

NOTES:

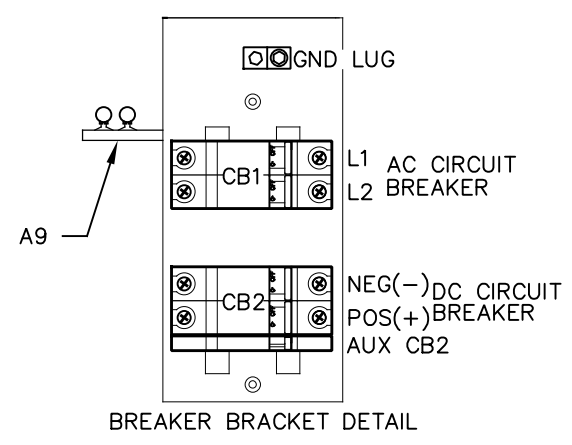
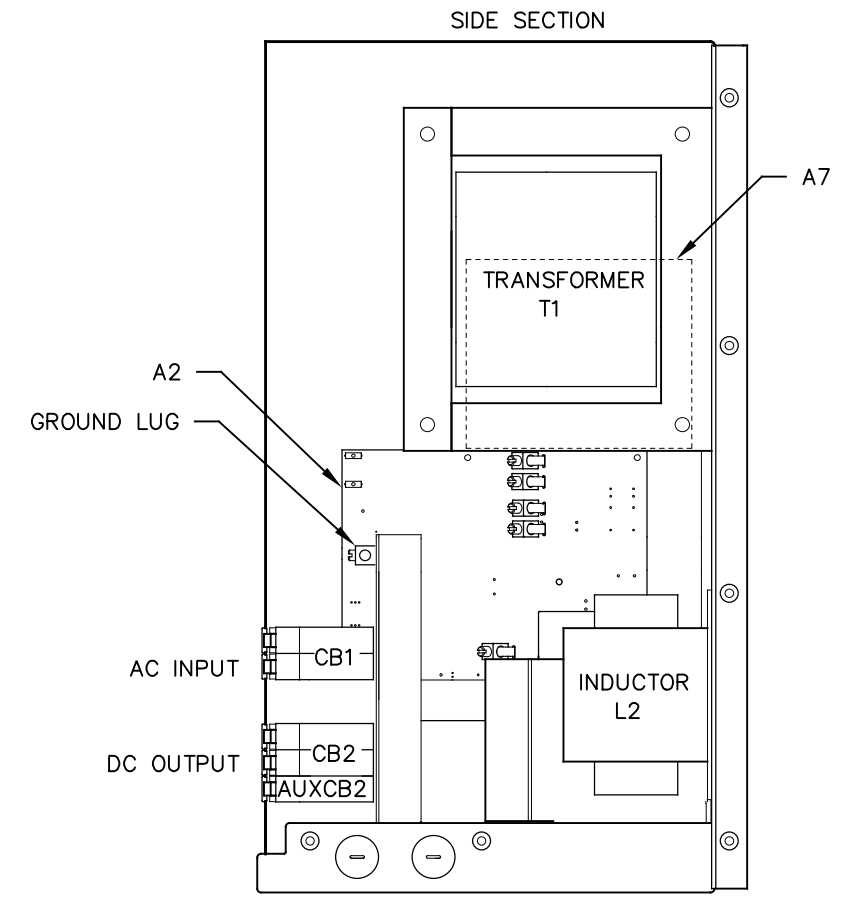
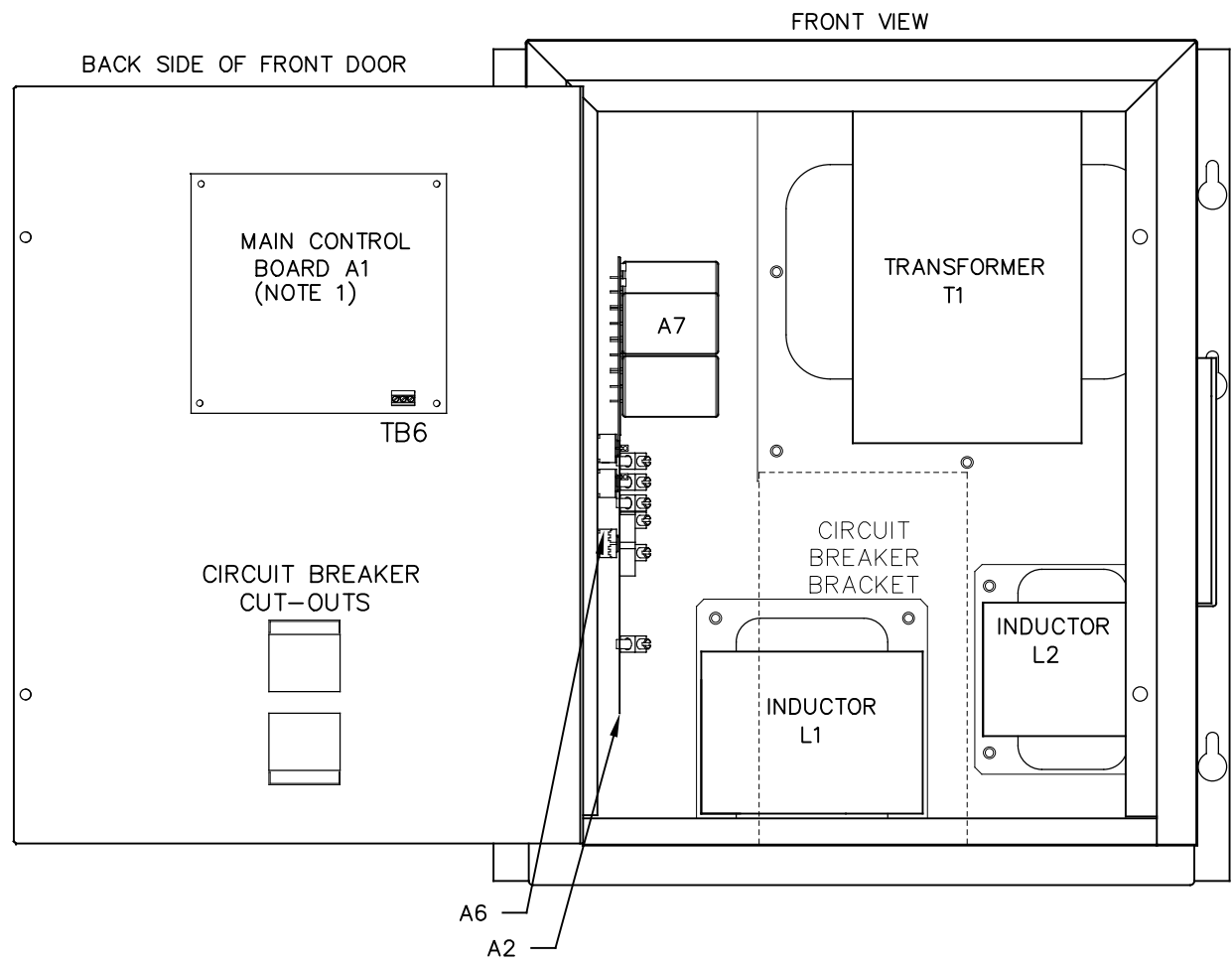
1. ENCLOSURE IS A NEMA TYPE 1 / IP20 TOP-VENTED STEEL CABINET WITHOUT GASKETS. FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT.
2. ALLOW 6in / 152mm OF FREE AIR ON ALL VENTED SURFACES (TOP, SIDES & REAR) FOR COOLING.
3. SIX (6) KEY-HOLE SLOTS ARE PROVIDED ON BACK OF ENCLOSURE AS SHOWN. FOR WALL-MOUNTING WITH 0.25in / 6.25mm HARDWARE.
4. SIX (6) 1.31in / 33mm DIA KNOCKOUTS ARE PROVIDED AS SHOWN, WITH TWO (2) ADDITIONAL KNOCKOUTS FEATURED ON BOTTOM PANEL OF ENCLOSURE. USE OF ANY OF THESE FOUR (4) LOWER CONDUIT KNOCKOUTS WILL ALLOW REMOVAL OF CABINET SHROUD WITHOUT REMOVAL OF EXTERNAL WIRING.
5. DATA NAMEPLATE (WITH CHARGER RATINGS) MOUNTED ON LOWER LEFT OF DOOR.
6. BATTERY CHARGER SHIPPING WEIGHT: SEE PRODUCT LITERATURE.

