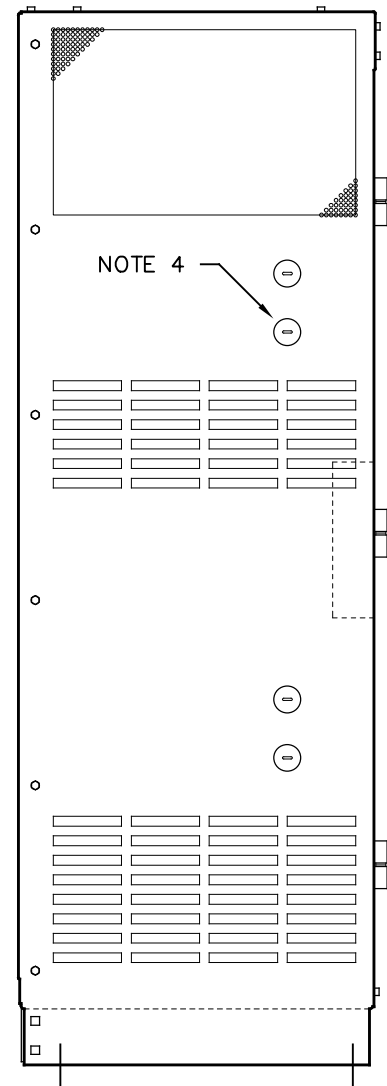
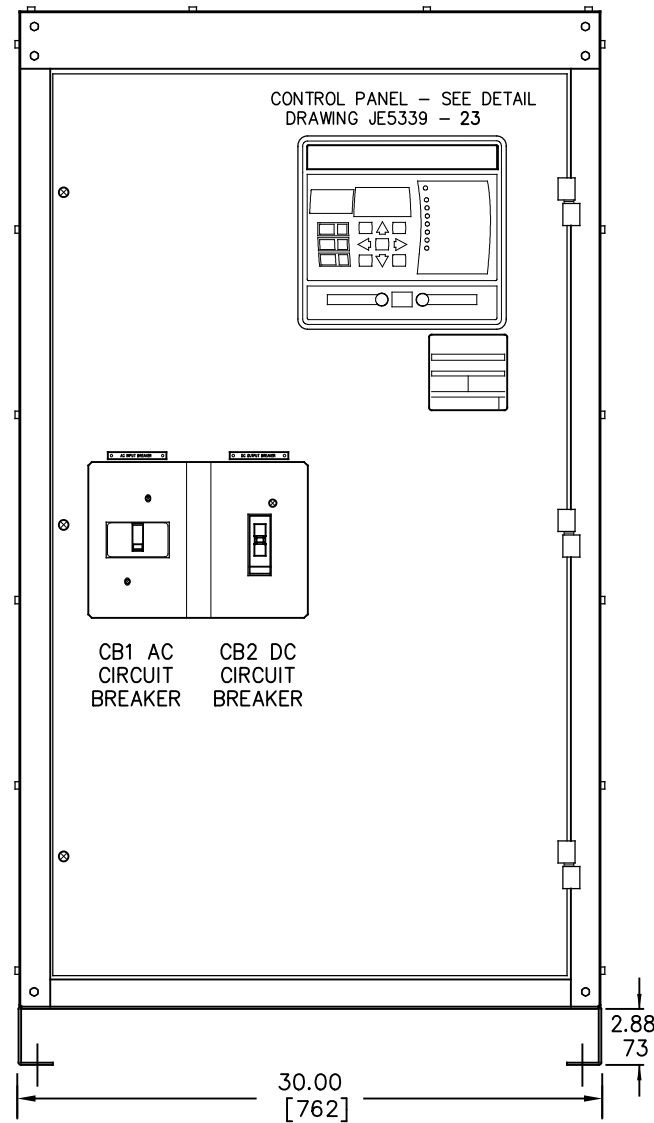


