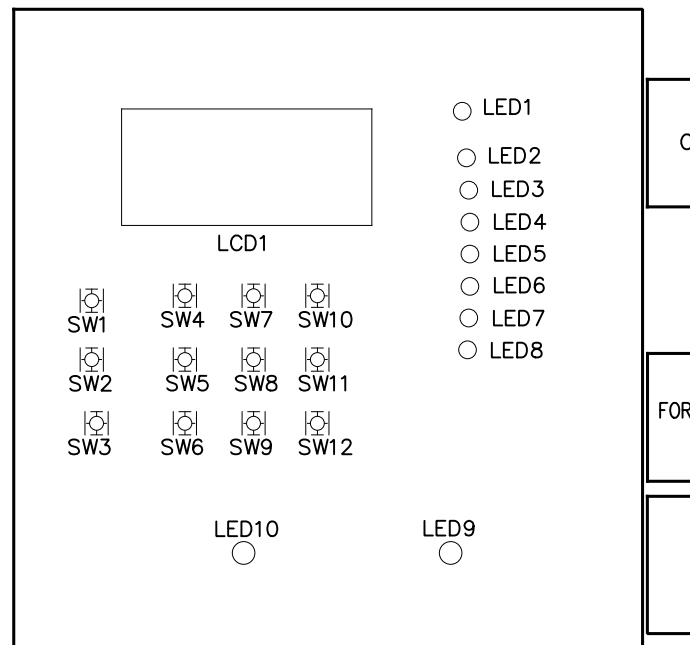
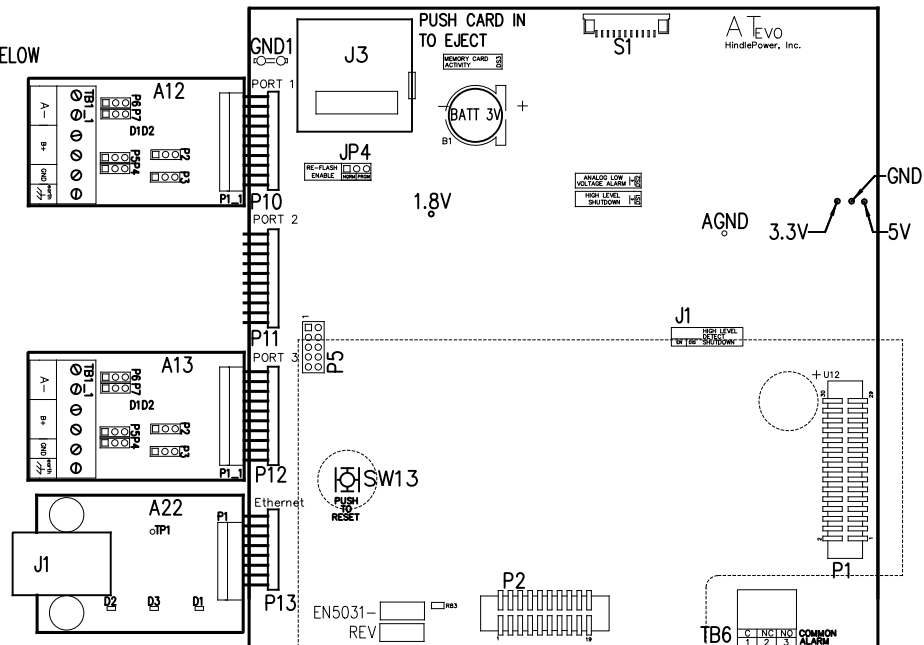


