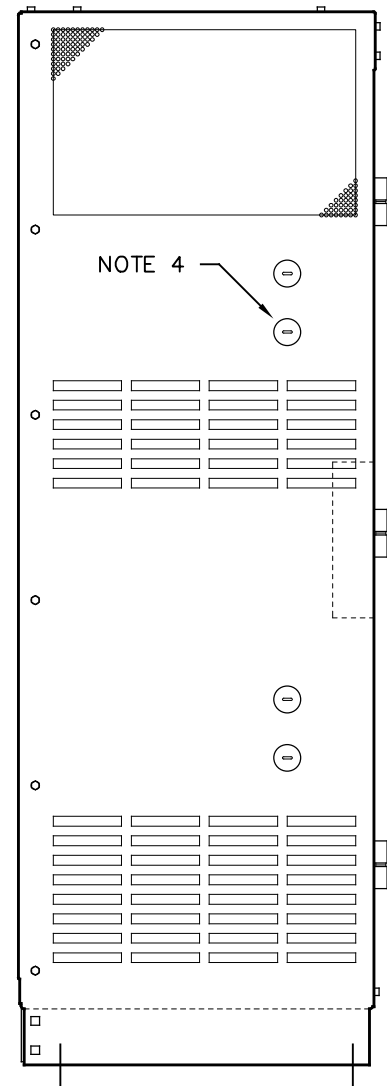
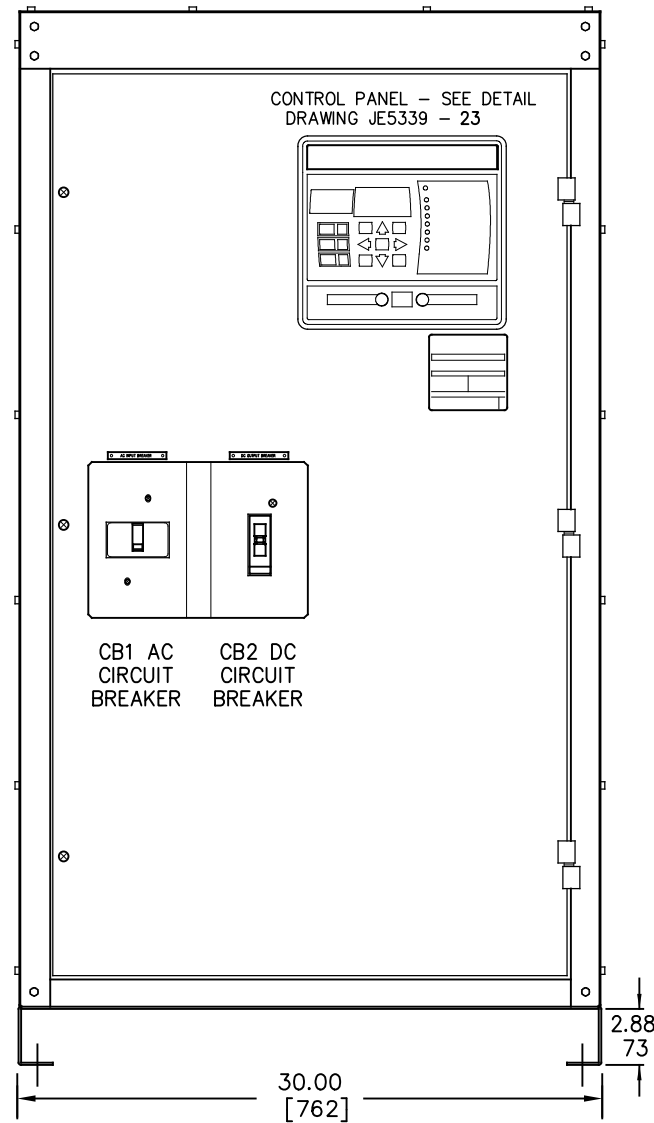


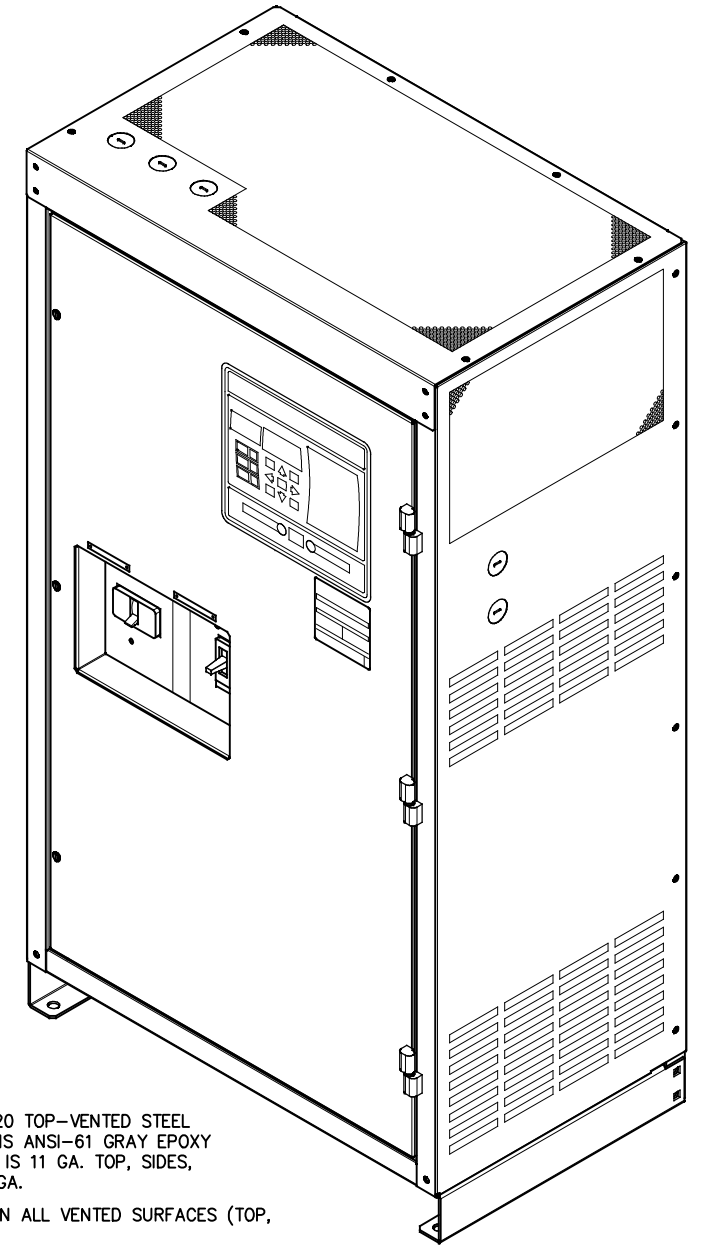
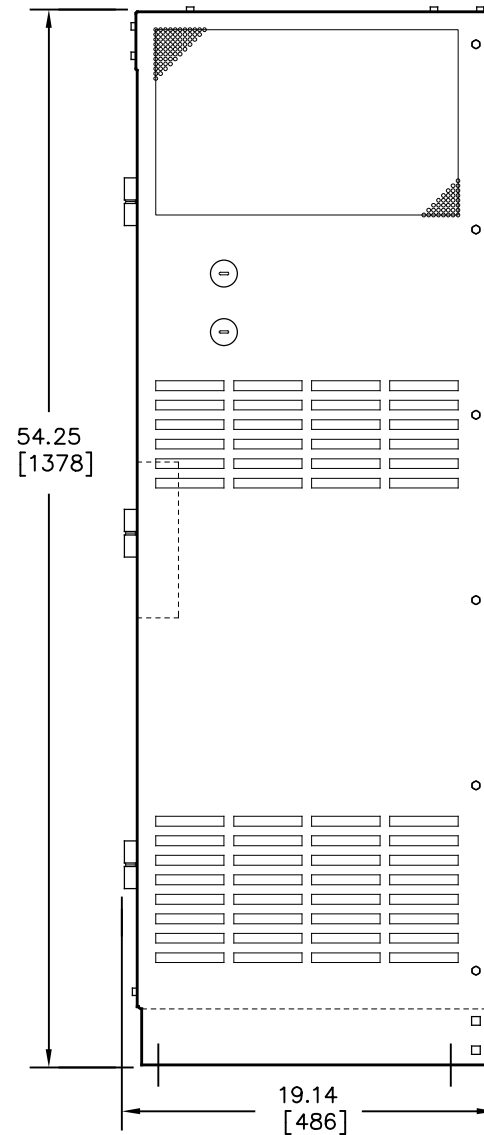
SIDE VIEW