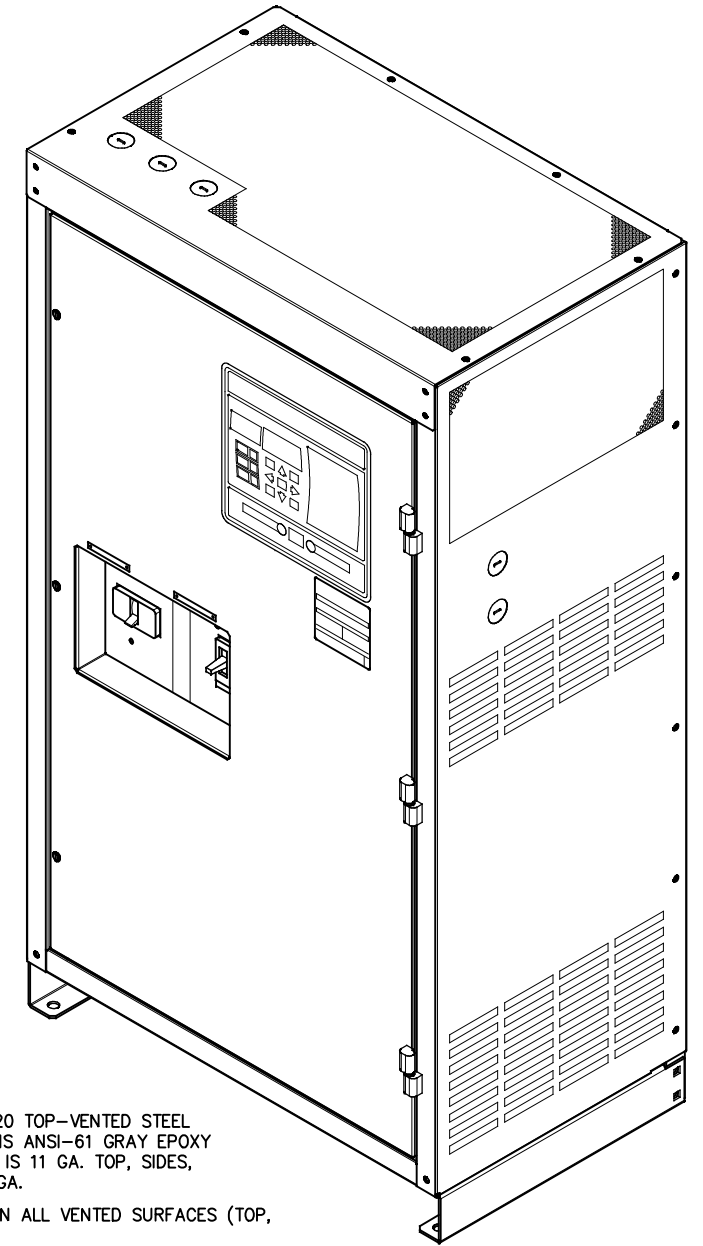
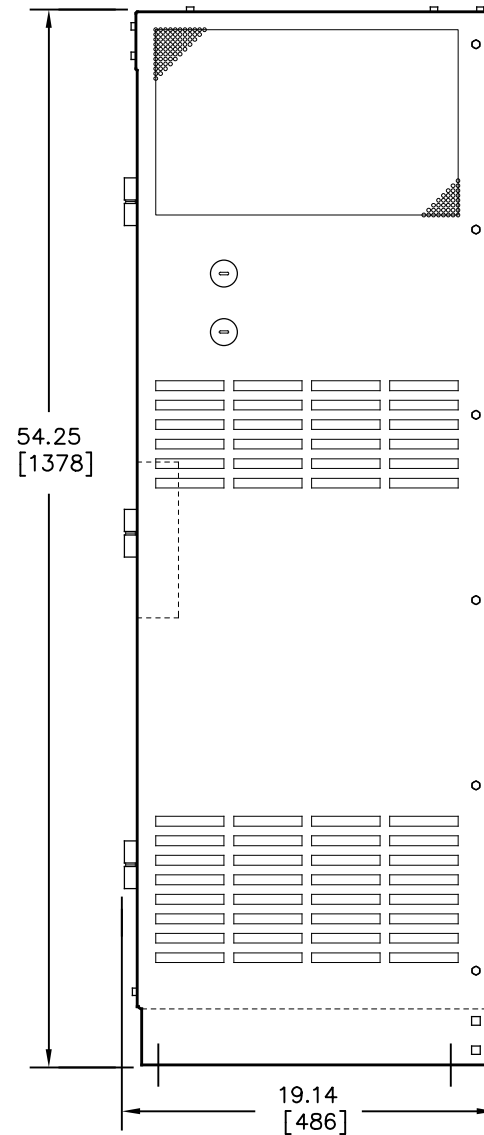
SIDE VIEW



FRONT VIEW

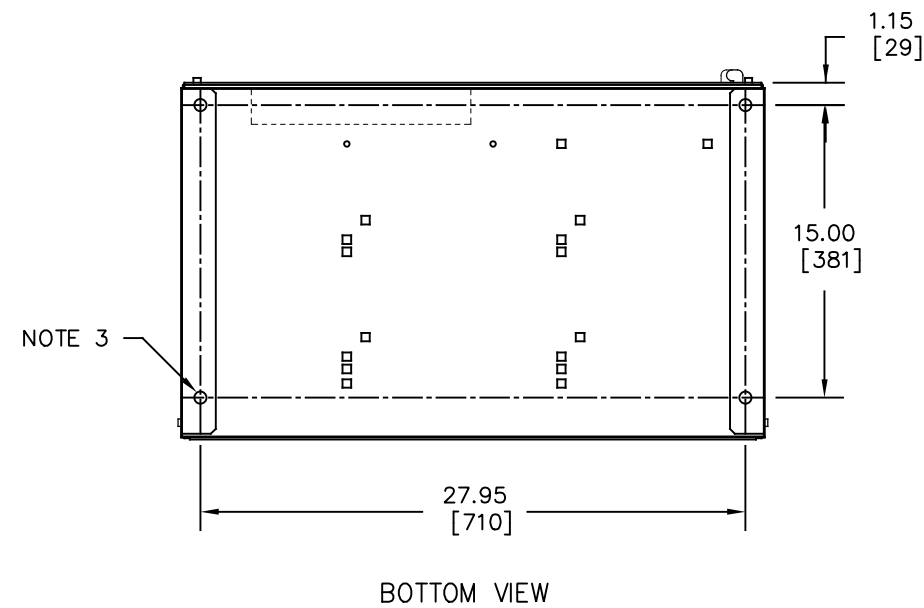


SIDE VIEW



NOTES:

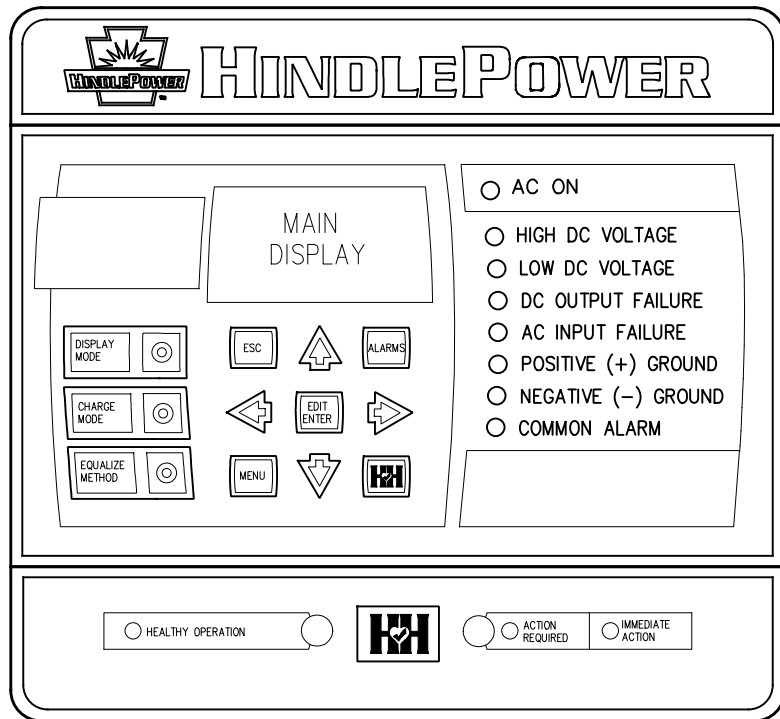
- ENCLOSURE IS A NEMA TYPE 1 / IP20 TOP-VENTED STEEL CABINET WITHOUT GASKETS. FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT. BASE IS 7 GA. FRAME IS 11 GA. TOP, SIDES, AND BACK ARE 16 GA. DOOR IS 14 GA.
- ALLOW 6in / 152mm OF FREE AIR ON ALL VENTED SURFACES (TOP, SIDES & REAR) FOR COOLING.
- FOUR (4) 0.625in / 16mm FLOOR-MOUNTING HOLES ARE PROVIDED ON BOTTOM OF ENCLOSURE AS SHOWN.
- NINE (9) 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



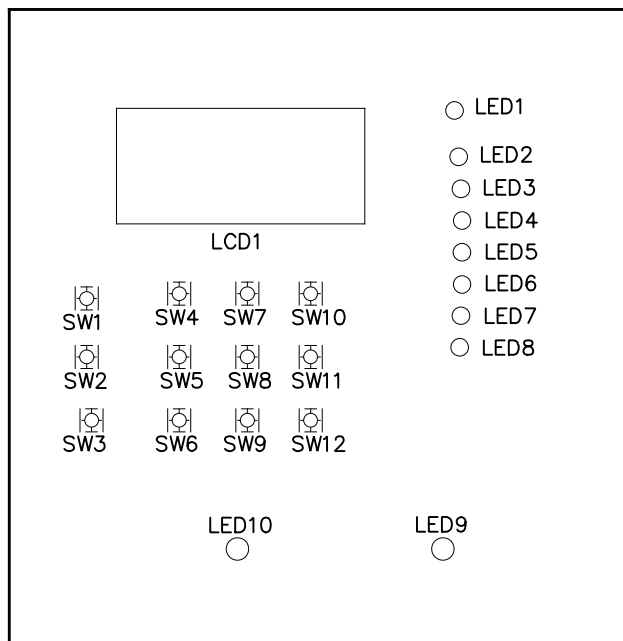
DUAL DIMENSIONS in mm

REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/26/2021	DRN BY KJB	DATE 10/26/2021	<b>HINDLEPOWER</b> 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 10/26/2021	
ECN NO. N/A					CHK BY MCR	DATE 10/26/2021	TITLE <b>ATEVO 3PH BATTERY CHARGER                  OUTLINE: NEMA-1 STYLE-5030 ENCL                  3Ø WITH COMMON OPTIONS 50-100A</b>
							SCALE <b>B</b> NTS
					DWG No <b>JE5337-23</b>		REV 0 SHEET 1 OF 1

