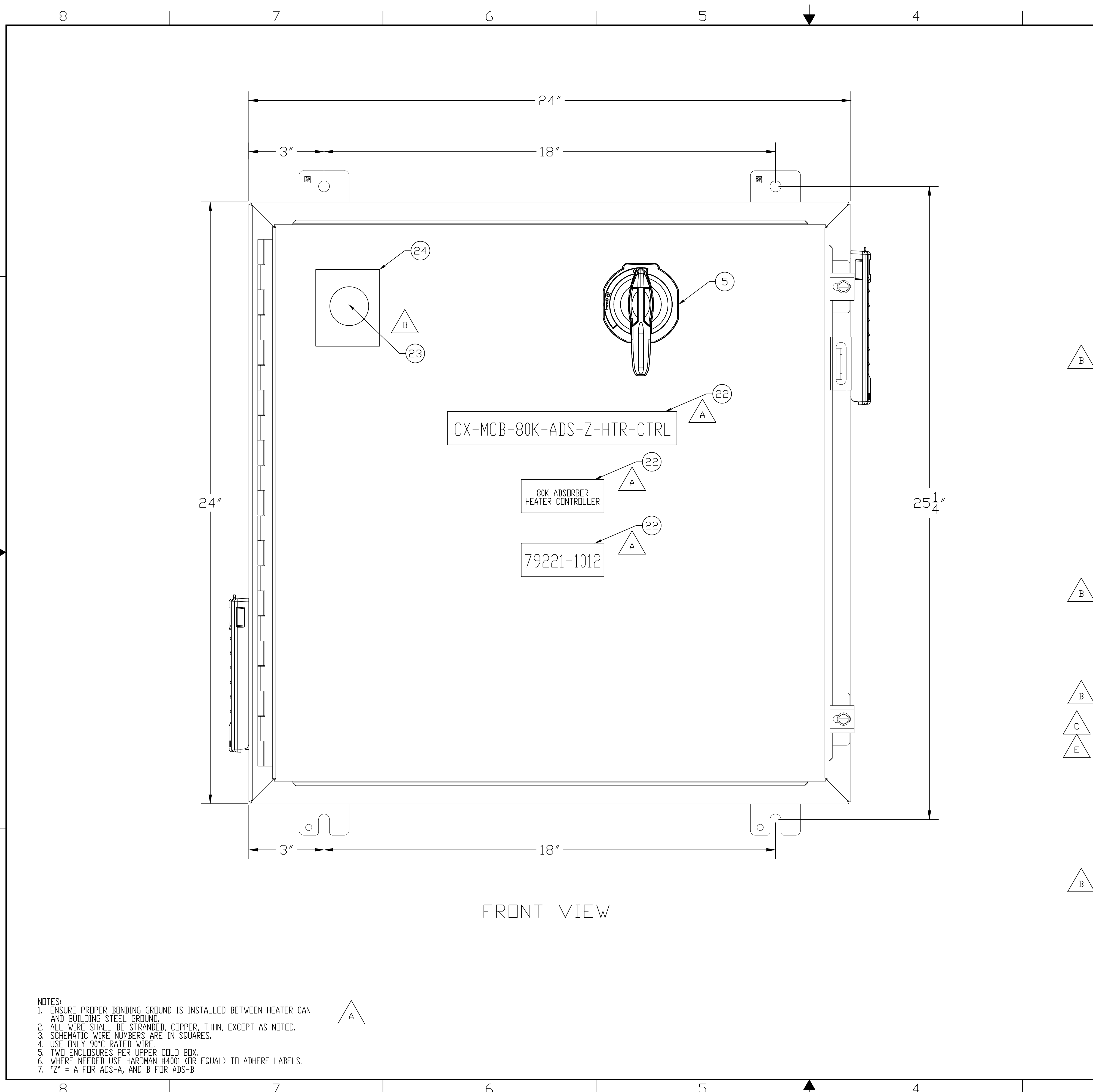


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FRONT VIEW

- NOTES:
1. ENSURE PROPER BONDING GROUND IS INSTALLED BETWEEN HEATER CAN AND BUILDING STEEL GROUND.
  2. ALL WIRE SHALL BE STRANDED, COPPER, THHN, EXCEPT AS NOTED.
  3. SCHEMATIC WIRE NUMBERS ARE IN SQUARES.
  4. USE ONLY 90°C RATED WIRE.
  5. TWO ENCLOSURES PER UPPER COLD BOX.
  6. WHERE NEEDED USE HARDMAN #4001 (OR EQUAL) TO ADHERE LABELS.
  7. 'Z' = A FOR ADS-A, AND B FOR ADS-B.