**INSTRUMENT PANEL**  
(PART No. FK5047-00)



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

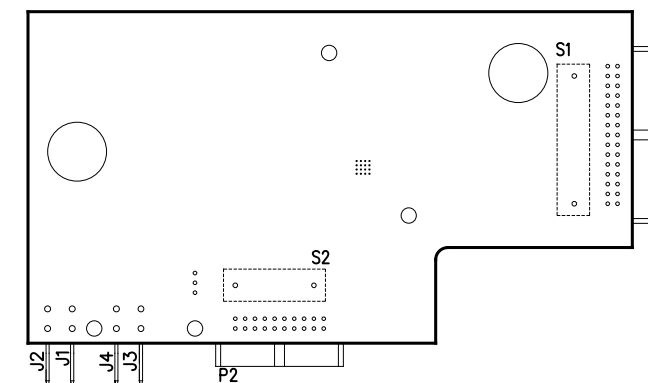
SEE BELOW



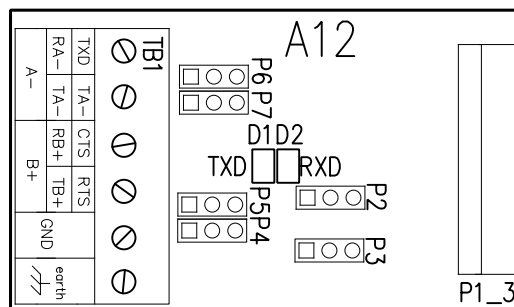
**MAIN CONTROL PC BOARD (A1)**  
BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

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)**



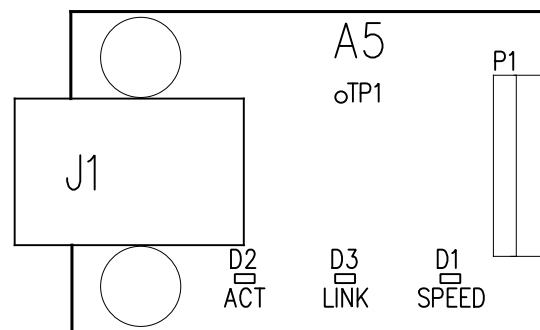
**CONNECTORS (A12):**  
P1 - MAIN CONTROL BOARD

**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

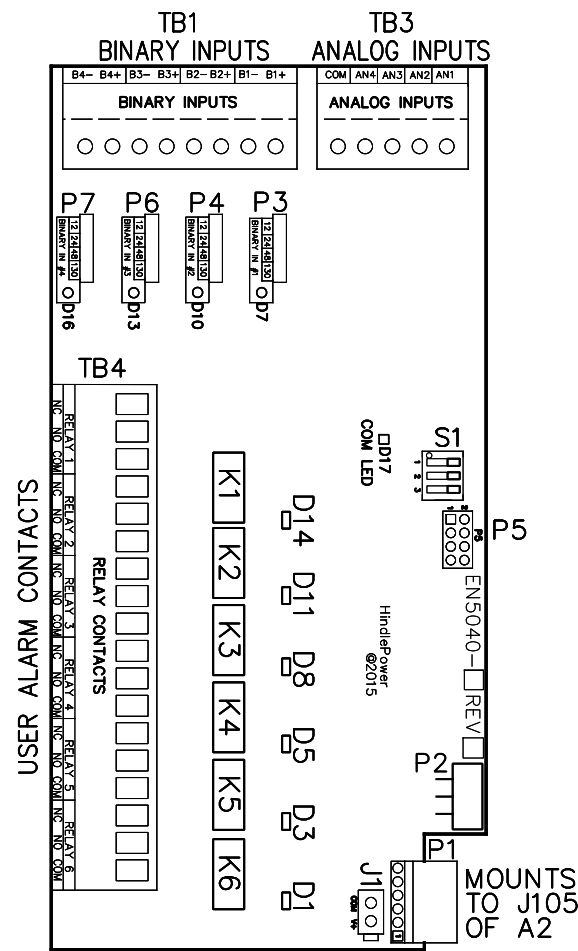
**TEST POINTS:**  
1.8V - 1.8 VOLTS  
3.3V - 3.3 VOLTS  
5V - 5.0 VOLTS  
GND - GROUND  
AGND - ANALOG GROUND  
SDA - MAIN BOARD 12C DATA  
SCL - MAIN BOARD 12C CLOCK