| | | | | | |
|--|--------|--------|----------|--------|----------|
| REV. DRN BY | CHK BY | APP BY | DATE | DRN BY | DATE |
| B | KJB | MCR | 11/15/19 | KJB | 11/15/19 |
| DESCRIPTION | | | | CHK BY | DATE |
| STANDARD DRAWINGS. | | | | MCR | 11/15/19 |
| | | | | APP BY | DATE |
| | | | | MCR | 11/15/19 |
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| | | HINDLEPOWER | |
| ATEVO BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5054 ENCL | | SCALE B NTS | DWG No JE5251-00 |
| REV | SHEET | B | 1 OF 1 |

DUAL DIMENSIONS in [mm]

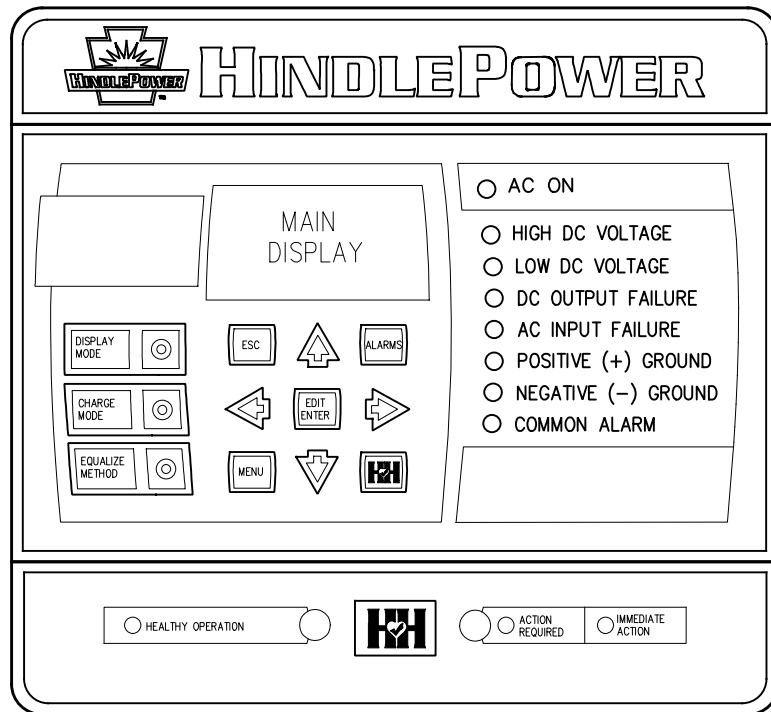
| SYM | STANDARD COMPONENT DESCRIPTION |
|--------|-------------------------------------|
| A1 | MAIN CONTROL PC BOARD |
| A2 | POWER BOARD |
| A6 | RECTIFIER H/S ASSEMBLY |
| A7 | FILTER BOARD |
| A9 | MOV BOARD |
| CB1 | AC INPUT CIRCUIT BREAKER C60-K 2P |
| CB2 | DC OUTPUT CIRCUIT BREAKER C60-K 2P |
| AUXCB2 | DC CKT BKR (CB2) AUXILIARY CONTACTS |
| L1 | MAIN INDUCTOR |
| L2 | FILTER INDUCTOR |
| T1 | POWER ISOLATION TRANSFORMER |



NOTES:
 1. FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A2, A4 etc.) SEE DRAWING JE5253-00.