FRONT VIEW

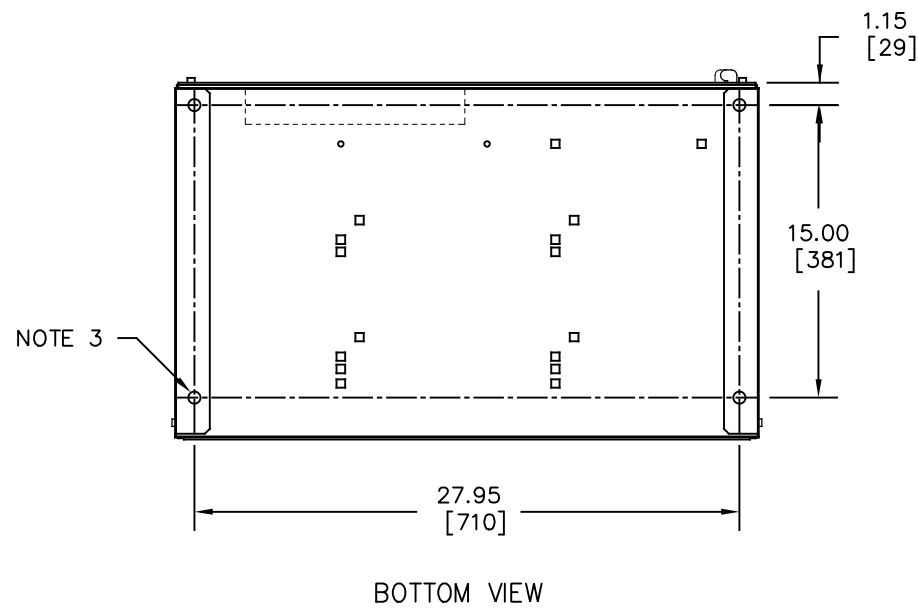


SIDE VIEW



NOTES:

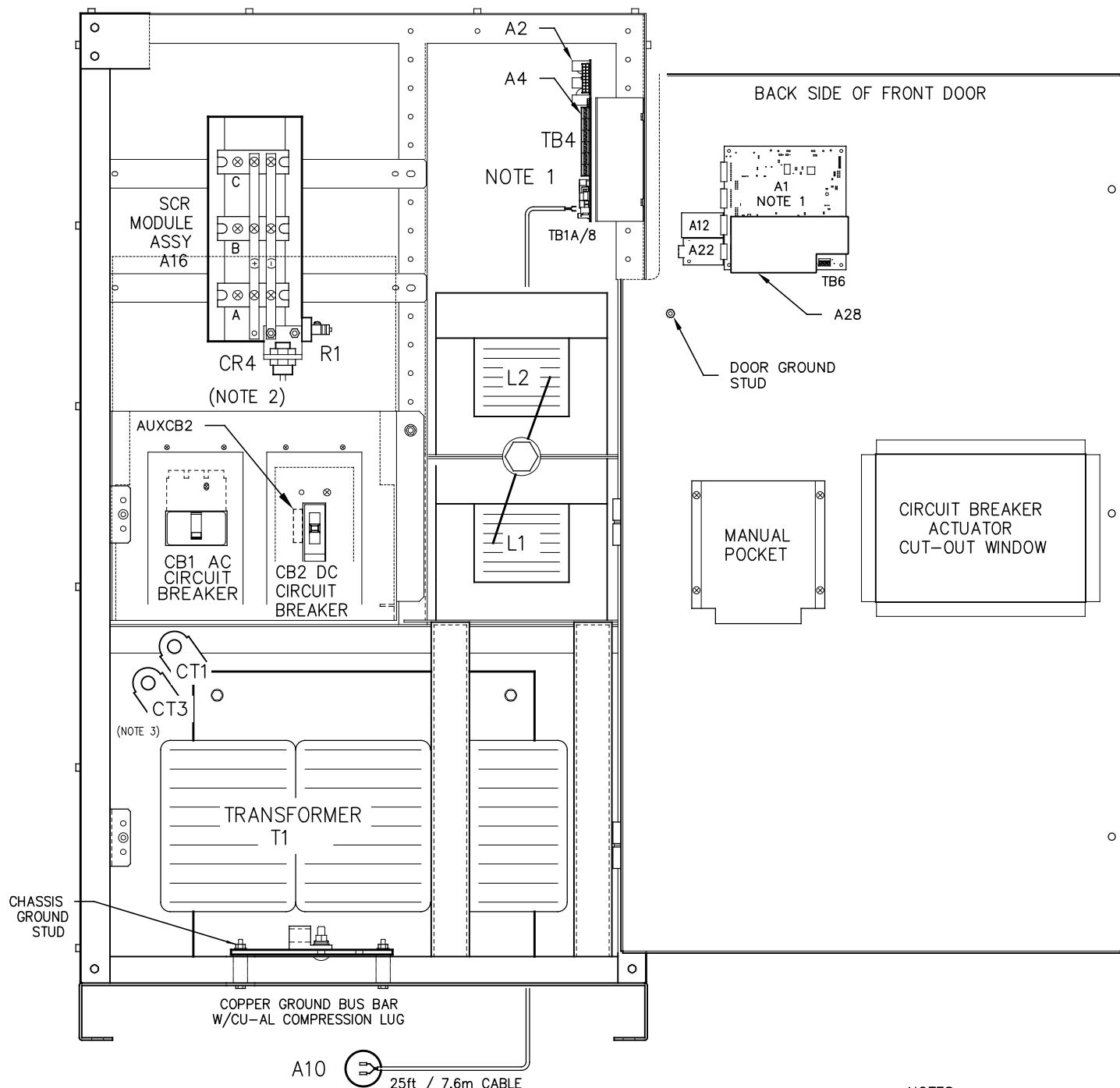
- ENCLOSURE IS A NEMA TYPE 1 / IP20 TOP-VENTED STEEL CABINET WITHOUT GASKETS. FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT. BASE IS 7 GA. FRAME IS 11 GA. TOP, SIDES, AND BACK ARE 16 GA. DOOR IS 14 GA.
- ALLOW 6in / 152mm OF FREE AIR ON ALL VENTED SURFACES (TOP, SIDES & REAR) FOR COOLING.
- FOUR (4) 0.625in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



