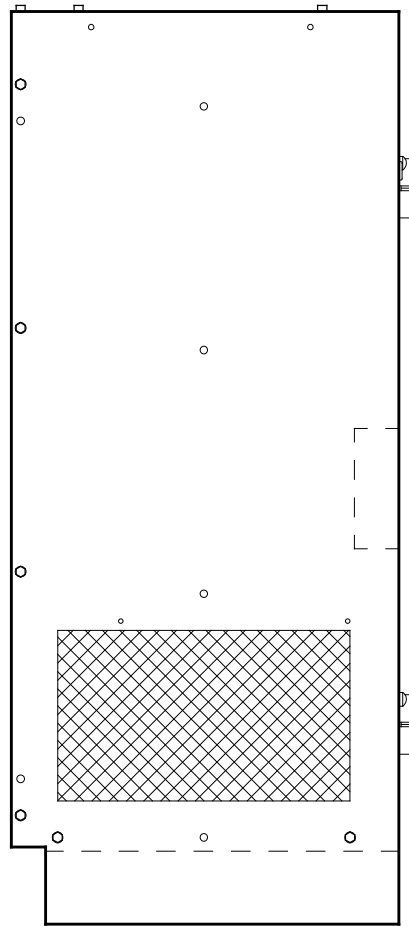
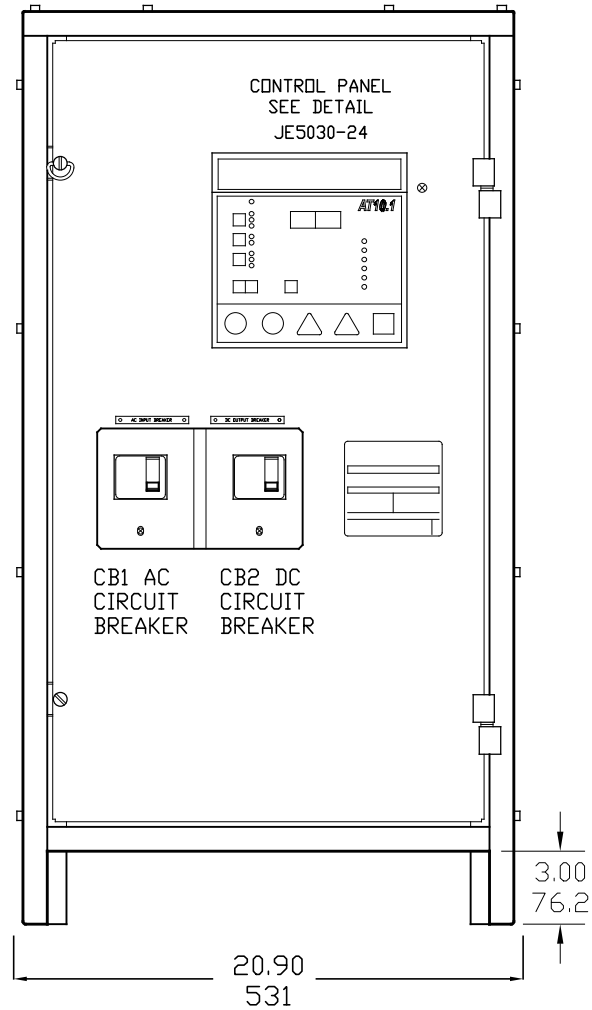


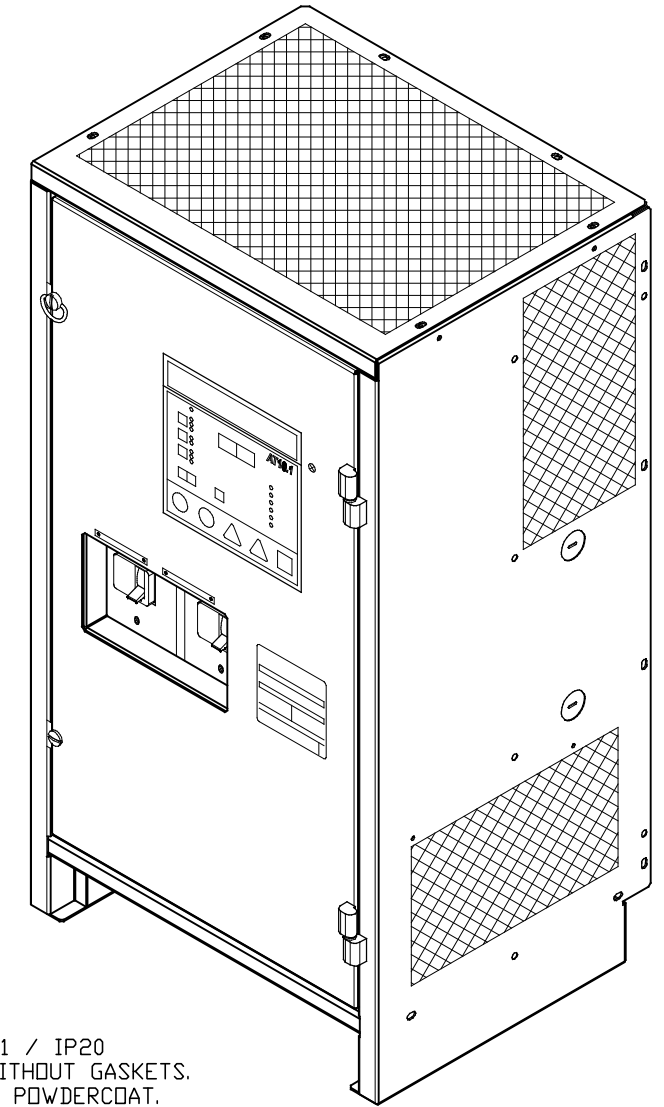
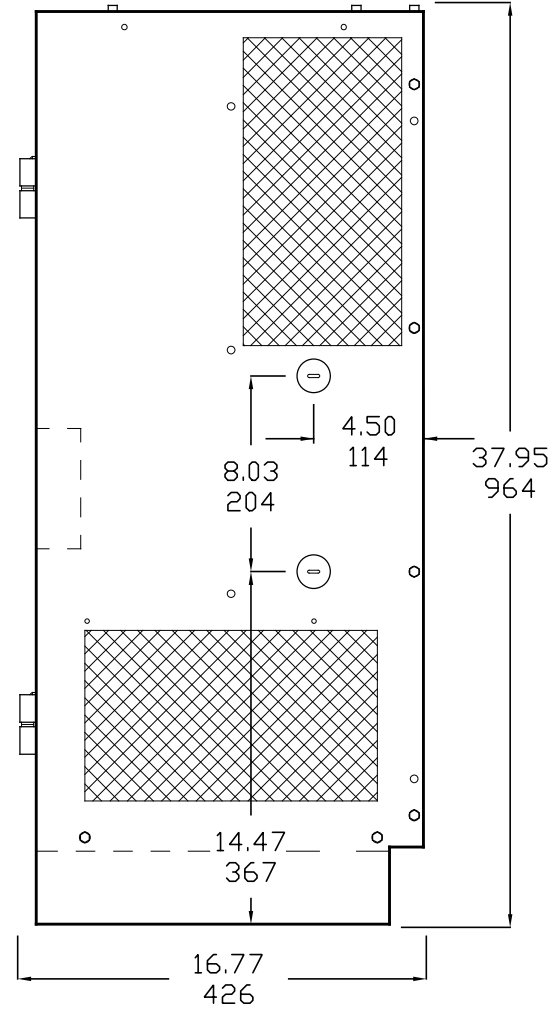
SIDE VIEW



