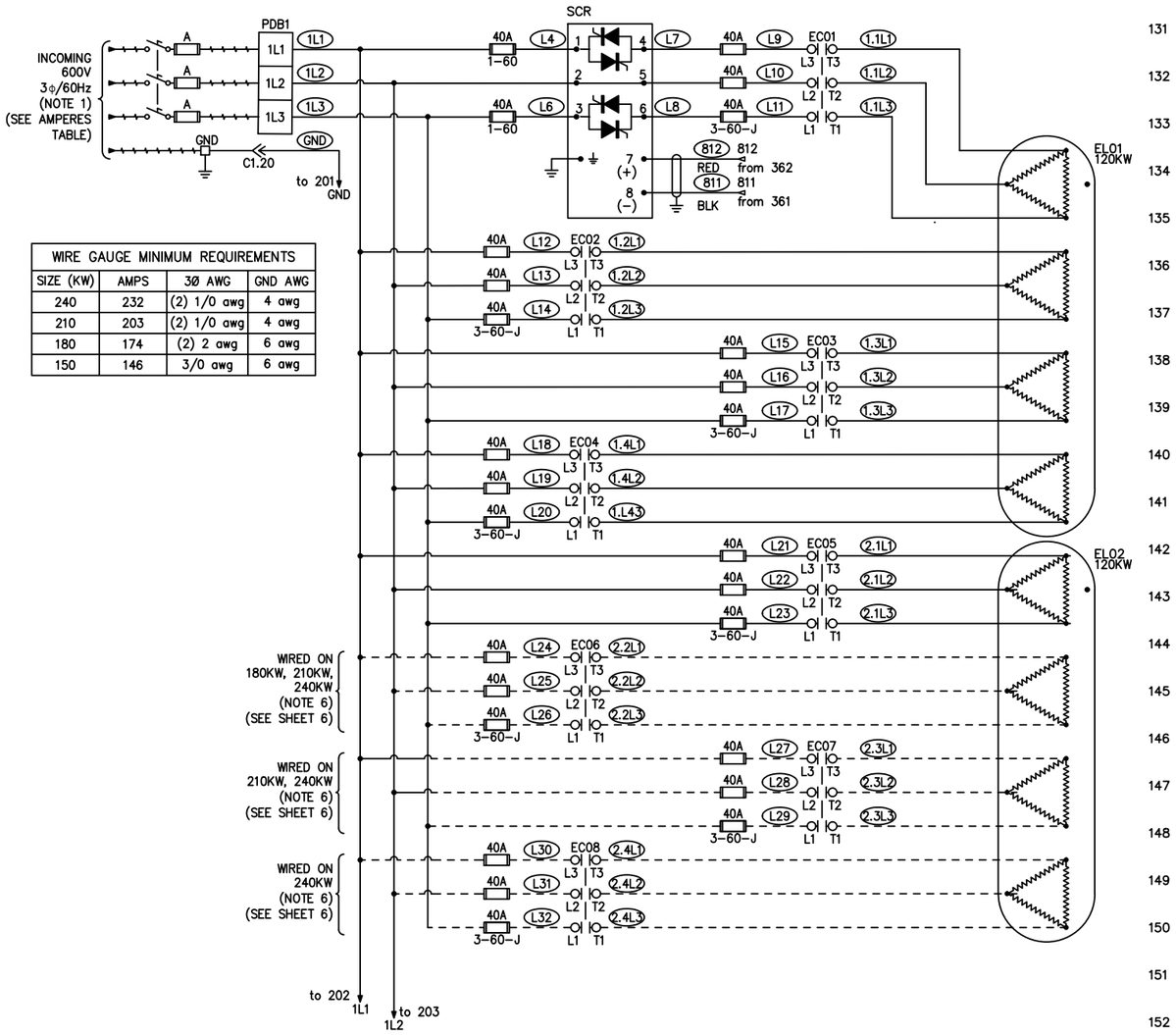

WIRE GAUGE MINIMUM REQUIREMENTS			
SIZE (KW)	AMPS	3Ø AWG	GND AWG
240	232	(2) 1/0 awg	4 awg
210	203	(2) 1/0 awg	4 awg
180	174	(2) 2 awg	6 awg
150	146	3/0 awg	6 awg

AMPERES @ 600V		
SIZE (KW)	FULL LOAD AMPS	MCA
240	232	289.9
210	203	253.8
180	174	217.8
150	146	181.7

NOTES;
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5. (————————) INDICATES OPTIONAL EQUIPMENT.
6. (– – – – – – – –) INDICATES WIRING CHANGES BASED ON DE-RATED OPTIONS.
7. RS232 NOT TERMINATED.
8. (—·——·——·—) INDICATES FACTORY FINAL WIRING.

REV	REVISION DESCRIPTION	B.O.M.	ELEC. ENG	MECH. ENG	CHECKED	APPROVED
-	INITIAL RELEASE -	- -	- -	- -	- -	- -

REVISION HISTORY

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TOLERANCES ON
FRACTIONS ± 1/16
(2) PLACE DEC. ± .01
(3) PLACE DEC. ± .005
ANGLES ± 2 DEG.
SURFACE FINISH
250 MICRO-INCHES