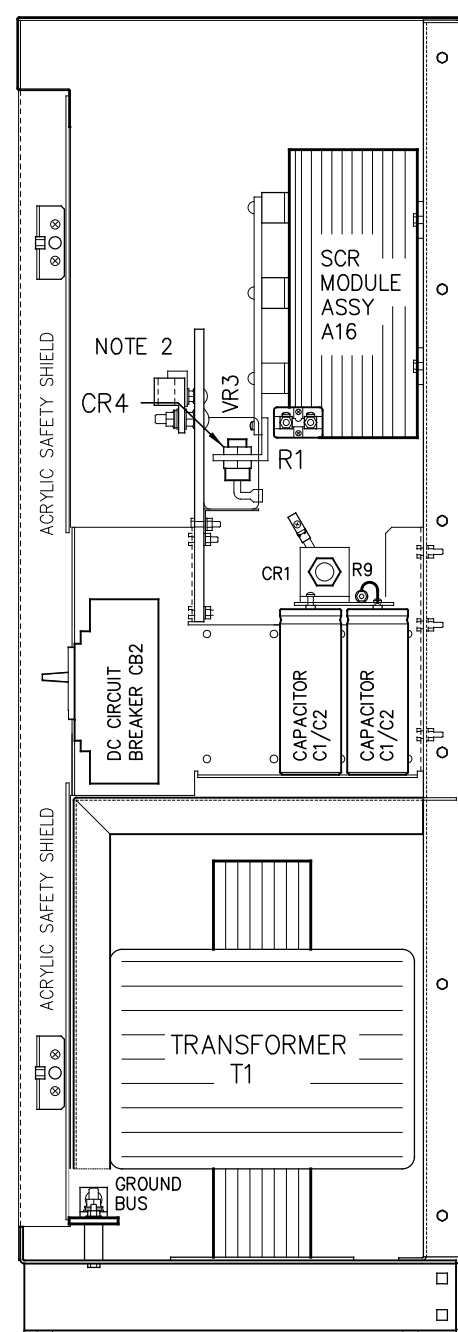
DUAL DIMENSIONS in mm

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

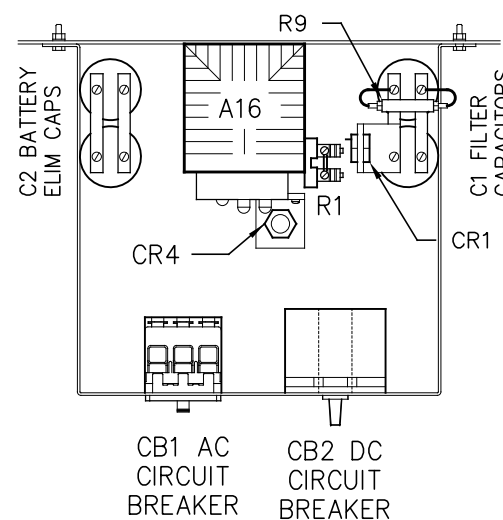
FRONT VIEW



SIDE SECTION



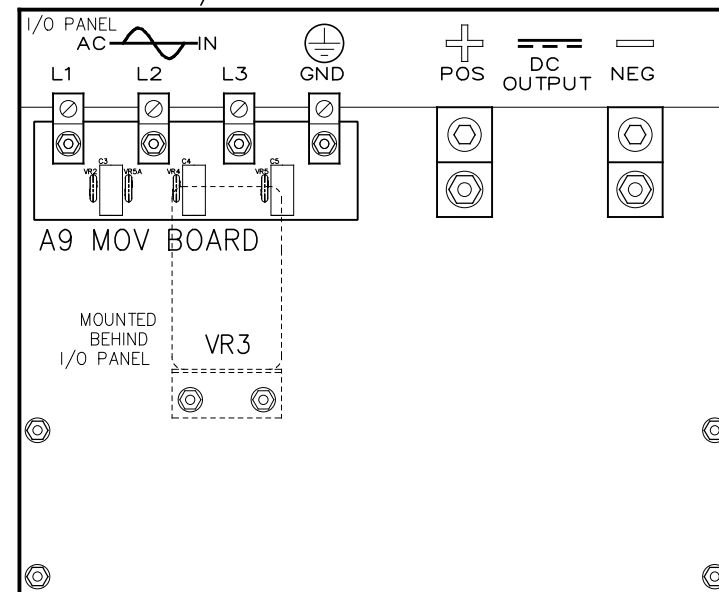
TOP VIEW OF CIRCUIT BREAKER MOUNTING BRACKET



SYM STANDARD COMPONENT DESCRIPTION	
A1	MAIN CONTROL PC BOARD
A2	THREE PHASE POWER BOARD
A9	MOV PC BOARD
A16	6-PULSE SCR MODULE HEATSINK ASSY
C1x	DC OUTPUT FILTER CAPACITOR
CB1	AC INPUT CIRCUIT BREAKER (Bx3)
CB2	DC OUTPUT CIRCUIT BREAKER (B&2)
AUXCB2	DC CKT BKR (CB2) AUXILIARY CONTACTS
CR1	POLARITY DIODE
CR4	FREE-WHEELING DIODE
L1	MAIN INDUCTOR
L2	FILTER INDUCTOR
R1	MAIN DC SHUNT, NEG(-) BUS
R9	FILTER CAP (C1) BLEED RESISTOR
T1	POWER ISOLATION TRANSFORMER
TB1A	REMOTE SENSE (A2)
TB6	SUMMARY ALARM CONTACTS
TB8	TEMPCO PROBE TERMINAL BLOCK

