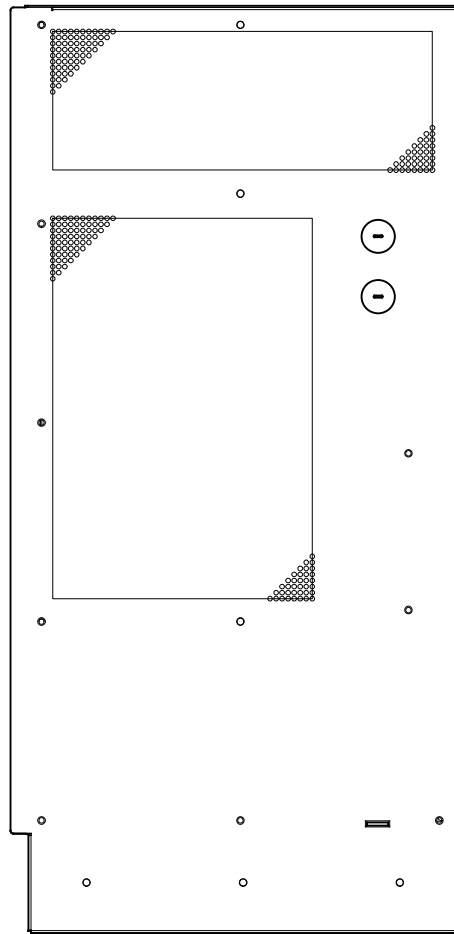
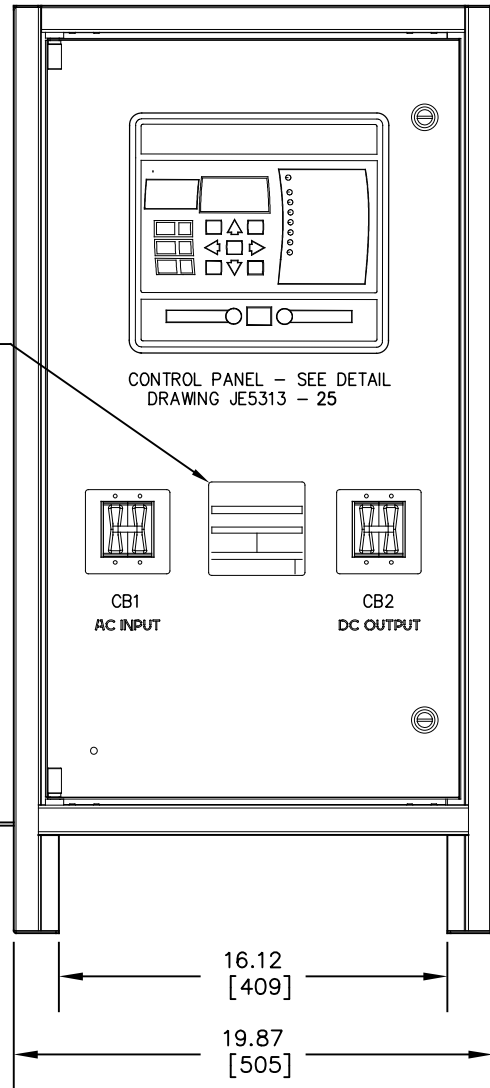


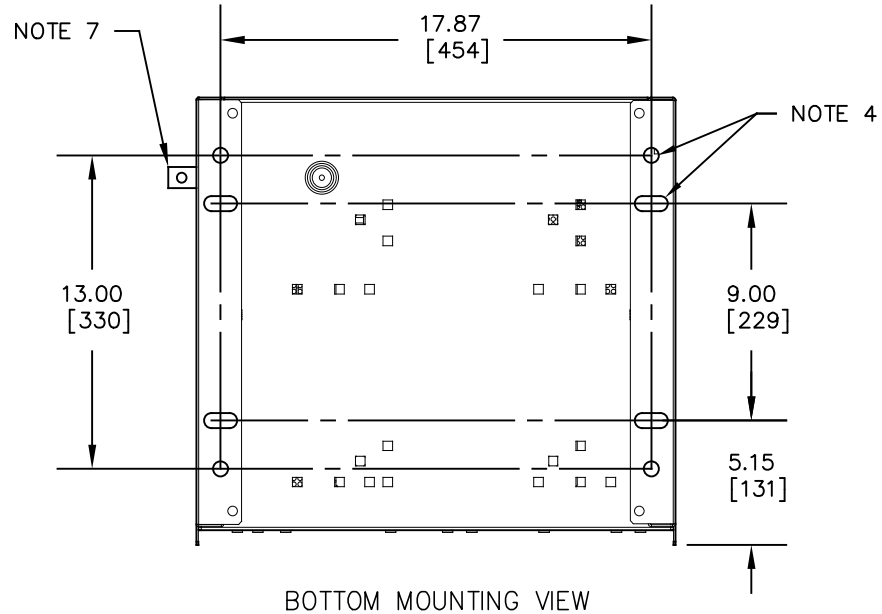
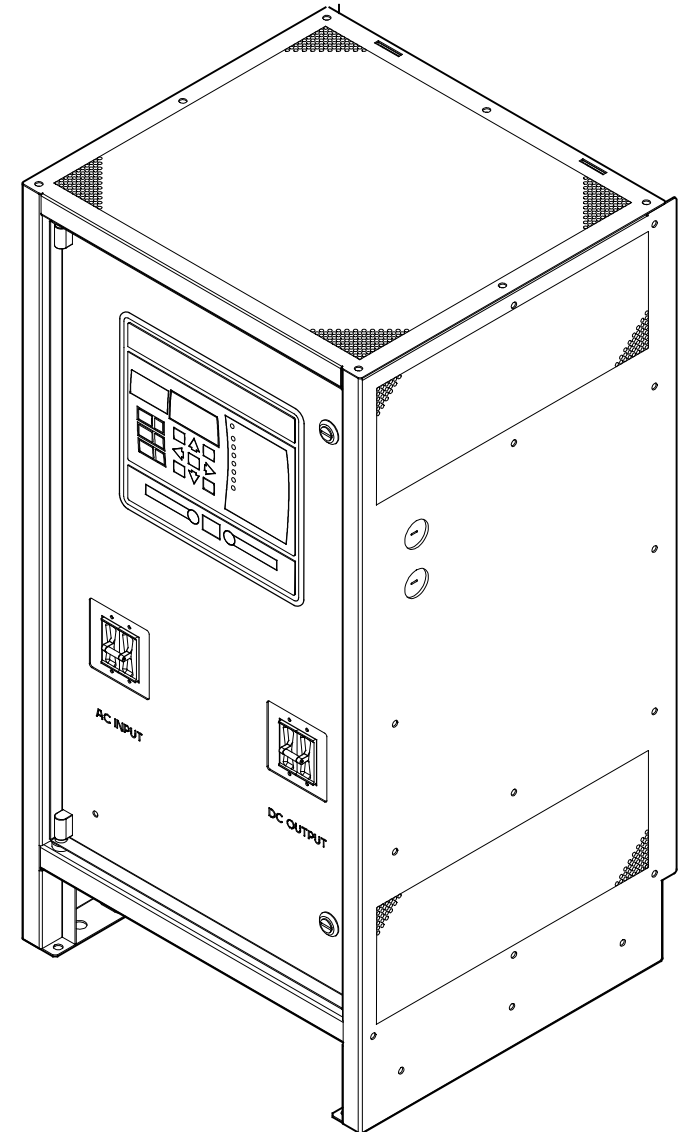
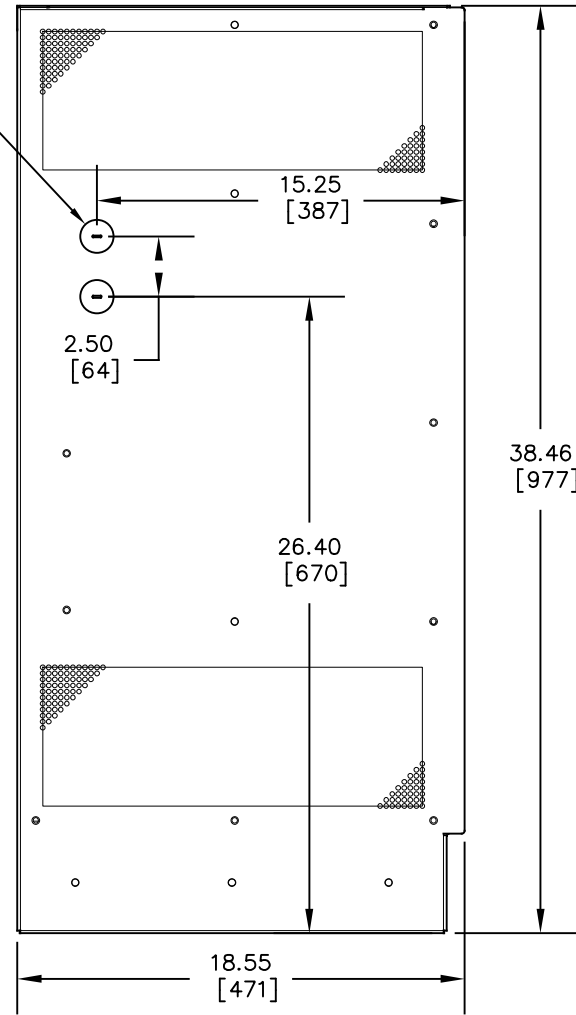
LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW