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THIRD ANGLE PROJECTION

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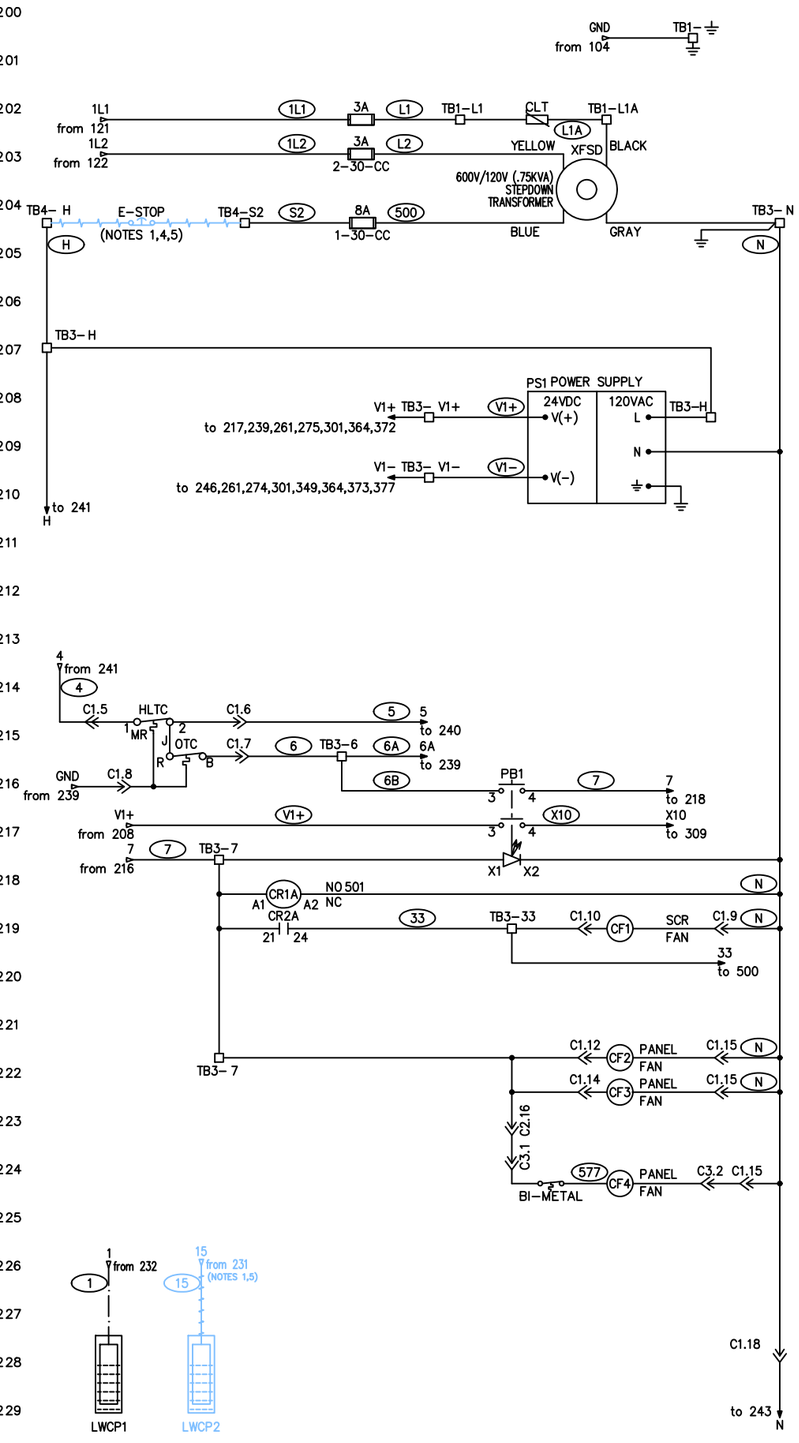
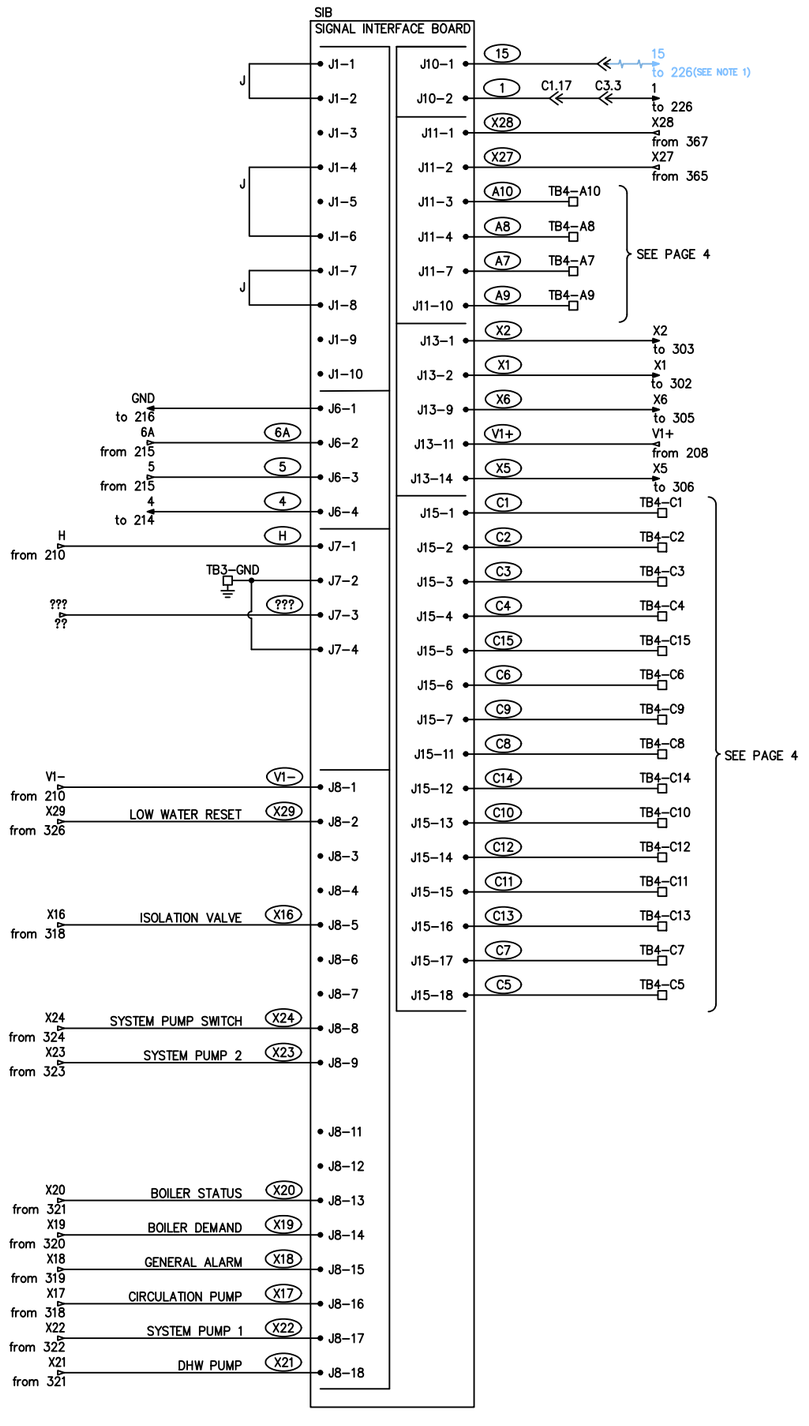
