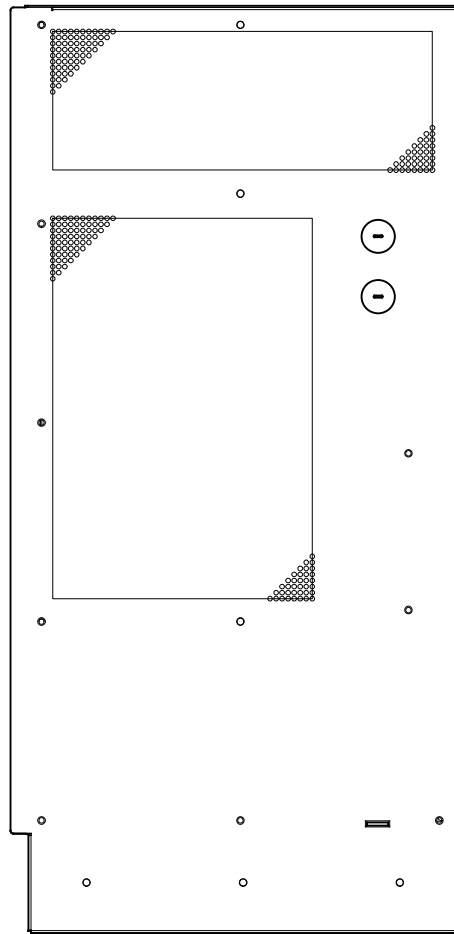
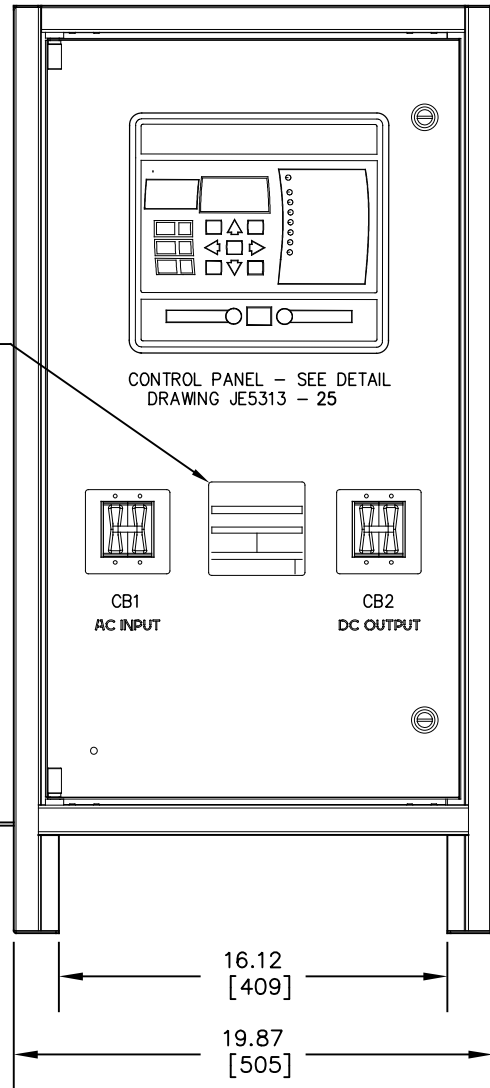


