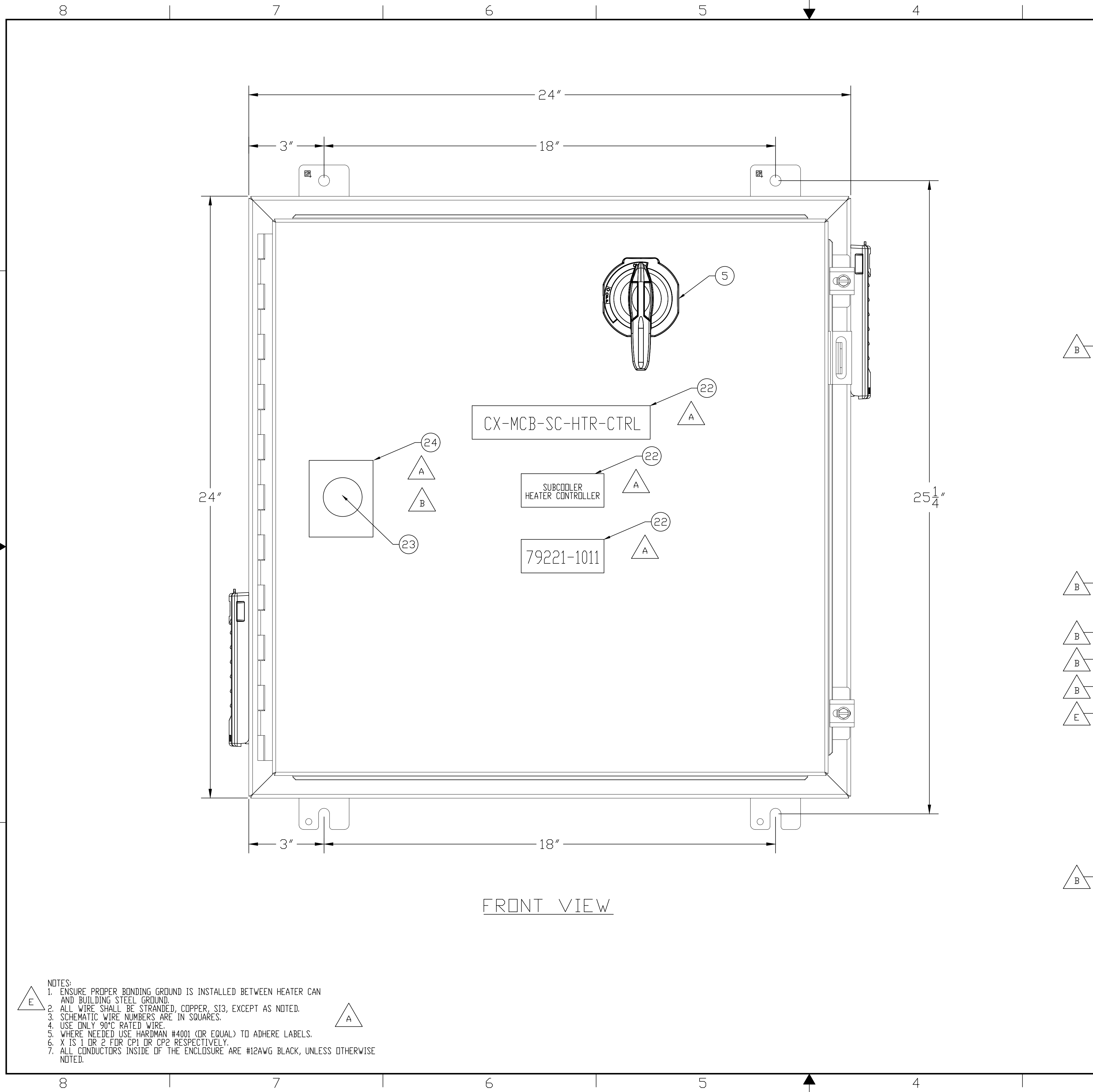


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FRONT VIEW

- NOTES:
1. ENSURE PROPER BONDING GROUND IS INSTALLED BETWEEN HEATER CAN AND BUILDING STEEL GROUND.
  2. ALL WIRE SHALL BE STRANDED, COPPER, S13, EXCEPT AS NOTED.
  3. SCHEMATIC WIRE NUMBERS ARE IN SQUARES.
  4. USE ONLY 90°C RATED WIRE.
  5. WHERE NEEDED USE HARDMAN #4001 (OR EQUAL) TO ADHERE LABELS.
  6. X IS 1 OR 2 FOR CP1 OR CP2 RESPECTIVELY.
  7. ALL CONDUCTORS INSIDE OF THE ENCLOSURE ARE #12AWG BLACK, UNLESS OTHERWISE NOTED.

REVISION HISTORY				
ZONE	REV	DESCRIPTION	DATE	APPROVED
ALL	-	INITIAL SUBMITTAL	TMM 30AUG17	30AUG17 R. NORTON
VAR	A	1. ADDED VOLTAGE INDICATOR TO PARTS LIST AND BODY OF DRAWING. 2. ADDED LABEL TO PARTS LIST AND ENCLOSURE 3. ADDED NOTE FIVE. 4. RELOCATED NOTES TO SH 1. 5. ADDED GENERIC LABELS. 2. REMOVED TEXT ABOVE THE DISCONNECT SWITCH.	TMM 30NOV17	30NOV17 R. NORTON
SH1	B	1. REVISED VOLTAGE INDICATOR AND ADDED LABEL TO PARTS LIST AND BODY OF DRAWING. 2. ADDED TEXT TO THE ELEMENTS. 3. REVISED SCHEMATICS ENTIRELY. 4. ADDED ITEM NO 25. 5. REVISED ITEM NO 11 AND 13 QTY'S. 6. REVISED ITEM NO 9, 10 AND 11 DESCRIPTIONS. 7. REVISED ITEM NO 2, 11 PART NO. 8. REVISED WIRE TERMINATIONS. 9. ADDED NOTE 6 AND 7.	SS 15JAN18	15JAN18 R. NORTON

QTY REQD	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	NOTES
4	25	2004-1401	4-CONDUCTOR THROUGH TERMINAL BLOCK	-	-
