MODULE

Thank you for purchasing the WLM2-SIP-Module, this allows the connection of your underfloor heating WLM2 master network to a TREND BMS system. Included in your pack are;

1 x WLM2-SIP-MODULE

1 x RJ14 to RJ45 cable

1 x Power supply

Connection Diagram

Default IP address – 192.168.1.227

Subnet mask – 255.255.255.0

Default gateway – 192.168.1.1

Network connection

Power supply

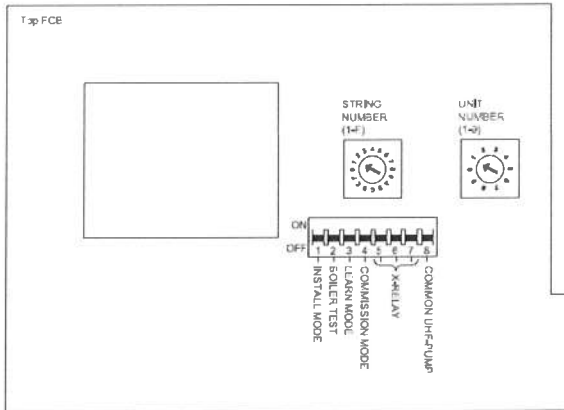
Please ensure V- (0 Volts)
is NOT Earthed.

CONNECTION TO
WLM2-1FS/B



SETTING OF MODBUS/OUTSTATION ID's

Within the WLM2-1FS/B and WLM2-1BA masters are 2 dial encoders. These can be configured to give the unit a MODBUS or OUTSTATION ID number which in turn can be read by the vIQ within the SIP interface module.



It is vital that the WLM2-1FS/B master is set to 2 – 0, i.e. 20 and the 'Slave' WLM2-1BA masters are sequentially coded in series, PLEASE NOTE that sequence number 3 – 0 i.e. 30 must be avoided. On a system containing 16 masters the setting sequence would be;

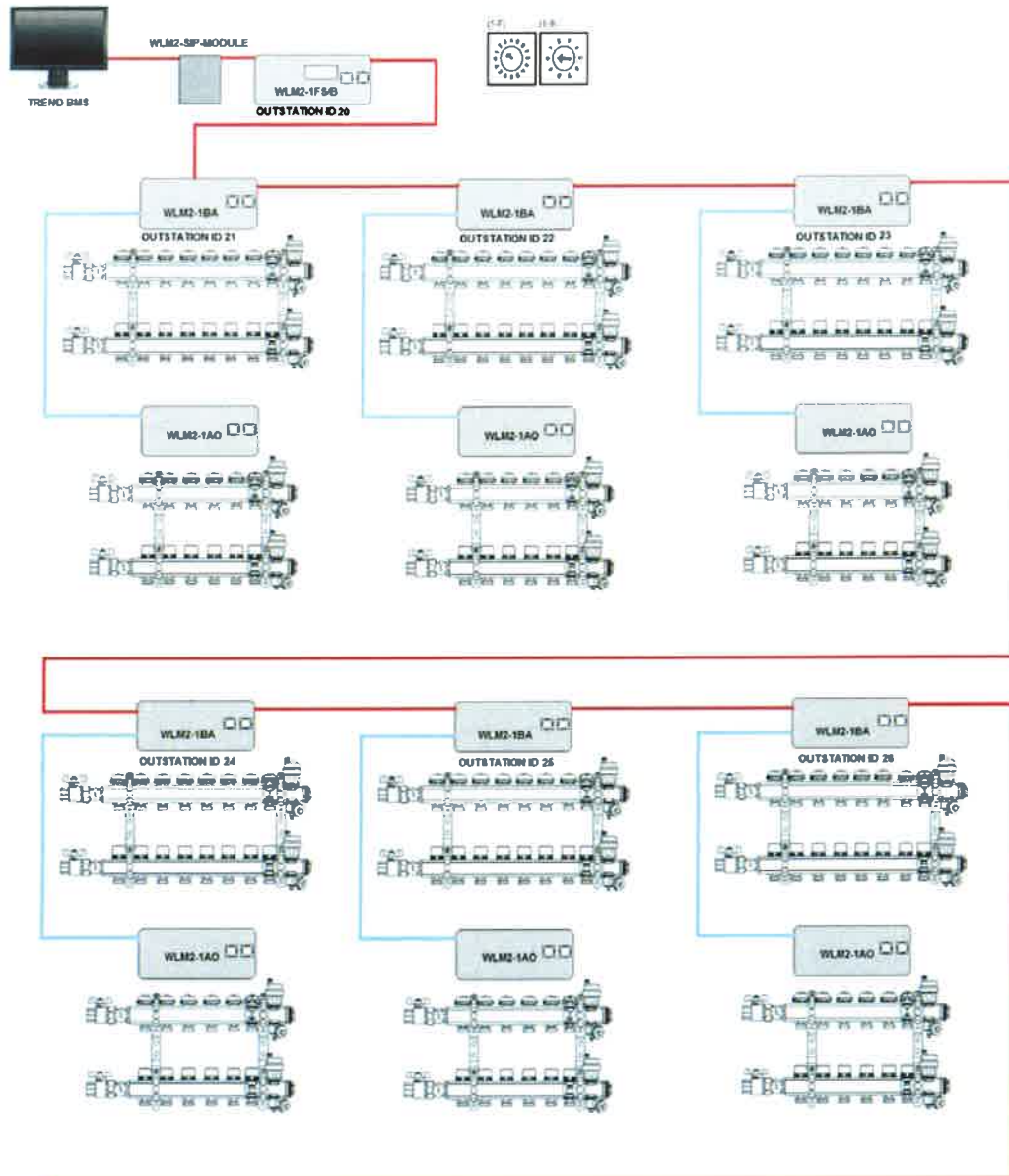
2 – 0, (20) Network BMS master (It is not