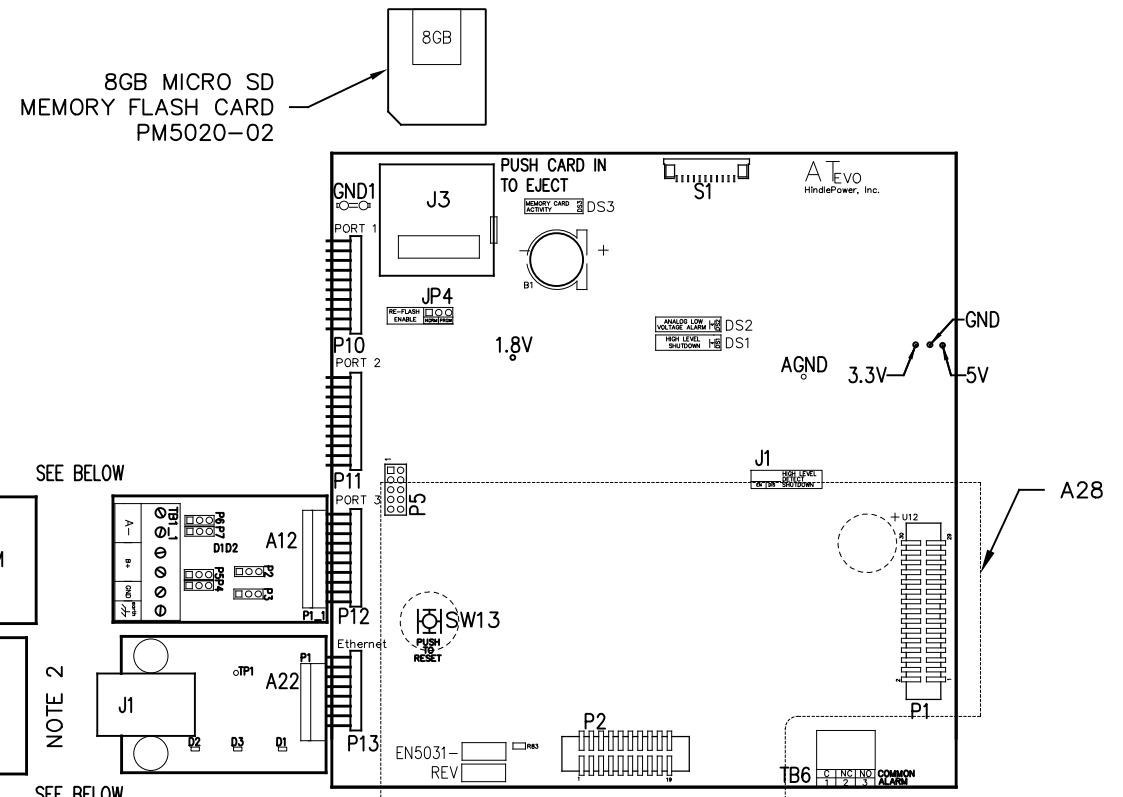




**CONTROL PANEL**  
(PART No. FK5047-00)



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

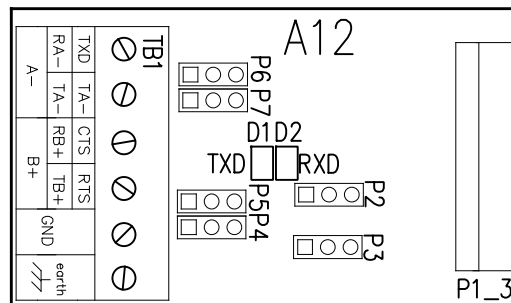


**MAIN CONTROL PC BOARD (A1)**  
BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

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.

2. ETHERNET ADAPTER (A22) SUPPORTS MULTIPLE PROTOCOLS (DNP3 AND MODBUS) SIMULTANEOUSLY. SEE JA0102-54.

**SERIAL COMMUNICATION ADAPTER (A12)**



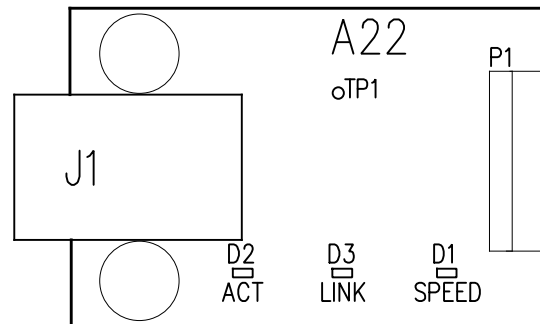
**CONNECTORS (A12):**  
P1 - MAIN CONTROL BOARD

