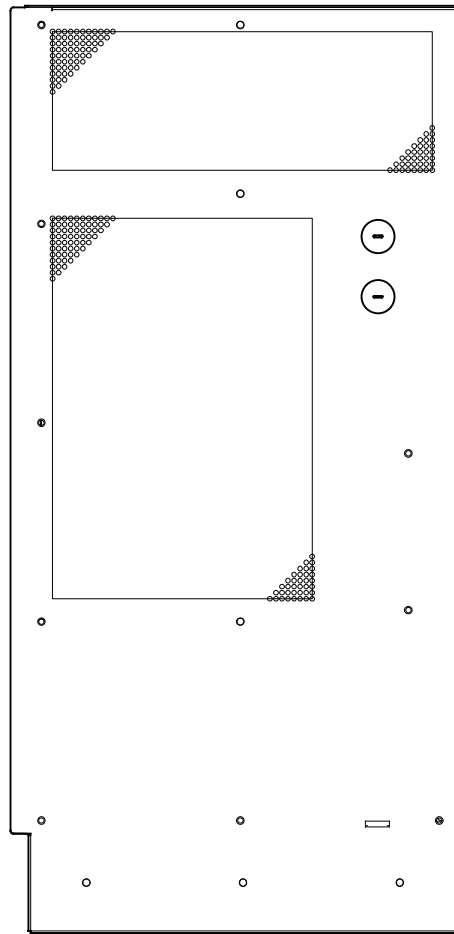
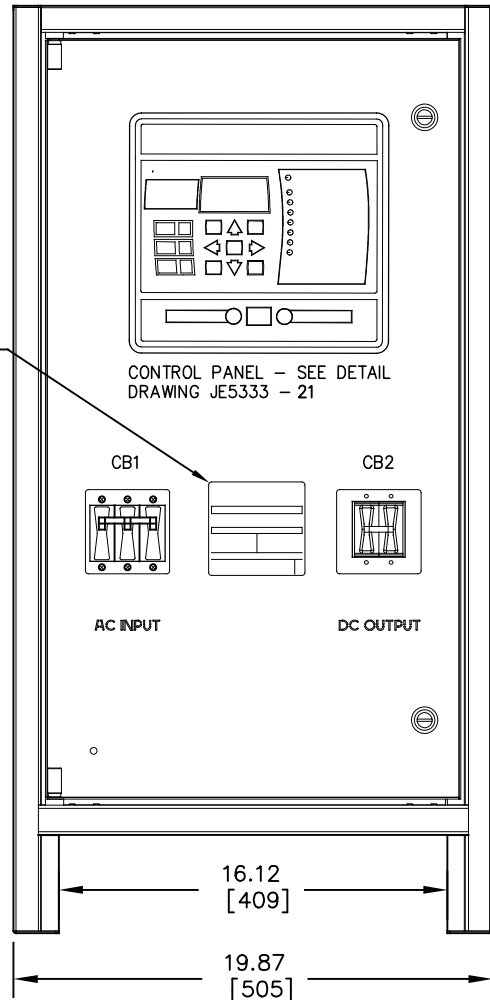


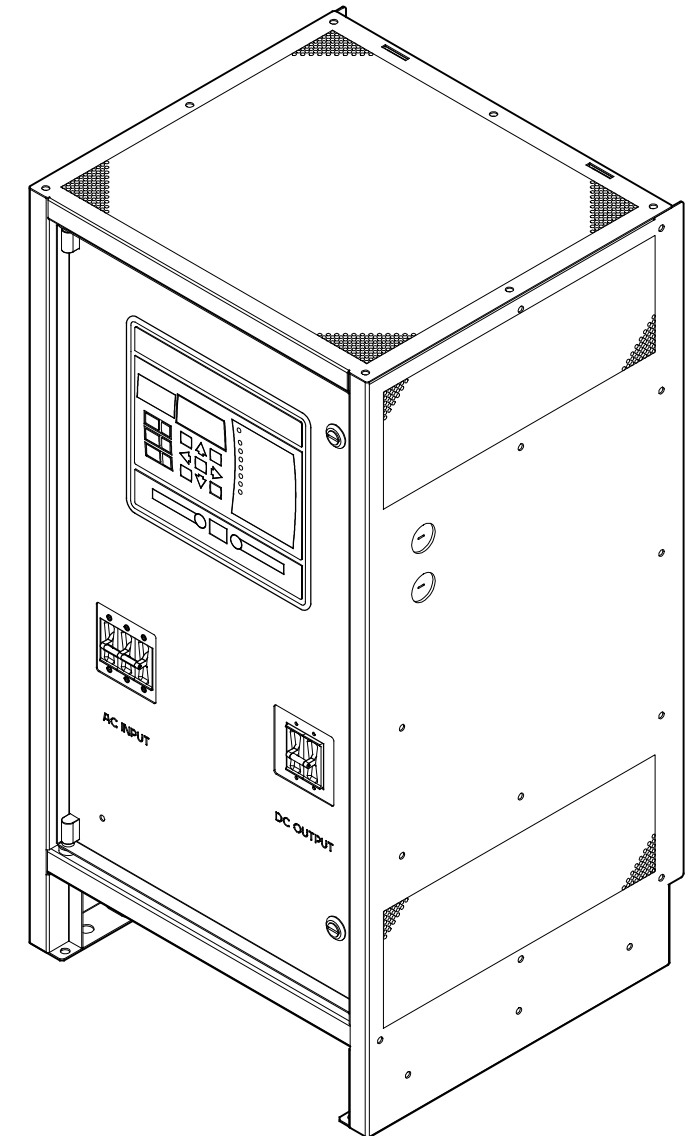
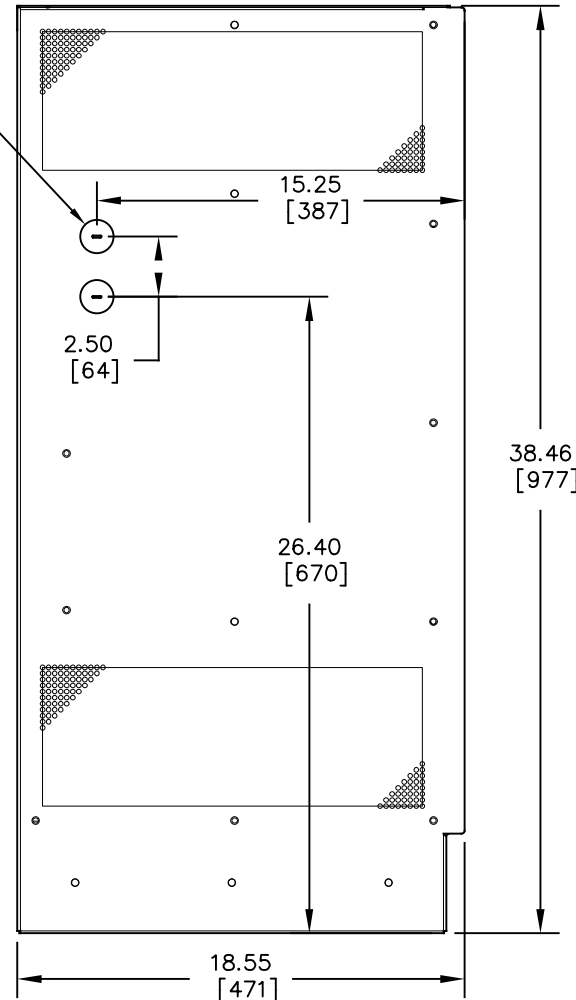
LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW



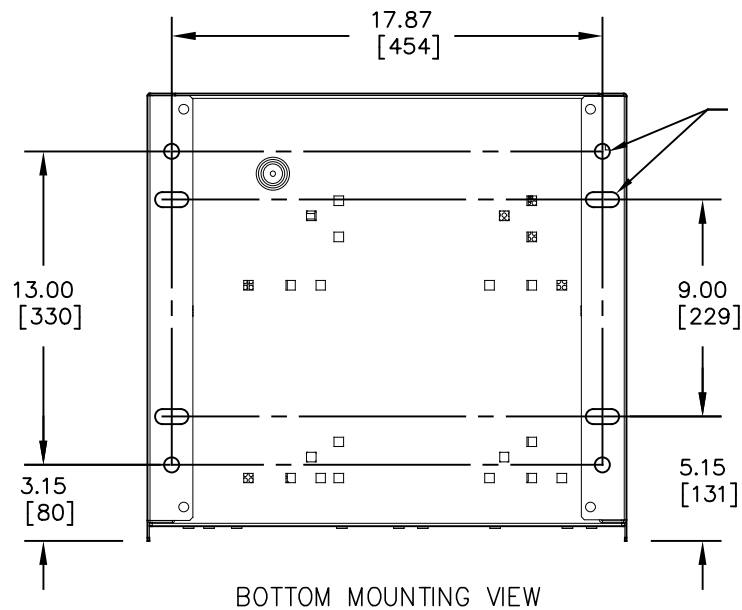
NOTE 3

NOTE 5

NOTE 4

NOTES:

- ENCLOSURE IS A NEMA TYPE 1 / IP20 TOP-VENTED STEEL CABINET WITHOUT GASKETS. FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT. MOUNTING BASE IS 12 GA. SIDE PANELS ARE 14 GA. TOP PANEL AND DOOR ARE 16 GA.
- ALLOW 6in / 152mm OF FREE AIR ON ALL VENTED SURFACES (TOP, SIDES & REAR) FOR COOLING.
- DATA NAMEPLATE (WITH CHARGER RATINGS) MOUNTED ON DOOR.
- FOUR (4) 0.5in / 12mm FLOOR-MOUNTING HOLES AND FOUR (4) 1in x 0.625in / 25mm x 16mm FLOOR-MOUNTING SLOTS ARE PROVIDED ON BOTTOM OF ENCLOSURE AS SHOWN.
- FOUR (4) 1.31in / 33mm DIA STANDARD PRE-FAB KEY-SLOT KNOCKOUTS ARE PROVIDED AS SHOWN FOR 1in / 25mm CONDUIT ENTRY. IF ADDITIONAL CONDUIT ENTRANCES ARE REQUIRED, ENCLOSURE SHOULD BE FIELD-MODIFIED BY INSTALLER.
- BATTERY CHARGER SHIPPING WEIGHT: APPROXIMATELY TBD lbs / TBD kg



DUAL DIMENSIONS in [mm]

REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/29/2021	DRN BY KJB	DATE 10/29/2021
DESCRIPTION STANDARD DRAWINGS.					CHK BY MCR	DATE 10/29/2021
ECN No. N/A					APP BY MCR	DATE 10/29/2021

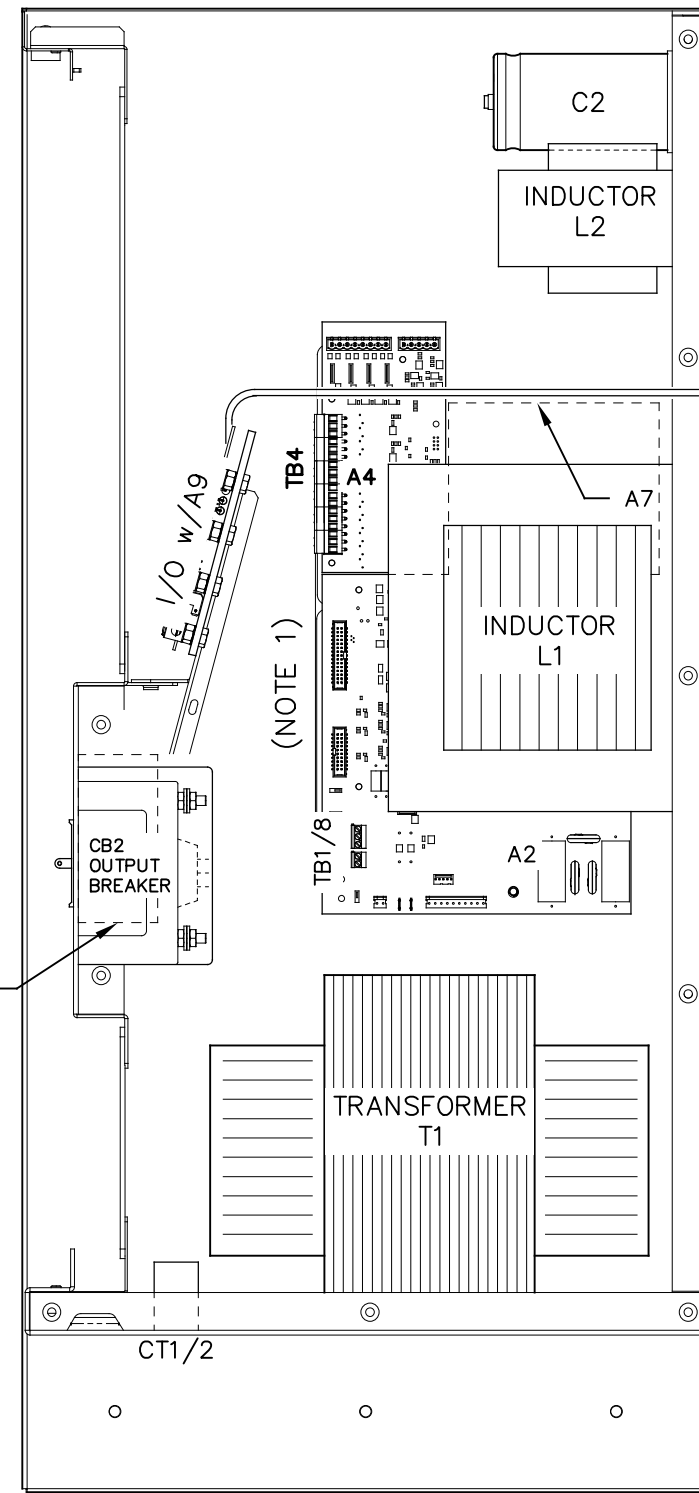
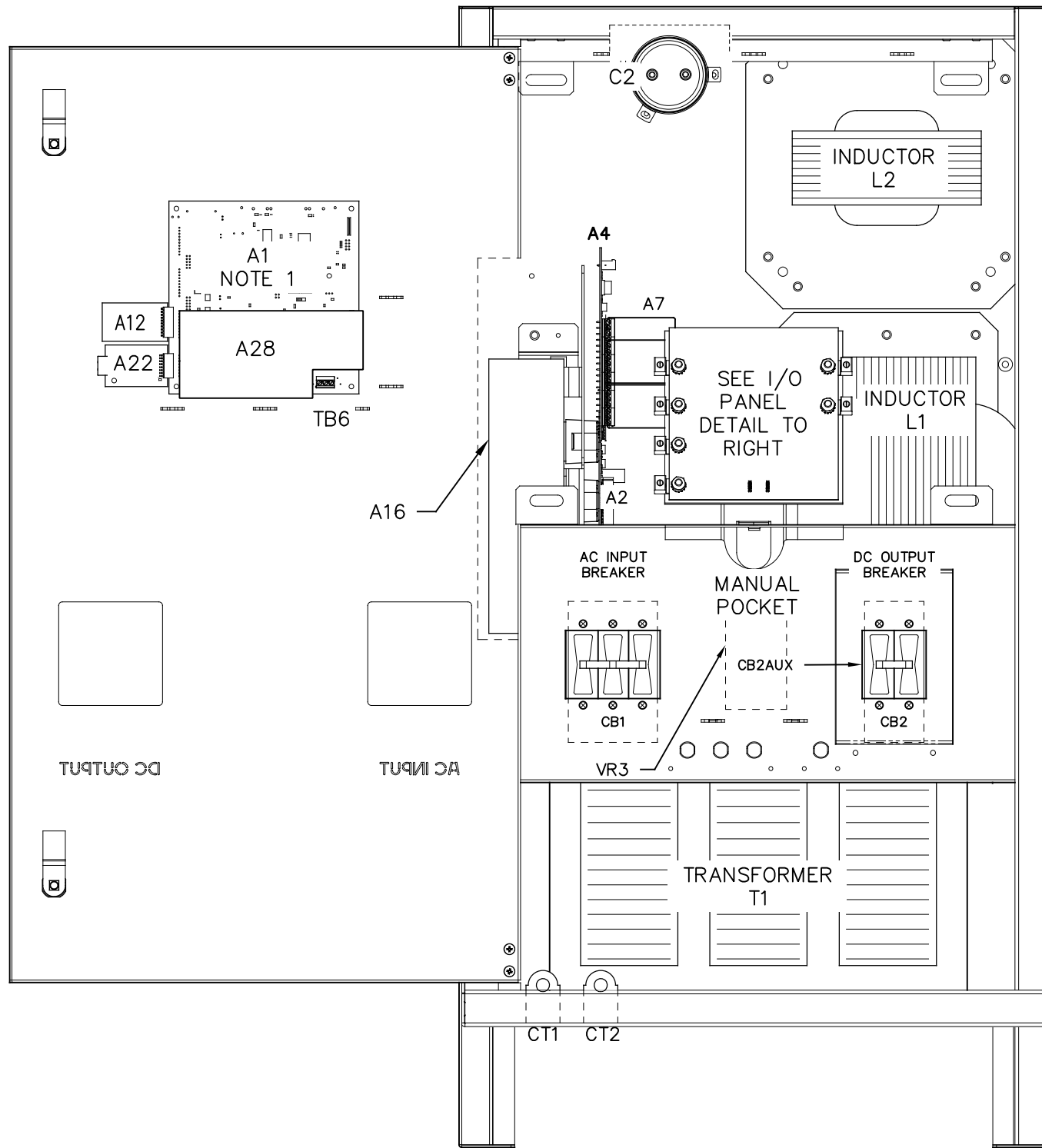
HINDLEPOWER

