Riello Gateways

CODE	
	LMV3, LMV5, Array, Condexa, Automation
20141213, 20141214	

RIELLO

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1. BURNER(S)/BOILER(S) SETUP

1.1 PRODUCT USAGE

CASE 1: (Array or Condexa Boiler): The gateway can connect with up to 8 boilers.

MODULES – There are 8 modules within this one boiler

CONDEXA **ARRAY**

Note: Number of modules depends on the boiler model. Ex. Array 1000 has 2 modules, Array 3000 has 6 modules, etc.

CASE 2 or 3: (Either LMV3 or LMV5): Within the R Series burner(s), identify the LMV controller by removing the burner cover. The gateway can connect with up to 6 burners.

OR

Case 2

OR

Case 3

LMV3

RWF55 PID

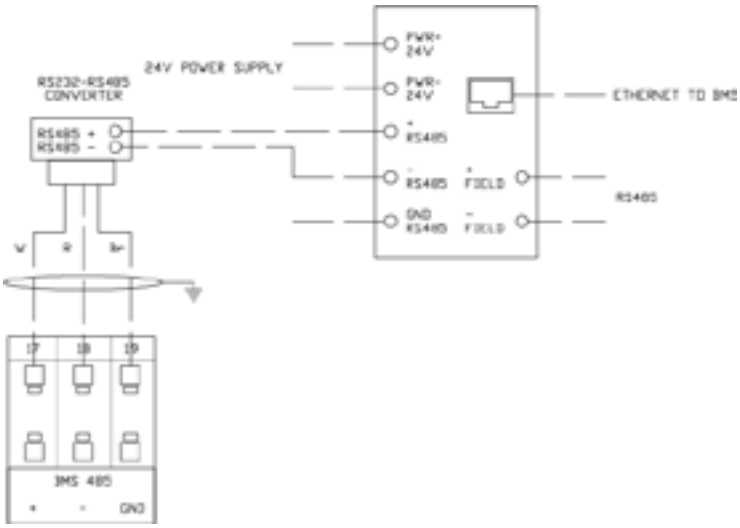
LMV5

1.2 FIELD DEVICE CONNECTIONS

Disconnect all power supplies before attempting installation

For other wiring installations refer to the job specific wiring diagram.

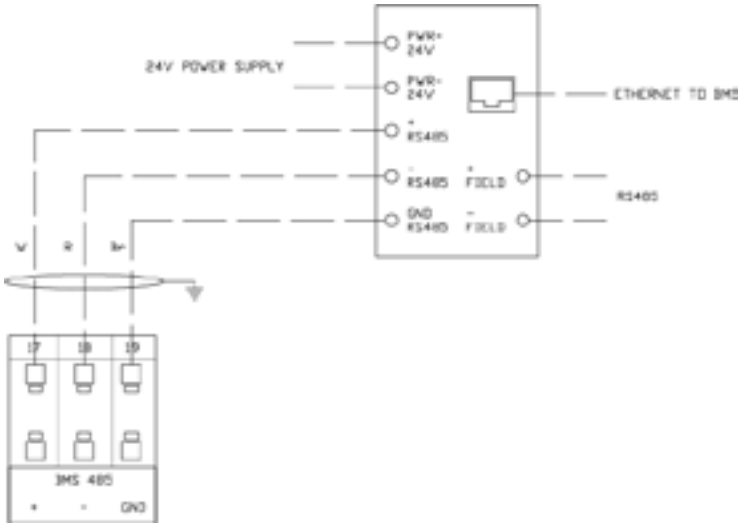
The gateway can connect with up to 8 boilers. Please see job specific Riello burner drawings for linkageless LMV3, LMV5 burners.



Array
Low Voltage
Terminal Strip

*** RS232 Converter with Array 1.0 is 20147499 (1 per boiler)
*** RS232-RS485 Device on Array V1.0 is powered through the RS232 bus.
*** AL Bus for cascade control is on a separate daisy chain. Please see Array Control System manual.

ARRAY 1.0 Integration

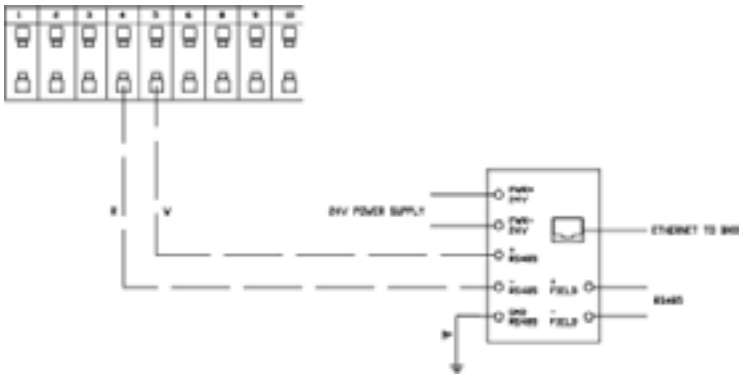


Array
Low Voltage
Terminal Strip

*** AL Bus for cascade control is on a separate daisy chain. Please see Array Control System manual

CONDEXA NA 75 P & CONDEXA NA 117 P Integration

CONDEXA LOW VOLTAGE TERMINAL STRIP (TB1)



*** AL Bus for cascade control is on a separate daisy chain. Please see Condexa Installation and Operation Manual

ARRAY 2.0 Integration

1.3 SETTING UP FIELD CONTROLLERS

1.3.1 CASE 1: SETTING UP THE ARRAY BOILER CONTROLLER(S)

*** **Important :** There is nothing the BAS technician needs to change with respect to the Modbus side of the boilers. Modbus addressing is automatically set up when the boilers are addressed through the cascade.