**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 11/05/19	DRN BY KJB	DATE 11/05/19	<p><b>HINDLEPOWER</b> 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 11/05/19	<p><b>ATEVO BATTERY CHARGER</b> <b>INSTRUMENT PANEL / PC BOARD DETAIL</b></p>	
				APP BY MCR	DATE 11/05/19		
		<p><b>B</b> SCALE NTS</p>		<p>DWG No <b>JE5333-99</b></p>		<p>REV 0 SHEET 1 OF 4</p>	



**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)

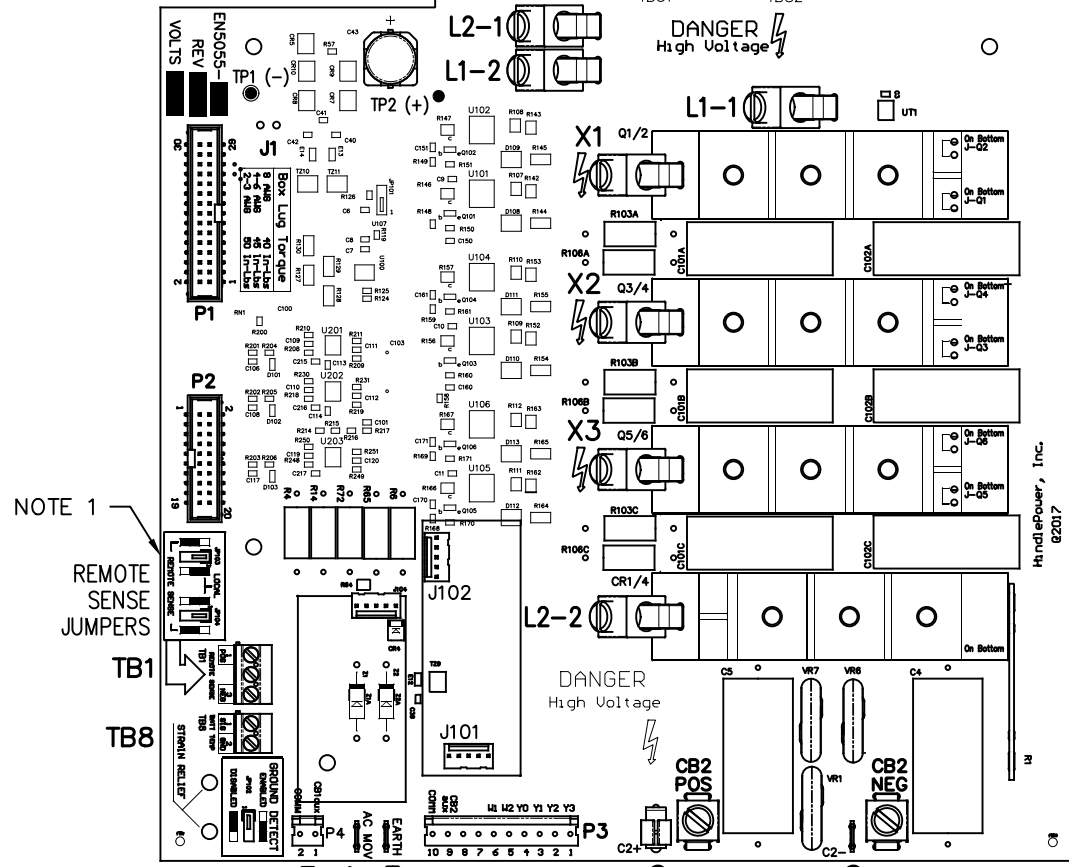
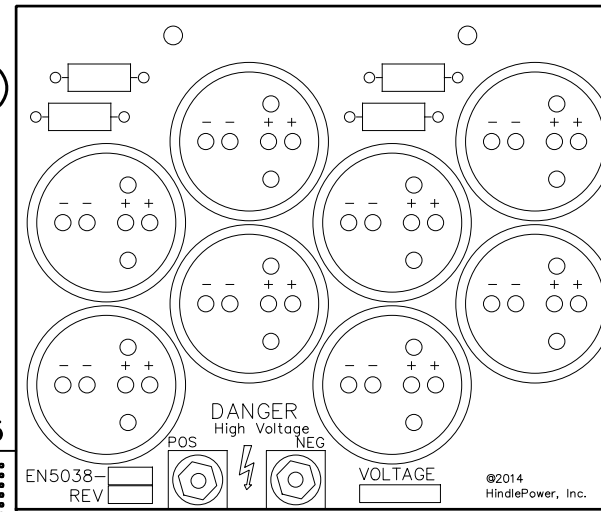
**USER TERMINALS ON RELAY BOARD (A4):**