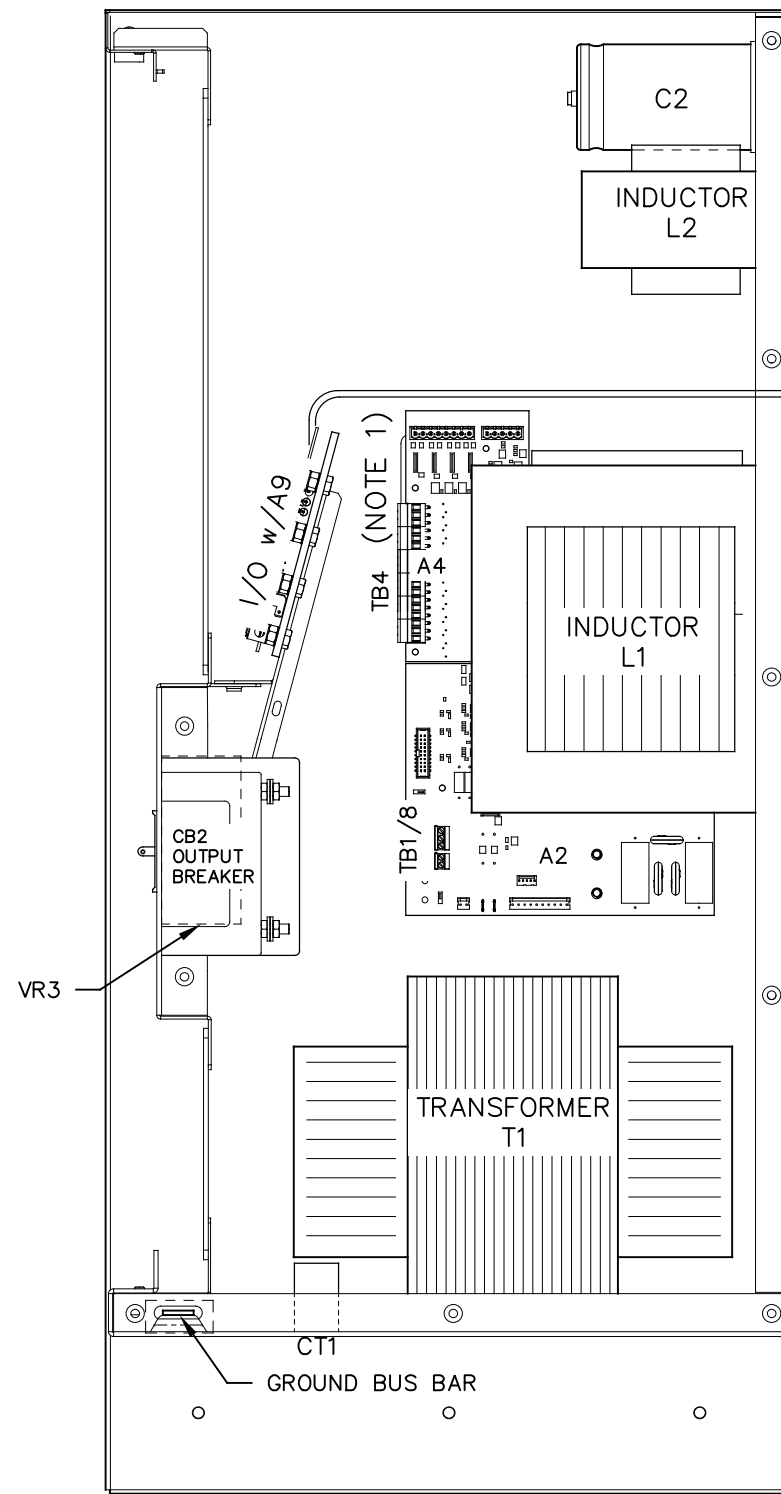
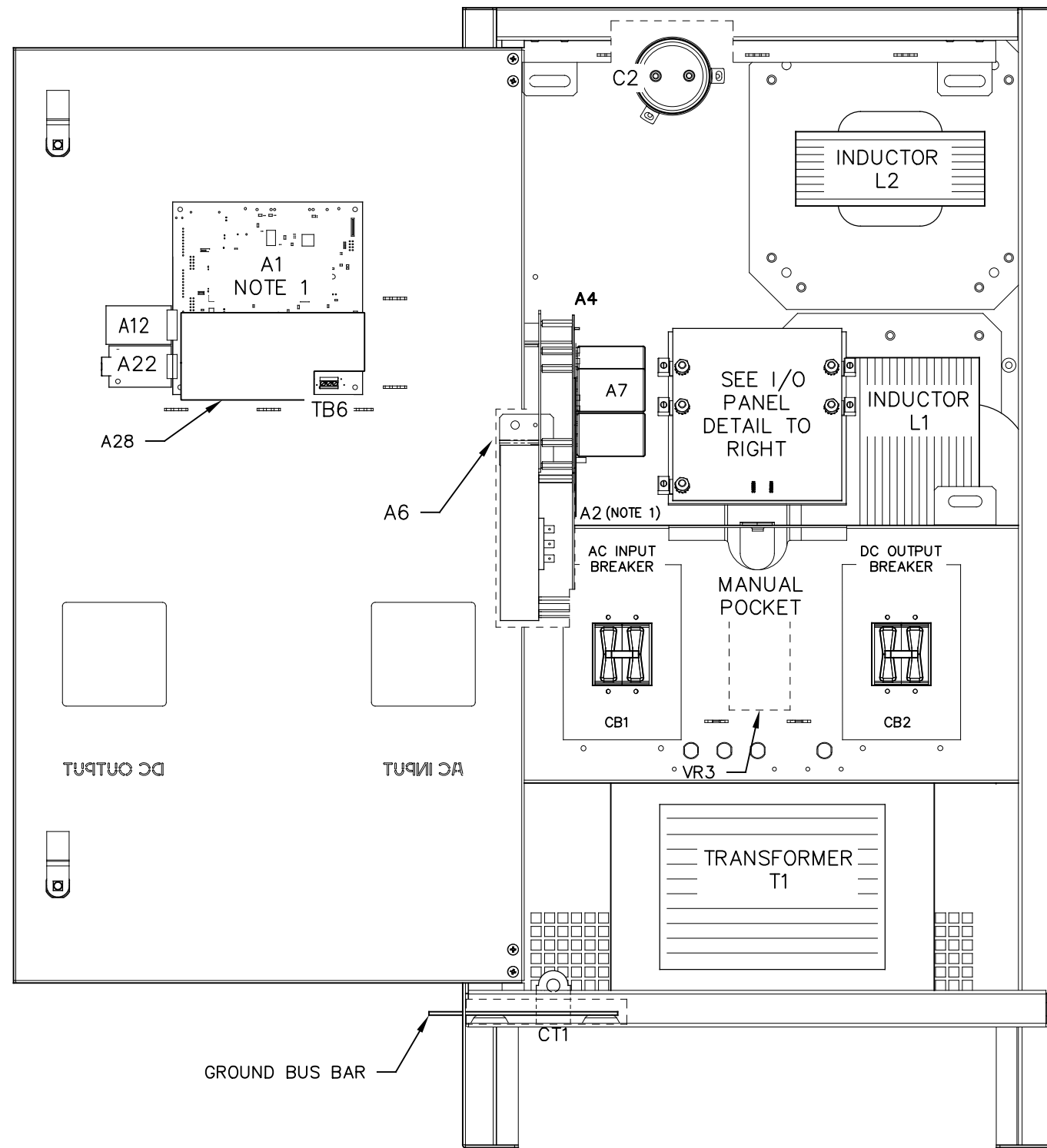