FRONT VIEW



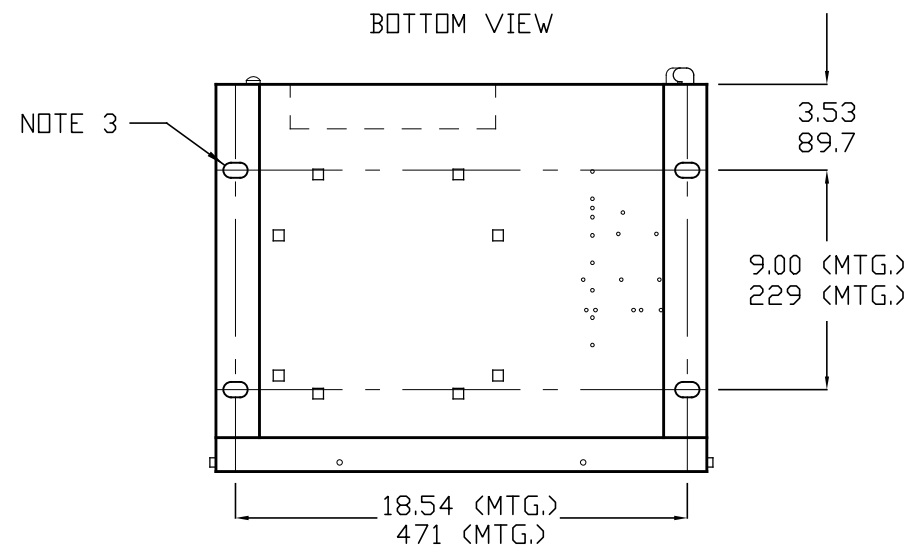
SIDE VIEW



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

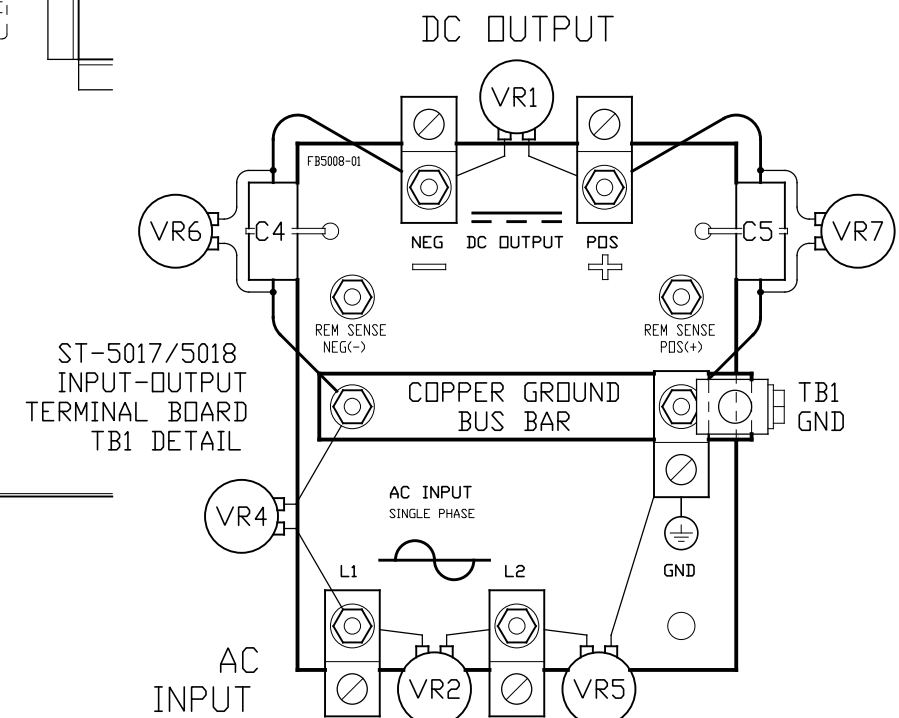
