



Instruction  
No.

**GF-124**

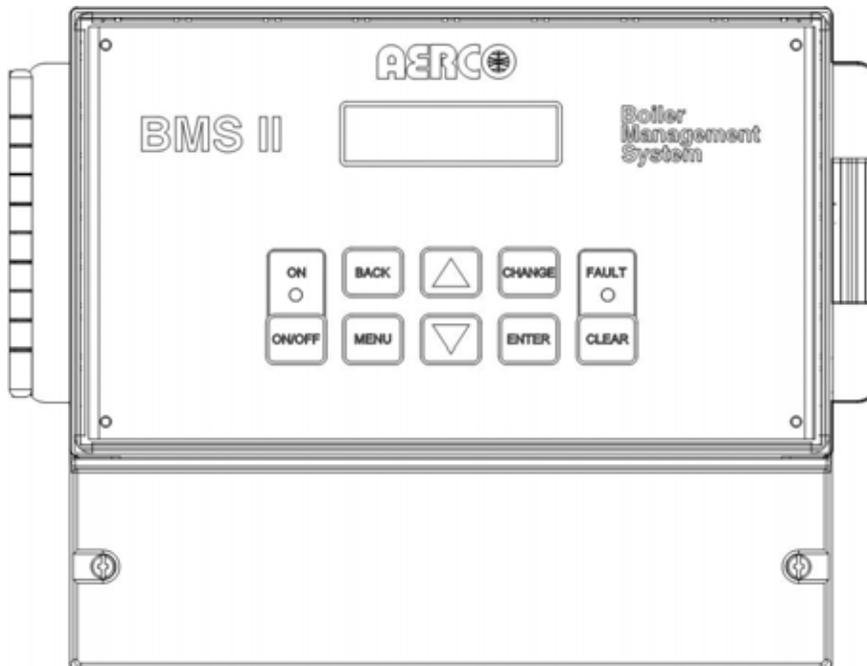
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AERCO INTERNATIONAL, Inc., Northvale, New Jersey, 07647 USA

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# Installation, Operation & Maintenance Instructions

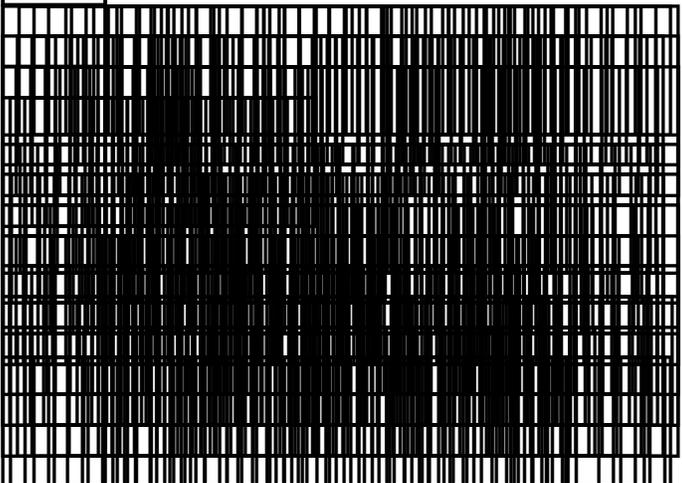
## BMS II BOILER MANAGEMENT SYSTEM



JANUARY, 2009

*Technology Support*

**AERGO**







**GF-124 – BMS II BOILER MANAGEMENT SYSTEM  
Operating & Maintenance Instructions**

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**CHAPTER 1 - GENERAL INFORMATION**

**1.1 SAFETY PRECAUTIONS & WARNINGS**

**1.2 INTRODUCTION**

**1.3 SYSTEM GENERAL DESCRIPTION**

# GENERAL INFORMATION

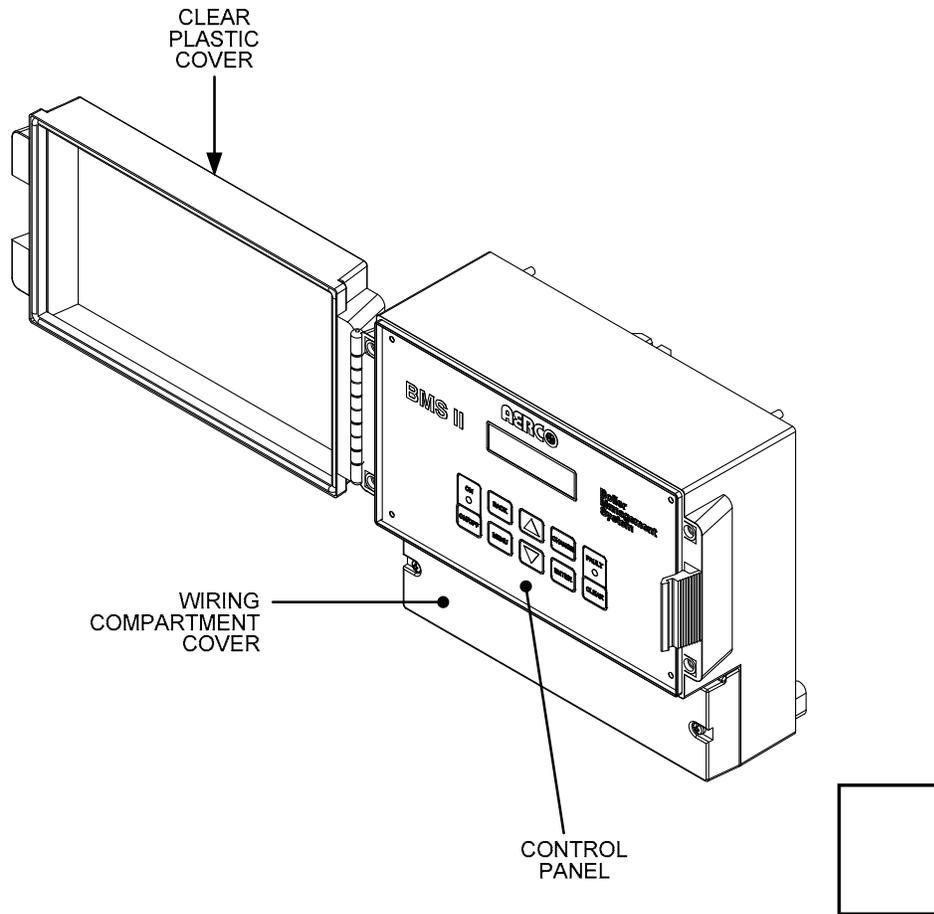


Figure 1-1. Boiler Management System II (BMS)

## 1.4 BMS II FEATURES

*Simplified installation*

*User friendly control panel*

# GENERAL INFORMATION

## *Retention of Menu Option Settings*

## *Application of the BMS II*

## ***Sequential or Parallel Operation***

Boilers can be programmed for either sequential or parallel operation using the BMS II keypad controls. When set for sequential operation, the boilers are brought on-line one at a time as needed. When set for parallel operation, the boilers are all brought on-line at one time when the demand is high.

## *Appearance*

## *Burner Settings*

## *Fault Alarm Supervision*

## *BMS II Programming Year 2000 Proof*



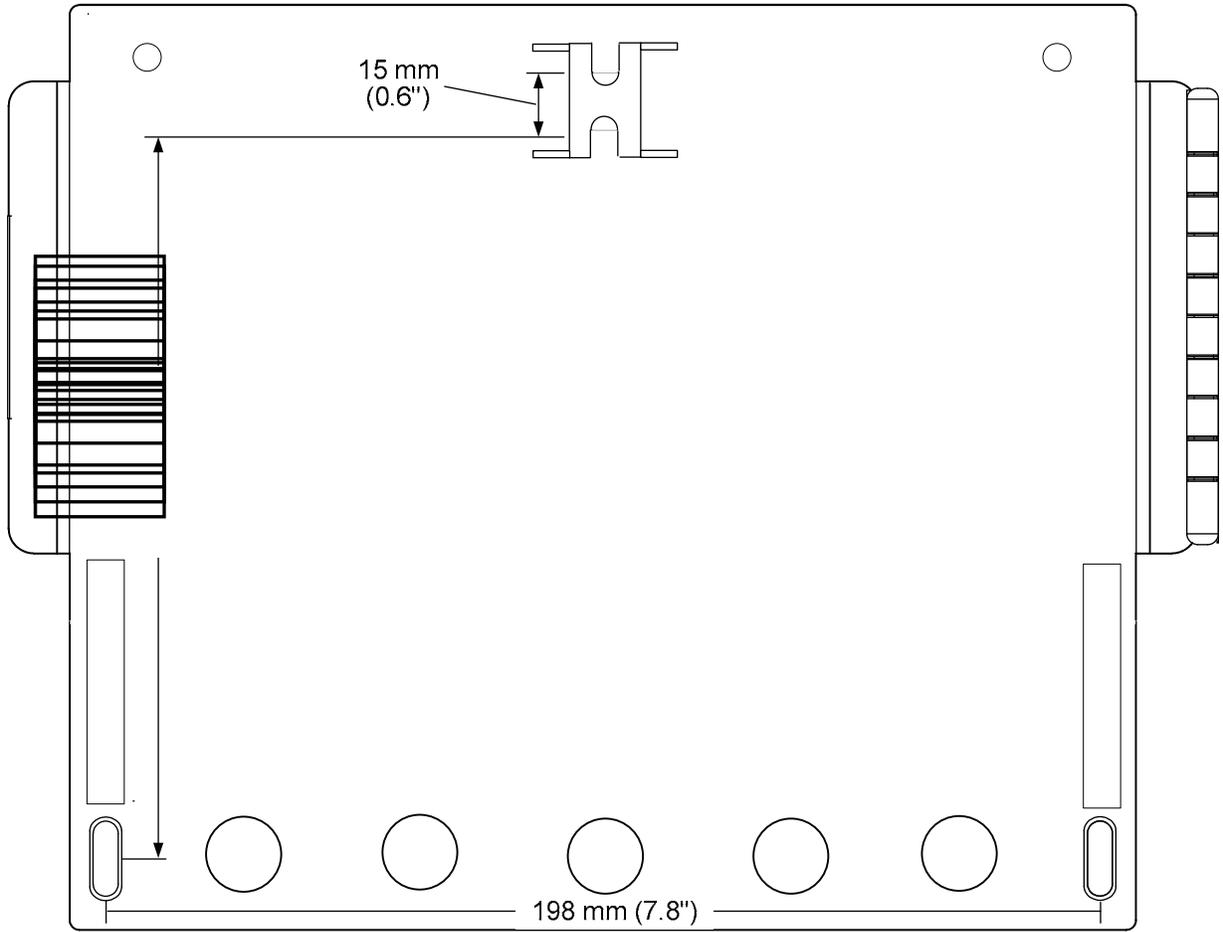
CHAPTER 2 - INSTALLATION

2.1 INTRODUCTION

2.2 SITE SELECTION AND MOUNTING

*Mounting on a Wall*

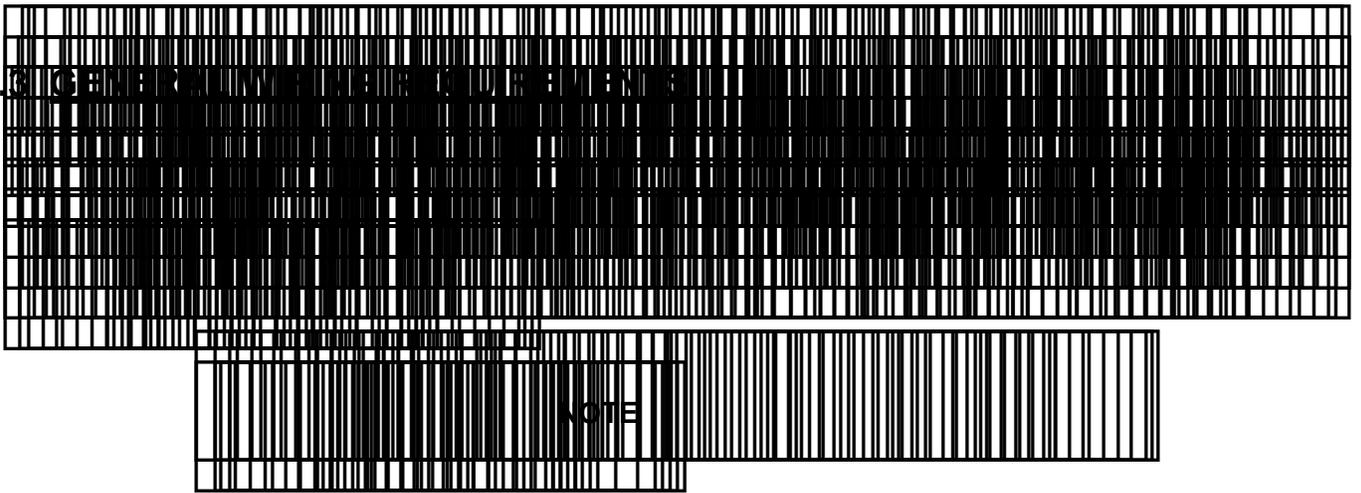
# INSTALLATION

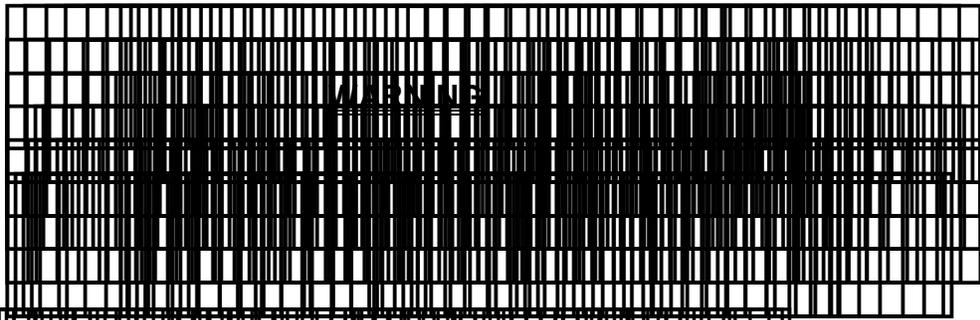


REAR VIEW

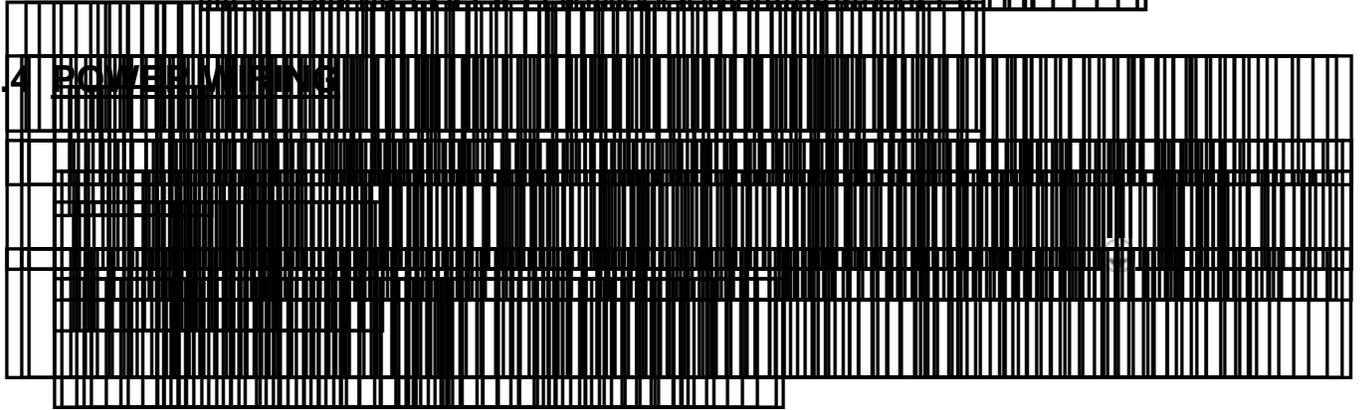
**Figure 2-1. BMS II Mounting Provisions**

