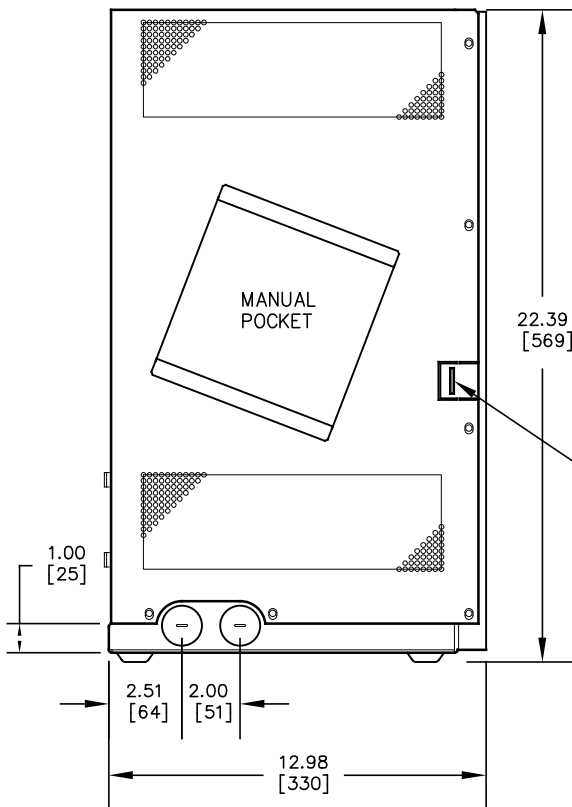
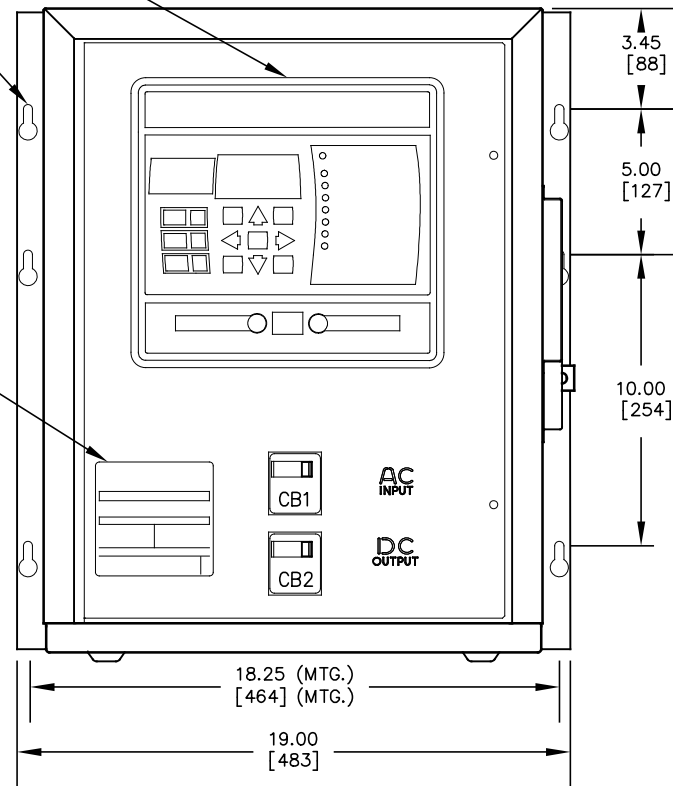


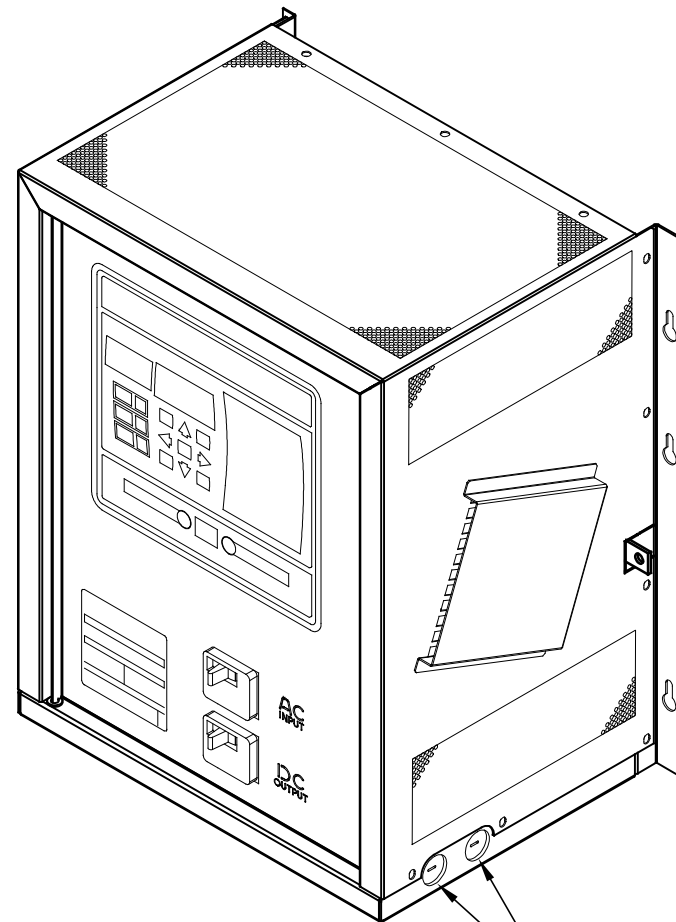
SEE CTRL PANEL
DETAIL DRAWING
(JE5253-01)