Menu>General>Other Settings

> Boiler 1 Modbus Address = 1
> Boiler 2 - 8 Modbus Address = 2
> Baudrate = 9600
> Stop Bits = 2

1.3.2 CASE : SETTING UP THE CONDEXA BOILER CONTROLLER(S)

1.3.3 CASE 2: SETTING UP THE LMV3 AND RWF55 CONTROLLER(S)

> 141 - 1 (Modbus RTU)
> 145 - Set burner address from 1-6 (each burner must have its own unique address)
> 146 - 1 (baudrate: 19200)
> 147 - 0 (parity: None)

Conf > Intf > set the following parameters:

> Bdrt - 2 (baudrate: 19200)
> Adr - Set RWF55 address from 11-16 (each RWF55 much have its own unique Address)

1.3.4 CASE 3: SETTING UP THE LMV5 CONTROLLER(S)

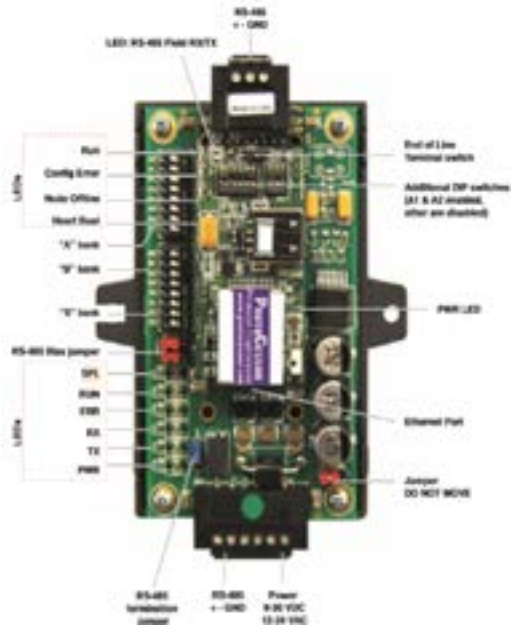
Operation > OPTG Mode Select > Modbus, BAS active
Params & Display > User level > AZL > Set the following parame-ters:

> Parity: 0
> Baudrate: 19200
> Address: Set the burner address from 1-6 (each burner address must be unique)

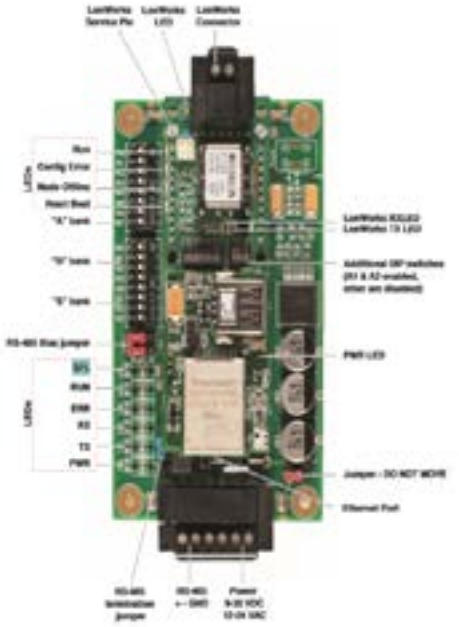
2. GATEWAY SETUP AND ELECTRICAL CONNECTIONS

2.1 GATEWAY BREAKDOWN

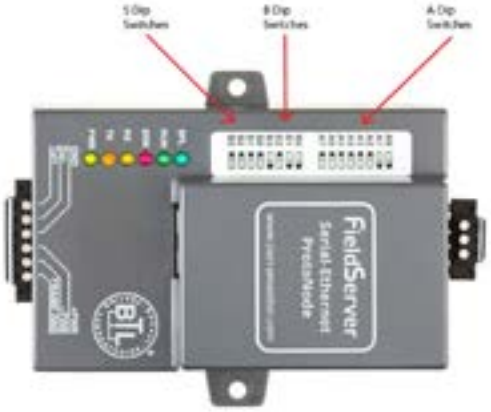
N34 Gateway



N35 Gateway



2.2 DIP SWITCHES



2.2.1 A DIP SWITCHES - BAS SIDE MAC ADDRESS (ONLY FOR BACNET MS/TP)

A Dipswitches - Set MAC Address for BAS								
Node Address	A0	A1	A2	A3	A4	A5	A6	A7
0	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF

A Dipswitches - Set MAC Address for BAS								
Node Address	A0	A1	A2	A3	A4	A5	A6	A7
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	OFF	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF

2.2.2 A DIP SWITCHES - BAS SIDE MAC ADDRESS (ONLY FOR BACNET MS/TP)

A Dipswitches - Set MAC Address for BAS								
Node Address	A0	A1	A2	A3	A4	A5	A6	A7
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
89	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
90	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
91	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
92	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF

A Dipswitches - Set MAC Address for BAS								
Node Address	A0	A1	A2	A3	A4	A5	A6	A7
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	OFF	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	OFF	OFF	ON	ON	ON	ON	OFF
123	ON	OFF	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	OFF	ON	ON	ON	ON	ON	OFF
127	ON	OFF	ON	ON	ON	ON	ON	OFF

2.2.3 B DIP SWITCHES - PROFILE SELECTION

For example: if you have two LMV3 burners, BACnet MSTP then: **B Dip switches** would be set: B0-"ON", B1-"ON", B2-"OFF", B3-"OFF". **S Dip switches** would be set: S0-"ON", S1-"OFF", S2-"OFF", S3-"ON". **A Dip switches** is for setting the MAC address.

B Dipswitches - SELECT PROFILE (ONLY N34 GATEWAY)					
	Profile	B0	B1	B2	B3
1	MODBUS TCP/ LONWORKS_ LMV3	OFF	OFF	OFF	OFF
2	MODBUS TCP/ LONWORKS_ LMV5	ON	OFF	OFF	OFF
3	MODBUS TCP/ LONWORKS_ARRAY	OFF	ON	OFF	OFF
4	BACNETIP_LMV3	ON	ON	OFF	OFF
5	BACNETIP_LMV5	OFF	OFF	ON	OFF
6	BACNETIP_ARRAY	ON	OFF	ON	OFF
7	ETHERNETIP_LMV3	OFF	ON	ON	OFF
8	ETHERNETIP_LMV5	ON	ON	ON	OFF
9	ETHERNETIP_ARRAY	OFF	OFF	OFF	ON
10	BACNETSTP_LMV3	ON	OFF	OFF	ON
11	BACNETSTP_LMV5	OFF	ON	OFF	ON
12	BACNETSTP_ARRAY	ON	ON	OFF	ON
13	METASYSN2_LMV3	OFF	OFF	ON	ON
14	METASYSN2_LMV5	ON	OFF	ON	ON
15	METASYSN2_ARRAY	OFF	ON	ON	ON
16	CONDEXA	ON	ON	ON	ON

B Dipswitches - SELECT PROFILE (ONLY N35 GATEWAY)					
	Profile	B0	B1	B2	B3
1	LMV3	OFF	OFF	OFF	OFF
2	LMV5	ON	OFF	OFF	OFF
3	ARRAY	OFF	ON	OFF	OFF
4	CONDEXA	ON	ON	OFF	OFF