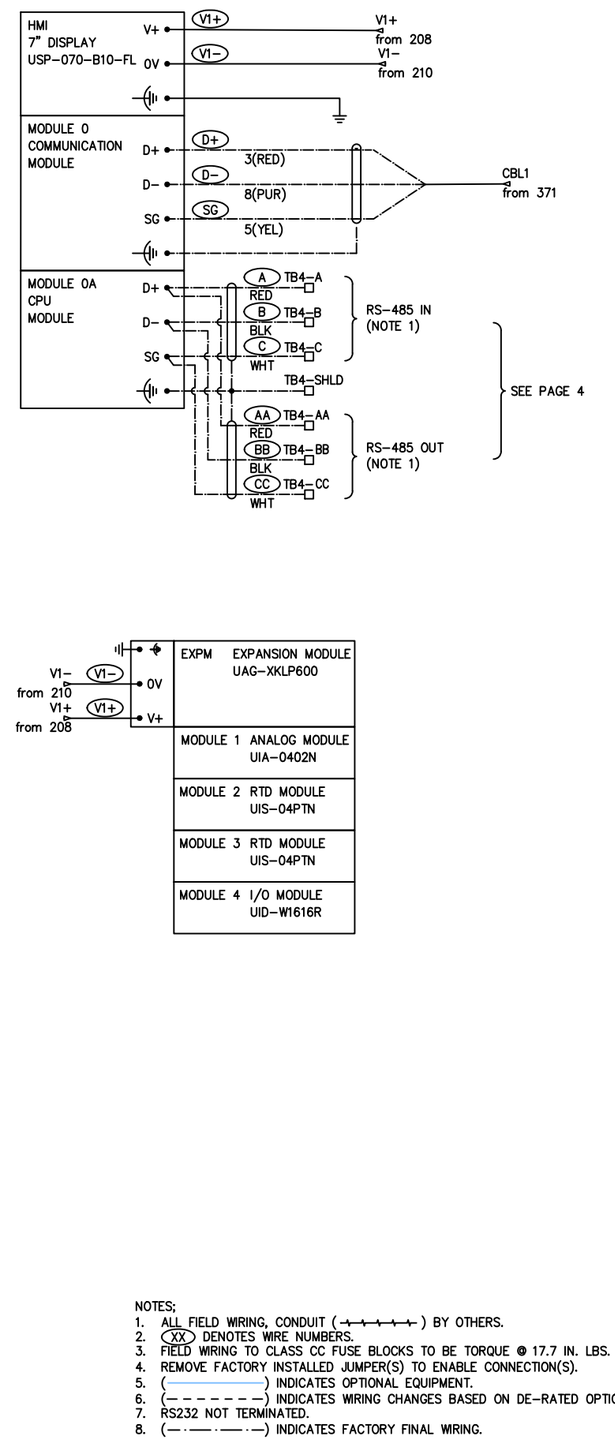
CHECKED BY: LNL 4/4/2025	ELEC. ENG: JES 4/4/2025	PROJECT NAME:	
B.O.M. REVIEW: - -	APPROVED BY: MP 4/4/2025	PROJECT MANAGER:	SHEET 1 OF 6