1	24	R-3W-L	SAFESIDE VOLTAGE INDICATOR LABEL	-	-
1	23	R-3W	SAFESIDE VOLTAGE INDICATOR	-	-
A/R	22	GENERIC	LABEL, ENGRAVED OR PRINTED	TEXT AS SHOWN	NOTE 5
2	21	WAGO 2002-991	END PLATE FOR FUSE TERMINAL BLOCKS	-	-
4	20	WAGO 249-116	END STOP	-	-
2	19	WAGO 870-568	3 LEVEL TB END BARRIER	-	-
4	18	WAGO 870-551	THREE LEVEL TERMINAL BLOCKS	-	-
1	17	HOFFMAN HF0526414	FAN	-	-
1	16	HOFFMAN HG0500404	EXHAUST GRILLE	-	-
1	15	ALLEN-BRADLEY 700-HN100	RELAY SOCKET, DPDT	-	-
1	14	ALLEN-BRADLEY 700-HA32Z24	RELAY, DPDT, 24VDC COIL	-	-
4	13	WAGO 2002-1611	2-CONDUCTOR FUSE DISCONNECT TERMINAL BLOCK WITH PIVOTING FUSE HOLDER	WITH 2EA 1/2A, 2EA 1A, 250V FUSES	-
A/R	12	WAGO 210-1142	35MM X 7.5MM CARRIER RAIL	-	-
4	11	BUSS CHCC2DU	FUSE BLOCK 2-POSITION	WITH KTK-R-15A FUSES	-
3	10	WAGO 2004-1491	END & INTERMEDIATE PLATE	-	-
6	9	WAGO 285-135	4-CONDUCTOR GROUND TERMINAL BLOCK	-	-
1	8	SAGINAW CONTROL SCE-24P24	ENCLOSURE PANEL, 24"x24"	-	-
1	7	SAGINAW CONTROL SCE-242416LP	ENCLOSURE, 24"x24"x16"	-	-
1	6	ALLEN-BRADLEY 194R-N1	DISCONNECT SWITCH SHAFT	-	-
1	5	ALLEN-BRADLEY 194R-PYT	DISCONNECT SWITCH HANDLE	-	-
1	4	DISCONNECT SWITCH 194R-N30-1753	DISCONNECT SWITCH	-	-
1	3	CUTLER-HAMMER CN35DN3AB	CONTACTOR, 3-POLE, 208V CNT 120V COIL	-	-
1	2	OHIOSEMITRONICS PC5-064EY25	POWER TRANSDUCER WITH EXTERNAL CURRENT SENSOR	-	-
1	1	HDR POWER SYSTEMS SHZF3-208-25-NC-01	THREE PHASE, 208VAC, 25A SCR POWER CONTROLLER	-	-