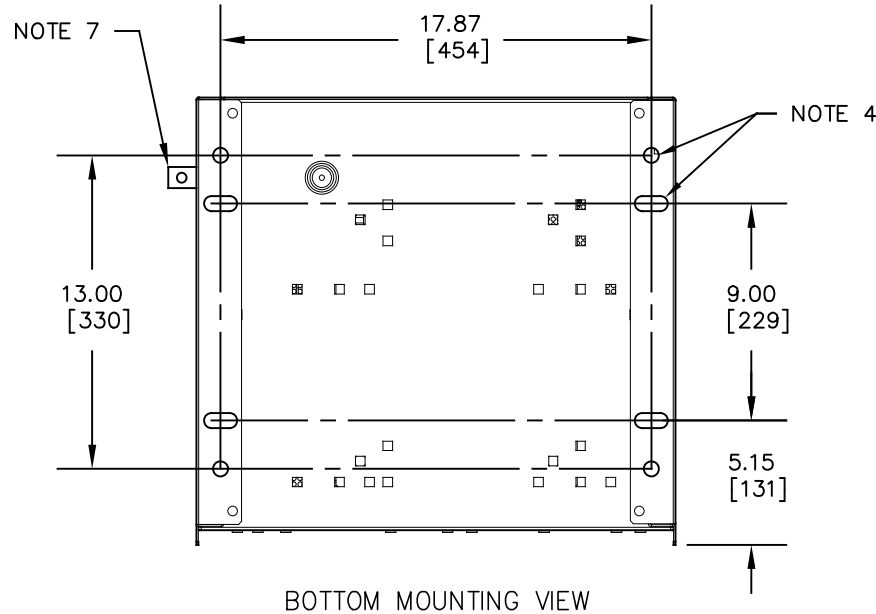
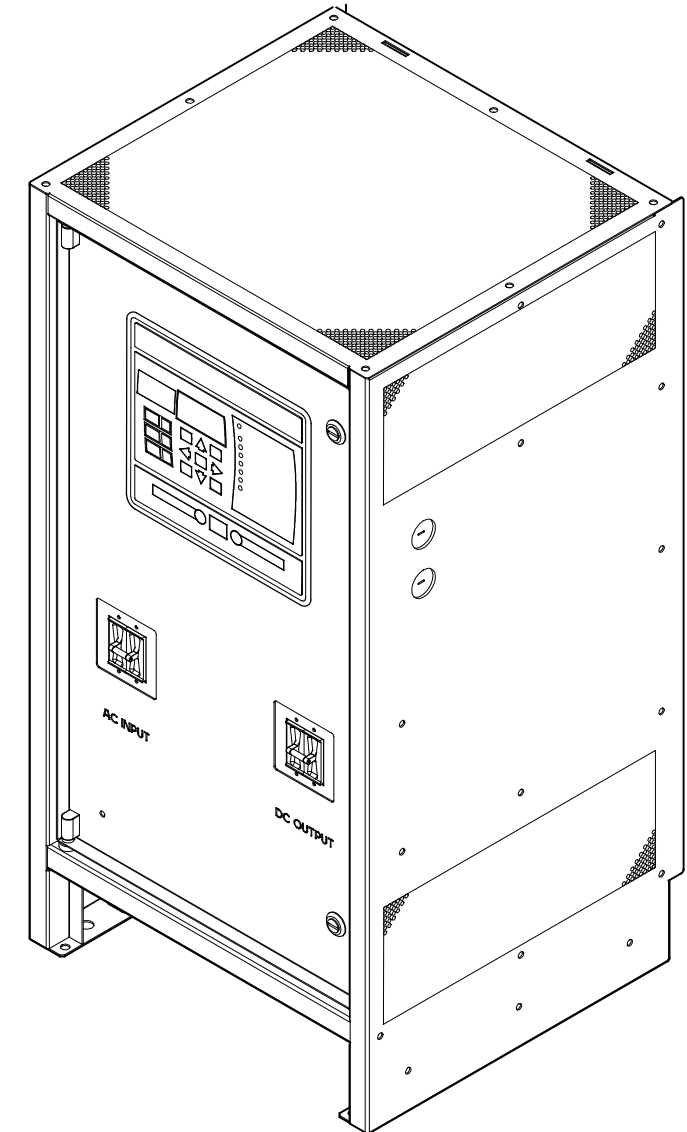
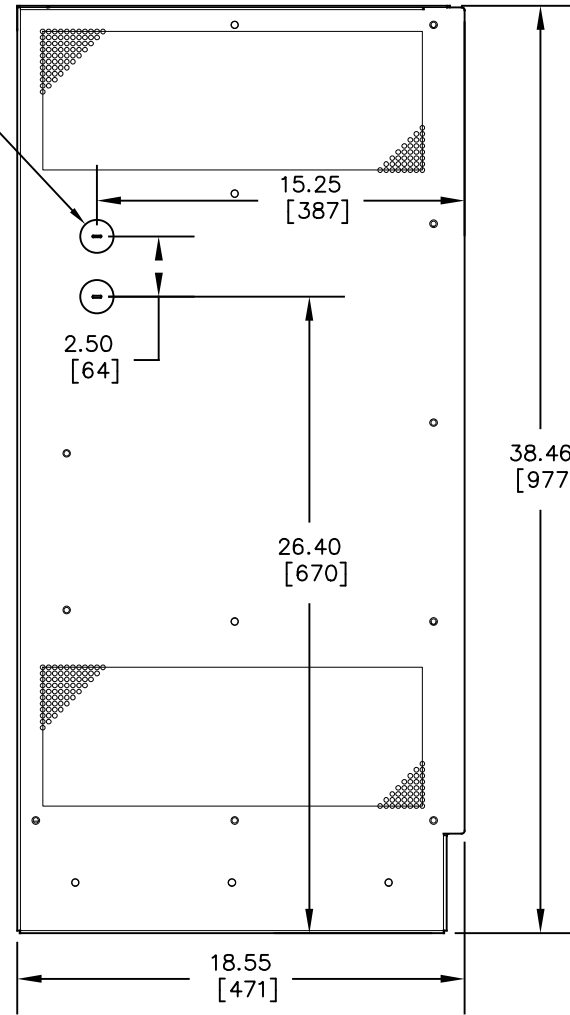
LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW

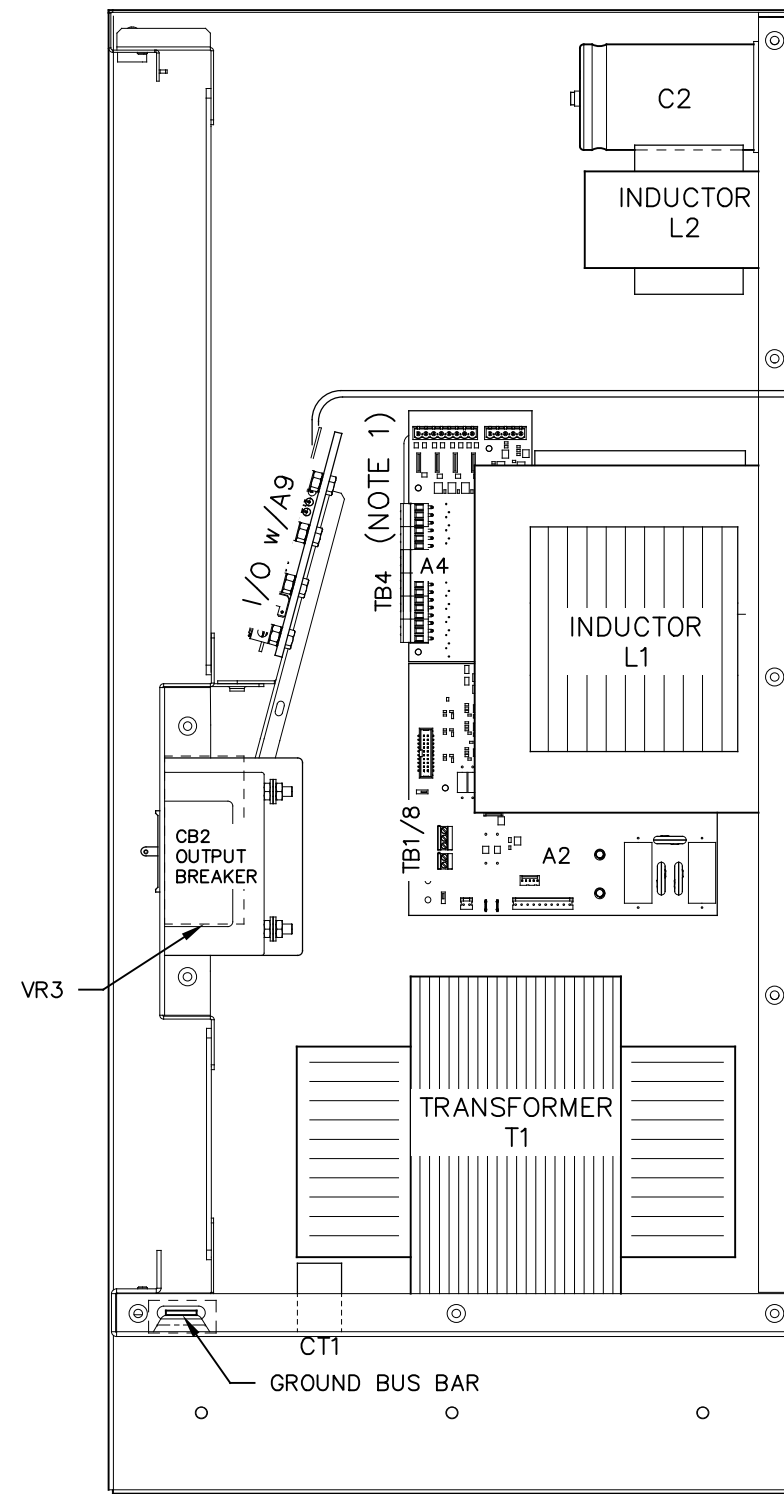
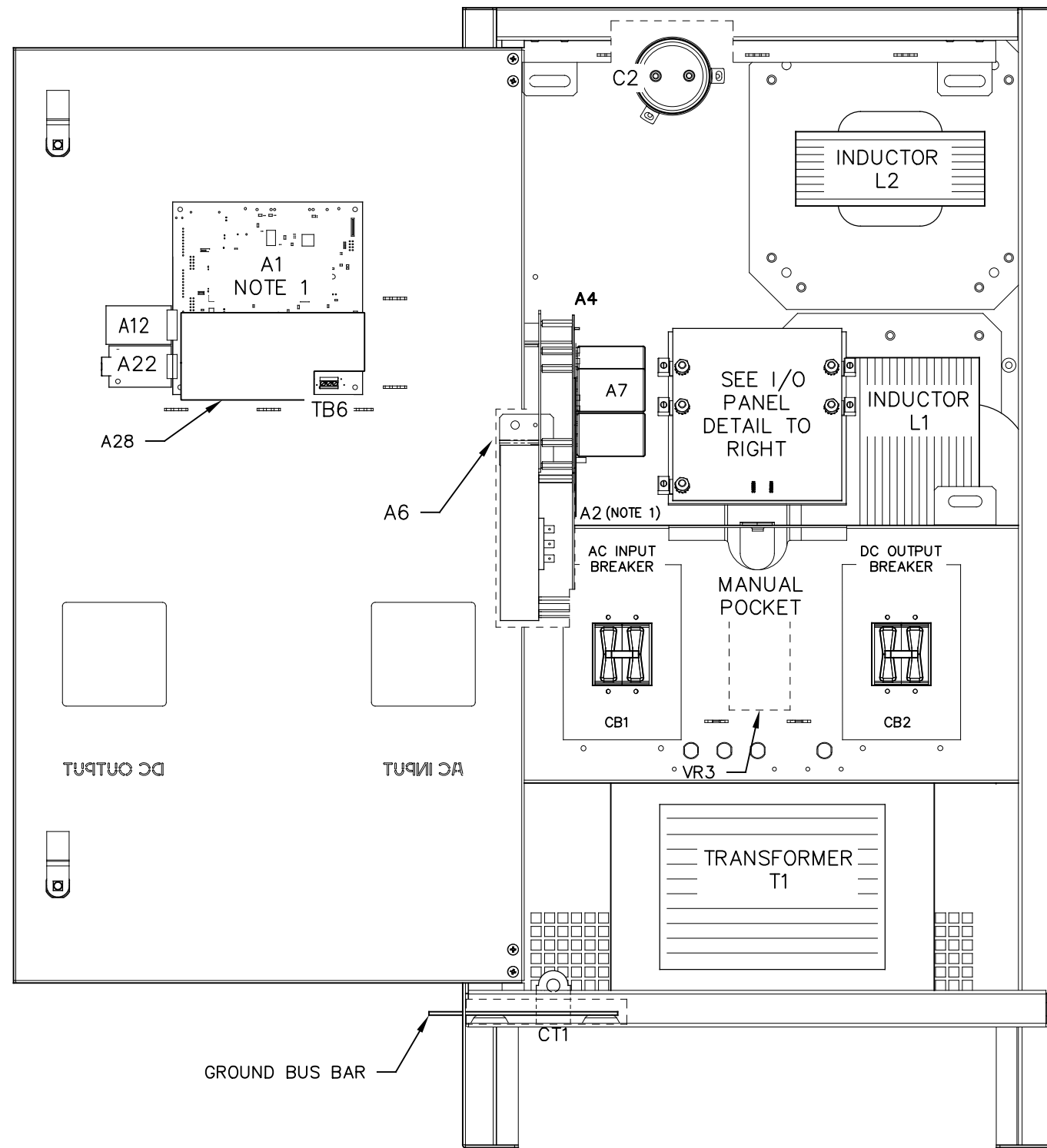


NOTES:

- 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 DECAL (WITH CHARGER RATINGS) APPLIED TO 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
- GROUND BUS BAR WITH 0.41 in / 10.41 mm DIA HOLE.