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 6. 4. RELOCATED NOTES TO SH 1. 5. ADDED GENERIC LABELS. 6. REMOVED TEXT ABOVE THE DISCONNECT SWITCH. 7. ADDED NOTE 7.	TMM 29NOV17 29NOV17	R. NORTON
SH1 SH1 SH3 SH1 3-C SH1 3-B SH1 3-B SH1 3-A SH2 VAR SH3	B	1. REVISED VOLTAGE INDICATOR IN PART LIST AND DRAWING BODY. 2. ADDED VOLTAGE INDICATOR LABEL IN PART LIST AND DRAWING BODY. 3. REVISED SCHEMATIC ENTIRELY. 4. ADDED ITEM NO 25. 5. REVISED ITEM NO 13 QTY, WAS 3. 6. REVISED ITEM NO 9 AND 10. 7. REVISED ITEM NO 2. 8. REVISED TERMINATIONS. 9. ADDED WIRE COLORS.	SS 05JAN18 05JAN18	R. NORTON

QTY REQD	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	NOTES
4	25	WAGO 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 6
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 HG0500504	FAN	-	-
1	16	HOFFMAN HF0526514	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	-	-
2	11	BUSS CHCC3DU	FUSE BLOCK 3-POSITION	WITH KTK-R-15A FUSES	-
2	10	WAGO 2004-1491	END & INTERMEDIATE PLATE	-	-
1	9	WAGO 870-837	4-CONDUCTOR GROUND TERMINAL BLOCK	-	-
1	8	SAGINAW CONTROL SCE-24P24	ENCLOSURE PANEL, 24"x24"	-	-
1	7	SAGINAW CONTROL SCE-242416LP	ENCLOSURE, 24"x24"x12"	-	-
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 CN35GN3AB	CONTACTOR, 3-POLE, 208V CNT 120V COIL	-	-
1	2	OHIOSEMITRONICS PC5-064EY25	POWER TRANSDUCER WITH EXTERNAL CURRENT SENSOR	-	-
1	1	HDR POWER SYSTEMS SHZF3-208-60-NC-01	THREE PHASE, 208VAC, 60A SCR POWER CONTROLLER	-	-

THIRD ANGLE PROJECTION

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

DO NOT SCALE DRAWING

DRAWN T.MCCOOL DATE 30AUG17

SCALE NONE USED IN ASSY NO N/A SHEET 1 OF 3

SEE PARTS LIST

U.S. Department of Energy Office of Science

**Jefferson Lab**  
Thomas Jefferson National Accelerator Facility

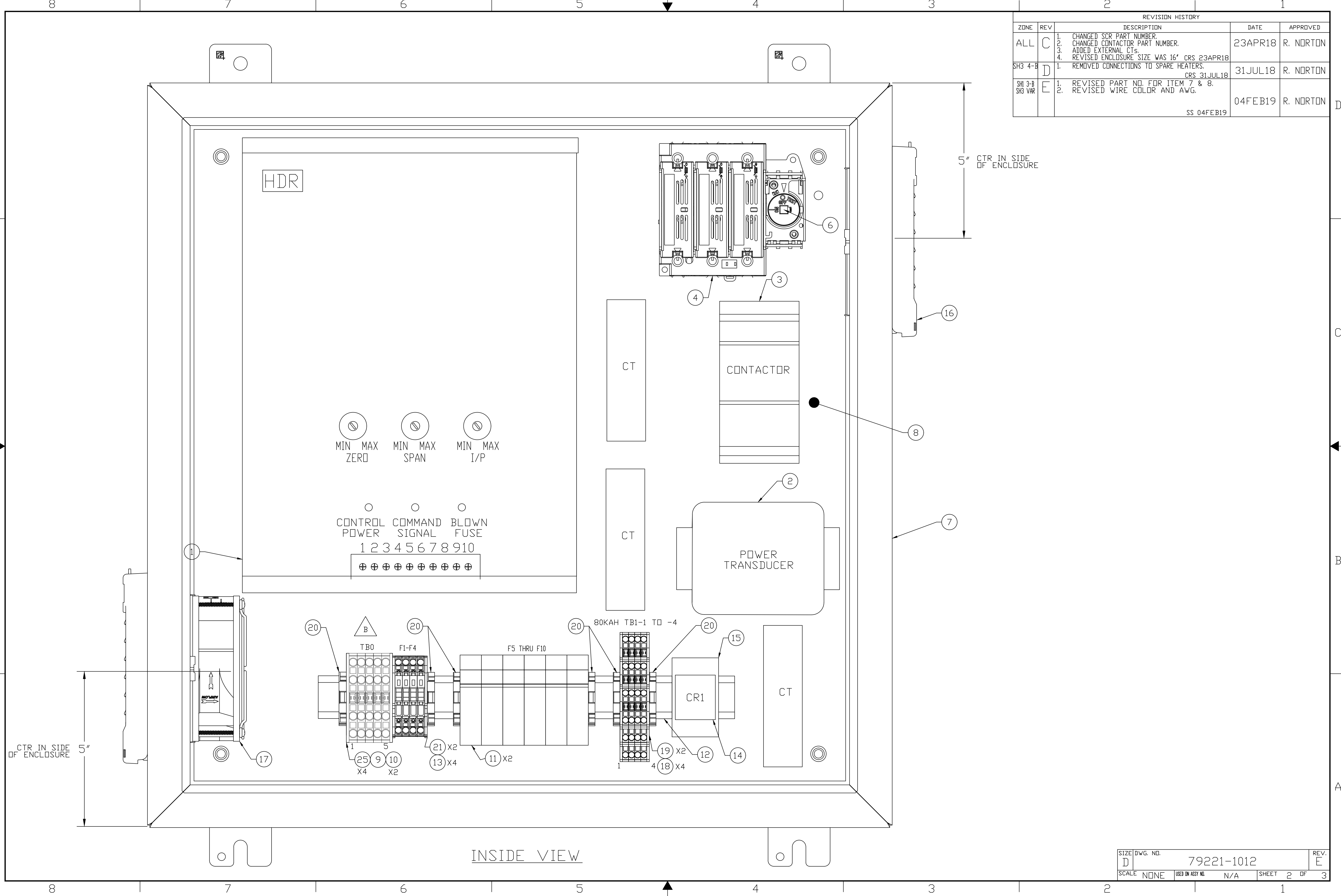
Operated by Jefferson Science Associates, LLC

