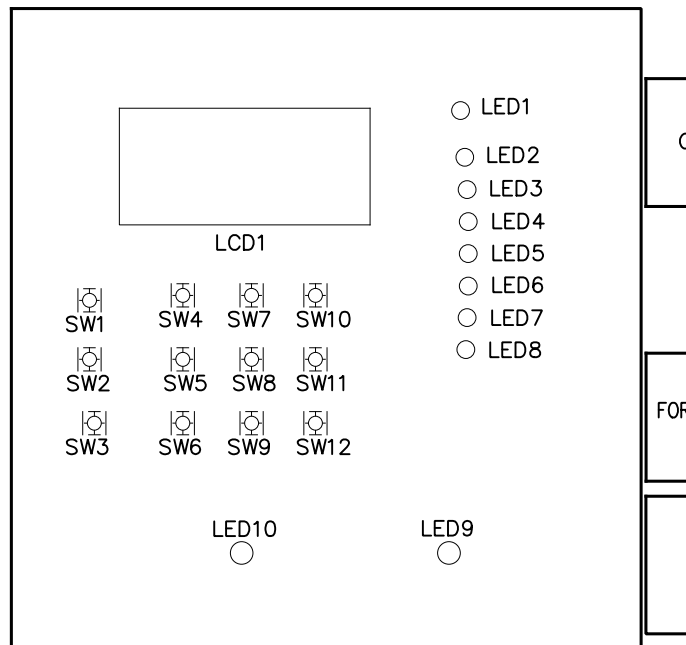
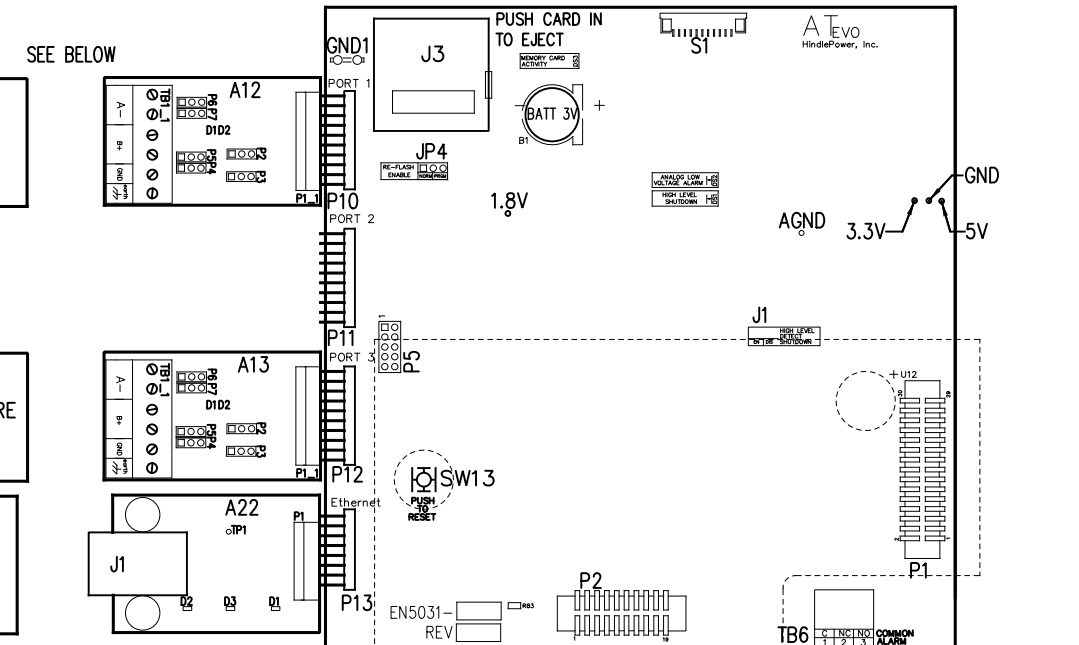