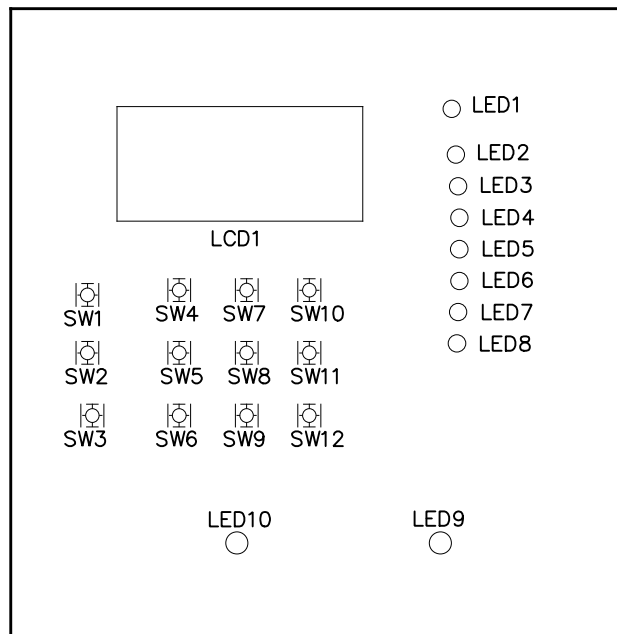
| I/O TERMINAL | DESCRIPTION - TYPE | CONNECTION |
|--------------|---|------------|
| CB2 (+/-) | POS/NEG DC OUTPUT TERMINALS - CKT BREAKER COMPRESSION LUG | #18-4 AWG |
| GND LUG | USER GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG | #14-6 AWG |
| CB1 (L1/L2) | AC INPUT TERMINALS - CKT BREAKER COMPRESSION LUG | #18-4 AWG |
| (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 |
| (A1) TB6 | SUMMARY ALARM TERMINAL BLOCK (A1) - SOLDERLESS COMP SCREW | #22-14 AWG |

| | | | | | | | |
|--|---------------|---------------|-------------------|---------------|------------------|-------------------------------|---|
| REV. DRN BY B KJB | CHK BY MCR | APP BY MCR | DATE 7/21/2021 | DRN BY KJB | DATE 11/15/19 | | 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com |
| DESCRIPTION STANDARD DRAWINGS. | | | | CHK BY MCR | DATE 11/15/19 | | |
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| | | | | | | REV B | SHEET 1 OF 1 |

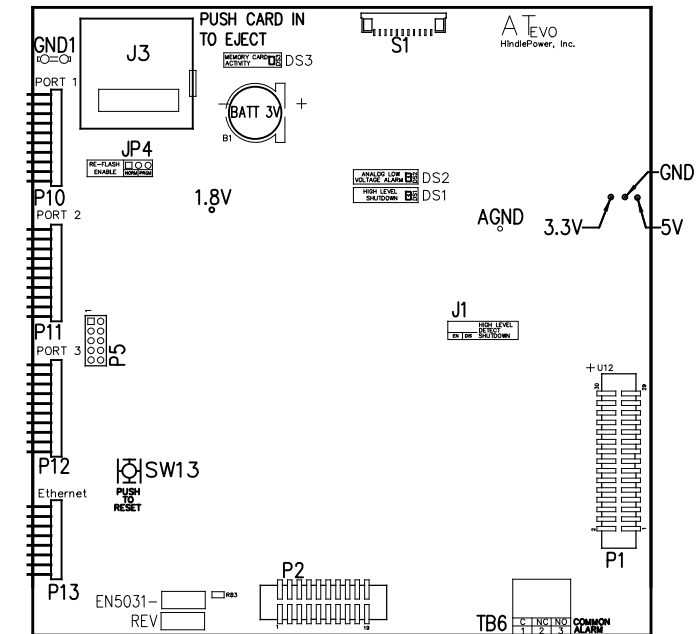


CONTROL PANEL
(PART No. FK5047-00)