NOTE 3

NOTE 5

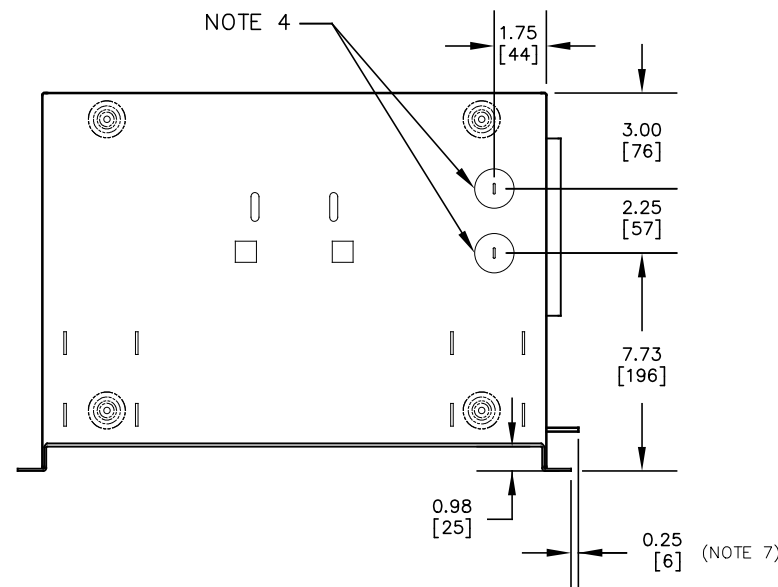


NOTE 7



NOTE 4

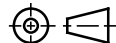
NOTE 4

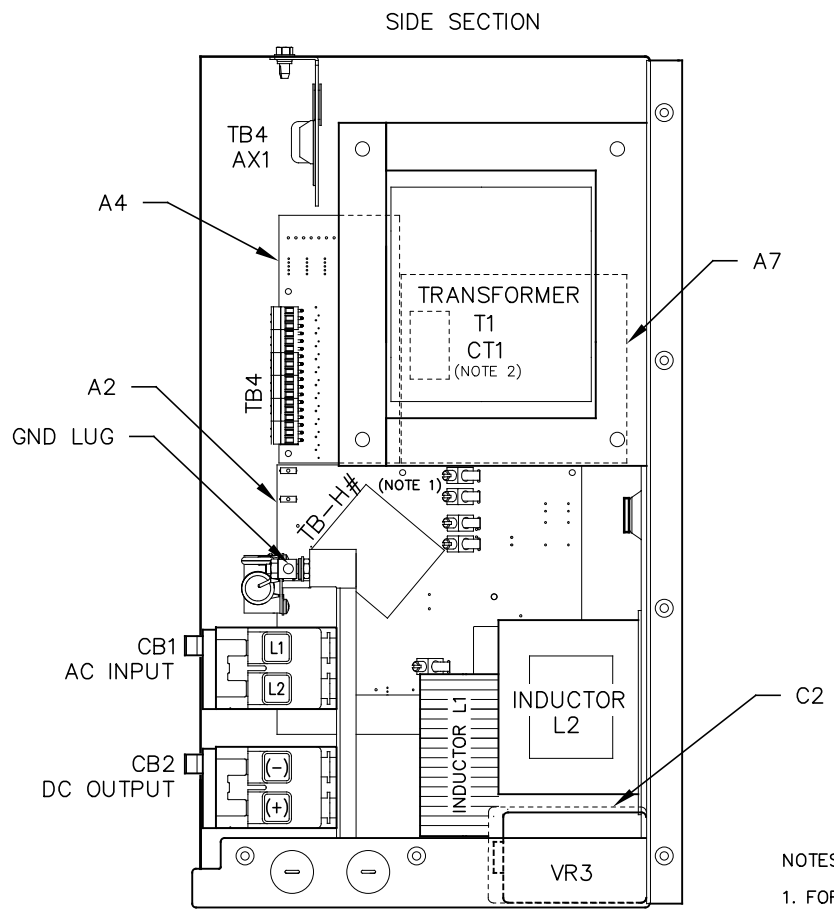
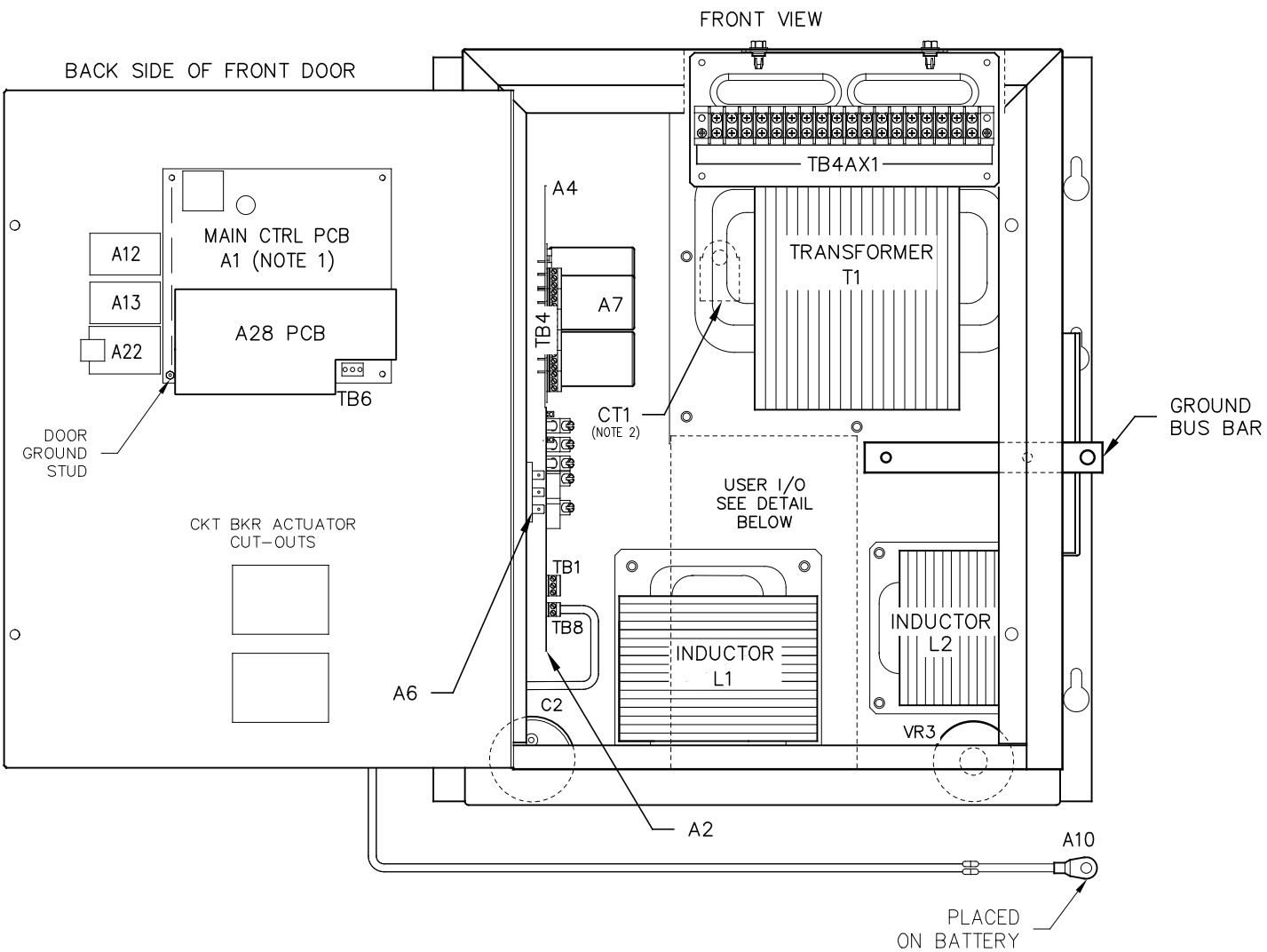


