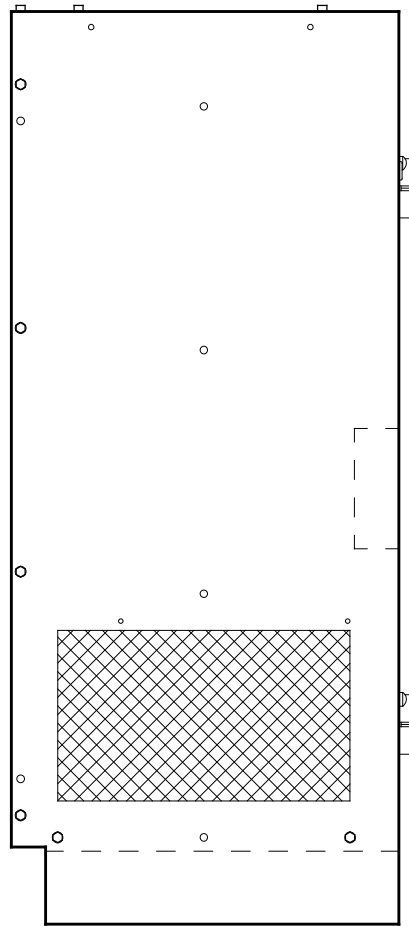
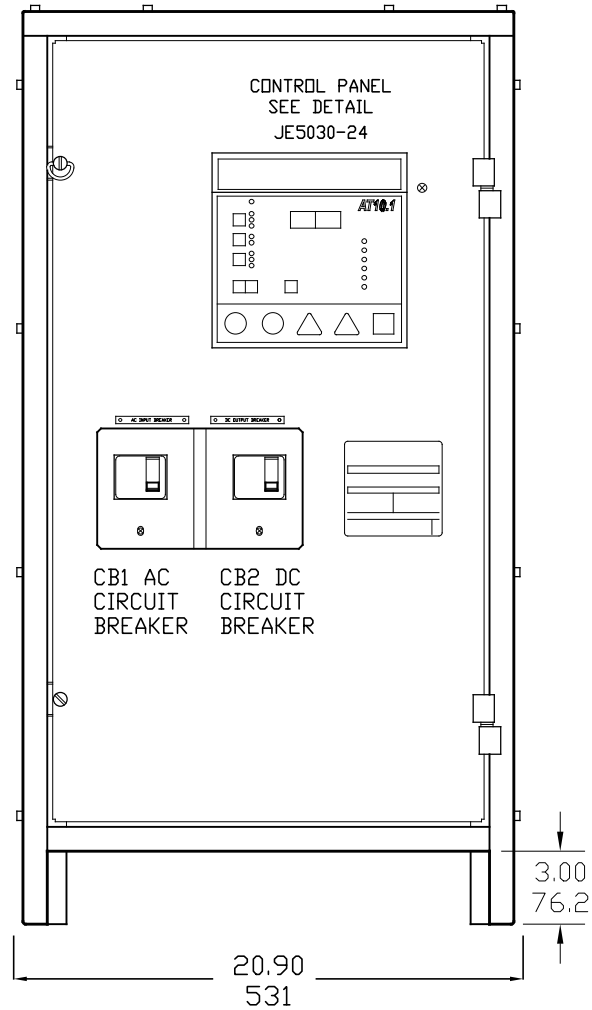


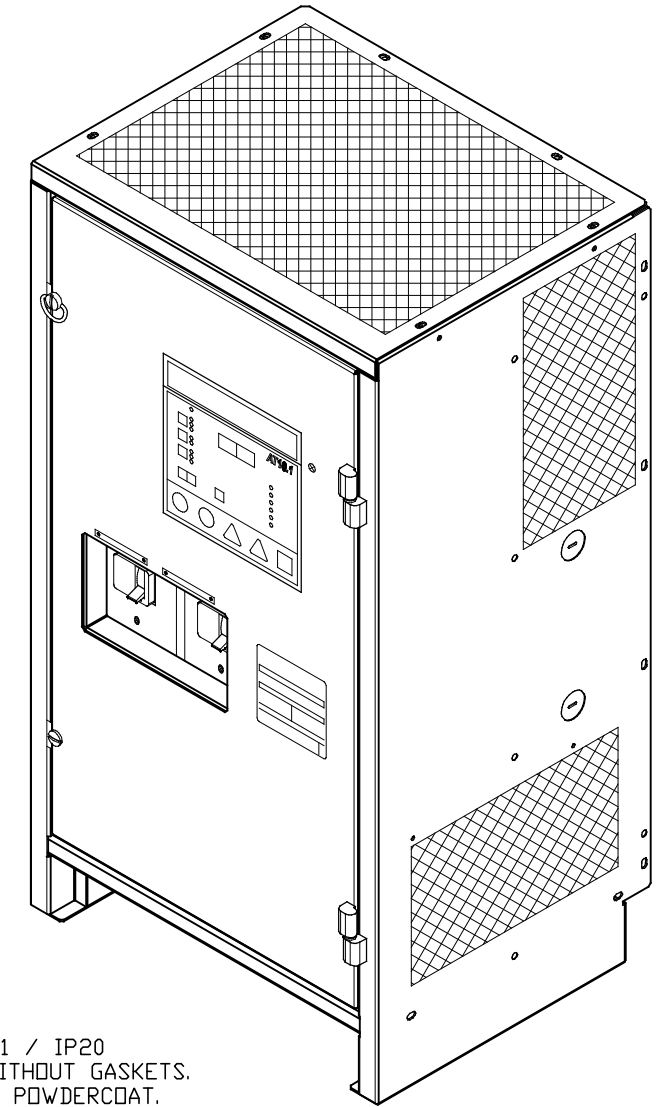
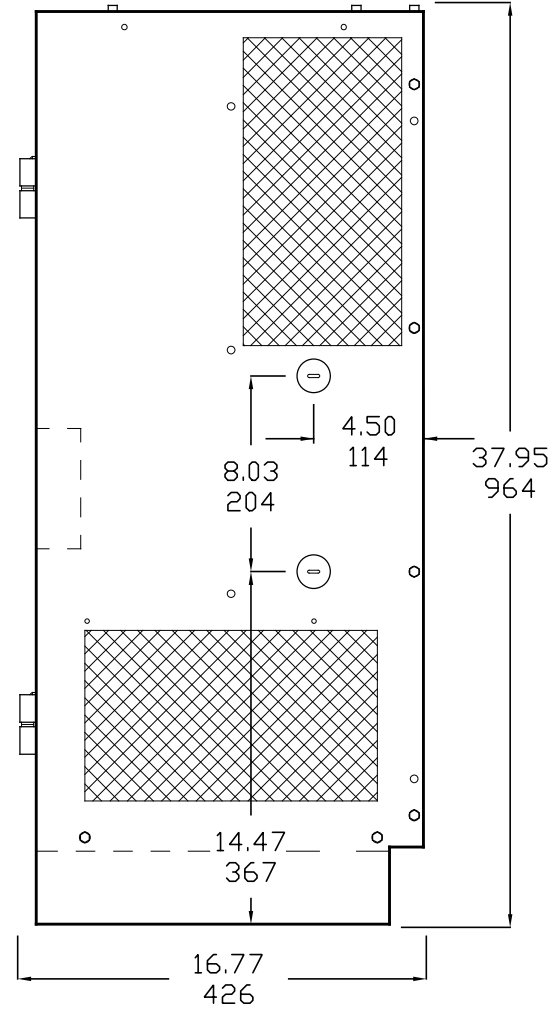
SIDE VIEW