SYM FEATURED OPTION COMP DESCRIPTION	
A4	AUXILIARY I/O PC BOARD
A10	TEMPERATURE COMPENSATION PROBE
A12	SERIAL COMMUNICATION ADAPTER
A22	ETHERNET ADAPTER BOARD
A28	METER MODULE PC BOARD
C2	BATTERY ELIMINATOR CAPACITOR
CT#	AC LINE CURRENT XFMR (AFFIXED TO WIRE)
TB4	AUX ALARM PCB (A4) TERM BLOCK
VR3	AC INPUT LIGHTNING ARRESTOR

I/O TERMINAL BOARD DETAIL



NOTES:

- FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A2, A4, A12, A22, etc.) SEE DRAWING JE5339-23
- I/O PANEL TERMINAL BOARD NOT SHOWN FOR CLARITY OF VIEW. SEE DETAIL TO RIGHT.
- CURRENT TRANSFORMER AFFIXED TO LINE 1 AND LINE 3 BETWEEN AC INPUT BREAKER (CB1) AND POWER ISOLATION TRANSFORMER (T1). (SEE JA5124-23).

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
I/O(+/-)	POS/NEG DC OUTPUT TERMS - CU-ALUMINUM COMPRESSION LUG	#6 AWG-350 MCM
(2) I/O-GND	USER GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14 AWG-350 MCM
I/O-L1/L2/L3	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

REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/26/2021	DRN BY KJB	DATE 10/26/2021
DESCRIPTION STANDARD DRAWINGS.					CHK BY MCR	DATE 10/26/2021
ECN NO. N/A					CHK BY MCR	DATE 10/26/2021

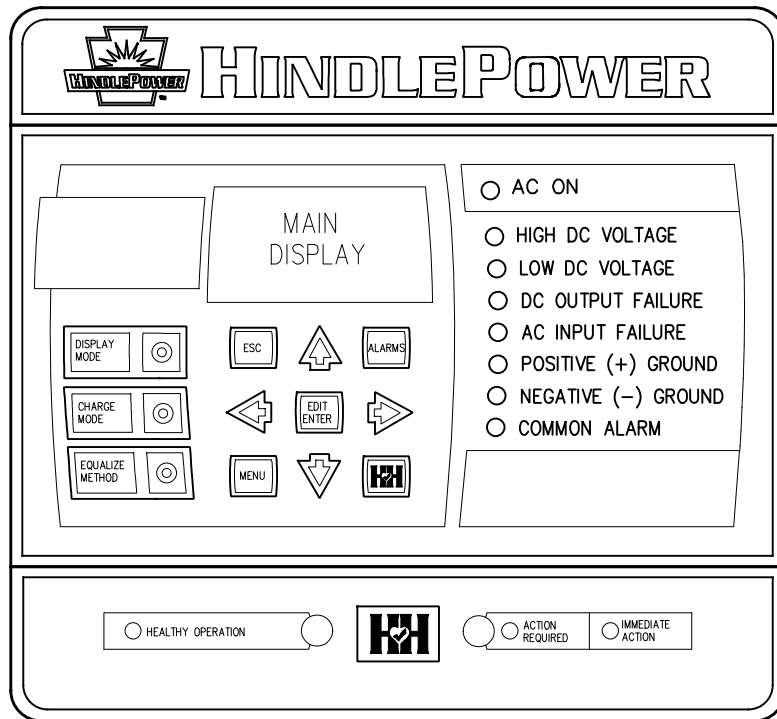
1075 Saint John Street
Easton, PA 18042-6661
PH 610-330-9000 FAX 610-330-8510
www.hindlepowerinc.com

HINDLEPOWER

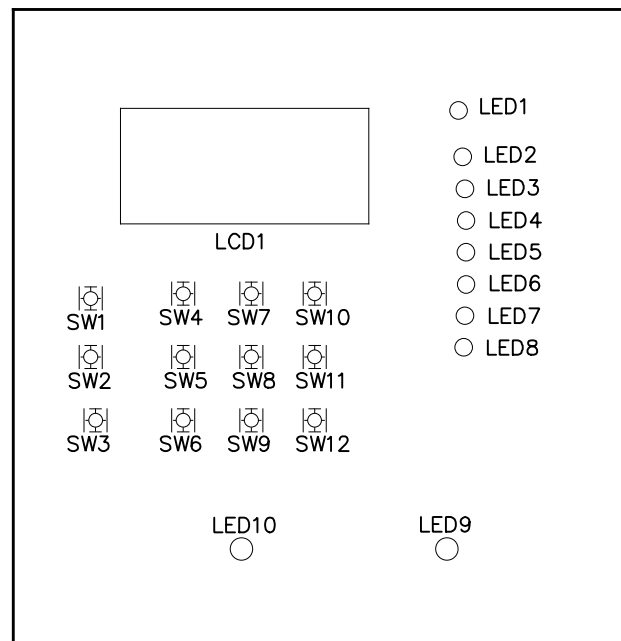
TITLE
ATEVO 3PH BATTERY CHARGER
INTERNAL COMPONENT LAYOUT: STYLE-5030
3Ø WITH COMMON OPTIONS 50-100A