2





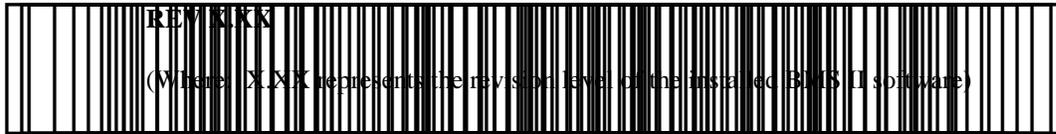
2.4 POWER WIRING



AERCO BMSII

REV XXX

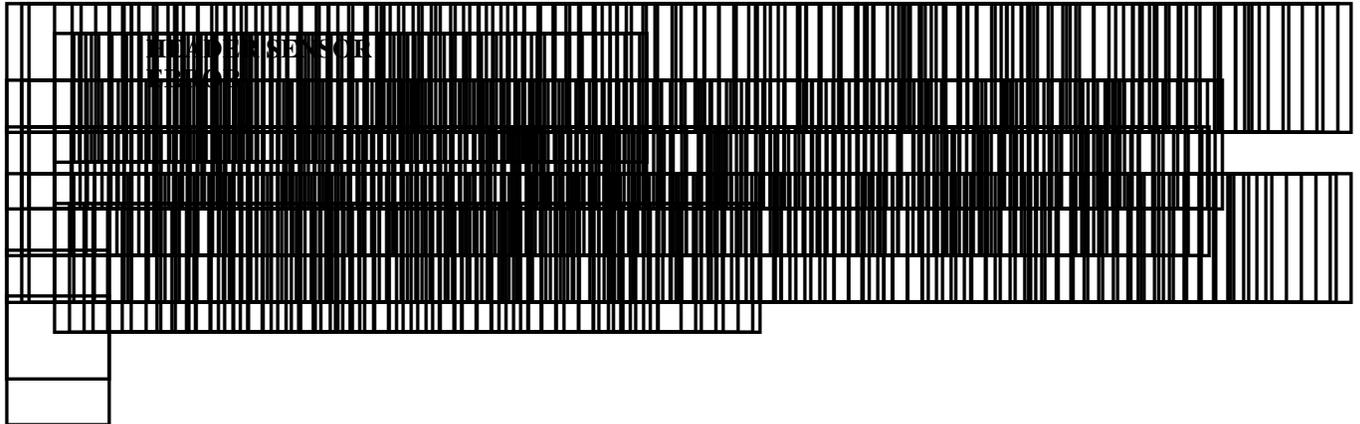
(Where XXX represents the revision level of the installed BMS II software)



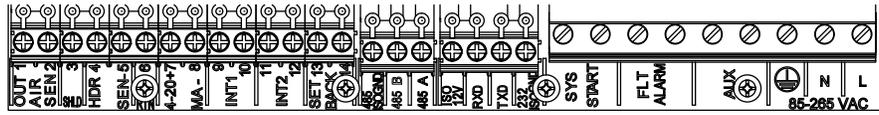
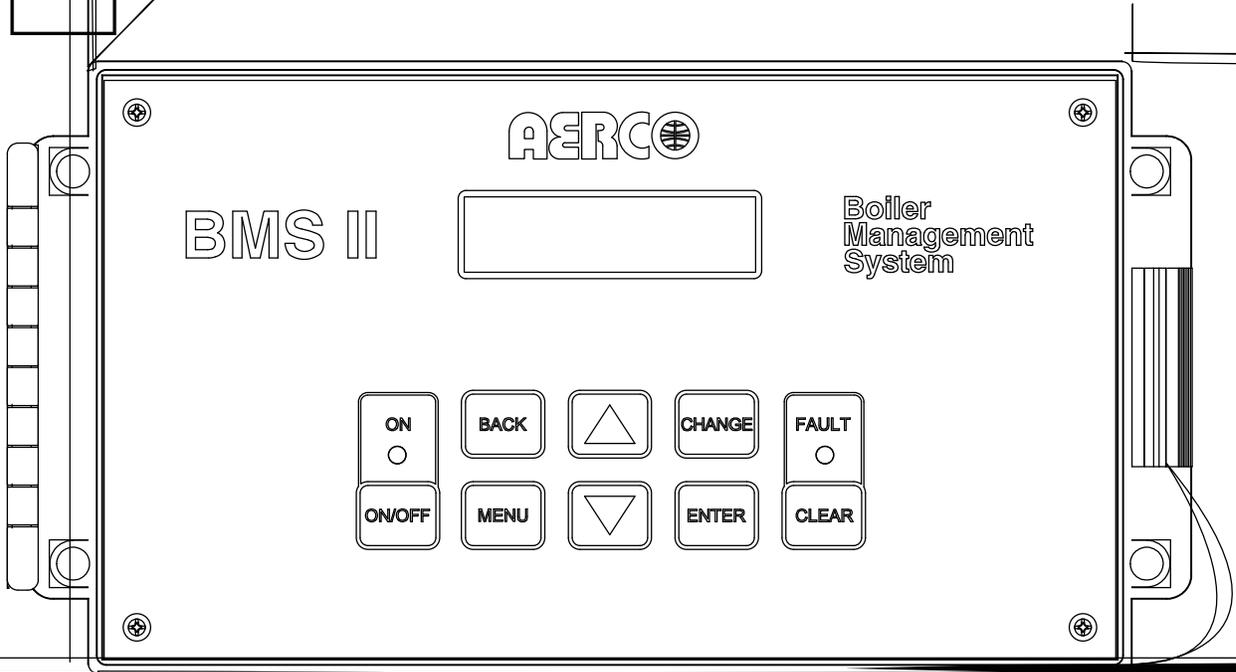
HEADER TEMP  
SENSOR ERROR



HEADER SENSOR

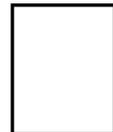
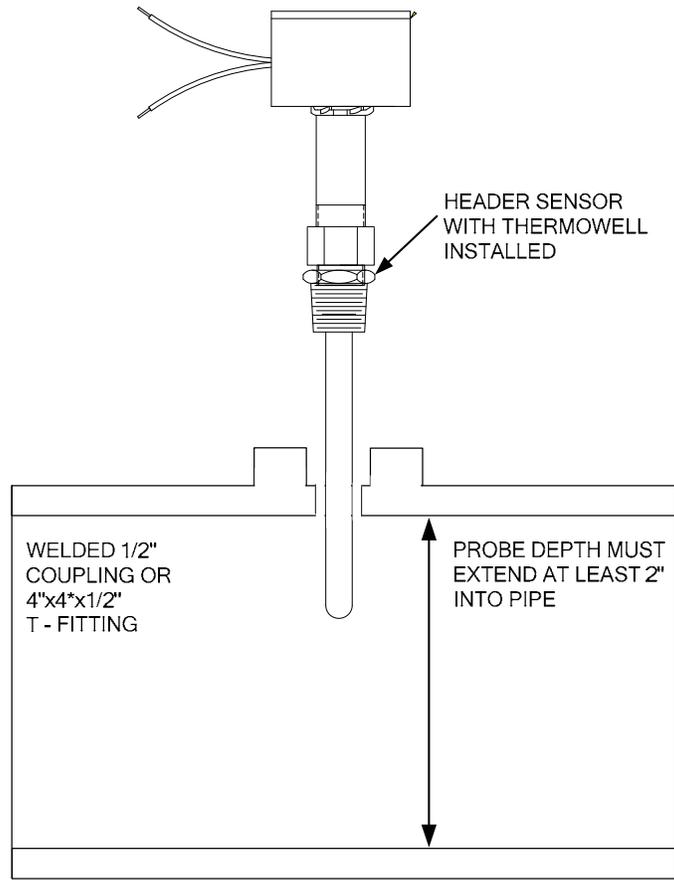


# INSTALLATION



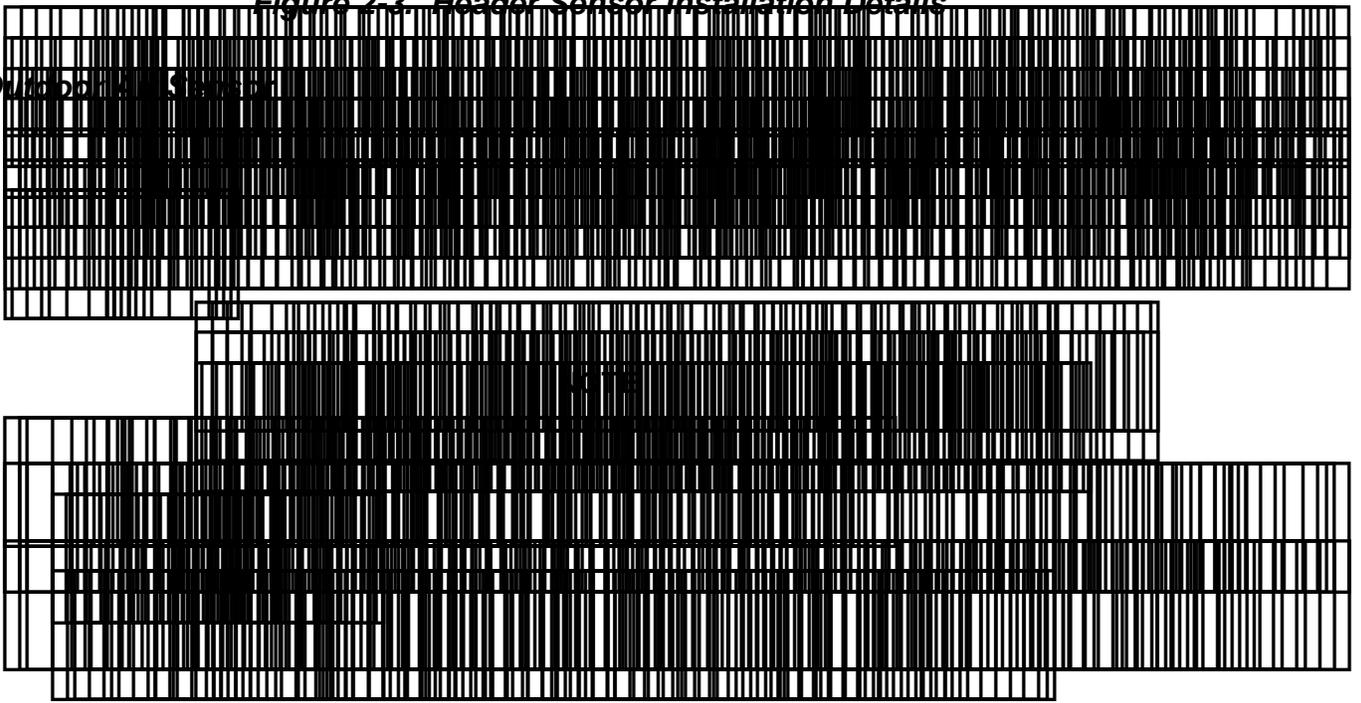
**2.5**

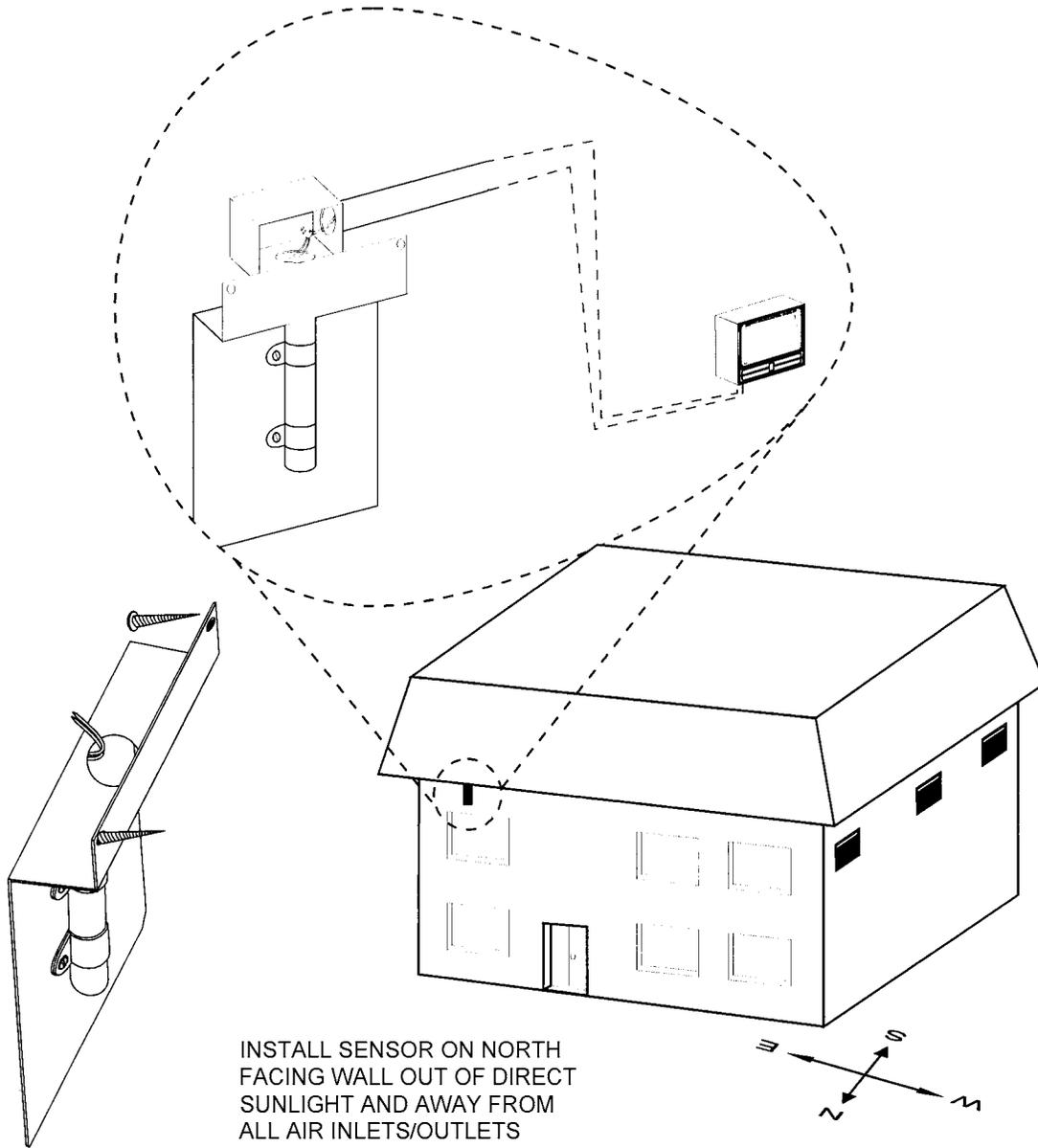
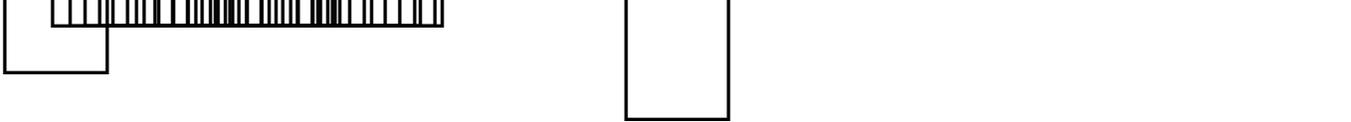
# INSTALLATION