- 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

**CAPACITOR BOARD (A7)**



**POWER BOARD (A2)**  
EN5055 FOR CHARGERS 25A TO 50A

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

- JP102 - GROUND DETECT CIRCUIT ENABLE / DISABLE
- JP103 - REMOTE OR LOCAL SENSE SELECTOR (+)
- JP104 - REMOTE OR LOCAL SENSE SELECTOR (-)

- J1 - POWER OUT
- J101 - DC POWER SUPPLY
- J102 - DC POWER SUPPLY
- J105 - AUXILIARY I/O BOARD
- P1 - MAIN CONTROL BOARD RIBBON
- P2 - MAIN CONTROL BOARD RIBBON (3 PHASE)
- P3 - TRANSFORMER AND CB2 AUX RIBBON
- P4 - CB2 AUX SWITCH CONTACTS

**DISCRETE TERMINALS:**

- AC MOV - CHASSIS EARTH GROUND
- EARTH - CHASSIS EARTH GROUND (DOOR)
- CB2 POS - DCBREAHER POSITIVE
- CB2 NEG - DC BREAKER NEGATIVE
- C2+ - ELIMINATOR FILTER CAPACITOR (+)
- C2- - ELIMINATOR FILTER CAPACITOR (-)
- 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)
- TBS1 - FILTER CAPACITOR BOARD (+)
- TBS2 - FILTER CAPACITOR BOARD (-)

**TEST POINTS ON POWER BOARD (A2):**

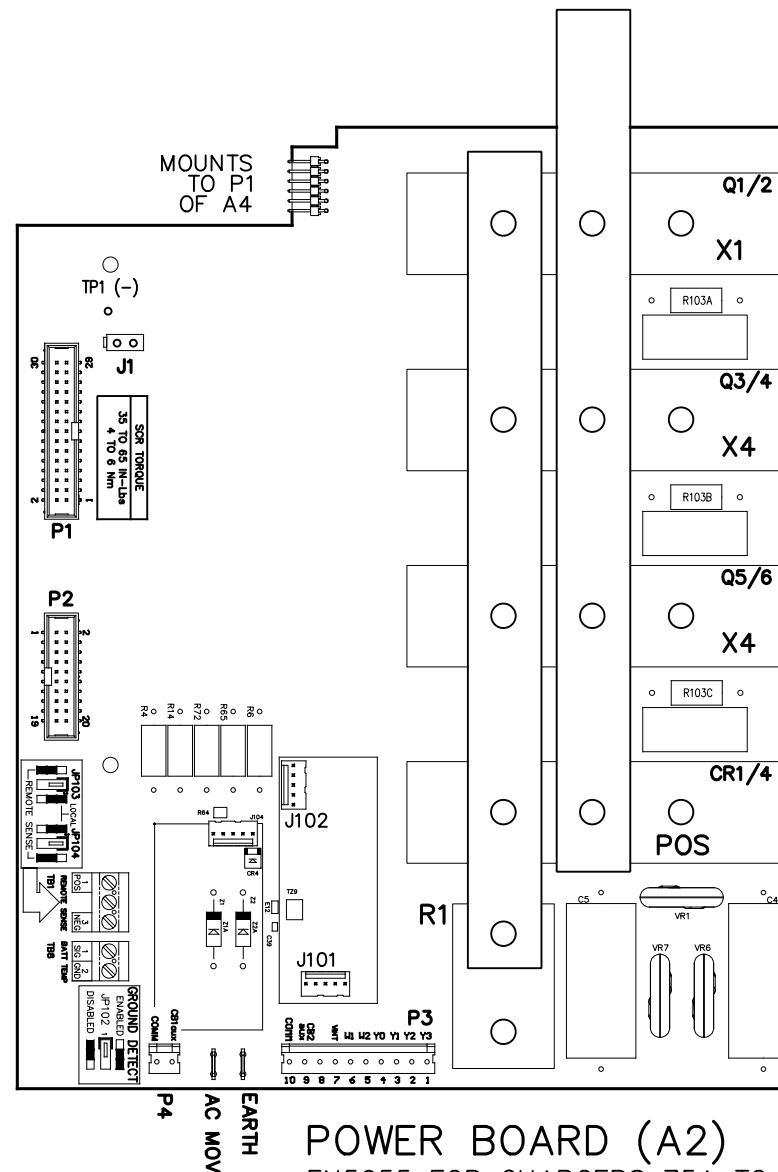
- TP1 - PRE-FILTERED DC BUS (-)
- TP2 - PRE-FILTERED DC BUS (+)

