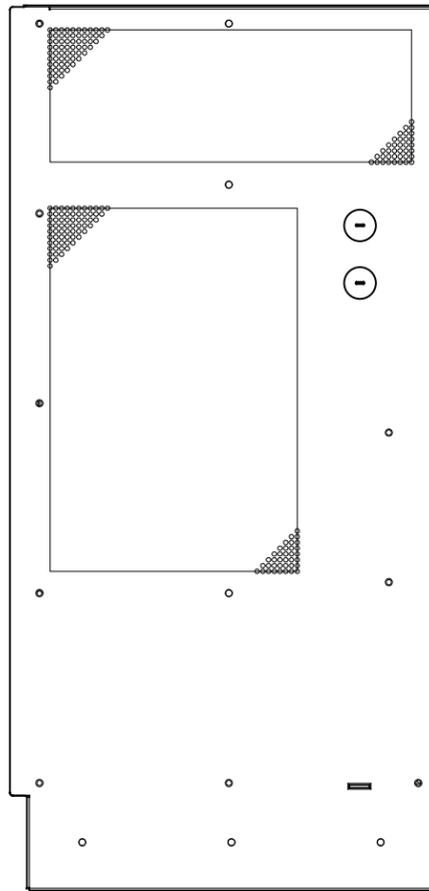
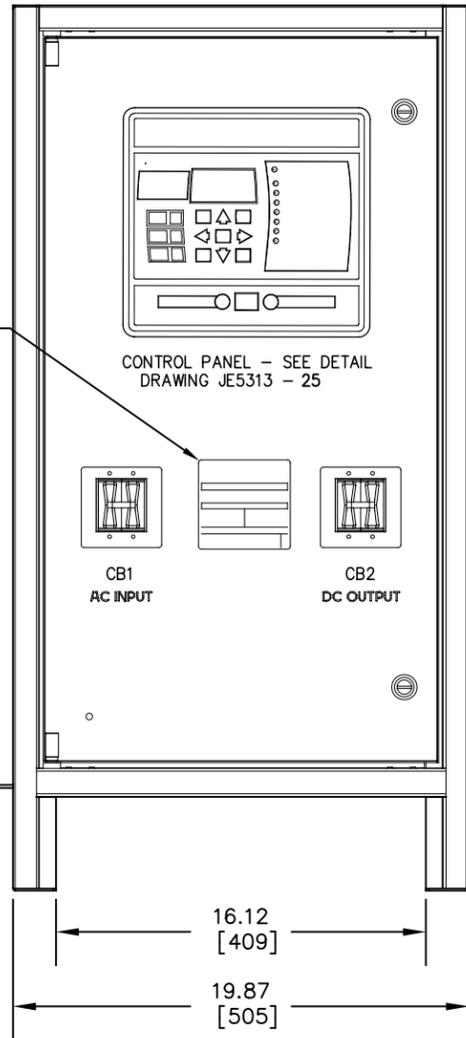


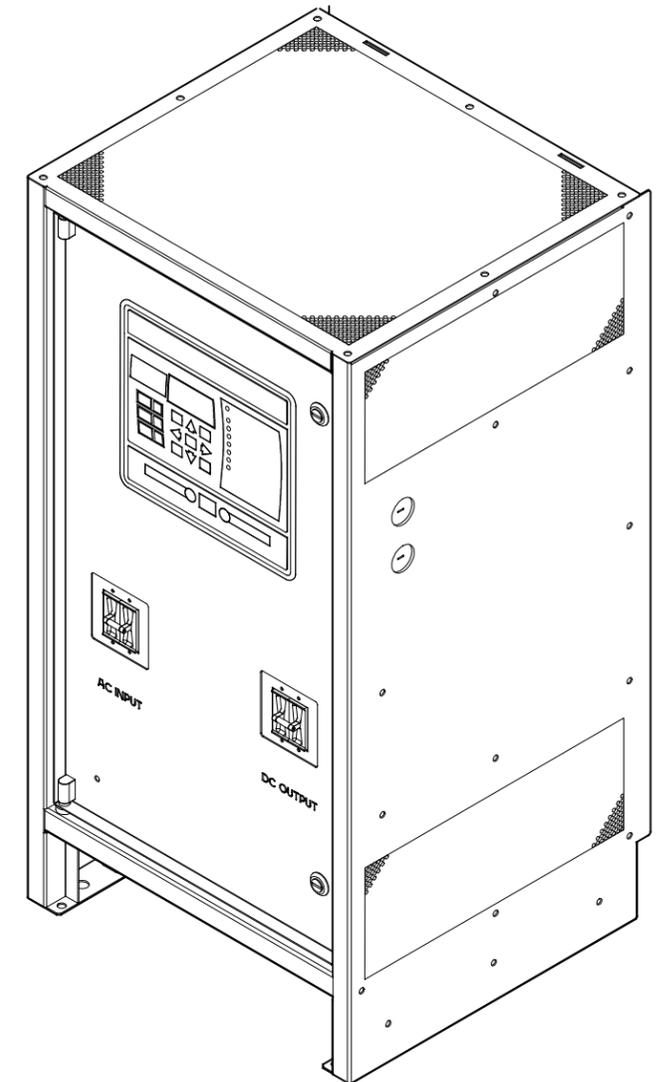
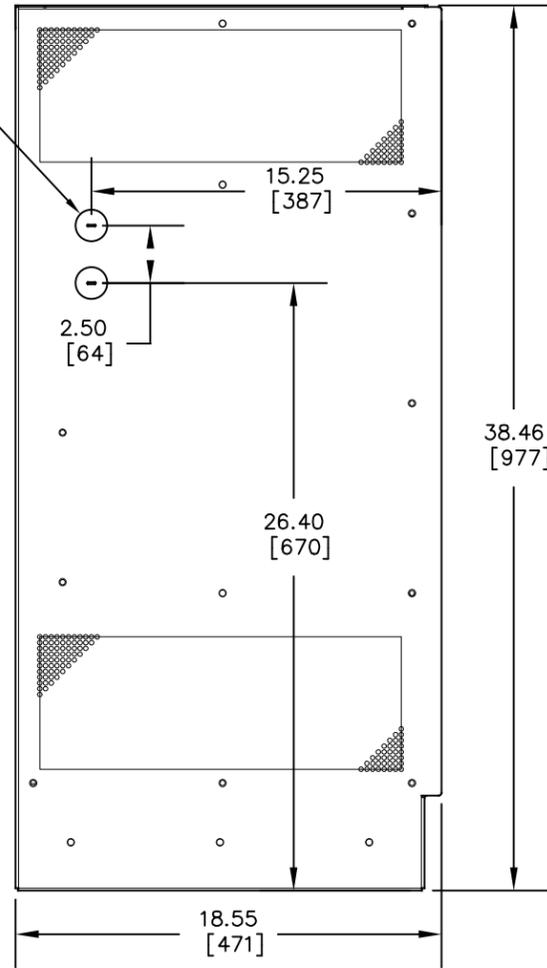
LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW



NOTE 3

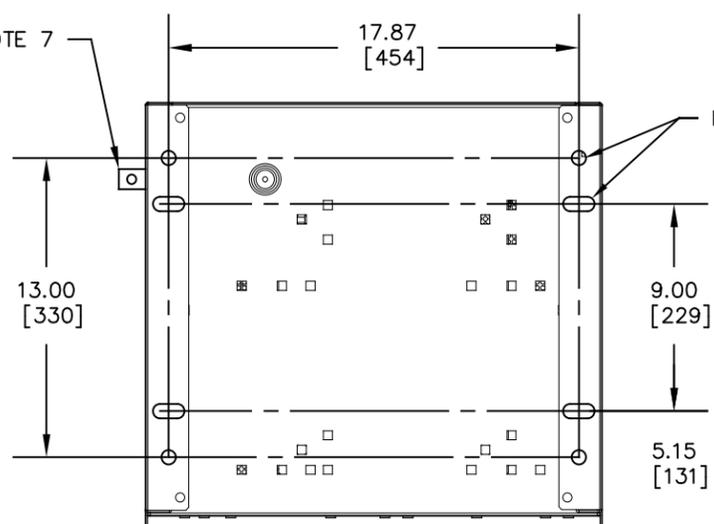
NOTE 5

NOTE 7

NOTE 4

NOTES:

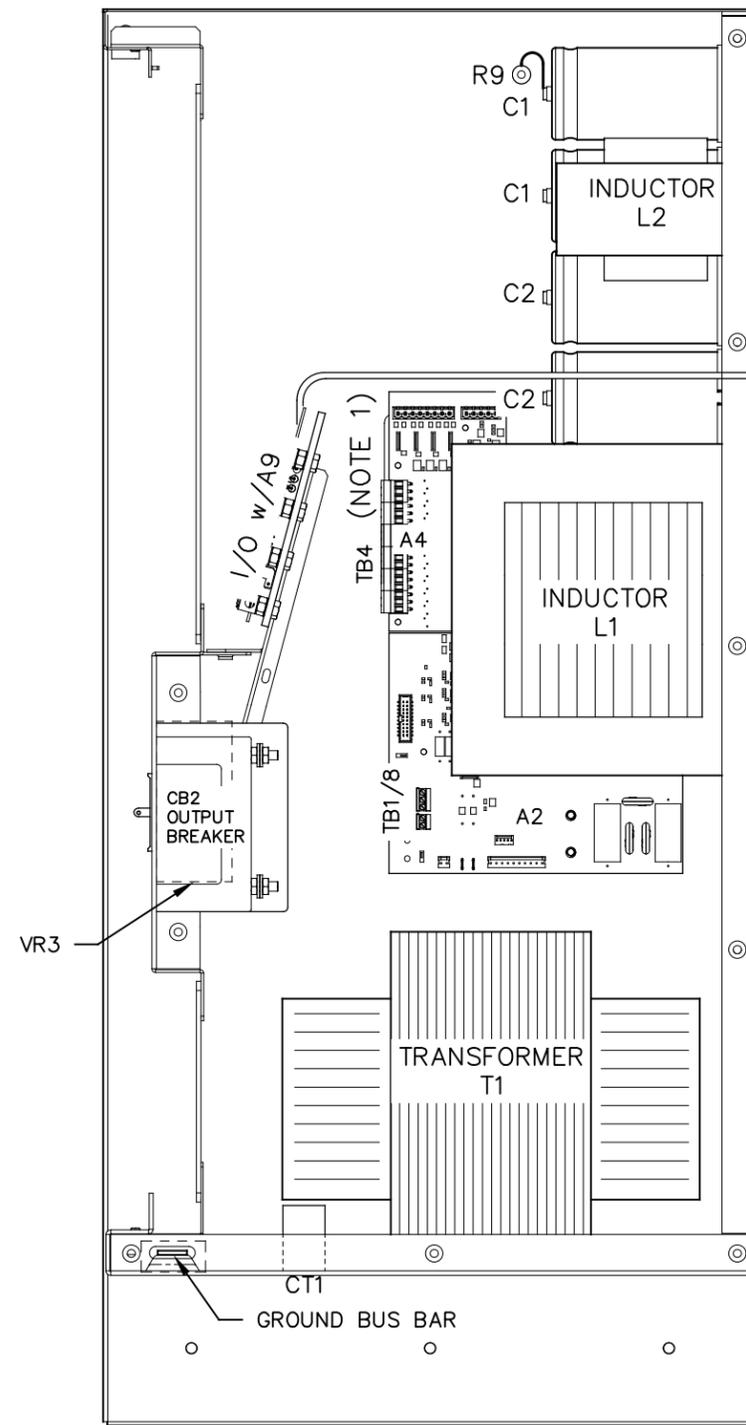
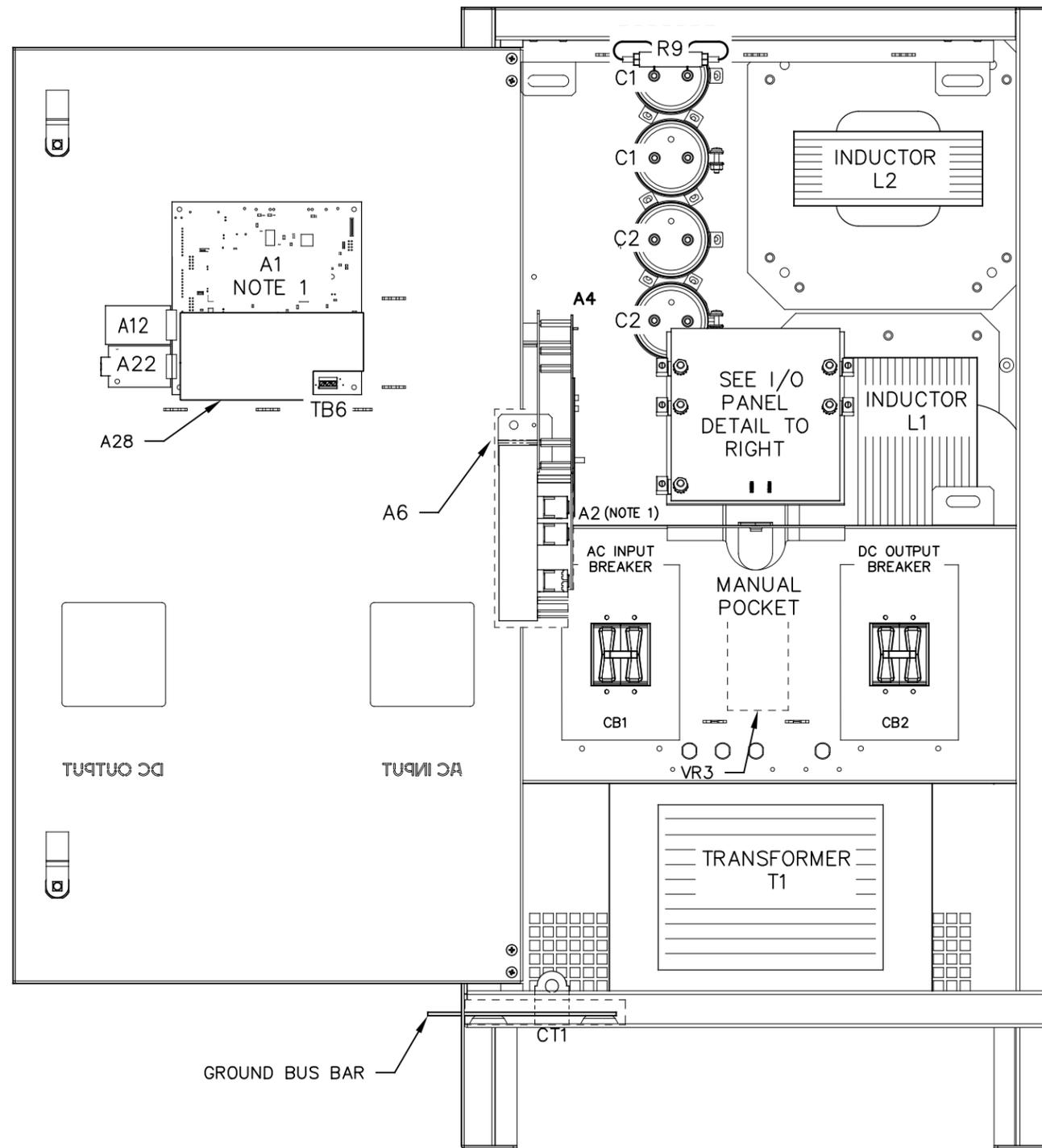
- ENCLOSURE IS A NEMA TYPE 1 / IP20 TOP-VENTED STEEL CABINET WITHOUT GASKETS. FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT. MOUNTING BASE IS 12 GA. SIDE PANELS ARE 14 GA. TOP PANEL AND DOOR ARE 16 GA.
- ALLOW 6in / 152mm OF FREE AIR ON ALL VENTED SURFACES (TOP, SIDES & REAR) FOR COOLING.
- DATA NAMEPLATE 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.