Fulton
FULTON THERMAL CORPORATION

DRAWING NUMBER	REV
7-53-626240	-







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B.O.M. REVIEW - -	APPROVED BY: MP 4/4/2025	PROJECT MANAGER:	

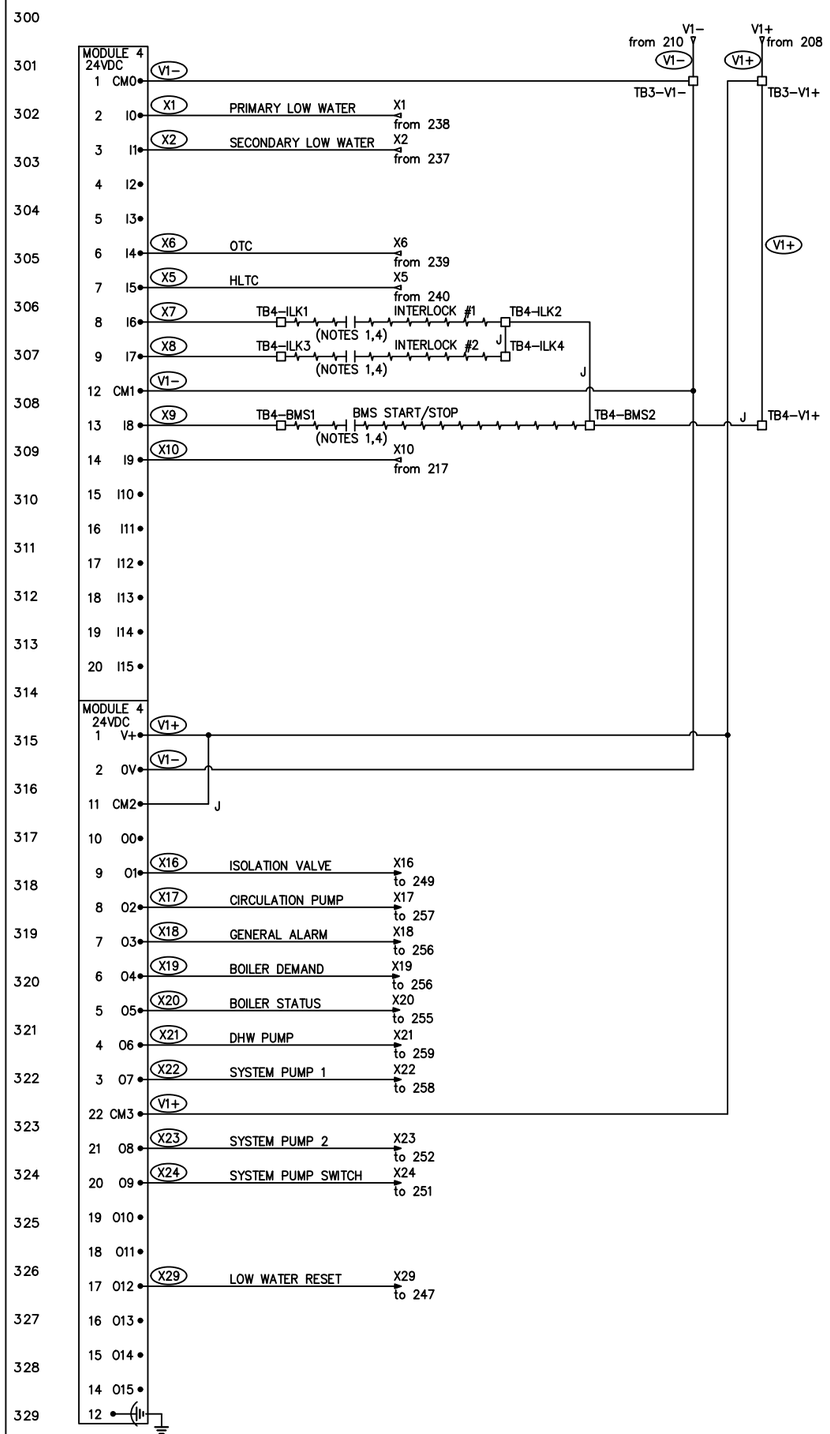
DESCRIPTION:
ELECTRICAL SCHEMATIC - ENDURA ZE BOILER - EZE-240, 600V/60HZ/3Ø

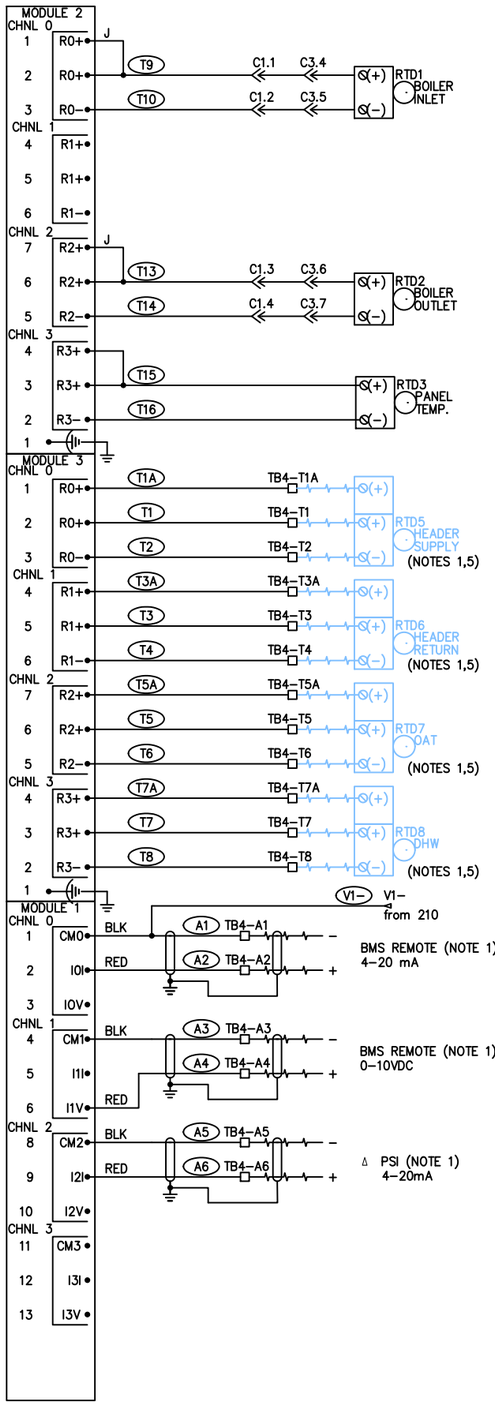
SHEET 2 OF 6