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

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
- 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
- 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
- SW13 – 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) – SOLDERLESS COMP SCREW | #22-14 AWG |

| | | | | | | |
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| REV. DRN BY | CHK BY | APP BY | DATE | DRN BY | DATE: | |
| B | KJB | MCR | MCR | 7/21/2021 | KJB | 11/15/19 |
| DESCRIPTION | | | | CHK BY | DATE: | |
| STANDARD DRAWINGS. | | | | MCR | 11/15/19 | |
| | | | | APP BY | DATE: | |
| | | | | MCR | 11/15/19 | |
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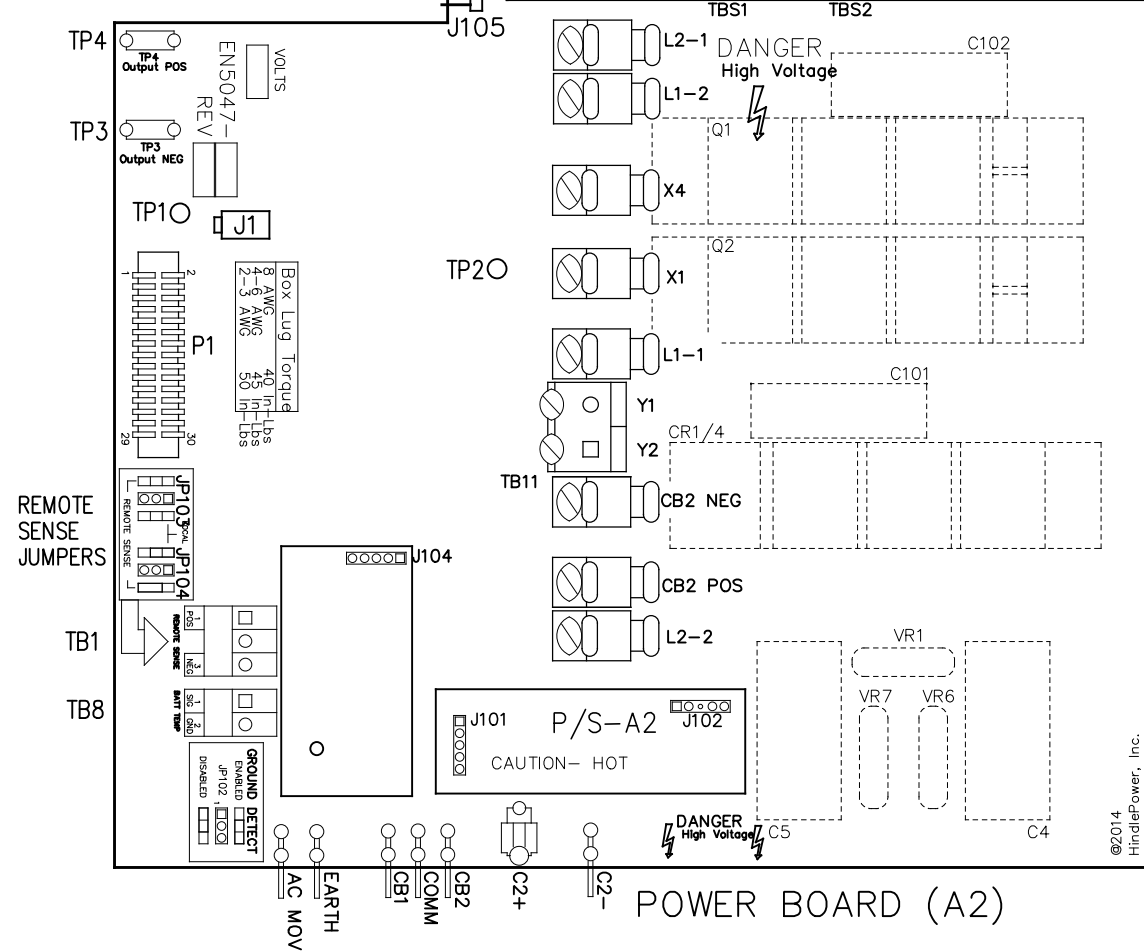
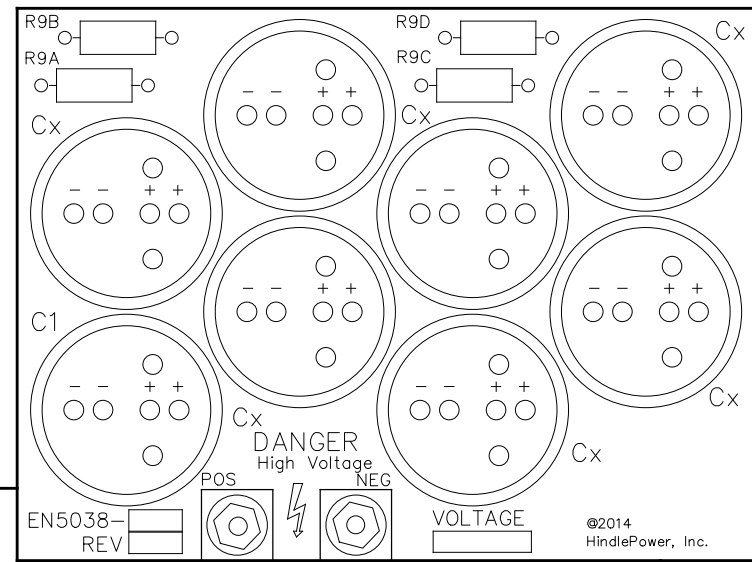
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HINDLEPOWER