**NOTE:**

1. REMOTE SENSE JUMPERS (JP103, JP104) MUST BE IN REMOTE SENSE POSITION IN STYLE-5070 ENCLOSURE.

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. 0	DRN BY KJB	CHK BY MCR	APP BY RDB	DATE 11/05/19	DRN BY KJB	DATE 11/05/19	<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 11/05/19	
					APP BY MCR	DATE 11/05/19	
TITLE <b>ATEVO BATTERY CHARGER INSTRUMENT PANEL / PC BOARD DETAIL</b>							
		<b>B</b> SCALE NTS		DWG No JE5333-99		REV 0 SHEET 2 OF 4	



**POWER BOARD (A2)**  
EN5055 FOR CHARGERS 75A TO 100A

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  
J104 - BATTERY SHUNT  
J105 - AUXILIARY I/O BOARD  
P1 - MAIN CONTROL BOARD RIBBON 1  
P2 - MAIN CONTROL BOARD RIBBON 2  
P3 - Wx, Yx, CB2-AUX, VINT  
P4 - CB1-AUX

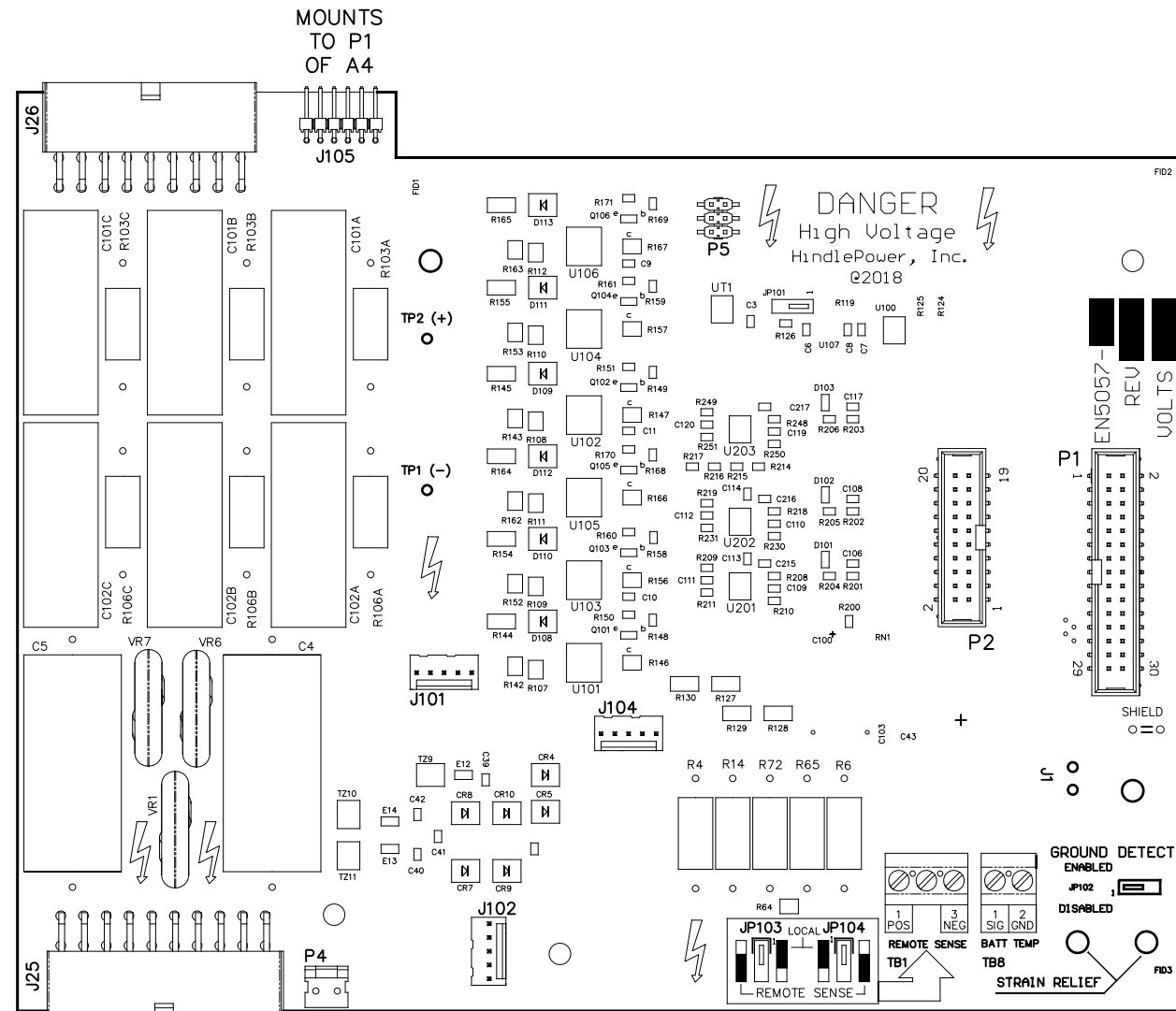
DISCRETE TERMINALS:  
AC MOV - CHASSIS EARTH GROUND  
EARTH - CHASSIS EARTH GROUND (DOOR)  
POS - POSITIVE CONNECTION POINT  
NEG - NEGATIVE CONNECTION POINT  
COMM - BREAKER AUX SWITCH COMMON  
X1 - TRANSFORMER SECONDARY WINDING  
X2 - TRANSFORMER SECONDARY WINDING  
X3 - TRANSFORMER SECONDARY WINDING  
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 STYLE-5070 ENCLOSURE.