BOTTOM MOUNTING VIEW

DUAL DIMENSIONS in [mm]

REV. 1	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 12/1/2021	DRN BY KJB	DATE: 10/29/2021	TITLE <b>ATEVO BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5070 ENCL 1Ø WITH COMMON OPTIONS 75-100ADC</b>
DESCRIPTION STANDARD DRAWINGS.					CHK BY MCR	DATE: 10/29/2021	
ECN NO. N/A					APP BY MCR	DATE: 10/29/2021	
							<b>B</b> SCALE NTS DWG No JE5309-24
							REV 1 SHEET 1 OF 1



TO BE PLACED NEAR BATTERY CELL

A10

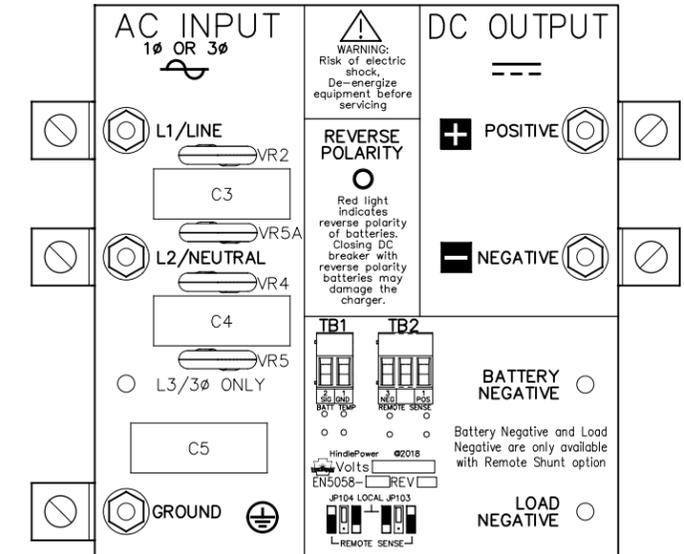
25ft / 7.6m CABLE

SYM STANDARD COMPONENT DESCRIPTION	
A1	MAIN CONTROL PC BOARD
A2	POWER BOARD
A6	RECTIFIER ASSEMBLY
A9	MOV PC BOARD
C1	FILTER CAPACITOR
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
R9	FILTER CAP BLEED RESISTOR
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



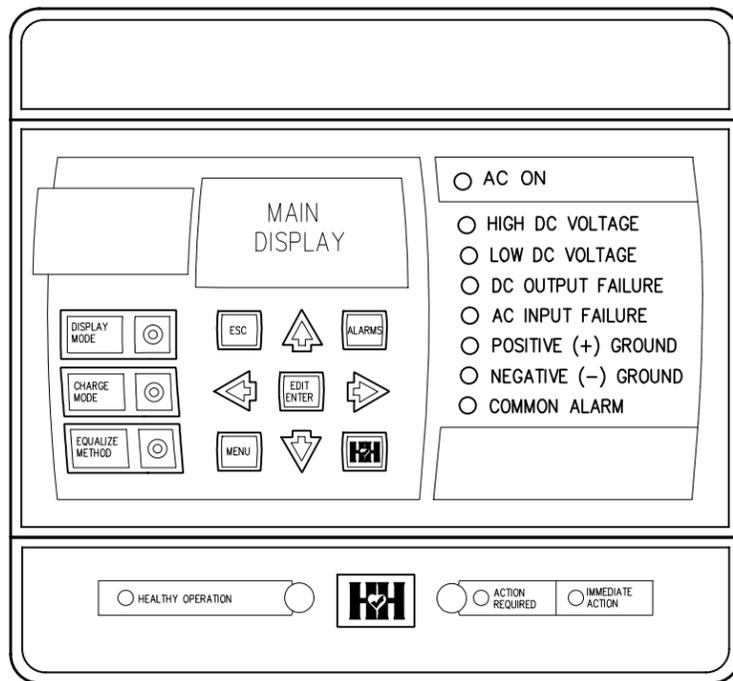
MOV PC BOARD (A9)

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.

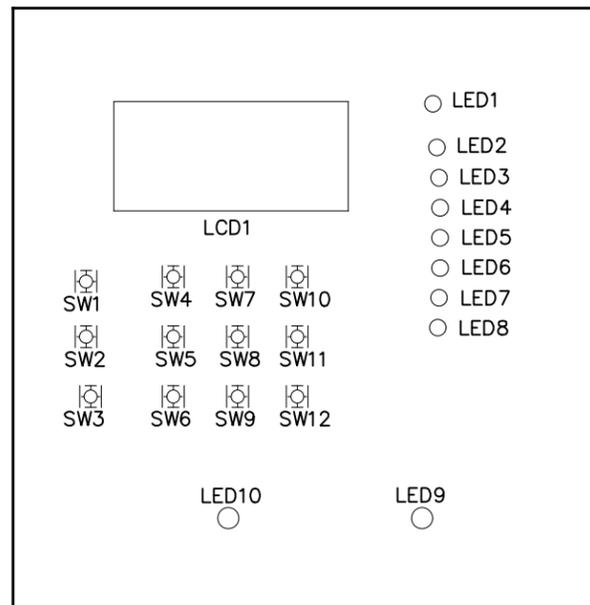
REV. 1	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 12/1/2021	DRN BY KJB	DATE 10/29/2021
DESCRIPTION: STANDARD DRAWINGS.					CHK BY MCR	DATE 10/29/2021
ECN NO. N/A					APP BY MCR	DATE 10/29/2021

TITLE: ATEVO BATTERY CHARGER INTERNAL COMPONENT LAYOUT: STYLE-5070 1Ø WITH COMMON OPTIONS 75-100ADC			
<b>B</b>	SCALE: NTS	DWG No: JE5310-24	REV: 1 SHEET: 1 OF 1