**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)**

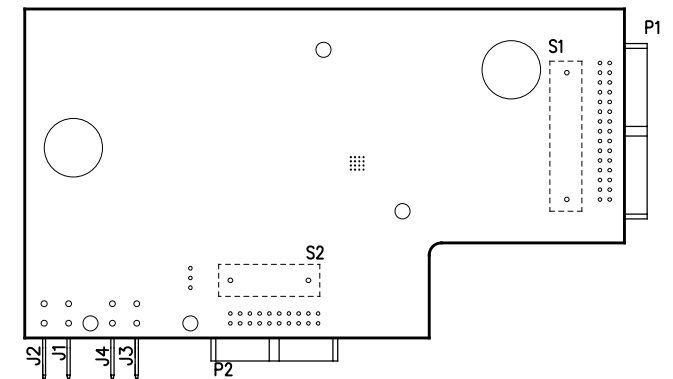


**CONNECTORS (A5):**  
P1 - MAIN CONTROL BOARD  
J1 - RJ-45 ETHERNET USER CONNECTION

**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

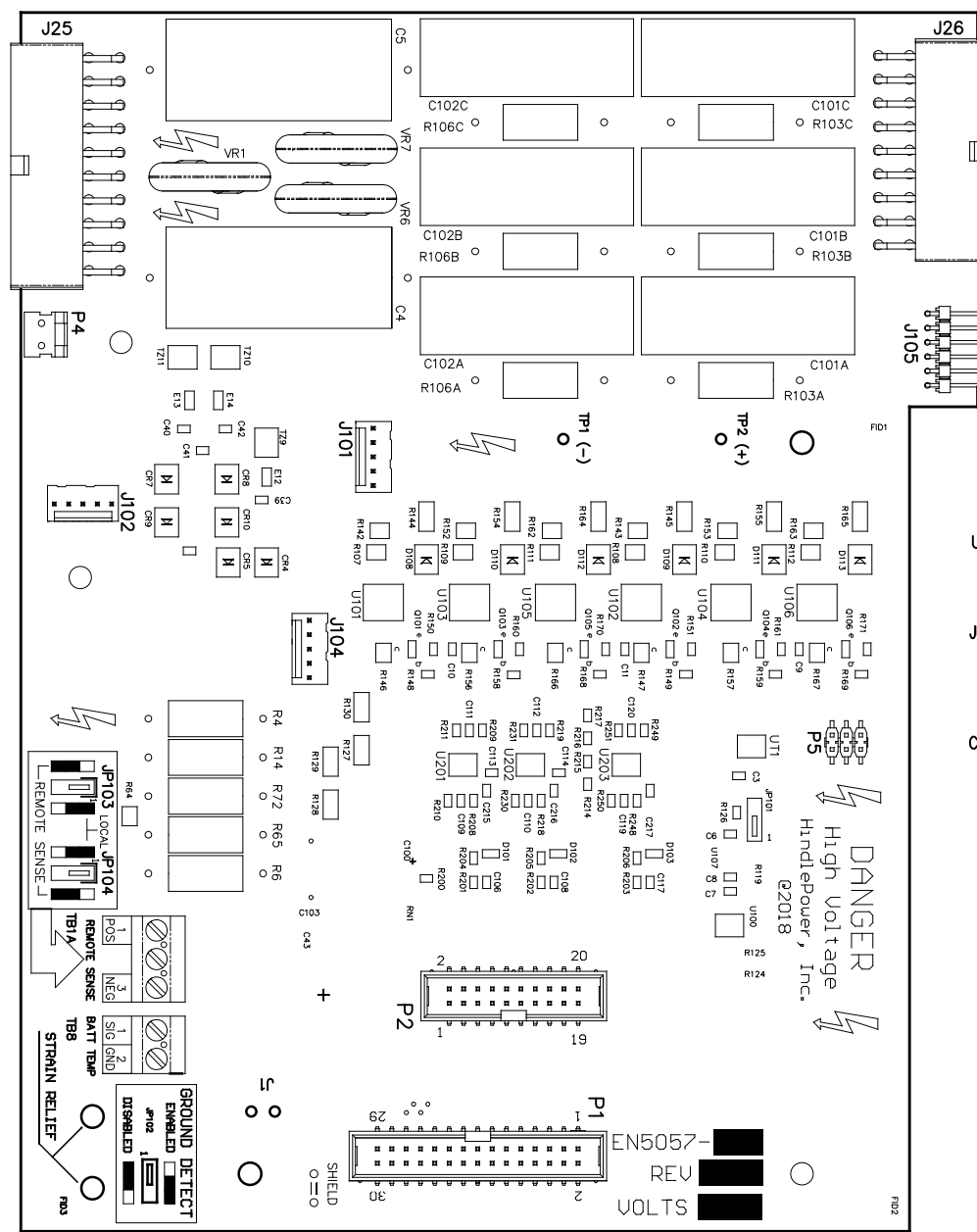


**MAIN CONTROL PC BOARD (A1)**

- 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  
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) - SOLDERLESS COMP SCREW	#22-14 AWG
(A12) TB1	RS-232 / RS-485 USER CONNECTIONS - SOLDERLESS COMP SCREW	#22-14 AWG
(A22) J1	ETHERNET CONNECTION - RJ45 PLUG	CATS

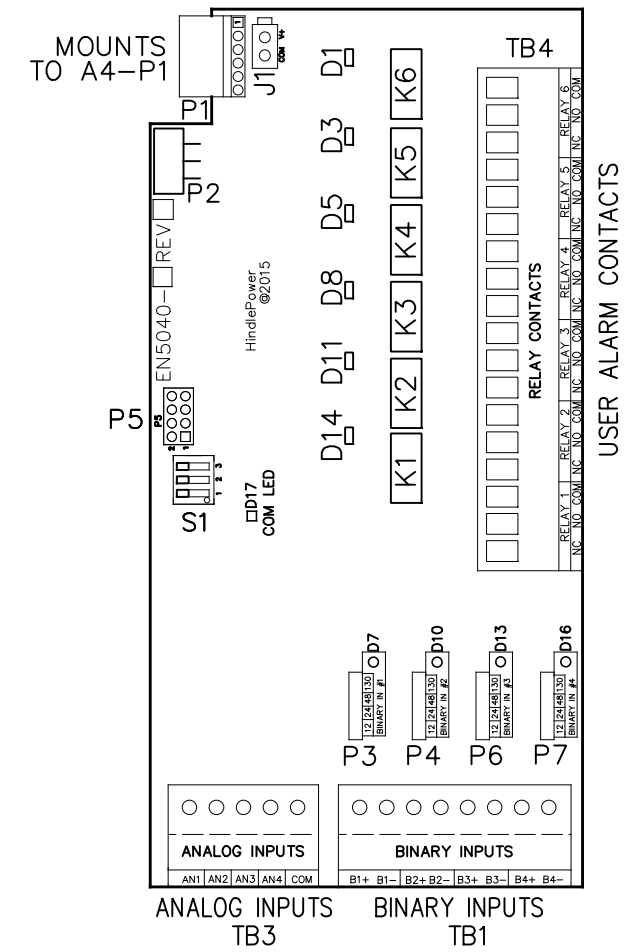
REV. DRN BY 0 KJB	CHK BY MCR	APP BY MCR	DATE 10/26/2021	DRN BY KJB	DATE 10/26/2021	<p><b>HINDLEPOWER</b> 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com</p>			
DESCRIPTION STANDARD DRAWINGS.				CHK BY MCR	DATE 10/26/2021				
ECN NO. N/A				CHK BY MCR	DATE 10/26/2021				
<p><b>TITLE</b> ATEVO 3PH BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL 3Ø WITH COMMON OPTIONS 50-100A</p>						<p>SCALE B</p>	<p>DWG No JE5339-23</p>	<p>REV 0</p>	<p>SHEET 1 OF 2</p>