B SCALE NTS DWG No JE5338-23

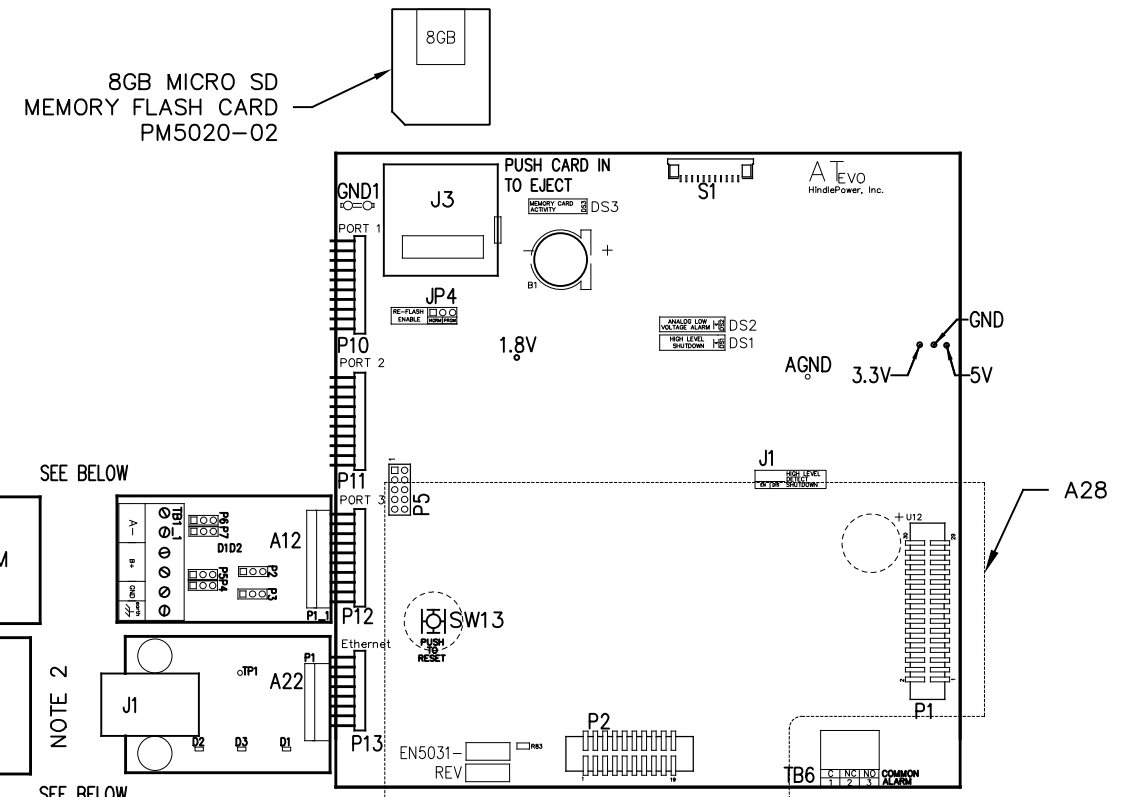
REV 0A SHEET 1 OF 1



CONTROL PANEL
(PART No. FK5047-00)



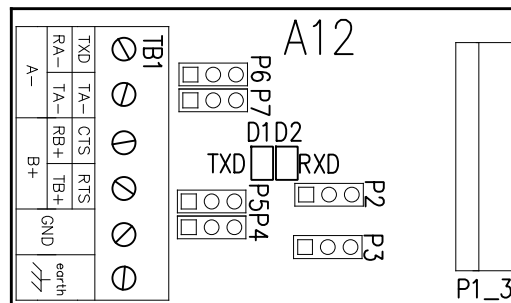
MAIN CONTROL PC BOARD (A1)
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED



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.

SERIAL COMMUNICATION ADAPTER (A12)



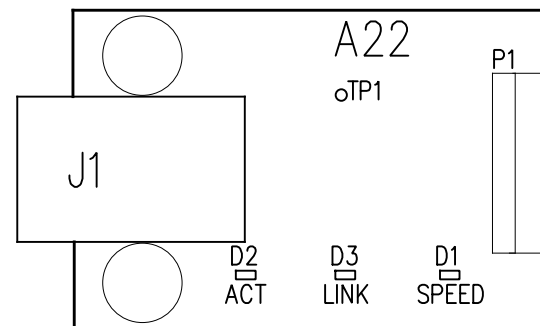
CONNECTORS (A12):
P1 - MAIN CONTROL BOARD

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)



NOTE 2

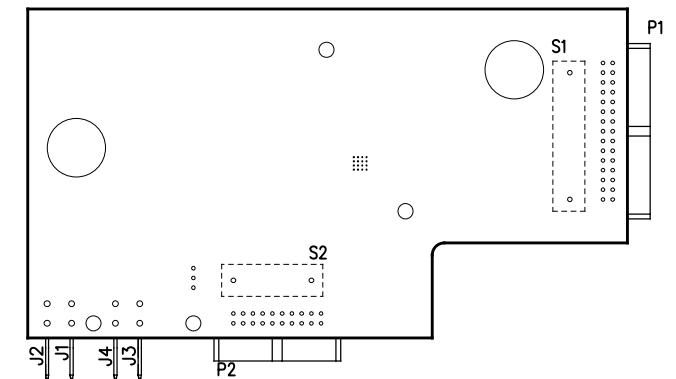
2. ETHERNET ADAPTER (A22) SUPPORTS MULTIPLE PROTOCOLS (DNP3 AND MODBUS) SIMULTANEOUSLY. SEE JA0102-54.

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:

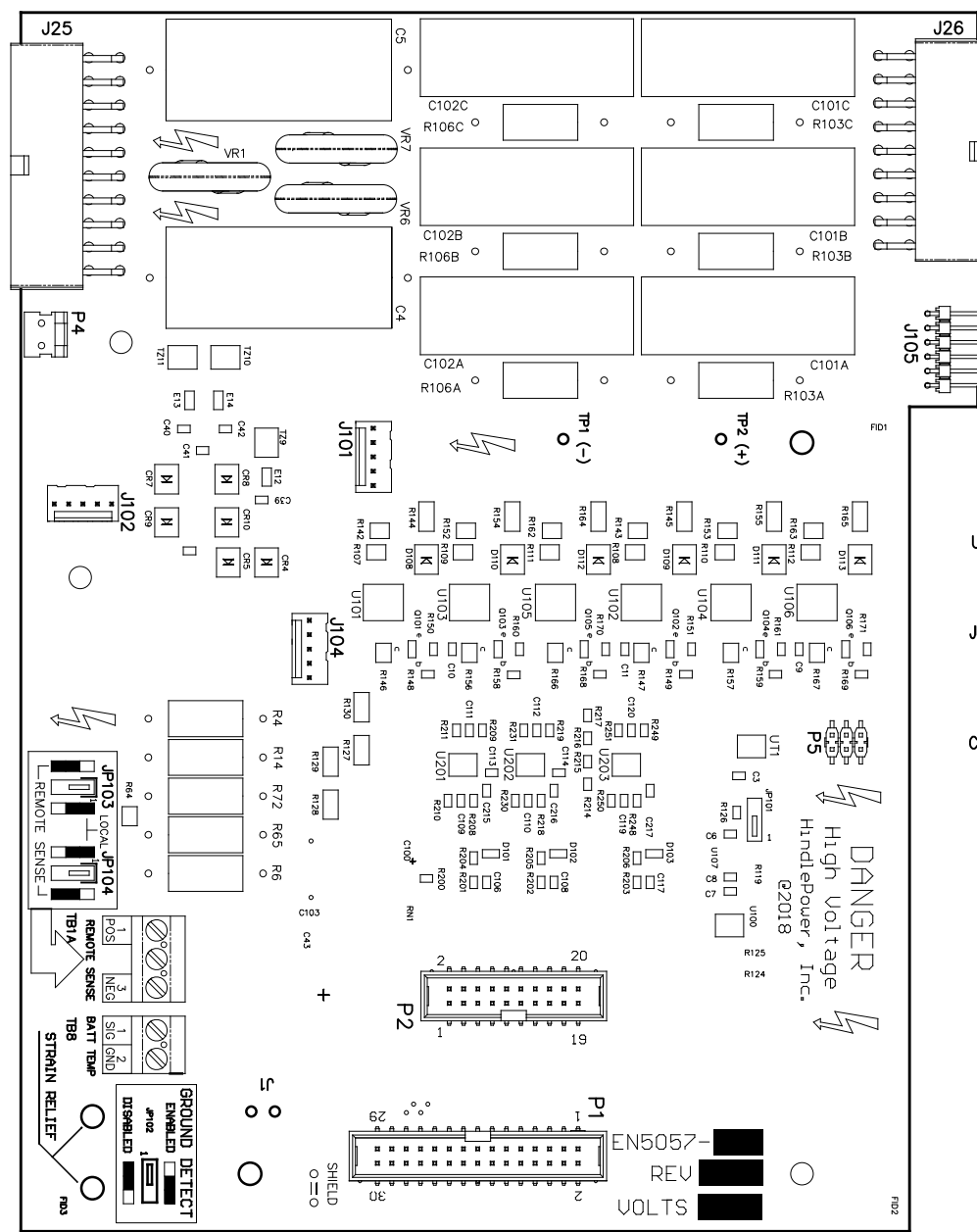
- S1 - DISPLAY BUTTON
- S2 - CHARGE MODE BUTTON
- S3 - EQUALIZE METHOD BUTTON
- S4 - ESCAPE (ESC) BUTTON
- S5 - LEFT ARROW BUTTON
- S6 - MENU BUTTON
- S7 - UP ARROW BUTTON
- S8 - EDIT / ENTER BUTTON
- S9 - DOWN ARROW BUTTON
- S10 - ALARM BUTTON
- S11 - RIGHT ARROW BUTTON
- S12 - HINDLE HEALTH (HHS) BUTTON
- 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