LCLS II  
4K COLD BOX SYSTEM  
80K ADSORBER HEATER  
CONTROLLER DETAILS & SCHEMATIC

SIZE DWG. NO. 79221-1012 REV. E

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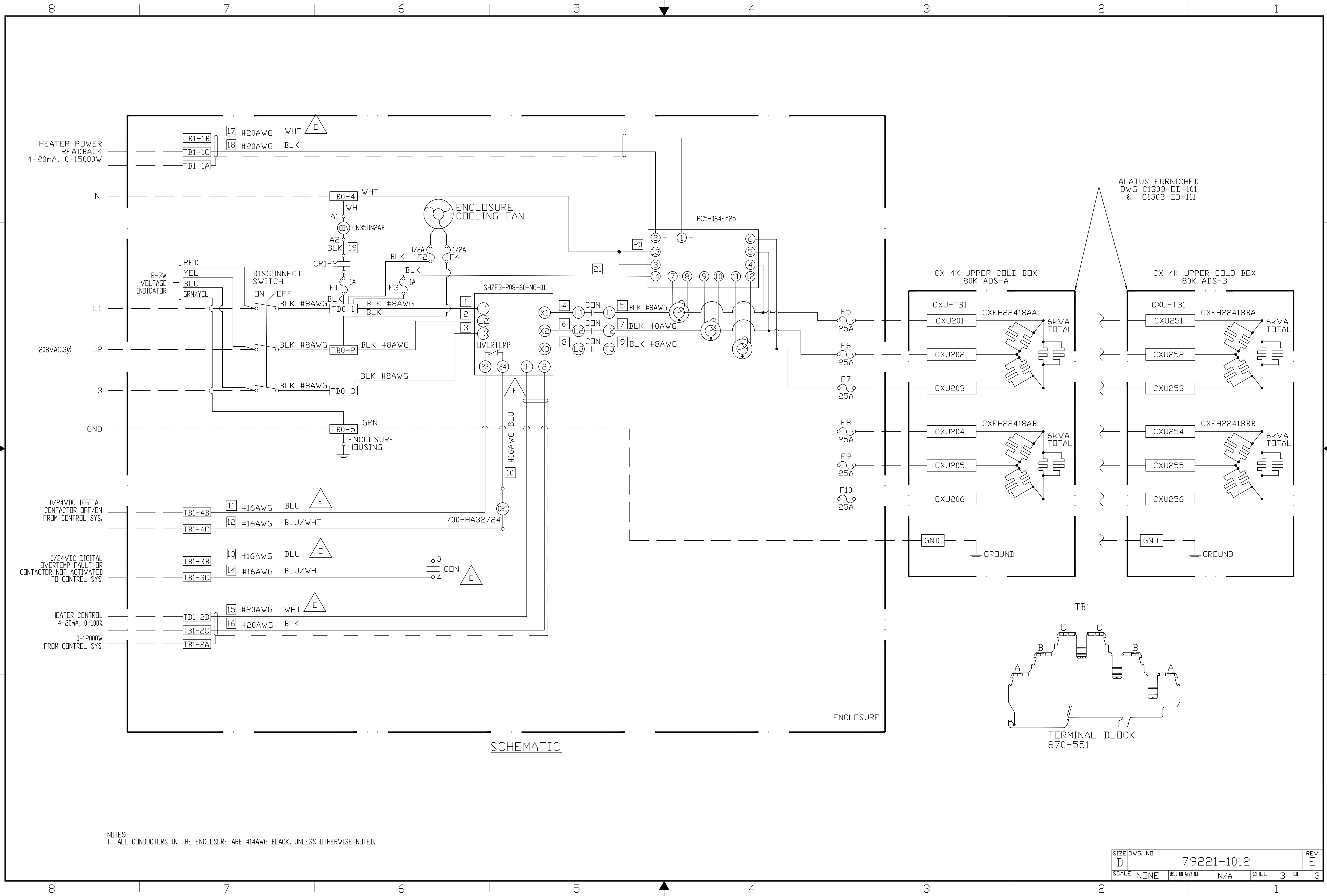
REVISION HISTORY				
ZONE	REV	DESCRIPTION	DATE	APPROVED
ALL	C	1. CHANGED SCR PART NUMBER. 2. CHANGED CONTACTOR PART NUMBER. 3. ADDED EXTERNAL CTs.	23APR18	R. NORTON
SH3 4-B	D	1. REVISED ENCLOSURE SIZE WAS 16' CRS 2. REMOVED CONNECTIONS TO SPARE HEATERS.	31JUL18 CRS 31JUL18	R. NORTON
SH 3-B SH3 VAR	E	1. REVISED PART NO. FOR ITEM 7 & 8. 2. REVISED WIRE COLOR AND AWG.	04FEB19 SS 04FEB19	R. NORTON