possible to use a WLM2-1AO add-on module)

- 2 – 1 (21) Slave 1 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 2 – 2 (22) Slave 2 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 2 – 3 (23) Slave 3 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 2 – 4 (24) Slave 4 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 2 – 5 (25) Slave 5 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 2 – 6 (26) Slave 6 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 2 – 7 (27) Slave 7 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 2 – 8 (28) Slave 8 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 2 – 9 (29) Slave 9 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 3 – 1 (31) Slave 10 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 3 – 2 (32) Slave 11 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 3 – 3 (33) Slave 12 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 3 – 4 (34) Slave 13 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 3 – 5 (35) Slave 14 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)
- 3 – 6 (36) Slave 15 CH 1 – 8,** (A WLM2-1AO add-on module may be used for CH 9-14)

The maximum number of 'Slave' masters is 16. If more than 16 are required then a second independent network must be used.

Below is an illustration of a network set-up, the WLM2-SIP-MODULE interfaces to the TREND® BMS and the WLM2-1FS/B master.



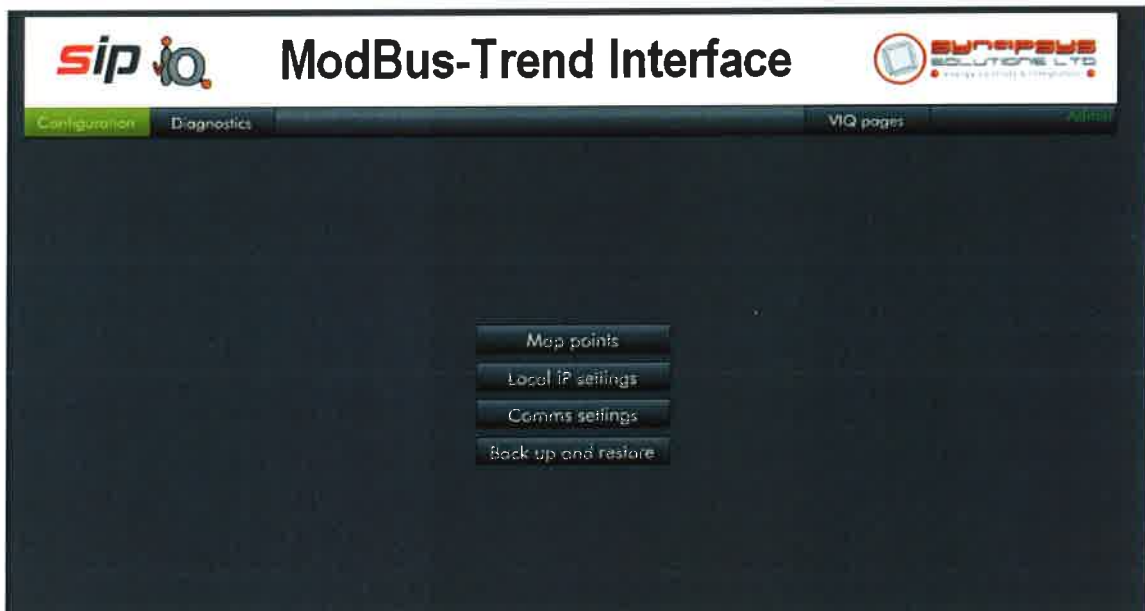
Please Note - The network can consist of one 'Network Master' WLM2-1FS/B and up to 15 'Slave' WLM2-1BA's or WLM2-1FS's (can be mixed as required). Any or all of the Slave Masters can be extended by adding a WLM2-1AO, add-on module taking the total number of areas from 8 to 14.