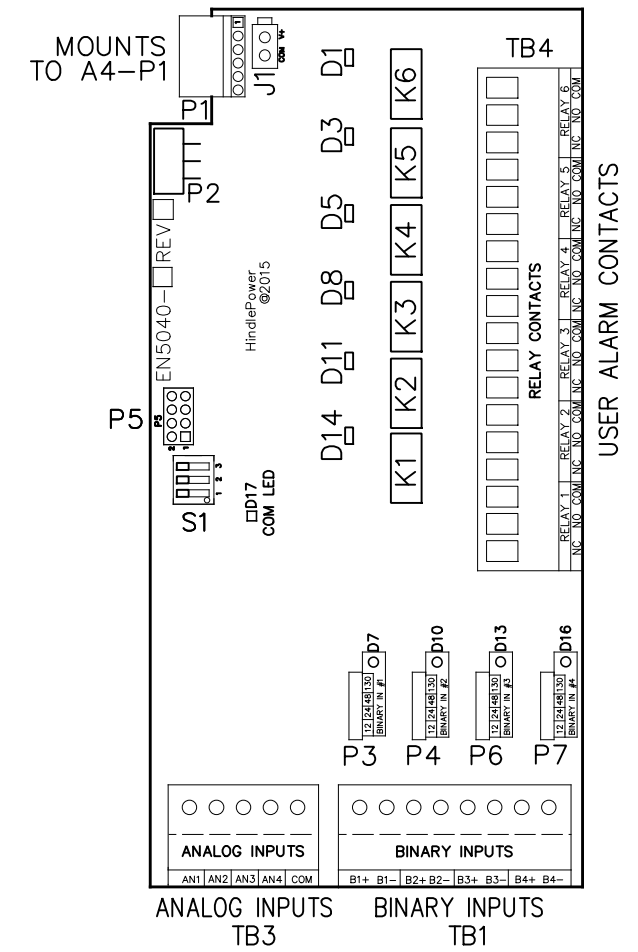
REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/26/2021	DRN BY KJB	DATE 10/26/2021	<p>HINDLEPOWER</p> <p>1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com</p>
DESCRIPTION: STANDARD DRAWINGS.					CHK BY MCR	DATE 10/26/2021	
ECN NO. N/A					CHK BY MCR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



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 (+)

POWER BOARD (A2)

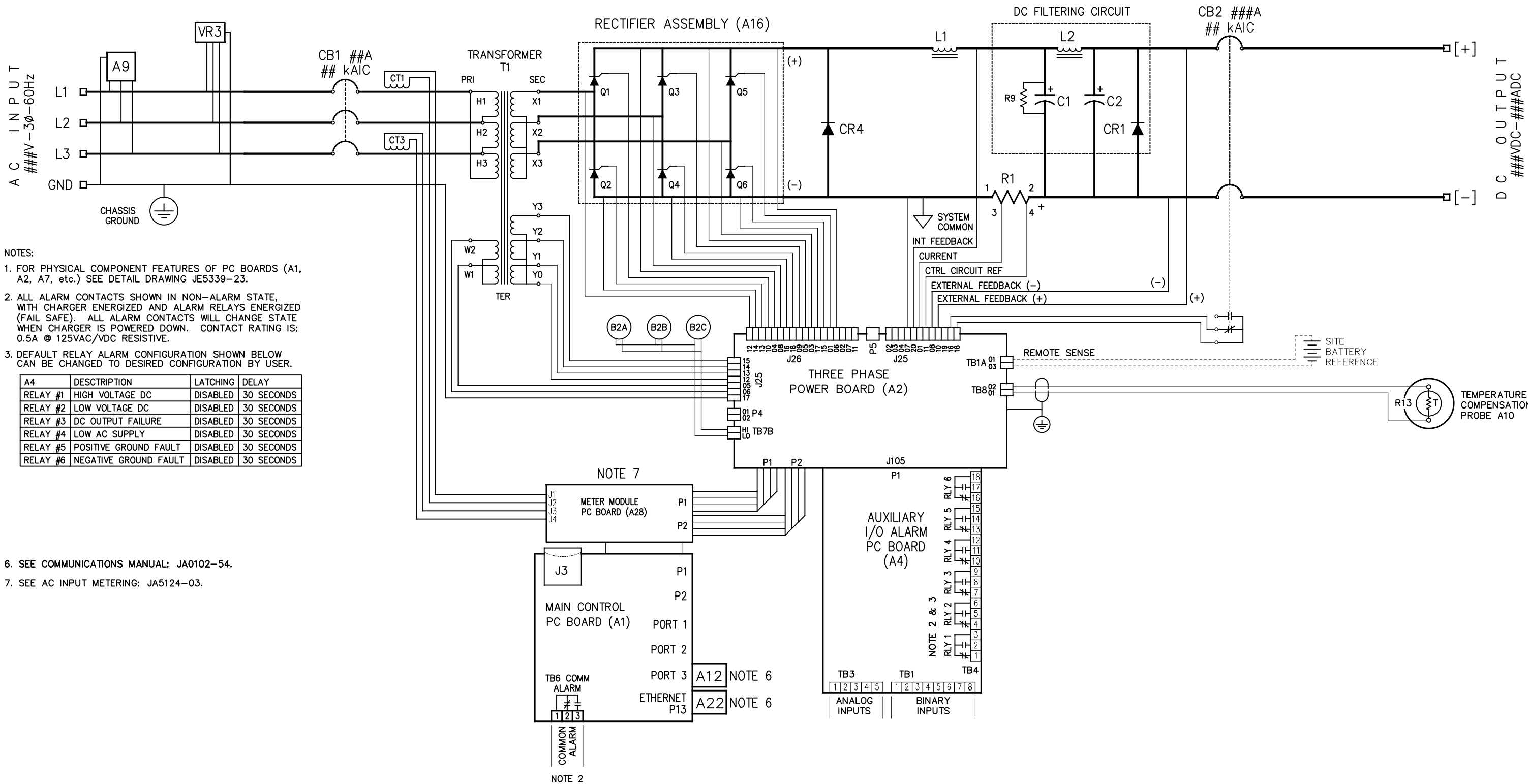


AUXILIARY I/O BOARD (A4)