THIRD ANGLE PROJECTION

FINISH MACHINED SURFACES UNLESS OTHERWISE NOTED  
DEBURR & BREAK ALL SHARP EDGES

DO NOT SCALE DRAWING

DATE 30AUG17

SCALE NONE

USED IN ASSY NO N/A

SHEET 1 OF 3

SEE PARTS LIST

OPERATED BY Jefferson Science Associates, LLC

Jefferson Lab  
Thomas Jefferson National Accelerator Facility

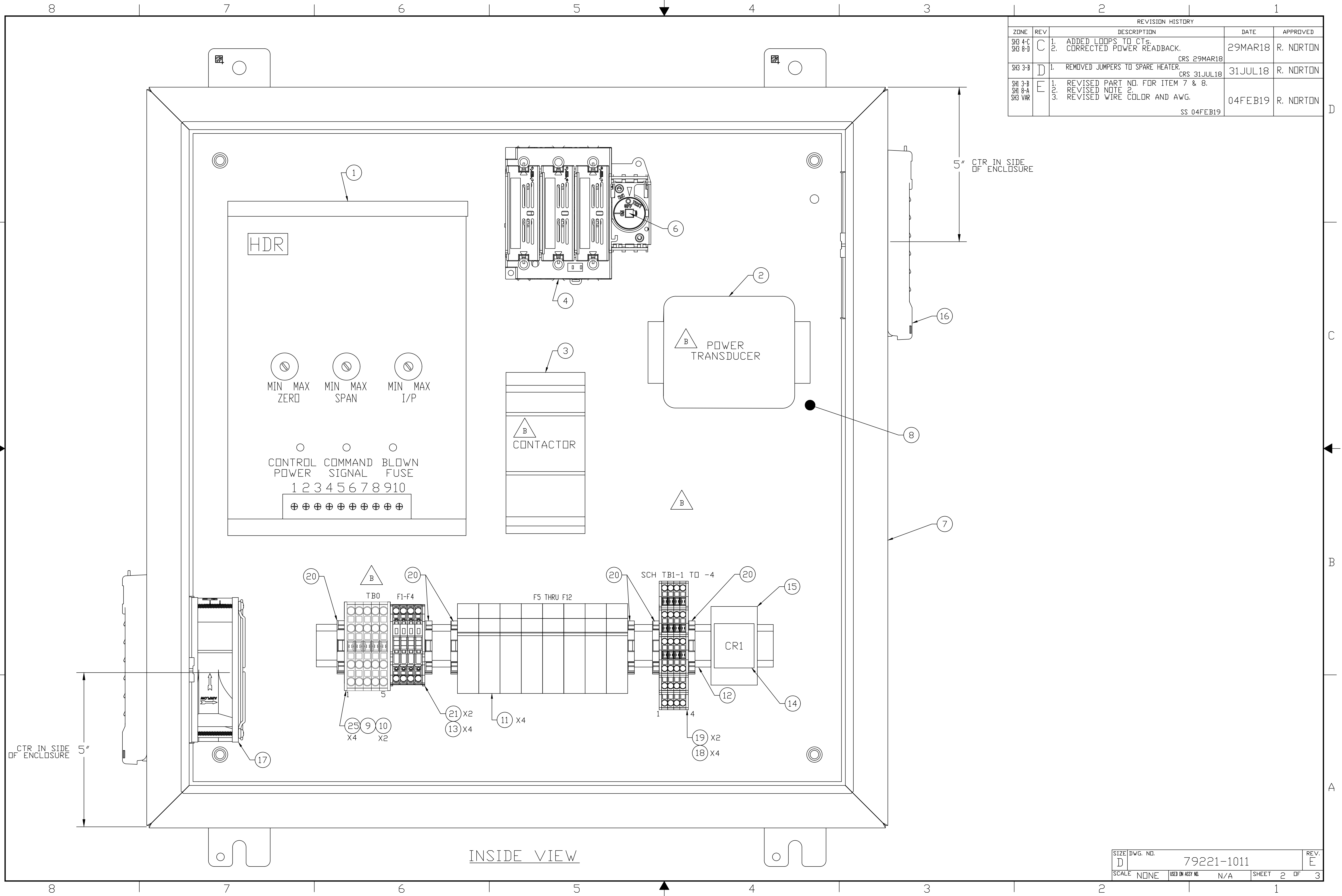
LCLS II  
4K COLD BOX SYSTEM  
SUBCOOLER HEATER  
CONTROLLER DETAILS & SCHEMATIC