NOTES:

- 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 ⁱⁿ
[mm]

REV	DRN BY	CHK BY	APP BY	DATE	DRN BY	DATE	 HINDLEPOWER 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com				
3	TET	MCR	MCR	11.05.2025	KJB	12.01.2021					
DESCRIPTION					CHK BY	DATE	TITLE ATEVO BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5054 ENCL				
REV. 3 (11.05.2025)					MCR	12.01.2021					
REV. 2 (03.12.2025)					APP BY	DATE	VARIANT 1PH 6-25ADC W/COMMON OPTIONS				
REV. 1 (02.14.2024)					MCR	12.01.2021					
REV. 0 (12.01.2021)					NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER		 B SCALE NTS DWG No JE5251-21 REV 3 SHEET 1 OF				



SYM STANDARD COMPONENT DESCRIPTION

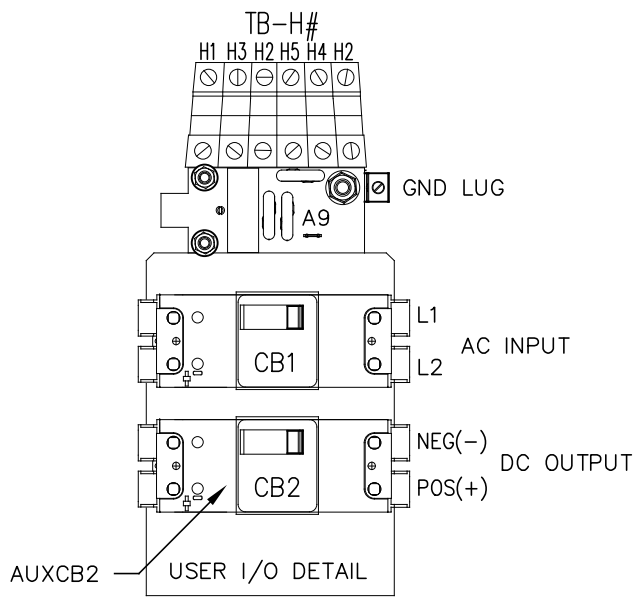
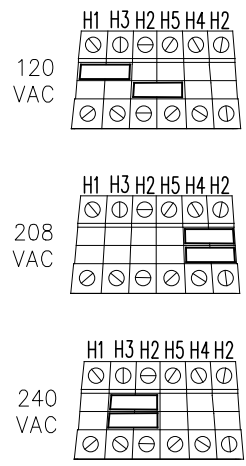
A1	MAIN CONTROL PCB
A6	RECTIFIER H/S ASSEMBLY
A2	POWER BOARD
A7	FILTER BOARD (C1x/R9x)
A9	MOV PCB
CB1	AC INPUT CIRCUIT BREAKER (Bx)
CB2	DC OUTPUT CIRCUIT BREAKER (Bx)
AUXCB2	DC CKT BKR (CB2) AUXILIARY CONTACTS
L1	MAIN INDUCTOR
L2	FILTER INDUCTOR
T1	POWER ISOLATION TRANSFORMER
TB1	REMOTE SENSE (A2) TERMINAL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

SYM STANDARD COMPONENT DESCRIPTION

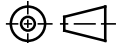
A4	AUXILIARY I/O BOARD
A10	TEMPERATURE COMPENSATION PROBE
A12	SERIAL COMMUNICATION ADAPTER
A13	FORCED LOAD SHARING PCB
A22	ETHERNET COMMUNICATION ADAPTER
A28	AC METER MODULE PC BOARD
C2	BATTERY ELIMINATOR FILTER CAP
CT1	CURRENT TRANSFORMER
TB4	AUX ALARM PCB (A4) TERM BLOCK
VR3	AC INPUT LIGHTNING ARRESTOR

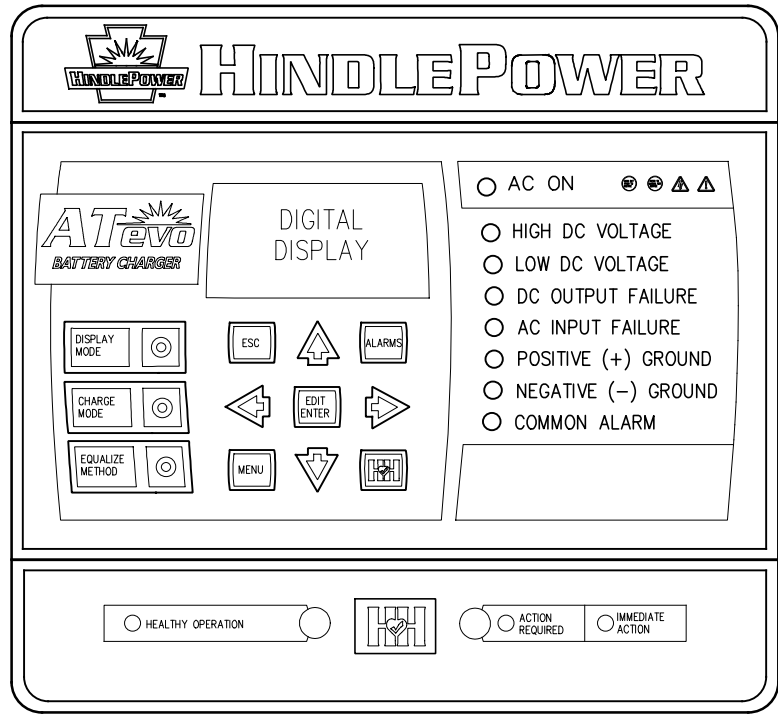
- NOTES:
- FOR ENHANCED VIEWS OF ALL PC BOARDS (A1, A2, A4 etc.) INCLUDING LOCATION AND ORIENTATION OF TERMINAL BLOCKS (A2-TB1 & A2-TB8) SEE DETAIL DRAWING (JE5253-21).
 - CURRENT TRANSFORMER (CT1) AFFIXED TO LINE 1 BETWEEN AC INPUT BREAKER (CB1) AND POWER ISOLATION TRANSFORMER (T1).