- 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		ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL 3Ø WITH COMMON OPTIONS 50-100A	
		B SCALE NTS	DWG No JE5339-23
		REV 0	SHEET 2 OF 2

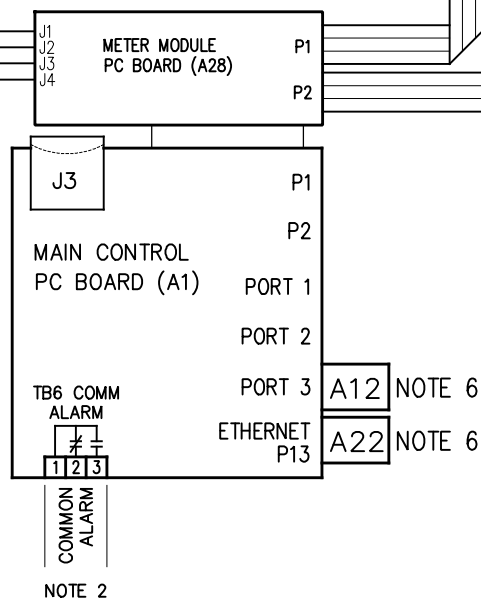


- NOTES:
- FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A2, A7, etc.) SEE DETAIL DRAWING JE5339-23.
 - ALL ALARM CONTACTS SHOWN IN NON-ALARM STATE, WITH CHARGER ENERGIZED AND ALARM RELAYS ENERGIZED (FAIL SAFE). ALL ALARM CONTACTS WILL CHANGE STATE WHEN CHARGER IS POWERED DOWN. CONTACT RATING IS: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

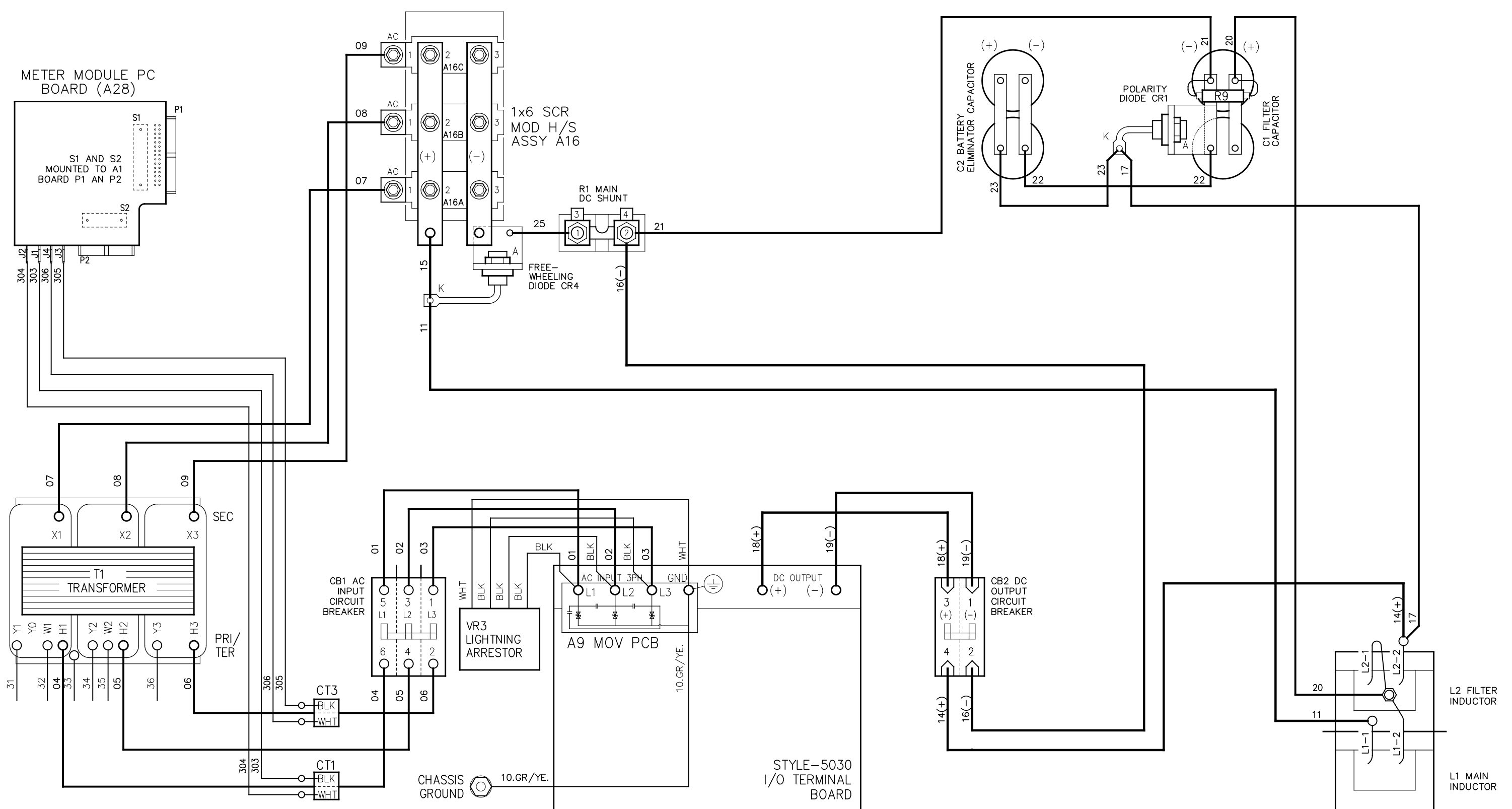
A4	DESCRIPTION	LATCHING	DELAY
RELAY #1	HIGH VOLTAGE DC	DISABLED	30 SECONDS
RELAY #2	LOW VOLTAGE DC	DISABLED	30 SECONDS
RELAY #3	DC OUTPUT FAILURE	DISABLED	30 SECONDS
RELAY #4	LOW AC SUPPLY	DISABLED	30 SECONDS
RELAY #5	POSITIVE GROUND FAULT	DISABLED	30 SECONDS
RELAY #6	NEGATIVE GROUND FAULT	DISABLED	30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