2.2.4 S DIPSWITCHES - NUMBER OF ARRAY BOILER(S)/BURNER(S)

S Dipswitches - NUMBER OF BURNERS/BOILERS (NOT FOR CONDEXA)				
Profile	S0	S1	S2	S3
1 BURNER/BOILER	OFF	OFF	OFF	ON
2 BURNERS/BOILERS	ON	OFF	OFF	ON
3 BURNERS/BOILERS	OFF	ON	OFF	ON
4 BURNERS/BOILERS	ON	ON	OFF	ON
5 BURNERS/BOILERS	OFF	OFF	ON	ON
6 BURNERS/BOILERS	ON	OFF	ON	ON
7 BURNERS/BOILERS	OFF	ON	ON	ON
8 BURNERS/BOILERS	ON	ON	ON	ON

2.2.5 S DIPSWITCHES - CONDEXA SETTINGS

S Dipswitches - CONDEXA (ONLY N34 GATEWAY)				
Profile	S0	S1	S2	S3
BACNET MSTP (8 BOILERS)	OFF	OFF	OFF	ON
BACNET IP (8 BOILERS)	ON	OFF	OFF	ON
ETHERNET IP (8 BOILERS)	OFF	ON	OFF	ON
MODBUS TCP (8 BOILERS)	ON	ON	OFF	ON
METASYS N2 (8 BOILERS)	OFF	OFF	ON	ON

S Dipswitches - CONDEXA (ONLY N35 GATEWAY)				
Profile	S0	S1	S2	S3
LONWORKS (8 BOILERS)	OFF	OFF	OFF	ON

2.2.6 DISCOVERING A DEVICE

1. Please download field server toolbox from the following link:

   https://www.sierramonitor.com/content/fieldserver-toolbox-0

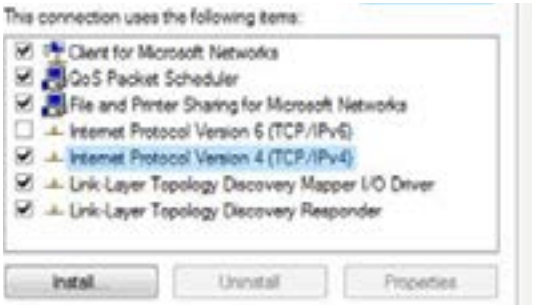
2. Open toolbox application, at this point the toolbox will discover the gateway connected to your laptop

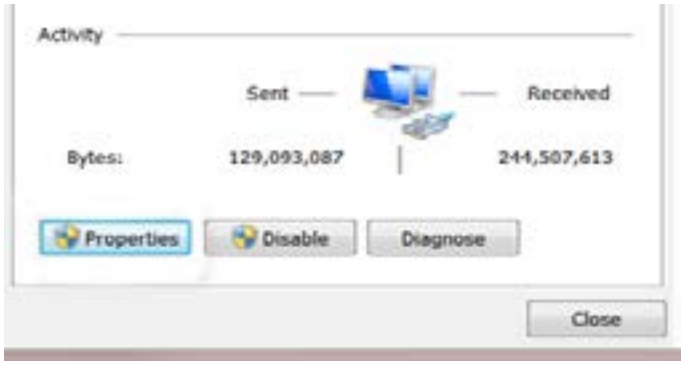
2.2.7 SETTING UP YOUR LAPTOP TO CONNECT TO THE GATEWAY

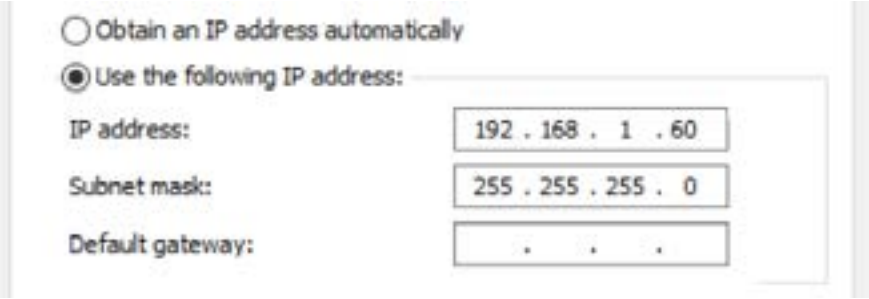
Assuming the gateway has the following default IP address: 192.168.1.24 and Subnet Mask: 255.255.255.0…..

Step 1: Right click on the Local Area Network Connection and go into “properties”
Step 2: Select “Properties”
Step 3: Right click on “Internet Protocol Version 4(TCP/IP/IPV4)”
Step 4: Change IP and Subnet Mask to match the network of the gateway.

2.3 CHANGING THE GATEWAY IP







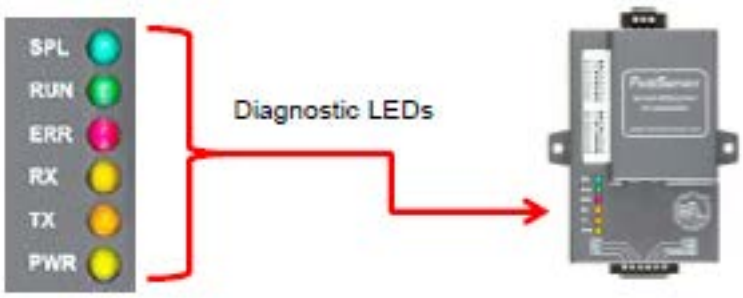
Step 1: Open up your internet browser, enter IP address of gateway, and click on

“Diagnostics & Debugging” at the bottom right hand side of the page.

Step 2: On the Nav tree, click “Setup”, then “Network Settings”

3. TROUBLESHOOTING

3.1 GATEWAY LIGHTS



SPL - Will light if the gateway is offline.

RUN - Will start flashing 20 seconds after power indicating normal operation.

ERR - Will go solid 15 seconds after power up. It will turn off after 5 seconds. A steady red light indicates that there is an error.

RX - Will flash when a message is received on the host port.

TX - Will flash when a message is sent from the host port.

PWR - This is the power light and should show a steady green at all times when the gateway is powered

*** After properly wiring and configuring the gateway the “RX” and “TX” lights should be flashing indicating that there is communication between the gateway and burner(s)/ boiler(s).