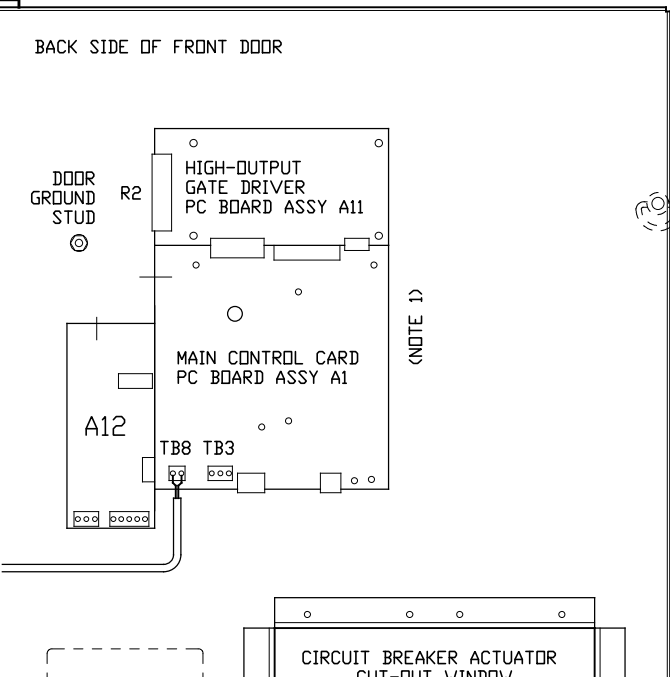
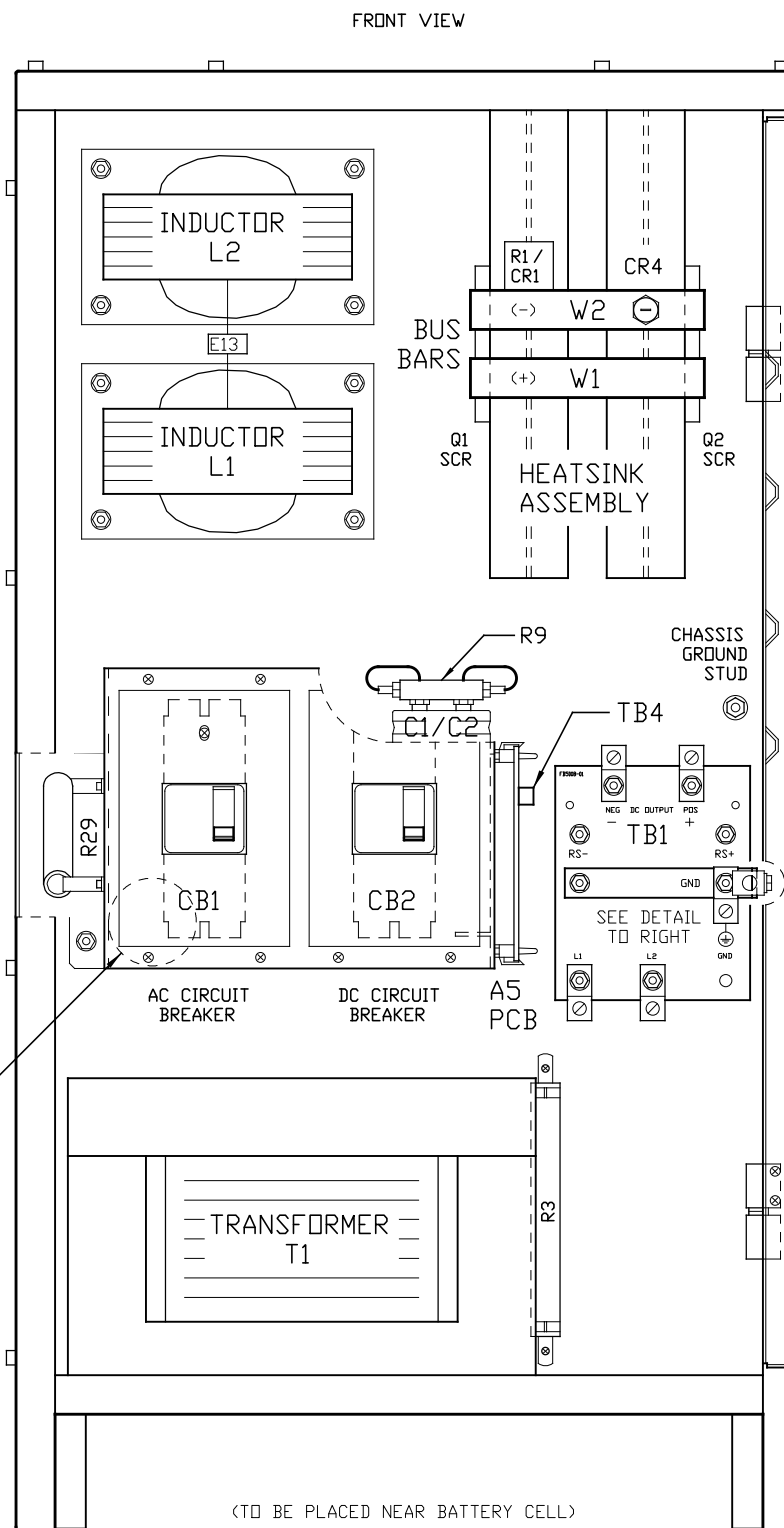
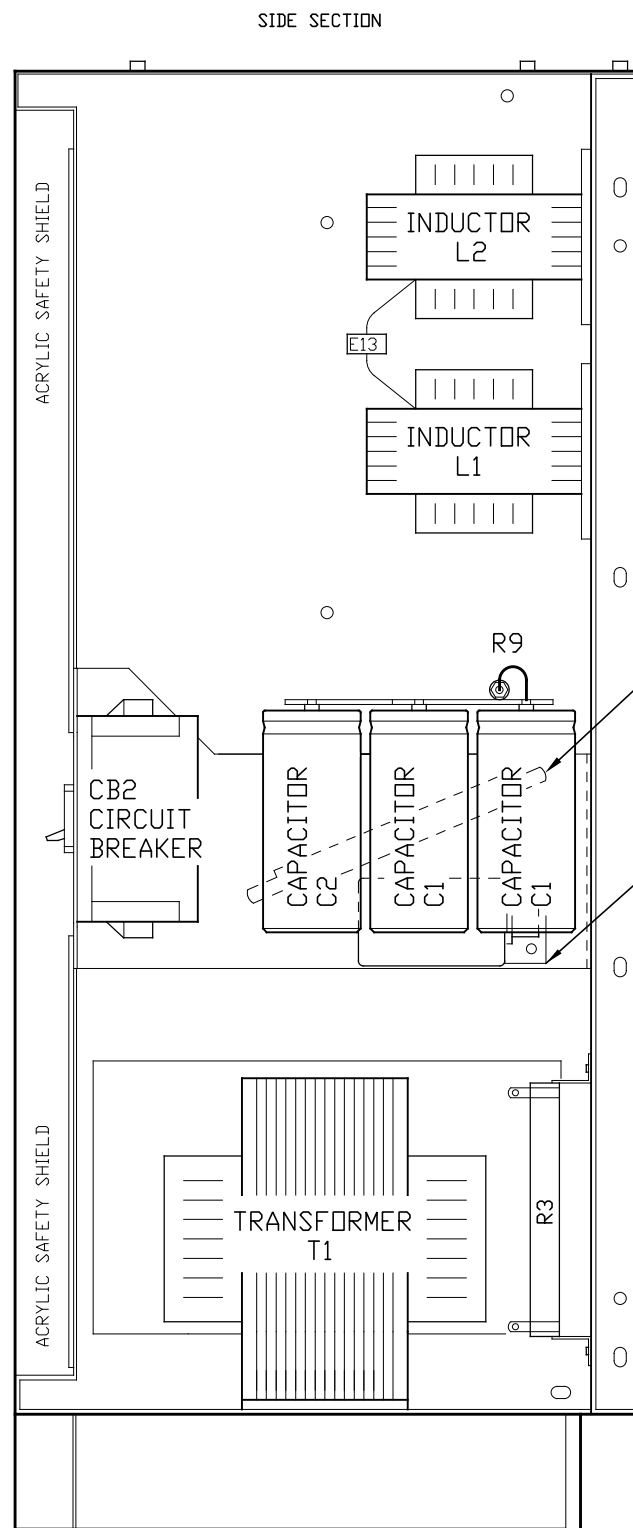
BOTTOM VIEW