MODBUS TABLES AND vIQ

Once installed the WLM2-SIP-MODULE can be accessed via its IP address, 192.168.1.227, This address can be altered from within the SIP's menu system if required. Below are some screen shots from the SIP module. Detailed below are the operations which can be performed to personalise the SIP for your installation.



SIP Login Menu – Default user name is 'Admin' (capital 'A'), Password is 'password'



SIP Main Menu – all the available options can be accessed from this screen, including connection to the VIQ pages.

Reg.	Qty	Data type	Function	Factor	Offset	Bit mask	Access	Module	Mod. num
1	1	Integer 16 bits unsigned	4 - Input registers	1	0	15 8 7 0	R/O	S	1
4	1	Integer 16 bits unsigned	4 - Input registers	1	0	16 8 7 0	R/O	S	2
5	1	Digital binary 16 bits	4 - Input registers	1	0	15 8 7 0	R/O	I	1
8	3	Integer 16 bits unsigned	4 - Input registers	1	0	16 8 7 0	R/O	S	3
9	6	Integer 16 bits signed	4 - Input registers	0.01	0	16 8 7 0	R/O	S	6
22	2	Integer 16 bits unsigned	4 - Input registers	0.01	0	16 8 7 0	R/O	S	12
26	1	Integer 16 bits signed	4 - Input registers	0.01	0	16 8 7 0	R/O	S	14
32	2	Integer 16 bits unsigned	4 - Input registers	0.01	0	16 8 7 0	R/O	S	15

SIP Map Points – This page displays the ModBus points monitored by the SIP. The only editing allowed on this page is assigning the slave addresses to the VIQ's, however this has already been completed prior to despatch so no alteration should be necessary.