*Figure 2-3 Header Sensor Installation Details*

Outdoor Sensors





**Figure 2-4. Outdoor Air Sensor Installation**



# INSTALLATION

## 2.6 RS-485 NETWORKS WITH DRAIN

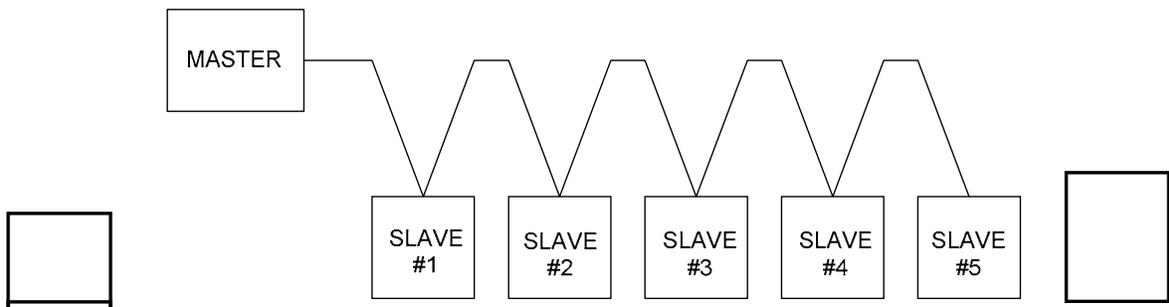
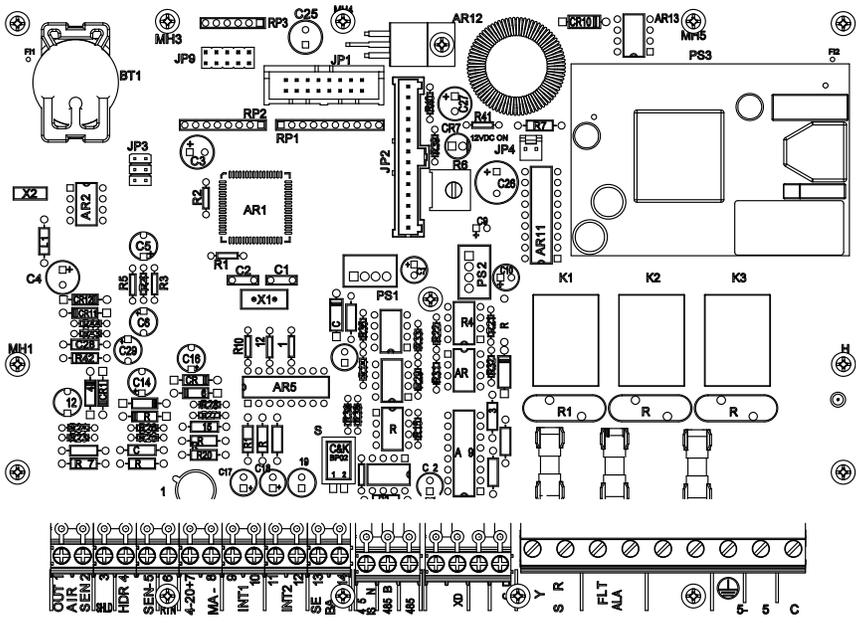


Figure 2-4. Typical Daisy Chain Modbus/RS-485 Network

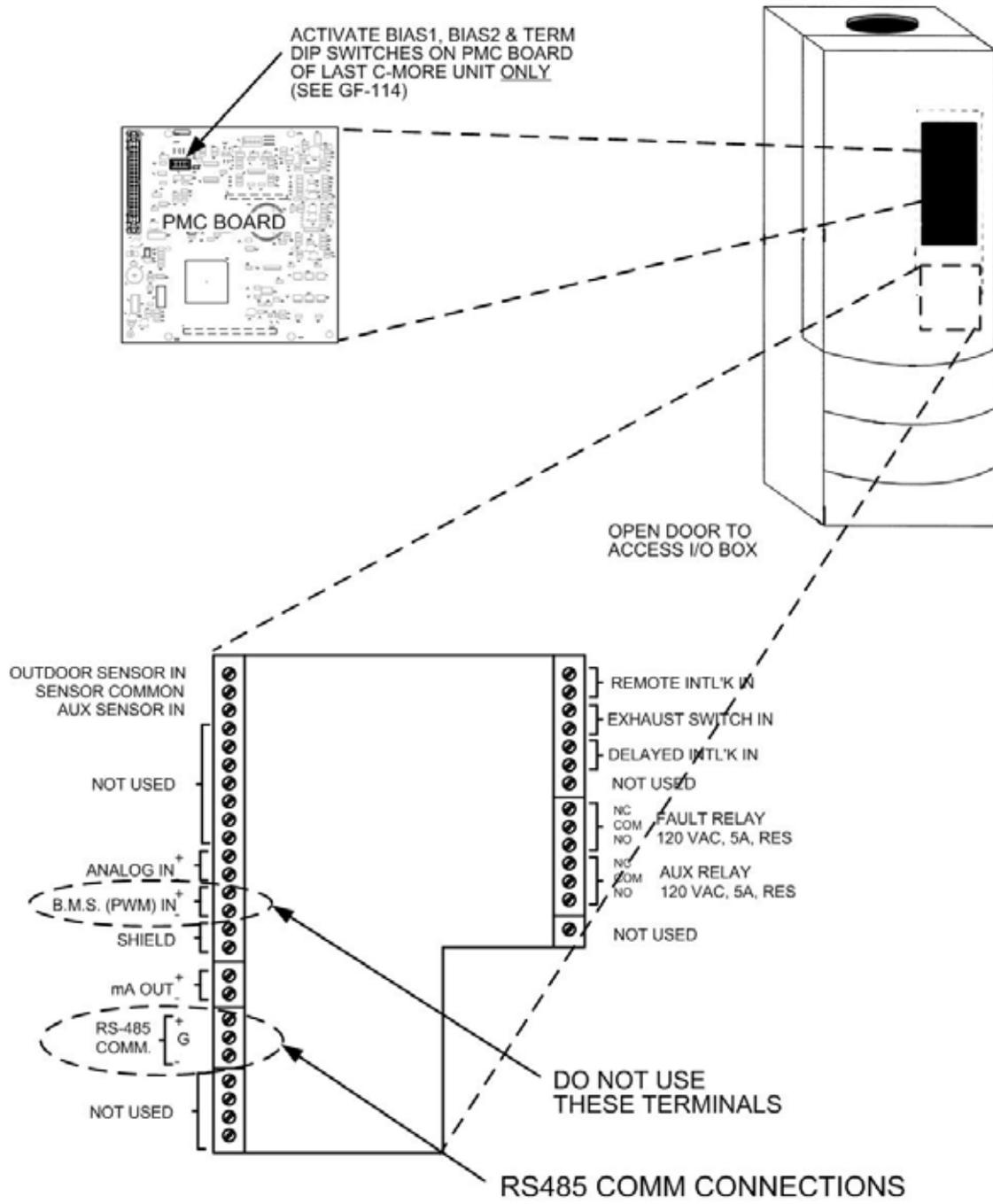
485 A+

BVS BVS BVS BVS

# INSTALLATION



# INSTALLATION



**Figure 2-7. RS485 (Modbus) Wiring For Benchmark Series Boilers**

# INSTALLATION

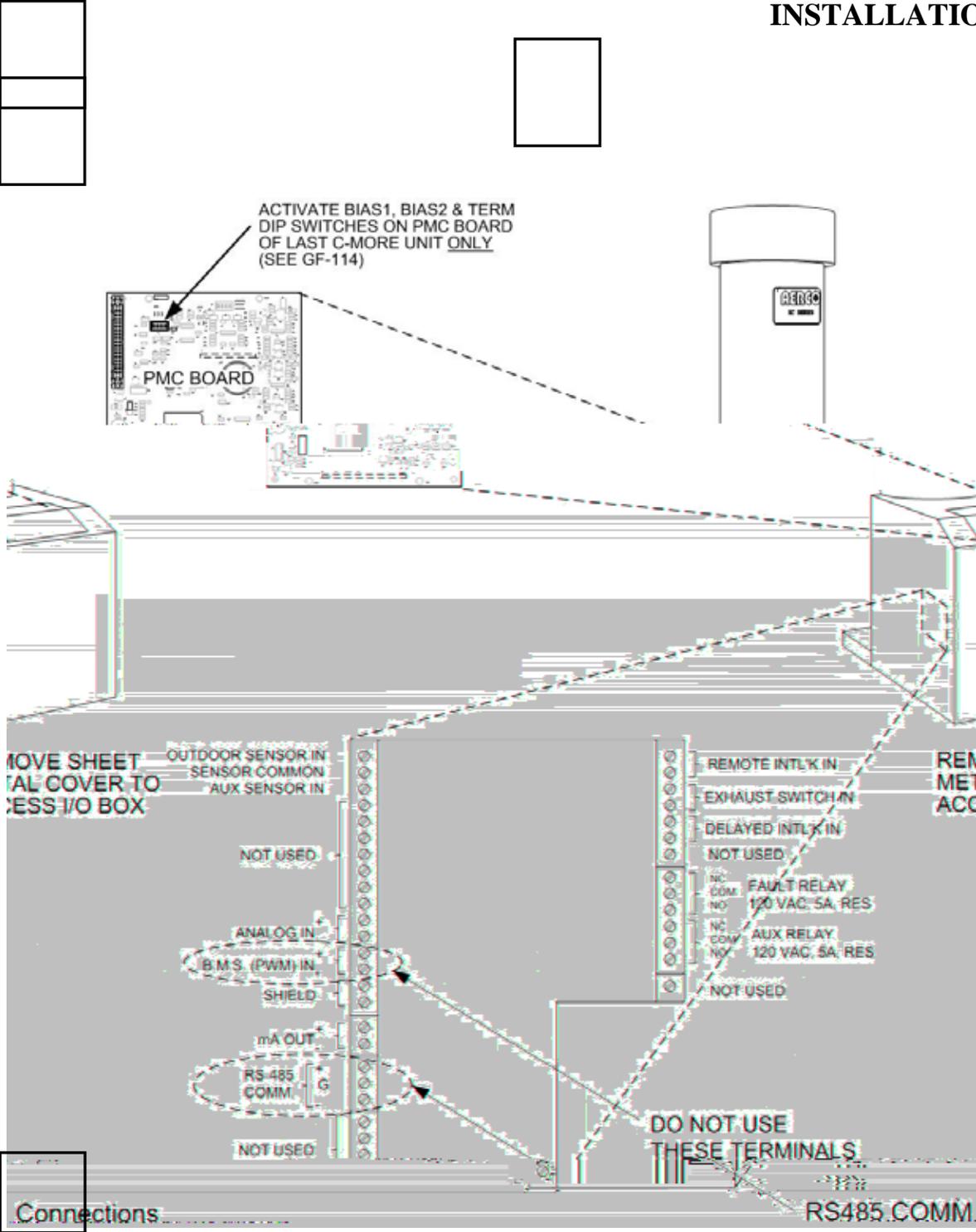
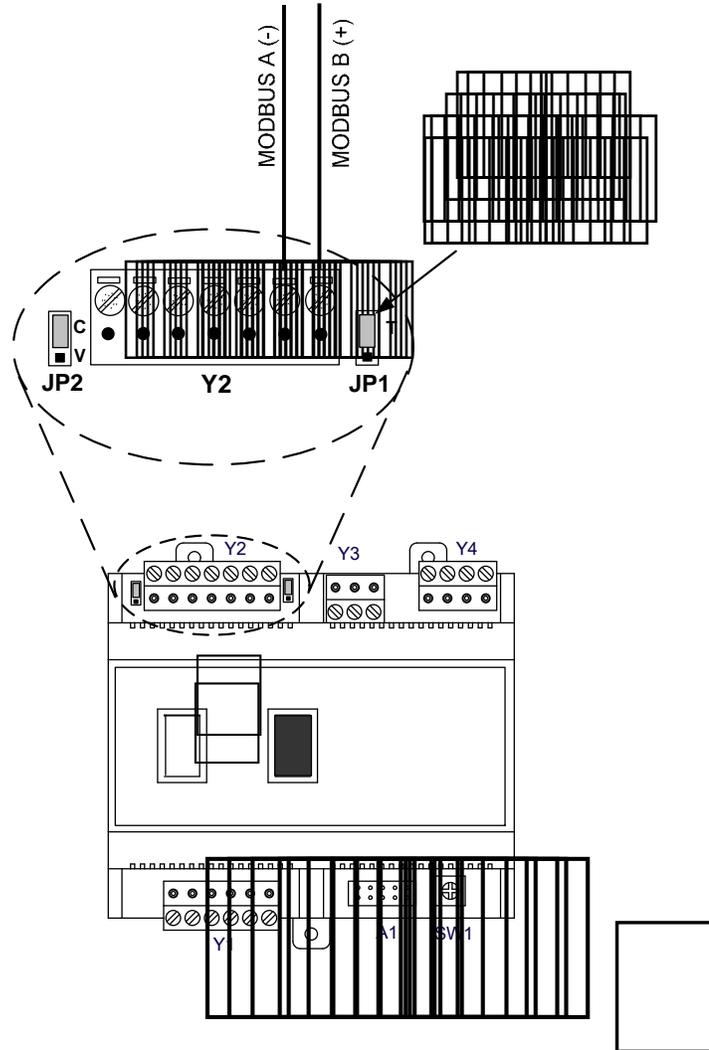