POWER BOARD (A2)

MOUNTS TO A2-J105

- 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 (+)

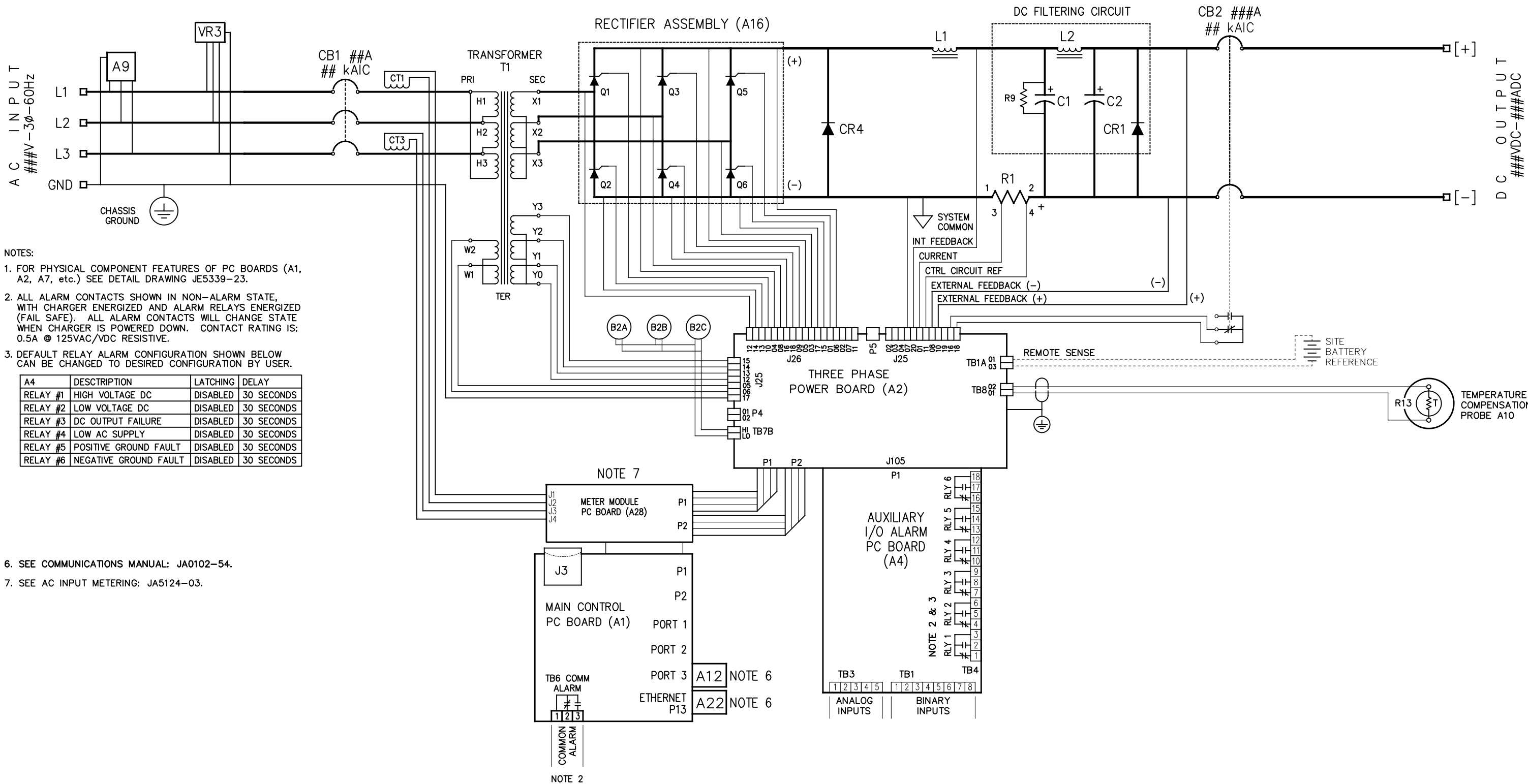


AUXILIARY I/O BOARD (A4)

- 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

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
(A2) TB1A	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) 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

DRN BY KJB	DATE: 10/26/2021		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com
CHK BY MCR	DATE: 10/26/2021		
CHK BY MCR	DATE: 10/26/2021		
TITLE		<b>ATEVO BATTERY CHARGER          CONTROL PANEL / PC BOARD DETAIL          3Ø WITH COMMON OPTIONS 50-100A</b>	
		<b>B</b> SCALE NTS	DWG No <b>JE5339-23</b>
		REV 0	SHEET 2 OF 2

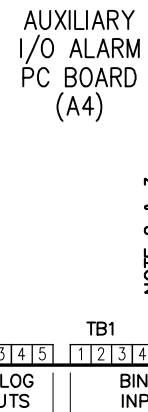
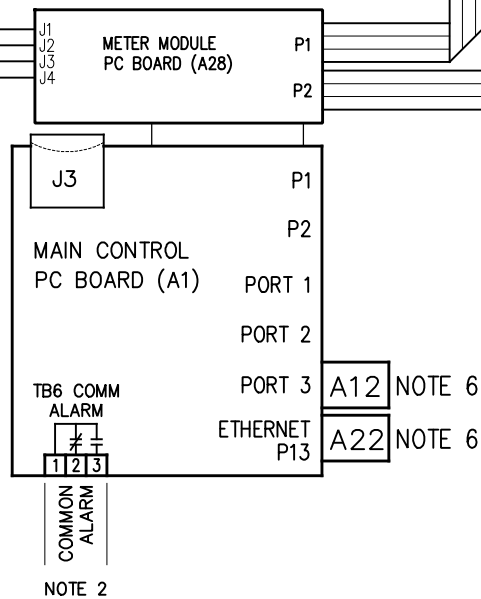