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 <b>KMW</b> <b>110821</b>		TITLE <b>AT10.1 SERIES BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5018 ENCLOSURE</b>	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No <b>JE5026-24</b> REV <b>0</b> <b>B</b>	
0 N/A 110821			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE <b>NTS</b> SALES No SHEET <b>1</b> OF <b>1</b>	
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 (POS)
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 (POS 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

**HINDLE POWER**

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

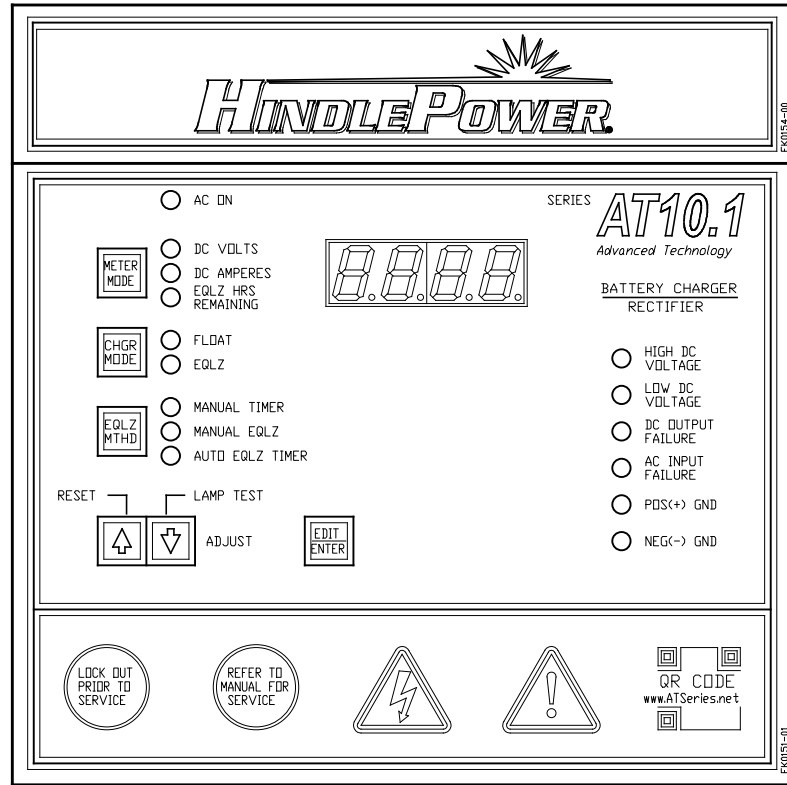
TITLE: AT10.1 SERIES BATTERY CHARGER  
 INTERNAL COMPONENT LAYOUT; STYLE-5018

DRAWING No: JE5029-24 REV 0 B

SCALE: NTS SALES No SHEET 1 OF 1

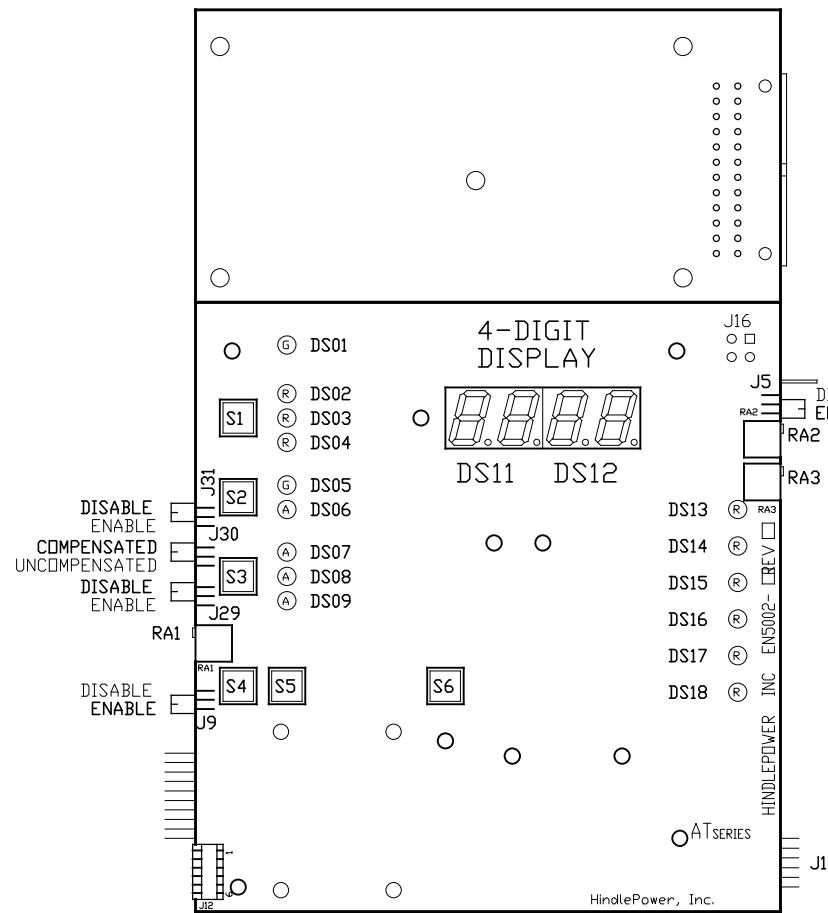
(TO BE PLACED NEAR BATTERY CELL)  
 A10 25ft / 7.6m LONG CABLE