Figure 2-8. RS485 (Modbus) Wiring For KC1000 Boilers

RS485 Wiring for Modbus Series Boilers

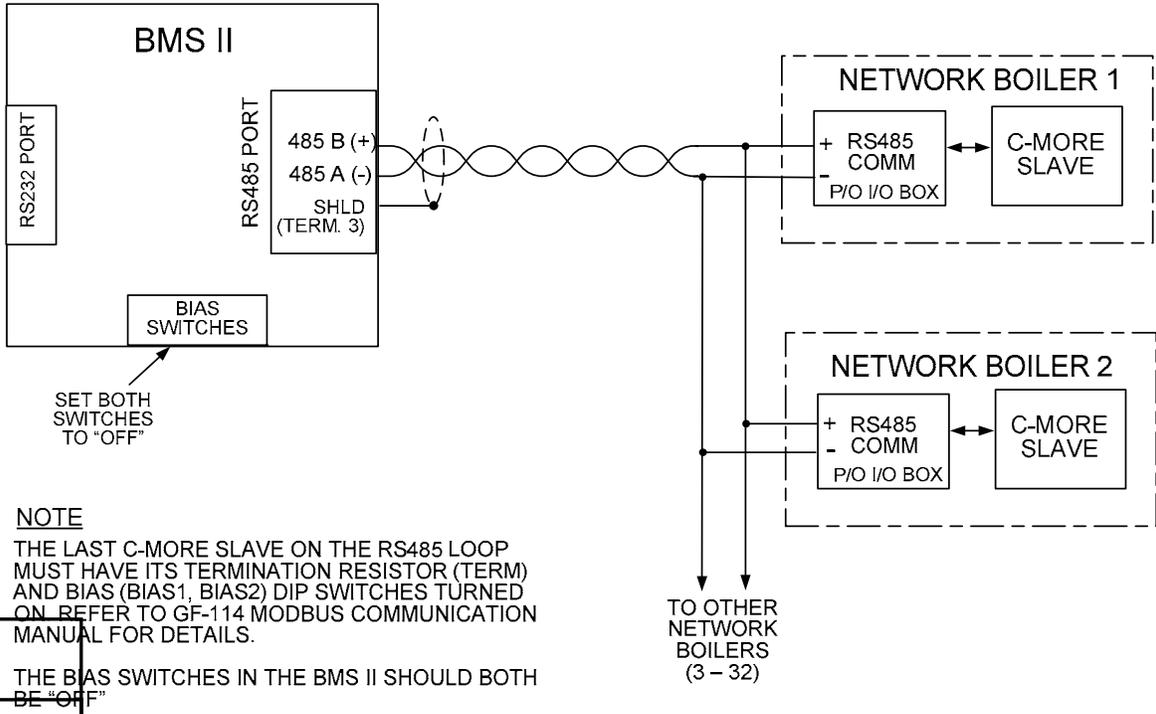
# INSTALLATION



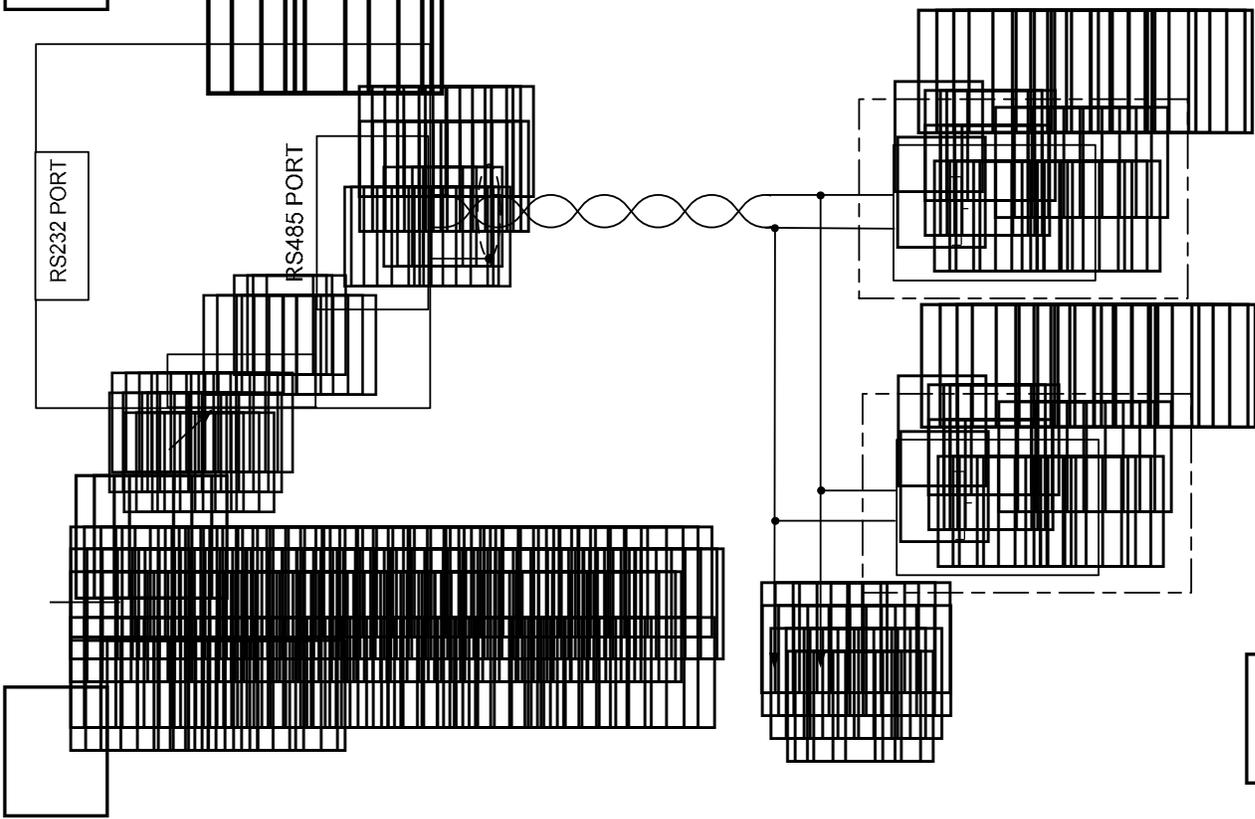
**Figure 2-9. RS485 (Modbus) Wiring For Modulex Series Boilers**

## 2.8 SAMPLE RS485 (MODBUS) NETWORK OVERVIEW

# INSTALLATION



**Figure 2-10. Sample RS485 (Modbus) Network For Benchmark or KC1000 Boilers**



**Figure 2-11. Sample RS485 (Modbus) Network For Modulex Series Boilers**

# INSTALLATION

## 2.9 RS485 NETWORK CONNECTIONS

### IS-411

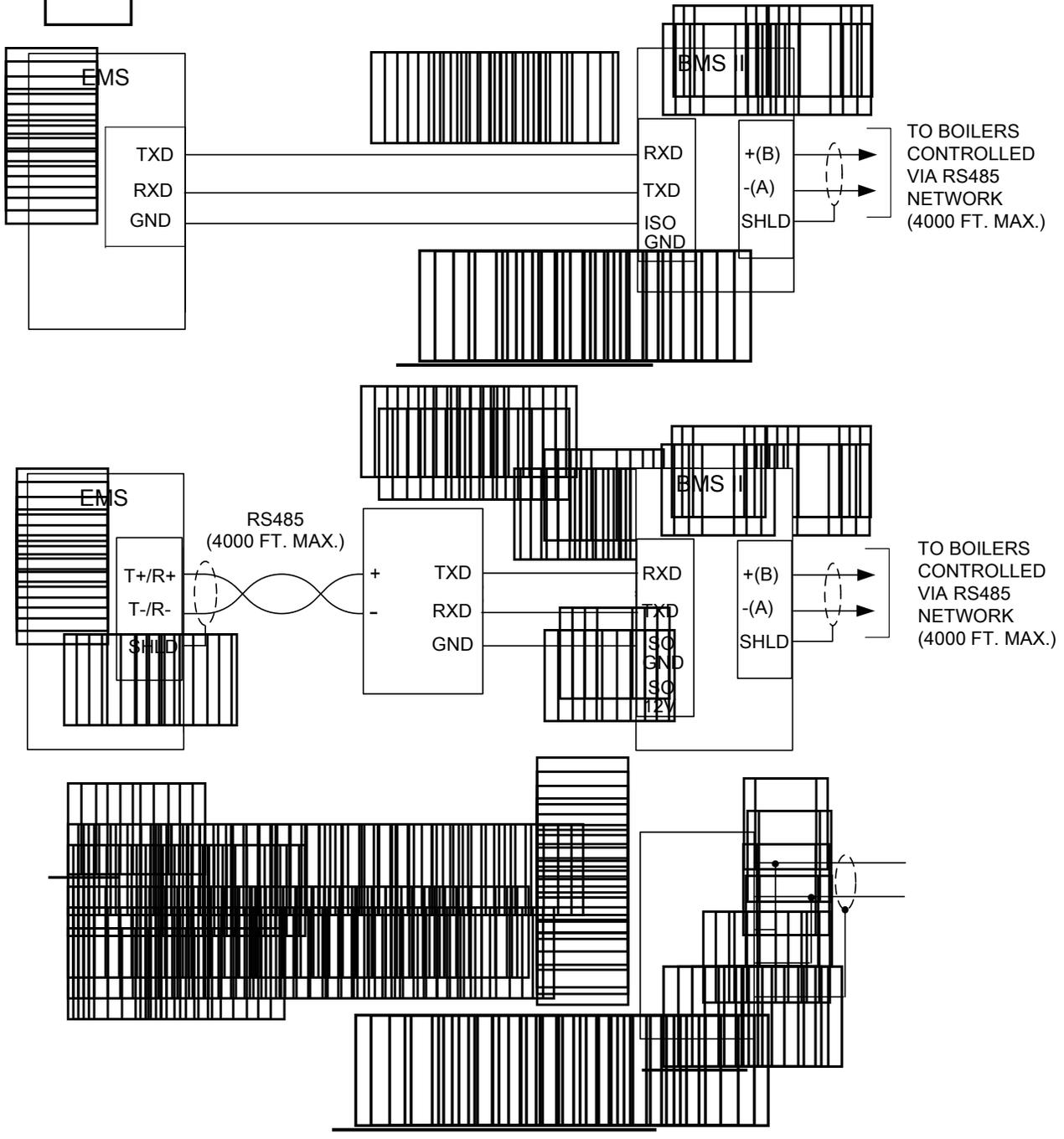


Figure 2-12. Sample Network Connections To EMS

2.10	INTERLOCKING	
	1	2
	3	4
	1	2
	3	4
	5	6
	7	8
	9	10
	11	12
	13	14
	15	16
	17	18
	19	20
	21	22
	23	24
	25	26
	27	28
	29	30
	31	32
	33	34
	35	36
	37	38
	39	40
	41	42
	43	44
	45	46
	47	48
	49	50
	51	52
	53	54
	55	56
	57	58
	59	60
	61	62
	63	64
	65	66
	67	68
	69	70
	71	72
	73	74
	75	76
	77	78
	79	80
	81	82
	83	84
	85	86
	87	88
	89	90
	91	92
	93	94
	95	96
	97	98
	99	100

Interlock	1		2	
	3	4	5	6
	7	8	9	10
Interlock	1		2	
	3	4	5	6
	7	8	9	10
2.11	SETBACK		1	
	2	3	4	5
	6	7	8	9
BACK	1		2	
	3	4	5	6
	7	8	9	10
	11	12	13	14
	15	16	17	18
	19	20	21	22
	23	24	25	26
	27	28	29	30
	31	32	33	34
	35	36	37	38
	39	40	41	42
	43	44	45	46
	47	48	49	50
	51	52	53	54
	55	56	57	58
	59	60	61	62
	63	64	65	66
	67	68	69	70
	71	72	73	74
	75	76	77	78
	79	80	81	82
	83	84	85	86
	87	88	89	90
	91	92	93	94
	95	96	97	98
	99	100		

2.12	RELANDING	
	1	2
	3	4
	5	6
	7	8
	9	10
	11	12
	13	14
	15	16
	17	18
	19	20
	21	22
	23	24
	25	26
	27	28
	29	30
	31	32
	33	34
	35	36
	37	38
	39	40
	41	42
	43	44
	45	46
	47	48
	49	50
	51	52
	53	54
	55	56
	57	58
	59	60
	61	62
	63	64
	65	66
	67	68
	69	70
	71	72
	73	74
	75	76
	77	78
	79	80
	81	82
	83	84
	85	86
	87	88
	89	90
	91	92
	93	94
	95	96
	97	98
	99	100

# INSTALLATION

NOTE	
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System Summary
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Fault Alarm Details
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Alarm Details
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2.18.4.2.2.2.2.2
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# CHAPTER 3 - OPERATION

