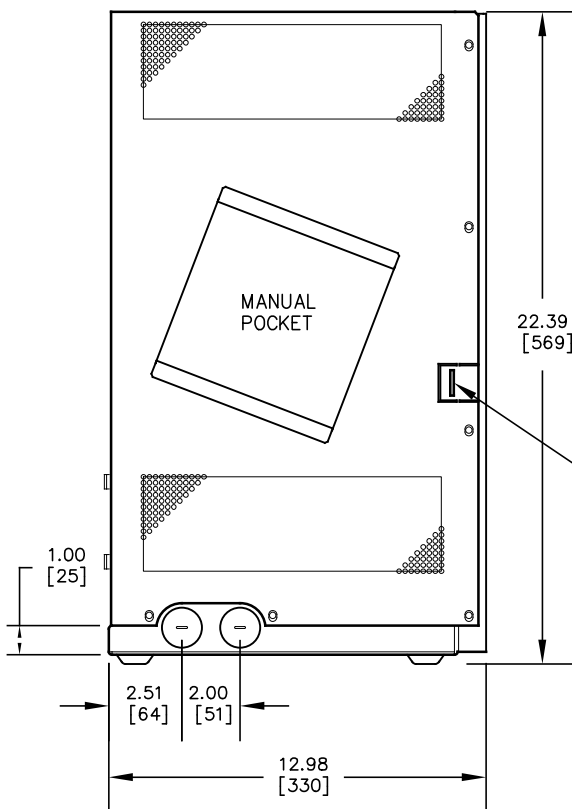
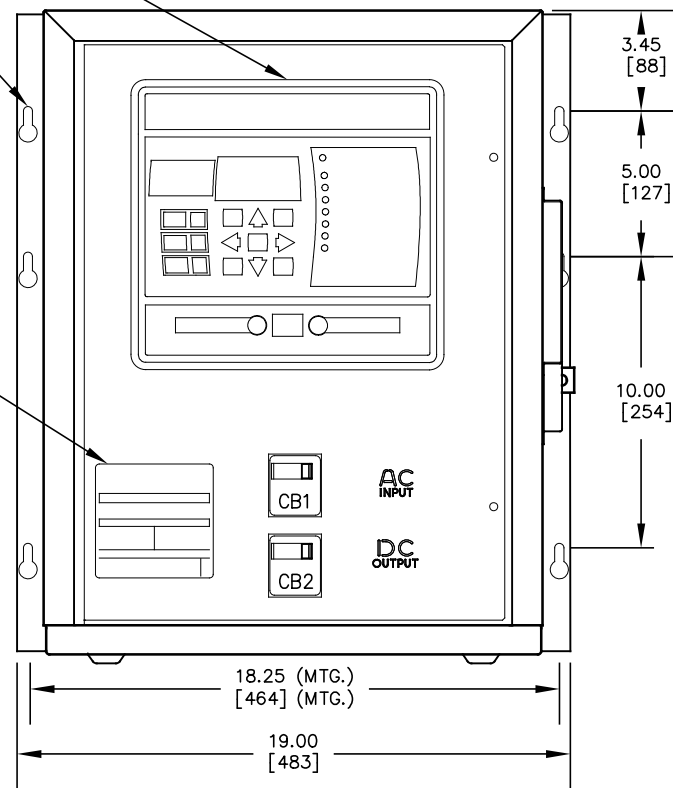


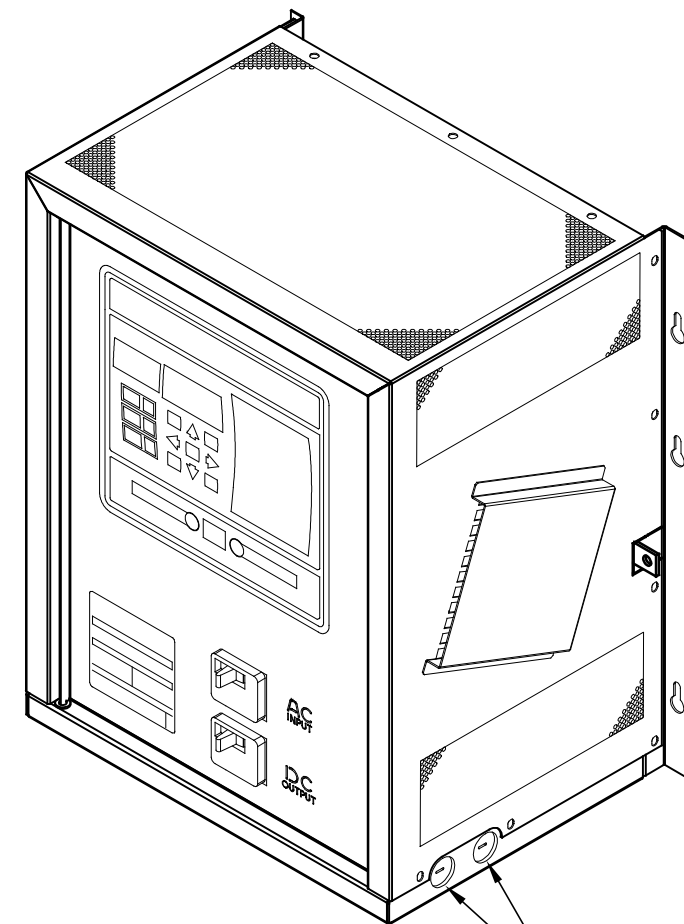
SEE CTRL PANEL  
DETAIL DRAWING  
(JE5253-01)