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	<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: 10/29/2021	
ECN NO. N/A					APP BY MCR	DATE: 10/29/2021	
TITLE ATEVO BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5070 ENCL 1Ø WITH COMMON OPTIONS 16-25A							<p>SCALE DWG No B NTS JE5309-25</p>
REV 0							SHEET 1 OF 1



TO BE PLACED NEAR BATTERY CELL

A10

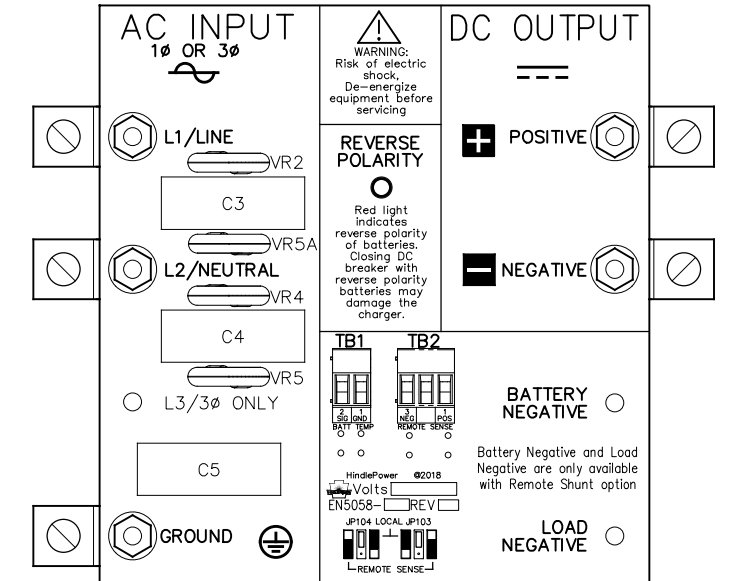
25ft / 7.6m CABLE

SYM STANDARD COMPONENT DESCRIPTION

A1	MAIN CONTROL PC BOARD
A2	POWER BOARD
A6	RECTIFIER ASSEMBLY
A9	MOV PC BOARD
A7	FILTER BOARD (C1x/R9x)
CB1	AC INPUT CIRCUIT BREAKER (CD2)
CB2	DC OUTPUT CIRCUIT BREAKER (CD2)
AUXCB2	DC CKT BKR (CB2) AUXILIARY CONTACTS
L1	MAIN INDUCTOR
L2	FILTER INDUCTOR
T1	POWER TRANSFORMER

A4	AUXILIARY I/O BOARD
A10	TEMPERATURE COMPENSATION PROBE
A12	SERIAL COMMUNICATION ADAPTER
A22	ETHERNET ADAPTER
A28	METER MODULE PC BOARD
CT1	CURRENT TRANSFORMER
VR3	AC INPUT LIGHTNING ARRESTOR
C2	BATTERY ELIMINATOR FILTER CAP

ST-5070 INPUT-OUTPUT 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
GND BUS	COPPER GROUND BUS - 0.41 in / 10.41 mm DIA HOLE	0.38in RING LUG
(A2) TB1	POS/NEG REMOTE SENSE TERMS (A2) - SOLDERLESS COMP SCREW	#22-14 AWG
(A2) TB8	TEMPCO PROBE (A10) TERMINAL BLOCK - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A4) TB4	AUX I/O RELAY CONTACTS (A4) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
(A1) TB6	SUMMARY ALARM TERMINAL BLOCK (A1) - SOLDERLESS COMPRESSION SCREW	#22-14 AWG

NOTES:
1. FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A2, etc.) SEE DRAWING JE5313 - 25.

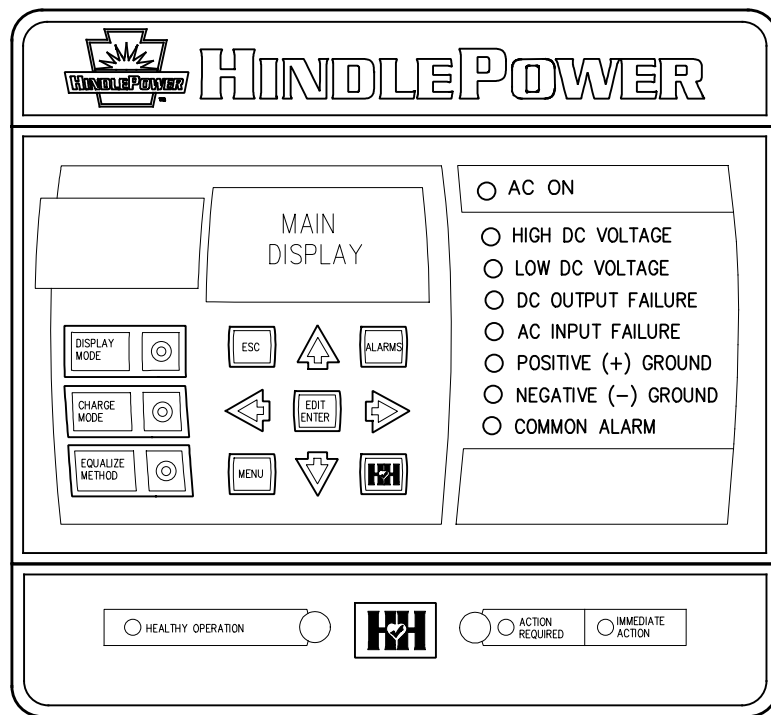
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ECN NO. N/A					APP BY MCR	DATE: 10/29/2021