- NOTES:
- FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A2, A7, etc.) SEE DETAIL DRAWING JE5339-23.
  - ALL ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER ENERGIZED AND ALARM RELAYS ENERGIZED (FAIL SAFE). ALL ALARM CONTACTS WILL CHANGE STATE WHEN CHARGER IS POWERED DOWN. CONTACT RATING IS: 0.5A @ 125VAC/VDC RESISTIVE.
  - DEFAULT RELAY ALARM CONFIGURATION SHOWN BELOW CAN BE CHANGED TO DESIRED CONFIGURATION BY USER.

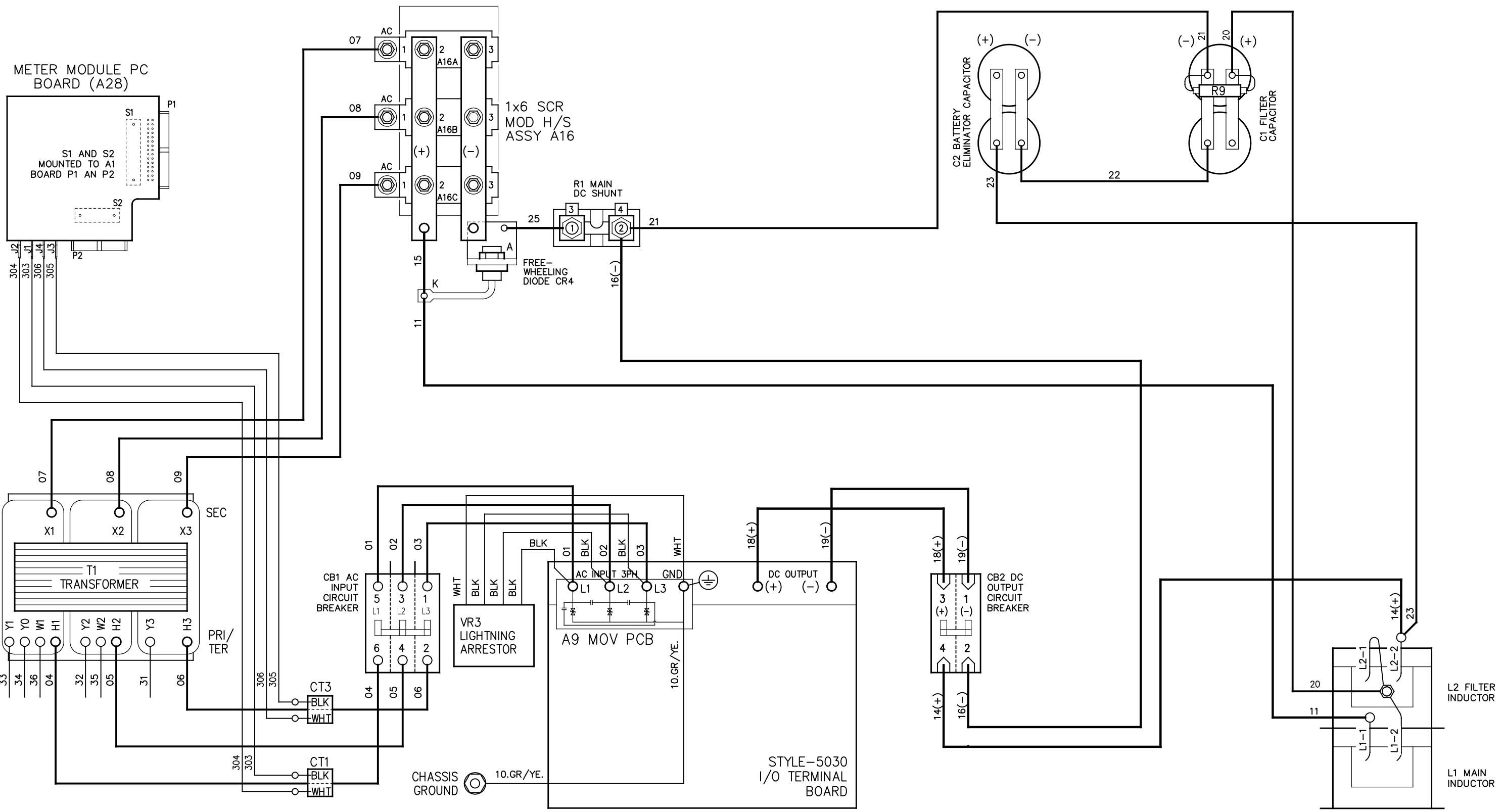
A4	DESCRIPTION	LATCHING	DELAY
RELAY #1	HIGH VOLTAGE DC	DISABLED	30 SECONDS
RELAY #2	LOW VOLTAGE DC	DISABLED	30 SECONDS
RELAY #3	DC OUTPUT FAILURE	DISABLED	30 SECONDS
RELAY #4	LOW AC SUPPLY	DISABLED	30 SECONDS
RELAY #5	POSITIVE GROUND FAULT	DISABLED	30 SECONDS
RELAY #6	NEGATIVE GROUND FAULT	DISABLED	30 SECONDS

- SEE COMMUNICATIONS MANUAL: JA0102-54.
- SEE AC INPUT METERING: JA5124-03.