**INSTRUMENT PANEL**  
(PART No. FK5047-00)



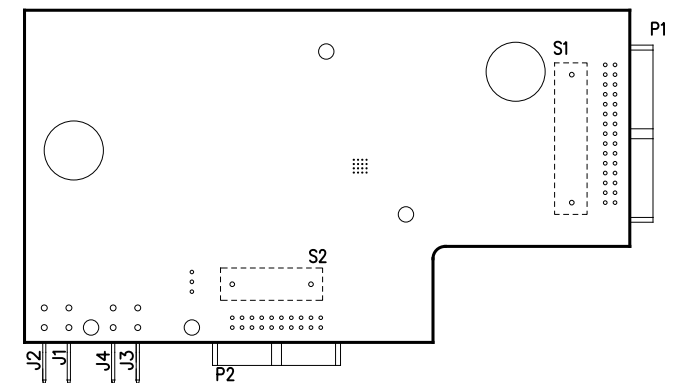
**MAIN CONTROL PC BOARD (A1)**  
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED



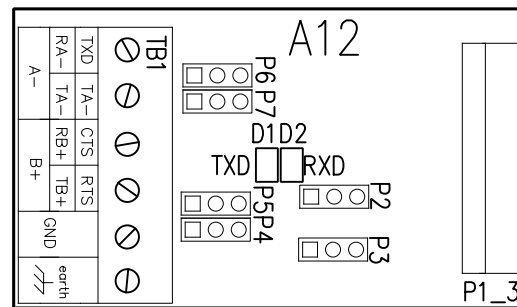
**MAIN CONTROL PC BOARD (A1)**  
BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

NOTE: 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.

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



**SERIAL ADAPTER (A12)**



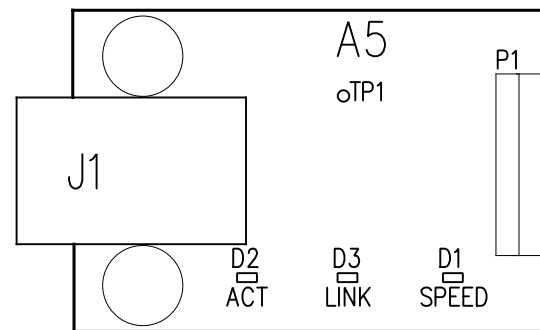
**CONNECTORS (A12):**  
P1 - MAIN CONTROL BOARD

**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

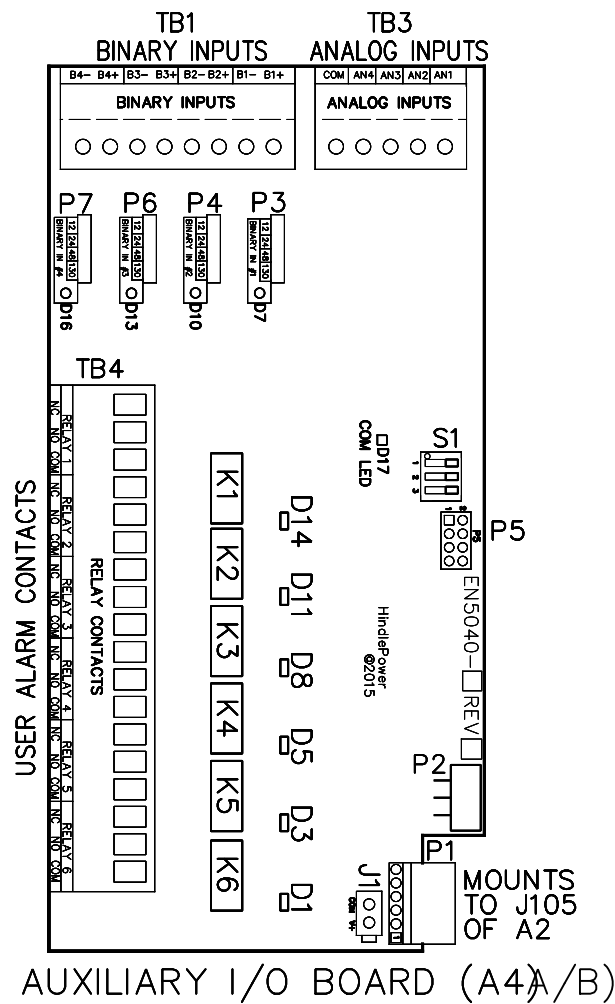
**TEST POINTS (A5):**  
TP1 - CLOCK OUT

**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  
DS2 - RED - ANALOG LOW VOLTAGE ALARM (LLD)  
DS1 - RED - HIGH LEVEL SHUTDOWN (HLD)  
DS3 - RED - MEMORY CARD ACTIVITY
- JUMPERS:**  
J1 - ANALOG HIGH VOLTAGE SHUTDOWN JUMPER  
J3 - SD CARD PORT  
JP4 - RE-FLASH (FIELD PROGRAMMING) JUMPER
- 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 12C DATA  
SCL - MAIN BOARD 12C CLOCK
- 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  
S13 - 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