NOTE 3

NOTE 5

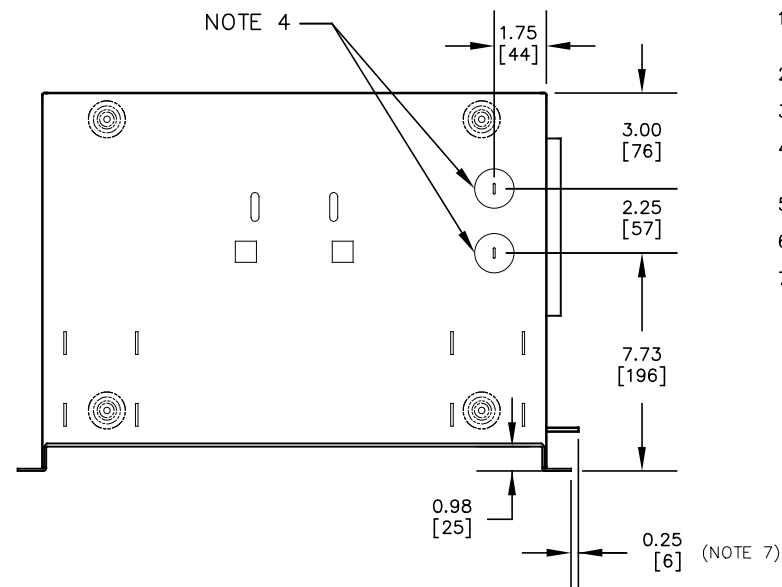


NOTE 7



NOTE 4

NOTE 4

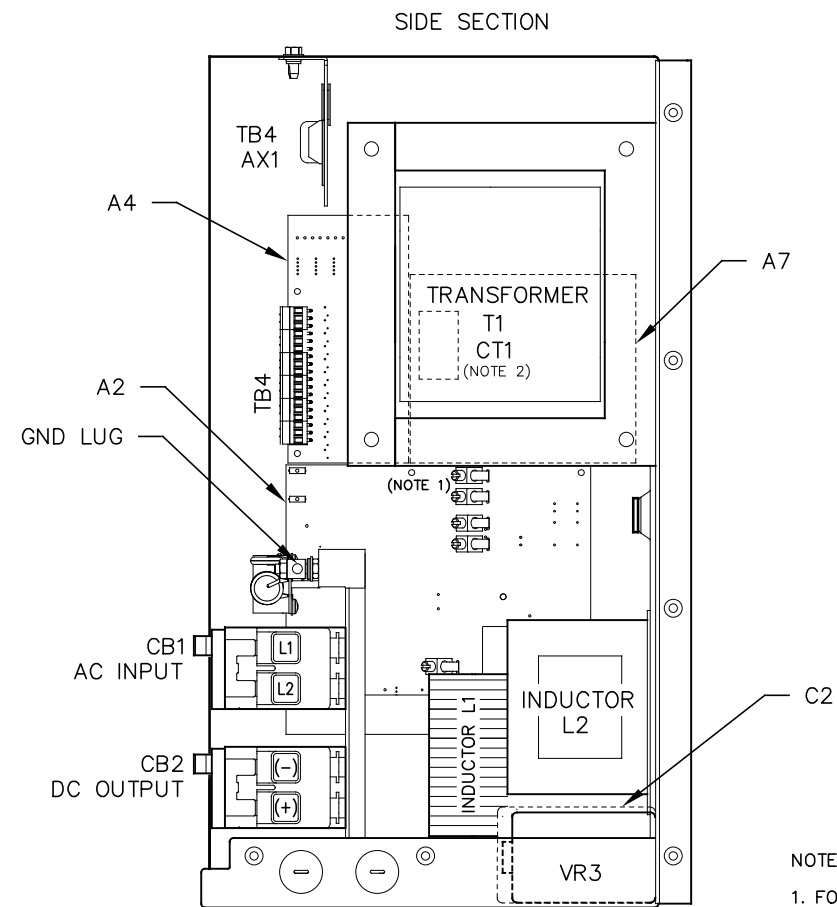
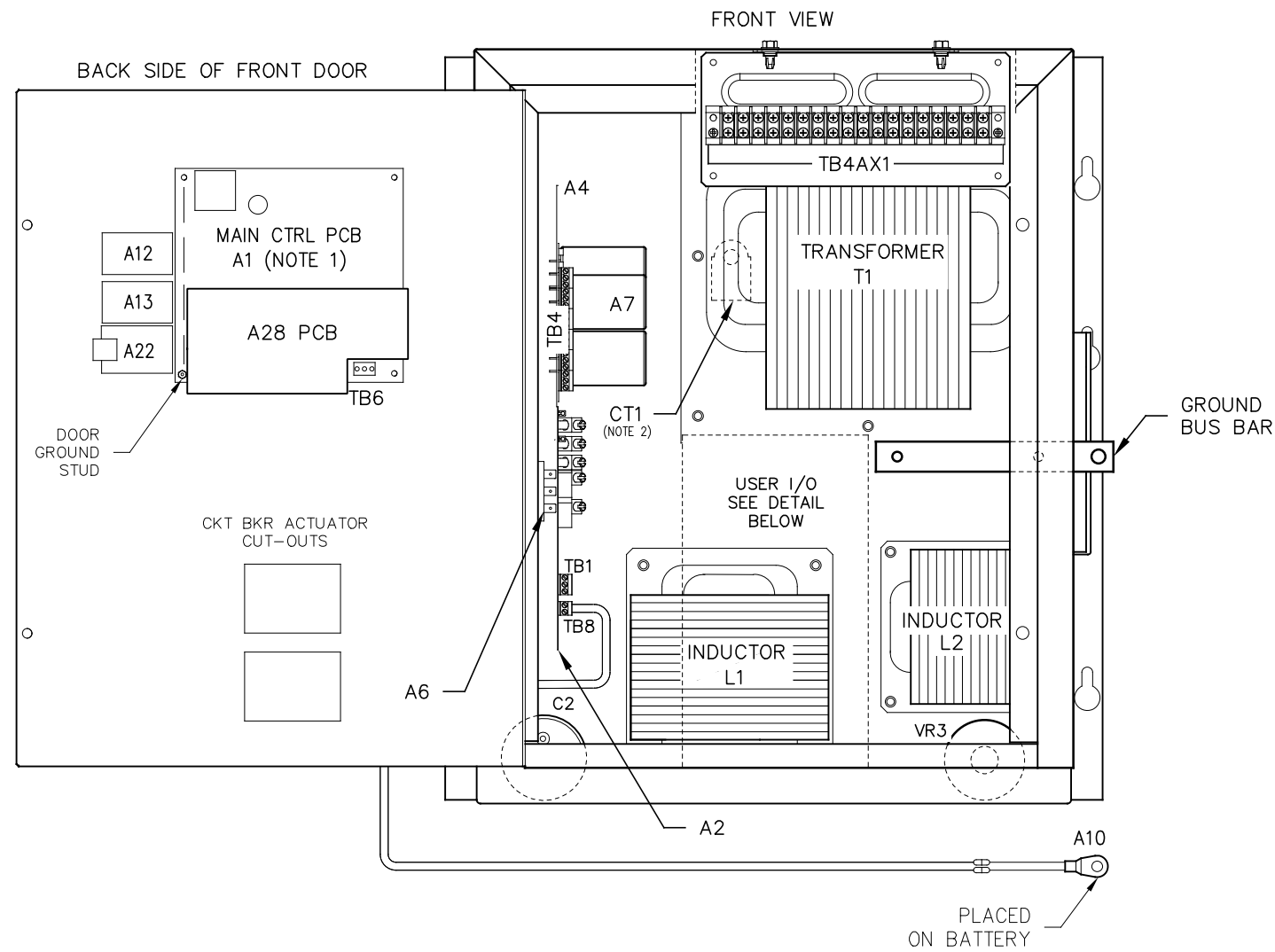


NOTES:

- ENCLOSURE IS A NEMA TYPE-1 / IP20 TOP-VENTED STEEL CABINET WITHOUT GASKETS. SHEET STEEL BASE IS 14 GA, SHROUD IS 18 GA & DOOR IS 16 GA. EXTERNAL FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT.
- ALLOW 6in / 152mm OF FREE AIR ON ALL VENTED SURFACES (TOP & SIDES) FOR COOLING.
- SIX (6) KEY-HOLE SLOTS ARE PROVIDED ON BACK OF ENCLOSURE AS SHOWN. FOR WALL-MOUNTING WITH 0.25in / 6.25mm HARDWARE.
- SIX (6) STANDARD 1.31in / 33mm DIA KEY-SLOT CONDUIT KNOCKOUTS ARE PROVIDED ON STYLE-5054. USE OF ANY OF THESE LOWER KNOCKOUTS WILL ALLOW REMOVAL OF TOP SHROUD WITHOUT REMOVAL OF EXTERNAL WIRING.
- DATA NAMEPLATE DECAL (WITH CHARGER RATINGS) APPLIED TO DOOR.
- BATTERY CHARGER INSTALLATION WEIGHT: (SEE PRODUCT LITERATURE)
- COPPER GROUND BUS BAR WITH 0.375 in / 9.5 mm DIA HOLE.