IP settings

Hostname: SIP_OJ-WLM

IP address: 192.168.1.227

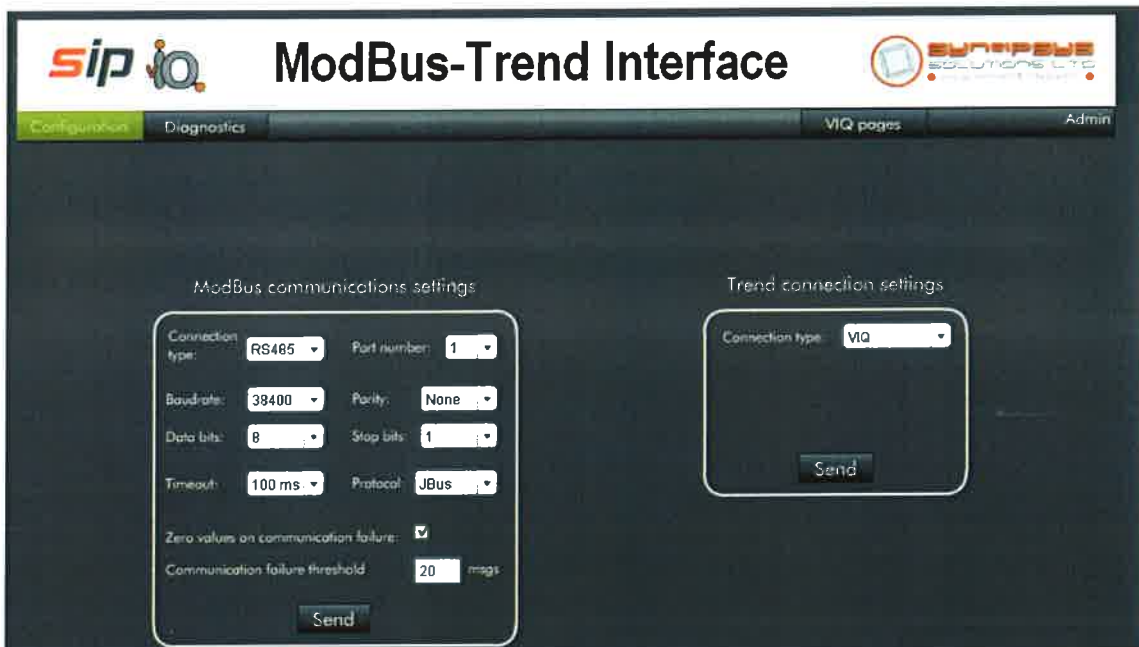
Subnet mask: 255.255.255.0

Default gateway: 192.168.1.1

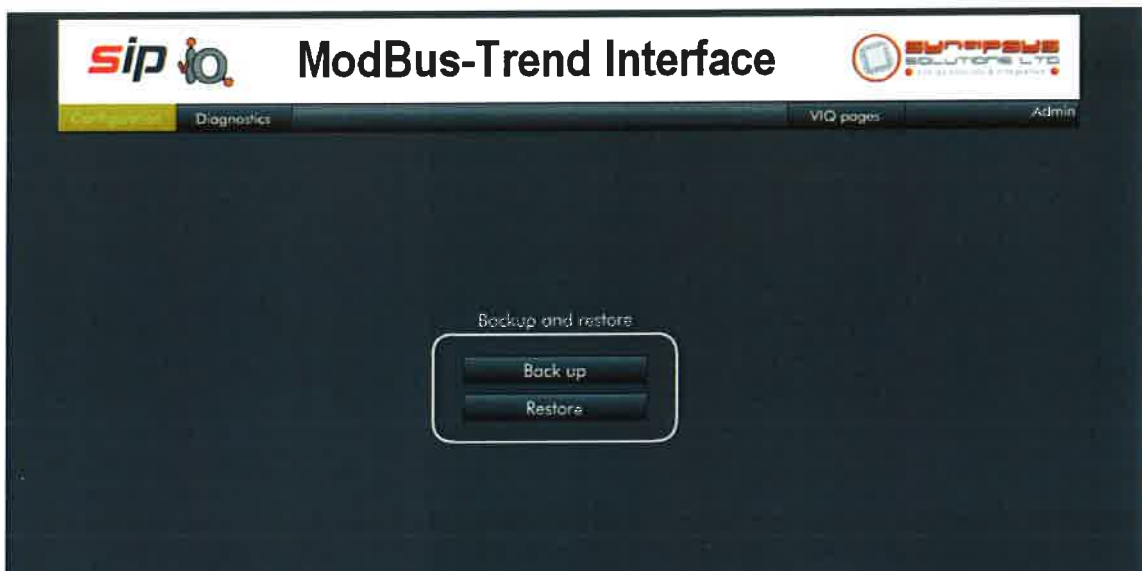
DHCP Enabled:

Set and reboot

SIP IP Setting – This screen details the SIP's current IP address, subnet mask and Default gateway.



SIP Communications setting – This page details the communication setting that have been set as default, a number of drop down menus allows the operator to change any necessary parameters.



Backup and Restore – The SIP module can store a file copy of the data being held for safe keeping in case of an emergency.

-To make a copy of the data press the 'Restore' button and within a few moments a file will be available for storage on any appropriate device.

-To upload a copy into the SIPs memory please press the 'Back up' button – this will then prompt you to select the back-up file of your choosing. Please note that this operation will overwrite anything previously programmed in to the SIP's memory.

The screenshot shows the 'ModBus-Trend Interface' with the 'Diagnostics' tab active. The interface includes a navigation bar with 'Configuration', 'Diagnostics', 'VIQ pages', and 'Admin'. Below the navigation bar, there are buttons for 'Last 100 comms packets', 'Last 100 feedback msgs', and 'Custom request'. A section for 'Auto-refresh' is checked, with a 'Minimum interval' of '2 seconds'. To the right, there are three status indicators: 'Error' (white circle), 'Warning' (yellow circle), and 'Information' (white circle). The main content area is a table with the following data:

Time and date	Message
20/07/2011 10:45:19	Valid response received from slave 31
20/07/2011 10:45:19	Valid response received from slave 31
20/07/2011 10:45:19	Valid response received from slave 31
20/07/2011 10:45:19	Valid response received from slave 31

The Diagnostics button allows you to see in real time the read/write or responses only being received from the WLM2 network of Masters. Please not that the number of VIQ's will need to be edited to minimise any timeouts.