FRONT VIEW



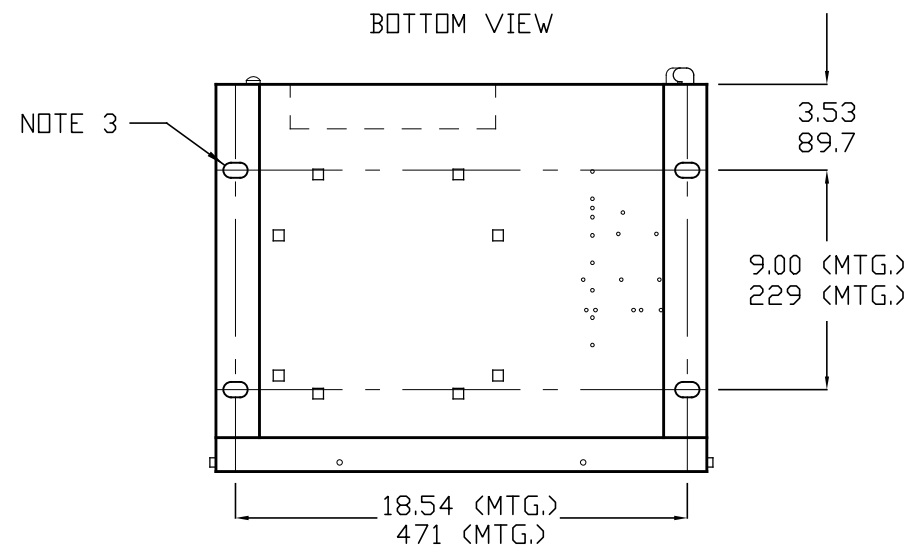
SIDE VIEW



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) FOUR (4) 1in x 0.625in / 25mm x 16mm FLOOR-MOUNTING SLOTS ARE PROVIDED ON BOTTOM OF ENCLOSURE AS SHOWN.
- 4) TWO (2) 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.
- 5) BATTERY CHARGER SHIPPING WEIGHT: SEE PRODUCT LITERATURE

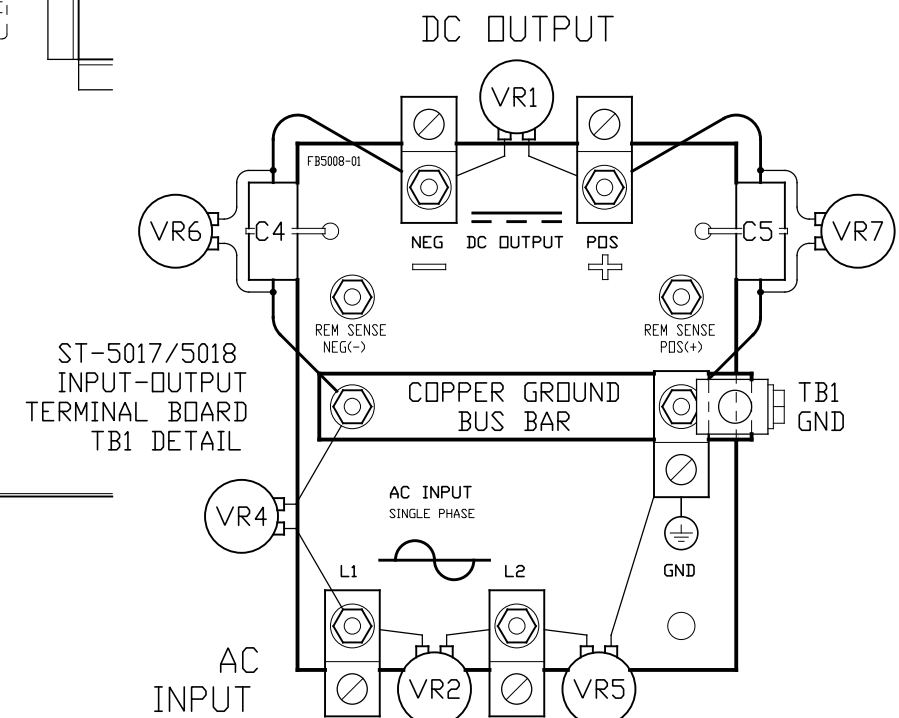
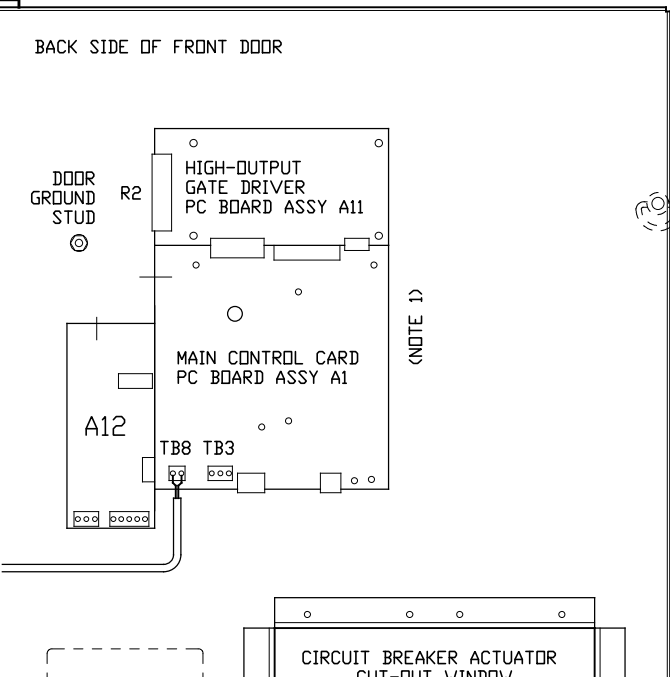
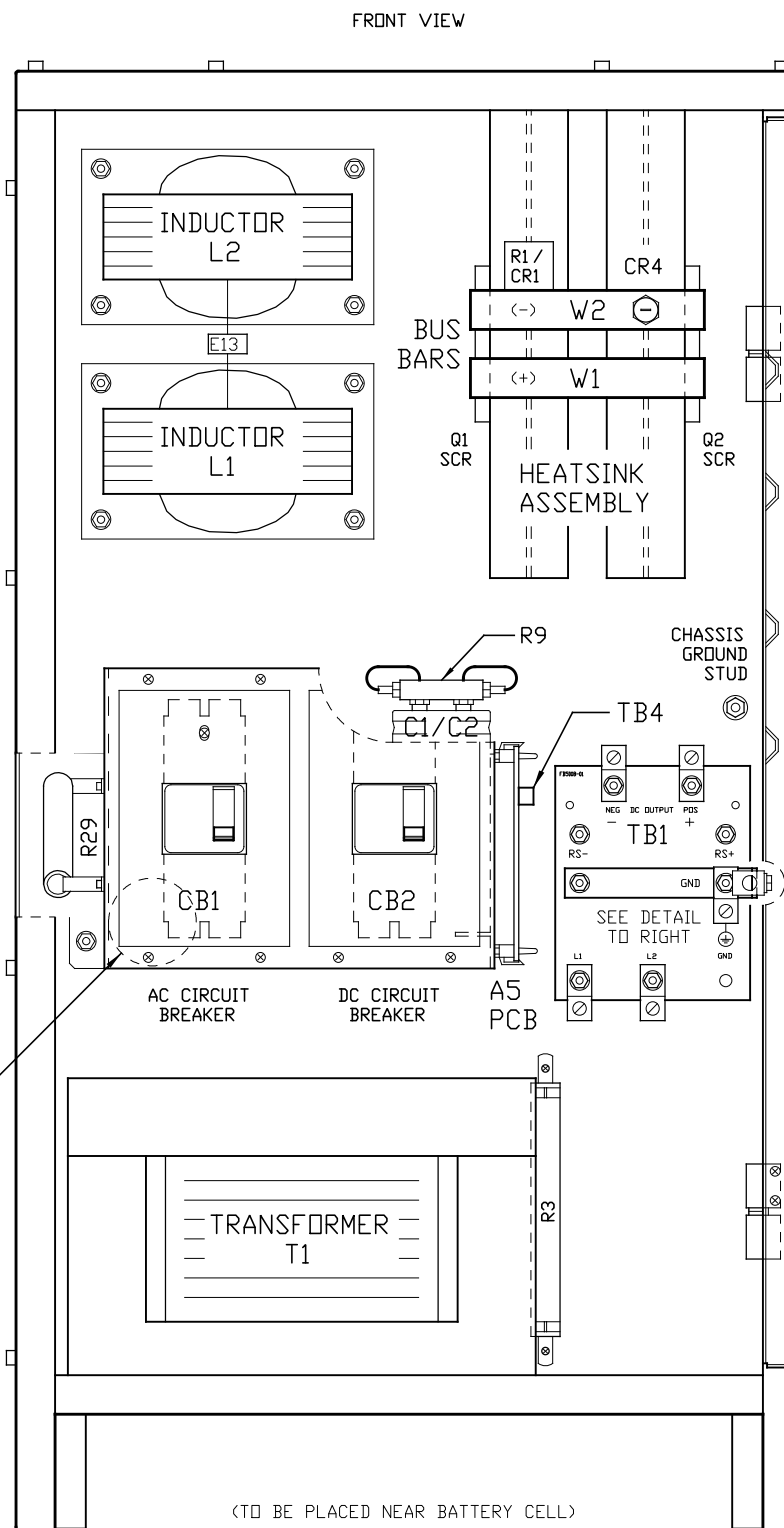
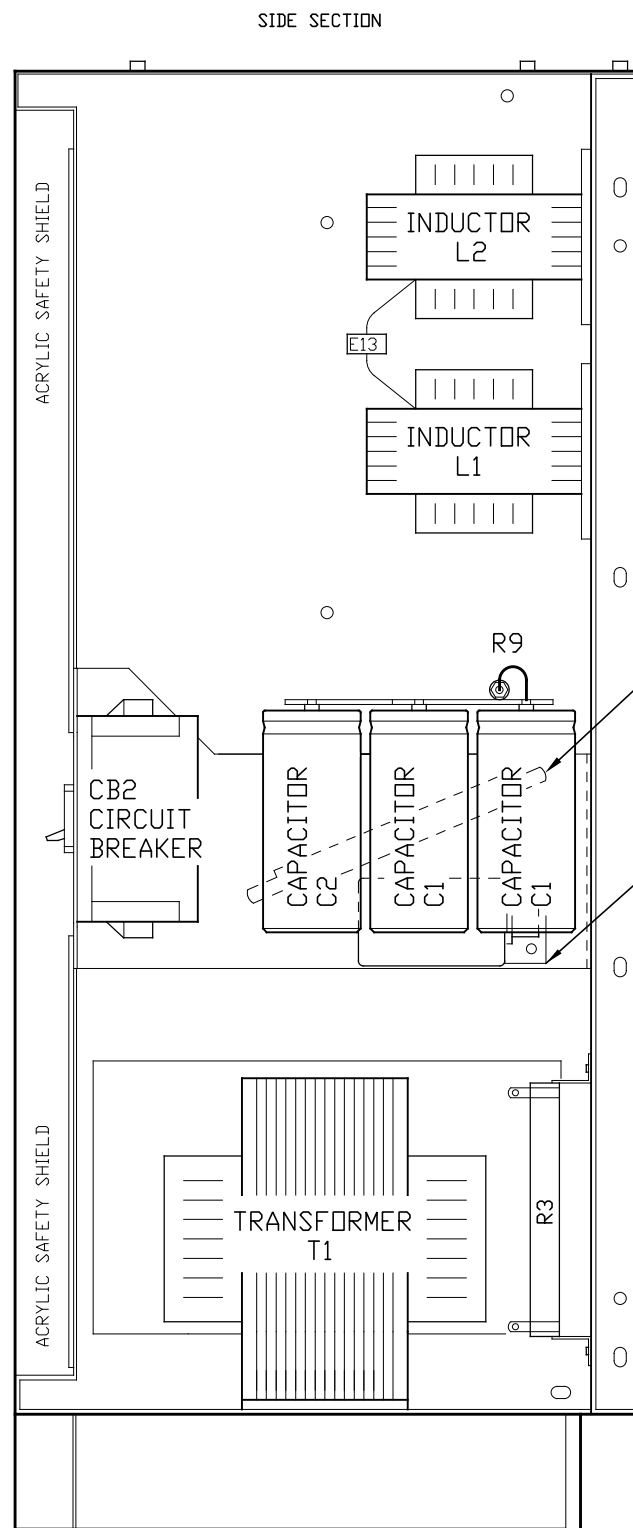
BOTTOM VIEW