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



CONTROL PANEL  
(PART No. FK0151-01)

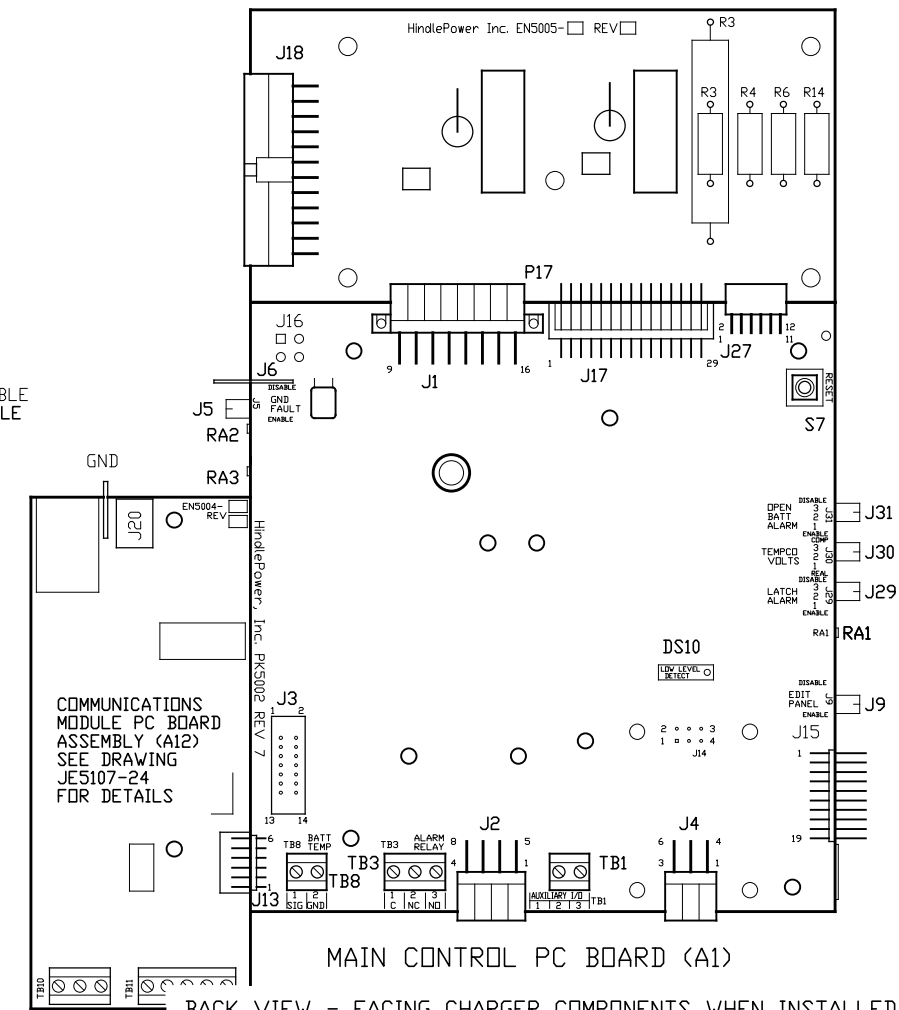
HIGH-OUTPUT GATE DRIVER PC BOARD (A11)



MAIN CONTROL PC BOARD (A1)

FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED

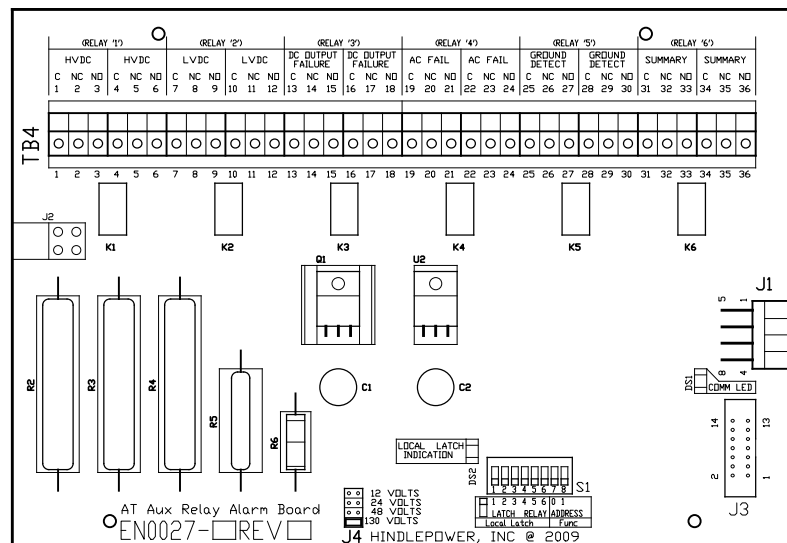
HIGH-OUTPUT GATE DRIVER PC BOARD (A11)



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)

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 - TEMPCO VOLTAGES (COMPENSATED/UNCOMP) SELECTOR
- J31 - BATTERY OPEN ALARM ENABLE/DISABLE SELECTOR

SWITCHES:

- S1 - METER MODE
- S2 - CHARGER MODE
- S3 - EQUALIZE METHOD
- S4 -  $\Delta$  ADJUST
- S5 -  $\nabla$  ADJUST
- S6 - EDIT / ENTER
- S7 - PROCESSOR MANUAL RESET

TERMINAL BLOCKS:

- TB3 - SUMMARY ALARM RELAY CONTACTS
- TB4 - AUX ALARM RELAY CONTACTS
- TB8 - OPT TEMPCO PROBE (A10) CONN
- TB18 - REM SHUTDOWN INTERFACE