NOTES:

- ENCLOSURE IS A NEMA TYPE 1 / IP20 TOP-VENTED STEEL CABINET WITHOUT GASKETS. FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT. MOUNTING BASE IS 12 GA. SIDE PANELS ARE 14 GA. TOP PANEL AND DOOR ARE 16 GA.
- ALLOW 6in / 152mm OF FREE AIR ON ALL VENTED SURFACES (TOP, SIDES & REAR) FOR COOLING.
- DATA NAMEPLATE DECAL (WITH CHARGER RATINGS) APPLIED TO DOOR.
- FOUR (4) 0.5in / 12mm FLOOR-MOUNTING HOLES AND FOUR (4) 1in x 0.625in / 25mm x 16mm FLOOR-MOUNTING SLOTS ARE PROVIDED ON BOTTOM OF ENCLOSURE AS SHOWN.
- FOUR (4) 1.31in / 33mm DIA STANDARD PRE-FAB KEY-SLOT KNOCKOUTS ARE PROVIDED AS SHOWN FOR 1in / 25mm CONDUIT ENTRY. IF ADDITIONAL CONDUIT ENTRANCES ARE REQUIRED, ENCLOSURE SHOULD BE FIELD-MODIFIED BY INSTALLER.
- BATTERY CHARGER SHIPPING WEIGHT: APPROXIMATELY TBD lbs / TBD kg
- GROUND BUS BAR WITH 0.41 in / 10.41 mm DIA HOLE.

DUAL DIMENSIONS in [mm]

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DESCRIPTION STANDARD DRAWINGS.					CHK BY MCR	DATE: 10/29/2021	
ECN NO. N/A					APP BY MCR	DATE: 10/29/2021	
TITLE ATEVO BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5070 ENCL 1Ø WITH COMMON OPTIONS 16-25A							<p>SCALE DWG No <b>B</b> NTS JE5309-25</p>
							REV 0 SHEET 1 OF 1