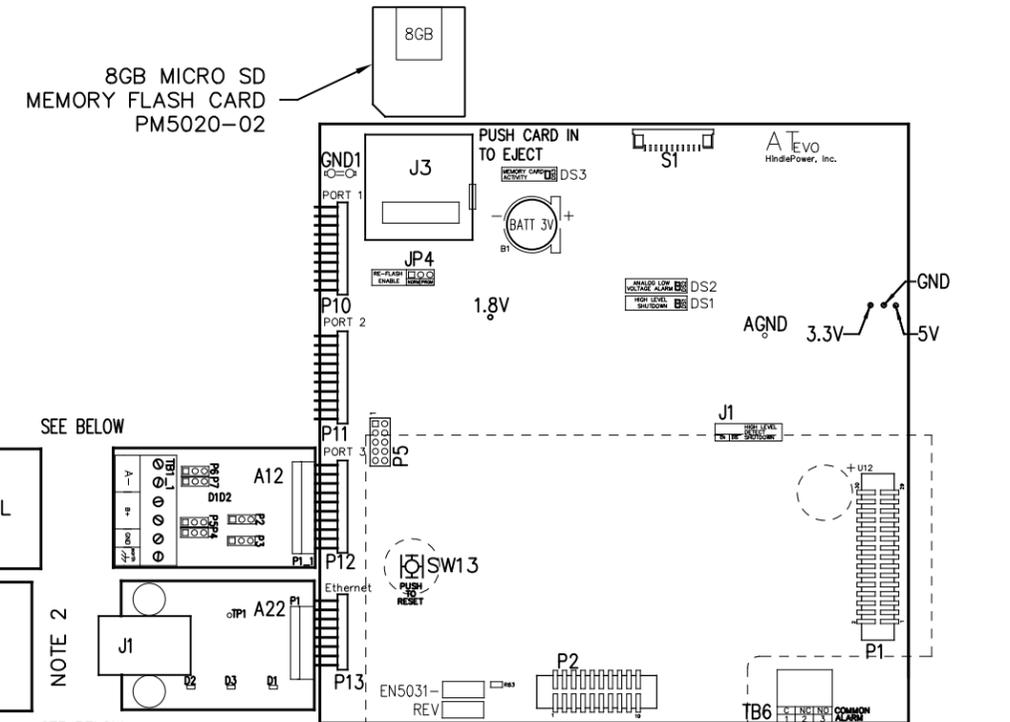


**CONTROL PANEL**  
(PART No. FK5047-00)

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.

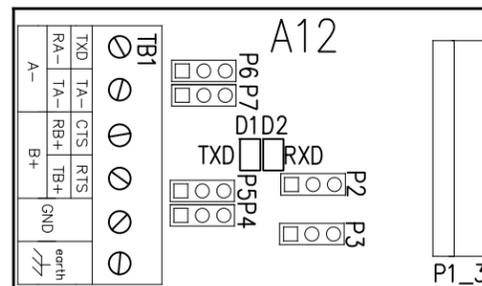


**MAIN CONTROL PC BOARD (A1)**  
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED



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

**SERIAL COMMUNICATION ADAPTER (A12)**



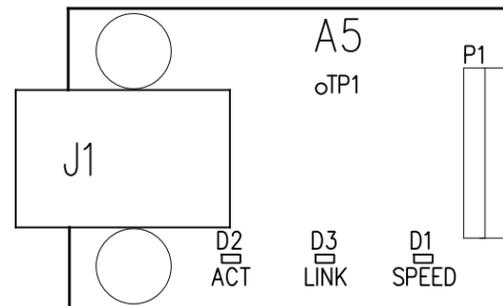
**CONNECTORS (A12):**  
P1 - MAIN CONTROL BOARD

**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)**



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

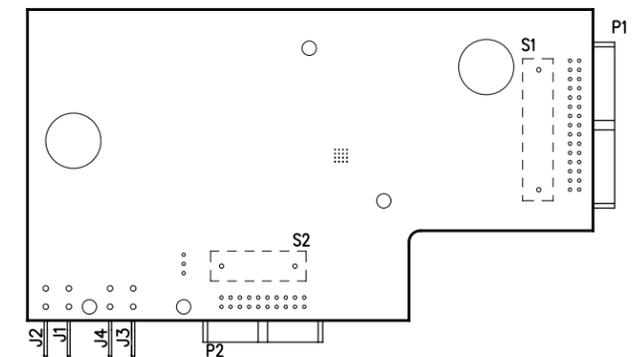
3. ETHERNET ADAPTER (A22) SUPPORTS MULTIPLE PROTOCOLS (DNP3 AND MODBUS) SIMULTANEOUSLY. SEE JA0102-54.