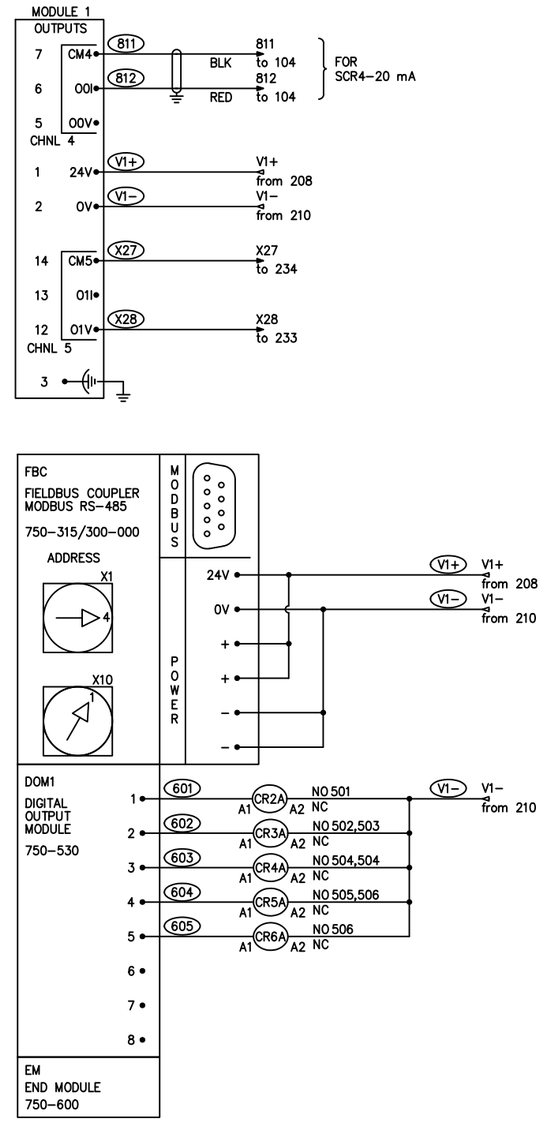
FULTON THERMAL CORPORATION

DRAWING NUMBER 7-53-626240

REV -







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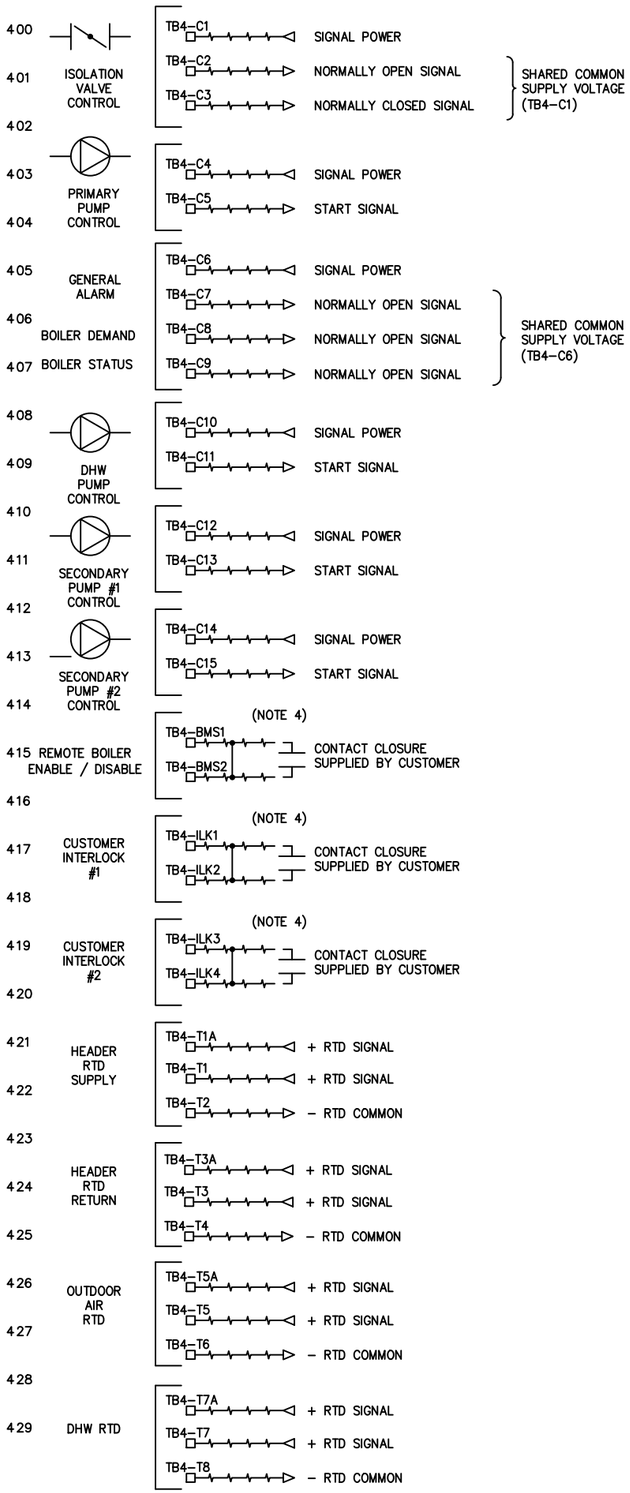
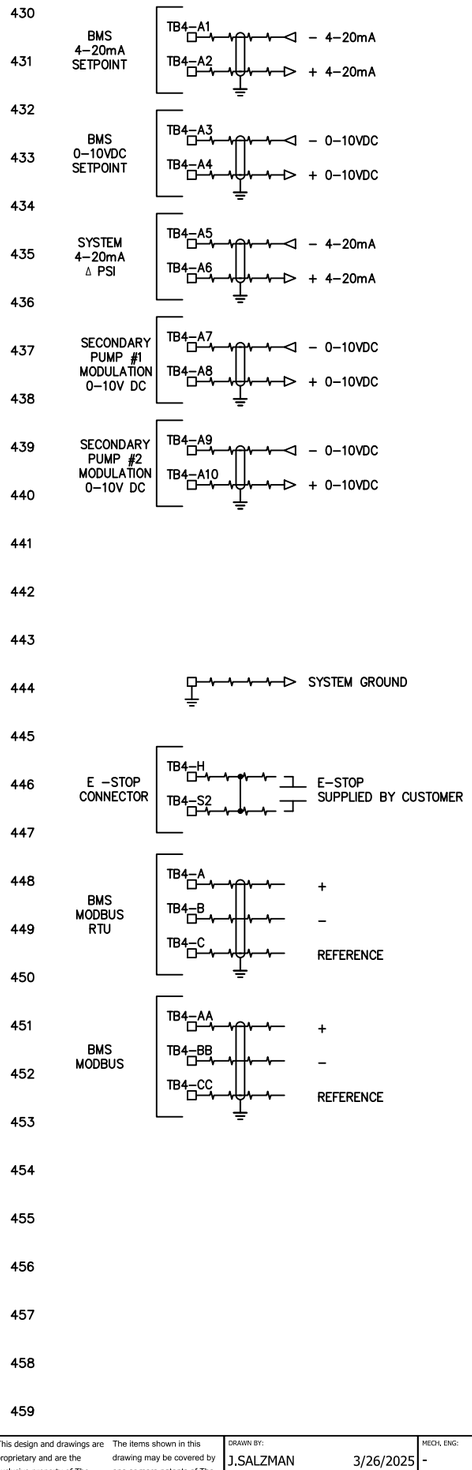
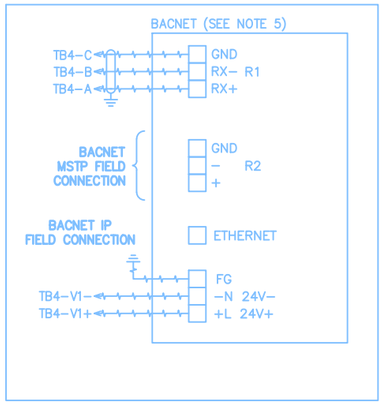
B.O.M. REVIEW: - -	APPROVED BY: MP 4/4/2025	PROJECT MANAGER:	SHEET 3 OF 6