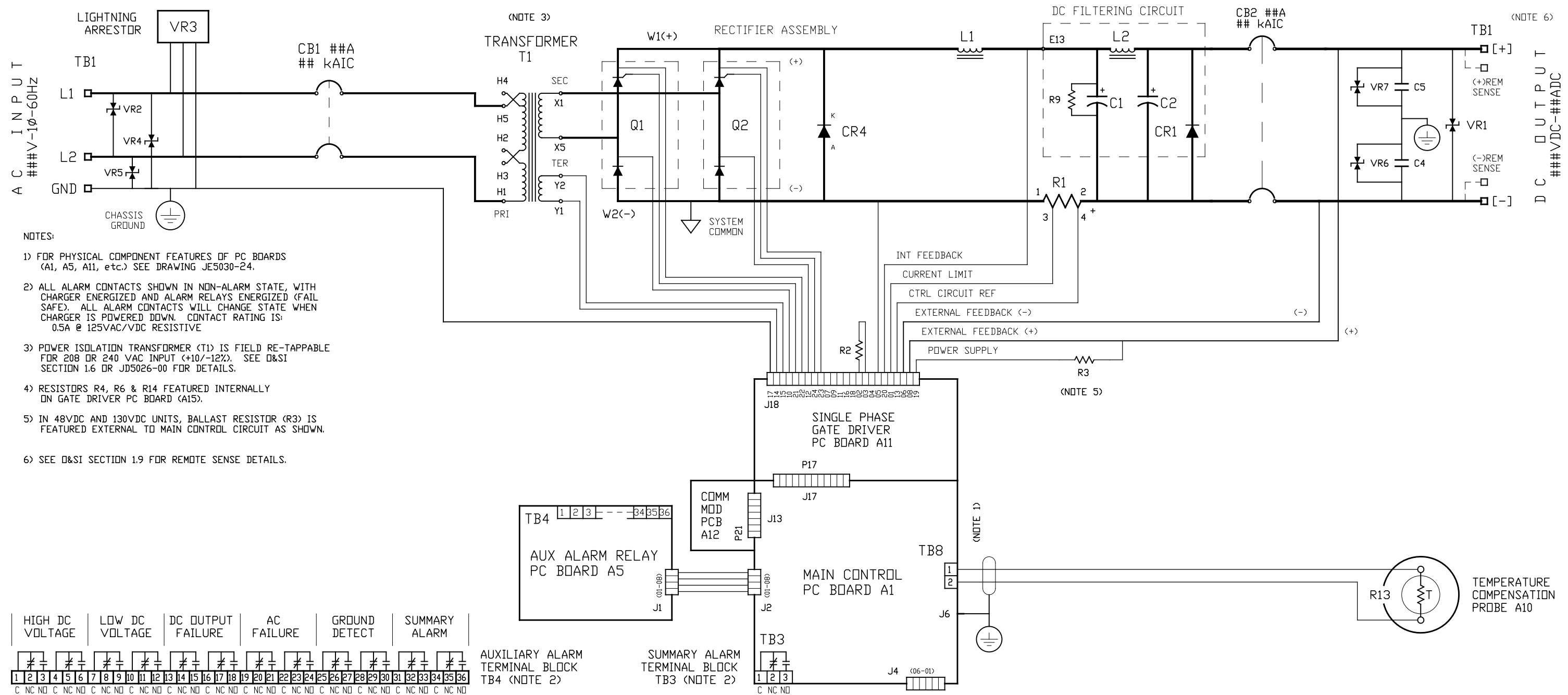
- OTHER CONTROLS:
- RA1 - LOW LEVEL DETECT ADJUST
  - RA2 - GROUND FAULT BALANCE
  - RA3 - GROUND FAULT SENSITIVITY

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

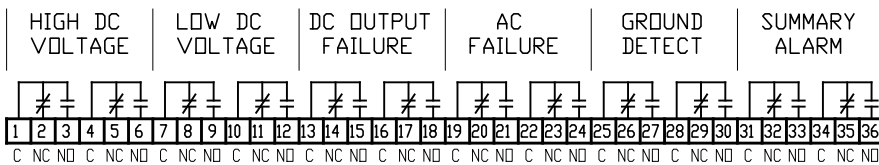
A5-J1 CONNECTED TO A1-J2 VIA EH5045-0# 8-PIN SERIAL CABLE

40-100ADC W/ COMMON OPTIONS

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



- 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.



STANDARD AT10.1 COMPONENTS:

- A1 MAIN CONTROL PC BOARD (NOTE 1)
- A11 SINGLE PHASE 100A GATE DRIVER PCB (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

STANDARD AT10.1 COMPONENTS:

- 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)
- T1 POWER ISOLATION TRANSFORMER (+10/-12%)
- TB1 INPUT/OUTPUT TERMINAL BLOCK
- TB3 SUMMARY ALARM TERMINAL BLOCK (NOTE 2)
- TB8 OPTIONAL TEMPCD 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