DUAL DIMENSIONS in mm

40-100ADC W/ COMMON OPTIONS

			 THIRD ANGLE PROJECTION		 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KMW 110821		TITLE AT10.1 SERIES BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5018 ENCLOSURE	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5026-24 REV 0 B	
0 N/A 110821			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS SALES No SHEET 1 OF 1	
REV	ECN No	DATE				



SYM	STANDARD COMPONENT DESCRIPTION
A1	MAIN CONTROL PC BOARD
A11	HIGH-OUTPUT GATE DRIVER PC BRD
C4	EMI OUTPUT FILTER CAP (NEG)
C5	EMI OUTPUT FILTER CAP (PDS)
CB1	AC INPUT CIRCUIT BREAKER (Bx2)
CB2	DC OUTPUT CIRCUIT BREAKER (BD2)
CR4	FREE-WHEELING DIODE
L1	MAIN INDUCTOR
Q1	SILICON-CONTROLLED RECTIFIER
Q2	SILICON-CONTROLLED RECTIFIER
R1	MAIN DC SHUNT, NEG(-) BUS
R2	RATING RESISTOR
R3	PWR SUPPLY BALLAST RES (130VDC)
T1	POWER TRANSFORMER
TB1	I/O TERMINAL BOARD
TB3	SUMMARY ALARM CONTACTS
TB8	TEMPCD PROBE TERMINAL BLOCK
VR1	OUTPUT SURGE SUPPRESSOR
VR2	INPUT SURGE SUPPRESSOR
VR4	INPUT SURGE SUPPRESSOR
VR5	INPUT SURGE SUPPRESSOR
VR6	OUTPUT SURGE SUPPRESSOR
VR7	OUTPUT SURGE SUPPRESSOR
W1	COPPER BUS BAR (PDS LEG)
W2	COPPER BUS BAR (NEG LEG)

SYM	FEATURED OPTION COMP DESCRIPTION
A5	AUXILIARY ALARM RELAY PC BOARD
A10	TEMPERATURE COMPENSATION PROBE
A12	COMMUNICATIONS MODULE PC BOARD
C1	FILTER CAPACITOR
C2	BATTERY ELIMINATOR FILTER CAP
CR1	POLARITY DIODE
E13	INDUCTOR INTER-CONNECT POINT
TB4	AUX ALARM PCB (A5) TERM BLOCK
L2	FILTER INDUCTOR
R9	FILTER CAP BLEED RESISTOR
R29	COMM MOD BALLAST RES (130VDC)
VR3	AC INPUT LIGHTNING ARRESTOR

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB1(+/-)	POS/NEG DC OUTPUT TERMS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
REM SENSE(+/-)	POS/NEG REMOTE SENSE TERMINALS - 1/4-20 ZPS STUDS	1/4in RING LUG
(2) TB1-GND	USER GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
TB1-L1/L2	AC INPUT TERMINALS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
TB3	SUMMARY ALARM TERMINAL BLOCK - SOLDERLESS COMP SCREW	#22-14 AWG
TB4	AUXILIARY ALARM TERM BLK - SOLDERLESS COMP SCREW	#22-14 AWG
TB8	TEMPCD PROBE (A10) TERM BLK - SOLDERLESS COMP SCREW	#22-14 AWG

NOTES:
 1) FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A5, A11, etc.) SEE DETAIL DRAWING JE5030-24.