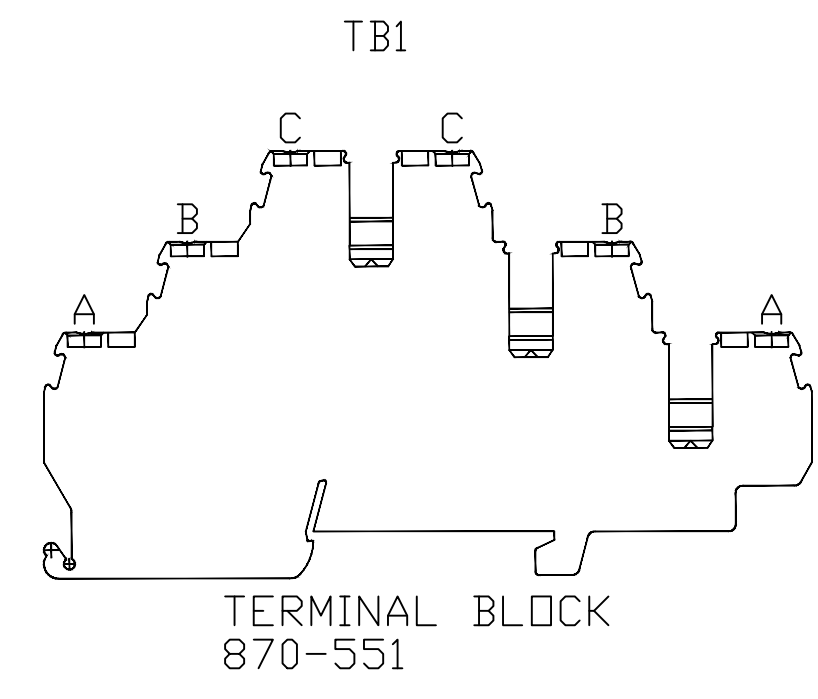
INSIDE VIEW

SIZE	DWG. NO.	REV.
D	79221-1012	E
SCALE	USED ON ASSY NO.	SHEET 2 OF 3
NONE	N/A	

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**SCHMATIC**



NOTES:  
 1. ALL CONDUCTORS IN THE ENCLOSURE ARE #14AWG BLACK, UNLESS OTHERWISE NOTED.

ALATUS FURNISHED  
 DWG C1303-ED-101  
 & C1303-ED-111

SIZE DWG. NO.	79221-1012	REV.	E
SCALE	NONE	USED ON ASSY NO.	N/A
		SHEET	3 OF 3