3.1	INTRODUCTION
3.2	FRONT PANEL OPERATING CONTROLS AND DISPLAYS

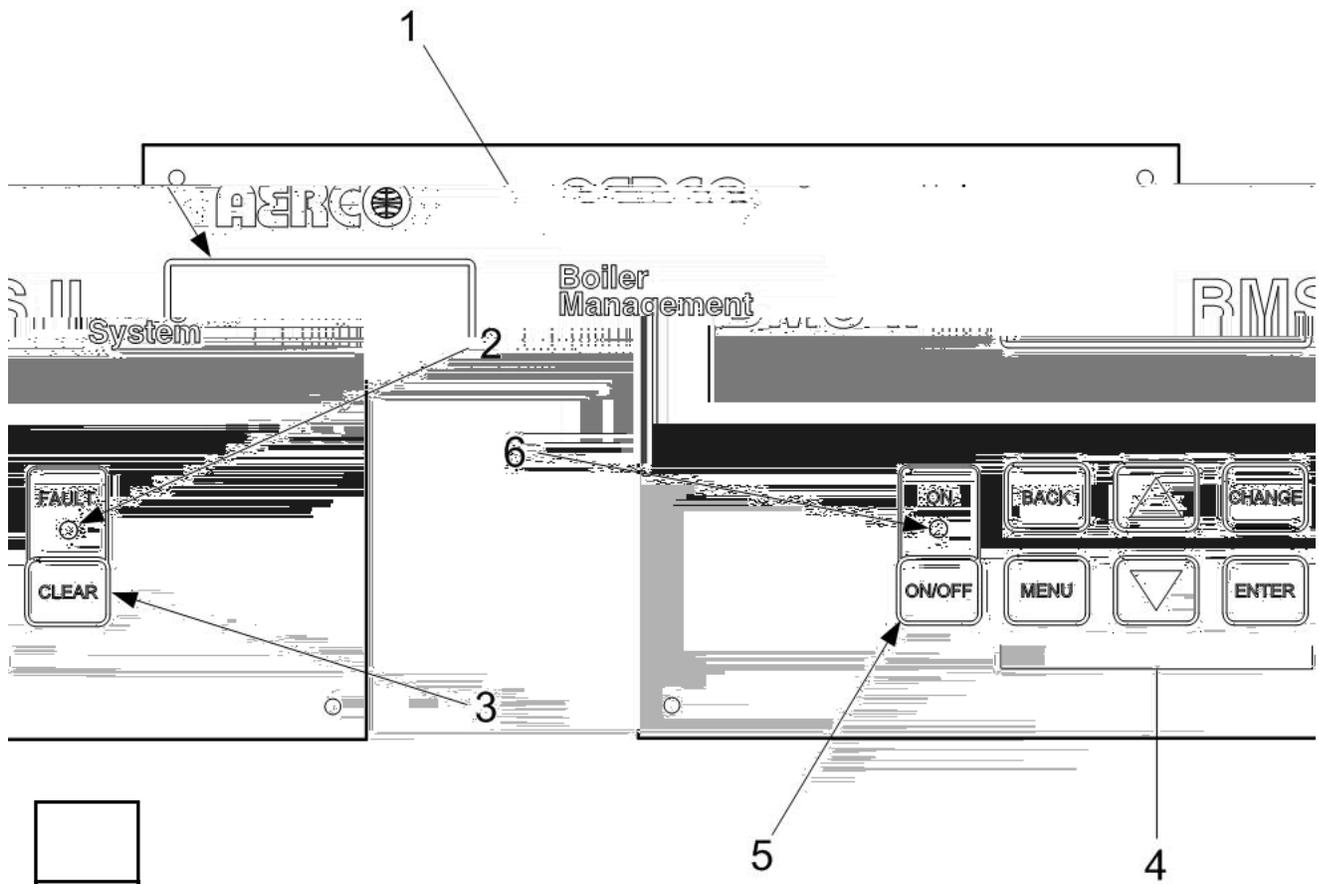
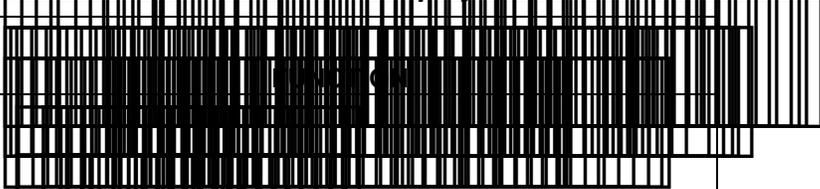
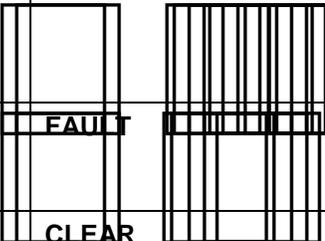
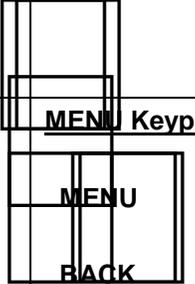
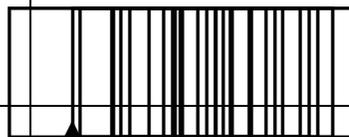
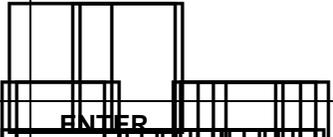
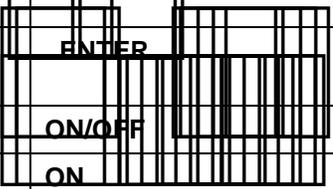


Figure 3-1. BMS II Front Panel Controls and Displays

# OPERATION

Table 3-1. BMS II Front Panel Controls and Displays

CONTROL, INDICATOR OR DISPLAY	
	
	<ul style="list-style-type: none"> <li>•</li> <li>•</li> <li>•</li> </ul>
	
	
	
	
	
	

3. BMS MAIN SCREENS

- 
- 

Menu Processing Procedure

ENTER

OPERATION

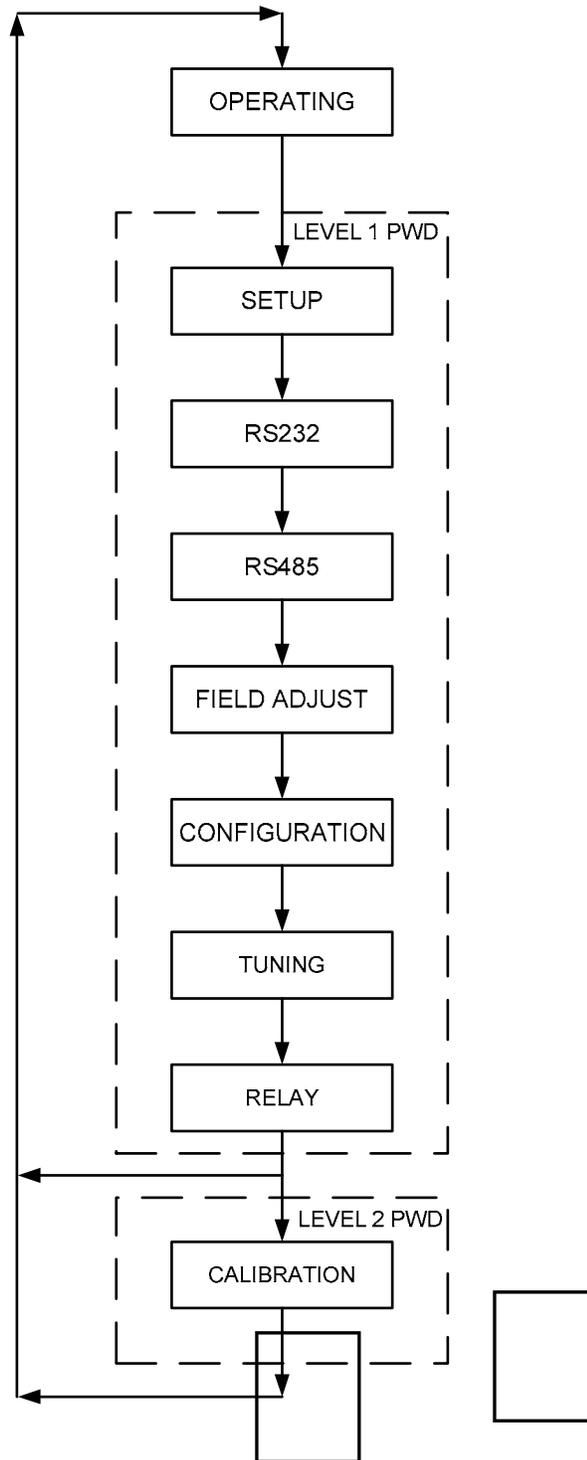
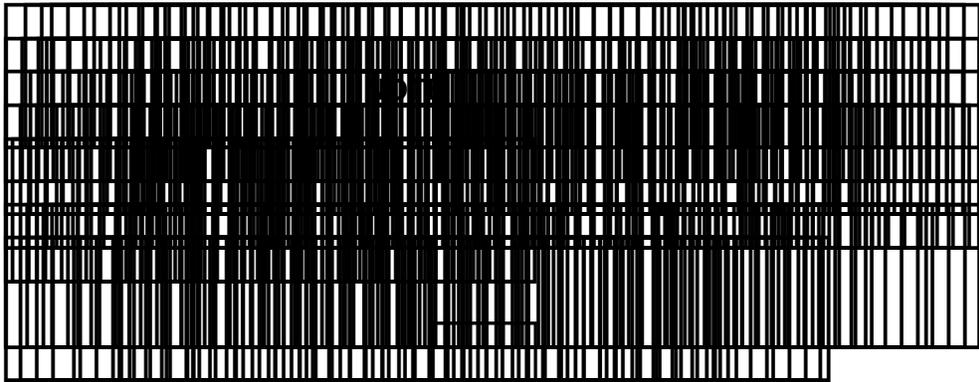


Figure 3-2. BMS II Menu Structure

**OPERATION**



**3.4 OPERATING MEN**

HEADER TEMP, WIND SPEED, HUMIDITY, OUTSIDE AIR TEMP, PERCENT OF LOAD, WD STATUS  
RETURN TEMP

HEADER TEMP and PERCENT OF LOAD

HEADER TEMP

HDR SENS BRDF

PERCENT OF LOAD

HEADER SENS BRDF

OUTSIDE AIR TEMP

OUTSIDE AIR TEMP

NOT CONNECTED

# OPERATION

I/O STAFFS

I/O STAFFS

RETURN KEYS

RETURN KEYS

3.5 SET TIME

ENTER PASSWORD

ENTER PASSWORD

*Date and Time Menu Options*

- SET MONTH            01 -12
- SET DATE             01 - 31
- SET YEAR             00 - 99
- SET HOUR             00 -23
- SET MINUTE           00 - 59
- SET DAY OF WEEK     SUNDAY TO SATURDAY

3.6 RS232 MENU

RS232 MODE
RS232 BAUD RATE
MODBUS ADDRESS
MODBUS ADDRESS
NETWORK TIMEOUT
MODBUS PASS PHASE

RS232 MODE

RS232 MODE
RS232 BAUD RATE
MODBUS ADDRESS
MODBUS ADDRESS
NETWORK TIMEOUT
MODBUS PASS PHASE

RS232 BAUD RATE

RS232 BAUD RATE
MODBUS ADDRESS
MODBUS ADDRESS
NETWORK TIMEOUT
MODBUS PASS PHASE

MODBUS ADDRESS

MODBUS ADDRESS
MODBUS ADDRESS
NETWORK TIMEOUT
MODBUS PASS PHASE

NETWORK TIMEOUT

NETWORK TIMEOUT
MODBUS PASS PHASE

MODBUS PASS PHASE

MODBUS PASS PHASE
-------------------

3.7 RS485 MENU

RS485 MODE
RS485 BAUD RATE
MODBUS ADDRESS
MODBUS ADDRESS
NETWORK TIMEOUT
MODBUS PASS PHASE

# OPERATION

<b>RS485 BAUD RATE</b> RS485 BAUD RATE	
<b>MIN SLAVE ADDR</b> MIN SLAVE ADDR	
<b>MAX SLAVE ADDR</b> MAX SLAVE ADDR	
<b>NUMBER NETWORKS</b>	
<b>MODBUS RTU TYPE</b> ROBIN	<input type="checkbox"/> POINT TO POINT <input type="checkbox"/> BROADCAST <input type="checkbox"/> ROUND
<b>NETWORK NUMBER</b> MIN SLAVE ADDR    MAX SLAVE ADDR	<input type="checkbox"/> 01 - 127 <input type="checkbox"/> 01 - 127
<b>3.8 FIELD ADDRESS</b>	
<b>HEADER SET MODE</b> HEADER SET MODE	
<b>HDR HIGH LIMIT</b> HDR HIGH LIMIT	HDR LOW LIMIT

HDR LOW LIMIT

HDR LOW LIMIT

TEMPERATURE LIMIT

INTERNAL SETPT

INTERNAL SETPT

HEADER SETPT

CONSTANT SETPT

HEADER SET MODE

CONSTANT SETPT

RESET RATIO

RATIO

BLDG REF TEMP

BLDG REF TEMP

HEADER SET MODE

OUTDOOR RESET

(BLDG REF TEMP)

REMOTE SIGNAL

REMOTE SIGNAL

HEADER SET MODE

REMOTE

SETPT

OFFSET ENABLE

OFFSET ENABLE

Offset Menu Options

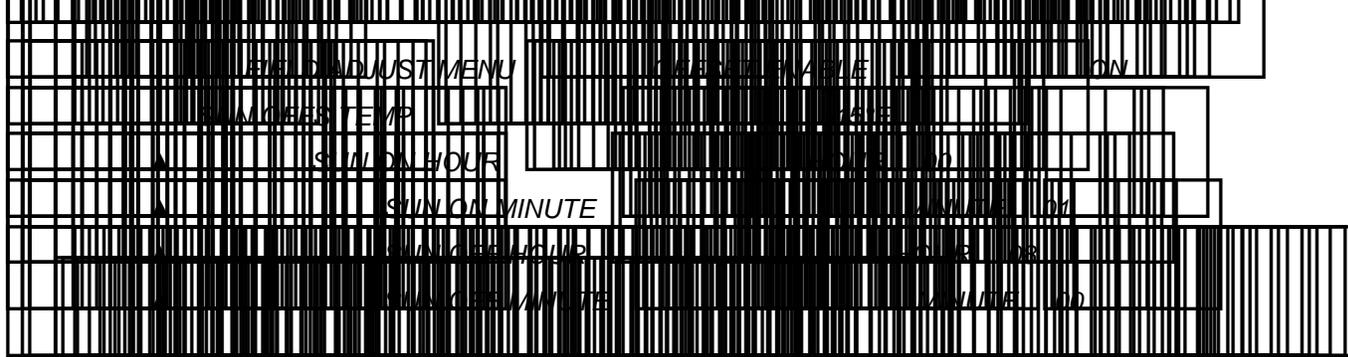
- OFFS TEMP
- ON HOUR (00 to 23)
- ON MINUTE (00 to 59)

• OFFS DAY (00 to 23)

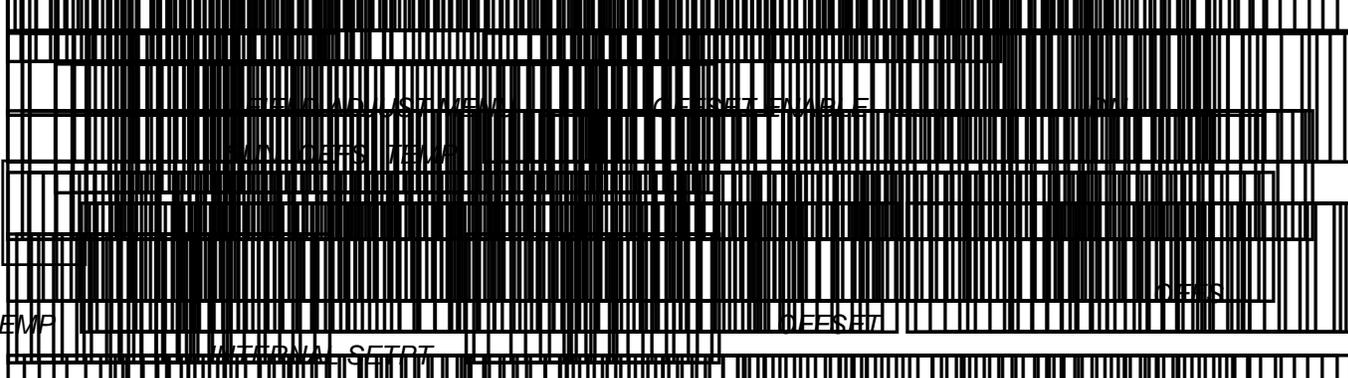
• OFFS WEEK (00 to 07)

# OPERATION

## Safety (Hazard) Settings



## Manual Offset



## 3.9 CONFIGURATION

### BOILER OP MODE



### Parallel Mode





**OPERATION**

**3.10 TUNING MENU**

TUNING MENU

**PROPERTY MENU**

**INTEGRATION**

DERIVATIVE CAN

HDR TEMP DEADBND

3.11 RELAY MENU

RELAY MENU

SYS START ENB

SYS START OPTION

SYS START OPTIO

LOAD START PCT

LOAD START PCT.