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

TITLE
**ATEVO BATTERY CHARGER
OUTLINE: NEMA-1 STYLE-5070 ENCL
3φ WITH COMMON OPTIONS 16-100A**

B SCALE DWG No
NTS JE5331-21

REV 0 SHEET 1 OF 1



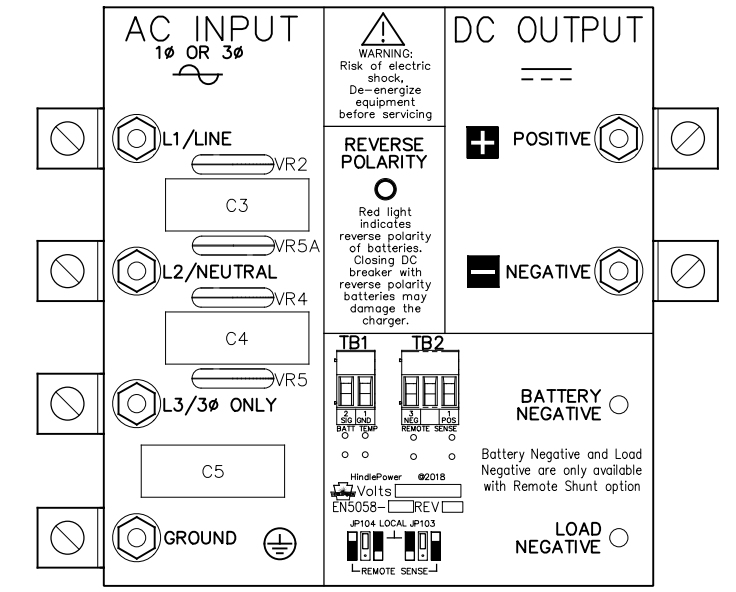
TO BE PLACED NEAR BATTERY CELL

A10
25ft / 7.6m CABLE

- SYM STANDARD COMPONENT DESCRIPTION
- A1 MAIN CONTROL PC BOARD
 - A2 POWER BOARD
 - A16 RECTIFIER H/S ASSEMBLY
 - A7 FILTER BOARD (C1x/R9)
 - A9 MOV PC BOARD
 - CB1 AC INPUT CIRCUIT BREAKER (CD3)
 - CB2 DC OUTPUT CIRCUIT BREAKER (CD2)
 - CB2AUX DC CKT BKR (CB2) AUXILIARY CONTACTS
 - L1 MAIN INDUCTOR
 - L2 FILTER INDUCTOR
 - T1 POWER TRANSFORMER
- SYM FEATURED OPTION COMP DESCRIPTION
- A4 AUXILIARY I/O PC BOARD
 - A10 TEMPERATURE COMPENSATION PROBE
 - A12 SERIAL COMMUNICATION ADAPTER
 - A22 ETHERNET ADAPTER
 - A28 METER MODULE PC BOARD
 - CTx CURRENT TRANSFORMERS
 - VR3 AC INPUT LIGHTNING ARRESTOR

C2 BATTERY ELIMINATOR FILTER CAP

ST-5070 I/O TERMINAL BOARD DETAIL



MOV PC BOARD (A9)

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
I/O (+/-)	POS/NEG OUTPUT TERMINALS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
GND LUG	USER GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
I/O (L1/L2)	AC INPUT TERMINALS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
(A1) TB6	SUMMARY ALARM TERMINAL BLOCK (A1) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A2) TB1	POS/NEG REMOTE SENSE TERMS (A2) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A2) TB8	TEMPCO PROBE (A10) TERM BLK - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB4	AUX I/O RELAY CONTACTS (A4) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG

NOTES:
1. FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A2, etc.) SEE DRAWING JE5333 - 21.

REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/29/2021	DRN BY KJB	DATE 10/29/2021
DESCRIPTION				STANDARD DRAWINGS.	CHK BY MCR	DATE 10/29/2021
ECN No. N/A				APP BY MCR	DATE 10/29/2021	

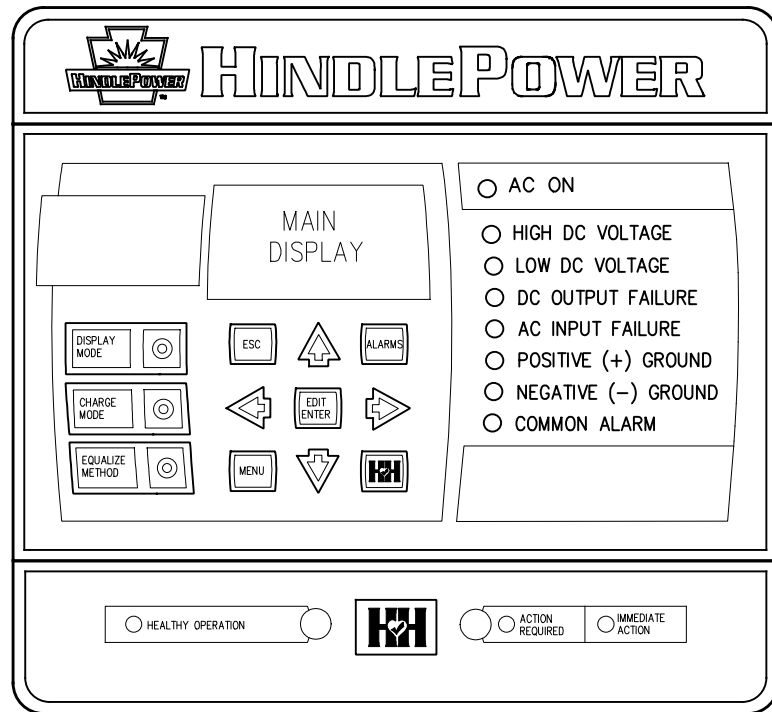
1075 Saint John Street
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PH 610-330-9000 FAX 610-330-8510
www.hindlepowerinc.com

HINDLEPOWER

TITLE
**ATEVO BATTERY CHARGER
INTERNAL COMPONENT LAYOUT: STYLE-5070
3Ø WITH COMMON OPTIONS 16-100A**

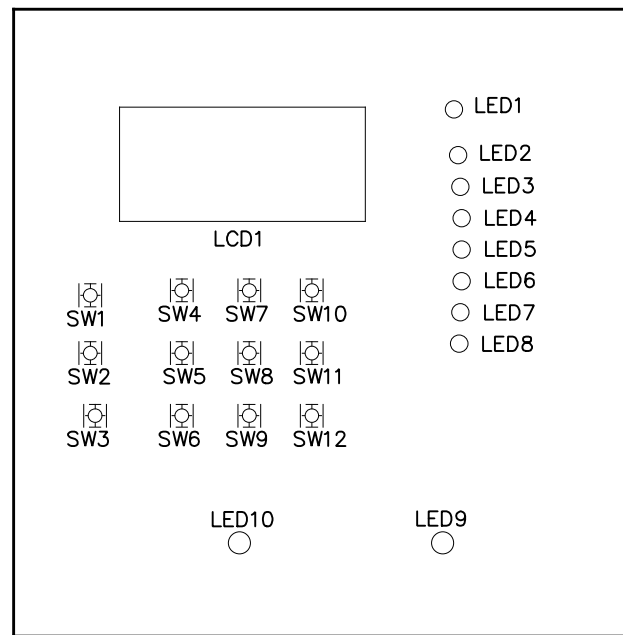
B SCALE DWG No
NTS JE5332-21

REV 0 SHEET 1 OF 1

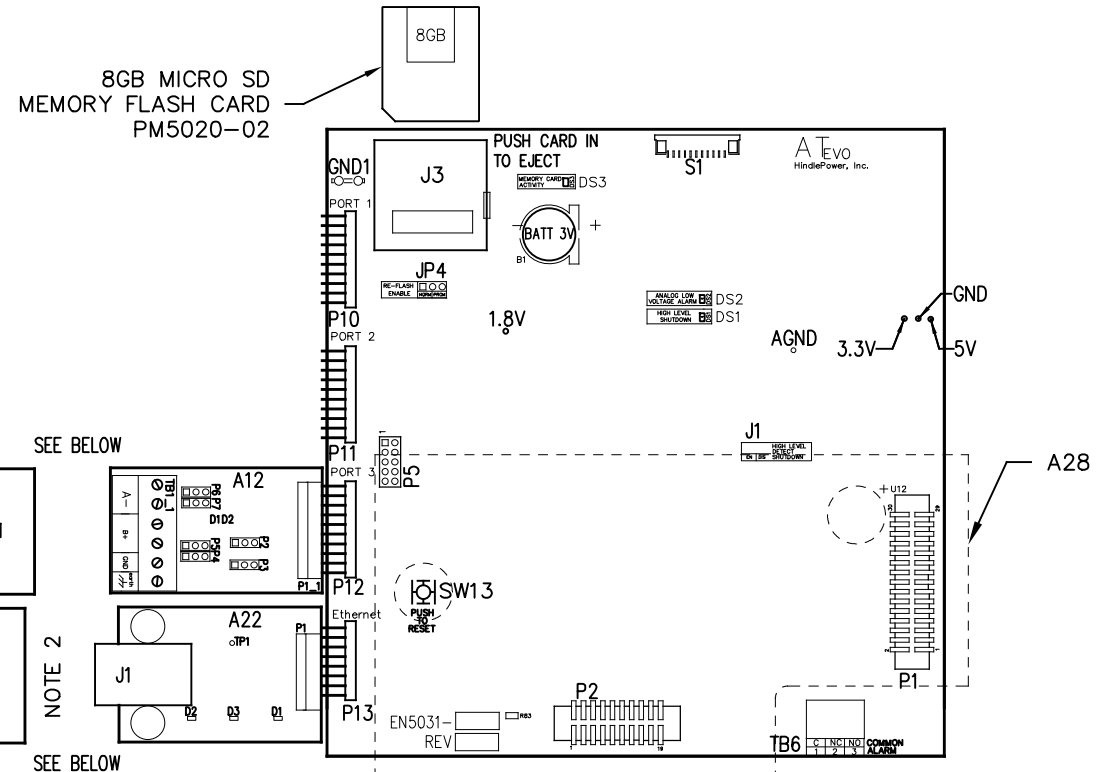


CONTROL PANEL
(PART No. FK5047-00)

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.

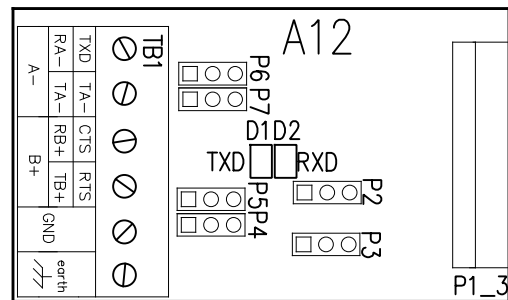


MAIN CONTROL PC BOARD (A1)
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED



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

SERIAL COMMUNICATION ADAPTER (A12)



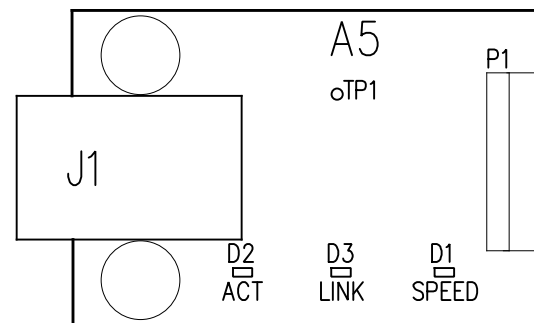
CONNECTORS (A12):
P1 - MAIN CONTROL BOARD

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)