**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

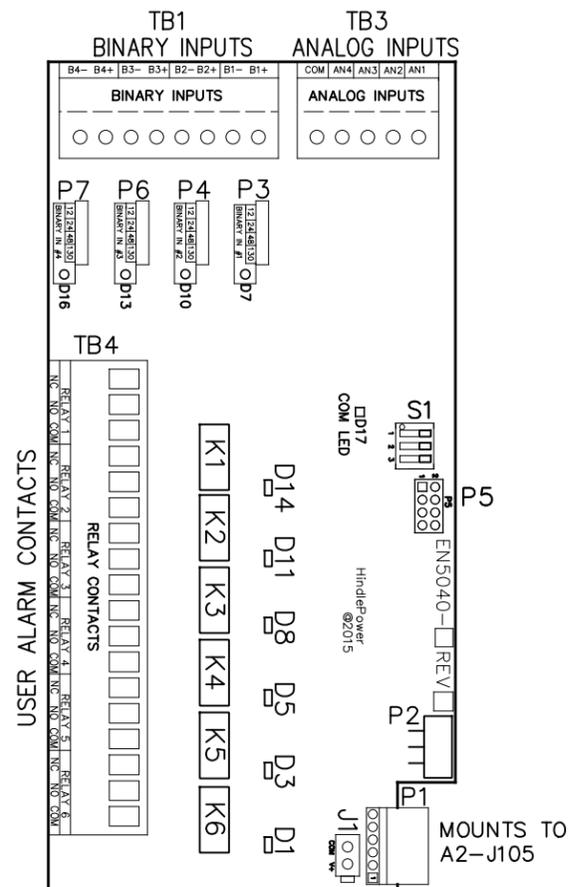
**METER MODULE PC BOARD (A28)**  
MOUNTED ON MAIN CONTROL PC BOARD



MAIN CONTROL PC BOARD (A1)			
<b>INDICATOR LIGHTS (LEDs):</b> 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	<b>JUMPERS:</b> J1 - ANALOG HIGH VOLTAGE SHUTDOWN JUMPER J3 - SD CARD PORT JP4 - RE-FLASH (FIELD PROGRAMMING) JUMPER <b>TERMINAL BLOCKS:</b> TB6 - COMMON ALARM RELAY CONTACTS <b>TEST POINTS:</b> 1.8V - 1.8 VOLTS 3.3V - 3.3 VOLTS 5V - 5.0 VOLTS GND - GROUND AGND - ANALOG GROUND SDA - MAIN BOARD 12C DATA SCL - MAIN BOARD 12C CLOCK	<b>SWITCHES:</b> 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)	<b>CONNECTORS:</b> 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

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

REV. 1 DRN BY KJB CHK BY MCR APP BY MCR DATE 12/1/2021	DRN BY KJB DATE 10/29/2021	TITLE <b>ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL 1Ø WITH COMMON OPTIONS 75-100ADC</b>	SCALE <b>B</b>	DWG No <b>JE5313-24</b>	REV 1	SHEET 1 OF 2
DESCRIPTION STANDARD DRAWINGS.	CHK BY MCR DATE 10/29/2021					
ECN NO. N/A	APP BY MCR DATE 10/29/2021					



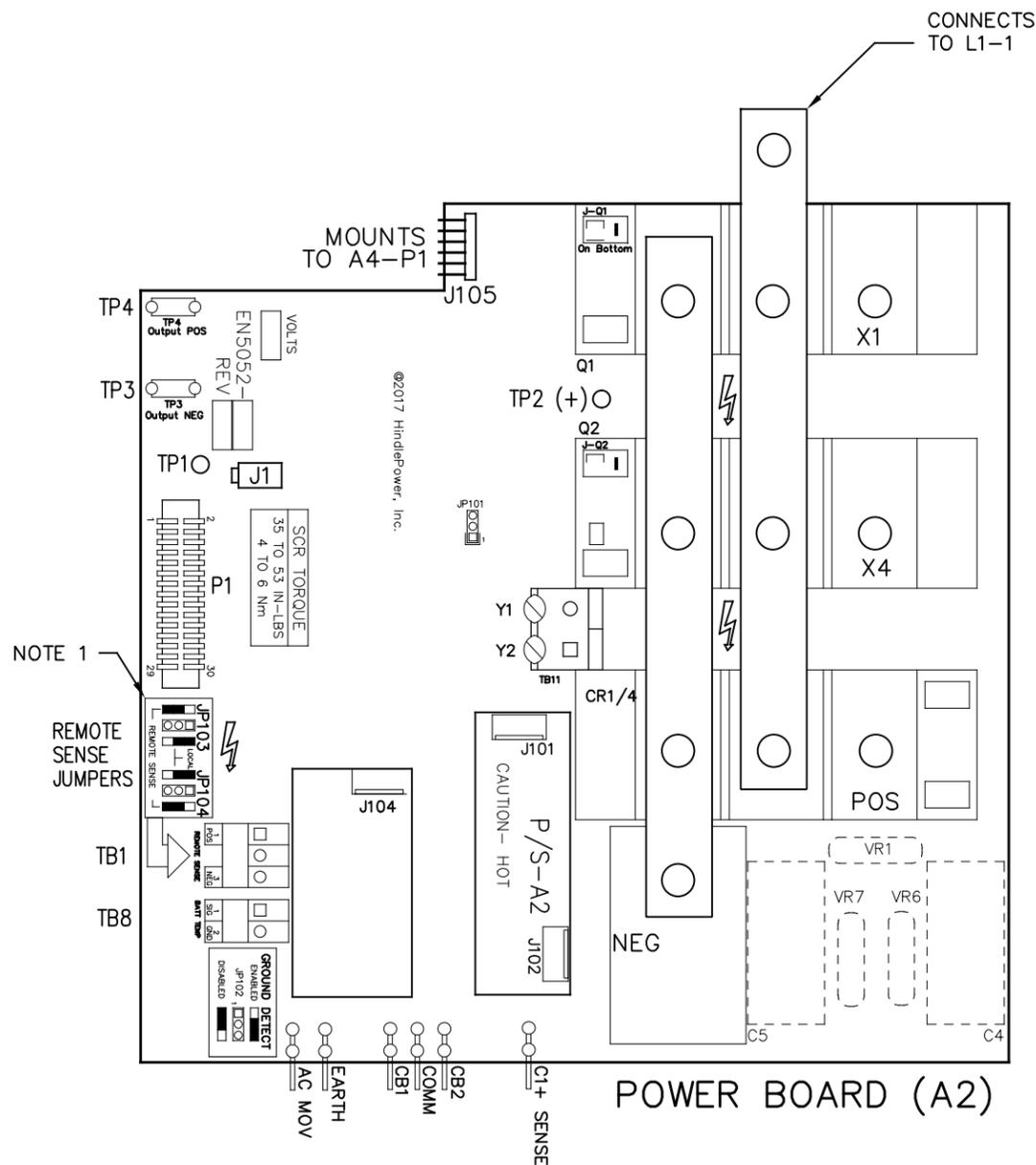
**AUXILIARY I/O BOARD (A4)**

**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



**POWER BOARD (A2)**

**USER TERMINALS ON POWER BOARD (A2):**  
 TB1 - REMOTE VOLTAGE SENSE  
 TB8 - BATTERY TEMPERATURE COMPENSATION  
 TB11 - 'Y' CONTROL WINDINGS