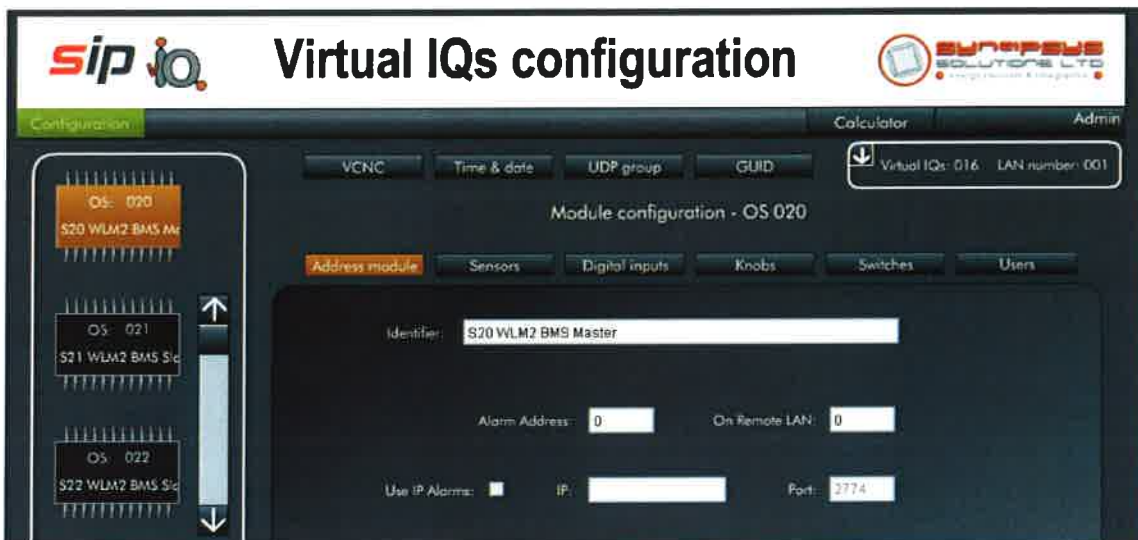
The screenshot shows the 'Virtual IQs configuration' web application with the 'User' tab active. The interface includes a navigation bar with 'Configuration', 'Calculator', and 'User'. The main content area is a login form with the following elements:

- Text: 'Login' (above the input fields)
- Form: A rounded rectangle containing two input fields: 'User name' and 'Password'.
- Button: A 'Login' button below the input fields.

Virtual IQ logon Screen - Default user name is 'Admin' (capital 'A'), Password is 'password'



VIQ Standard page – Each of the tabs can be selected to view the data available.



VIQ Address labels – To change the given label on a VIQ please over type the 'Identifier' and press the 'send' button at the foot of the screen. Once the send button has gone from red to green you know your instruction has been accepted. To refers the screen you will need to click away from this VIQ and back again.

The screenshot displays the 'Virtual IQs configuration' software. On the left, a vertical list of modules is shown, with OS 031 highlighted. The main area features a table of parameters with columns for Index, Label, Value, Units, H. Lim., L. Lim., and Plot interval. A configuration dialog box is open, showing 'Virtual IQs: 016' and 'LAN number: 001'. The dialog includes an 'OS' field, a 'LAN' field, and buttons for '+', 'X', and 'Set'.

Index	Label	Value	Units	H. Lim.	L. Lim.	Plot interval
1	Qty. of units	11.000		0.000	0.000	15 Minutes
2	Qty. of Units in Error	0.000		0.000	0.000	15 Minutes
3	System Error Code	0.000		0.000	0.000	15 Minutes
4	Qty. of Network Slaves	0.000		0.000	0.000	15 Minutes
5	Qty. of Slaves in Comms Er	0.000		0.000	0.000	15 Minutes
6	Supply Temperature	3.940	DegC	125.000	-40.000	15 Minutes
7	Appliance Temperature	-39.760	DegC	125.000	-40.000	15 Minutes
8	OutDoor Temperature	-4.520	DegC	125.000	-40.000	15 Minutes
9	Mbdng Valve Output	100.000	%	100.000	0.000	15 Minutes
10	Max. Dew Point	0.000	DegC	125.000	-40.000	15 Minutes

VIQ Deleting – Your VIQ has been supplied with 16 outstation address, these will need to be edited to match your number of masters on the network – this reduces the possibility of timeouts slowing the system down.

By pressing the arrow button a drop down menu will appear, by entering the number of the OS you wish to delete in the OS box and then pressing the red 'X' button this VIQ will be deleted.

If a VIQ is deleted by mistake just enter the OS number you wish to add in the OS box and press the 'x2' button – the VIQ will now be added.

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