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

REV. 0	DRN BY KJB	CHK BY MCR	APP BY RDB	DATE 11/05/19	DRN BY KJB	DATE 11/05/19	<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 11/05/19	
TITLE				ATEVO BATTERY CHARGER INSTRUMENT PANEL / PC BOARD DETAIL			
SCALE		DWG No		REV		SHEET	
B NTS		JE5333-99		0		3 OF 4	



**POWER BOARD (A2)**  
EN5057 FOR CHARGERS 100A TO 1000A

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  
J25 - MAIN CONTROL SIGNAL HARNESS  
J26 - SCR FIRING CONTROL HARNESS  
J101 - DC POWER SUPPLY  
J102 - DC POWER SUPPLY  
J104 - BATTERY SHUNT  
J105 - AUXILIARY I/O BOARD  
P1 - MAIN CONTROL BOARD RIBBON 1  
P2 - MAIN CONTROL BOARD RIBBON 2  
P4 - CB1 AUX  
P5 - RECTIFIER TEMP SENSOR INTERFACE

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

REV. 0	DRN BY KJB	CHK BY MCR	APP BY RDB	DATE 11/05/19	DRN BY KJB	DATE 11/05/19	<p>1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com</p>
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TITLE <b>ATEVO BATTERY CHARGER INSTRUMENT PANEL / PC BOARD DETAIL</b>							
		<b>B</b>	SCALE NTS	DWG No JE5333-99	REV 0	SHEET 4 OF 4	