3.2 ACCESSING GATEWAY TO TROUBLESHOOT

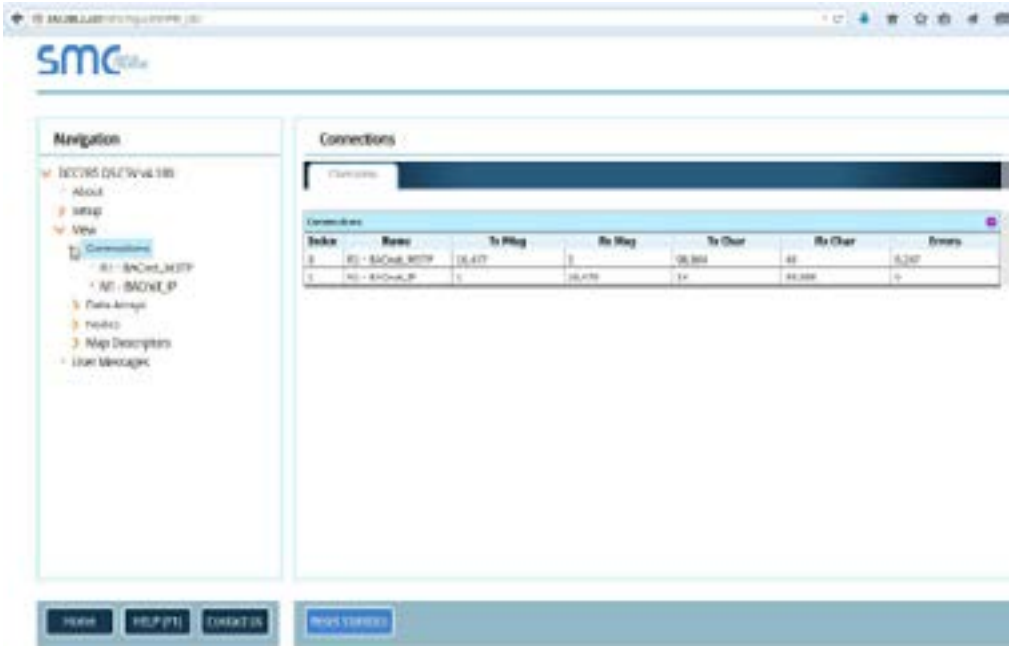
Troubleshooting steps after setup, if red light is flashing or gateway is not communicating:

Is ERR light flashing?

If ERR light is NOT flashing and “TX” and “RX” lights not flashing then:

1. Connect to the gateway from your internet browser by entering the gateway IP address (see section 2.4). Verify that the gateway is reading data from the burner(s).

Example: Under the navigation tree: view>Data Arrays>burner(x)/boiler(x) ensure data is showing in the bottom right matrix of the Array. If all data is reading ‘0’, then the gateway is



not communicating with the burner/boiler.
If ERR light is flashing then:

1. Verify wiring is correct between gateway and burner(s)/boiler(s).
2. If “ERR” LED light is flashing red, ensure dipswitch A7 is in the off position. To reset gateway move the S3 dipswitch to the “off” position, then back to the “on” position.

4. OBJECT TABLES

4.1 LMV3 BURNER(S) TABLE

BACnet MS/TP - Default: Baud Rate - 38400 (adjustable through internet GUI) , Parity - none, Data Bits - 8, Stop Bits - 1, Node ID - 1547 (adjustable through internet GUI) , Max Master - 127, and MAC address is set through dip switches A.

BACnet IP - Default: IP - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 1547 (adjustable through internet GUI)

Modbus TCP - Default: - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 154

Ethernet IP - Default: - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 154

Metasys N2 - Default - Baud Rate - 9600 (non adjustable), Node ID - 154 (adjustable through internet GUI)

LMV3 BACnet MS/TP, BACnet IP, Modbus TCP, Lonworks, and Metasys N2, Ethernet IP											
B1 add	B2 add	B3 add	B4 add	B5 add	B6 add	Point Name	LON fun., SVNT OPT+type	EIP Att., Class	Modbus TCP Data type	Data Type	Unit/ SNVT_Type
1	*25*	*50*	*75*	*100*	*125*	*B(X)_Phase*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
2	*26*	*51*	*76*	*101*	*126*	*B(X)_VFD Output*	*NVUI, Value,SNVT_ switch*	*3,4*	*Holding Reg.*	*AI*	*%*
3	*27*	*52*	*77*	*102*	*127*	*B(X)_Fuel Type*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
4	*28*	*53*	*78*	*103*	*128*	*B(X)_Firing Rate*	*NVUI,Value,SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
5	*29*	*54*	*79*	*104*	*129*	*B(X)_Flame Signal*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
6	*30*	*55*	*80*	*105*	*130*	*B(X)_Fuel Flow*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
7	*31*	*56*	*81*	*106*	*131*	*B(X)_Start Count*	*NVUI,Value,SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
8	*32*	*57*	*82*	*107*	*132*	*B(X)_Error Code*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
9	*33*	*58*	*83*	*108*	*133*	*B(X)_Diag Code*	*NVUI,Value,SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
						Inputs					
*1/301**	*10/310**	*20/3200**	*30/330**	*40/340**	*50/350**	*B(X)_Safety Loop*	*NVUI,Value,SNVT_switch*	*3,4*	*Discrete_Input*	*BI*	*No Unit*
*2/302**	*11/311*	*21/321**	*31/331**	*41/341**	*51/351**	*B(X)_Gas Switches*	*NVUI,Value,SNVT_switch*	*3,4*	*Discrete_Input*	*BI*	*No Unit*
						Outputs					
*3/303**	*12/312**	*22/322**	*32/332**	*42/342**	*52/352**	*B(X)_Alarm*	*NVUI,Value,SNVT_switch*	*3,4*	*Discrete_Input*	*BO*	*No Unit*
*4/304**	*13/313**	*23/323**	*33/333**	*43/343**	*53/353**	*B(X)_Fan*	*NVUI,Value,SNVT_switch*	*3,4*	*Discrete_Input*	*BO*	*No Unit*
10	*34*	*59*	*84*	*109*	*134*	*B(X)_Loc_Rem*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*No Unit*
11	*35*	*60*	*85*	*110*	*135*	*B(X)_RemOnOffAuto*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*No Unit*
12	*36*	*61*	*86*	*111*	*136*	*B(X)_Firing Rate*	*NVUI,Value,SNVT_switch*	*3,4*	*Holding Reg.*	*AV*	*%*
13	*37*	*62*	*87*	*112*	*137*	*B(X)_Process Value*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
14	*38*	*63*	*88*	*113*	*138*	*B(X)_Setpoint*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
15	*39*	*64*	*89*	*114*	*139*	*B(X)_PID Loc/Rem*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*No Unit*
16	*40*	*65*	*90*	*115*	*140*	*RWF(X)_Setpoint*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*No Unit*

* LONworks registers

4.2 LMV5 BURNER(S) TABLE

BACnet MS/TP - Default: Baud Rate - 38400 (adjustable through internet GUI) , Parity - none, Data Bits - 8, Stop Bits - 1, Node ID - 1547 (adjustable through internet GUI) , Max Master - 127, and MAC address is set through dip switches A.