DUAL DIMENSIONS <sup>in</sup> [mm]

REV 3	DRN BY TET	CHK BY MCR	APP BY MCR	DATE 11.05.2025	DRN BY KJB	DATE 12.01.2021		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
DESCRIPTION					CHK BY MCR	DATE 12.01.2021			TITLE
REV. 3 (11.05.2025)					APP BY MCR	DATE 12.01.2021	ATEVO BATTERY CHARGER		
REV. 2 (03.12.2025)					NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER			OUTLINE: NEMA-1 STYLE-5054 ENCL	
REV. 1 (02.14.2024)					SCALE			VARIANT 1PH 30-50ADC W/COMMON OPTIONS	
REV. 0 (12.01.2021)					DWG No			REV SHEET	
					JE5251-22			3 1 OF 1	



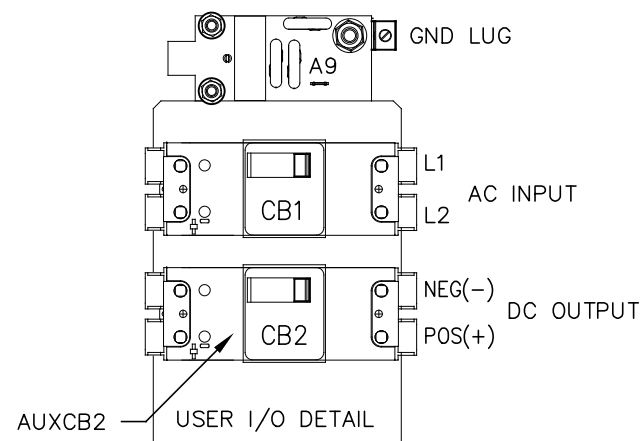
**SYM STANDARD COMPONENT DESCRIPTION**

- A1 MAIN CONTROL PCB
- A6 RECTIFIER H/S ASSEMBLY
- A2 POWER BOARD
- A7 FILTER BOARD (C1x/R9x)
- A9 MOV PCB
- CB1 AC INPUT CIRCUIT BREAKER (Bx)
- CB2 DC OUTPUT CIRCUIT BREAKER (Bx)
- AUXCB2 DC CKT BKR (CB2) AUXILIARY CONTACTS
- L1 MAIN INDUCTOR
- L2 FILTER INDUCTOR
- T1 POWER ISOLATION TRANSFORMER
- TB1 REMOTE SENSE (A2) TERMINAL BLOCK
- TB6 COMMON ALARM RELAY (A1) CONTACTS
- TB8 BATT TEMPERATURE (A2) TERM BLOCK

**SYM STANDARD COMPONENT DESCRIPTION**

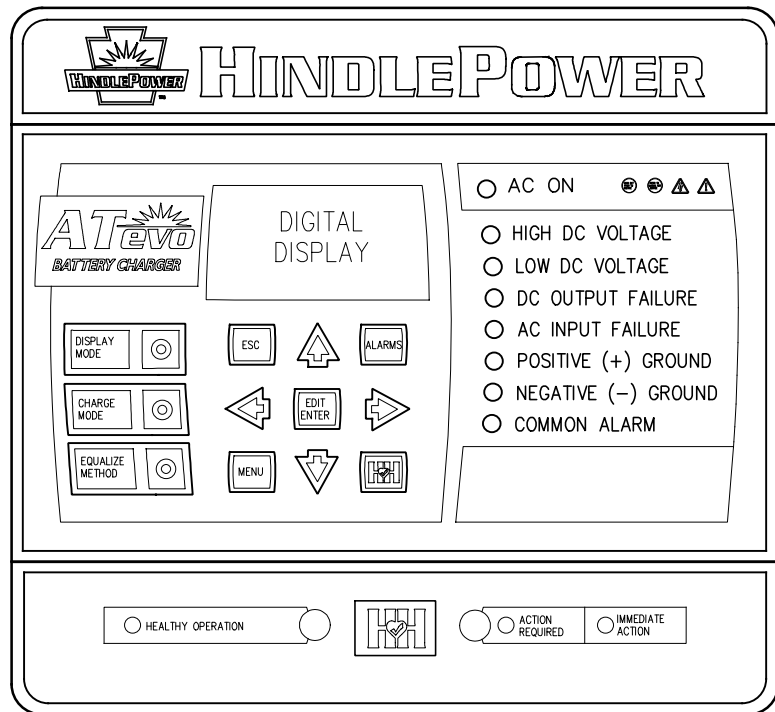
- A4 AUXILIARY I/O BOARD
- A10 TEMPERATURE COMPENSATION PROBE
- A12 SERIAL COMMUNICATION ADAPTER
- A13 FORCED LOAD SHARING PCB
- A22 ETHERNET COMMUNICATION ADAPTER
- A28 AC METER MODULE PC BOARD
- C2 BATTERY ELIMINATOR FILTER CAP
- CT1 CURRENT TRANSFORMER
- TB4 AUX ALARM PCB (A4) TERM BLOCK
- VR3 AC INPUT LIGHTNING ARRESTOR

- NOTES:**
- FOR ENHANCED VIEWS OF ALL PC BOARDS (A1, A2, A4 etc.) INCLUDING LOCATION AND ORIENTATION OF TERMINAL BLOCKS (A2-TB1 & A2-TB8) SEE DETAIL DRAWING (JE5253-21).
  - CURRENT TRANSFORMER (CT1) AFFIXED TO LINE 1 BETWEEN AC INPUT BREAKER (CB1) AND POWER ISOLATION TRANSFORMER (T1).

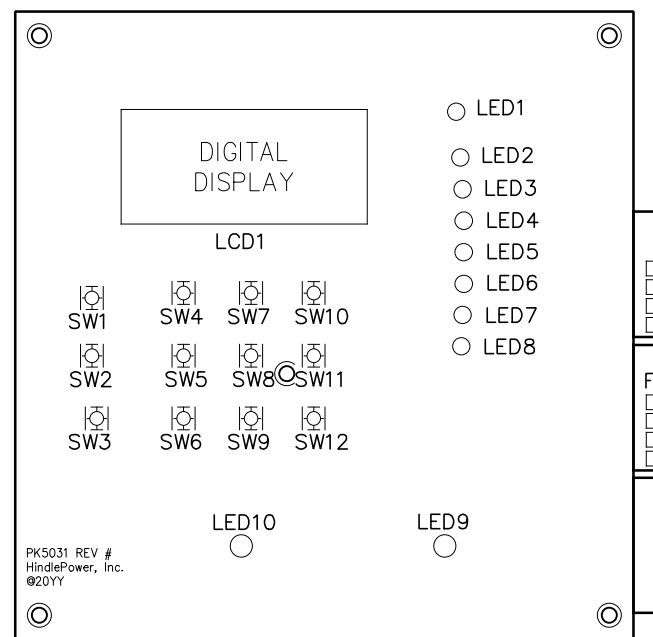


I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
CB2 (+/-)	POS/NEG DC OUTPUT TERMINALS - CIRCUIT BREAKER COMPRESSION LUG	#14-2/0 AWG
GND LUG	USER GROUND TERMINAL - CU-AL COMPRESSION BOX LUG	#14-6 AWG
CB1 (L1/L2)	AC INPUT TERMINALS - CIRCUIT BREAKER COMPRESSION LUG	#14-2/0 AWG
GND BUS	COPPER GROUND BUS - 0.375 in / 9.525 mm DIA HOLE	0.38in/9.7mm RING LUG
(NOTE 1) (A1) TB6	COMMON ALARM RELAY (A1) TERMINAL BLOCK - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A2) TB1	BATTERY Vdc REMOTE SENSE (A2) TERMINALS - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A2) TB8	REMOTE TEMPCO PROBE (A10) TERMINAL BLOCK - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB4	AUX I/O BOARD (A4) ALARM RELAY CONTACTS - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
TB4AX1	BARRIER TYPE AUX ALARM (A4) CONTACTS - 6-32 BINDER HEAD SCREW	#16-10 AWG