JUMPER CONFIGURATIONS



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
	(A2) TB1	BATTERY Vdc REMOTE SENSE (A2) TERMINALS - SOLDERLESS COMPRESSION SCREW
	(A2) TB8	REMOTE TEMPCO PROBE (A10) TERMINAL BLOCK - SOLDERLESS COMPRESSION SCREW
	(A4) TB4	AUX I/O BOARD (A4) ALARM RELAY CONTACTS - SOLDERLESS COMPRESSION SCREW
	TB4AX1	BARRIER TYPE AUX ALARM (A4) CONTACTS - 6-32 BINDER HEAD SCREW

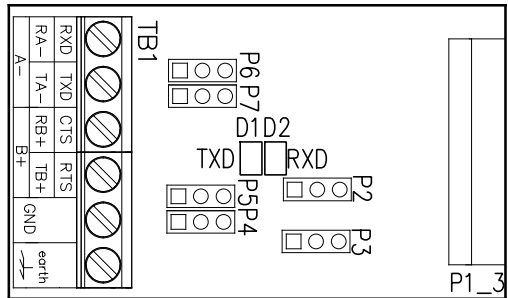
REV 3	DRN BY TET	CHK BY MCR	APP BY MCR	DATE 11.05.2025	DRN BY KJB	DATE 12.01.2021	 HINDLEPOWER 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
DESCRIPTION REV. 3 (11.05.2025) REV. 2 (03.12.2025) REV. 1 (02.14.2024) REV. 0 (12.01.2021)					CHK BY MCR	DATE 12.01.2021		TITLE ATEVO BATTERY CHARGER INTERNAL COMPONENT LAYOUT: STYLE-5054
NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER					APP BY MCR	DATE 12.01.2021		VARIANT 1PH 6-25ADC W/COMMON OPTIONS
					SCALE B	DWG No JE5252-21	REV 3	SHEET 1 OF 1



CONTROL PANEL
(p/n FK5047-00)

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.

SERIAL COMMUNICATION ADAPTER (A12)



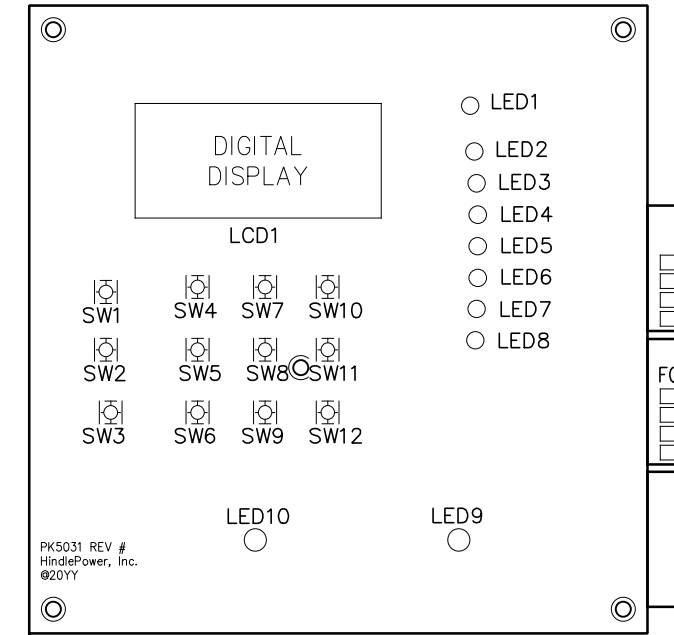
(NOTE 1)

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)