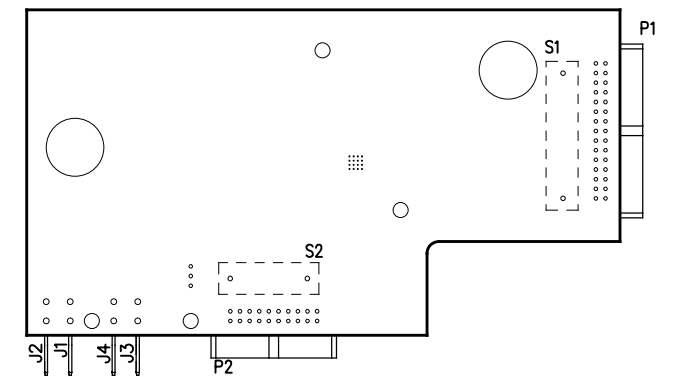


CONNECTORS (A5):
P1 - MAIN CONTROL BOARD
J1 - RJ-45 ETHERNET USER CONNECTION

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

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



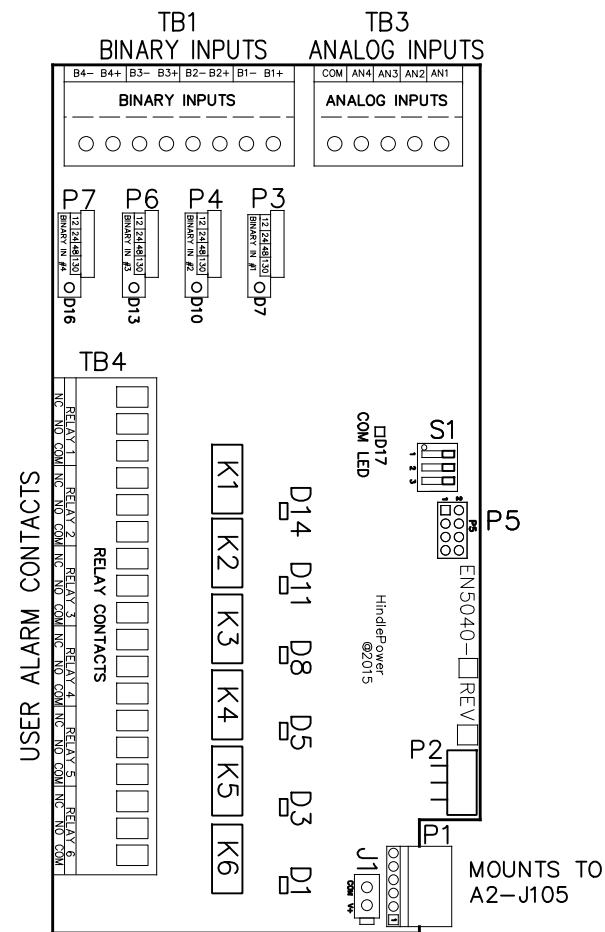
I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
(A1) TB6	SUMMARY ALARM TERMINAL BLOCK (A1) - SOLDERLESS COMP SCREW	#22-14 AWG
(A12) TB1	RS-232 / RS-485 USER CONNECTIONS - SOLDERLESS COMP SCREW	#22-14 AWG
(A22) J1	SERIAL ETHERNET CONNECTION - RJ45 PLUG	CAT5

MAIN CONTROL PC BOARD (A1)

<p>INDICATOR LIGHTS (LEDs):</p> <p>LED1 - GREEN - AC ON</p> <p>LED2 - RED - HIGH DC VOLTAGE ALARM</p> <p>LED3 - RED - LOW DC VOLTAGE ALARM</p> <p>LED4 - RED - DC OUTPUT FAILURE ALARM</p> <p>LED5 - RED - AC INPUT FAILURE ALARM</p> <p>LED6 - RED - POSITIVE (+) GROUND ALARM</p> <p>LED7 - RED - NEGATIVE (-) GROUND ALARM</p> <p>LED8 - RED - COMMON ALARM</p> <p>LED9 - RED - ACTION REQUIRED ALARM</p> <p>LED10 - GREEN - HEALTHY OPERATION</p> <p>DS1 - RED - HIGH LEVEL SHUTDOWN (HLD)</p> <p>DS2 - RED - ANALOG LOW VOLTAGE ALARM (LLD)</p> <p>DS3 - RED - MEMORY CARD ACTIVITY</p>	<p>JUMPERS:</p> <p>J1 - ANALOG HIGH VOLTAGE SHUTDOWN JUMPER</p> <p>J3 - SD CARD PORT</p> <p>JP4 - RE-FLASH (FIELD PROGRAMMING) JUMPER</p> <p>TERMINAL BLOCKS:</p> <p>TB6 - COMMON ALARM RELAY CONTACTS</p> <p>TEST POINTS:</p> <p>1.8V - 1.8 VOLTS</p> <p>3.3V - 3.3 VOLTS</p> <p>5V - 5.0 VOLTS</p> <p>GND - GROUND</p> <p>AGND - ANALOG GROUND</p> <p>SDA - MAIN BOARD I2C DATA</p> <p>SCL - MAIN BOARD I2C CLOCK</p>	<p>SWITCHES:</p> <p>S1 - DISPLAY BUTTON</p> <p>S2 - CHARGE MODE BUTTON</p> <p>S3 - EQUALIZE METHOD BUTTON</p> <p>S4 - ESCAPE (ESC) BUTTON</p> <p>S5 - LEFT ARROW BUTTON</p> <p>S6 - MENU BUTTON</p> <p>S7 - UP ARROW BUTTON</p> <p>S8 - EDIT / ENTER BUTTON</p> <p>S9 - DOWN ARROW BUTTON</p> <p>S10 - ALARM BUTTON</p> <p>S11 - RIGHT ARROW BUTTON</p> <p>S12 - HINDLE HEALTH (HHS) BUTTON</p> <p>SW13 - SYSTEM RESET BUTTON (BACK OF BOARD)</p>	<p>CONNECTORS:</p> <p>P1 - POWER BOARD RIBBON</p> <p>P2 - 3 PHASE RECTIFIER RIBBON</p> <p>P3 - USB EXPANSION PORT</p> <p>P4 - SPI & I2C EXPANSION PORT #1</p> <p>P5 - SPI & I2C EXPANSION PORT #2</p> <p>P6 - DISPLAY SPI PORT</p> <p>P7 - DISPLAY JTAG PORTS</p> <p>P10 - SERIAL INTERFACE PORT #1</p> <p>P11 - SERIAL INTERFACE PORT #2</p> <p>P12 - SERIAL INTERFACE PORT #3</p> <p>P13 - ETHERNET INTERFACE PORT</p> <p>P17 - GENERAL EXPANSION PORT</p>
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REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/29/2021	DRN BY KJB	DATE 10/29/2021
DESCRIPTION			CHK BY MCR	DATE 10/29/2021	APP BY MCR	
STANDARD DRAWINGS.					DATE 10/29/2021	
ECN No. N/A						

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TITLE ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL 3φ WITH COMMON OPTIONS 16-100A			
B	SCALE NTS	DWG No. JE5333-21	REV 0 SHEET 1 OF 2



AUXILIARY I/O BOARD (A4)

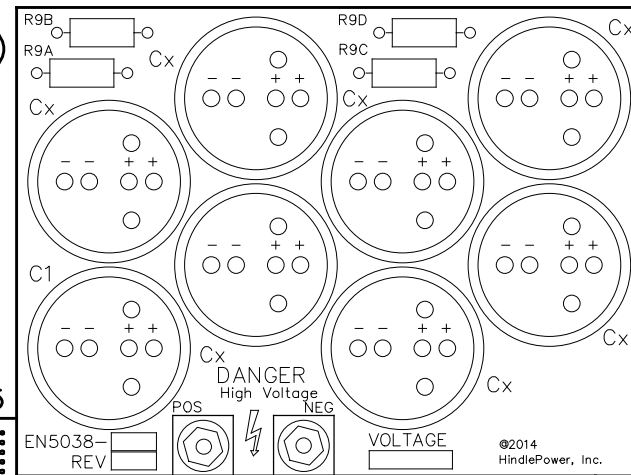
JUMPERS & CONFIGURATION SWITCHES FOR AUX I/O BOARD (A4)
 J1 - AUXILIARY POWER INPUT
 P1 - POWER BOARD (PRIMARY POWER & COMM SOURCE)
 P5 - PROGRAMMING HEADER