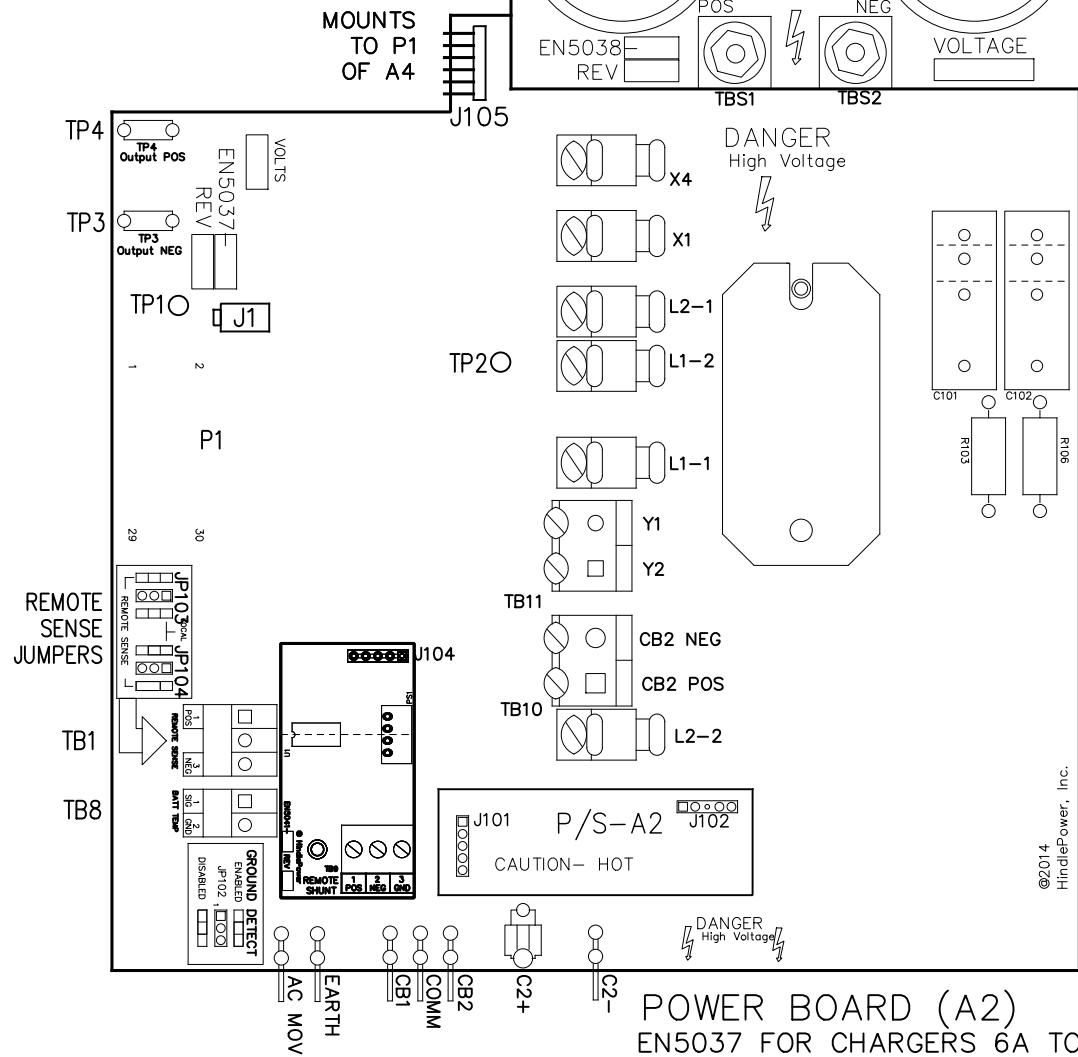
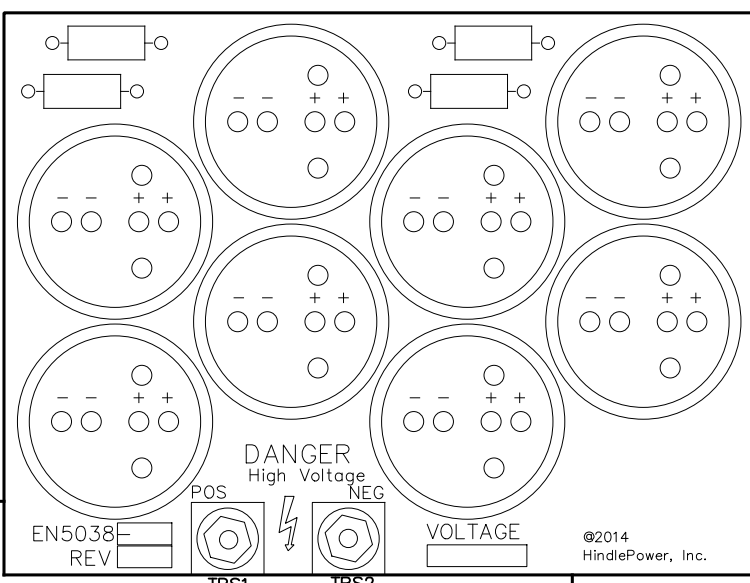
I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
(A1) TB6	SUMMARY ALARM TERMINAL BLOCK (A1) - SLDRSS COMP SCREW	#22-14 AWG
(A12) TB1	RS-232 / RS-485 USER CONNECTIONS - SLDRSS COMP SCREW	#22-14 AWG