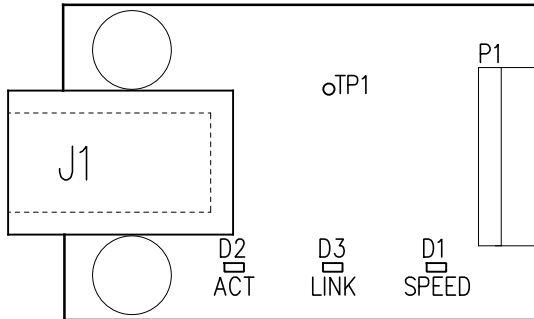
TERMINAL BLOCKS (A12):
TB1 - USER CONNECTIONS TO SERIAL INTERFACE

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

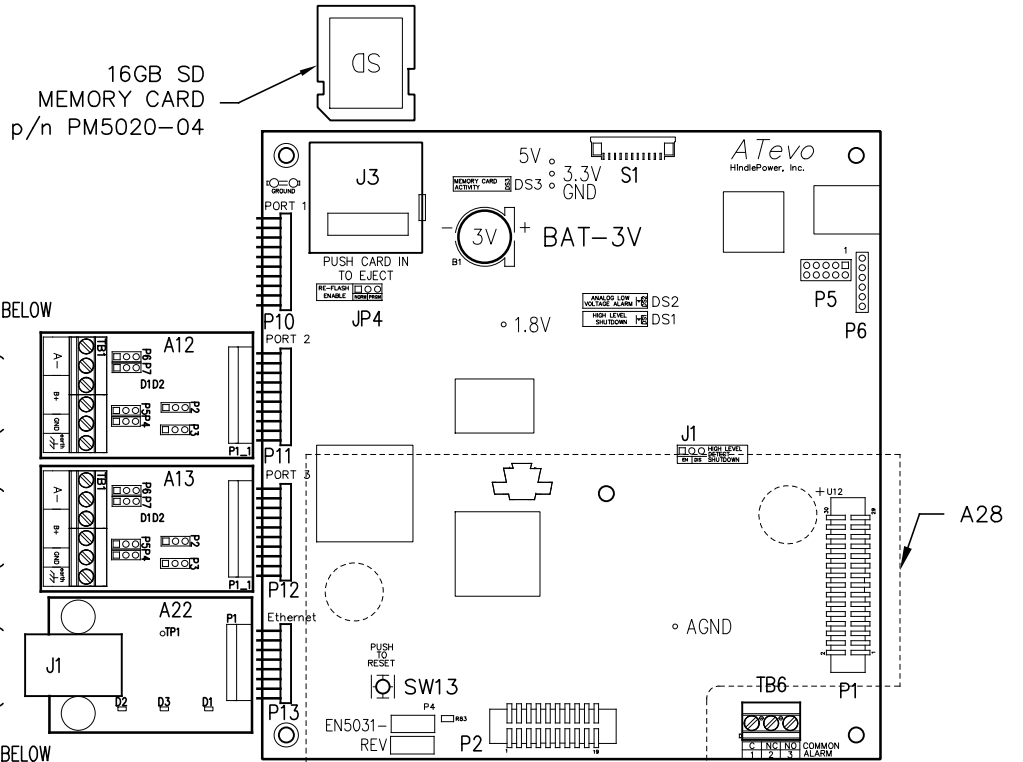


MAIN CONTROL PC BOARD (A1)
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED

ETHERNET ADAPTER (A22)



(NOTE 3)



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

NOTES:

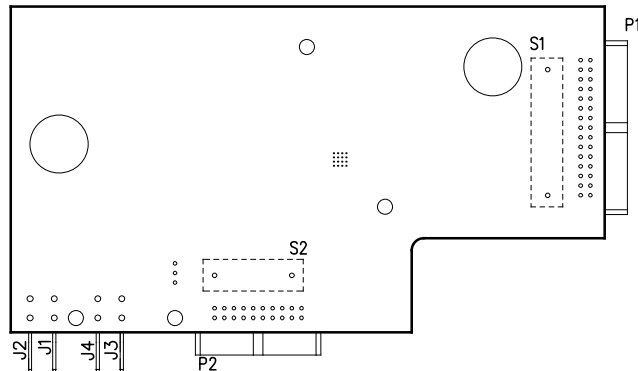
- SERIAL COMMUNICATIONS ADAPTER (A12) SUPPORTS DNP3 LEVEL 2 AND MODBUS PROTOCOLS. SEE ATEVO COMMUNICATIONS MANUAL (JA0102-54) FOR DETAILS.
- FOR FORCED LOAD SHARING & A13 PC BOARD DETAIL, SEE FLS DRAWING (JE5257-21).
- ETHERNET ADAPTER (A22) SUPPORTS DNP3 LEVEL 2 AND MODBUS COMMUNICATIONS PROTOCOLS.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

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



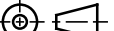
INDICATOR LIGHTS (LEDs):
LED1 - GREEN - AC ON
LED2 - RED - HIGH DC VOLTAGE ALARM
LED3 - RED - LOW DC VOLTAGE ALARM
LED4 - RED - DC OUTPUT FAILURE ALARM
LED5 - RED - AC INPUT FAILURE ALARM
LED6 - RED - POSITIVE (+) GROUND ALARM
LED7 - RED - NEGATIVE (-) GROUND ALARM
LED8 - RED - COMMON ALARM
LED9 - RED - 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
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 12C DATA
SCL - MAIN BOARD 12C CLOCK

SWITCHES:
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)

CONNECTORS:
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

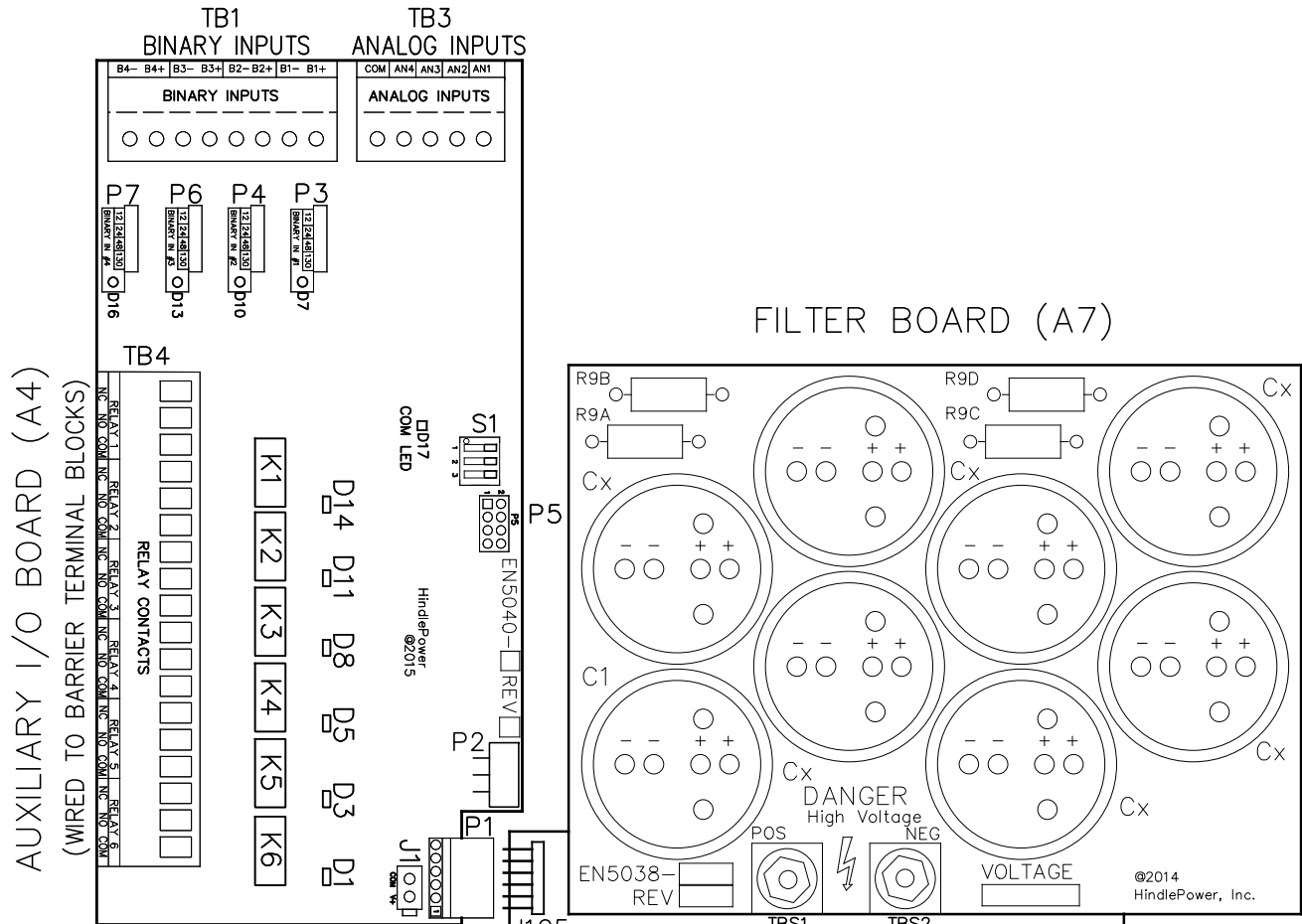
I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
(A1) TB6	COMMON ALARM TERMINAL BLOCK (A1) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A12) TB1	RS-232 / RS-485 USER CONNECTIONS - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A13) TB1	FORCED LOAD SHARE SIGNAL - SOLDERLESS COMP SCREW	#22-14 AWG
(A22) J1	ETHERNET COMMUNICATIONS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