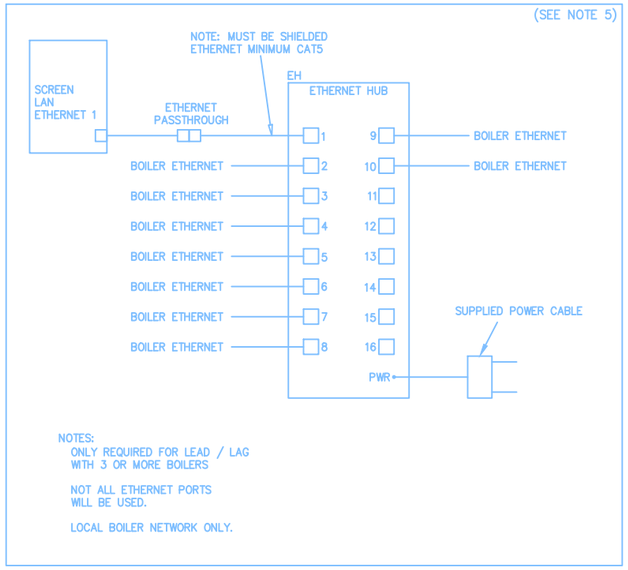
Fulton
FULTON THERMAL CORPORATION

DRAWING NUMBER 7-53-626240 REV -

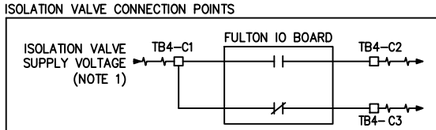








ISOLATION VALVE CONNECTION POINTS



VALVE TYPE	OPEN	CLOSED
POWER CLOSED, SPRING OPEN	N/A	C3
POWER OPEN, SPRING CLOSED	C2	N/A
POWER OPEN, POWER CLOSED	C2	C3

TB–CR		
#'S	A1	A2
CR1A	○	○
CR2A	○	●
CR3A	○	●
CR4A	○	●
CR5A	○	●
CR6A	○	●

TB1–	
#'S	J
L1A	○
L1	○
GND	○

TB3	
#'S	J
6	○
7	●
7	●
33	○
H	●
H	●
H	●
N	●
N	●
N	●
⏚	○
⏚	○
V1+	●
V1+	●
V1+	●
V1+	●
V1–	●
V1–	●
V1–	●
V1–	●
⏚	○
⏚	○
⏚	○

TB4	
#'S	J
H	●
S2	●
C1	○
C2	○
C3	○
C4	○
C5	○
C6	○
C7	○
C8	○
C9	○
C10	○
C11	○
C12	○
C13	○
C14	○
C15	○
V1–	○
V1+	●
BMS2	●
ILK2	●
ILK4	●
BMS1	○
ILK1	○
ILK3	○
AA	○
BB	○
CC	○
SHLD	○
A	○
B	○
C	○
T1A	○
T1	○
T2	○
T3A	○
T3	○
T4	○
T5A	○
T5	○
T6	○
T7A	○
T7	○
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A2	○
A3	●
A4	○
A5	●
A6	○
A7	○
A8	○
A9	○
A10	○
⏚	○
⏚	○
⏚	○
⏚	○

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	-	-	-	-	-	-

REVISION HISTORY

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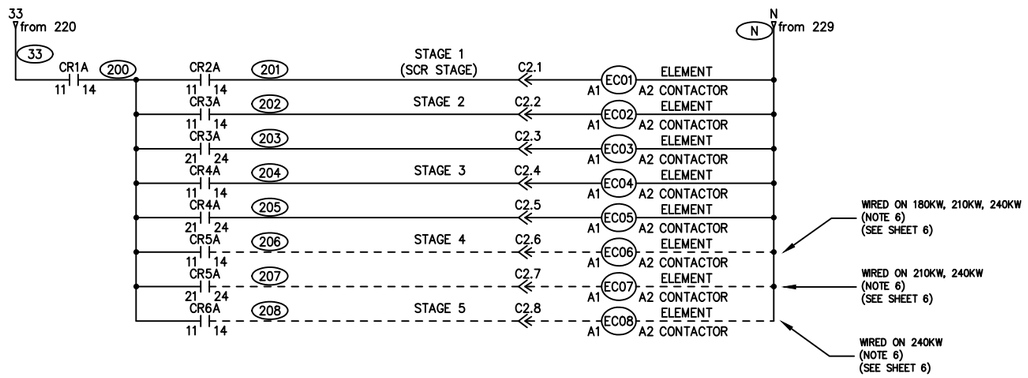
CHECKED BY: LNL 4/4/2025	ELEC. ENG: JES 4/4/2025	PROJECT NAME:	
B.O.M. REVIEW - -	APPROVED BY: MP 4/4/2025	PROJECT MANAGER:	SHEET 4 OF 6