TITLE
**ATEVO BATTERY CHARGER
CONTROL PANEL / PC BOARD DETAIL W/O OPTIONS
FOR CHARGERS AT 30-50ADC**


| | | | | |
|----------|-------|-----------|-----|--------|
| B | SCALE | DWG No | REV | SHEET |
| NTS | | JE5253-20 | B | 1 OF 2 |

FILTER 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 (+)

| 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 |

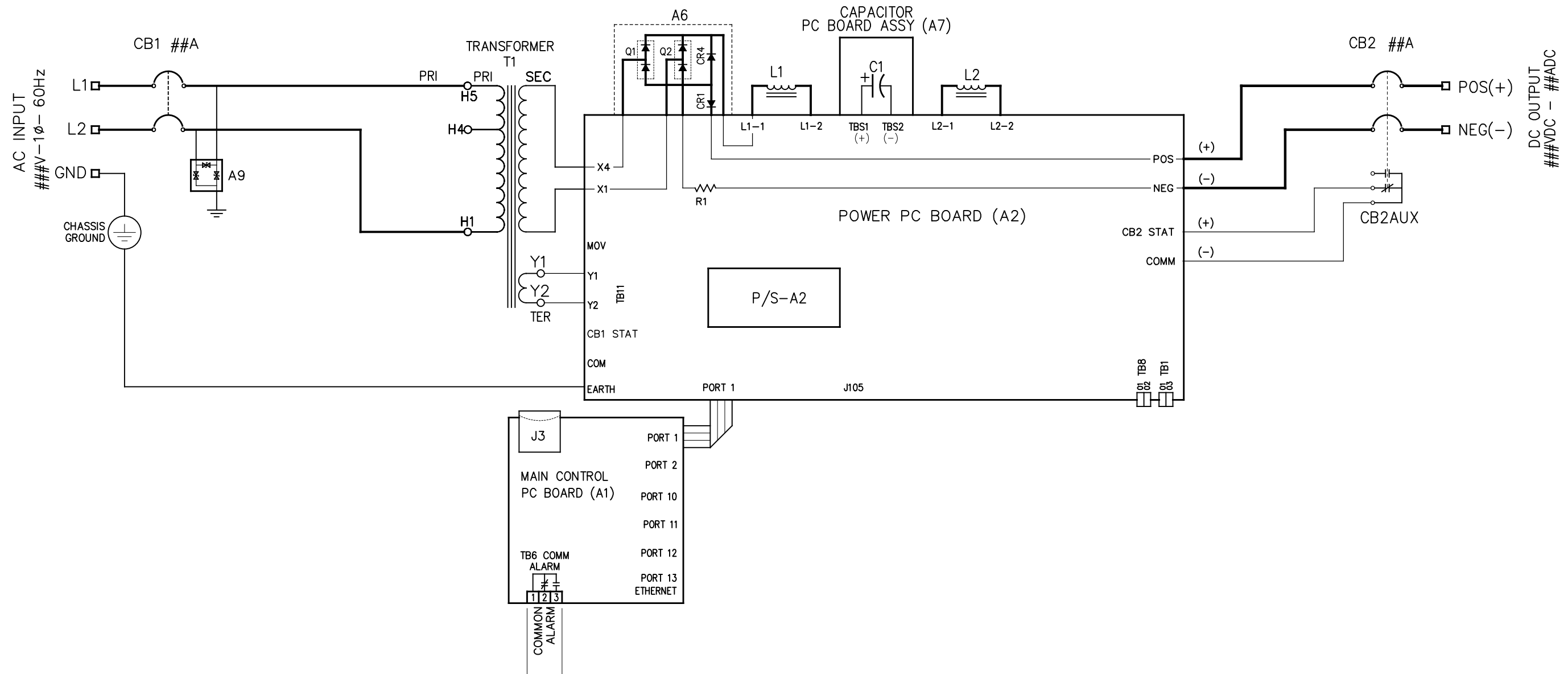


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TITLE: ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL W/O OPTIONS FOR CHARGERS AT 30-50ADC