TO BE PLACED NEAR BATTERY CELL

A10

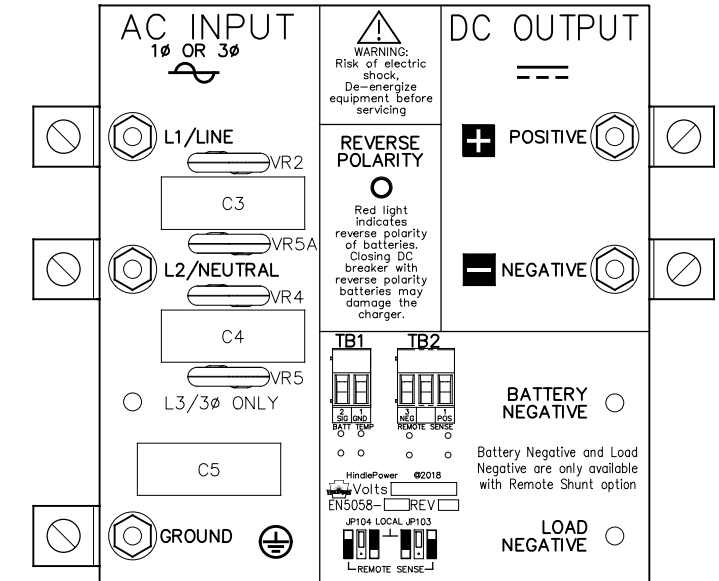
25ft / 7.6m CABLE

SYM STANDARD COMPONENT DESCRIPTION	
A1	MAIN CONTROL PC BOARD
A2	POWER BOARD
A6	RECTIFIER ASSEMBLY
A9	MOV PC BOARD
A7	FILTER BOARD (C1x/R9x)
CB1	AC INPUT CIRCUIT BREAKER (CD2)
CB2	DC OUTPUT CIRCUIT BREAKER (CD2)
AUXCB2	DC CKT BKR (CB2) AUXILIARY CONTACTS
L1	MAIN INDUCTOR
L2	FILTER INDUCTOR
T1	POWER TRANSFORMER

SYM OPTIONAL COMP DESCRIPTION	
A4	AUXILIARY I/O BOARD
A10	TEMPERATURE COMPENSATION PROBE
A12	SERIAL COMMUNICATION ADAPTER
A22	ETHERNET ADAPTER
A28	METER MODULE PC BOARD
C2	BATTERY ELIMINATOR FILTER CAP
CT1	CURRENT TRANSFORMER
VR3	AC INPUT LIGHTNING ARRESTOR

ST-5070 INPUT-OUTPUT TERMINAL BOARD DETAIL



MOV PC BOARD (A9)

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
I/O (+/-)	POS/NEG OUTPUT TERMINALS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
GND LUG	USER GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
I/O (L1/L2)	AC INPUT TERMINALS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
GND BUS	COPPER GROUND BUS - 0.41 in / 10.41 mm DIA HOLE	0.38in RING LUG
(A2) TB1	POS/NEG REMOTE SENSE TERMS (A2) - SOLDERLESS COMP SCREW	#22-14 AWG
(A2) TB8	TEMPCO PROBE (A10) TERMINAL BLOCK - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB4	AUX I/O RELAY CONTACTS (A4) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A1) TB6	SUMMARY ALARM TERMINAL BLOCK (A1) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG

NOTES:  
1. FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A2, etc.) SEE DRAWING JE5313 - 25.

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DESCRIPTION: STANDARD DRAWINGS.					CHK BY MCR	DATE 10/29/2021
ECN NO. N/A					APP BY MCR	DATE 10/29/2021

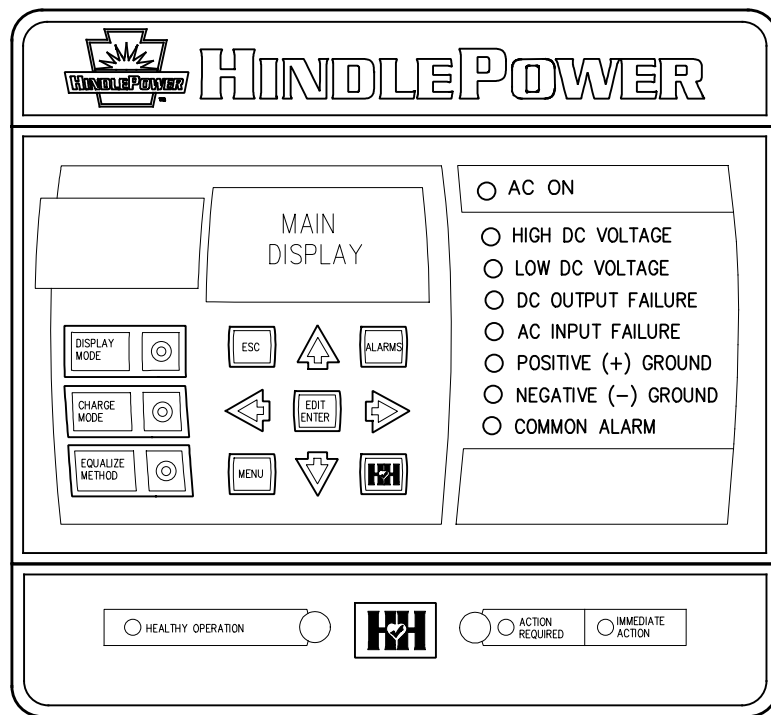
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**HINDLEPOWER**

TITLE: **ATEVO BATTERY CHARGER**  
**INTERNAL COMPONENT LAYOUT: STYLE-5070**  
**1Ø WITH COMMON OPTIONS 16-25A**

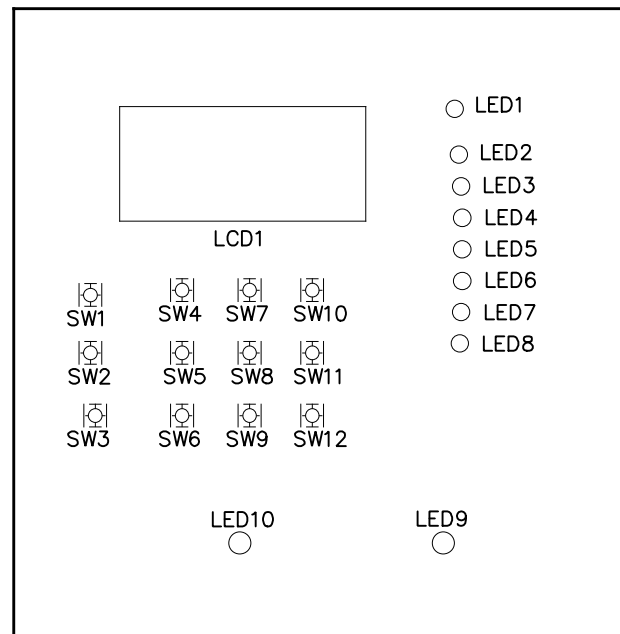
**B** SCALE: **NTS** DWG No: **JE5310-25**