0	N/A	110821	THIRD ANGLE PROJECTION
REV	ECN No	DATE	DRAWN BY KMW 110821
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG
			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

40-100ADC W/ COMMON OPTIONS

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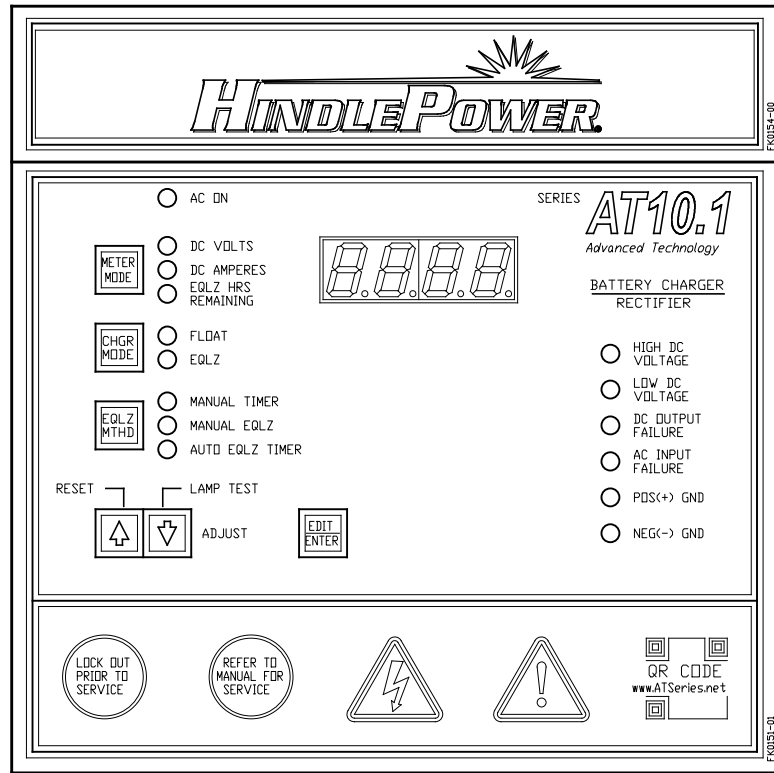
TITLE: AT10.1 SERIES BATTERY CHARGER
 INTERNAL COMPONENT LAYOUT; STYLE-5018

DRAWING No: JE5029-24 REV 0 B

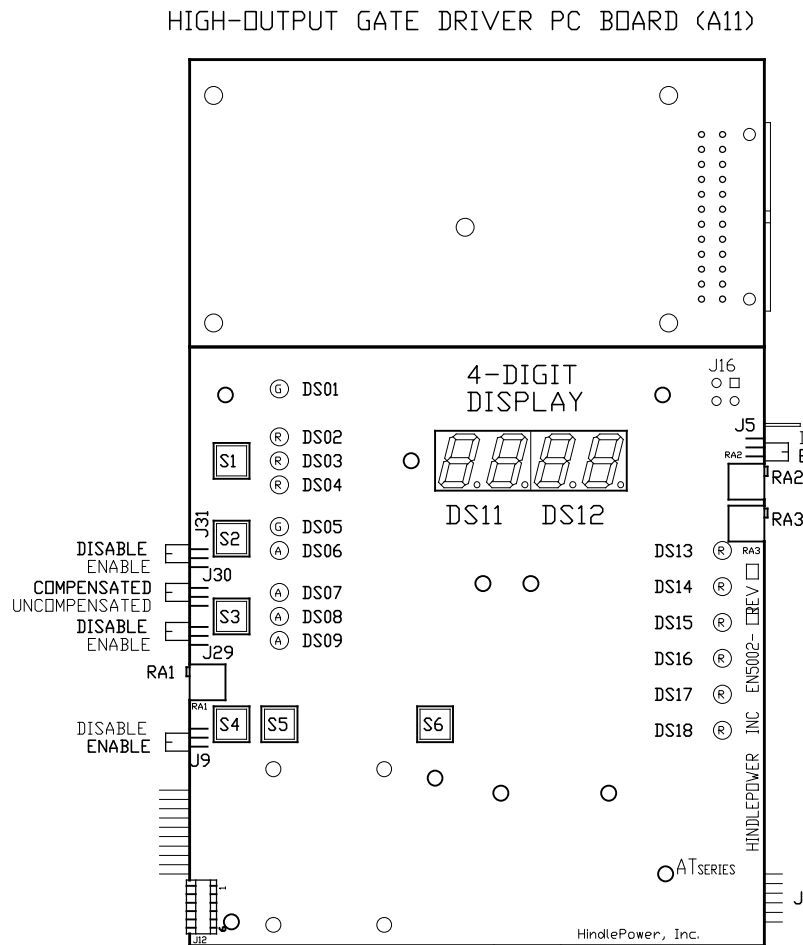
SCALE: NTS SALES No SHEET 1 OF 1

(TO BE PLACED NEAR BATTERY CELL)
 A10 25ft / 7.6m LONG CABLE

- INDICATOR LIGHTS (LEDs):
- DS01 - GREEN - AC ON
 - DS02 - RED - DC VOLTS
 - DS03 - RED - DC AMPERES
 - DS04 - RED - EQUALIZE HRS REMAINING
 - DS05 - GREEN - FLOAD
 - DS06 - AMBER - EQUALIZE
 - DS07 - AMBER - MANUAL TIMER
 - DS08 - AMBER - MANUAL EQUALIZE
 - DS09 - AMBER - AUTO EQUALIZE TIMER
 - DS10 - RED - LOW LEVEL DETECT
 - DS11 - RED - (METER DISPLAY)
 - DS12 - RED - (METER DISPLAY)
 - DS13 - RED - HIGH DC VOLTAGE
 - DS14 - RED - LOW DC VOLTAGE
 - DS15 - RED - DC OUTPUT FAILURE
 - DS16 - RED - AC INPUT FAILURE
 - DS17 - RED - POS(+) GROUND FAULT
 - DS18 - RED - NEG(-) GROUND FAULT