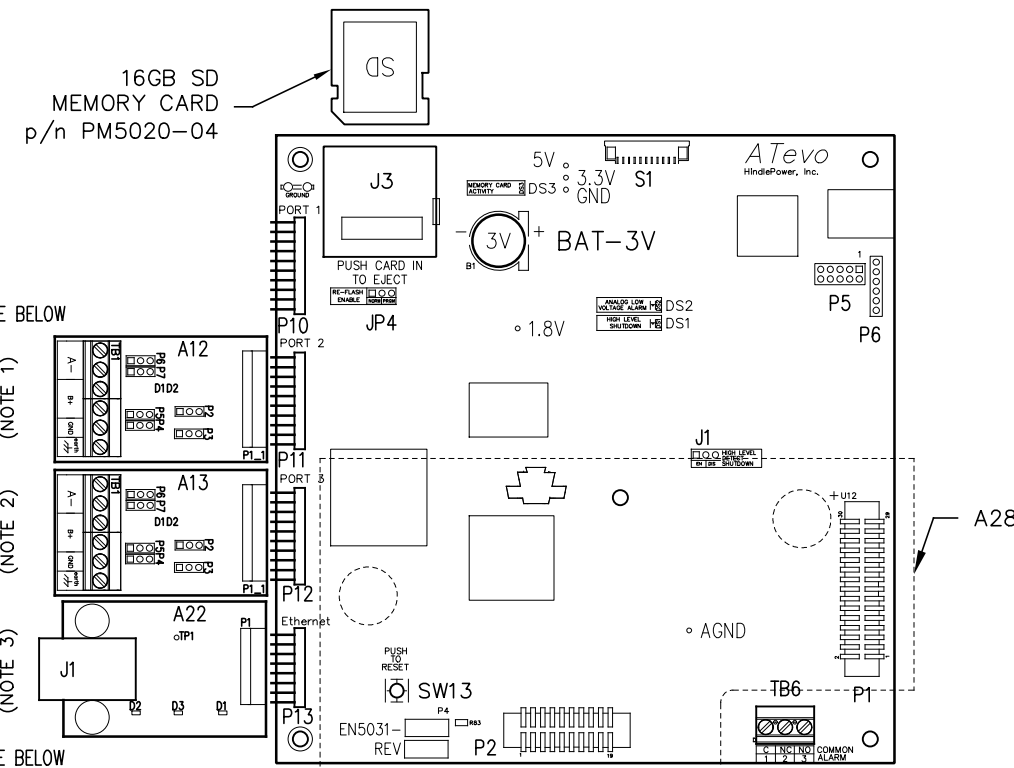
REV 3 (11.05.2025)	DRN BY TET	CHK BY MCR	APP BY MCR	DATE 11.05.2025	DRN BY KJB	DATE 12.01.2021	<p>1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com</p>
DESCRIPTION	REV. 2 (03.12.2025)	REV. 1 (02.14.2024)	REV. 0 (12.01.2021)	CHK BY MCR	DATE 12.01.2021	APP BY MCR	
<p>NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER</p>							<p>TITLE <b>ATEVO BATTERY CHARGER</b> INTERNAL COMPONENT LAYOUT: STYLE-5054</p> <p>VARIANT <b>1PH 30-50ADC W/COMMON OPTIONS</b></p>
<p>SCALE <b>B</b> NTS</p>			<p>DWG No <b>JE5252-22</b></p>		REV 3	SHEET 1 OF 1	



**CONTROL PANEL**  
(p/n FK5047-00)



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



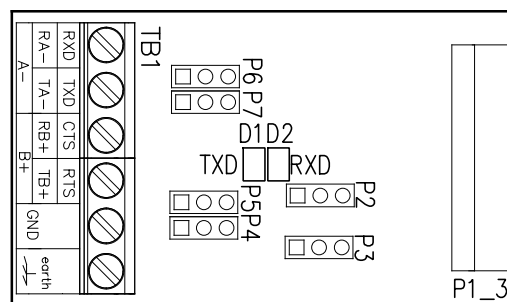
**MAIN CONTROL PC BOARD (A1)**  
BACK VIEW – FACING CHARGER COMPONENTS WHEN INSTALLED

NOTE: UNLESS OTHERWISE SPECIFIED, ALL USER ALARM TERMINAL BLOCKS ARE SOLDERLESS COMPRESSION SCREW TERMINALS, ACCEPTING #22-14 AWG WIRE. ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER ENERGIZED AND RELAYS ENERGIZED (FAIL SAFE). ALL ALARM CONTACTS WILL CHANGE STATE WHEN ATEVO POWERED DOWN. CONTACT RATING IS 0.5A @ 125VAC/VDC RESISTIVE.

**NOTES:**

- SERIAL COMMUNICATIONS ADAPTER (A12) SUPPORTS DNP3 LEVEL 2 AND MODBUS PROTOCOLS. SEE ATEVO COMMUNICATIONS MANUAL (JA0102-54) FOR DETAILS.
- FOR FORCED LOAD SHARING & A13 PC BOARD DETAIL, SEE FLS DRAWING (JE5257-21).
- ETHERNET ADAPTER (A22) SUPPORTS DNP3 LEVEL 2 AND MODBUS COMMUNICATIONS PROTOCOLS. SEE ATEVO COMMUNICATIONS MANUAL (JA0102-54) FOR DETAILS.

**SERIAL COMMUNICATION ADAPTER (A12)**



(NOTE 1)

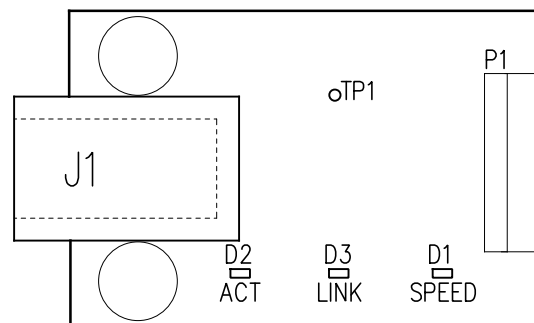
**CONNECTORS (A12):**  
P1 – MAIN CONTROL BOARD

**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)**



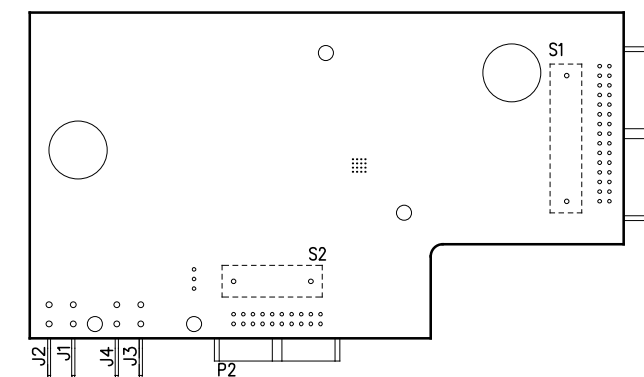
(NOTE 3)

**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

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



I/O TERMINAL	DESCRIPTION – TYPE	CONNECTION
(A1) TB6	COMMON ALARM TERMINAL BLOCK (A1) – SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A12) TB1	RS-232 / RS-485 USER CONNECTIONS – SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A13) TB1	FORCED LOAD SHARE SIGNAL – SOLDERLESS COMP SCREW	#22-14 AWG
(A22) J1	ETHERNET COMMUNICATIONS CONNECTION – RJ45 PLUG	CAT5/6 UTP