Fulton
FULTON THERMAL CORPORATION

DRAWING NUMBER 7-53-626240 REV -



Installation: FACTORY Location: DOOR

CATALOG	DESCRIPTION	TAG	QTY
---RTD----	RTD	RTD3	1
2-45-315001 *	UNISTREAM, HMI, 7" DISPLAY	HMI	1
2-45-315006 *	COMMUNICATION MODULE	MODULE 0	1
2-45-315007 *	CPU	MODULE 0A	1
2-45-315009 *	PUSH BUTTON, MOMENTARY, 22MM, CLEAR	PB1	1
2-45-315110 *	MODULE HOLDER, 3 POSITION		1
2-45-315114 *	LED MODULE, INTEGRATED LED, 24-240V AC/DC		1
2-45-315115 *	CONTACT MODULE, (1) N.O.		2

Installation: FACTORY Location: CABINET

CATALOG	DESCRIPTION	TAG	QTY
---HLTC---	LIMIT CONTROL, TEMPERATURE, WITH MANUAL RESET	HLTC	1
---OTC----	LIMIT CONTROL, TEMPERATURE, WITH AUTO RESET	OTC	1
2-40-420013-42	BI-METAL TEMPERATURE SWITCH, CLOSE ON RISE, [86°F (30°C)]	BI-METAL	1
2-40-420014-42	FAN, 120VAC	CF4	1
2-45-000395 *	FAN, 4", ENCLOSURE MOUNT, 120VAC, W/FILTER, 6.11"h x 7.38"w, 0.5"d	CF2 CF3	2
2-22-000602 *	STEEL BINDING BARRELS, 10-32 THREAD SIZE, 5/16" LENGTH		4

Installation: FACTORY Location: PRESSURE VESSEL

CATALOG	DESCRIPTION	TAG	QTY
---LWCP----	LOW WATER CUTOFF PROBE	LWCP1	1
---RTD----	RTD	RTD1 RTD2	2
---120KW---	IMMERSION HEATER, 120KW, 4 CIRCUIT	EL01 EL02	2

Installation: FIELD Location: OPTIONAL

CATALOG	DESCRIPTION	TAG	QTY
---LWCP----	LOW WATER CUTOFF PROBE	LWCP2	1
2-45-000733 *	PUSH BUTTON, PUSH-PULL, (1) N.C., WITH MUSHROOM HEAD, E-STOP, W/LEGEND PLATE	E-STOP	1
4-30-000500	PT100 - SENSOR KIT, TEMPERATURE [OUTDOOR]	RTD7	1
4-30-000510	PT100 - SENSOR KIT, TEMPERATURE [SUPPLY/RETURN]	RTD5 RTD6	2
4-30-315300	PT100 - SENSOR KIT, TEMPERATURE [DHW]	RTD8	1

Installation: FACTORY Location: POWER PANEL

CATALOG	DESCRIPTION	TAG	QTY
---CF----*	FAN, SCR, 120VAC	CF1	1
2-40-003026 *	CONTACTOR, ELEMENT, 120VAC	EC01 EC02 EC03 EC04 EC05 EC06 EC07 EC08	8
2-40-277600 *	SCR, POWER CONTROLLER, 277-600Vac	SCR	1
2-45-000011 *	FUSE, CLASS J, JLS, 600V, 40 AMP	40A	24
2-45-000244 *	HOLDER, FUSE, CLASS J, 3P, 600V, 60A	3-60-J	8
2-45-000581 *	COVER, FUSE, CLASS J, FINGER SAFE, 1P, 600V, 60A		24
2-45-100103 *	POWER DISTRIBUTION BLOCK, 760A, 3P, 2-LINE (4AWG-500KCMIL), 12-LOAD (14AWG-4AWG)	PDB1	3
2-45-100104 *	POWER DISTRIBUTION BLOCK, COVER		9
2-45-175114 *	HOLDER, FUSE, SEMI-CONDUCTOR, 1P, 700V, 63A	1-60	2
2-45-178040 *	FUSE, 40 AMP, SEMI-CONDUCTOR, 700V	40A	2

Installation: FACTORY Location: DOOR PANEL

CATALOG	DESCRIPTION	TAG	QTY
2-45-000365 *	FUSE, CLASS CC, KLKD, 600V, 8 AMP	8A	1
2-45-000371 *	HOLDER, FUSE, CLASS CC, 1P, 600V, 30A	1-30-CC	1
2-45-000381 *	FUSE, CLASS CC, KLDR, 600V, 3 AMP	3A	2
2-45-000433 *	HOLDER, FUSE, CLASS CC, 2P, 600V, 30A	2-30-CC	1
2-45-315004 *	UNISTREAM-IO, 4-RTD INPUT	MODULE 2 MODULE 3	2
2-45-315005 *	UNISTREAM-IO, DIGITAL INPUT/OUTPUT	MODULE 4	1
2-45-315068 *	THERMISTOR, NTC, CURRENT LIMITING	CLT	1
2-45-315121 *	PLC, INPUT/OUTPUT MODULE, ANALOG	MODULE 1	1
2-45-315123 *	POWER SUPPLY, 24VDC	PS1	1
2-45-620001 *	FIELDBUS COUPLER, MODBUS, RS-485, 24VDC	FBC	1
2-45-620004 *	DB9 CABLE ASSEMBLY, MALE, TINNED WIRE LEADS		1
2-45-620002 *	DIGITAL OUTPUT MODULE, 8-CHANNEL, 24VDC	DOM1	1
2-45-620003 *	END MODULE	EM	1
2-45-880360 *	RELAY, CONTROL, 120VAC, 2P	CR1A	1
2-45-880400 *	RELAY, CONTROL, 24VDC, 2P	CR2A CR3A CR4A CR5A CR6A	5
7-60-000100 *	I/O BOARD, PCB	SIB	1