SYS START INTLK

SYS START INTLK

SYS INTLK CONFIG

INTERLOCK 2, INTERLOCK 1&2.

START ENABLED

INTERLOCK 1 (default),

AUX RELAY OPEN

AUX RELAY OPEN

AUX RELAY CLOSE

# OPERATION

<b>FAULT ALARM RESET</b>
<b>FAULTS</b>
<b>INTERLOCK 1</b>
<b>FAULT ALARM BLRS</b>
<b>FAULT ALARM CLEER</b>

## 3.12 CALIBRATION MENU

NOTE

<b>HDR SENS OFFSET</b>
<b>OUTD SENS OFFSET</b>
<b>4-20 MA OFFSET</b>
<b>REFN SENS OFFSET</b>
<b>RAMP UP %/MIN</b>



# OPERATION

## CONSTANT SETPT MODE (Default)

MENU & OPTION	ACTION
1. SETUP MENU	
↓	
ENTER PASSWORD	
↓	
2. RS485 MENU	
↓	
NUMBER NETW BOILERS	
↓	
NETW BOILER 01 ADDRESS=001	
↓	
3. FIELD ADJUST MENU	
↓	
INTERNAL SETPT	
↓	
4. CONFIGURATION MENU	BLP START LEVEL=20% & BLP STOP LEVEL=16%
↓	
BLP START LEVEL	
↓	
BLP STOP LEVEL	

## REMOTE SETPT MODE

MENU & OPTION	ACTION
1. FIELD ADJUST MENU	
↓	
HEADER SET MODE	REMOTE SETPT
↓	
HDR HIGH LIMIT	
↓	
HDR LOW LIMIT	
↓	
REMOTE SIGNAL	
↓	
2. CONFIGURATION MENU	
↓	
FAIL SAFE MODE	CONSTANT SETPT
	SHUT(DOWN)

OUTDOOR RESET MODE

**MENU & OPTION**

**1. RELADJUST MENU**

HEADER SET MODE

RESET RATIO

BLDG REE TEMP

**2. CONFIGURATION MENU**

EAM SAFE MODE

**3. RELAY MENU**

BOYS START TEMP

**ACTION**

OUTDOOR RESET

CONSTANT SET SET

(SHUT/DOWN)

RELAY





**PROGRAMMING BMS II**

**Determining BMS II Status**

**Entering Basic Data Menu Building Parameters Temperature**

**Selecting Basic Data Menu**



## PROGRAMMING RMS II

ENTER

FIELD

ADJUST MENU

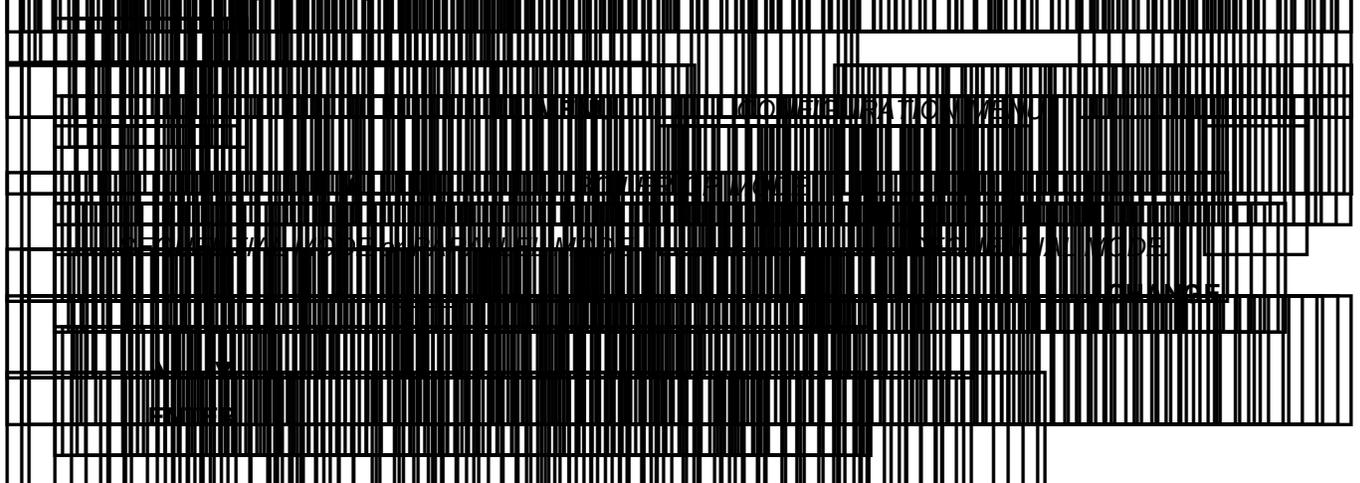
### Entering Reader High Limit And Low Limit Temperatures

TEMPERATURE ADJUSTMENT MENU

### Selecting Reader Signal Type

TEMPERATURE ADJUSTMENT MENU

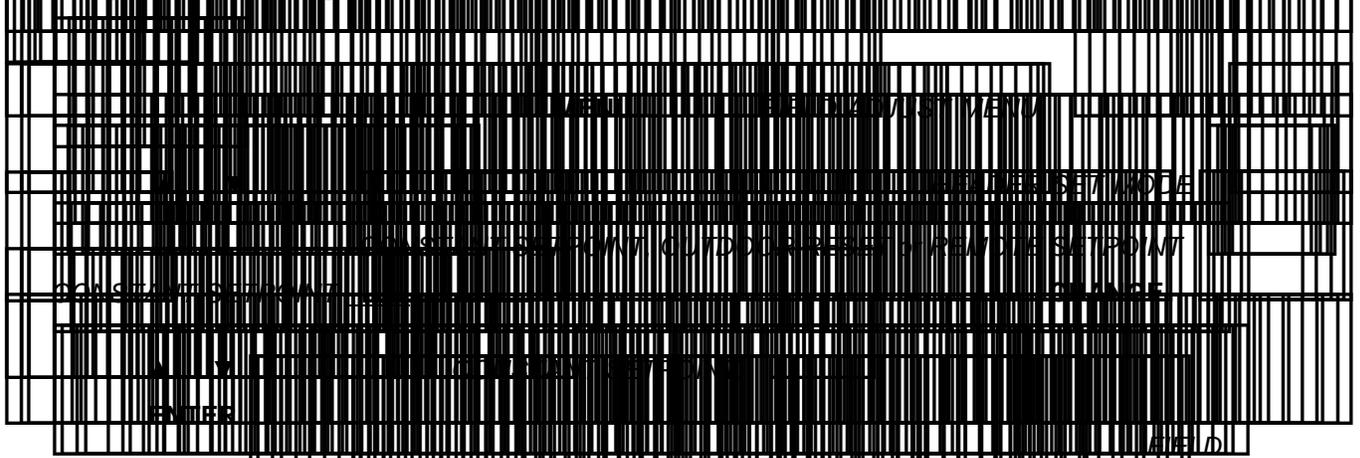
Selecting Bolt-Downing Mode



4.4 CONSTANT SETPOINT MODE

- 
- 
- 

Selecting Constant Setpoint Mode



ADJUST MENU,

# PROGRAMMING BMS II

**Selecting Soft Setpoint Mode**

1	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
2	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
3	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
4	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
5	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
6	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
7	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
8	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
9	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
10	ENTER	TEMPERATURE	SETPOINT	MODE	SETP

**Selecting Soft Devising Mode**

1	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
2	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
3	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
4	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
5	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
6	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
7	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
8	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
9	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
10	ENTER	TEMPERATURE	SETPOINT	MODE	SETP

**4.8 TEMPERATURE SCHEDULE**

1	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
2	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
3	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
4	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
5	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
6	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
7	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
8	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
9	ENTER	TEMPERATURE	SETPOINT	MODE	SETP
10	ENTER	TEMPERATURE	SETPOINT	MODE	SETP

PERCENT OF LOAD  
 LOAD START PCT. PERCENT OF LOAD LOAD STOP PCT. PERCENT OF LOAD  
 LOAD START PCT. PERCENT OF LOAD LOAD STOP PCT. PERCENT OF LOAD

# PROGRAMMING BMS II

## 4.6 START ENABLE DETECTION

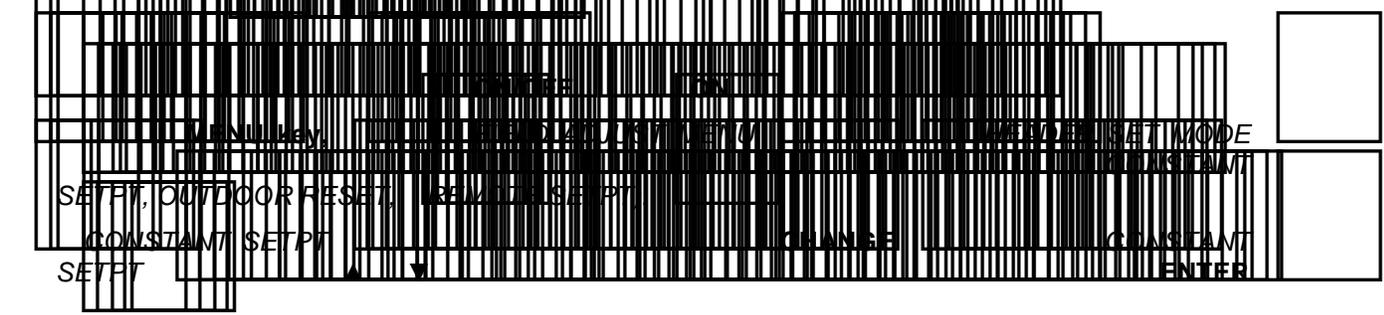
START ENABLE DETECTION  
 BMS START IN TLK

## 4.7 SYSTEM INITIALIZATION AND BOILING

INITIALIZATION AND BOILING  
 BOILING

## 4.8 TESTING THE SYSTEM

TESTING THE SYSTEM  
 WEATHER SET MODE  
 INTERNAL SETPT







# TROUBLESHOOTING



**Table 5-1. Fault Messages – Continued**

Fault Message	Description & Possible cause



# TROUBLESHOOTING

**Table 5-2 Common Problems**

Problem	Possible Causes	Solutions
Boiler plant not started by BMS II	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>
BMK or KC Boiler with C-More Control Box not being recognized by BMS II.	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>
Modulex Boiler with BCM Control not being recognized by BMS II.	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>
BMS II controlling boilers. EMS can see BMS II, but cannot see boilers.	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>

# TROUBLESHOOTING

**Table 5-2 Common Problems - Continued**

Problem	Possible Causes	Solution
EMS cannot see BMSII	<ul style="list-style-type: none"> <li>• [Redacted]</li> <li>• [Redacted]</li> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> <li>• [Redacted]</li> <li>• [Redacted]</li> </ul>
Boiler RAMP UP or RAMP DOWN too slow or too fast	<ul style="list-style-type: none"> <li>• RAMP UP / RAMP DOWN [Redacted]</li> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• UP %/MIN / RAMP DOWN %/MIN [Redacted]</li> <li>• [Redacted]</li> </ul>
HEADER TEMPERATURE not reaching Setpoint	<ul style="list-style-type: none"> <li>• [Redacted]</li> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> <li>• [Redacted]</li> </ul>
Need to restore Factory Default Settings.	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> </ul>
Boilers over-shooting setpoint or tripping aquastat	<ul style="list-style-type: none"> <li>• [Redacted]</li> <li>• [Redacted]</li> <li>• [Redacted]</li> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> <li>• [Redacted]</li> <li>• [Redacted]</li> <li>• [Redacted]</li> </ul>
Modbus Network faults encountered. Boiler plant not operating	<ul style="list-style-type: none"> <li>• [Redacted]</li> <li>• [Redacted]</li> </ul>	<ul style="list-style-type: none"> <li>• [Redacted]</li> <li>• [Redacted]</li> </ul>

APPENDIX A

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**BMS II MENUS**

MENU LEVEL & OPTION	AVAILABLE CHOICES OR LIMITS		DEFAULT
	MINIMUM	MAXIMUM	
<u>OPERATING MENU</u>			
<u>SETUP MENU</u>			
<u>RS232 MENU</u>			



APPENDIX A

BMS II MENUS - Continued

MENU LEVEL & OPTION	AVAILABLE CHOICES OR LIMITS		DEFAULT
	MINIMUM	MAXIMUM	
FIELD ADJUST MENU - Cont.			
CONFIGURATION MENU			
TUNING MENU			

**BMS II MENUS - Continued**

MENU LEVEL & OPTION	AVAILABLE CHOICES OR LIMITS		DEFAULT
	MINIMUM	MAXIMUM	
<b>RELAY MENU</b>			
<b>CALIBRATION MENU</b>			

APPENDIX B

STATUS AND FAULT MESSAGES

DISPLAY MESSAGES	DESCRIPTION
STATUS MESSAGES:	
FAULT MESSAGES:	