**JUMPERS ON POWER BOARD (A2):**  
 JP102 - GROUND DETECT CIRCUIT ENABLE / DISABLE  
 JP103 - REMOTE OR LOCAL SENSE SELECTOR (+)  
 JP104 - REMOTE OR LOCAL SENSE SELECTOR (-)

**CONNECTORS ON POWER BOARD (A2):**  
 J1 - POWER OUT  
 J101 - DC POWER SUPPLY  
 J102 - DC POWER SUPPLY  
 J105 - AUXILIARY I/O BOARD  
 P1 - MAIN CONTROL BOARD RIBBON

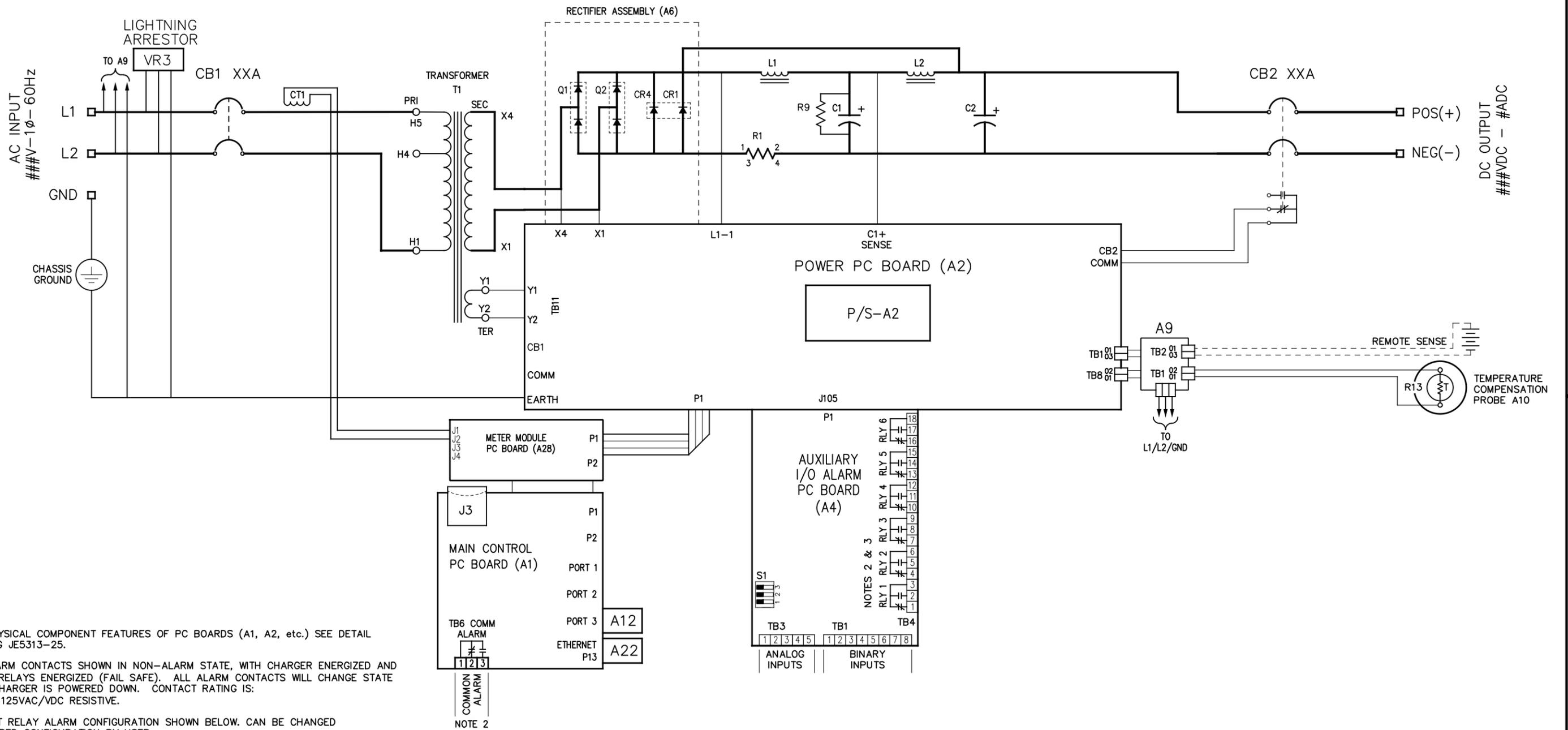
**DISCRETE TERMINALS:**  
 AC MOV - CHASSIS EARTH GROUND  
 EARTH - CHASSIS EARTH GROUND (DOOR)  
 CB1 - AC BREAKER AUX SWITCH CONTACT  
 CB2 - DC BREAKER AUX SWITCH CONTACT  
 POS - POSITIVE CONNECTION POINT  
 NEG - NEGATIVE CONNECTION POINT  
 COMM - BREAKER AUX SWITCH COMMON  
 X1 - TRANSFORMER SECONDARY WINDING  
 X4 - TRANSFORMER SECONDARY WINDING  
 L1-1 - FILTER INDUCTOR #1 (TERMINAL #1)  
 L1-2 - FILTER INDUCTOR #1 (TERMINAL #2)

**TEST POINTS ON POWER BOARD (A2):**  
 TP1 - PRE-FILTERED DC BUS (-)  
 TP2 - PRE-FILTERED DC BUS (+)  
 TP3 - DC BUS (-)  
 TP4 - DC BUS (+)