REV: **0A** SHEET: **1 OF 1**

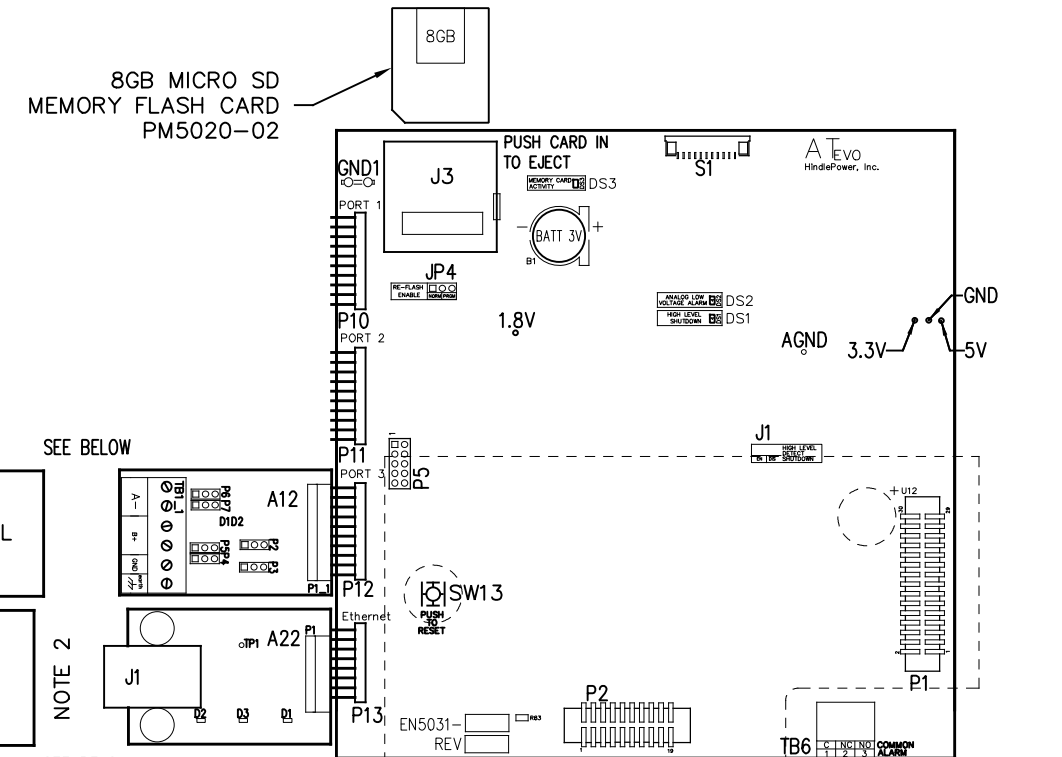


**CONTROL PANEL**  
(PART No. FK5047-00)

NOTE: ALL ALARM CONTACTS ARE ENERGIZED WHEN IN THE NON-ALARM STATE (FAIL SAFE). ALL ALARM CONTACTS WILL CHANGE STATE WHEN CHARGER IS POWERED DOWN. CONTACT RATING IS 0.5A @ 125VAC/VDC RESISTIVE.

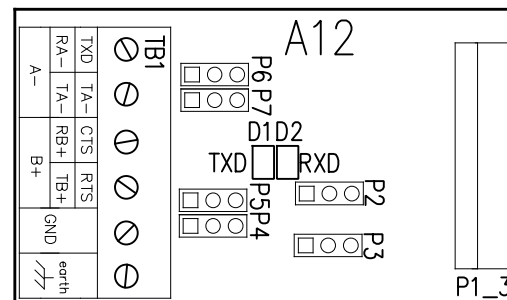


**MAIN CONTROL PC BOARD (A1)**  
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED



**MAIN CONTROL PC BOARD (A1)**  
BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

**SERIAL COMMUNICATION ADAPTER (A12)**



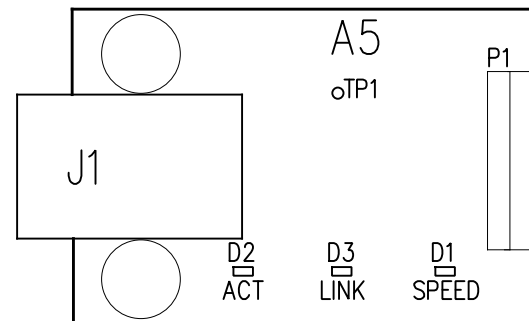
**CONNECTORS (A12):**  
P1 - MAIN CONTROL BOARD

**JUMPERS & CONFIGURATION SWITCHES (A12):**  
P2 - RECEIVER ENABLE CONTROL SELECTION  
P3 - MEDIA CONTROL SELECTION (RS-234 OR RS-485)  
P4 - RS-485 TERMINATION RESISTOR ENABLE (RECEIVE)  
P5 - RS-485 TERMINATION RESISTOR ENABLE (TRANSMIT)  
P6 - RS-485 INTERFACE 2 WIRE/4 WIRE SELECTION (A)  
P7 - RS-485 INTERFACE 2 WIRE/4 WIRE SELECTION (B)

**TERMINAL BLOCKS (A12):**  
TB1 - USER CONNECTIONS TO SERIAL INTERFACE

**INDICATOR LIGHTS (A12):**  
TXD (D1) - SERIAL DATA BEING SENT  
RXD (D2) - SERIAL DATA BEING RECEIVED

**ETHERNET ADAPTER (A22)**



**CONNECTORS (A5):**  
P1 - MAIN CONTROL BOARD  
J1 - RJ-45 ETHERNET USER CONNECTION

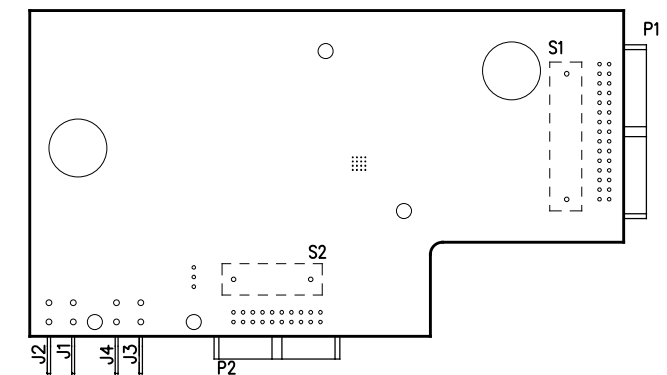
**INDICATOR LIGHTS (A5 LEDs):**  
D1 - ORANGE - ETHERNET SPEED INDICATION 10/100 MBPS  
D2 - YELLOW - ETHERNET ACTIVITY (FLASHING)  
D3 - RED - ETHERNET LINK