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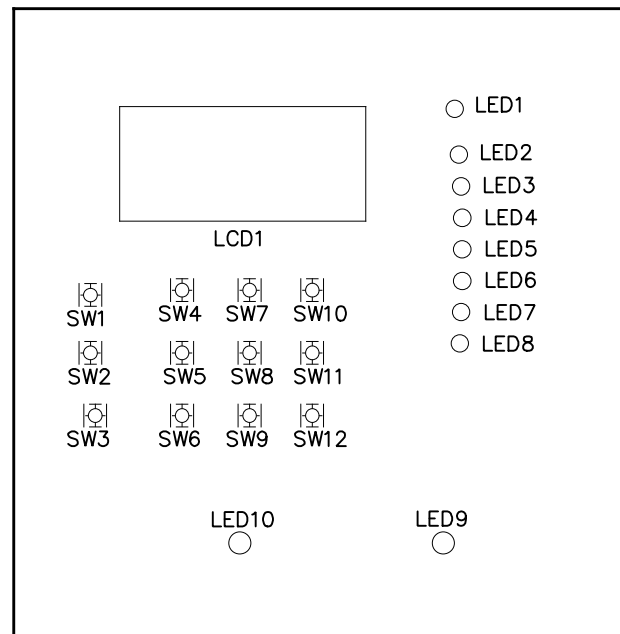
TITLE: **ATEVO BATTERY CHARGER**
INTERNAL COMPONENT LAYOUT: STYLE-5070
1Ø WITH COMMON OPTIONS 16-25A

SCALE: **B** DWG No: **JE5310-25** REV: 0 SHEET: 1 OF 1

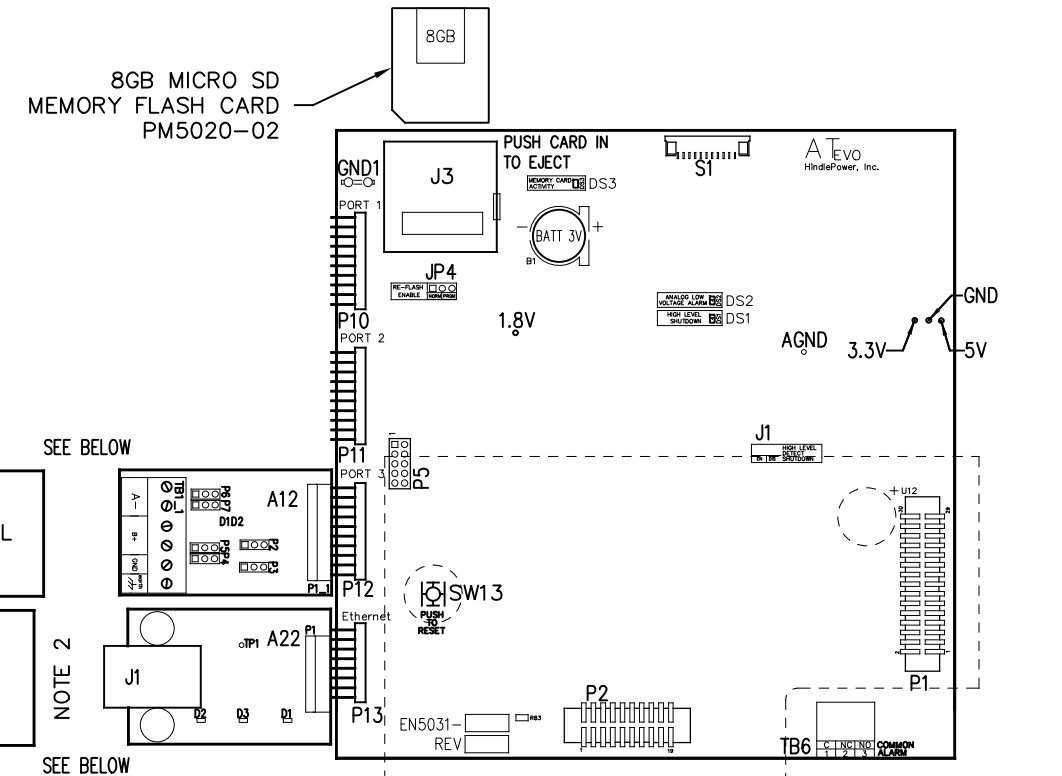


CONTROL PANEL
(PART No. FK5047-00)

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.

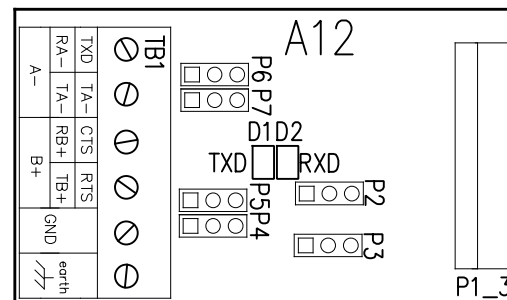


MAIN CONTROL PC BOARD (A1)
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED



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

SERIAL COMMUNICATION ADAPTER (A12)



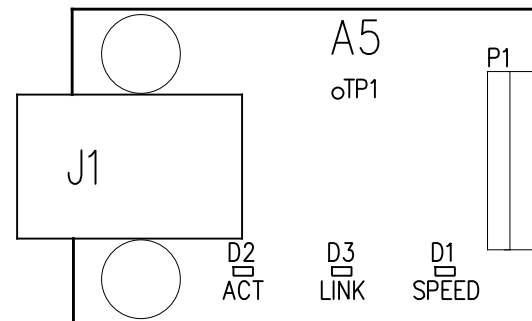
CONNECTORS (A12):
P1 - MAIN CONTROL BOARD

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)



2. SERIAL ADAPTER (A12) SUPPORTS MULTIPLE PROTOCOLS (DNP3 AND MODBUS) SIMULTANEOUSLY. SEE JA0102-54.

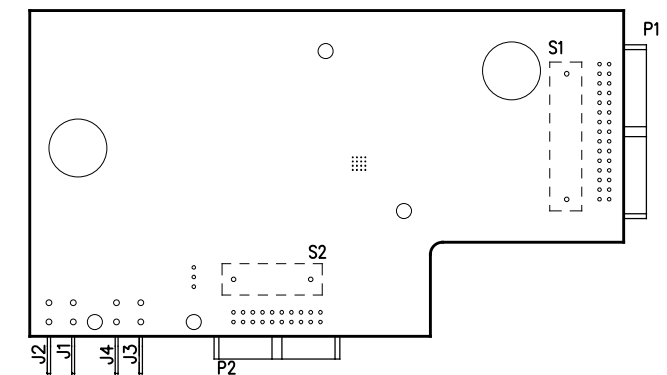
3. ETHERNET ADAPTER (A22) SUPPORTS MULTIPLE PROTOCOLS (DNP3 AND MODBUS) SIMULTANEOUSLY. SEE JA0102-54.