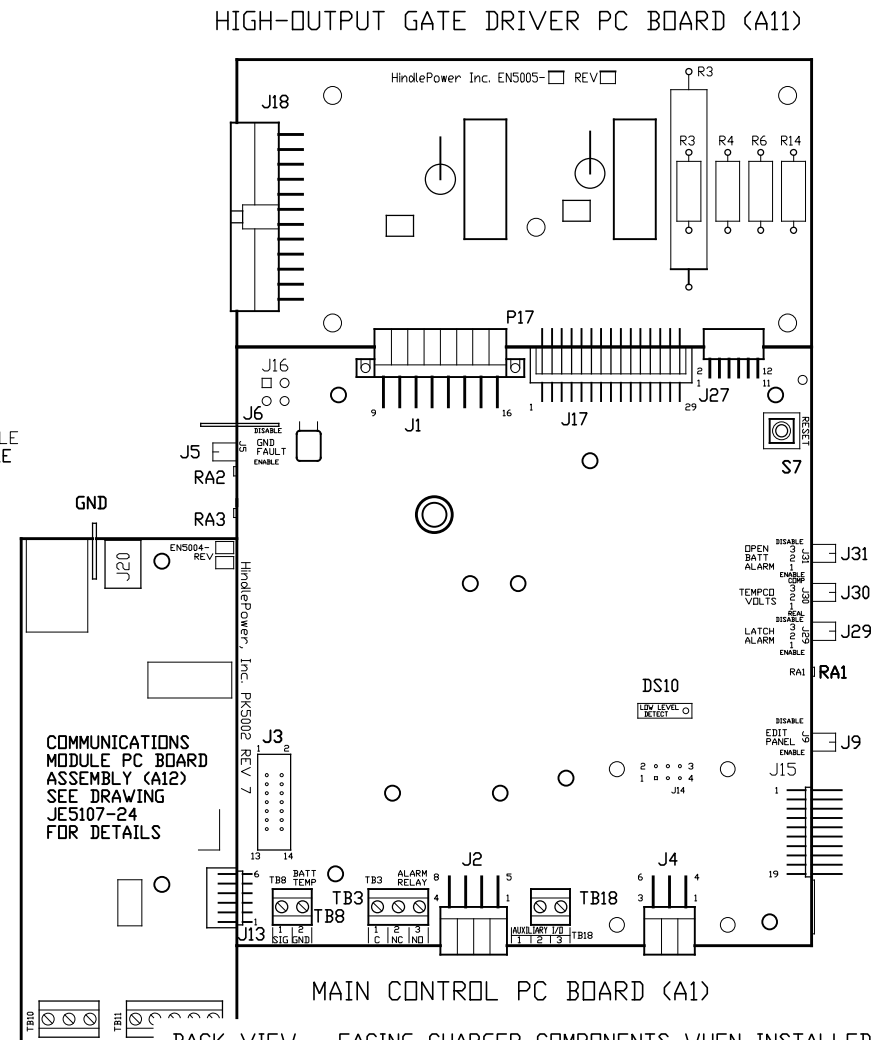


CONTROL PANEL
(PART No. FK0151-01)



MAIN CONTROL PC BOARD (A1)

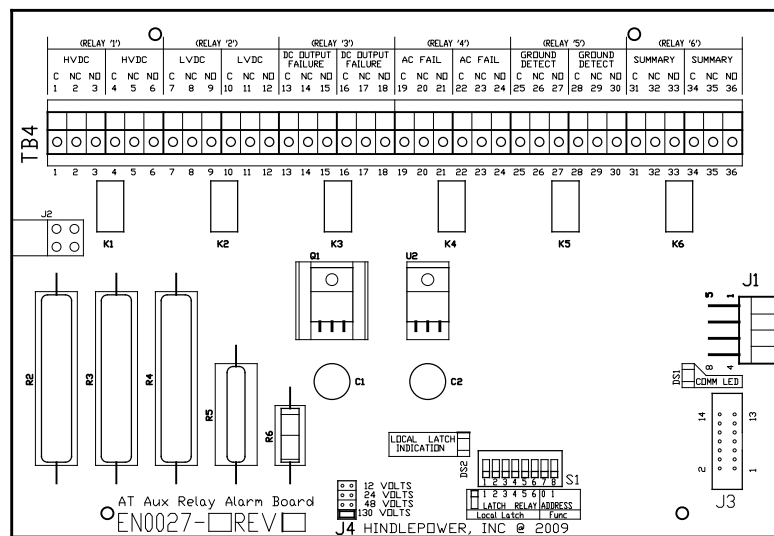
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED



MAIN CONTROL PC BOARD (A1)

BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

NOTE: UNLESS OTHERWISE SPECIFIED, ALL ALARM TERMINAL BLOCKS (TB3/TB4/TB8) ARE SOLDERLESS COMPRESSION TERMINALS, ACCEPTING #22-14 AWG WIRE. 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.



AUXILIARY ALARM RELAY PC BOARD (A5)

A5-J1 CONNECTED TO
A1-J2 VIA EH5045-0#
8-PIN SERIAL CABLE

OTHER CONTROLS:
RA1 - LOW LEVEL DETECT ADJUST
RA2 - GROUND FAULT BALANCE
RA3 - GROUND FAULT SENSITIVITY

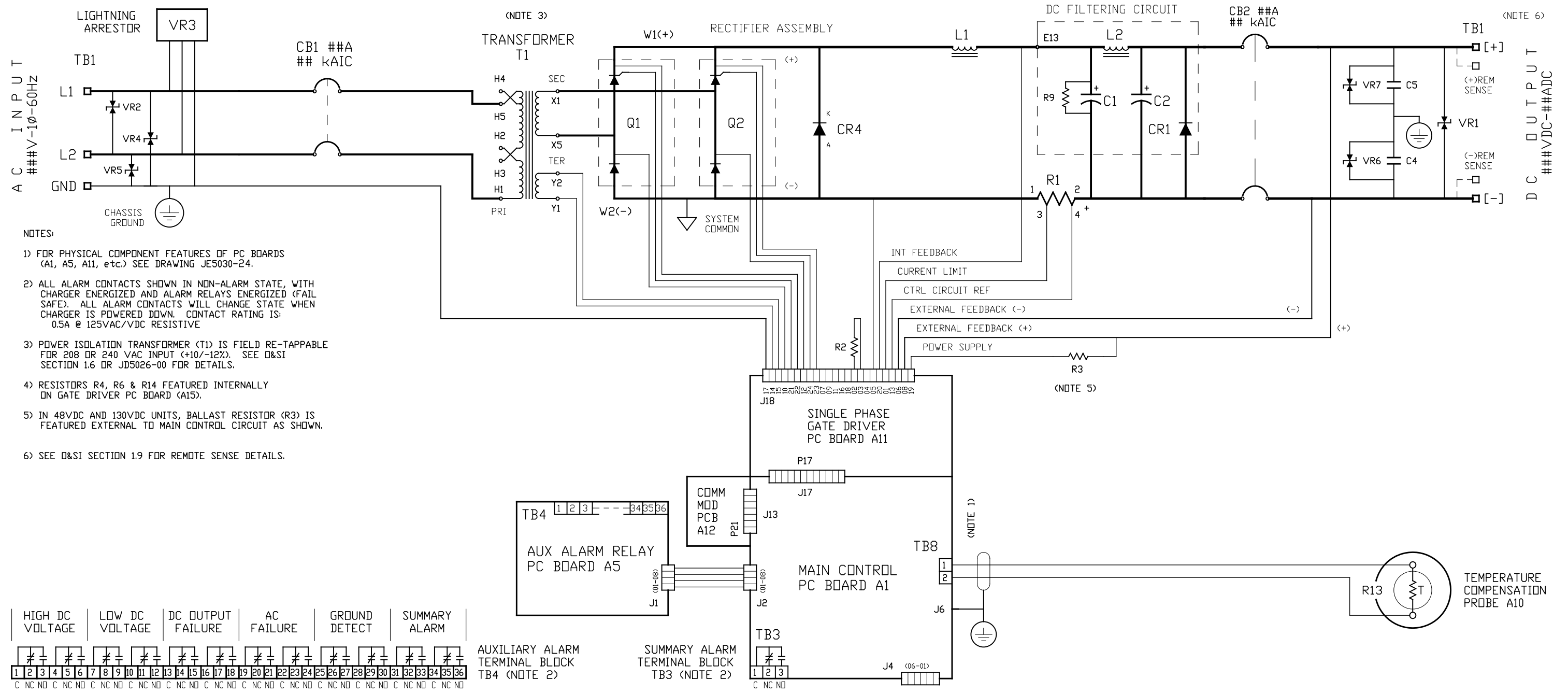
NON-USER ACCESSED JUMPERS:
J3 - DLD A5 RIBBON CONNECTOR
J12 - BOARD PROGRAMMING
J14 - DLD FORCED LOAD SHARING
J15 - MANUFACTURING TEST
J16 - DLD INTERNAL TEMP