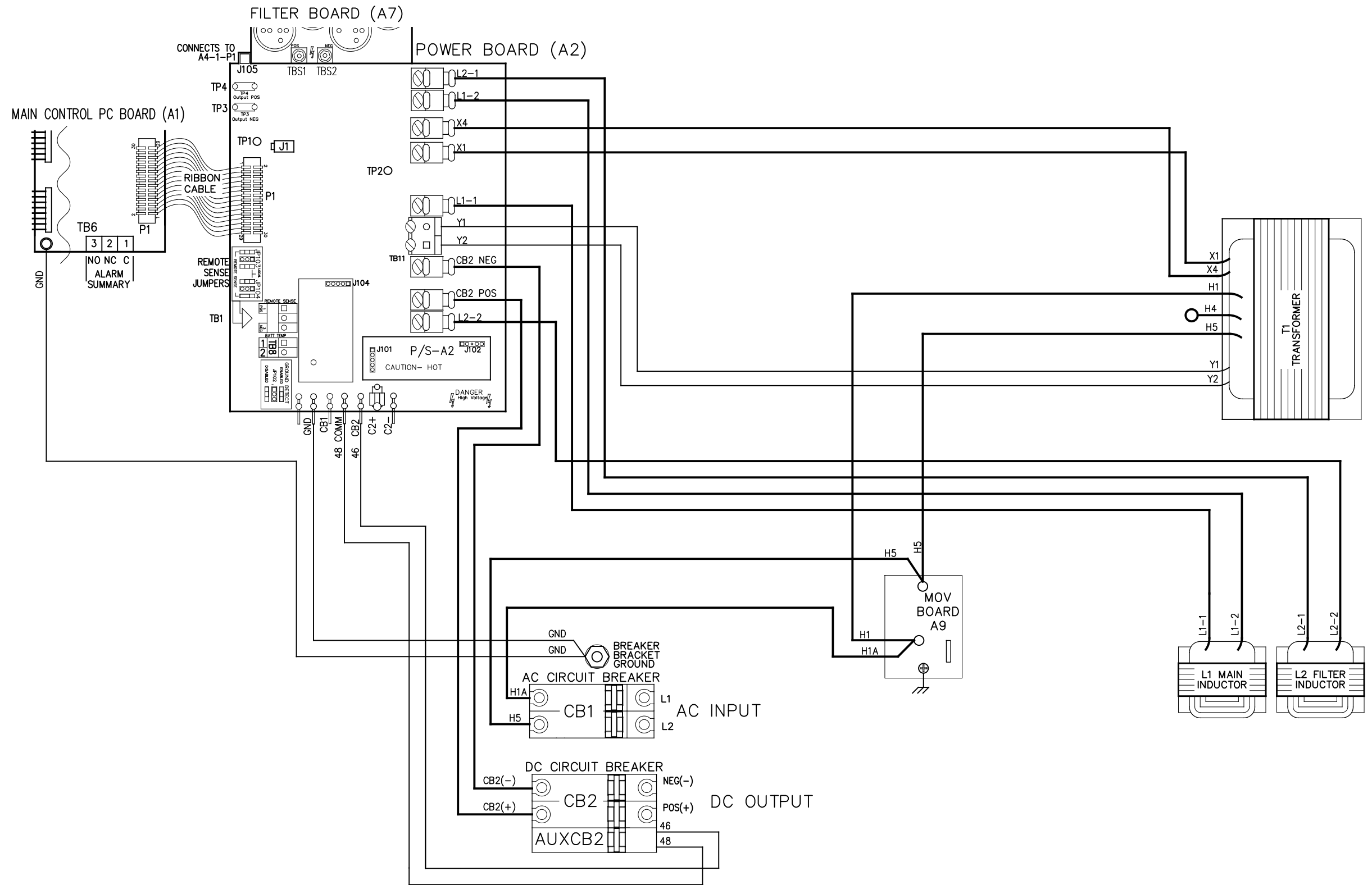
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| B | SCALE | DWG No | JE5253-20 | REV | SHEET |
| | NTS | | | B | 2 OF 2 |



NOTES:

1. FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A2, A4, A7 etc.) SEE DETAIL DRAWING JE5253-20.
2. 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.

| | | | | | | | |
|--|------------|------------|------------|---------------|---|----------------|---|
| REV. B | DRN BY KJB | CHK BY MCR | APP BY MCR | DATE 12/10/19 | DRN BY KJB | DATE: 12/10/19 | <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 ATEVO BATTERY CHARGER STYLE 5054 SCHEMATIC: W/O OPTIONS FOR CHARGERS AT 30-50ADC | | |
| | | | | | SCALE DWG No NTS JE5254-20 | | REV B |
| | | | | | | | SHEET 2 OF 2 |

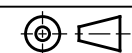


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| REV. C | DRN BY KJB | CHK BY MCR | APP BY MCR | DATE 4/13/2021 | DRN BY KJB | DATE: 1/21/2020 |
| DESCRIPTION | | | | STANDARD DRAWINGS. | CHK BY MCR | DATE: 1/21/2020 |
| | | | | APP BY MCR | DATE: 1/21/2020 | |


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TITLE
ATEVO BATTERY CHARGER
CONN DIAGRAM: 1Ø STYLE 5054 W/O OPTIONS
FOR CHARGERS AT 30-50ADC

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| B | SCALE NTS | DWG No JE5255-20 | REV C | SHEET 1 OF 1 |
|----------|-----------|------------------|-------|--------------|