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



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)

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

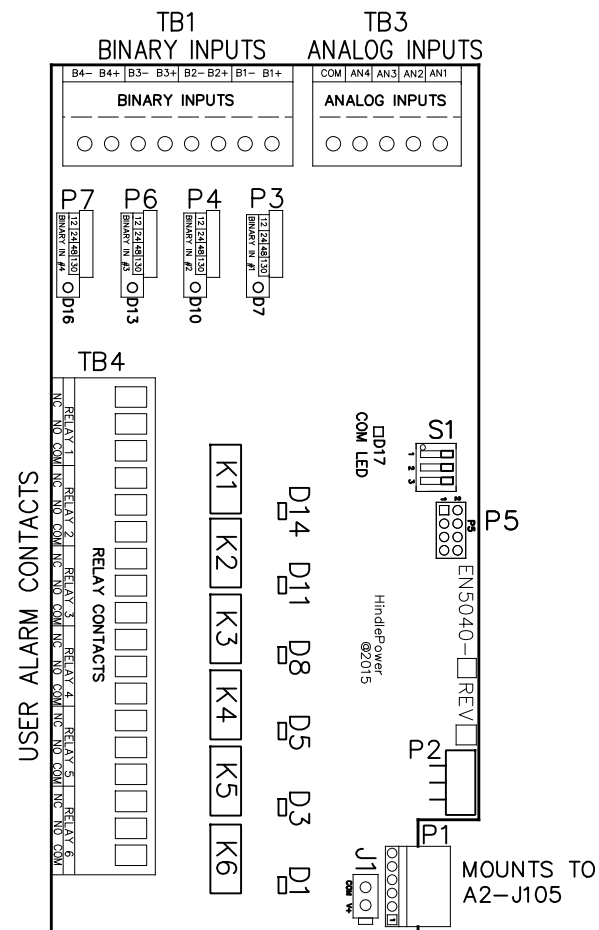
REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/29/2021	DRN BY KJB	DATE: 10/29/2021
DESCRIPTION: STANDARD DRAWINGS.					CHK BY MCR	DATE: 10/29/2021
ECN NO. N/A					APP BY MCR	DATE: 10/29/2021

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TITLE: **ATEVO BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL 1Ø WITH COMMON OPTIONS 16-25A**

SCALE: **B** DWG No: **JE5313-25** 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)

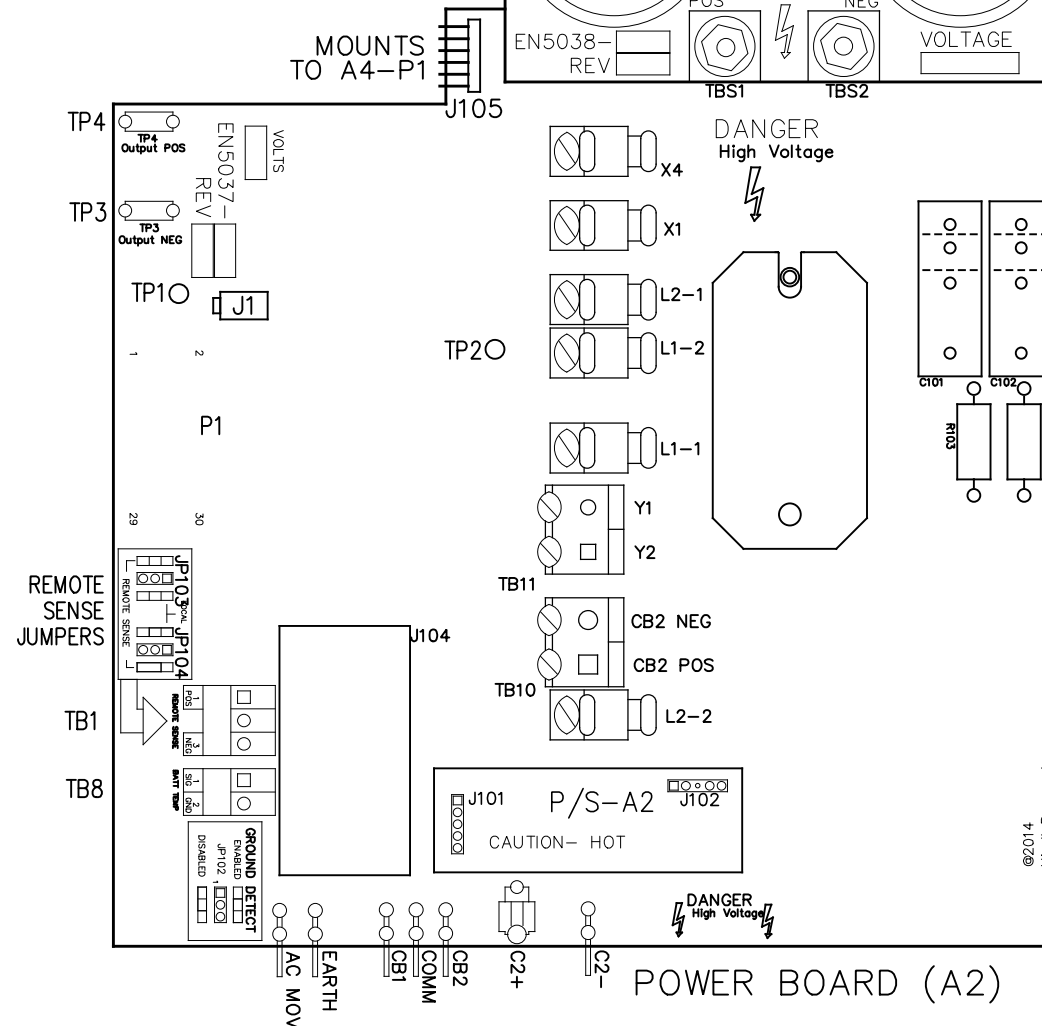
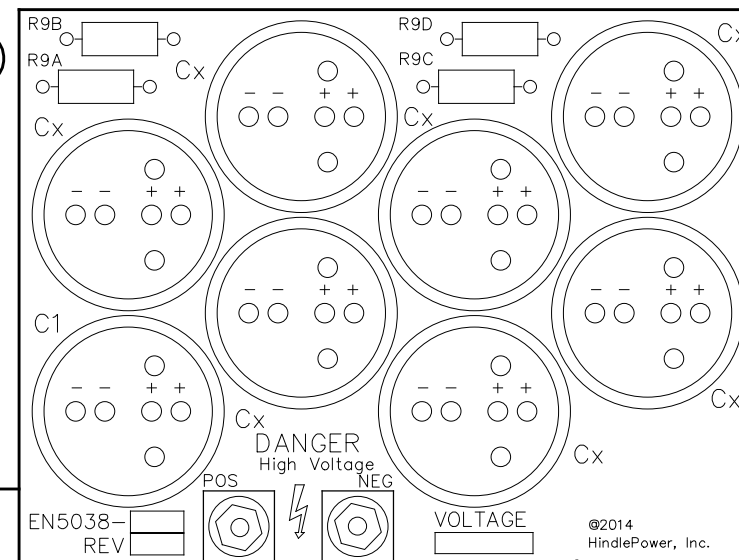
USER TERMINALS ON RELAY BOARD (A4):