REV 3	DRN BY TET	CHK BY MCR	APP BY MCR	DATE 11.05.2025	DRN BY KJB	DATE 12.01.2021	 HINDLEPOWER 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
DESCRIPTION REV. 3 (11.05.2025) 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	DATE 12.01.2021	TITLE ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL	
					NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER			
							B	
VARIANT 1PH 6-25ADC W/COMMON OPTIONS								

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



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 (-)

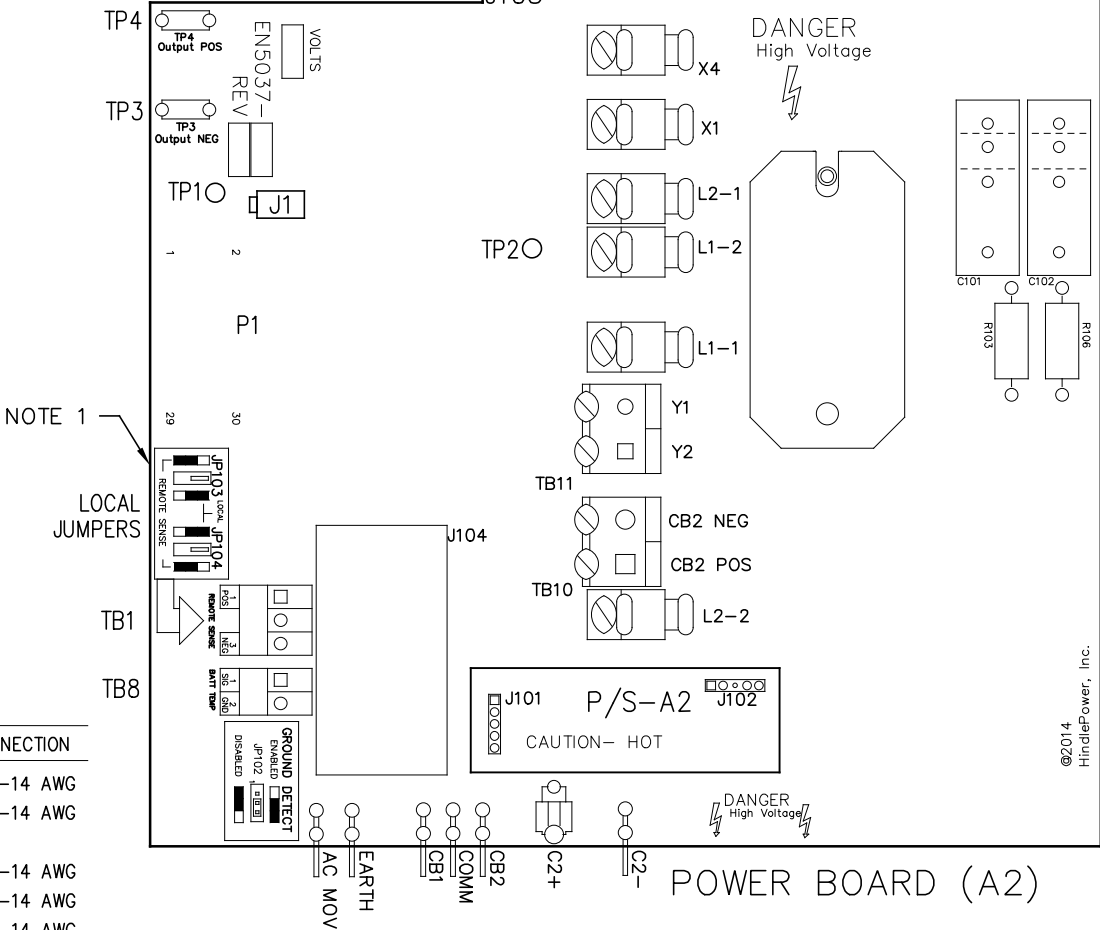
CONNECTORS ON POWER BOARD (A2):
J1 - POWER OUT
J101 - DC POWER SUPPLY
J102 - DC POWER SUPPLY
J105 - AUXILIARY I/O BOARD
P1 - MAIN CONTROL BOARD RIBBON

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 (+)

