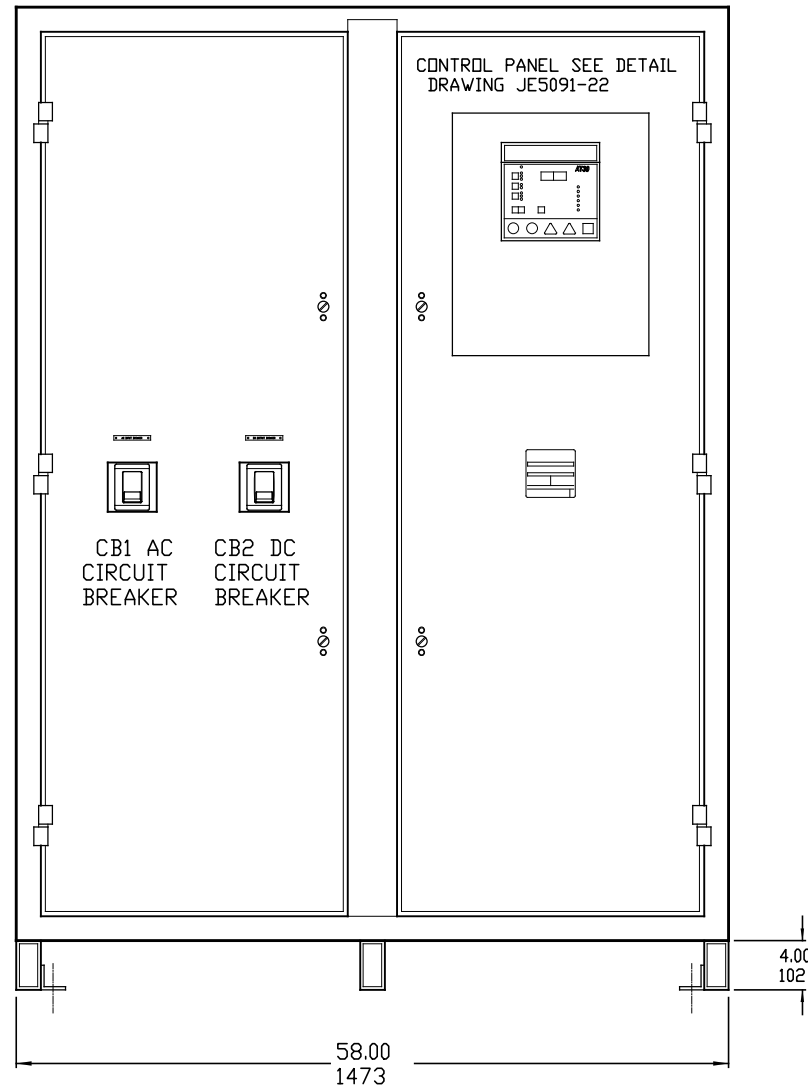
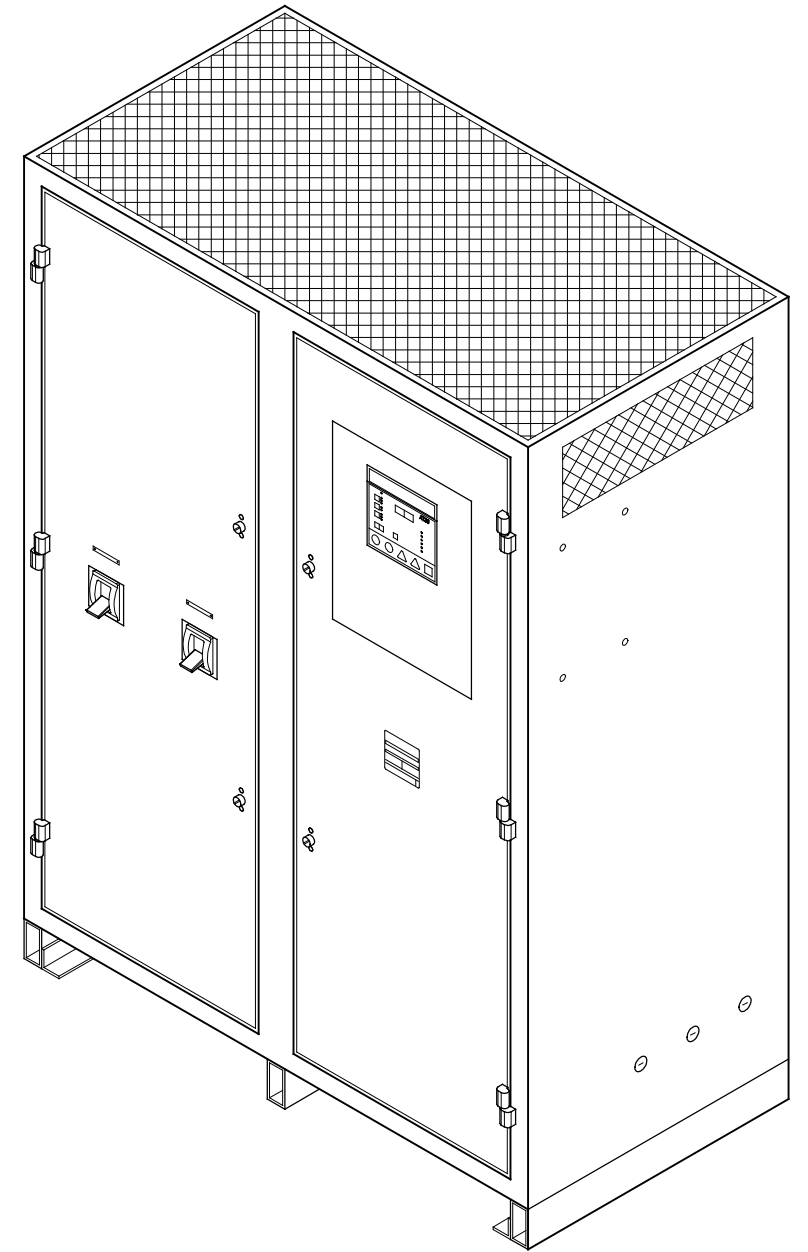
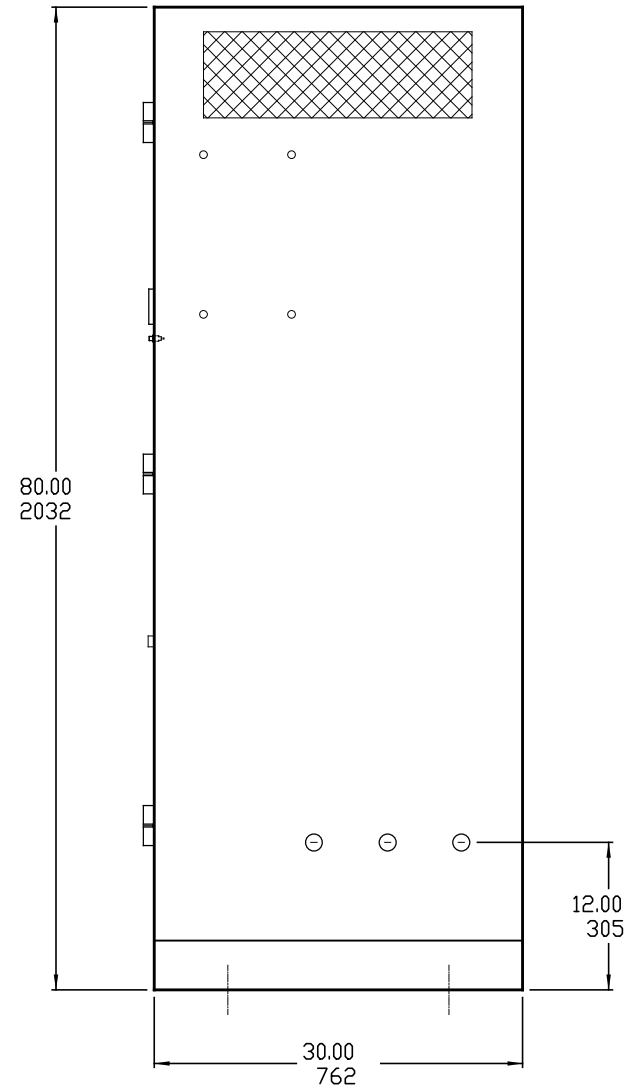