- 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)



POWER BOARD (A2)

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 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

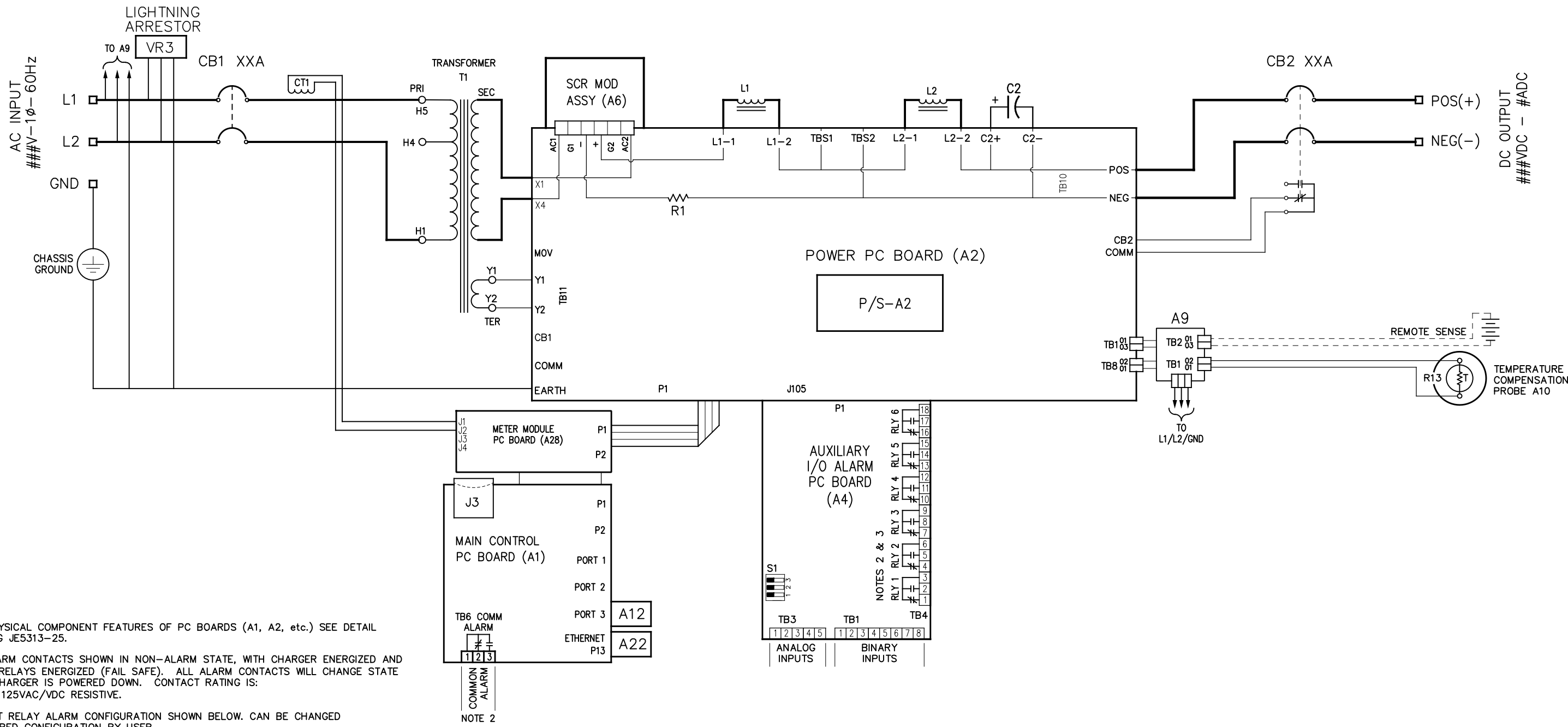
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TITLE
ATEVO BATTERY CHARGER
CONTROL PANEL / PC BOARD DETAIL
1Ø WITH COMMON OPTIONS 16-25A

B SCALE NTS DWG No JE5313-25

REV 0 SHEET 2 OF 2



- NOTES:
- FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A2, etc.) SEE DETAIL DRAWING JE5313-25.
 - 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.