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 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> SW1 – DISPLAY BUTTON SW2 – CHARGE MODE BUTTON SW3 – EQUALIZE METHOD BUTTON SW4 – ESCAPE (ESC) BUTTON SW5 – LEFT ARROW BUTTON SW6 – MENU BUTTON SW7 – UP ARROW BUTTON SW8 – EDIT / ENTER BUTTON SW9 – DOWN ARROW BUTTON SW10 – ALARM BUTTON SW11 – RIGHT ARROW BUTTON SW12 – 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 – FACTORY DEBUG PORT P5 – DISPLAY PROCESSOR JTAG PORT P7-P9 – CURRENTLY NOT USED P10 – SERIAL INTERFACE PORT #1 P11 – SERIAL INTERFACE PORT #2 P12 – SERIAL INTERFACE PORT #3 P13 – ETHERNET INTERFACE PORT P14-P16 – CURRENTLY NOT USED P17 – GENERAL EXPANSION PORT

REV	DRN BY	CHK BY	APP BY	DATE	DRN BY	DATE
3	TET	MCR	MCR	11.05.2025	KJB	12.01.2021
DESCRIPTION				CHK BY	DATE	
REV. 3 (11.05.2025)				MCR	12.01.2021	
REV. 2 (03.12.2025)				APP BY	DATE	
REV. 1 (02.14.2024)				MCR	12.01.2021	
REV. 0 (12.01.2021)				NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER		

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**HINDLEPOWER**

TITLE  
**ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL**

VARIANT **1PH 30-50ADC W/COMMON OPTIONS**

**B** SCALE NTS DWG No **JE5253-22** REV 3 SHEET 1 OF 2

JUMPERS & CONFIGURATION SWITCHES FOR AUX I/O BOARD (A4):

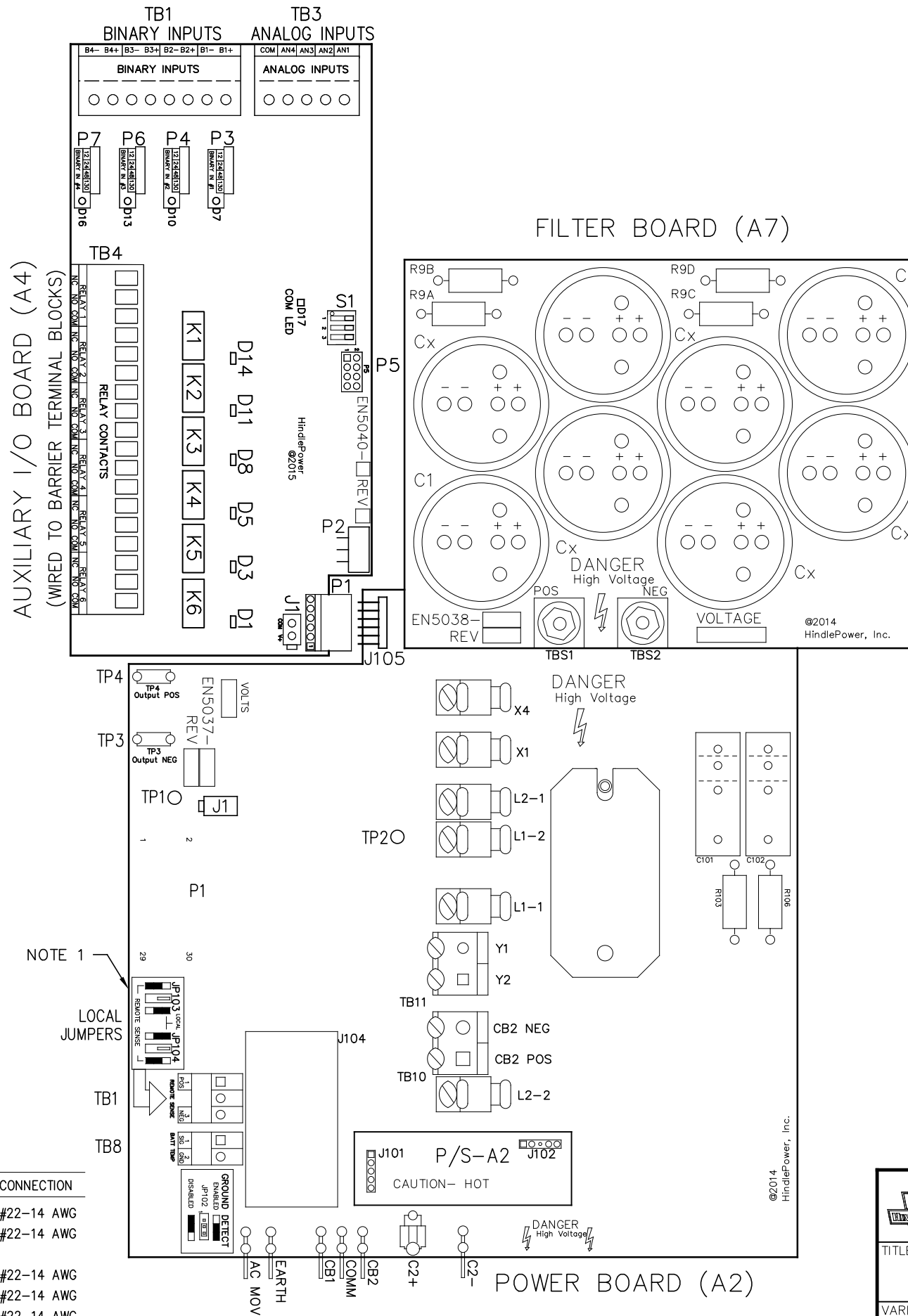
- J1 - AUXILIARY POWER INPUT
- P1 - POWER BOARD (PRIMARY POWER & COMM SOURCE)
- P5 - PROGRAMMING HEADER
- P5 - PROGRAMMING HEADER
- P3, P4, P6 & P7 - BINARY INPUT VOLTAGE CONFIGURATION JUMPERS
- S1 - BOARD ADDRESS DIPSWITCH

INDICATORS ON AUX I/O 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 AUX RELAY BOARD (A4):

- TB1 - BINARY INPUTS
- TB2 - SERIAL INTERFACE
- TB3 - ANALOG INPUTS
- TB4 - AUXILIARY I/O RELAY CONTACTS



NOTE:

1. REMOTE SENSE JUMPERS (JP103 & JP104) SET IN 'LOCAL POSITION' FOR STYLE-5054 ENCLOSURE.

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
(A2) TB1	BATTERY Vdc REMOTE SENSE (A2) TERMINALS - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A2) TB8	REMOTE TEMPCO PROBE (A10) TERMINAL BLOCK - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB1	AUX I/O BINARY INPUTS (A4) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB3	AUX I/O ANALOG INPUTS (A4) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB4	AUX I/O RELAY CONTACTS (A4) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG

USER TERMINALS ON POWER BOARD (A2):

- TB1 - REMOTE VOLTAGE SENSE
- TB8 - BATTERY TEMPERATURE COMPENSATION

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:

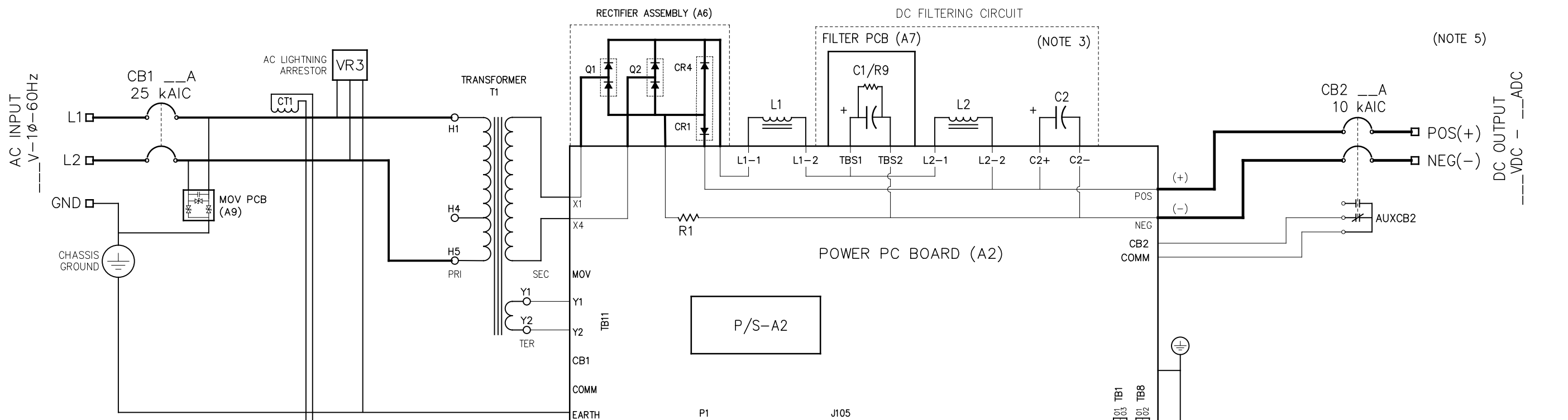
- AC MOV - CHASSIS EARTH GROUND
- EARTH - CHASSIS EARTH GROUND (DOOR)
- CB1 - AC BREAKER AUX SWITCH CONTACT
- CB2 - DC BREAKER AUX SWITCH CONTACT
- COMM - BREAKER AUX SWITCH COMMON
- C2+ - ELIMINATOR FILTER CAPACITOR (+)
- C2- - ELIMINATOR FILTER CAPACITOR (-)
- X1 - TRANSFORMER SECONDARY WINDING
- X4 - TRANSFORMER SECONDARY WINDING
- L1-1 - FILTER INDUCTOR #1 (TERMINAL #1)
- L1-2 - FILTER INDUCTOR #1 (TERMINAL #2)
- L2-1 - FILTER INDUCTOR #2 (TERMINAL #1)
- L2-2 - FILTER INDUCTOR #2 (TERMINAL #2)
- TB10 - CB2 DC BREAKER
- TB11 - 'Y' CONTROL WINDINGS
- TBS1 - FILTER CAPACITOR BOARD (+)
- TBS2 - FILTER CAPACITOR BOARD (-)

TEST POINTS ON POWER BOARD (A2):

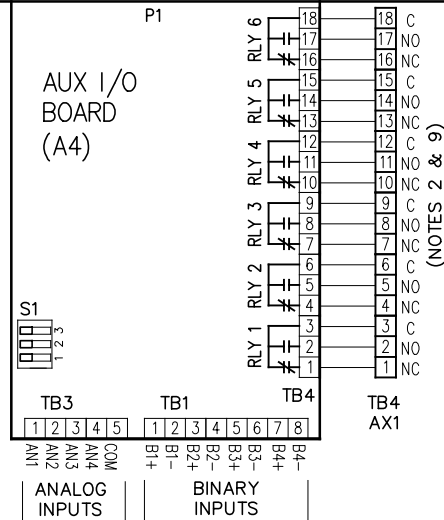
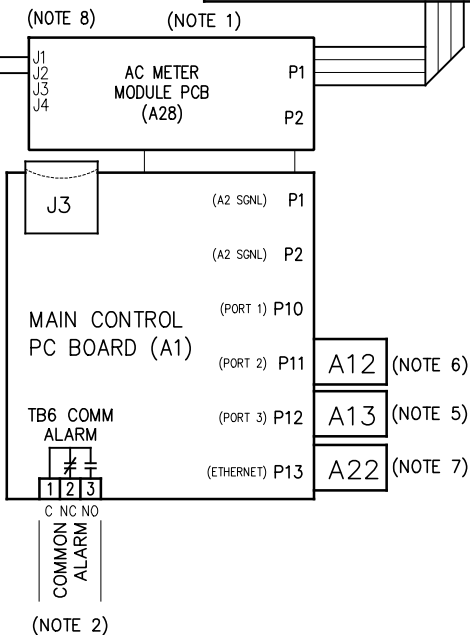
- TP1 - PRE-FILTERED DC BUS (-)
- TP2 - PRE-FILTERED DC BUS (+)
- TP3 - DC BUS (-)
- TP4 - DC BUS (+)

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TITLE		ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL	
VARIANT		1PH 30-50ADC W/COMMON OPTIONS	
<b>B</b>	SCALE	DWG No	REV
	NTS	JE5253-22	3
		SHEET	2 OF 2