**NOTE:**  
 1. REMOTE SENSE JUMPERS JP103, JP104 MUST BE IN REMOTE SENSE POSITION IN 5070 CABINETS.

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

REV. 1	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 12/1/2021	DRN BY KJB	DATE 10/29/2021
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 CONTROL PANEL / PC BOARD DETAIL 1Ø WITH COMMON OPTIONS 75-100ADC						SCALE: NTS
						DWG No: JE5313-24
REV 1						SHEET 2 OF 2

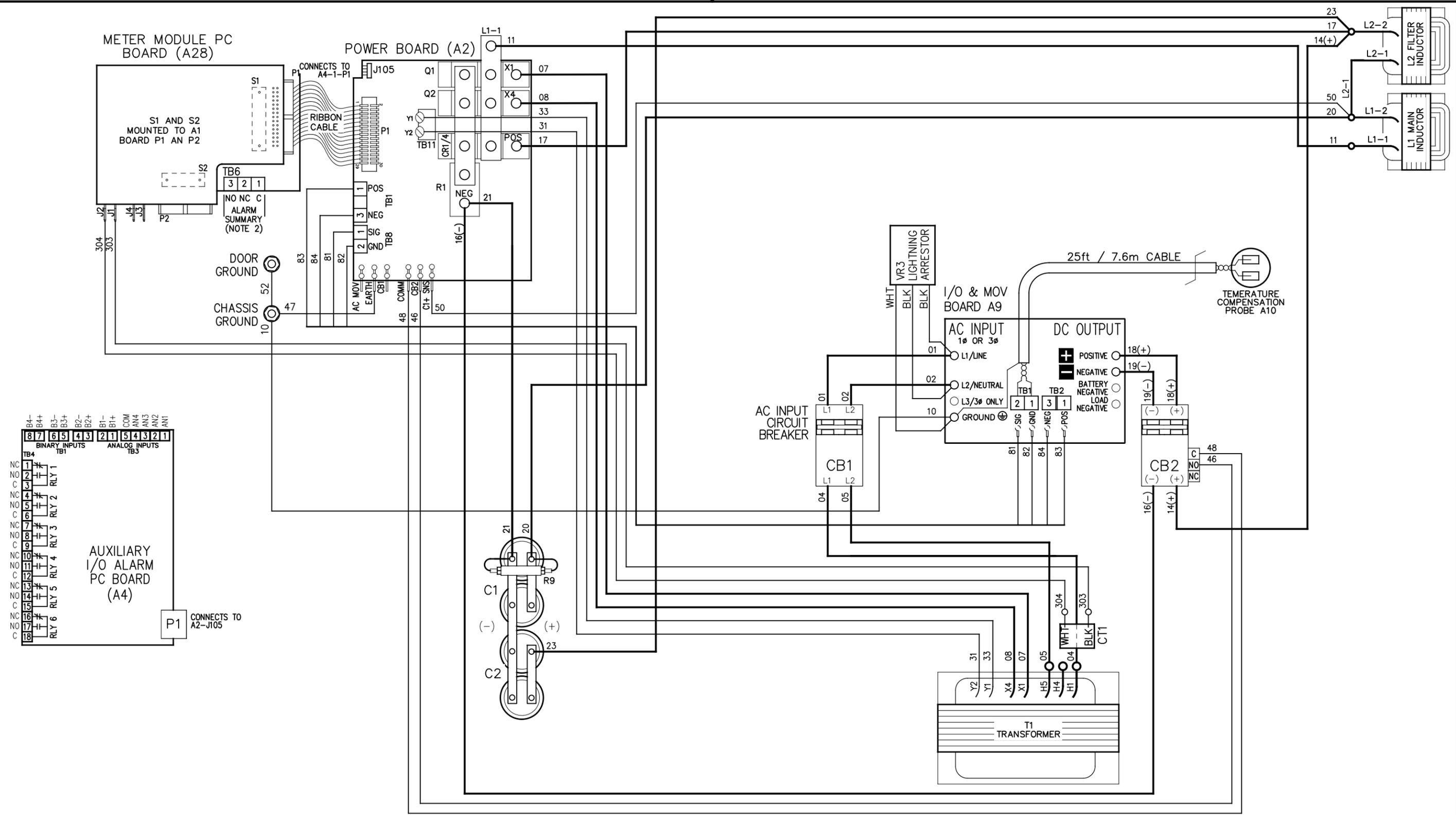


NOTES:

- 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. 1	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 12/1/2021	DRN BY KJB	DATE: 10/29/2021
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 75-100ADC		
				SCALE	DWG No	REV
				B	NTS	1
				JE5311-24		SHEET
						1 OF 1



- NOTES:
- WHEN NATURAL LEADS OF MAGNETICS ARE NOT USED, CHARGER COMPONENTS ARE CONNECTED WITH BLACK FLAME-RETARDANT SWITCHBOARD INSULATION SYSTEM (SIS) TYPE WIRING, IDENTIFIED ON EACH END WITH NUMBER-CODED MARKERS. GROUND WIRES ARE GREEN WITH YELLOW STRIPE.
  - STANDARD USER ALARM CONTACTS (TB6 [A1], TB1[A2], TB8[A2], etc.) ARE SOLDERLESS COMPRESSION SCREW TERMINALS, ACCEPTING #22-14 AWG WIRE.

REV. 1	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 12/1/2021	DRN BY KJB	DATE: 10/29/2021	TITLE <b>ATEVO BATTERY CHARGER CONNECTION DIAGRAM: STYLE 5070 1Ø WITH COMMON OPTIONS 75-100ADC</b>
DESCRIPTION STANDARD DRAWINGS.					CHK BY MCR	DATE: 10/29/2021	
ECN NO. N/A					APP BY MCR	DATE: 10/29/2021	
							<b>B</b> SCALE NTS DWG No JE5312-24 REV 1 SHEET 1 OF 1