SIZE DWG. NO. 79221-1011

REV. E

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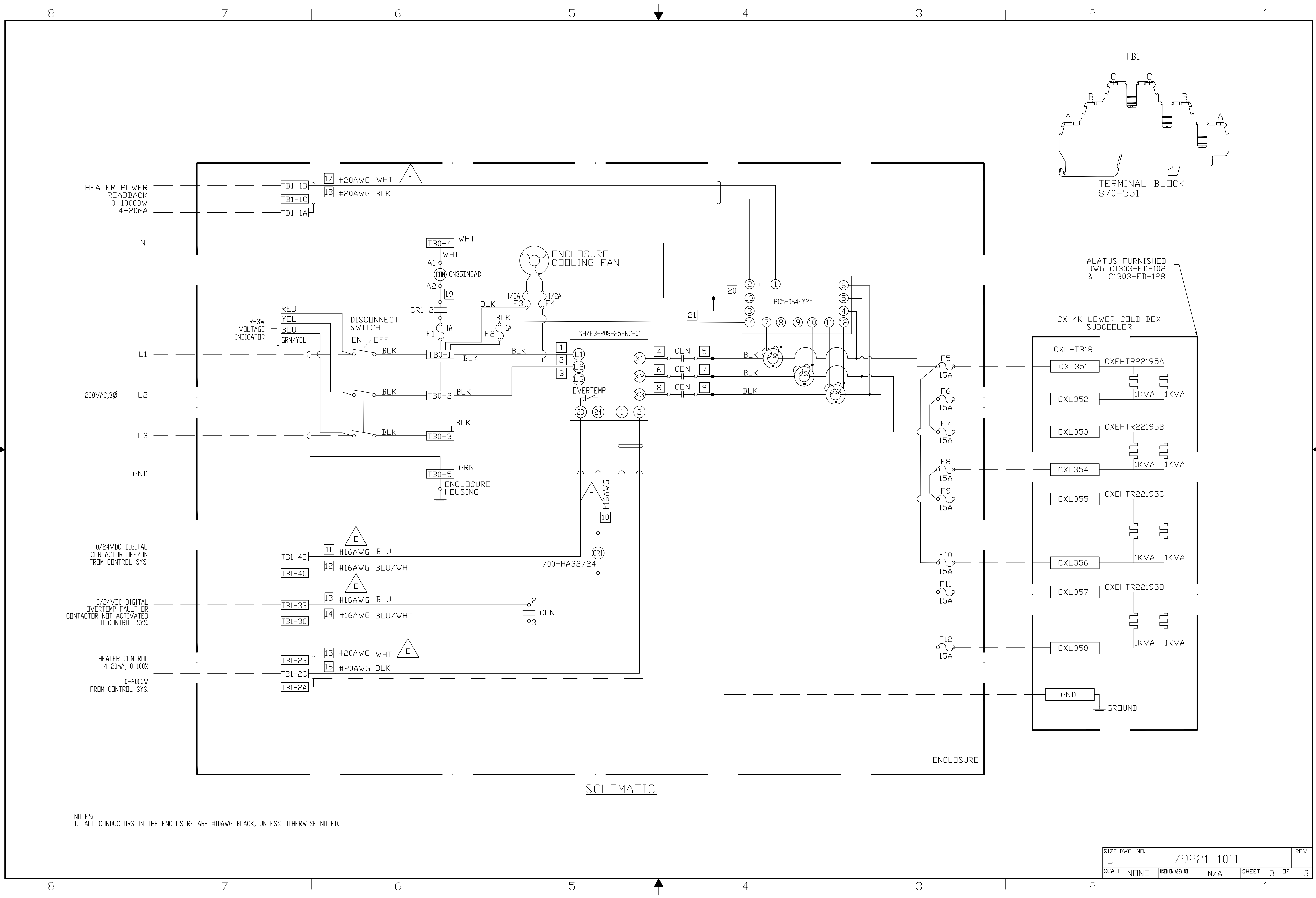
REVISION HISTORY				
ZONE	REV	DESCRIPTION	DATE	APPROVED
SH3 4-C SH3 8-D	C	1. ADDED LOOPS TO CTs. 2. CORRECTED POWER READBACK. CRS 29MAR18	29MAR18	R. NORTON
SH3 3-B	D	1. REMOVED JUMPERS TO SPARE HEATER. CRS 31JUL18	31JUL18	R. NORTON
SH3 3-B SH3 8-A SH3 VAR	E	1. REVISED PART NO. FOR ITEM 7 & 8. 2. REVISED NOTE 2. 3. REVISED WIRE COLOR AND AWG. SS 04FEB19	04FEB19	R. NORTON