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)

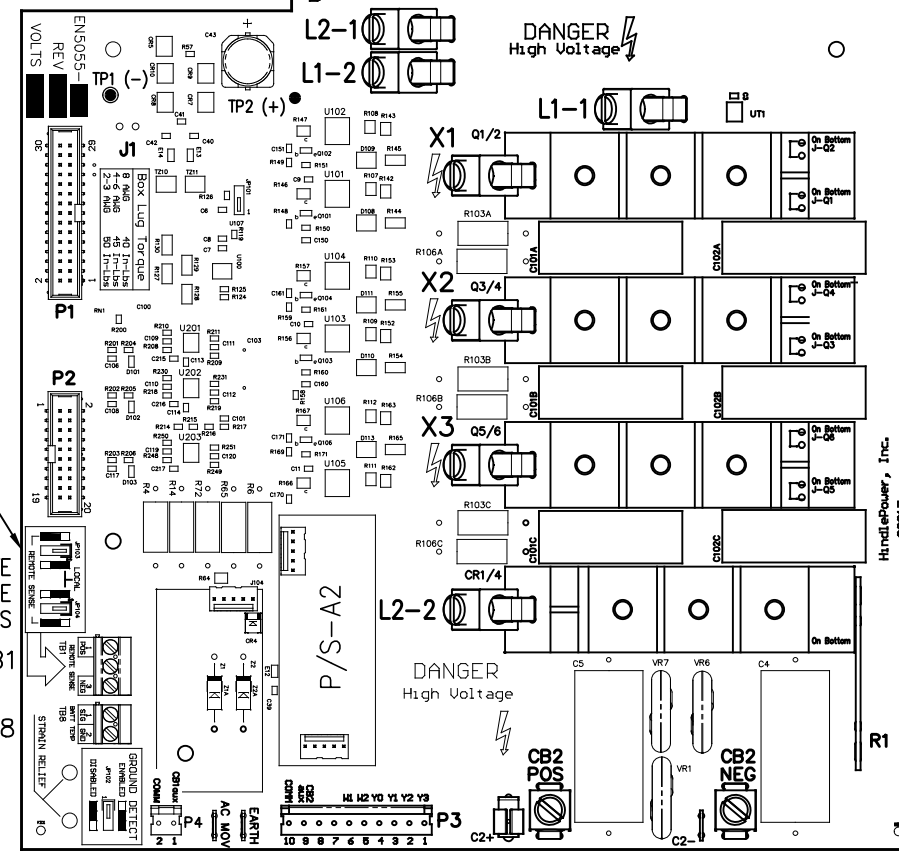
USER TERMINALS ON RELAY BOARD (A4):
 TB1 - BINARY INPUTS
 TB2 - SERIAL INTERFACE
 TB3 - ANALOG INPUTS
 TB4 - AUXILIARY I/O RELAY CONTACTS

JUMPERS & CONFIGURATION SWITCHES
 P3, 4, 6, 7 - BINARY INPUT VOLTAGE CONFIGURATION JUMPERS
 S1 - BOARD ADDRESS DIPSWITCH

FILTER BOARD (A7)



J105
 MOUNTS TO A4-P1



POWER BOARD (A2)

NOTE 1
 REMOTE SENSE JUMPERS
 TB1
 TB8

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 - DCBREAKER 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):

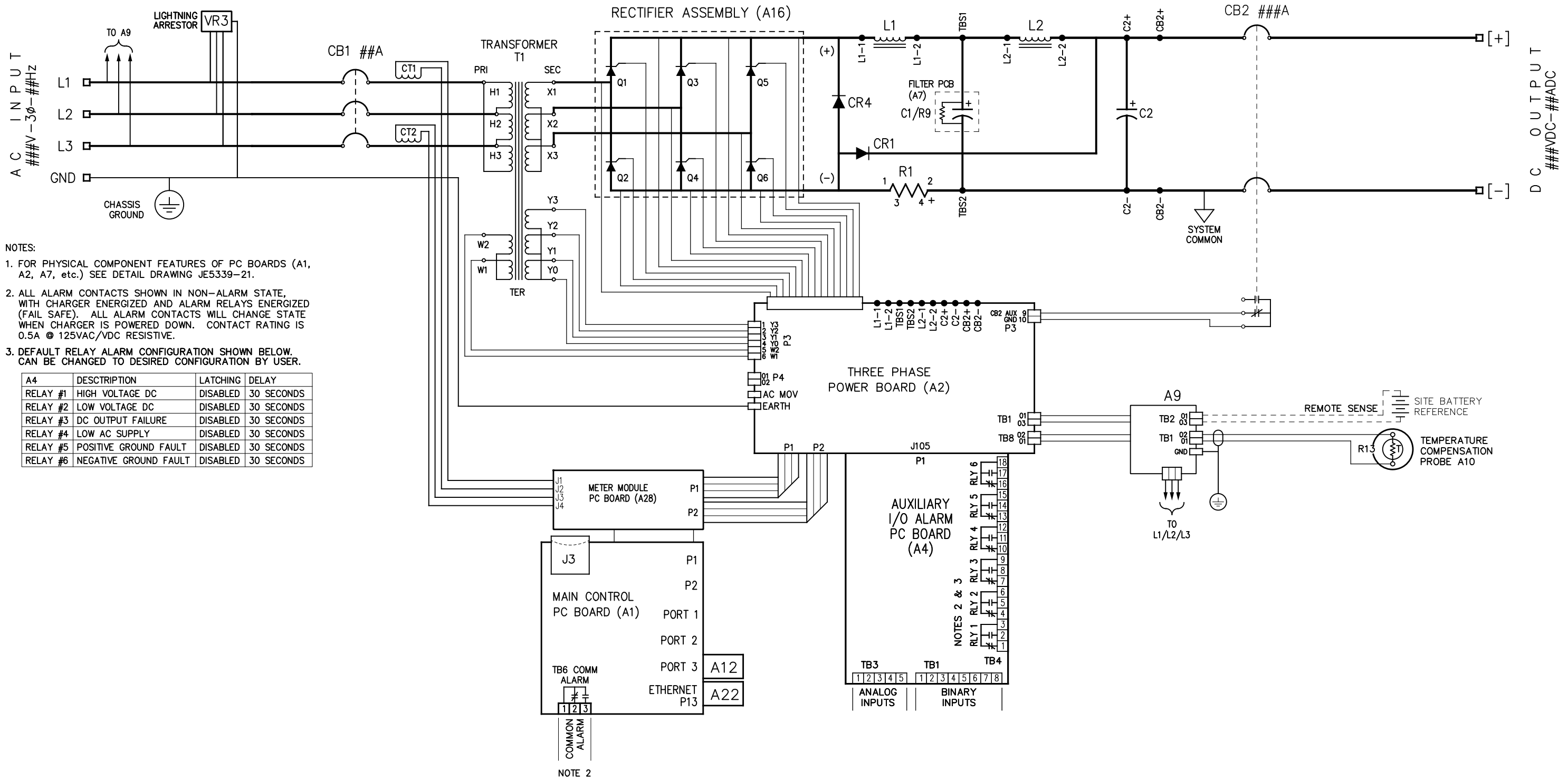
TP1 - PRE-FILTERED DC BUS (-)
 TP2 - PRE-FILTERED DC BUS (+)