**TEST POINTS (A5):**  
TP1 - CLOCK OUT

2. SERIAL ADAPTER (A12) SUPPORTS MULTIPLE PROTOCOLS (DNP3 AND MODBUS) SIMULTANEOUSLY. SEE JA0102-54.

3. ETHERNET ADAPTER (A22) SUPPORTS MULTIPLE PROTOCOLS (DNP3 AND MODBUS) SIMULTANEOUSLY. SEE JA0102-54.

**METER MODULE PC BOARD (A28)**  
MOUNTED ON MAIN CONTROL PC BOARD



I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
(A1) TB6	SUMMARY ALARM TERMINAL BLOCK (A1) - SOLDERLESS COMP SCREW	#22-14 AWG
(A12) TB1	RS-232 / RS-485 USER CONNECTIONS - SOLDERLESS COMP SCREW	#22-14 AWG
(A22) J1	SERIAL ETHERNET CONNECTION - RJ45 PLUG	CAT5

**MAIN CONTROL PC BOARD (A1)**

**INDICATOR LIGHTS (LEDs):**  
LED1 - GREEN - AC ON  
LED2 - RED - HIGH DC VOLTAGE ALARM  
LED3 - RED - LOW DC VOLTAGE ALARM  
LED4 - RED - DC OUTPUT FAILURE ALARM  
LED5 - RED - AC INPUT FAILURE ALARM  
LED6 - RED - POSITIVE (+) GROUND ALARM  
LED7 - RED - NEGATIVE (-) GROUND ALARM  
LED8 - RED - COMMON ALARM  
LED9 - RED - ACTION REQUIRED ALARM  
LED10 - GREEN - HEALTHY OPERATION  
DS1 - RED - HIGH LEVEL SHUTDOWN (HLD)  
DS2 - RED - ANALOG LOW VOLTAGE ALARM (LLD)  
DS3 - RED - MEMORY CARD ACTIVITY

**JUMPERS:**  
J1 - ANALOG HIGH VOLTAGE SHUTDOWN JUMPER  
J3 - SD CARD PORT  
JP4 - RE-FLASH (FIELD PROGRAMMING) JUMPER

**SWITCHES:**  
S1 - DISPLAY BUTTON  
S2 - CHARGE MODE BUTTON  
S3 - EQUALIZE METHOD BUTTON  
S4 - ESCAPE (ESC) BUTTON  
S5 - LEFT ARROW BUTTON  
S6 - MENU BUTTON  
S7 - UP ARROW BUTTON  
S8 - EDIT / ENTER BUTTON  
S9 - DOWN ARROW BUTTON  
S10 - ALARM BUTTON  
S11 - RIGHT ARROW BUTTON  
S12 - HINDLE HEALTH (HHS) BUTTON  
SW13 - SYSTEM RESET BUTTON (BACK OF BOARD)

**CONNECTORS:**  
P1 - POWER BOARD RIBBON  
P2 - 3 PHASE RECTIFIER RIBBON  
P3 - USB EXPANSION PORT  
P4 - SPI & I2C EXPANSION PORT #1  
P5 - SPI & I2C EXPANSION PORT #2  
P6 - DISPLAY SPI PORT  
P7 - DISPLAY JTAG PORTS  
P10 - SERIAL INTERFACE PORT #1  
P11 - SERIAL INTERFACE PORT #2  
P12 - SERIAL INTERFACE PORT #3  
P13 - ETHERNET INTERFACE PORT  
P17 - GENERAL EXPANSION PORT

**TERMINAL BLOCKS:**  
TB6 - COMMON ALARM RELAY CONTACTS

**TEST POINTS:**  
1.8V - 1.8 VOLTS  
3.3V - 3.3 VOLTS  
5V - 5.0 VOLTS  
GND - GROUND  
AGND - ANALOG GROUND  
SDA - MAIN BOARD I2C DATA  
SCL - MAIN BOARD I2C CLOCK

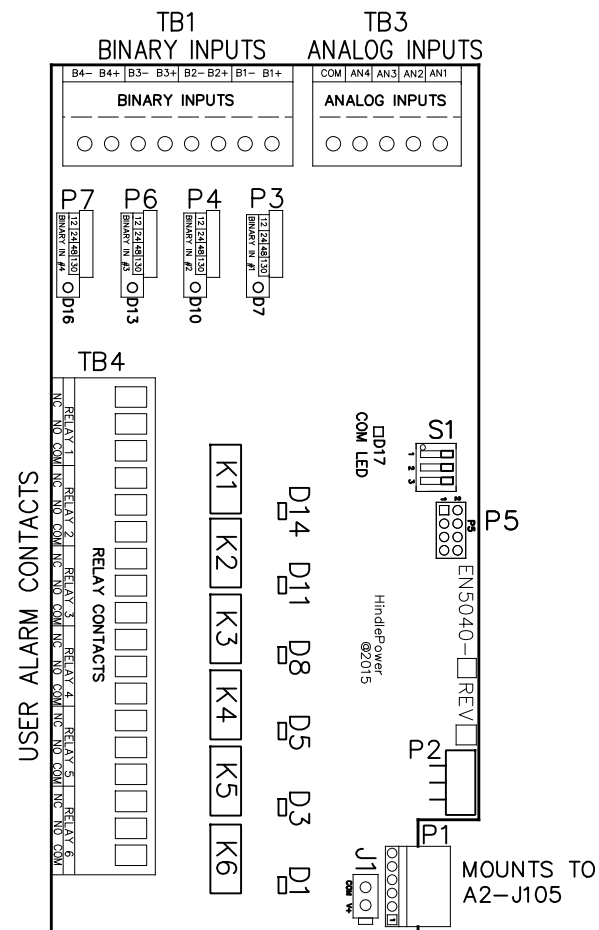
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DESCRIPTION: STANDARD DRAWINGS.				CHK BY MCR	DATE: 10/29/2021	APP BY MCR
ECN NO. N/A				DATE: 10/29/2021		

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**HINDLEPOWER**

TITLE: **ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL 1Ø WITH COMMON OPTIONS 16-25A**