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





HINDLEPOWER

1075 Saint John Street
Easton, PA 18042-6661
PH 610-330-9000 FAX 610-330-8510
www.hindlepowerinc.com

TITLE

ATEVO BATTERY CHARGER
CONTROL PANEL / PC BOARD DETAIL

VARIANT

1PH 6-25ADC W/COMMON OPTIONS

B

SCALE

DWG No

JE5253-21

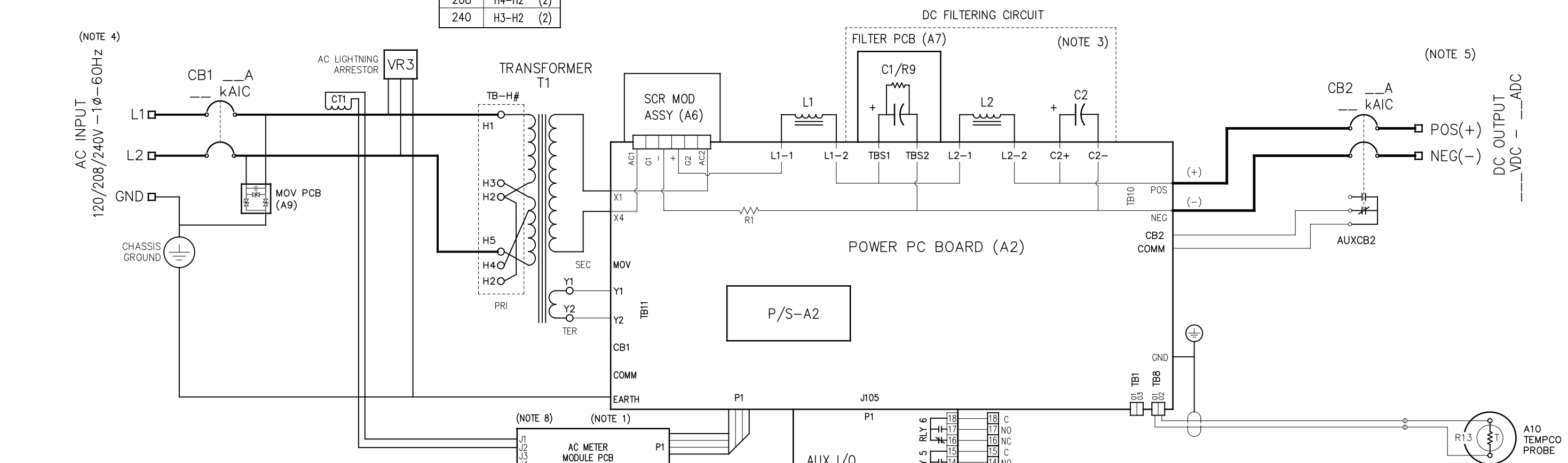
REV

3

SHEET

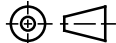
2 OF 2

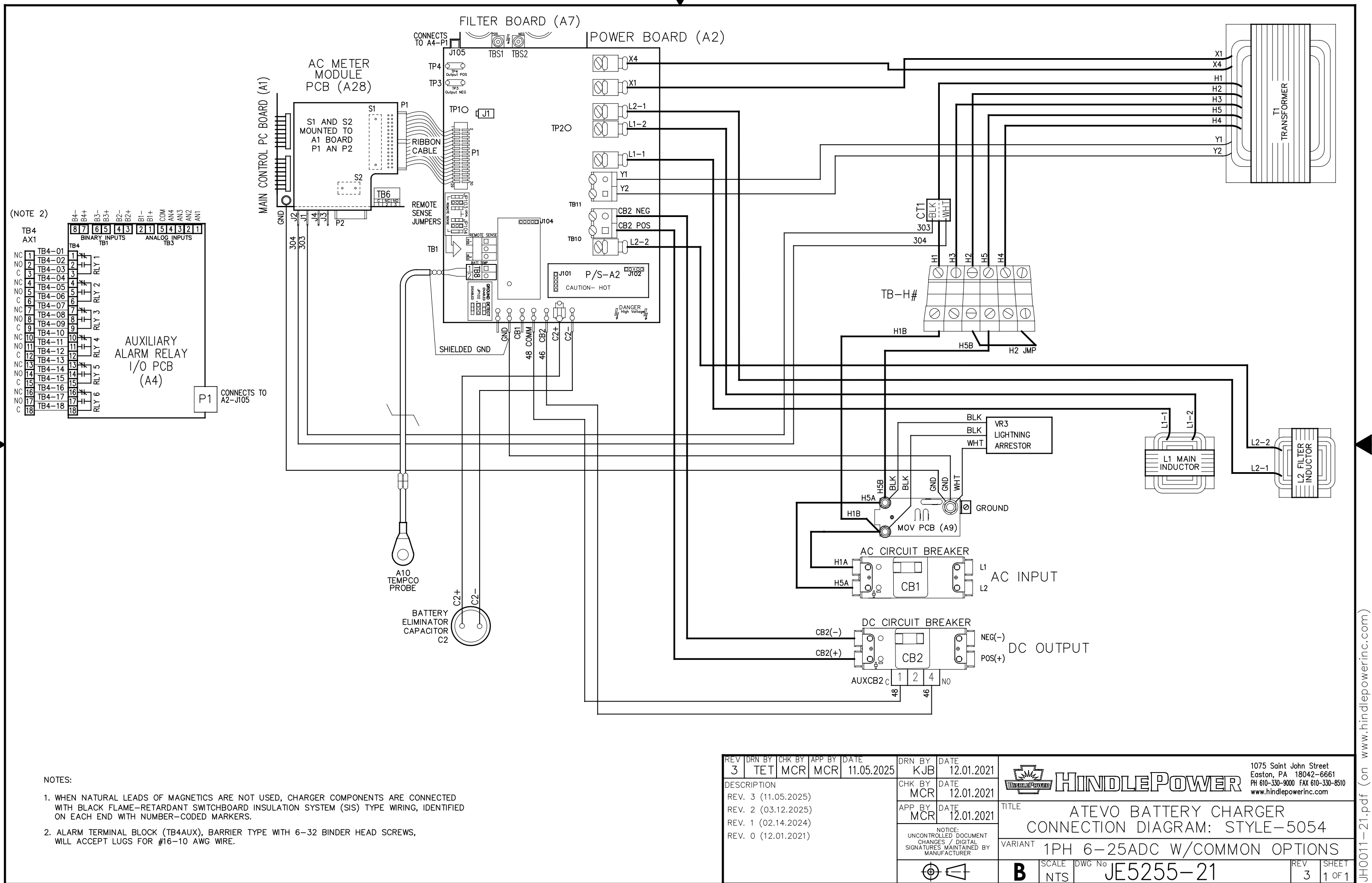
T1 CONNECTION TABLE	
INPUT	JUMPER
120	H1-H3, H2-H5
208	H4-H2 (2)
240	H3-H2 (2)