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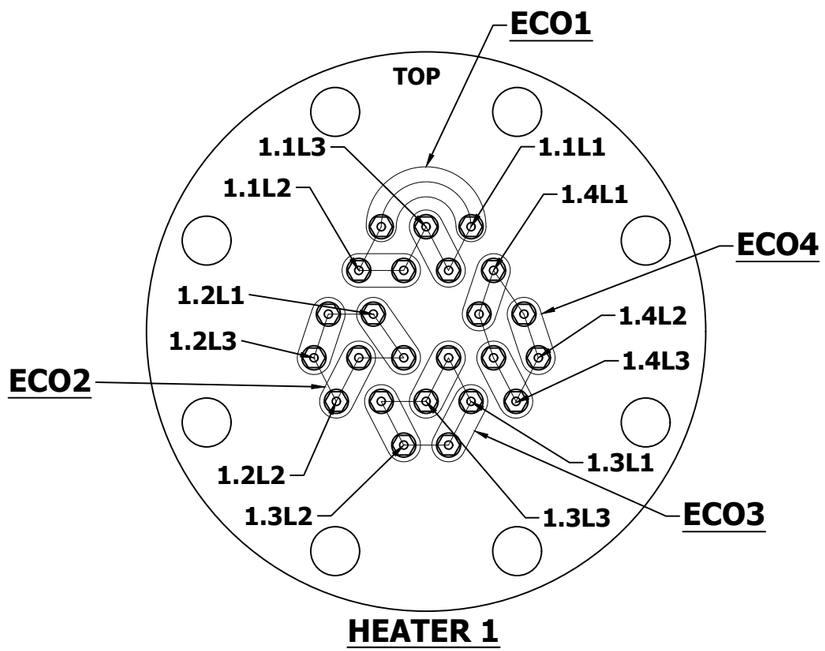
Fulton
FULTON THERMAL CORPORATION

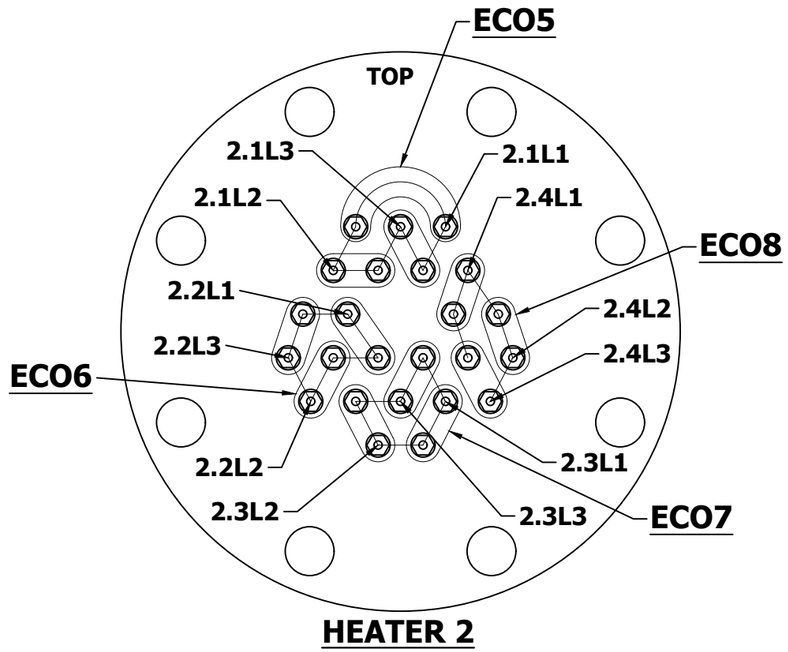
DRAWING NUMBER 7-53-626240 REV -

ELEMENT DERATE CONFIGURATIONS		
DERATE	EC	ELEMENT CIRCUITS
240KW	EC01 - EC08	1.1L1 -2.4L3
210KW	EC01 - EC07	1.1L1 - 2.3L3
180KW	EC01 - EC06	1.1L1 - 2.2L3
150KW	EC01 - EC05	1.1L1 - 2.1L3

CONTROL RELAY / I/O OUTPUT						
HEATER	ECO	ELEMENT CIRCUITS	240KW	210KW	180KW	150KW
1	ECO 01	1.1 L1 L2 L3	1	1	1	1
1	ECO 02	1.2 L1 L2 L3	2	2	2	2
1	ECO 03	1.3 L1 L2 L3	3	3	3	3
1	ECO 04	1.4 L1 L2 L3	4	4	4	4
2	ECO 05	2.1 L1 L2 L3	5	5	5	5
2	ECO 06	2.2 L1 L2 L3	6	6	6	
2	ECO 07	2.3 L1 L2 L3	7	7		
2	ECO 08	2.4 L1 L2 L3	8			



HEATER 1



HEATER 2

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7. RS232 NOT TERMINATED.
8. (—·—·—·—) INDICATES FACTORY FINAL WIRING.

REV	REVISION DESCRIPTION	B.O.M.	ELEC. ENG	MECH. ENG	CHECKED	APPROVED
-	INITIAL RELEASE	-	-	-	-	-
	-	-	-	-	-	-

REVISION HISTORY

UNLESS OTHERWISE NOTED:
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRACTIONS ± 1/16
(2) PLACE DEC. ± .01
(3) PLACE DEC. ± .005
ANGLES ± 2 DEG.
SURFACE FINISH
250 MICRO-INCHES

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The items shown in this drawing may be covered by one or more patents of The Fulton Companies.

THIRD ANGLE PROJECTION

DRAWN BY: J.SALZMAN 3/26/2025	MECH. ENG: - -	JOB NUMBER:	DESCRIPTION: ELECTRICAL SCHEMATIC - ENDURA ZE BOILER - EZE-240, 600V/60HZ/3Ø
CHECKED BY: LNL 4/4/2025	ELEC. ENG: JES 4/4/2025	PROJECT NAME:	
B.O.M. REVIEW: - -	APPROVED BY: MP 4/4/2025	PROJECT MANAGER:	SHEET 6 OF 6

FULTON THERMAL CORPORATION

DRAWING NUMBER 7-53-626240

REV -