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 COMPRESSION SCREW	#22-14 AWG
(A2) TB8	TEMPCO PROBE (A10) TERM BLK - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB1	AUX I/O BINARY INPUTS (A4) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB2	AUX I/O RELAY CONTACTS (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

REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/29/2021	DRN BY KJB	DATE: 10/29/2021		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: 10/29/2021		
ECN No. N/A					APP BY MCR	DATE: 10/29/2021	TITLE ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL 3φ WITH COMMON OPTIONS 16-100A	
					B SCALE NTS DWG No JE5333-21		REV 0	SHEET 2 OF 2

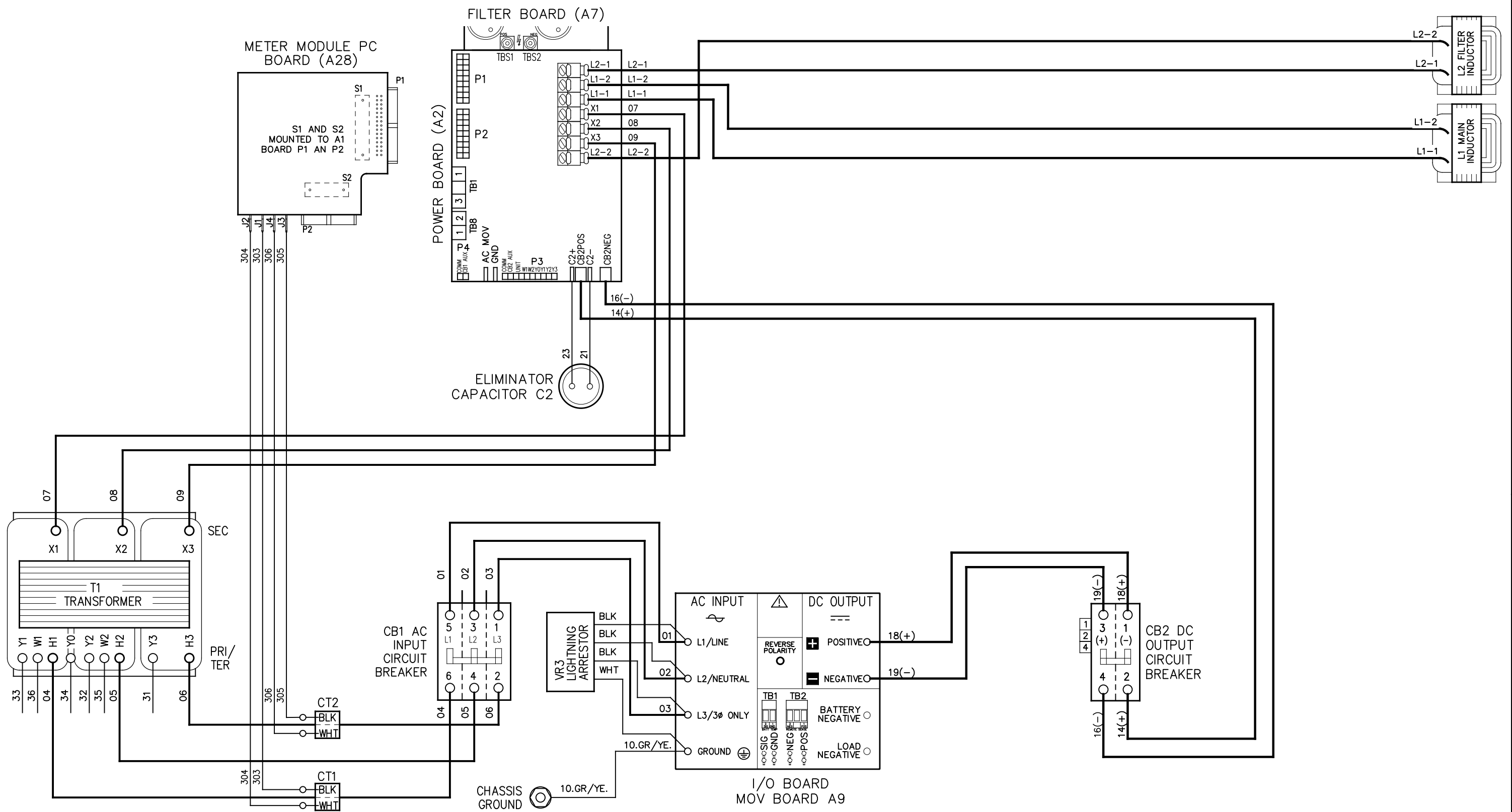


- NOTES:
- FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A2, A7, etc.) SEE DETAIL DRAWING JE5339-21.
 - ALL ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER ENERGIZED AND ALARM RELAYS ENERGIZED (FAIL SAFE). ALL ALARM CONTACTS WILL CHANGE STATE WHEN CHARGER IS POWERED DOWN. CONTACT RATING IS 0.5A @ 125VAC/VDC RESISTIVE.
 - DEFAULT RELAY ALARM CONFIGURATION SHOWN BELOW. CAN BE CHANGED TO DESIRED CONFIGURATION BY USER.

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

NOTE 2

REV. DRN BY 0 KJB	CHK BY MCR	APP BY MCR	DATE 10/29/2021	DRN BY KJB	DATE 10/29/2021
DESCRIPTION STANDARD DRAWINGS.				CHK BY MCR	DATE 10/29/2021
ECN No. N/A				APP BY MCR	DATE 10/29/2021
			TITLE ATEVO BATTERY CHARGER SCHEMATIC: STYLE 5070 3φ WITH COMMON OPTIONS 16-100A		
SCALE NTS		DWG No JE5334-21		REV 0	SHEET 1 OF 1