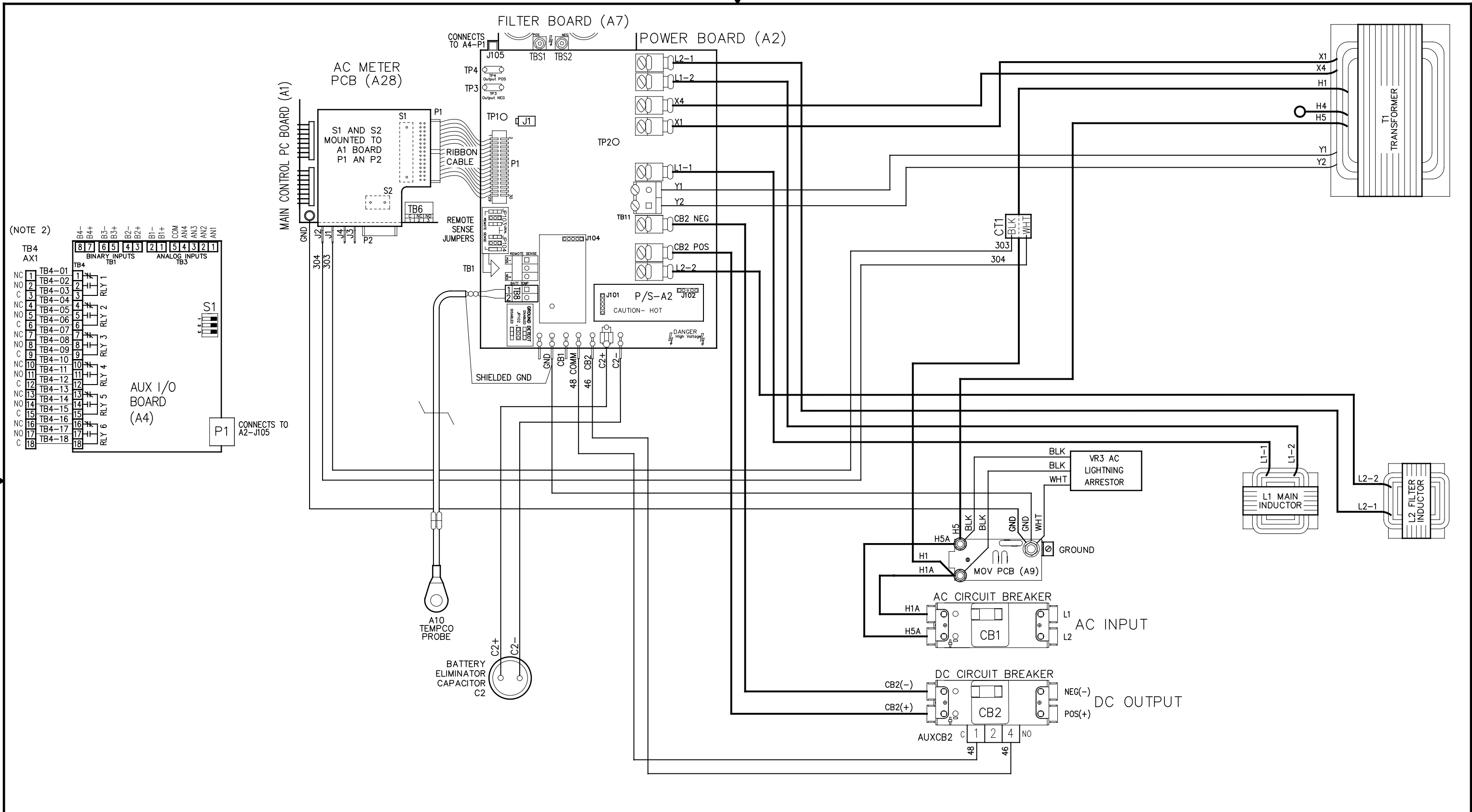


- NOTES: (#s not listed reserved for options not supplied)
- FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A2, A7, etc.) SEE DETAIL DRAWING (JE5253-#SLES#).
  - ALL ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER AND RELAYS ENERGIZED (FAIL SAFE). CONTACTS WILL CHANGE STATE WHEN ATEVO POWERED DOWN.  
CONTACT RATING: 0.5A @ 125VAC/120VDC RESISTIVE
  - DC FILTERING CIRCUIT (C1/L2/C2) DESIGNED AND TESTED TO MEET NEMA PE5 SPECIFICATION FOR "ELIMINATOR" (CODE "E"). MEASURED AC RIPPLE MAY BE LOWER, WHEN CONNECTED TO BATTERY.
  - ATEVO DC OUTPUT (+/-) PARALLELED WITH SECOND MODEL OF IDENTICAL RATING. SERIAL PCB (A13) INTERCONNECTED WITH SECOND UNIT FOR DC OUTPUT CONTROL. FOR FORCED LOAD SHARING, SEE DETAIL DRAWING (JE5257-#SLES#).
  - SERIAL ADAPTER (A12) USER CONNECTION, SEE ATEVO COMMUNICATIONS MANUAL (JA0102-54).
  - ETHERNET ADAPTER (A22) USER CONNECTION, SEE ATEVO COMMUNICATIONS MANUAL (JA0102-54).
  - AC INPUT METERING PER USER INSTRUCTIONS JA5124-03.
  - AUX I/O BOARD (A4) RELAYS CONFIGURABLE BY USER. SEE O&SI MANUAL SECTION 12.4. FACTORY-DEFAULTS LISTED IN TABLE BELOW.



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 3	DRN BY TET	CHK BY MCR	APP BY MCR	DATE 11.05.2025	DRN BY KJB	DATE 12.01.2021	<p>1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com</p>
DESCRIPTION					CHK BY MCR	DATE 12.01.2021	
REV. 3 (11.05.2025)					APP BY MCR	DATE 12.01.2021	
REV. 2 (03.12.2025)							
REV. 1 (02.14.2024)							TITLE
REV. 0 (12.01.2021)							ATEVO BATTERY CHARGER SCHEMATIC: STYLE-5054
NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER					VARIANT 1PH 30-50ADC W/COMMON OPTIONS		
					SCALE B	DWG No JE5254-22	REV 3 SHEET 1 OF 1



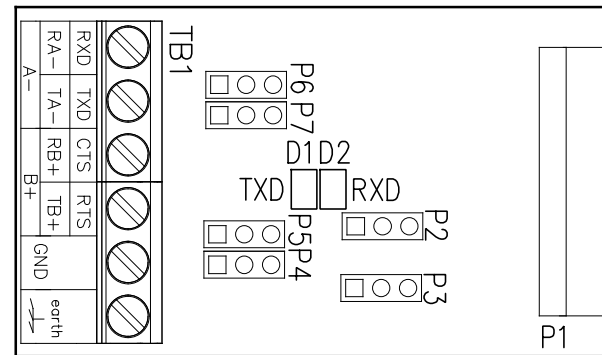
(NOTE 2)

TB4 AX1		BINARY INPUTS TB1				ANALOG INPUTS TB3			
NC	1	8	7	6	5	4	3	2	1
C	TB4-01	B4+	B4+	B3+	B3+	B2+	B2+	B1-	B1+
NO	TB4-02							COM	AN4
C	TB4-03							AN3	AN2
NO	TB4-04								AN1
C	TB4-05								
NO	TB4-06								
C	TB4-07								
NO	TB4-08								
C	TB4-09								
NO	TB4-10								
C	TB4-11								
NO	TB4-12								
C	TB4-13								
NO	TB4-14								
C	TB4-15								
NO	TB4-16								
C	TB4-17								
NO	TB4-18								

- 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.
  - TB4-AUX ALARM TERMINAL BLOCK, BARRIER TYPE WITH 6-32 BINDER HEAD SCREWS, WILL ACCEPT LUGS FOR #16-14 AWG WIRE (RATED 0.5A @ 125VAC/VDC).

REV 3	DRN BY TET	CHK BY MCR	APP BY MCR	DATE 11.05.2025	DRN BY KJB	DATE 12.01.2021	<p>1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com</p>
DESCRIPTION					CHK BY MCR	DATE 12.01.2021	
REV. 3 (11.05.2025)					APP BY MCR	DATE 12.01.2021	
REV. 2 (03.12.2025)							
REV. 1 (02.14.2024)							TITLE
REV. 0 (12.01.2021)							ATEVO BATTERY CHARGER CONNECTION DIAGRAM: STYLE-5054
NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER					VARIANT 1PH 30-50ADC W/COMMON OPTIONS		
			SCALE B		DWG No JE5255-22		REV 3
							SHEET 1 OF 1

### A13 PCB DETAIL



INSERTED INTO LEFT-SIDE PORT 3 (P12) OF MAIN CONTROL BOARD (A1)

(NOTE 5)

**WARNING**

NEVER SEPARATE THE ATevo CHARGER FROM THE DC BUS WHILE IN FORCED LOAD SHARING

When ATevo battery chargers are operating in Load Share Mode, they MUST both be connected to the same dc bus. If your application and dc system includes disconnects, Forced Load Sharing MUST first be disabled before chargers are isolated from each other. See FLS Instructions (JA5054-50) page 9 of 10, and disable via ATevo front panel display. Failure to disable forced load sharing when the ATevos are not connected to the same dc bus will result in an undesirable operation, whereby the battery may become DISCHARGED.

JUMPERS ON SERIAL COMMUNICATIONS ADAPTER (A13) MUST BE CONFIGURED TO OPERATE IN 2-WIRE RS-485 MODE.