BACnet IP - Default: IP - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 1547 (adjustable through internet GUI)

TCP - Default: - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 154

Ethernet IP - Default: - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 154

Metasys N2 - Default - Baud Rate - 9600 (non adjustable), Node ID - 154 (adjustable through internet GUI)

LMV5 BACnet MS/TP, BACnet IP, Modbus TCP, Lonworks, and Metasys N2, Ethernet IP											
B1 add	B2 add	B3 add	B4 add	B5 add	B6 add	Point Name	LON fun., SVNT OPT+type	EIP Att., Class	Modbus TCP Data type	Data Type	Unit/ SNVT_Type
1	*25*	*50*	*75*	*100*	*125*	*B(X)_Phase*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
2	*26*	*51*	*76*	*101*	*126*	*B(X)_VFD Output*	*NVUI,Value, SNVT_lev_percent*	*3,4*	*Holding Reg.*	*AI*	*%*
3	*27*	*52*	*77*	*102*	*127*	*B(X)_Fuel Type*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
4	*28*	*53*	*78*	*103*	*128*	*B(X)_Firing Rate*	*NVUI,Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
5	*29*	*54*	*79*	*104*	*129*	*B(X)_Setpoint*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
6	*30*	*55*	*80*	*105*	*130*	*B(X)_Process Value*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
7	*31*	*56*	*81*	*106*	*131*	*B(X)_Flame Signal*	*NVUI,Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
8	*32*	*57*	*82*	*107*	*132*	*B(X)_Fuel Flow*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
9	*33*	*58*	*83*	*108*	*133*	*B(X)_O2 Value*	*NVUI,Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
10	*34*	*59*	*84*	*109*	*134*	*B(X)_Start Count*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
11	*35*	*60*	*85*	*110*	*135*	*B(X)_Hours*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Hours*
12	*36*	*61*	*86*	*111*	*136*	*B(X)_Error Code*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
13	*37*	*62*	*87*	*112*	*137*	*B(X)_Diag Code*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
14	*38*	*63*	*88*	*113*	*138*	*B(X)_Support Air Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
15	*39*	*64*	*89*	*114*	*139*	*B(X)_Flue Gas Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
16	*40*	*65*	*90*	*115*	*140*	*B(X)_Comb Eff*	*NVUI,Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
						Inputs				*AI*	*No Unit*
*1/301**	*10/310**	*20/320**	*30/330**	*40/340**	*50/350**	*B(X)_Safety Loop*	*NVUI,Value, SNVT_switch*	*3,4*	*Discrete_Input*	*BI*	
*2/302**	*11/311**	*21/321**	*31/331**	*41/341**	*51/351**	*B(X)_Gas Switches*	*NVUI,Value, SNVT_switch*	*3,4*	*Discrete_Input*	*BI*	
						Outputs				*AI*	*No Unit*
*3/303**	*12/312**	*22/322**	*32/332**	*42/342**	*52/352**	*B(X)_Alarm*	*NVUI,Value, SNVT_switch*	*3,4*	*Discrete_Input*	*BO*	
*4/304**	*13/313**	*23/323**	*33/333**	*43/343**	*53/353**	*B(X)_Fan*	*NVUI,Value, SNVT_switch*	*3,4*	*Discrete_Input*	*BO*	
17	*41*	*66*	*91*	*116*	*141*	*B(X)_Loc_Rem*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*No Unit*
18	*42*	*67*	*92*	*117*	*142*	*B(X)_RemOnOffAuto*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*No Unit*
19	*43*	*68*	*93*	*118*	*143*	*B(X)_Setpoint*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*No Unit*
20	*44*	*69*	*94*	*119*	*144*	*B(X)_Firing Rate*	*NVUI,Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AV*	*%*

* LONworks registers

4.3 ARRAY BOILER(S) TABLE

BACnet MS/TP - Default: Baud Rate (adjustable through internet GUI) - 38400, Parity - none, Data Bits - 8, Stop Bits - 1, Node ID - 1547(adjustable through internet GUI) , Max Master - 127, and MAC address is set through dip switches A.

BACnet IP - Default: IP - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 1547 (adjustable through internet GUI)

Modbus TCP - Default: - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 154
Ethernet IP - Default: - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 154
Metasys N2 - Default - Baud Rate - 9600 (non adjustable), Node ID - 154 (adjustable through internet GUI)