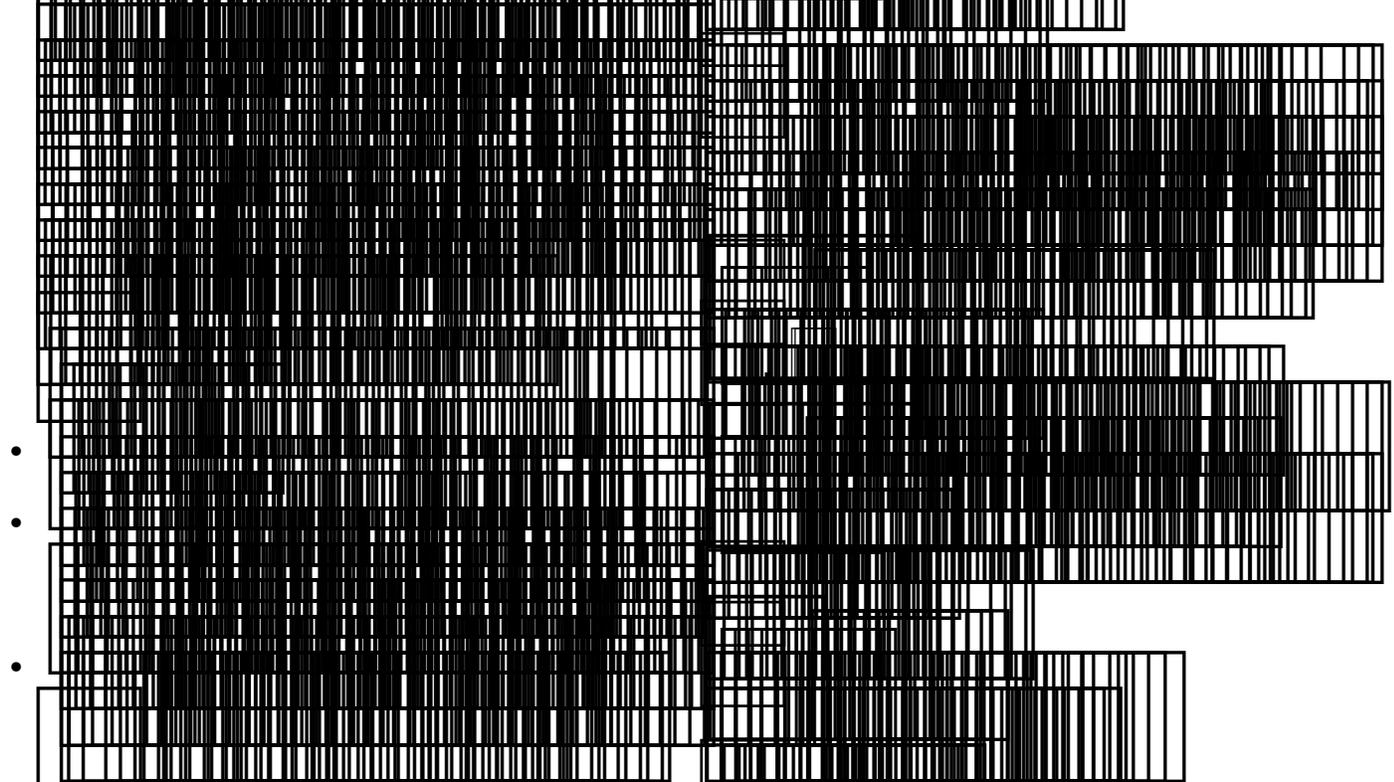


# APPENDIX C

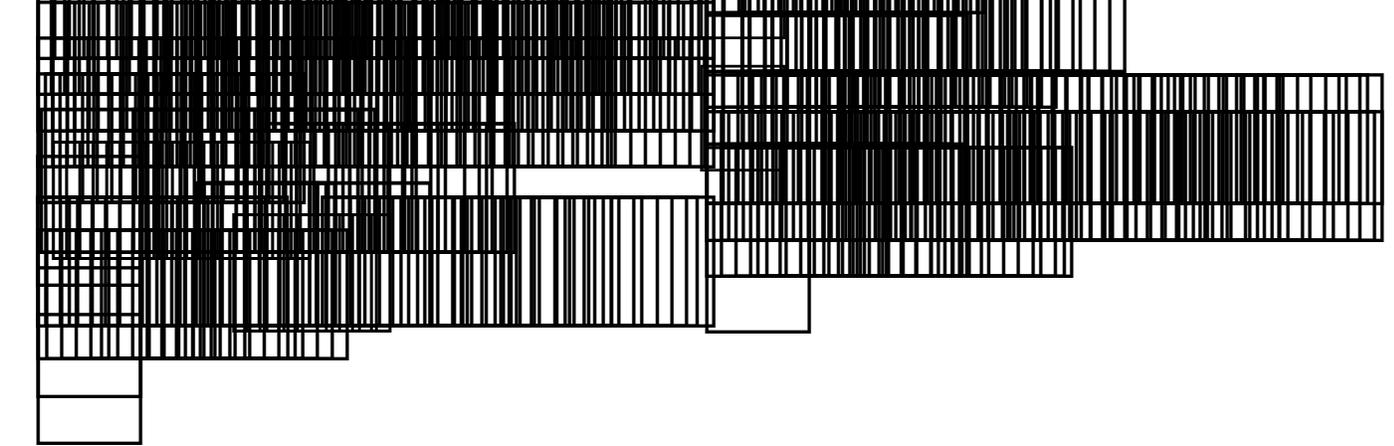
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## METHODS FOR DETERMINING RESET SCHEDULE AND OUTDOOR RESET RATIO CHARTS

### Using the Charts to Determine Reset Schedule



### Determining Reset Schedule w/ Formula





APPENDIX C

Table C-3. Header Temperature for a Building Reference Temperature of 65°F

Air Temp	RESET RATIO									
	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4
65°F										
60°F										
55°F										
50°F										
45°F										
40°F										
35°F										
30°F										
25°F										
20°F										
15°F										
10°F										
5°F										
0°F										
-5°F										
-10°F										
-15°F										
-20°F										

Table C-4. Header Temperature for a Building Reference Temperature of 70°F

Air Temp	RESET RATIO									
	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4
70°F										
65°F										
60°F										
55°F										
50°F										
45°F										
40°F										
35°F										
30°F										
25°F										
20°F										
15°F										
10°F										
5°F										
0°F										
-5°F										
-10°F										
-15°F										
-20°F										



APPENDIX C

Table C-7. Header Temperature for a Building Reference Temperature of 90°F

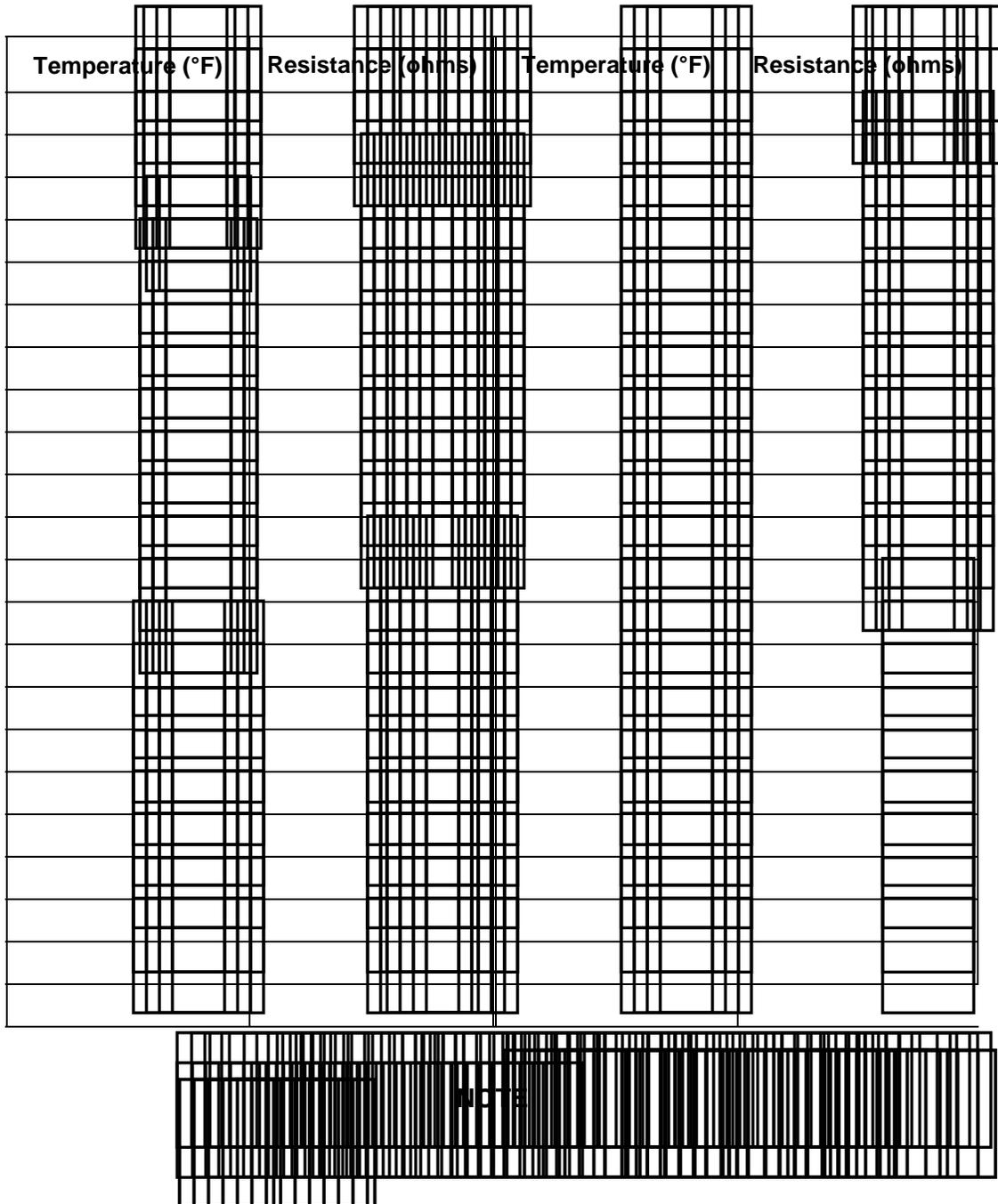
Air Temp	RESET RATIO									
	0.6	0.8	1.0	1.2	1.5	1.8	2.0	2.2	2.4	2.6
90°F										
85°F										
80°F										
75°F										
70°F										
65°F										
60°F										
55°F										
50°F										
45°F										
40°F										
35°F										
30°F										
25°F										
20°F										
15°F										
10°F										
5°F										
0°F										



APPENDIX D

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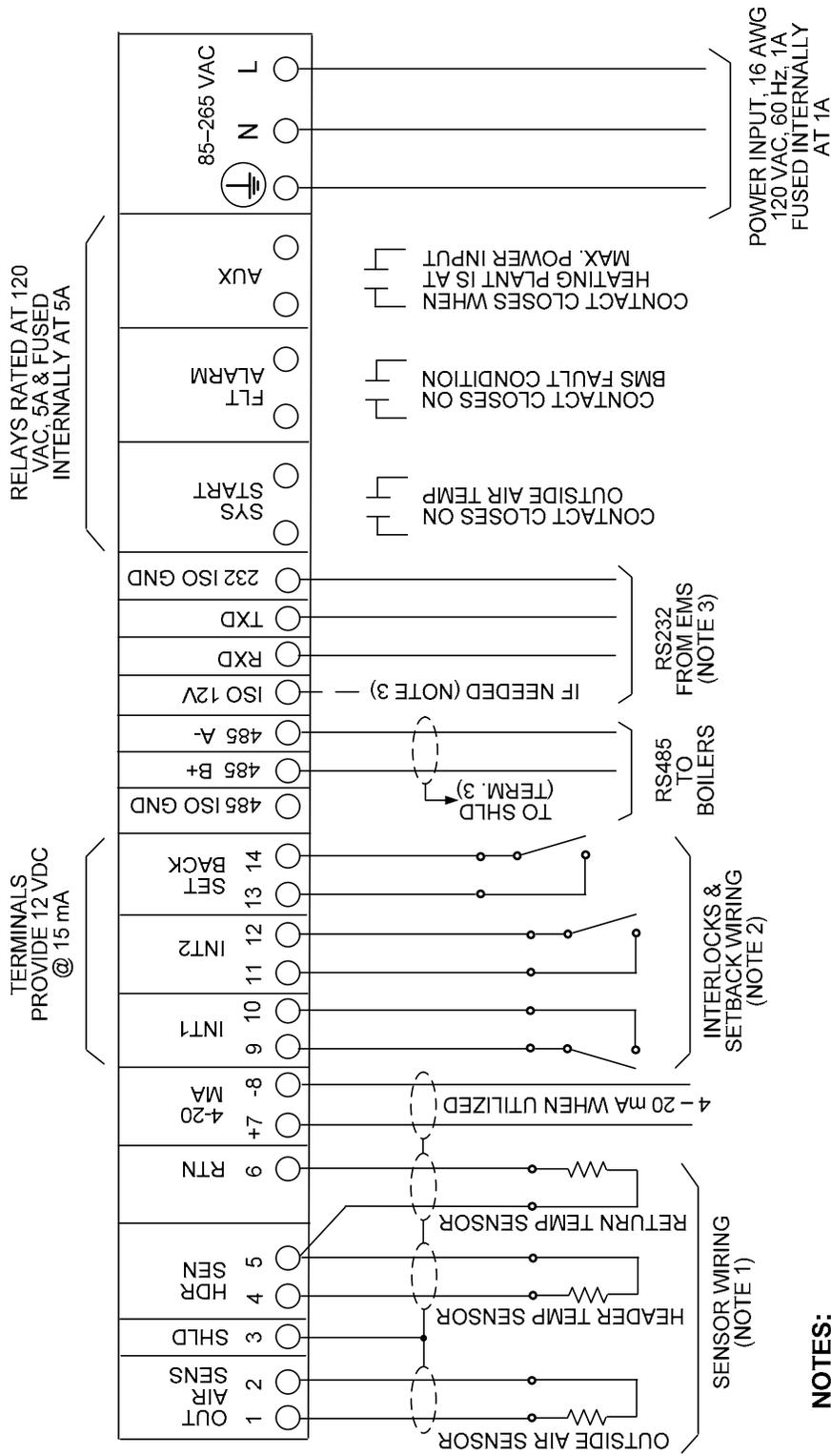
### NTC Temperature Sensor Resistance Chart





APPENDIX E

BMS II WIRING DIAGRAM



**NOTES:**

- AERCO RECOMMENDS USING TWO-CONDUCTOR, TWISTED, SHIELDED PAIR, 22 AWG CABLE (BELDEN 9841 OR EQUIV.)
  - TERMINATE SHIELDS AT BMS SHIELD (SHLD) TERMINAL ONLY.
  - DO NOT CONNECT SHIELDS AT SENSOR ENDS.
  - DO NOT RUN SENSOR WIRING WITH POWER WIRING.
- CONTACTS PROVIDED BY OTHERS: USE CONTACTS RATED FOR LOW SIGNAL LEVELS.
  - JUMPER INTERLOCKS (INT1, INT2) IF EXTERNAL CONTACTS ARE NOT USED.
- IF THE EMS BEING USED CONTAINS ONLY A RS485 PORT, A RS485-TO-RS232 CONVERTER IS REQUIRED. IF NECESSARY, A 12 VDC OUTPUT IS PROVIDED BY THE BMS II TO POWER THE RS485-TO-RS232 CONVERTER.