REV. 0	DRN BY KJB	CHK BY MCR	APP BY RDB	DATE 11/08/19	DRN BY KJB	DATE 11/08/19	<p><b>HINDLEPOWER</b></p> <p>1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com</p>
DESCRIPTION: STANDARD DRAWINGS.					CHK BY MCR	DATE 11/08/19	
PROPERTY AND CONFIDENTIAL NOTICE ANY REPRODUCTION, PARTIAL OR AS A WHOLE OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF HINDLE POWER, INC IS STRICTLY PROHIBITED.					APP BY RDB	DATE 11/08/19	
<p>TITLE: <b>ATEVO BATTERY CHARGER INSTRUMENT PANEL / PC BOARD DETAIL</b></p> <p>SCALE: <b>B</b> NTS DWG No: <b>JE5253-99</b> REV: 0 SHEET: 1 OF 4</p>							



- 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

CAPACITOR BOARD (A7)



- 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 (+)

POWER BOARD (A2)  
EN5037 FOR CHARGERS 6A TO 25A

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

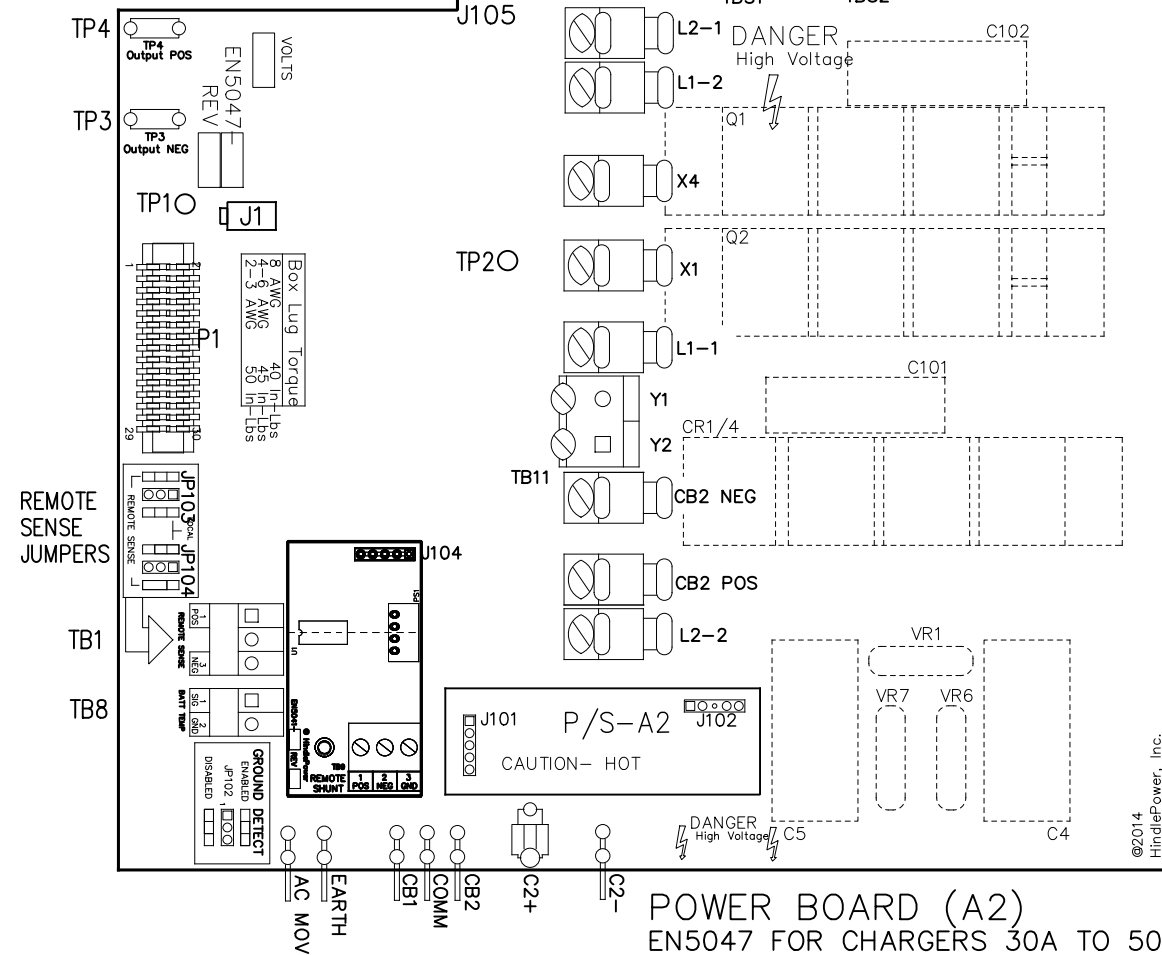
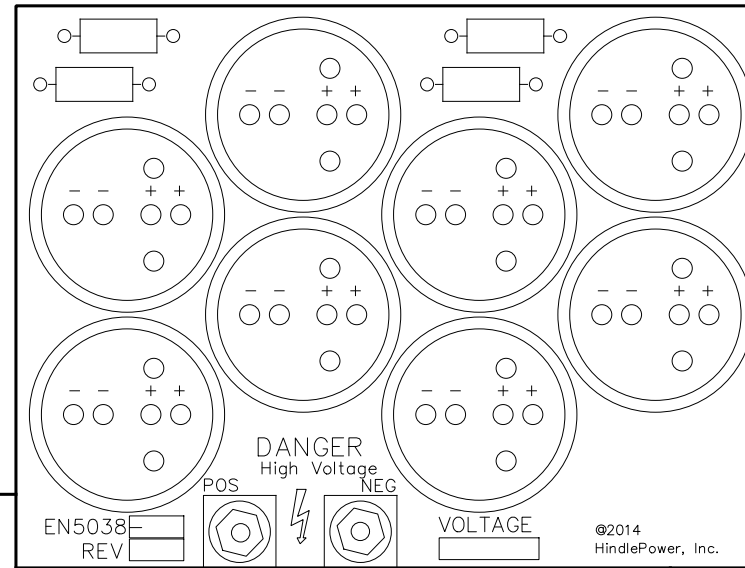
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TITLE: ATEVO BATTERY CHARGER  
 INSTRUMENT PANEL / PC BOARD DETAIL

**B** SCALE: NTS DWG No: JE5253-99 REV: 0 SHEET: 2 OF 4

CAPACITOR BOARD (A7)