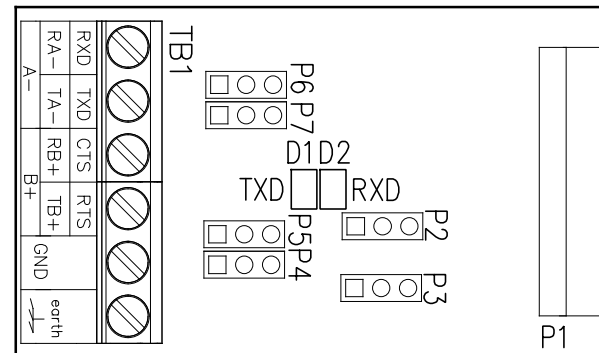
- NOTES: (#s not listed reserved for options not supplied)
- FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A2, A7, etc.) SEE DETAIL DRAWING (JE5253-01).
 - ALL ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER AND RELAYS ENERGIZED (FAIL SAFE). CONTACTS WILL CHANGE STATE WHEN ATEVO POWERED DOWN.
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.
 - INPUT POWER ISOLATION TRANSFORMER (T1) IS FIELD RE-TAPPABLE FOR 120, 208, OR 240 VAC. SEE TABLE ABOVE.
 - 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 (JE5257-21).
 - 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 ALARM 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	 HINDLEPOWER 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 ATEVO BATTERY CHARGER SCHEMATIC: STYLE-5054		
REV. 3 (11.05.2025)					APP BY MCR	DATE 12.01.2021			VARIANT 1PH 6-25ADC W/COMMON OPTIONS	
REV. 2 (03.12.2025)					NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER					
REV. 1 (02.14.2024)										
REV. 0 (12.01.2021)										
							SCALE B	DWG No JE5254-21	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

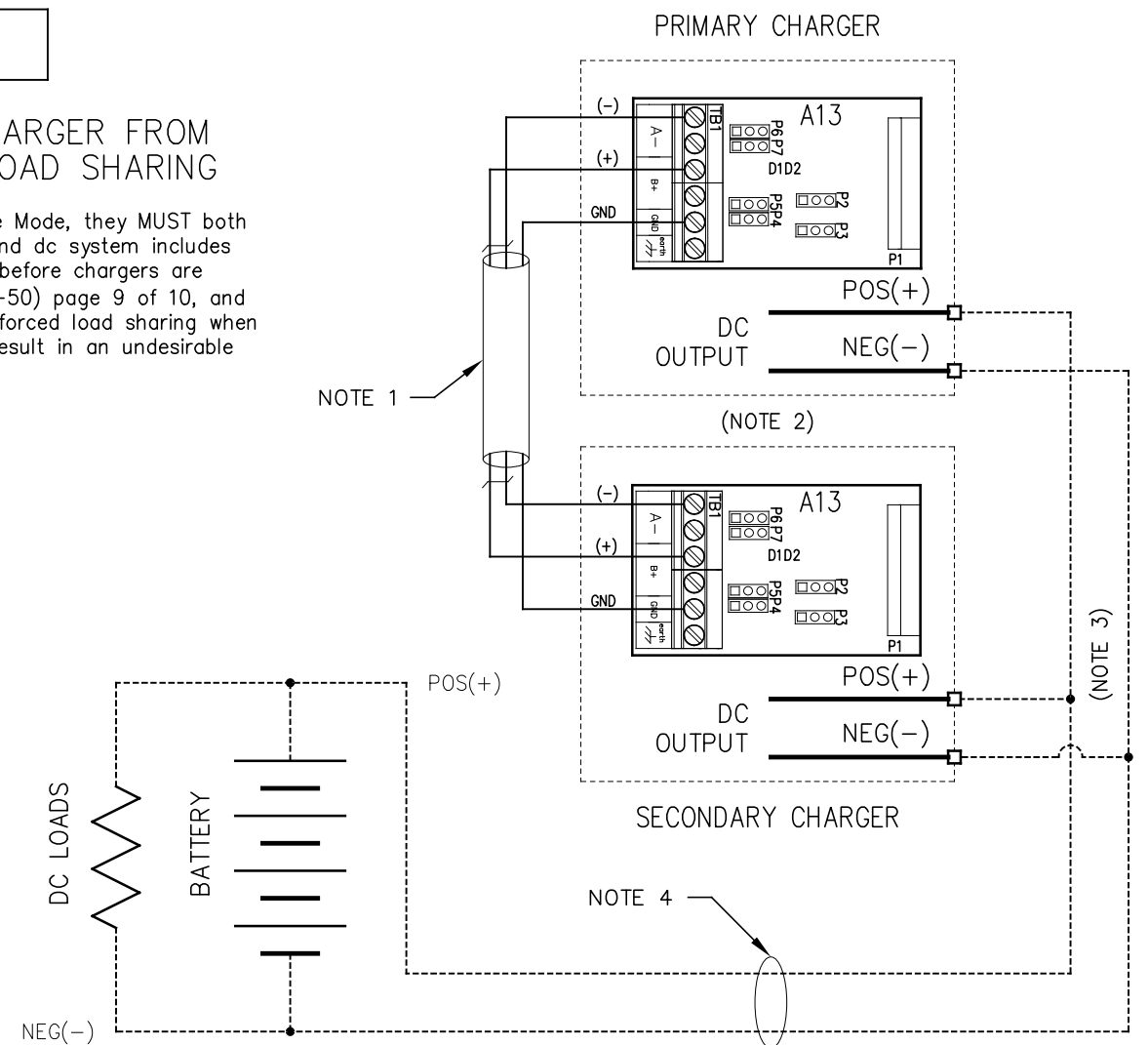
- Both battery chargers must be ATevo Series. The ATevo forced load sharing feature will not operate with legacy AT10.1 and AT30 Series battery chargers.
- Both connected chargers must have the same voltage settings, have the same output current rating, and have the same version of ATevo Main Control 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.

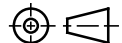
INSTALLING SERIAL COMMUNICATIONS ADAPTER (A13)

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 (V_{dc}–A_{dc}) 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>

REV 3	DRN BY TET	CHK BY MCR	APP BY MCR	DATE 11.05.2025	DRN BY KJB	DATE 12.01.2021	HINDLEPOWER 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com				
DESCRIPTION REV. 3 (11.05.2025) REV. 2 (03.12.2025) REV. 1 (02.14.2024) REV. 0 (12.01.2021)					CHK BY MCR	DATE 12.01.2021	TITLE ATEVO BATTERY CHARGER FORCED LOAD SHARING / PCB DETAIL				
					APP BY MCR	DATE 12.01.2021					
					NOTICE: UNCONTROLLED DOCUMENT CHANGES / DIGITAL SIGNATURES MAINTAINED BY MANUFACTURER		VARIANT 1PH 6-25ADC W/COMMON OPTIONS				
											
							B	SCALE NTS	DWG No JE5257-21	REV 3	SHEET 1 OF 1