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

NOTE 7

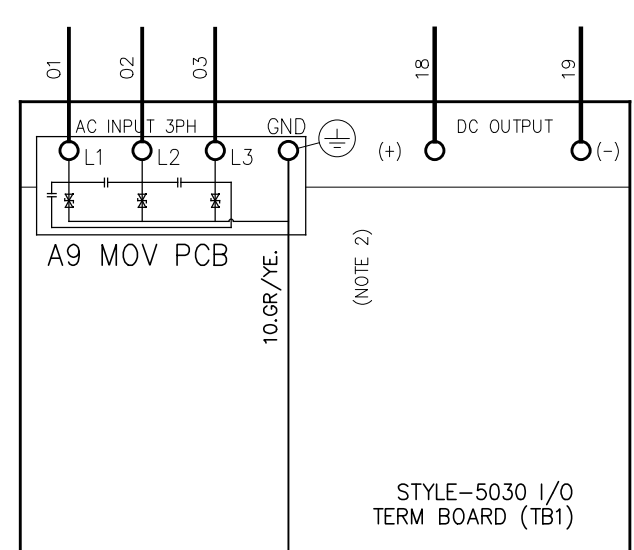
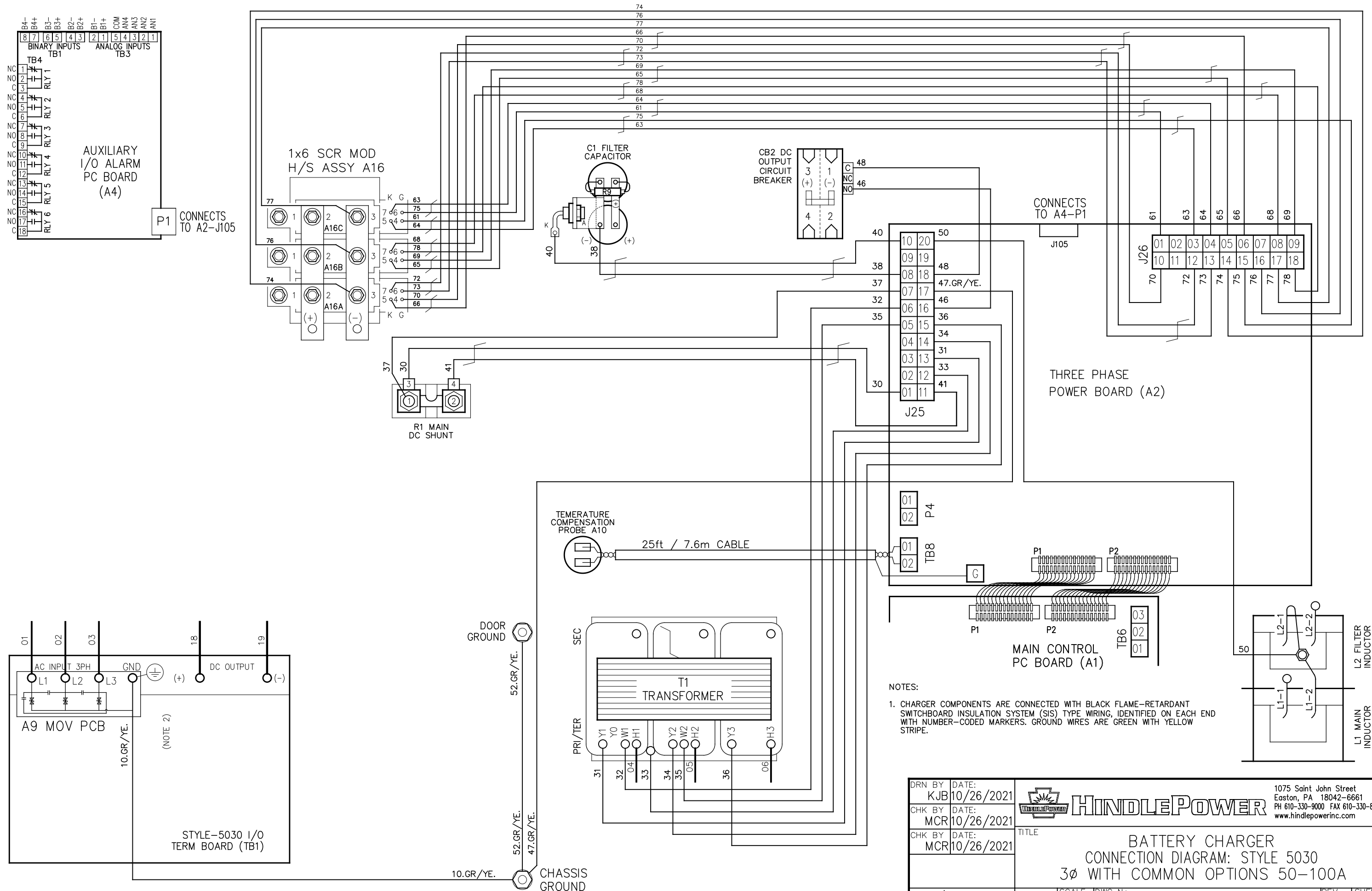


REV. DRN BY 0 KJB	CHK BY MCR	APP BY MCR	DATE 10/26/2021	DRN BY KJB	DATE 10/26/2021
DESCRIPTION STANDARD DRAWINGS.				CHK BY MCR	DATE 10/26/2021
ECN NO. N/A				CHK BY MCR	DATE 10/26/2021
HINDLEPOWER 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com			TITLE BATTERY CHARGER SCHEMATIC: STYLE 5030 3Ø WITH COMMON OPTIONS 50-100A		
			SCALE NTS	DWG No JE5340-23	REV 0



- 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.

REV. DRN BY 2 KJB	CHK BY MCR	APP BY MCR	DATE 9/11/2023	DRN BY KJB	DATE: 10/26/2021	HINDLEPOWER 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com
DESCRIPTION REVISED T1 SINGAL WIRING ORDER.				CHK BY MCR	DATE: 10/26/2021	
ECN NO. N/A				CHK BY MCR	DATE: 10/26/2021	TITLE BATTERY CHARGER CONNECTION DIAGRAM: STYLE 5030 3Ø WITH COMMON OPTIONS 50-100A
						SCALE NTS
				DWG No JE5341-23		REV 2
						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 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		BATTERY CHARGER CONNECTION DIAGRAM: STYLE 5030 3Ø WITH COMMON OPTIONS 50-100A		
CHK BY MCR	DATE: 10/26/2021				
TITLE B		SCALE NTS	DWG No JE5341-23	REV 2	SHEET 2 OF 2