POWER BOARD (A2)  
EN5047 FOR CHARGERS 30A TO 50A

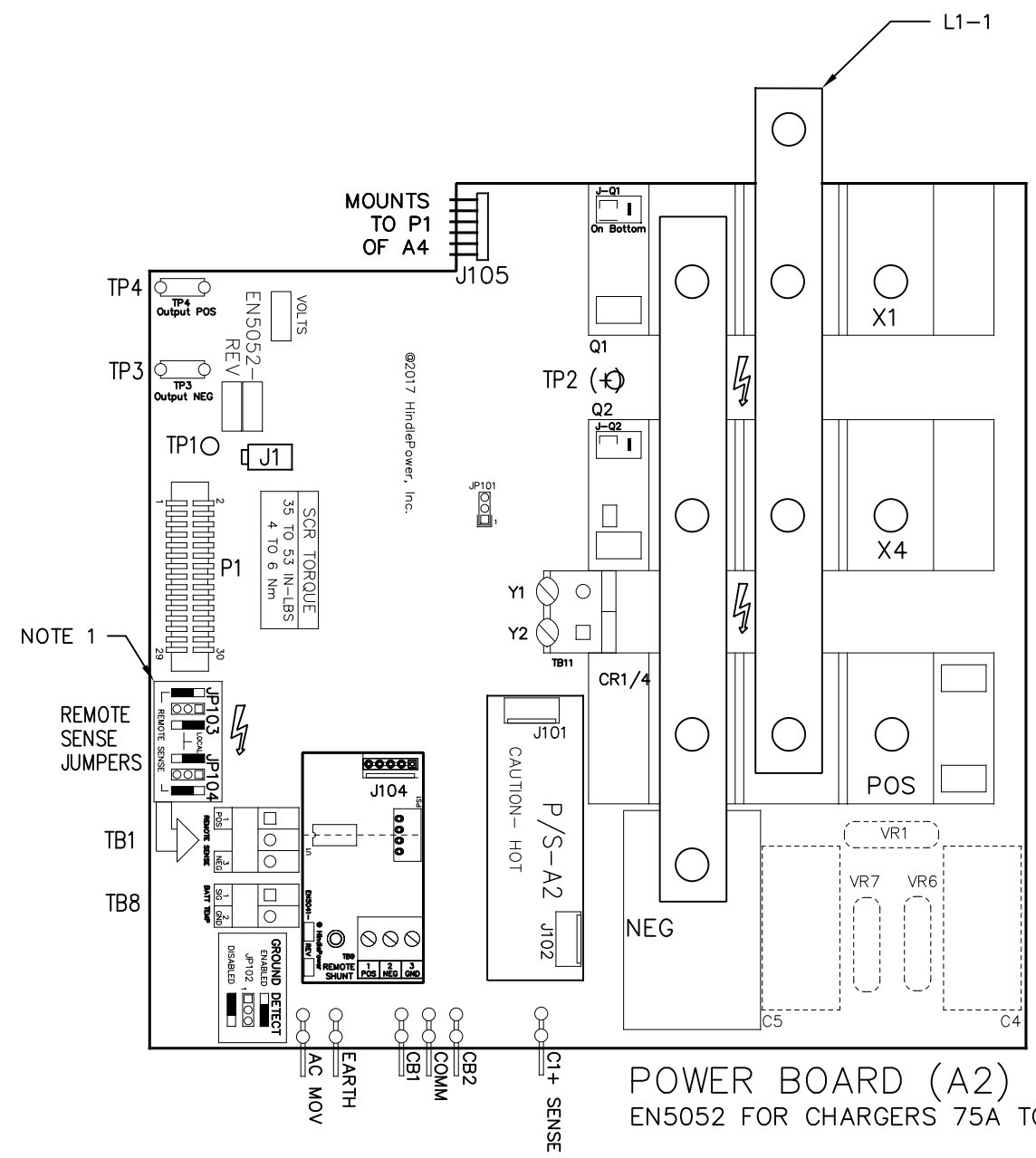
- USER TERMINALS ON POWER BOARD (A2):  
 TB1 - REMOTE VOLTAGE SENSE  
 TB8 - BATTERY TEMPERATURE COMPENSATION
- JUMPERS ON POWER BOARD (A2):  
 JP102 - GROUND DETECT CIRCUIT ENABLE / DISABLE  
 JP103 - REMOTE OR LOCAL SENSE SELECTOR (+)  
 JP104 - REMOTE OR LOCAL SENSE SELECTOR (-)
- CONNECTORS ON POWER 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 (+)

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

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TITLE  
 ATEVO BATTERY CHARGER  
 INSTRUMENT PANEL / PC BOARD DETAIL

<b>B</b>	SCALE NTS	DWG No <b>JE5253-99</b>	REV 0	SHEET 3 OF 4
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- 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

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

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APP BY MCR	DATE: DATE/0000	SCALE DWG No <b>B</b> NTS JE5253-99		REV SHEET 0 4 OF 4