Array BACnet MS/TP, BACnet IP, Modbus TCP, Lonworks, and Metasys N2, Ethernet IP													
B1	B2	B3	B4	B5	B6	B7	B8	Point Name	LON fun., SVNT OPT+type	EIP Att., Class	Modbus TCP Data type	Data Type	Unit/ SNVT_Type
11	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*System SP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
1	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*System OAT*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
2	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*System Firing Rate*	*NVUI, Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
3	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*System SP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
4	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*System Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
*1/*1001*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*System Pump Status*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
*5/*1005*	*10/*1010*	*15/*1015*	*20/*1020*	*25/*1405*	*30/*1030*	*35/*1035*	*40/*1040*	*Boiler)x)_Running*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
*6/*1006*	*11/*1012*	*16/*10*	*21/*1021*	*26/*1406*	*31/*1031*	*36/*1036*	*41*/1041*	*Boiler)x)_Error*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
7	*107*	*207*	*307*	*407*	*507*	*607*	*707*	*Boiler)x)_Firing Rate*	*NVUI, Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
8	*108*	*208*	*308*	*408*	*508*	*608*	*708*	*Boiler)x)_SP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
9	*109*	*209*	*309*	*409*	*509*	*609*	*709*	*Boiler)x)_Supply Temp.*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
10	*110*	*210*	*310*	*410*	*510*	*610*	*710*	*Boiler)x)_Hours*					*Hours*
14	*114*	*214*	*314*	*414*	*514*	*614*	*714*	*Boiler)x)Mod1_State*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
15	*115*	*215*	*315*	*415*	*515*	*615*	*715*	*Boiler)x)Mod1_Error Code*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
16	*116*	*216*	*316*	*416*	*516*	*616*	*716*	*Boiler)x) Mod1_SP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
17	*117*	*217*	*317*	*417*	*517*	*617*	*717*	*Boiler)x) Mod1_Firing Rate*	*NVUI, Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
18	*118*	*218*	*318*	*418*	*518*	*618*	*718*	*Boiler)x) Mod1_Water Flow*		*3,4*	*Holding Reg.*	*AI*	*Litres/Min*
19	*119*	*219*	*319*	*419*	*519*	*619*	*719*	*Boiler)x) Mod1_Supply Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
20	*120*	*220*	*320*	*420*	*520*	*620*	*720*	*Boiler)x) Mod1_Return Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
21	*121*	*221*	*321*	*421*	*521*	*621*	*721*	*Boiler)x) Mod1_Flue Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
22	*122*	*222*	*322*	*422*	*522*	*622*	*722*	*Boiler)x) Mod1_Hours*			*Holding Reg.*	*AI*	*Hours*
23	*123*	*223*	*323*	*423*	*523*	*623*	*723*	*Boiler)x)Mod2_State*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
24	*124*	*224*	*324*	*424*	*524*	*624*	*724*	*Boiler)x)Mod2_Error Code*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
25	*125*	*225*	*325*	*425*	*525*	*625*	*725*	*Boiler)x) Mod2_SP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
26	*126*	*226*	*326*	*426*	*526*	*626*	*726*	*Boiler)x) Mod2_Firing Rate*	*NVUI, Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*

Array BACnet MS/TP, BACnet IP, Modbus TCP, Lonworks, and Metasys N2, Ethernet IP (Continued)													
B1	B2	B3	B4	B5	B6	B7	B8	Point Name	LON fun., SVNT OPT+type	EIP Att., Class	Modbus TCP Data type	Data Type	Unit/ SNVT_Type
27	127	227	327	427	527	627	727	Boiler)x) Mod2_Water Flow		3,4	Holding Reg.	AI	Litres/Min
28	128	228	328	428	528	628	728	Boiler)x) Mod2_Supply Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
29	129	229	329	429	529	629	729	Boiler)x) Mod2_Return Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
30	130	230	330	430	530	630	730	Boiler)x) Mod2_Flue Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
31	131	231	331	431	531	631	731	Boiler)x) Mod2_Hours			Holding Reg.	AI	Hours
32	132	232	332	432	532	632	732	Boiler)x)Mod3_State	NVUI,-,-	3,4	Holding Reg.	AI	No Unit
33	133	233	333	433	533	633	733	Boiler)x)Mod3_Error Code	NVUI,-,-	3,4	Holding Reg.	AI	No Unit
34	134	234	334	434	534	634	734	Boiler)x) Mod3_SP	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
35	135	235	335	435	535	635	735	Boiler)x) Mod3_Firing Rate	NVUI, Value, SNVT_switch	3,4	Holding Reg.	AI	%
36	136	236	336	436	536	636	736	Boiler)x) Mod3_Water Flow		3,4	Holding Reg.	AI	Litres/Min
37	137	237	337	437	537	637	737	Boiler)x) Mod3_Supply Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
38	138	238	338	438	538	638	738	Boiler)x) Mod3_Return Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
39	139	239	339	439	539	639	739	Boiler)x) Mod3_Flue Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
40	140	240	340	440	540	640	740	Boiler)x) Mod3_Hours			Holding Reg.	AI	Hours
41	141	241	341	441	541	641	741	Boiler)x)Mod4_State	NVUI,-,-	3,4	Holding Reg.	AI	No Unit
42	142	242	342	442	542	642	742	Boiler)x)Mod4_Error Code	NVUI,-,-	3,4	Holding Reg.	AI	No Unit
43	143	243	343	443	543	643	743	Boiler)x) Mod4_SP	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
44	144	244	344	444	544	644	744	Boiler)x) Mod4_Firing Rate	NVUI, Value, SNVT_switch	3,4	Holding Reg.	AI	%
45	145	245	345	445	545	645	745	Boiler)x) Mod4_Water Flow		3,4	Holding Reg.	AI	Litres/Min
46	146	246	346	446	546	646	746	Boiler)x) Mod4_Supply Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
47	147	247	347	447	547	647	747	Boiler)x) Mod4_Return Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
48	148	248	348	448	548	648	748	Boiler)x) Mod4_Flue Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
49	149	249	349	449	549	649	749	Boiler)x) Mod4_Hours			Holding Reg.	AI	Hours
50	150	250	350	450	550	650	750	Boiler)x)Mod5_State	NVUI,-,-	3,4	Holding Reg.	AI	No Unit
51	151	251	351	451	551	651	751	Boiler)x)Mod5_Error Code	NVUI,-,-	3,4	Holding Reg.	AI	No Unit
52	152	252	352	452	552	652	752	Boiler)x) Mod5_SP	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
53	153	253	353	453	553	653	753	Boiler)x) Mod5_Firing Rate	NVUI, Value, SNVT_switch	3,4	Holding Reg.	AI	%
54	154	254	354	454	554	654	754	Boiler)x) Mod5_Water Flow		3,4	Holding Reg.	AI	Litres/Min
55	155	255	355	455	555	655	755	Boiler)x) Mod5_Supply Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
56	156	256	356	456	556	656	756	Boiler)x) Mod5_Return Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
57	157	257	357	457	557	657	757	Boiler)x) Mod5_Flue Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
58	158	258	358	458	558	658	758	Boiler)x) Mod5_Hours			Holding Reg.	AI	Hours
59	159	259	359	459	559	659	759	Boiler)x)Mod6_State	NVUI,-,-	3,4	Holding Reg.	AI	No Unit
60	160	260	360	460	560	660	760	Boiler)x)Mod6_Error Code	NVUI,-,-	3,4	Holding Reg.	AI	No Unit
61	161	261	361	461	561	661	761	Boiler)x) Mod6_SP	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
62	162	262	362	462	562	662	762	Boiler)x) Mod6_Firing Rate	NVUI, Value, SNVT_switch	3,4	Holding Reg.	AI	%
63	163	263	363	463	563	663	763	Boiler)x) Mod6_Water Flow		3,4	Holding Reg.	AI	Litres/Min
64	164	264	364	464	564	664	764	Boiler)x) Mod6_Supply Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
65	165	265	365	465	565	665	765	Boiler)x) Mod6_Return Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
66	166	266	366	466	566	666	766	Boiler)x) Mod6_Flue Temp	NVUI,-,-	3,4	Holding Reg.	AI	Deg F
67	167	267	367	467	567	667	767	Boiler)x) Mod6_Hours			Holding Reg.	AI	Hours