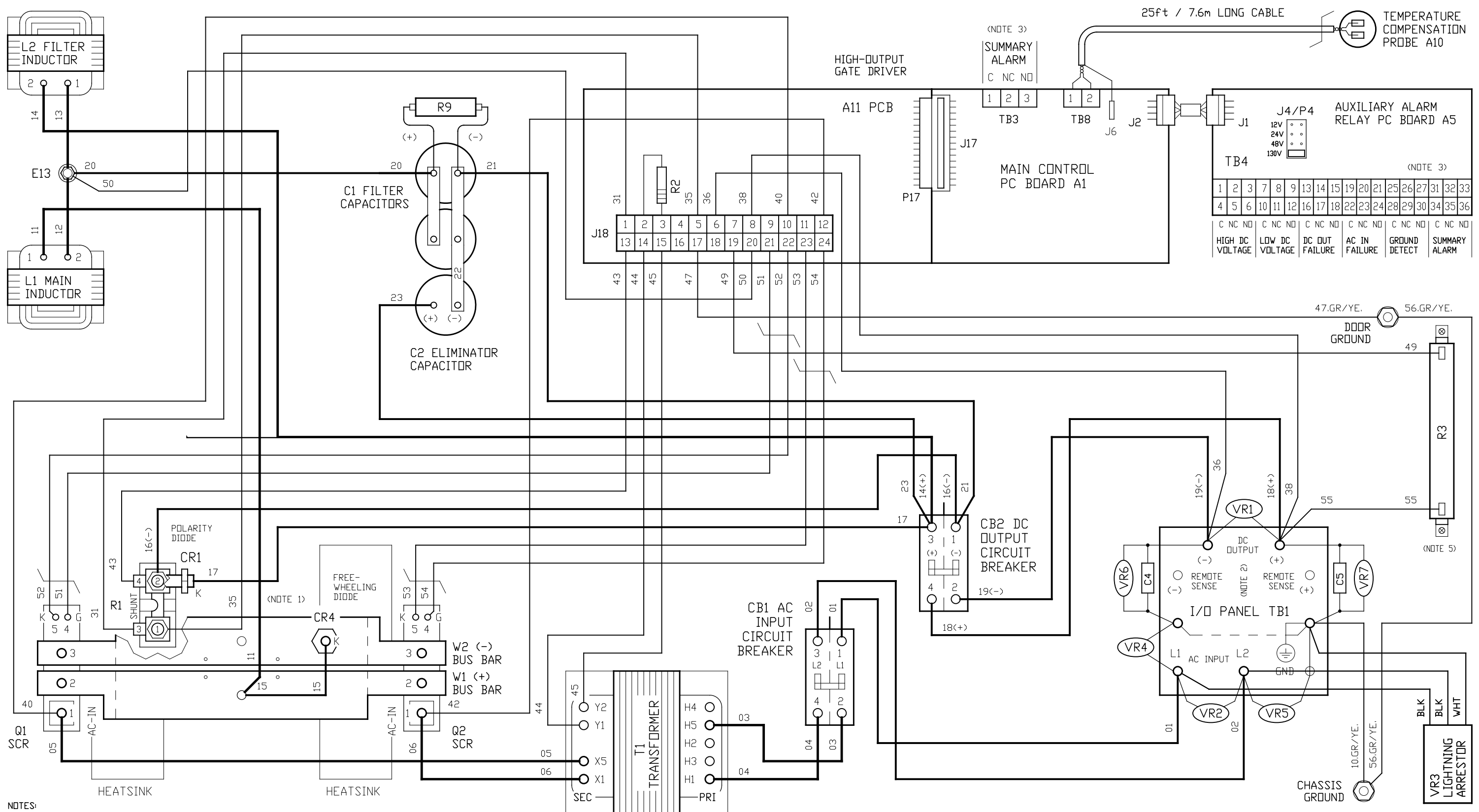
SUPPLIED AT10.1 OPTION COMPONENTS:

- 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

SUPPLIED AT10.1 OPTION COMPONENTS:

- A5 AUXILIARY ALARM RELAY PC BOARD (NOTE 1)
- TB4 AUXILIARY ALARM (A5) TERMINAL BLOCK (NOTE 2)
- A10 EXTERNAL TEMPERATURE COMPENSATION PROBE
- R13 TEMPCD PROBE (A10) RESISTOR SEE JD5003-00
- T TEMPCD PROBE (A10) THERMISTOR
- A12 COMMUNICATIONS MODULE PC BOARD (NOTE 1)

DRAWN BY <b>KMW</b> 110821		TITLE <b>BATTERY CHARGER SCHEMATIC: 40-100ADC W/ COMMON OPTIONS</b>	
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No <b>JE5032-24</b> REV <b>0</b> <b>B</b>	
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE <b>NTS</b> SALES No SHEET <b>1</b> OF <b>1</b>	



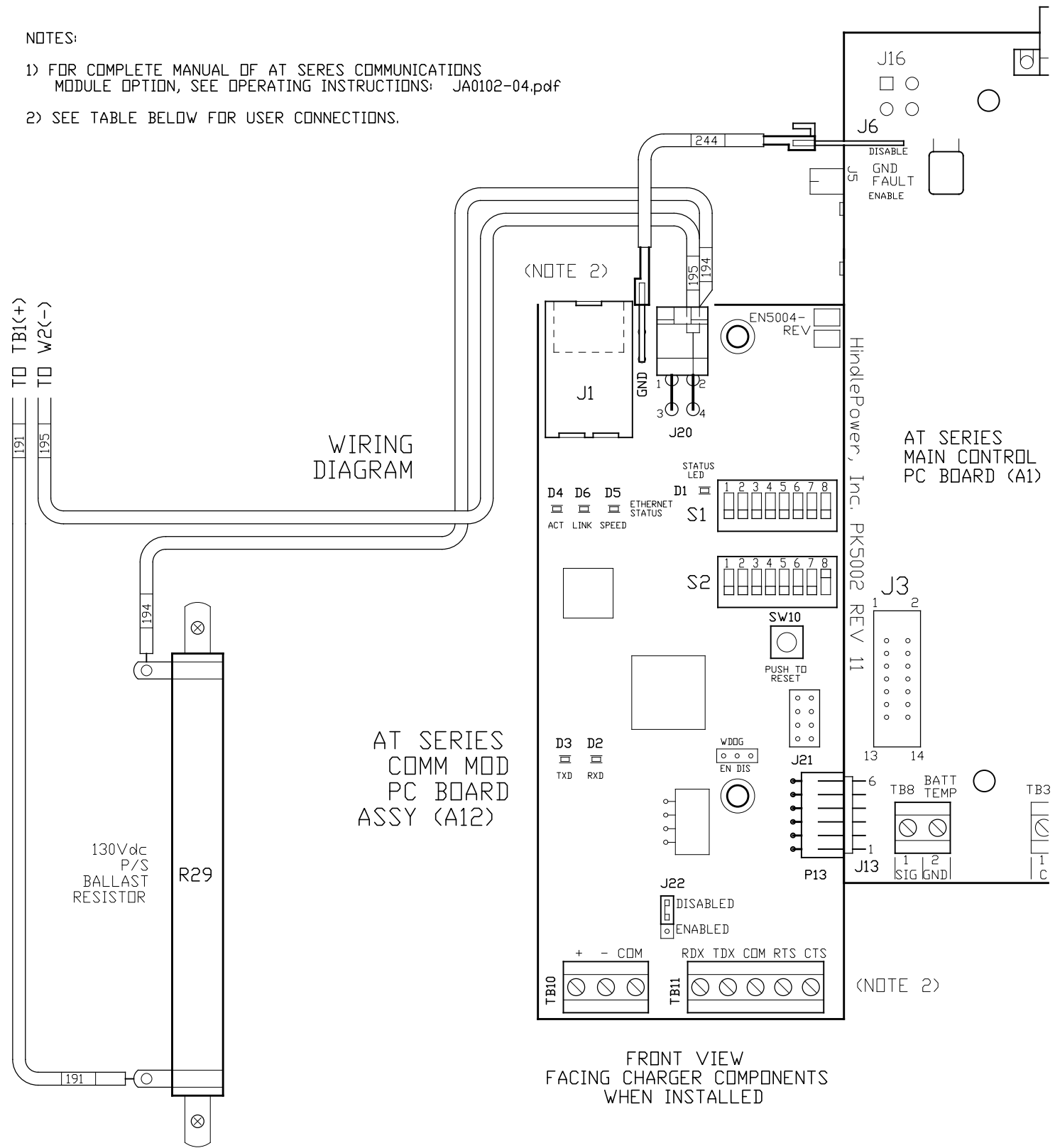
- NOTES:
- 1) CHARGER COMPONENTS ARE CONNECTED WITH BLACK FLAME-RETARDANT SWITCHBOARD INSULATION SYSTEM (SIS) TYPE WIRING, IDENTIFIED ON EACH END WITH NUMBER-CODED MARKERS. GROUND WIRES #10, #47 & #56 ARE GREEN WITH YELLOW STRIPE. DIODES (CR1 & CR4) ARE ANODE-MOUNTED TYPE, WIRE TO CATHODE.
  - 2) WHEN 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