- JUMPER P2 (RXCNTL) MUST BE SET TO TXE – LEFT TWO PINS
- JUMPER P3 (MEDIA) MUST BE SET TO 485 – LEFT TWO PINS
- JUMPERS P4 & P5 (485-TERM) MUST BE SET TO OFF – LEFT TWO PINS
- JUMPERS P6 & P7 (# WIRES) MUST BE SET TO 2W – LEFT TWO PINS

### INTRODUCTION

Multiple battery chargers are sometimes employed in dc power systems to provide redundancy. Two (2) chargers of the same voltage rating can be connected in parallel, each of them capable of powering the connected dc load and charging the battery. When two (2) chargers operate in parallel, they normally will not share the load current equally. Since any two (2) chargers will usually have slightly different connection paths, one of the chargers in a system will typically have a slightly higher dc output voltage, and will therefore assume more of the burden of providing the necessary load current.

The ATevo forced load sharing feature supports a single "Primary" charger, and a "Secondary" charger. The Primary charger communicates with a Secondary charger over a serial connection. Each charger requires a Serial Communications Adapter (A13) set for RS-485, wired to all other chargers to create the forced load sharing communication network.

### SYSTEM REQUIREMENTS

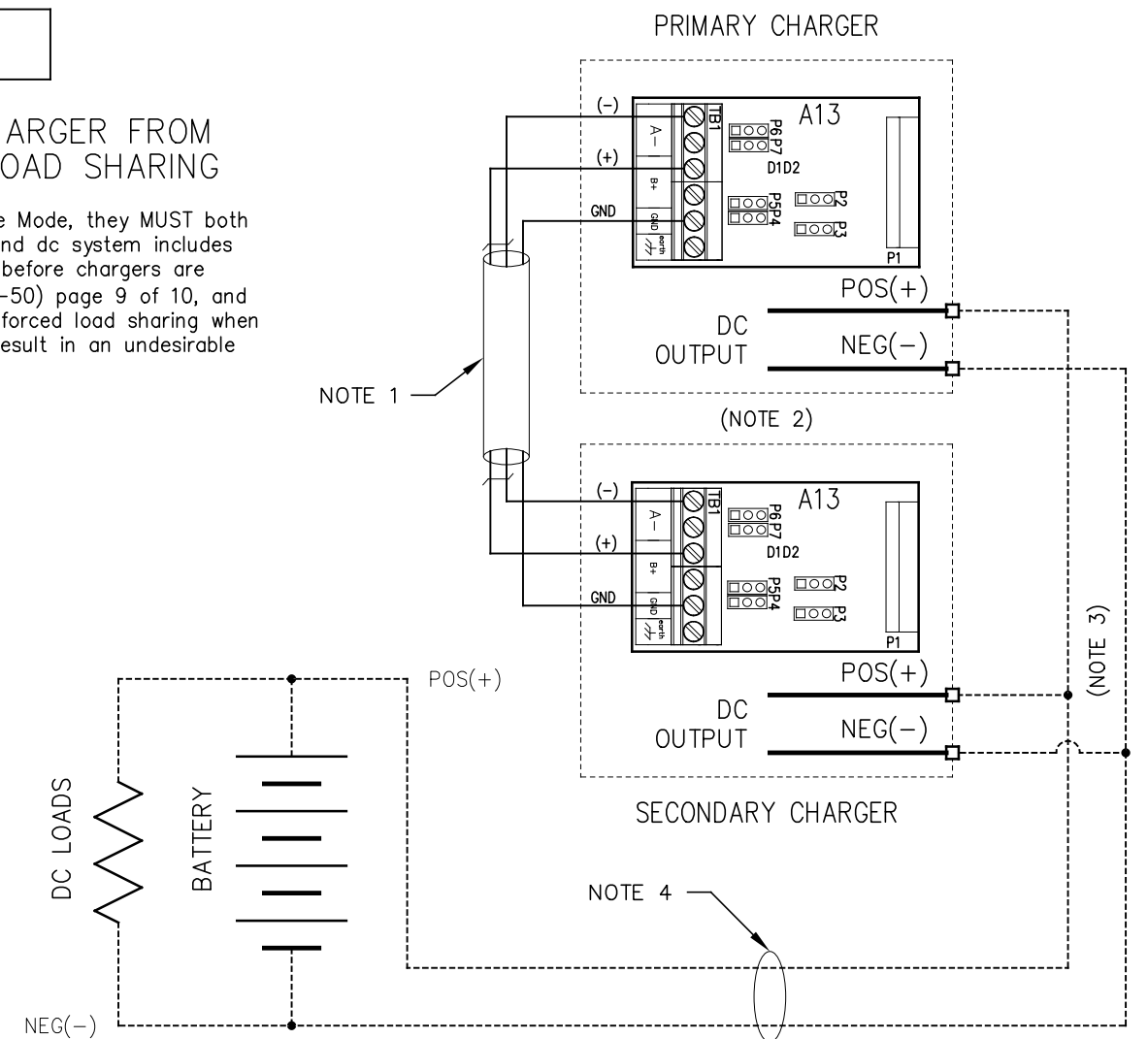
- Both battery chargers must be ATevo Series. The ATevo forced load sharing feature will not operate with legacy AT10.1 and AT30 Series battery chargers.
- Both connected chargers must have the same voltage settings, have the same output current rating, and have the same version of ATevo Main Control PC Board (A1) firmware.
- Each ATevo requires a Serial Communications Adapter (A13) to be installed in either Port 2 or Port 3 of the Main Control PC Board (A1).

### ATEVO CHARGER LOAD SHARING CONFIGURATION

If the ATevo is ordered with the forced load sharing feature, the hardware and software configuration will be completed at the factory. The forced load sharing Serial Communications Adapters (A13) and software will be verified during the charger production test. The signal interconnection cable will be supplied in a bagged kit, to be connected to the chargers in the field after installation. If forced load sharing is added to the ATevo in the field, hardware and software configuration will be required.

### INSTALLING SERIAL COMMUNICATIONS ADAPTER (A13)

Refer to the Serial Communication Adapter section of the ATevo Communications Manual (JA0102-54) for instructions on how to install the Serial Communications Adapter. Refer to User Instructions (JA5054-50), or Forced Load Sharing Section 13 of the Operating and Service Instructions, for instructions on how to configure ATevo's to share dc load.



### NOTES:

1. FOR TWO (2) UNITS TO LOAD SHARE, CONNECT A13-TB1 OF "PRIMARY" CHARGER TO A13-TB1 OF "SECONDARY" CHARGER USING SUPPLIED \_\_\_ft / \_\_\_m INTERCONNECTION CABLE (p/n EH5052-0\_).
2. FORCED LOAD SHARING FEATURE ONLY FUNCTIONAL WITH ATEVO MODELS (Vdc-Adc) OF IDENTICAL RATING.
3. ATEVO BATTERY CHARGERS OPERATING IN FORCED LOAD SHARING MODE MUST BE CONNECTED TO COMMON DC BUS.
4. CHARGER/BATTERY/LOAD INTER-CONNECTION DC CABLING NOT SUPPLIED WITH ATEVO, NOR WITH FORCED LOAD SHARING ACCESSORY (p/n EJ5306-0\_). DC CABLING MAY BE SUPPLIED BY BATTERY MANUFACTURER, SYSTEM INTEGRATOR, OR SITE INSTALLER. SEE BATTERY/SYSTEM DRAWINGS FOR SPECIFICATIONS.
5. TWO (2) WARNING DECALS (p/n FK5046-00) SUPPLIED WITH BAGGED LOAD SHARING KIT FOR FIELD APPLICATION TO VITAL LOCATIONS.
6. FOR DETAILED INSTALLATION, OPERATING AND TROUBLE-SHOOTING PROCEDURES, SEE ATEVO FORCED LOAD SHARING USER INSTRUCTION (JA5054-50). <http://www.atseries.net/PDFs/JA5054-50.pdf>

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