Array BACnet MS/TP, BACnet IP, Modbus TCP, Lonworks, and Metasys N2, Ethernet IP (Continued)													
B1	B2	B3	B4	B5	B6	B7	B8	Point Name	LON fun., SVNT OPT+type	EIP Att., Class	Modbus TCP Data type	Data Type	Unit/ SNVT_Type
68	*168*	*268*	*368*	*468*	*568*	*668*	*768*	*Boiler)x)Mod7_State*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
69	*169*	*269*	*369*	*469*	*569*	*669*	*769*	*Boiler)x)Mod7_Error Code*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
70	*170*	*270*	*370*	*470*	*570*	*670*	*770*	*Boiler)x) Mod7_SP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
71	*171*	*271*	*371*	*471*	*571*	*671*	*771*	*Boiler)x) Mod7_Firing Rate*	*NVUI, Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
72	*172*	*272*	*372*	*472*	*572*	*672*	*772*	*Boiler)x) Mod7_Water Flow*		*3,4*	*Holding Reg.*	*AI*	*Litres/Min*
73	*173*	*273*	*373*	*473*	*573*	*673*	*773*	*Boiler)x) Mod7_Supply Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
74	*174*	*274*	*374*	*474*	*574*	*674*	*774*	*Boiler)x) Mod7_Return Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
75	*175*	*275*	*375*	*475*	*575*	*675*	*775*	*Boiler)x) Mod7_Flue Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
76	*176*	*276*	*376*	*476*	*576*	*676*	*776*	*Boiler)x) Mod7_Hours*			*Holding Reg.*	*AI*	*Hours*
77	*177*	*277*	*377*	*477*	*577*	*677*	*777*	*Boiler)x)Mod8_State*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
78	*178*	*278*	*378*	*478*	*578*	*678*	*778*	*Boiler)x)Mod8_Error Code*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
79	*179*	*279*	*379*	*479*	*579*	*679*	*779*	*Boiler)x) Mod8_SP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
80	*180*	*280*	*380*	*480*	*580*	*680*	*780*	*Boiler)x) Mod8_Firing Rate*	*NVUI, Value, SNVT_switch*	*3,4*	*Holding Reg.*	*AI*	*%*
81	*181*	*281*	*381*	*481*	*581*	*681*	*781*	*Boiler)x) Mod8_Water Flow*		*3,4*	*Holding Reg.*	*AI*	*Litres/Min*
82	*182*	*282*	*382*	*482*	*582*	*682*	*782*	*Boiler)x) Mod8_Supply Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
83	*183*	*283*	*383*	*483*	*583*	*683*	*783*	*Boiler)x) Mod8_Return Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
84	*184*	*284*	*384*	*484*	*584*	*684*	*784*	*Boiler)x) Mod8_Flue Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
85	*185*	*285*	*385*	*485*	*585*	*685*	*785*	*Boiler)x) Mod8_Hours*			*Holding Reg.*	*AI*	*Hours*

* LONworks registers

4.3.1 ARRAY STATE TABLE

STATE TABLE (Boiler(x)Mod(x)_State)		
Profile		Description
0	Intialization	Initialization Variabls for Reset (Start-up) State
1	Reset	Reset (Start-up) State
2	Standby	Standby
3 or 4	Pre-purge	Pre-Purging
5 or 6	Pre-Ignition	Pre-ignition
7	Flame Proving	Flame Proving
8 or 9	Burn	Burn
10 or 11	Post Purge	Post-purge
12	Error	Error
13	Alarm	Alarm
14	Warning	Warning
15	Burner Boot	Rebooting Controller

4.4 CONDEXA BOILER(S) TABLE

BACnet MS/TP - Default: Baud Rate (adjustable through internet GUI) - 38400, Parity - none, Data Bits - 8, Stop Bits - 1, Node ID - 1547(adjustable through internet GUI) , Max Master - 127, and MAC address is set through dip switches A.

BACnet IP - Default: IP - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 1547

Modbus TCP - Default: - 192.168.1.24, Subnet Mask - 255.255.255.0, Node ID - 154

Ethernet IP - Default: - 192.168.1.24, Subnet Mask - 255.255.255.0

Metasys N2 - Default - Baud Rate - 9600 (non adjustable), Parity - none, Data Bits - 8, Stop Bits - 1, Node ID - 154 (adjustable through internet GUI)

Array BACnet MS/TP, BACnet IP, Modbus TCP, Lonworks, and Metasys N2, Ethernet IP													
B1	B2	B3	B4	B5	B6	B7	B8	Point Name	LON fun., SVNT OPT+type	EIP Att., Class	Modbus TCP Data type	Data Type	Unit/ SNVT_Type
*1/*14/**14*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*SysSP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*Deg F*
*2/*15/**15*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*DHWSP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*Deg F*
*3/*16/**16/***5*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*SysSP_Cntrl*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AV*	*No Unit*
1	*31*	*50*	*71*	*91*	*111*	*131*	*151*	*State*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
2	*32*	*51*	*72*	*92*	*112*	*132*	*152*	*Error_Code*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*No Unit*
3	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*CalcSysSP*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
*1/*4/**1/***3*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*SysPmp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*BI*	*No Unit*
*2/*5/**2/***4*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*DHWPmp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*BI*	*No Unit*
6	*33*	*55*	*73*	*93*	*113*	*133*	*153*	*Supp_Temp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
7	*34*	*56*	*74*	*94*	*114*	*134*	*154*	*RtrnTemp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
8	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*DHWTemp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
9	*35*	*58*	*75*	*95*	*115*	*135*	*155*	*FlueTemp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
10	*36*	*59*	*76*	*96*	*116*	*136*	*156*	*SysTemp*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
11	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*N/A*	*OAT*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*Deg F*
12	*37*	*61*	*77*	*97*	*117*	*137*	*157*	*FiringRate*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*%*
13	*38*	*62*	*78*	*98*	*118*	*138*	*158*	*FlameSignal*	*NVUI,-,-*	*3,4*	*Holding Reg.*	*AI*	*%*