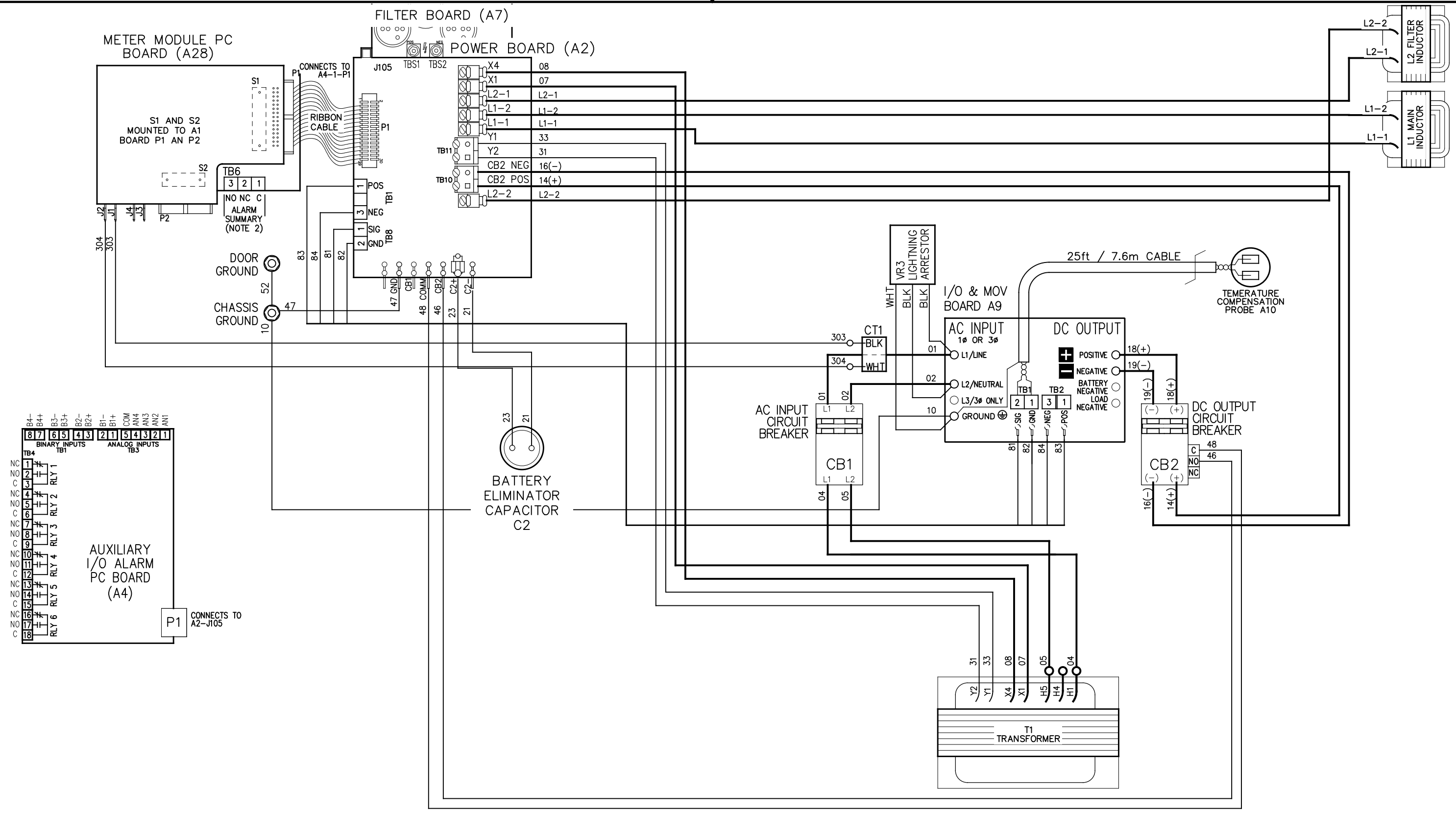
A4	DESCRIPTION	LATCHING	DELAY
RELAY #1	HIGH VOLTAGE DC	DISABLED	30 SECONDS
RELAY #2	LOW VOLTAGE DC	DISABLED	30 SECONDS
RELAY #3	DC OUTPUT FAILURE	DISABLED	30 SECONDS
RELAY #4	LOW AC SUPPLY	DISABLED	30 SECONDS
RELAY #5	POSITIVE GROUND FAULT	DISABLED	30 SECONDS
RELAY #6	NEGATIVE GROUND FAULT	DISABLED	30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

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
APP BY MCR				DATE: 10/29/2021	TITLE	
ECN NO. N/A				ATEVO BATTERY CHARGER		
				SCHEMATIC: STYLE 5070		
				1Ø WITH COMMON OPTIONS 16-25A		
				SCALE B	DWG No NTS	JE5311-25
				REV 0	SHEET 1 OF 1	

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ATEVO BATTERY CHARGER
SCHEMATIC: STYLE 5070
1Ø WITH COMMON OPTIONS 16-25A



- 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], TB1[A2], TB8[A2], etc.) ARE SOLDERLESS COMPRESSION SCREW TERMINALS, ACCEPTING #22-14 AWG WIRE.

REV. 0	DRN BY KJB	CHK BY MCR	APP BY MCR	DATE 10/29/2021	DRN BY KJB	DATE: 10/29/2021	<p>HINDLEPOWER</p>	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			TITLE ATEVO BATTERY CHARGER CONNECTION DIAGRAM: STYLE 5070 1Ø WITH COMMON OPTIONS 16-25A
ECN NO. N/A					APP BY MCR	DATE: 10/29/2021			
							B SCALE NTS DWG No JE5312-25	REV 0 SHEET 1 OF 1	