SCALE: **B** DWG No: **JE5313-25** REV: 0 SHEET: 1 OF 2



**AUXILIARY I/O BOARD (A4)**

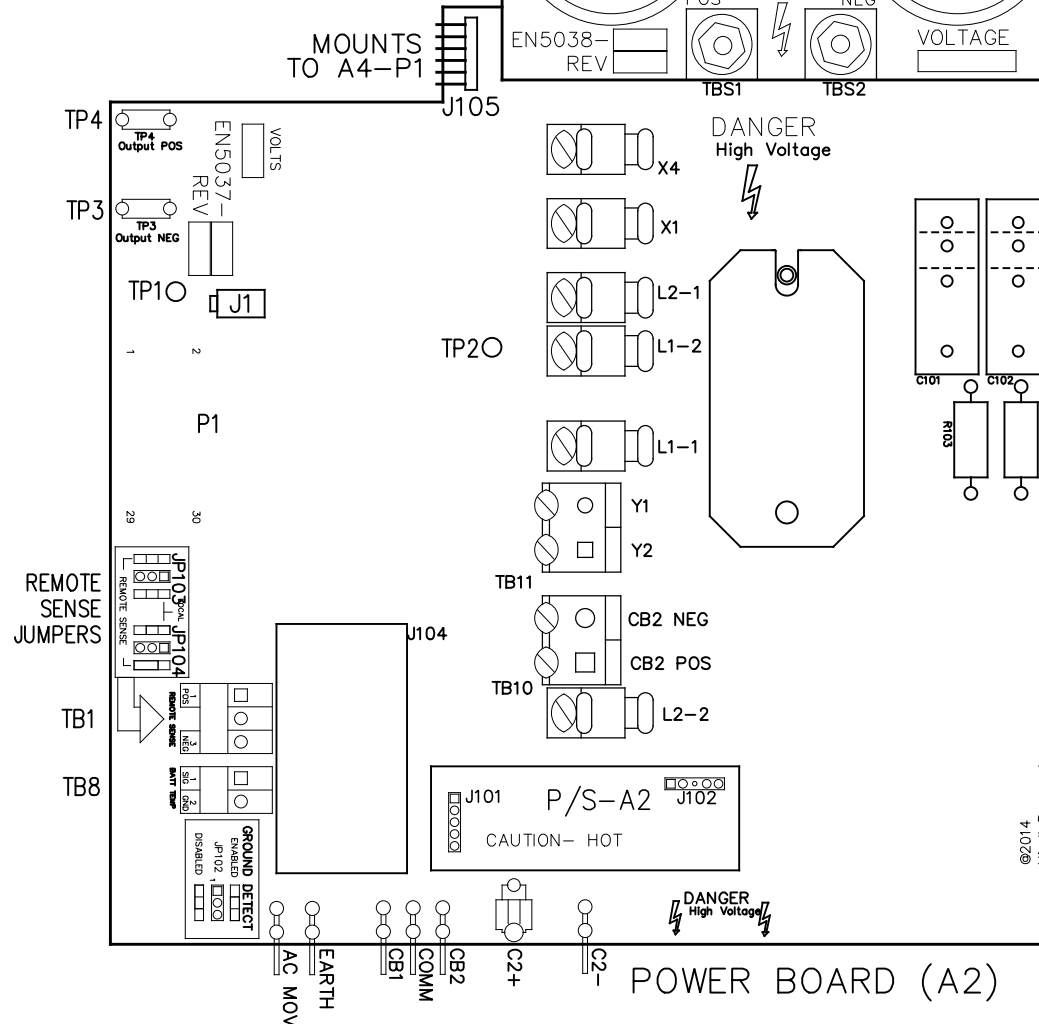
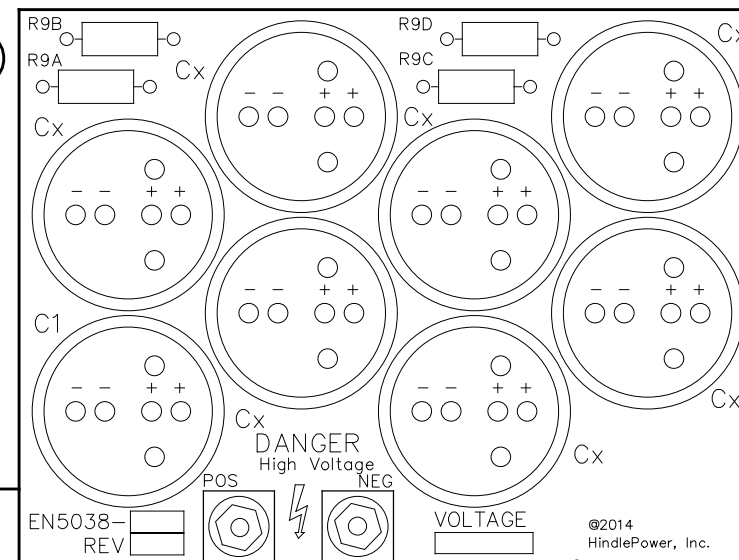
**JUMPERS & CONFIGURATION SWITCHES FOR AUX I/O BOARD (A4)**  
 J1 - AUXILIARY POWER INPUT  
 P1 - POWER BOARD (PRIMARY POWER & COMM SOURCE)  
 P5 - PROGRAMMING HEADER

**USER TERMINALS ON RELAY BOARD (A4):**  
 D1 - RED - RELAY #6 IN ALARM STATE  
 D3 - RED - RELAY #5 IN ALARM STATE  
 D5 - RED - RELAY #4 IN ALARM STATE  
 D7 - YELLOW - BINARY INPUT #1 IS ABOVE THRESHOLD  
 D8 - RED - RELAY #3 IN ALARM STATE  
 D10 - YELLOW - BINARY INPUT #2 IS ABOVE THRESHOLD  
 D11 - RED - RELAY #2 IN ALARM STATE  
 D13 - YELLOW - BINARY INPUT #3 IS ABOVE THRESHOLD  
 D14 - RED - RELAY #1 IN ALARM STATE  
 D16 - YELLOW - BINARY INPUT #4 IS ABOVE THRESHOLD  
 D17 - GREEN - COMMUNICATION TO MAIN BOARD (FLASHING)

**USER TERMINALS ON RELAY BOARD (A4):**  
 TB1 - BINARY INPUTS  
 TB2 - SERIAL INTERFACE  
 TB3 - ANALOG INPUTS  
 TB4 - AUXILIARY I/O RELAY CONTACTS

**JUMPERS & CONFIGURATION SWITCHES**  
 P3, 4, 6, 7 - BINARY INPUT VOLTAGE CONFIGURATION JUMPERS  
 S1 - BOARD ADDRESS DIPSWITCH