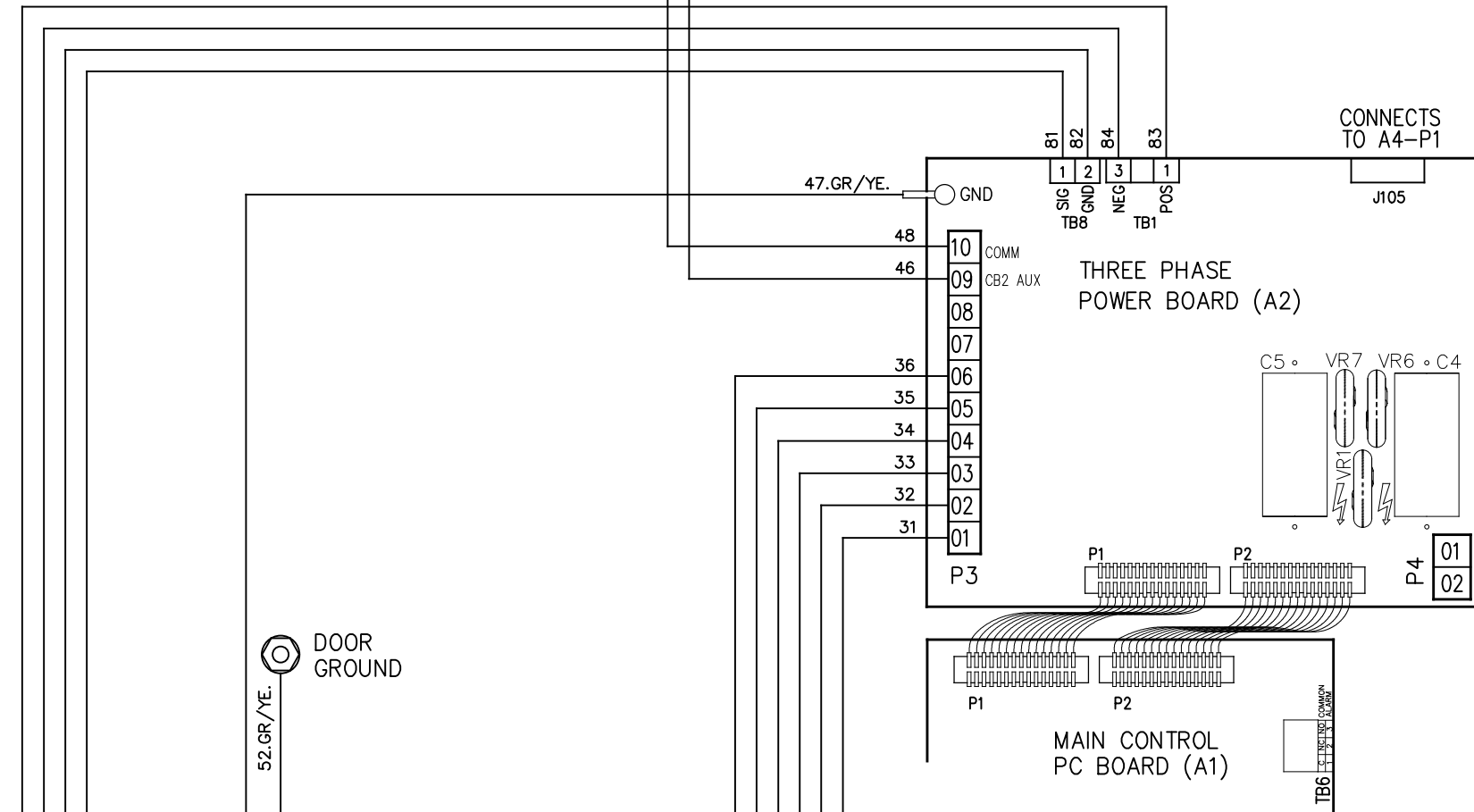
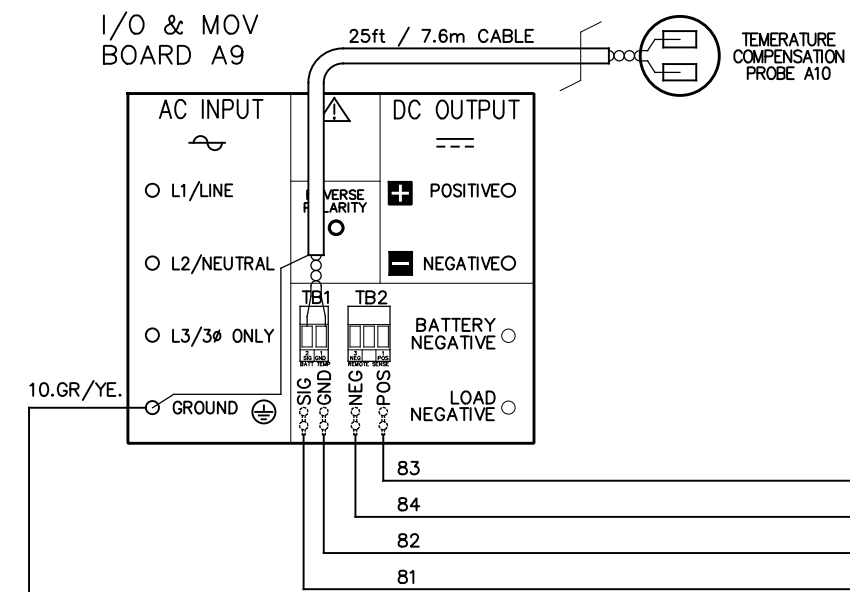
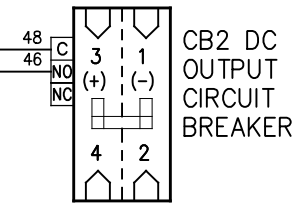
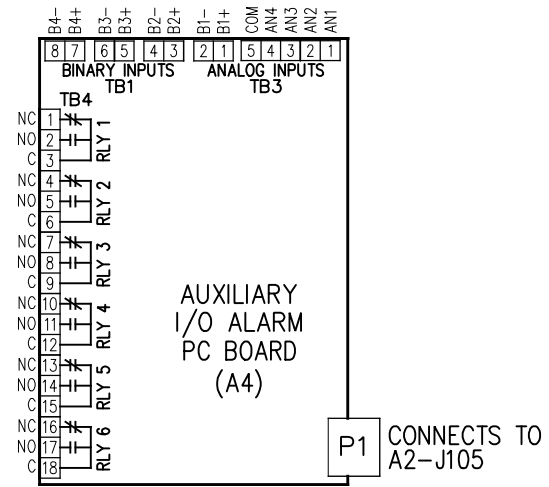


NOTES:

1. 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. GROUND WIRES ARE GREEN WITH YELLOW STRIPE.
2. THIS DRAWING (SHEET 1) SHOWS THE MAINFRAME POWER WIRING AND USER CONNECTION CONTACTS TO CONTROL PC BOARDS (A1 & A2). SEE SHEET 2 FOR ALL CONTROL (SIGNAL) WIRING.

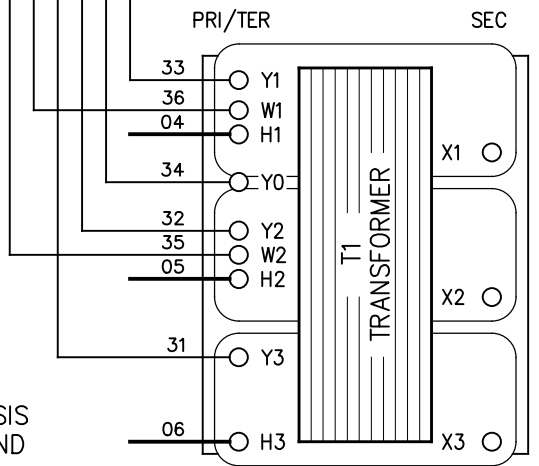
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DESCRIPTION STANDARD DRAWINGS.					CHK BY MCR	DATE: 10/29/2021
ECN No. N/A					APP BY MCR	DATE: 10/29/2021

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		TITLE ATEVO BATTERY CHARGER CONN DIAGRAM: STYLE 5070 3 ϕ WITH COMMON OPTIONS 16-100A		
B	SCALE NTS	DWG No JE5335-21	REV 0	SHEET 1 OF 2



DOOR GROUND

CHASSIS GROUND



NOTES:

1. 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. GROUND WIRES ARE GREEN WITH YELLOW STRIPE.
2. STANDARD USER ALARM CONTACTS (TB6 [A1], etc.) ARE SOLDERLESS COMPRESSION SCREW TERMINALS, ACCEPTING #22-14 AWG WIRE.

DRN BY	DATE:
KJB	10/29/2021
CHK BY	DATE:
MCR	10/29/2021
APP BY	DATE:
MCR	10/29/2021

TITLE
ATEVO BATTERY CHARGER
CONN DIAGRAM: STYLE 5070
3Ø WITH COMMON OPTIONS 16-100A

B	SCALE	DWG No	REV	SHEET
	NTS	JE5335-21	0	2 OF 2