- USER JUMPERS:
- J1 - MAINFRAME SIGNAL HARNESS (NOT USED IN 30-100A)
 - J2 - AUX ALARM RELAY BOARD (A5) SERIAL CONNECTOR
 - J4 - FORCED LOAD SHARING CABLE INTERCONNECTOR
 - J5 - GROUND FAULT ENABLE/DISABLE
 - J6 - EARTH GROUND CONNECTOR
 - J9 - FRONT PANEL ENABLE/DISABLE (LOCKOUT)
 - J13 - COMMUNICATIONS PC BOARD (A12) INTERCONNECTOR
 - J17 - HD GATE DRIVER PC BOARD (A11) INTERCONNECTOR
 - J18 - MAINFRAME SIGNAL HARNESS (30-100A OUTPUT)
 - J27 - not used (3PH GATE DRIVER INTERCONNECTOR)
 - J29 - LATCHING ALARMS ENABLE/DISABLE SELECTOR
 - J30 - TEMPCD VOLTAGES (COMPENSATED/UNCOMP) SELECTOR
 - J31 - BATTERY OPEN ALARM ENABLE/DISABLE SELECTOR

- SWITCHES:
- S1 - METER MODE
 - S2 - CHARGER MODE
 - S3 - EQUALIZE METHOD
 - S4 - Δ ADJUST
 - S5 - ∇ ADJUST
 - S6 - EDIT / ENTER
 - S7 - PROCESSOR MANUAL RESET
- TERMINAL BLOCKS:
- TB3 - SUMMARY ALARM RELAY CONTACTS
 - TB4 - AUX ALARM RELAY CONTACTS
 - TB8 - OPT TEMPCD PROBE (A10) CONN
 - TB18 - REM SHUTDOWN INTERFACE

40-100ADC W/ COMMON OPTIONS

					1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
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ELECTRONIC APPROVAL SIGNATURES			MAINTAINED BY MFG ECN LOG		TITLE	
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:					AT10.1 SERIES BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL	
REV	ECN No	DATE	DRAWING No		REV	0A B
0	N/A	110821	JE5030-24			
SCALE			NTS		SALES No	
SHEET			1		OF 1	



- NOTES:
- 1) FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A5, A11, etc.) SEE DRAWING JE5030-24.
 - 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
 - 3) POWER ISOLATION TRANSFORMER (T1) IS FIELD RE-TAPPABLE FOR 208 OR 240 VAC INPUT (+10/-12%). SEE D&SI SECTION 1.6 OR JD5026-00 FOR DETAILS.
 - 4) RESISTORS R4, R6 & R14 FEATURED INTERNALLY ON GATE DRIVER PC BOARD (A15).
 - 5) IN 48VDC AND 130VDC UNITS, BALLAST RESISTOR (R3) IS FEATURED EXTERNAL TO MAIN CONTROL CIRCUIT AS SHOWN.
 - 6) SEE D&SI SECTION 1.9 FOR REMOTE SENSE DETAILS.

HIGH DC VOLTAGE	LOW DC VOLTAGE	DC OUTPUT FAILURE	AC FAILURE	GROUND DETECT	SUMMARY ALARM
1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36

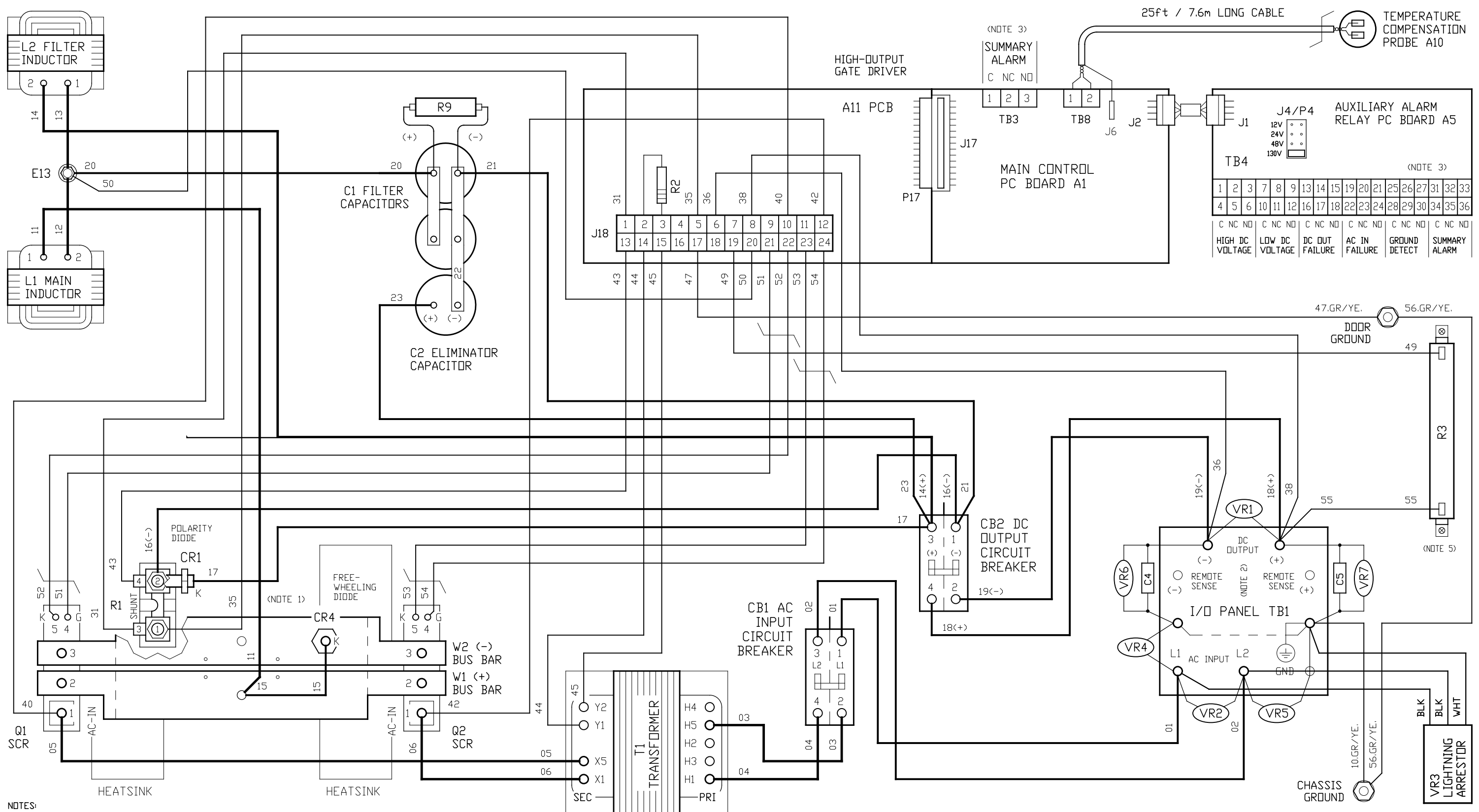
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AUXILIARY ALARM TERMINAL BLOCK TB4 (NOTE 2)