**FILTER BOARD (A7)**



**POWER BOARD (A2)**

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
(A2) TB1	POS/NEG REMOTE SENSE TERMS (A2) - SOLDERLESS COMP SCREW	#22-14 AWG
(A2) TB8	TEMPCO PROBE (A10) TERM BLK - SOLDERLESS COMP SCREW	#22-14 AWG
(A4) TB1	AUX I/O BINARY INPUTS (A4) - SOLDERLESS COMP SCREW	#22-14 AWG
(A4) TB2	AUX I/O RELAY CONTACTS (A4) - SOLDERLESS COMP SCREW	#22-14 AWG
(A4) TB3	AUX I/O ANALOG INPUTS (A4) - SOLDERLESS COMP SCREW	#22-14 AWG
(A4) TB4	AUX I/O RELAY CONTACTS (A4) - SOLDERLESS COMP SCREW	#22-14 AWG

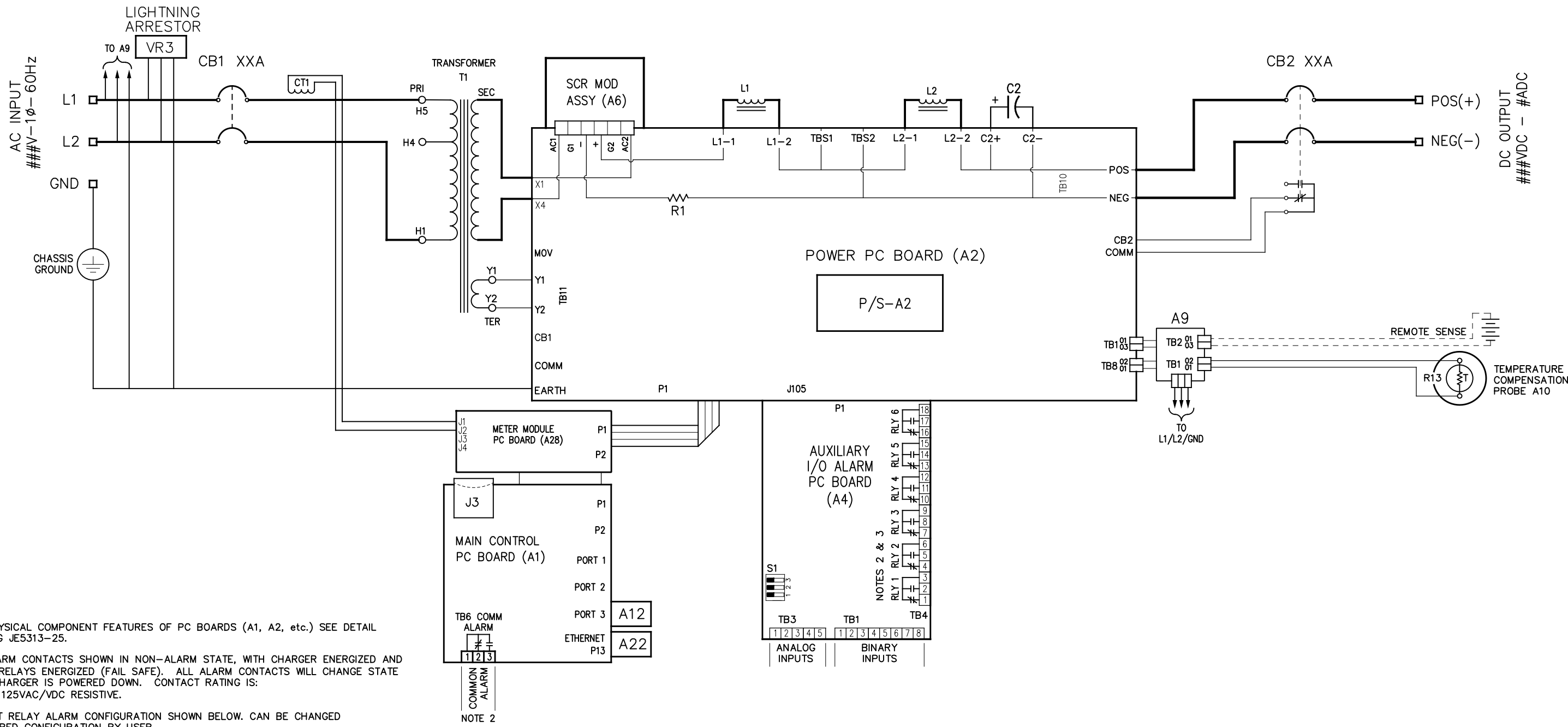
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DESCRIPTION STANDARD DRAWINGS.					CHK BY MCR	DATE 10/29/2021
ECN NO. N/A					APP BY MCR	DATE 10/29/2021

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**HINDLEPOWER**

**TITLE**  
**ATEVO BATTERY CHARGER**  
**CONTROL PANEL / PC BOARD DETAIL**  
**1Ø WITH COMMON OPTIONS 16-25A**

**B** SCALE NTS DWG No **JE5313-25** REV 0 SHEET 2 OF 2



- NOTES:
- FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A2, etc.) SEE DETAIL DRAWING JE5313-25.
  - ALL ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER ENERGIZED AND ALARM RELAYS ENERGIZED (FAIL SAFE). ALL ALARM CONTACTS WILL CHANGE STATE WHEN CHARGER IS POWERED DOWN. CONTACT RATING IS: 0.5A @ 125VAC/VDC RESISTIVE.
  - DEFAULT RELAY ALARM CONFIGURATION SHOWN BELOW. CAN BE CHANGED TO DESIRED CONFIGURATION BY USER.

A4	DESCRIPTION	LATCHING	DELAY
RELAY #1	HIGH VOLTAGE DC	DISABLED	30 SECONDS
RELAY #2	LOW VOLTAGE DC	DISABLED	30 SECONDS
RELAY #3	DC OUTPUT FAILURE	DISABLED	30 SECONDS
RELAY #4	LOW AC SUPPLY	DISABLED	30 SECONDS
RELAY #5	POSITIVE GROUND FAULT	DISABLED	30 SECONDS
RELAY #6	NEGATIVE GROUND FAULT	DISABLED	30 SECONDS

REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/29/2021	DRN BY KJB	DATE: 10/29/2021		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com
DESCRIPTION: STANDARD DRAWINGS.					CHK BY MCR	DATE: 10/29/2021		
ECN NO. N/A					APP BY MCR	DATE: 10/29/2021	TITLE	ATEVO BATTERY CHARGER SCHEMATIC: STYLE 5070 1Ø WITH COMMON OPTIONS 16-25A
					SCALE	DWG No	REV	SHEET
			B		NTS	JE5311-25	0	1 OF 1