* Ethernet IP and Modbus TCP registers
**Metasys N2 registers
***LONworks registers

4.4.1 CONDEXA STATUS AND STATE TABLES

STATUS TABLE		
Nr.	Name	Description
0	STANDBY	Standby
10	ALARM	Soft lockout error
14	BLOCK	Hard lockout error
15	FROST_PROTECTION	Freeze protection on
16	CH_DEMAND	Heat demand
17	RESET_STATE	Reset
18	STORAGE_DEMAND	DHW demand
19	DHW_TAP_DEMAND	Imm. DHW demand
20	DHW_PRE_HEAT	Pre-heating demand
21	STORE_HOLD_WARM	Holding desired storage temperature
22	GENERAL_PUMPING	Boiler pump ON

STATE TABLE		
Nr.	Name	Description
Standby		
0	Initialization	Intialization of reset variables
1	Reset	Reset
2	Standby	Standby
Active		
3	Pre Purge 1	Initialization of pre-purging variables
4	Pre Purge 2	Pre-purging
5	Pre Ignition 1	ON safety relay test
6	Pre Ignition 2	OFF safety relay test
7	Flame Proving	Initialization of ignition variables
8	Burn 1	Start-up
9	Burn 2	The boiler is ON
10	Post Purge 1	Initialization of post-purging variables
11	Post Purge 2	Post-purging
ERROR		
12	Error	Boiler Lockout
13	Alarm	Boiler Error
14	Warning	Boiler Alarm
15	Burner Boot	Restart of board

4.5 ARRAY & CONDEXA ERROR TABLES

ERROR TABLE (Boiler(x)Mod(x)_Error Code)	
0	E2PROM_READ_ERROR
1	IGNIT_ERROR
2	GV_RELAY_ERROR
3	SAFETY_RELAY_ERROR
4	BLOCKING_TOO_LONG
5	FAN_ERROR_NOT_RUNNING
6	FAN_ERROR_TOO_SLOW
7	FAN_ERROR_TOO_FAST
8	RAM_ERROR
9	WRONG_EEPROM_SIGNATURE
10	E2PROM_ERROR
11	STATE_ERROR
12	ROM_ERROR
13	APS_NOT_OPEN
14	APS_NOT_CLOSED
15	MAX_TEMP_ERROR
16	FLUE_GAS_ERROR
17	STACK_ERROR
18	INSTRUCTION_ERROR
19	ION_CHECK_FAILED
20	FLAME_OUT_TOO_LATE
21	FLAME_BEFORE_IGNIT
22	TOO_MANY_FLAME_LOSS
23	CORRUPTED_ERROR_NR
24	FLUE_SWITCH_NOT_CLOSING
25	SUPPLY_DIFF_ERROR
26	TFLUE_DIFF_ERROR
27	FILLING_TOO_MUCH
28	FILL_TIME_ERROR
29	PSM_ERROR
30	REGISTER_ERROR
31	T_EXCHANGE_LOCK_ERROR
32	T_EXCHANGE_DIFF_ERROR
33	LWCO_1_ERROR
34	LWCO_2_ERROR
35	GAS_PRESSURE_ERROR
36	AIR_DAMPER_LOCKING
37	FLUE_PRESSURE_LOCKING

BLOCKING	
100	WD_ERROR_RAM
101	WD_ERROR_RAM
102	WD_ERROR_STACK
103	WD_ERROR_REGISTER
104	WD_ERROR_XRL
105	HIGH_TEMP_ERROR
106	REFHI_TOO_HIGH
107	REFHI_TOO_LOW
108	REFLO_TOO_HIGH
109	REFLO_TOO_LOW
110	REFHI2_TOO_HIGH
111	REFHI2_TOO_LOW
112	REFLO2_TOO_HIGH
113	REFLO2_TOO_LOW
114	FALSE_FLAME
115	LOW_WATER_PRESSURE_ERROR
116	LOW_WATER_PRESSURE_SENSOR
117	BLOCKED_DRAIN
118	WD_COMM_ERROR
119	RETURN_OPEN
120	SUPPLY_OPEN
121	SUPPLY2_OPEN
122	DHW_OPEN
123	FLUE_OPEN
124	FLUE2_OPEN
125	OUTDOOR_OPEN
126	RETURN_SHORTED
127	SUPPLY_SHORTED
128	SUPPLY2_SHORTED
129	DHW_SHORTED
130	FLUE_SHORTED
131	FLUE2_SHORTED
132	OUTDOOR_SHORTED
133	RESET_BUTTON_ERROR
134	T_EXCHANGE_BLOCK_ERROR
135	T_CHIMNEY_OPEN
136	T_EXCHANGE1_OPEN
137	T_EXCHANGE2_OPEN

BLOCKING	
139	T_SELECTION1_OPEN
140	T_SELECTION2_OPEN
141	T_SELECTION3_OPEN
142	T_OPTIONAL1_OPEN
143	T_OPTIONAL2_OPEN
144	T_AMBIENT_OPEN
145	T_CHIMNEY_CLOSED
146	T_EXCHANGE1_CLOSED
147	T_EXCHANGE2_CLOSED
148	T_SELECTION1_CLOSED
149	T_SELECTION2_CLOSED
150	T_SELECTION3_CLOSED
151	T_OPTIONAL1_CLOSED
152	T_OPTIONAL2_CLOSED
153	T_AMBIENT_CLOSED
154	WD_CONFIG_ERROR
155	FLUE_PRESSURE_ERROR
156	AIR_DAMPER_ERROR
157	T_SECONDARY_SUPPLY_OPEN
158	T_SECONDARY_RETURN_OPEN
159	T_SECONDARY_SUPPLY_CLOSED
160	T_SECONDARY_RETURN_CLOSED
161	FILL_WARNING
162	FLUE_BLOCKED
163	LOWEXFLOW_PROTECTION

WARNINGS	
200	CC_LOSS_COMMUNICATION
201	CC_LOSS_BOILER_COMM
202	OUTDOOR_WRONG
203	T_SYSTEM_WRONG
204	T_CASCADE_WRONG
255	NOTHING IS WRONG

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