SUMMARY ALARM TERMINAL BLOCK TB3 (NOTE 2)

STANDARD AT10.1 COMPONENTS:	STANDARD AT10.1 COMPONENTS:	SUPPLIED AT10.1 OPTION COMPONENTS:	SUPPLIED AT10.1 OPTION COMPONENTS:
A1 MAIN CONTROL PC BOARD (NOTE 1) A11 SINGLE PHASE 100A GATE DRIVER PCB (NOTE 1)	R1 MAIN DC SHUNT, NEG(-) BUS R2 CURRENT RATING RESISTOR R3 POWER SUPPLY BALLAST RESISTOR (NOTE 5) R4 EXTERNAL SCALING RESISTOR (+) (NOTE 4) R6 INTERNAL SCALING RESISTOR (NOTE 4) R14 EXTERNAL SCALING RESISTOR (-) (NOTE 4)	DC FILTERING ASSEMBLY: C1 DC OUTPUT FILTERING CAPACITOR CR1 POLARITY DIODE E13 INDUCTOR INTERCONNECTION POINT L2 FILTERING INDUCTOR R9 FILTER CIRCUIT BLEED RESISTOR C2 BATTERY ELIMINATOR FILTER CAPACITOR VR3 AC INPUT LIGHTNING ARRESTOR	A5 AUXILIARY ALARM RELAY PC BOARD (NOTE 1) TB4 AUXILIARY ALARM (A5) TERMINAL BLOCK (NOTE 2) A10 EXTERNAL TEMPERATURE COMPENSATION PROBE R13 TEMPCO PROBE (A10) RESISTOR SEE JD5003-00 T TEMPCO PROBE (A10) THERMISTOR A12 COMMUNICATIONS MODULE PC BOARD (NOTE 1)
C4 DC OUTPUT EMI FILTER CAPACITOR (-) TO GROUND C5 DC OUTPUT EMI FILTER CAPACITOR (+) TO GROUND CB1 AC INPUT CIRCUIT BREAKER CB2 DC OUTPUT CIRCUIT BREAKER CR4 FREE-WHEELING DIODE L1 MAIN INDUCTOR Q1 SILICON-CONTROLLED RECTIFIER (SCR) MODULE Q2 SILICON-CONTROLLED RECTIFIER (SCR) MODULE	T1 POWER ISOLATION TRANSFORMER (+10/-12%) TB1 INPUT/OUTPUT TERMINAL BLOCK TB3 SUMMARY ALARM TERMINAL BLOCK (NOTE 2) TB8 OPTIONAL TEMPCO PROBE (A10) INTERCONNECTOR VR1 DC OUTPUT SURGE SUPPRESSOR (-) TO (+) VR2 AC INPUT SURGE SUPPRESSOR (L1-L2) VR4 AC INPUT SURGE SUPPRESSOR (L1-GND) VR5 AC INPUT SURGE SUPPRESSOR (L2-GND) VR6 DC OUTPUT SURGE SUPPRESSOR (-) TO GROUND VR7 DC OUTPUT SURGE SUPPRESSOR (+) TO GROUND W1 POSITIVE(+) DC BUS BAR W2 NEGATIVE(-) DC BUS BAR		

DRAWN BY KMW 110821		THIRD ANGLE PROJECTION				1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		TITLE BATTERY CHARGER SCHEMATIC: 40-100ADC W/ COMMON OPTIONS		DRAWING No JE5032-24		REV 0 B	
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS		SALES No		SHEET 1 OF 1	



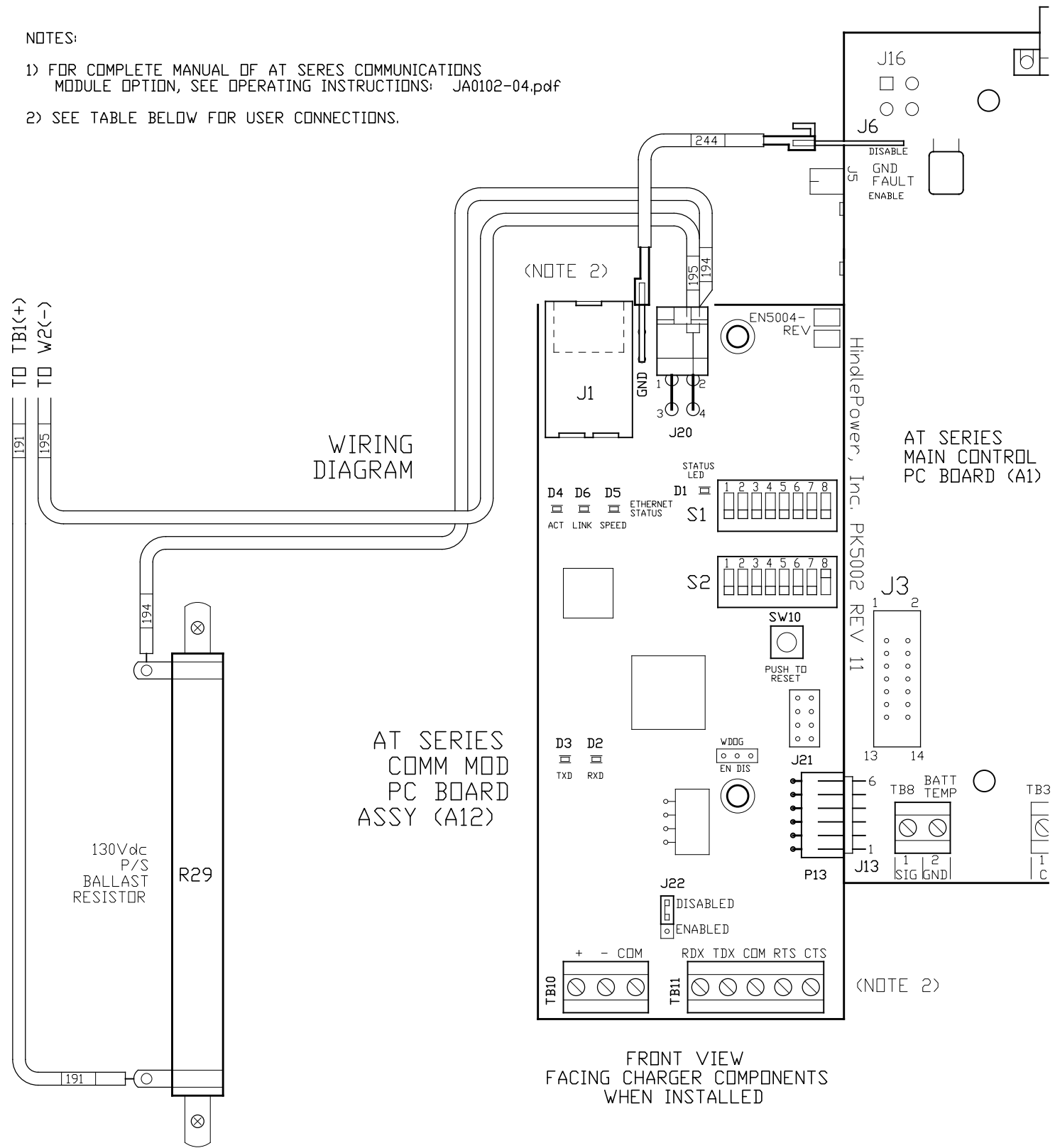
- NOTES:
- 1) CHARGER COMPONENTS ARE CONNECTED WITH BLACK FLAME-RETARDANT SWITCHBOARD INSULATION SYSTEM (SIS) TYPE WIRING, IDENTIFIED ON EACH END WITH NUMBER-CODED MARKERS. GROUND WIRES #10, #47 & #56 ARE GREEN WITH YELLOW STRIPE. DIODES (CR1 & CR4) ARE ANODE-MOUNTED TYPE, WIRE TO CATHODE.
 - 2) WHEN REMOTE SENSE IS USED, WIRE# 36 CONNECTS A11-J18-06 TO REMOTE SENSE(-), AND WIRE# 38 CONNECTS A11-J18-08 TO REMOTE SENSE(+).
 - 3) STANDARD USER ALARM CONTACTS (TB3, TB4, etc.) ARE SOLDERLESS COMPRESSION SCREW TERMINALS, ACCEPTING #22-14 AWG WIRE.
 - 4) SEE SCHEMATIC FOR TRANSFORMER (T1) PRIMARY CONNECTION TABLE.
 - 5) IN 130 VDC UNITS, BALLAST RESISTOR (R3) IS SUPPLIED EXTERNALLY AS SHOWN.