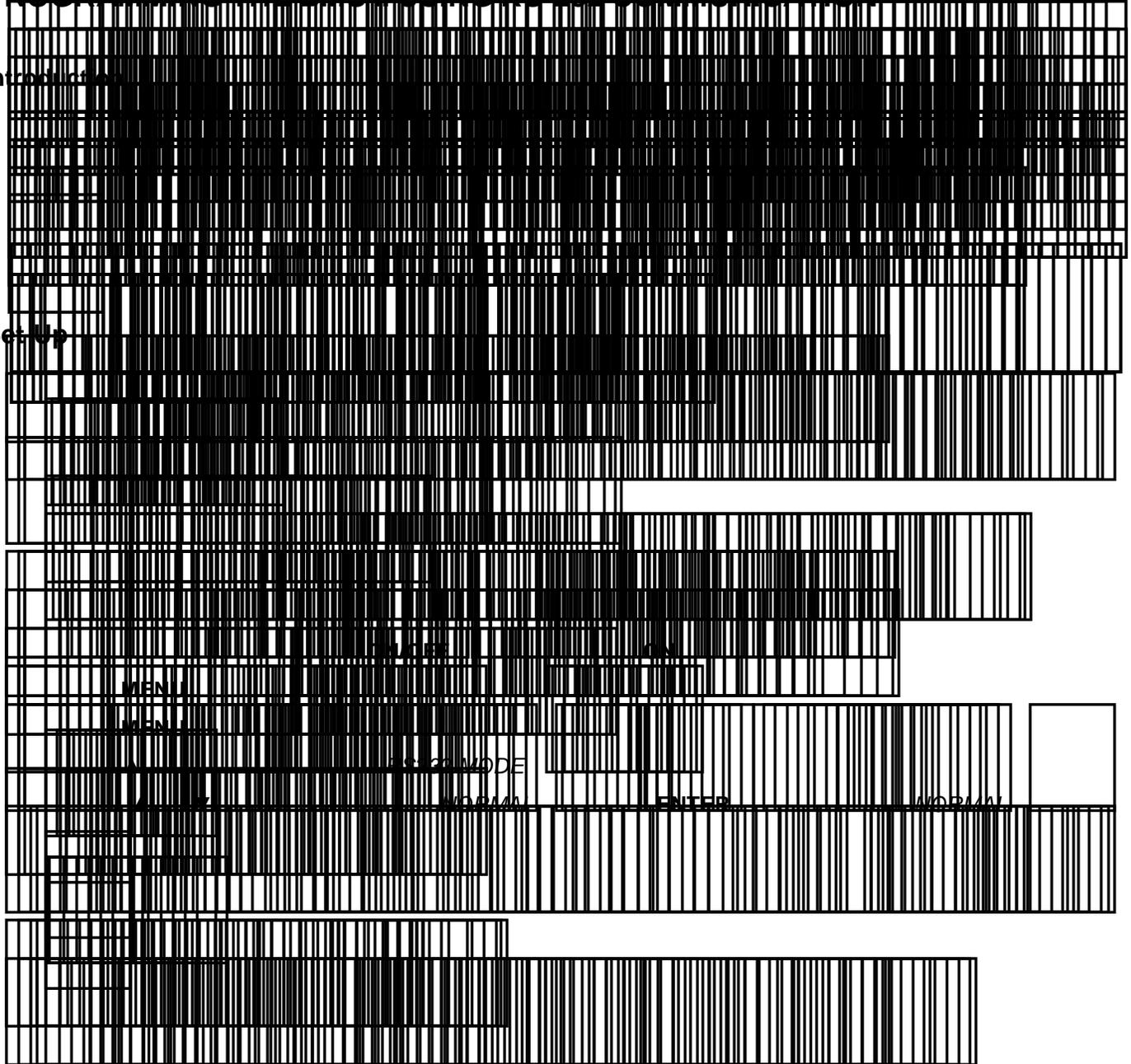
# APPENDIX G

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## PROGRAMMING THE BMS II USING RS-232 COMMUNICATION

Introduction

Set Up







APPENDIX G (cont.) \_\_\_\_\_

Table G-1. BMS II COMMANDS

No.	COMMAND	ENTRY RANGE	FACTORY DEFAULT









# APPENDIX H

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## BMS II MODBUS ADDRESS ASSIGNMENTS

### H-1 BMS II STANDARD INPUT REGISTER ASSIGNMENTS

*Table H-1. BMS II Standard Input Register Address Mapping*

Modbus Data Address (Hex)	Menu Item	Units and Range	Default/Comments
---------------------------	-----------	-----------------	------------------





## **APPENDIX H**

APPENDIX H (cont.)

H-2 BMS II Controller Standard Holding Register Assignments

Table H-2. BMS II Standard Holding Register Address Mapping

Modbus Data Address (Hex)	Menu Item	Units and Range	Default/Comments
0001	0100000000	0.00	
0002	0100000001	0.00	
0003	0100000002	0.00	
0004	0100000003	0.00	
0005	0100000004	0.00	
0006	0100000005	0.00	
0007	0100000006	0.00	
0008	0100000007	0.00	
0009	0100000008	0.00	
000A	0100000009	0.00	
000B	010000000A	0.00	
000C	010000000B	0.00	
000D	010000000C	0.00	
000E	010000000D	0.00	
000F	010000000E	0.00	
0010	010000000F	0.00	
0011	0100000010	0.00	
0012	0100000011	0.00	
0013	0100000012	0.00	
0014	0100000013	0.00	
0015	0100000014	0.00	
0016	0100000015	0.00	
0017	0100000016	0.00	
0018	0100000017	0.00	
0019	0100000018	0.00	
001A	0100000019	0.00	
001B	010000001A	0.00	
001C	010000001B	0.00	
001D	010000001C	0.00	
001E	010000001D	0.00	
001F	010000001E	0.00	
0020	010000001F	0.00	
0021	0100000020	0.00	
0022	0100000021	0.00	
0023	0100000022	0.00	
0024	0100000023	0.00	
0025	0100000024	0.00	
0026	0100000025	0.00	
0027	0100000026	0.00	
0028	0100000027	0.00	
0029	0100000028	0.00	
002A	0100000029	0.00	
002B	010000002A	0.00	
002C	010000002B	0.00	
002D	010000002C	0.00	
002E	010000002D	0.00	
002F	010000002E	0.00	
0030	010000002F	0.00	
0031	0100000030	0.00	
0032	0100000031	0.00	
0033	0100000032	0.00	
0034	0100000033	0.00	
0035	0100000034	0.00	
0036	0100000035	0.00	
0037	0100000036	0.00	
0038	0100000037	0.00	
0039	0100000038	0.00	
003A	0100000039	0.00	
003B	010000003A	0.00	
003C	010000003B	0.00	
003D	010000003C	0.00	
003E	010000003D	0.00	
003F	010000003E	0.00	
0040	010000003F	0.00	
0041	0100000040	0.00	
0042	0100000041	0.00	
0043	0100000042	0.00	
0044	0100000043	0.00	
0045	0100000044	0.00	
0046	0100000045	0.00	
0047	0100000046	0.00	
0048	0100000047	0.00	
0049	0100000048	0.00	
004A	0100000049	0.00	
004B	010000004A	0.00	
004C	010000004B	0.00	
004D	010000004C	0.00	
004E	010000004D	0.00	
004F	010000004E	0.00	
0050	010000004F	0.00	
0051	0100000050	0.00	
0052	0100000051	0.00	
0053	0100000052	0.00	
0054	0100000053	0.00	
0055	0100000054	0.00	
0056	0100000055	0.00	
0057	0100000056	0.00	
0058	0100000057	0.00	
0059	0100000058	0.00	
005A	0100000059	0.00	
005B	010000005A	0.00	
005C	010000005B	0.00	
005D	010000005C	0.00	
005E	010000005D	0.00	
005F	010000005E	0.00	
0060	010000005F	0.00	
0061	0100000060	0.00	
0062	0100000061	0.00	
0063	0100000062	0.00	
0064	0100000063	0.00	
0065	0100000064	0.00	
0066	0100000065	0.00	
0067	0100000066	0.00	
0068	0100000067	0.00	
0069	0100000068	0.00	
006A	0100000069	0.00	
006B	010000006A	0.00	
006C	010000006B	0.00	
006D	010000006C	0.00	
006E	010000006D	0.00	
006F	010000006E	0.00	
0070	010000006F	0.00	
0071	0100000070	0.00	
0072	0100000071	0.00	
0073	0100000072	0.00	
0074	0100000073	0.00	
0075	0100000074	0.00	
0076	0100000075	0.00	
0077	0100000076	0.00	
0078	0100000077	0.00	
0079	0100000078	0.00	
007A	0100000079	0.00	
007B	010000007A	0.00	
007C	010000007B	0.00	
007D	010000007C	0.00	
007E	010000007D	0.00	
007F	010000007E	0.00	
0080	010000007F	0.00	
0081	0100000080	0.00	
0082	0100000081	0.00	
0083	0100000082	0.00	
0084	0100000083	0.00	
0085	0100000084	0.00	
0086	0100000085	0.00	
0087	0100000086	0.00	
0088	0100000087	0.00	
0089	0100000088	0.00	
008A	0100000089	0.00	
008B	010000008A	0.00	
008C	010000008B	0.00	
008D	010000008C	0.00	
008E	010000008D	0.00	
008F	010000008E	0.00	
0090	010000008F	0.00	
0091	0100000090	0.00	
0092	0100000091	0.00	
0093	0100000092	0.00	
0094	0100000093	0.00	
0095	0100000094	0.00	
0096	0100000095	0.00	
0097	0100000096	0.00	
0098	0100000097	0.00	
0099	0100000098	0.00	
009A	0100000099	0.00	
009B	010000009A	0.00	
009C	010000009B	0.00	
009D	010000009C	0.00	
009E	010000009D	0.00	
009F	010000009E	0.00	
00A0	010000009F	0.00	
00A1	01000000A0	0.00	
00A2	01000000A1	0.00	
00A3	01000000A2	0.00	
00A4	01000000A3	0.00	
00A5	01000000A4	0.00	
00A6	01000000A5	0.00	
00A7	01000000A6	0.00	
00A8	01000000A7	0.00	
00A9	01000000A8	0.00	
00AA	01000000A9	0.00	
00AB	01000000AA	0.00	
00AC	01000000AB	0.00	
00AD	01000000AC	0.00	
00AE	01000000AD	0.00	
00AF	01000000AE	0.00	
00B0	01000000AF	0.00	
00B1	01000000B0	0.00	
00B2	01000000B1	0.00	
00B3	01000000B2	0.00	
00B4	01000000B3	0.00	
00B5	01000000B4	0.00	
00B6	01000000B5	0.00	
00B7	01000000B6	0.00	
00B8	01000000B7	0.00	
00B9	01000000B8	0.00	
00BA	01000000B9	0.00	
00BB	01000000BA	0.00	
00BC	01000000BB	0.00	
00BD	01000000BC	0.00	
00BE	01000000BD	0.00	
00BF	01000000BE	0.00	
00C0	01000000BF	0.00	
00C1	01000000C0	0.00	
00C2	01000000C1	0.00	
00C3	01000000C2	0.00	
00C4	01000000C3	0.00	
00C5	01000000C4	0.00	
00C6	01000000C5	0.00	
00C7	01000000C6	0.00	
00C8	01000000C7	0.00	
00C9	01000000C8	0.00	
00CA	01000000C9	0.00	
00CB	01000000CA	0.00	
00CC	01000000CB	0.00	
00CD	01000000CC	0.00	
00CE	01000000CD	0.00	
00CF	01000000CE	0.00	
00D0	01000000CF	0.00	
00D1	01000000D0	0.00	
00D2	01000000D1	0.00	
00D3	01000000D2	0.00	
00D4	01000000D3	0.00	
00D5	01000000D4	0.00	
00D6	01000000D5	0.00	
00D7	01000000D6	0.00	
00D8	01000000D7	0.00	
00D9	01000000D8	0.00	
00DA	01000000D9	0.00	
00DB	01000000DA	0.00	
00DC	01000000DB	0.00	
00DD	01000000DC	0.00	
00DE	01000000DD	0.00	
00DF	01000000DE	0.00	
00E0	01000000DF	0.00	
00E1	01000000E0	0.00	
00E2	01000000E1	0.00	
00E3	01000000E2	0.00	
00E4	01000000E3	0.00	
00E5	01000000E4	0.00	
00E6	01000000E5	0.00	
00E7	01000000E6	0.00	
00E8	01000000E7	0.00	
00E9	01000000E8	0.00	
00EA	01000000E9	0.00	
00EB	01000000EA	0.00	
00EC	01000000EB	0.00	
00ED	01000000EC	0.00	
00EE	01000000ED	0.00	
00EF	01000000EE	0.00	
00F0	01000000EF	0.00	
00F1	01000000F0	0.00	
00F2	01000000F1	0.00	
00F3	01000000F2	0.00	
00F4	01000000F3	0.00	
00F5	01000000F4	0.00	
00F6	01000000F5	0.00	
00F7	01000000F6	0.00	
00F8	01000000F7	0.00	
00F9	01000000F8	0.00	
00FA	01000000F9	0.00	
00FB	01000000FA	0.00	
00FC	01000000FB	0.00	
00FD	01000000FD	0.00	
00FE	01000000FE	0.00	
00FF	01000000FF	0.00	













APPENDIX H

APPENDIX H (cont.)

**Table H-2. BMS II Standard Holding Register Address Mapping**

Modbus Data Address (Hex)	Variable	Units and Range	Default/Comments