INSIDE VIEW

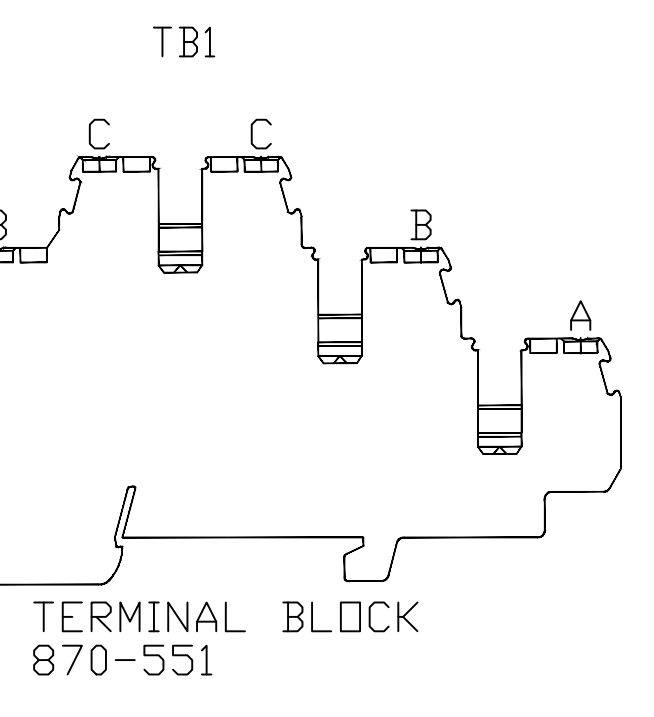
SIZE	DWG. NO.	REV.
D	79221-1011	E
SCALE	USED ON ASSY NO.	SHEET 2 OF 3
NONE	N/A	

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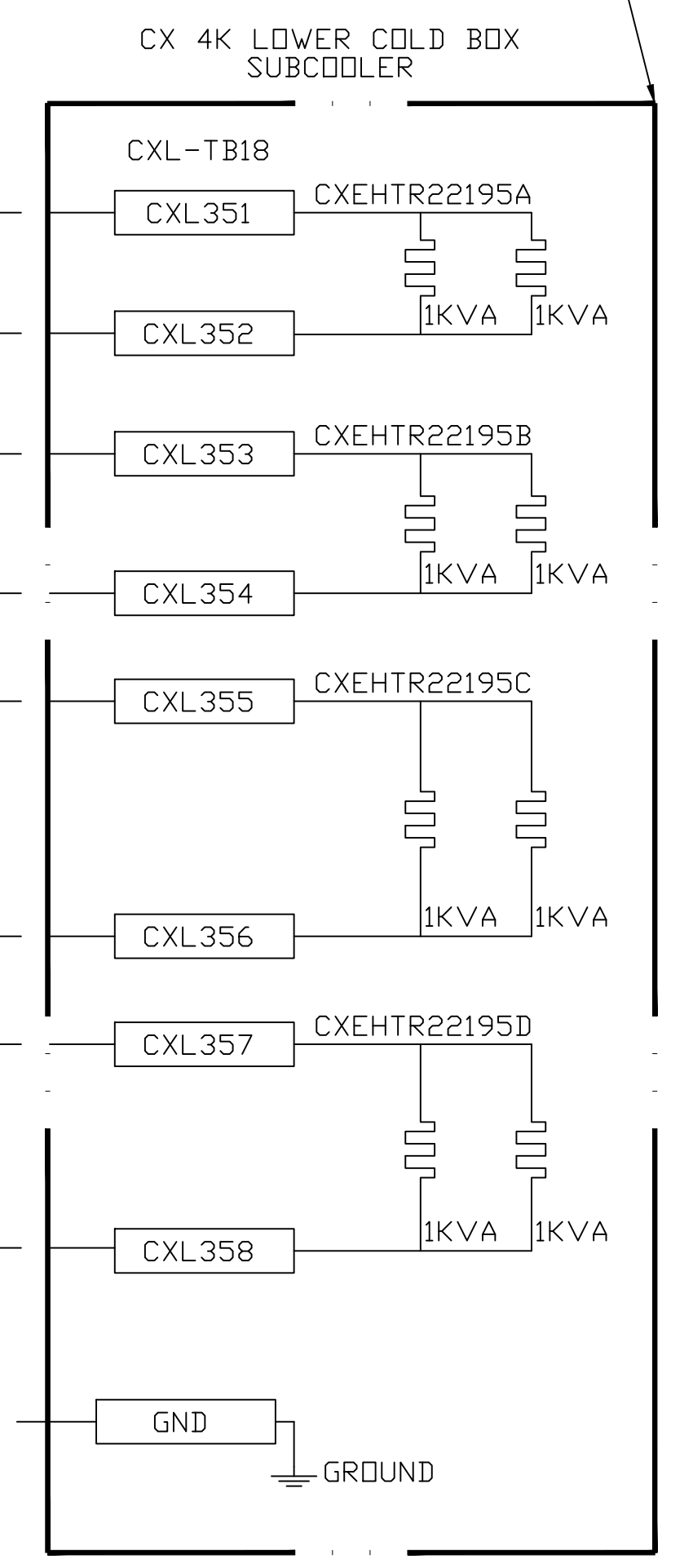


SCHEMATIC

NOTES:  
 1. ALL CONDUCTORS IN THE ENCLOSURE ARE #10AWG BLACK, UNLESS OTHERWISE NOTED.



ALATUS FURNISHED  
 DWG C1303-ED-102  
 & C1303-ED-128



SIZE	DWG. NO.	REV.
D	79221-1011	E
SCALE	USED ON ASSY NO.	SHEET
NONE	N/A	3 OF 3