- FEATURED OPTIONS:
- STANDARD DC OUTPUT FILTERING
 - BATTERY ELIMINATOR FILTER CAP
 - AC INPUT CIRCUIT BREAKER
 - AUXILIARY ALARM RELAY PC BOARD
 - AC INPUT LIGHTNING ARRESTOR
 - EXTERNAL TEMPCO REMOTE PROBE

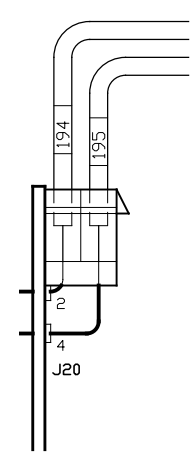
			THIRD ANGLE PROJECTION		 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KMW 110821			
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5034-24	
			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		REV 0 B	
0	N/A	110821			SCALE NTS	SHEET 1 OF 1
REV	ECN No	DATE			SALES No	

NOTES:

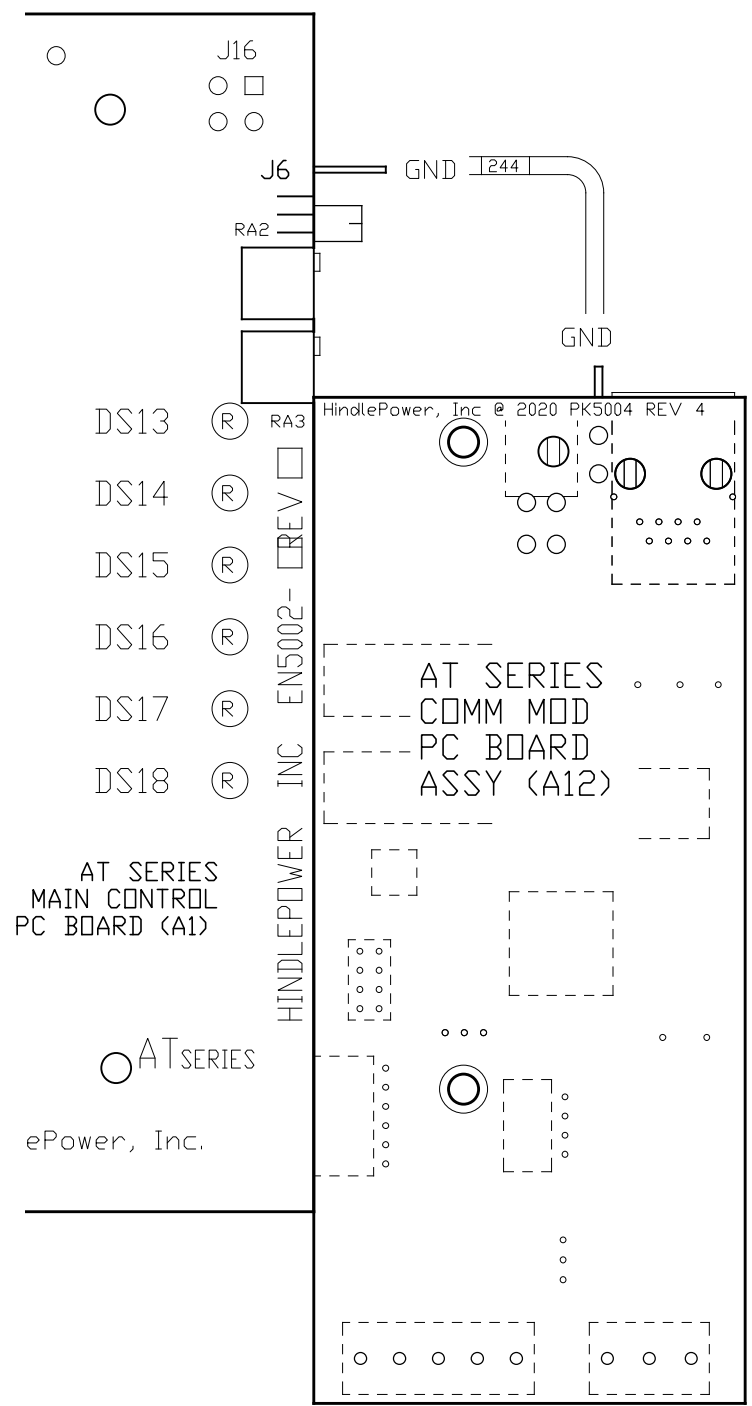
- 1) FOR COMPLETE MANUAL OF AT SERIES COMMUNICATIONS MODULE OPTION, SEE OPERATING INSTRUCTIONS: JA0102-04.pdf
- 2) SEE TABLE BELOW FOR USER CONNECTIONS.



SIDE VIEW OF PC BOARD



FRONT VIEW FACING CHARGER COMPONENTS WHEN INSTALLED



BACK VIEW FACING CHARGER DOOR WHEN INSTALLED

- INDICATOR LIGHTS:
- D1 - STATUS LED, SPI COMM
 - D2 - RXD, SERIAL RECEIVE LED
 - D3 - TXD, SERIAL TRANSMIT LED
 - D4 - ACT, ETHERNET ACTIVITY LED
 - D5 - SPEED, ETHERNET 10/100 LED
 - D6 - LINK, ETHERNET STATUS LED
- JUMPERS / CONNECTORS:
- J20 - POWER SUPPLY CONNECTION
 - J21 - FACTORY CONNECTION
 - J22 - RS-485 TERMINATING RESISTOR (ENABLE/DISABLE)
 - P13 - PLUG FOR MAIN CONTROL PCB (A1) (J13 CONNECTION)
- SWITCHES:
- S1 - CONFIGURATION SWITCHES
 - S2 - MODBUS ADDRESS
 - SW10 - RESET BUTTON

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB10	RS-485 SERIAL TERMINALS - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
TB11	RS-232 SERIAL TERMINALS - SOLDERLESS COMPRESSION SCREW	#22-14 AWG
J1	ETHERNET SERIAL TERMINAL - RJ45 SOCKET	CAT 5,6 UTP
GND	PC BOARD GROUND TERMINAL - SLIP-ON TAB	QC LUG

40-100ADC W/ COMMON OPTIONS

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DRAWN BY KMW		110821		TITLE AT SERIES BATT CHGR COMMUNICATIONS MODULE OPTION DETAIL
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG				DRAWING No JE5107-24
0	N/A	110821	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	
REV	ECN No	DATE	SCALE NTS	SHEET 1 OF 1