NOTE 7



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DESCRIPTION STANDARD DRAWINGS.				CHK BY MCR	DATE 10/26/2021		
ECN NO. N/A				CHK BY MCR	DATE 10/26/2021	SCALE DWG No NTS JE5340-23	
						REV 0	SHEET 1 OF 1



- NOTES:
1. 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.

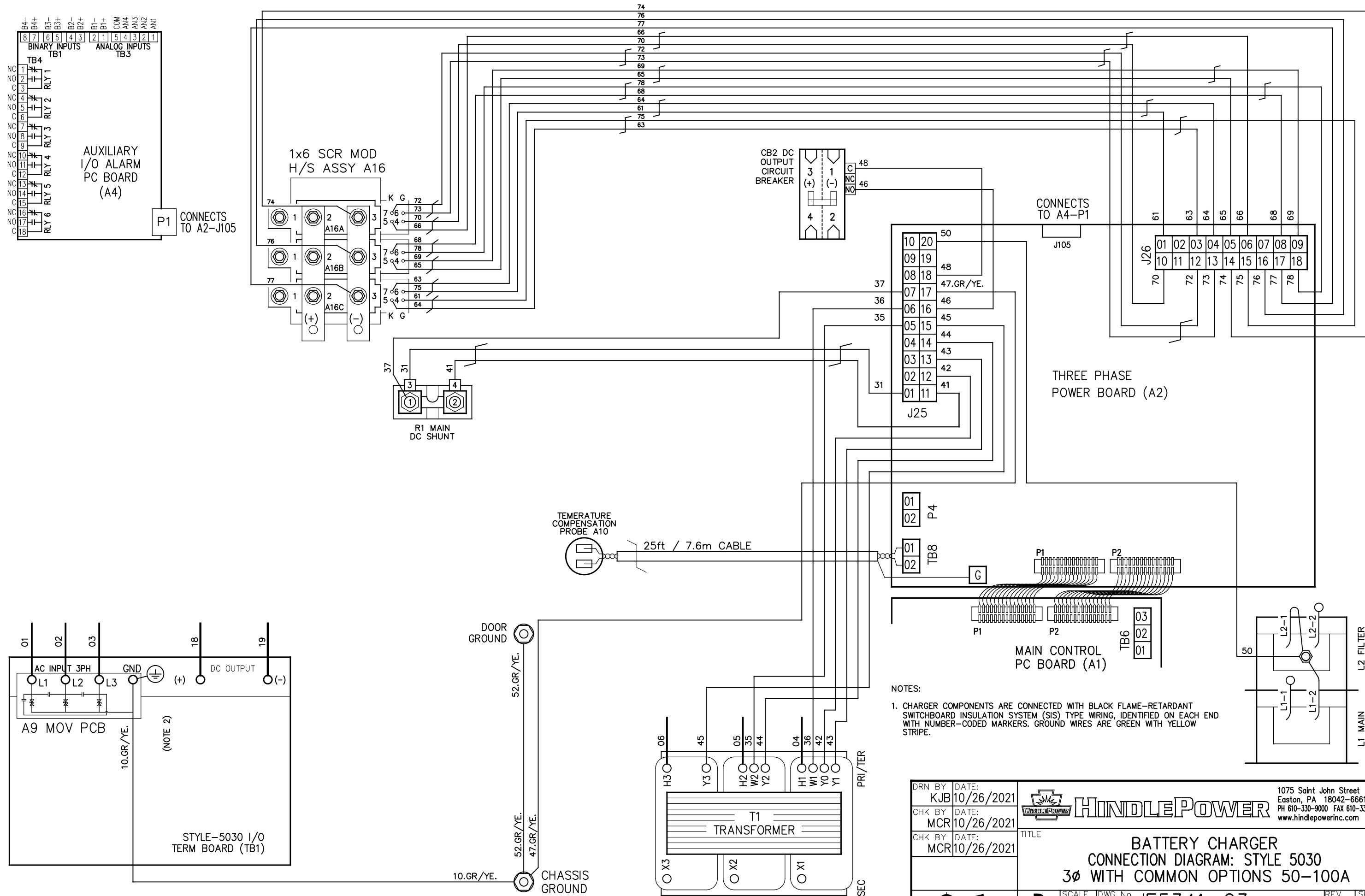
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DESCRIPTION STANDARD DRAWINGS.					CHK BY MCR	DATE 10/26/2021
ECN NO. N/A					CHK BY MCR	DATE 10/26/2021

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**HINDLEPOWER**

**BATTERY CHARGER  
CONNECTION DIAGRAM: STYLE 5030  
3Ø WITH COMMON OPTIONS 50-100A**

**B** SCALE NTS DWG No **JE5341-23** REV 0 SHEET 1 OF 2



NOTES:  
 1. 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.

DRN BY	DATE:
KJB	10/26/2021
CHK BY	DATE:
MCR	10/26/2021
CHK BY	DATE:
MCR	10/26/2021


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**BATTERY CHARGER**  
**CONNECTION DIAGRAM: STYLE 5030**  
**3Ø WITH COMMON OPTIONS 50-100A**

	<b>B</b>	SCALE	DWG No	REV	SHEET
		NTS	JE5341-23	0	2 OF 2