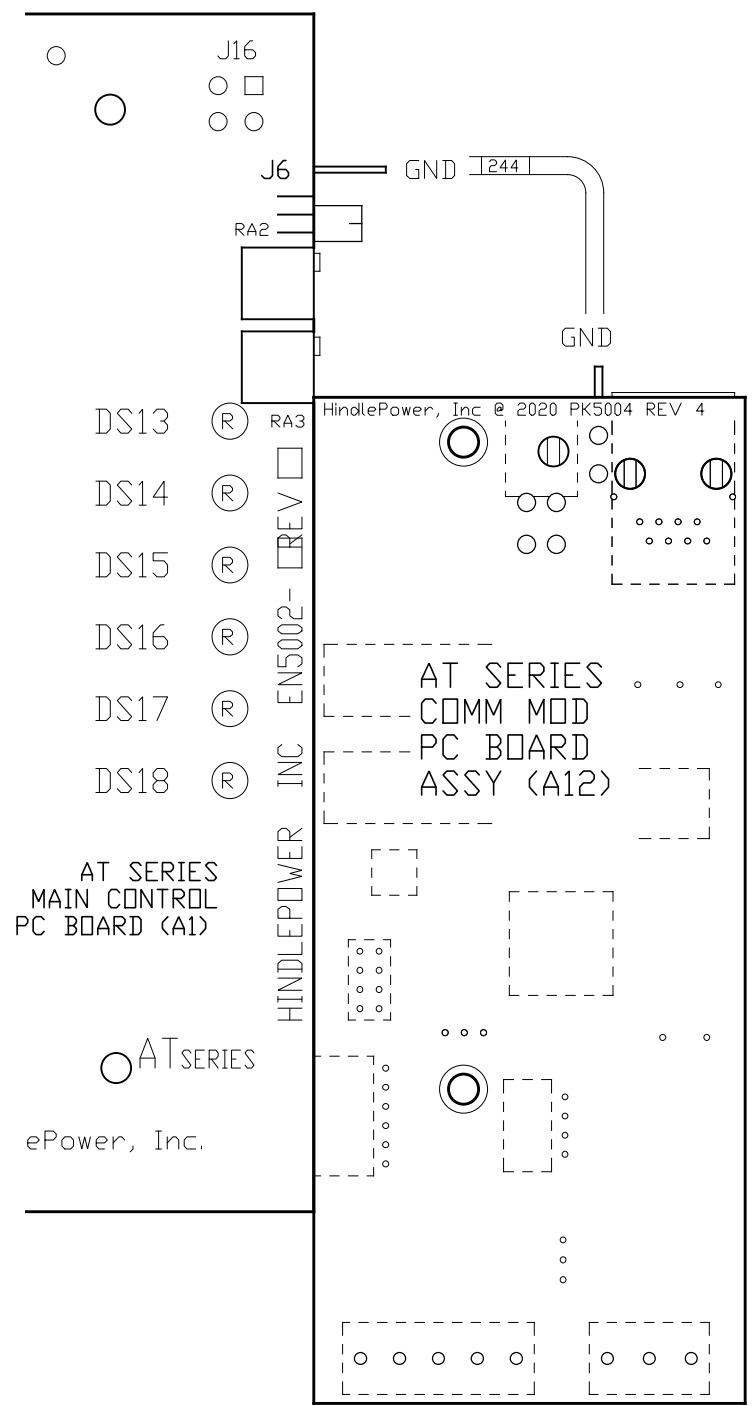
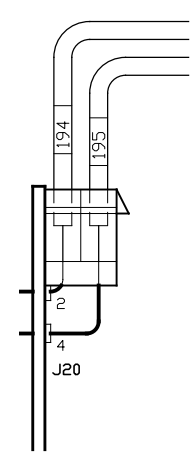
			THIRD ANGLE PROJECTION		 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com			
			DRAWN BY	KMW			110821	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			TITLE	BATTERY CHARGER CONNECTION DIAGRAM: 40-100ADC W/ COMMON OPTIONS	
			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:			DRAWING No	JE5034-24	
0	N/A	110821				REV	0	B
REV	ECN No	DATE				SCALE	NTS	SHEET 1 OF 1

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



- 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

			 THIRD ANGLE PROJECTION	 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com
DRAWN BY <b>KMW</b>			110821	TITLE <b>AT SERIES BATT CHGR COMMUNICATIONS MODULE OPTION DETAIL</b>
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG				DRAWING No <b>JE5107-24</b>
0	N/A	110821	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	
REV	ECN No	DATE	SCALE <b>NTS</b>	SHEET <b>1</b> OF <b>1</b>