FRONT VIEW



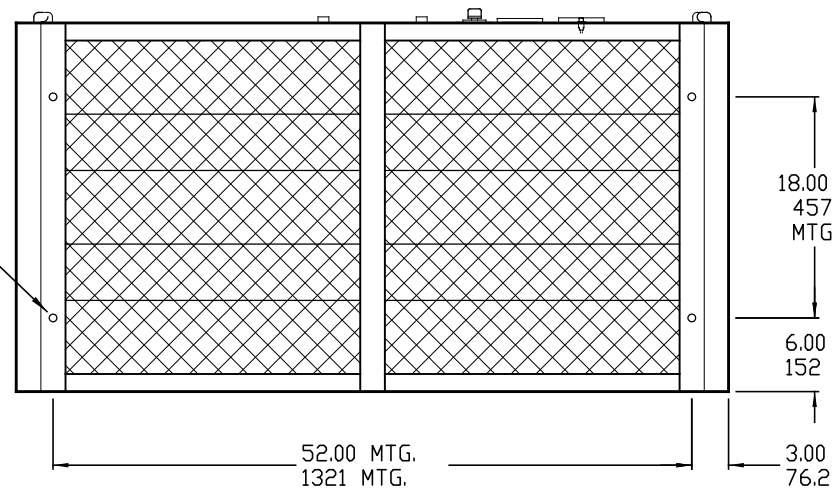
RIGHT SIDE VIEW



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) 0.625in / 16mm FLOOR-MOUNTING HOLES ARE PROVIDED ON BOTTOM OF ENCLOSURE AS SHOWN.
- 4) SIX (6) STANDARD PRE-FAB CONDUIT KNOCKOUTS ARE PROVIDED AS SHOWN FOR CABLE ENTRY. BOTTOM AND TOP CONDUIT ENTRY IS POSSIBLE THROUGH EXPANDED METAL UNDERSIDE AND FULLY VENTED TOP. IF ADDITIONAL CONDUIT ENTRANCES ARE REQUIRED, ENCLOSURE SHOULD BE FIELD-MODIFIED BY INSTALLER.
- 5) BATTERY CHARGER SHIPPING WEIGHT: SEE PRODUCT LITERATURE

NOTE 3



BOTTOM VIEW

DUAL DIMENSIONS in mm

500-1,000ADC W/ COMMON OPTIONS

			THIRD ANGLE PROJECTION		HINDLEPOWER		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KMW 110921		TITLE AT30 BATTERY CHARGER OUTLINE: NEMA-1 STYLE-198 ENCLOSURE			
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5096-22		REV 0 B	
0 -N/A- 110921			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS SALES No		SHEET 1 OF 1	

SIDE SECTION

FRONT VIEW

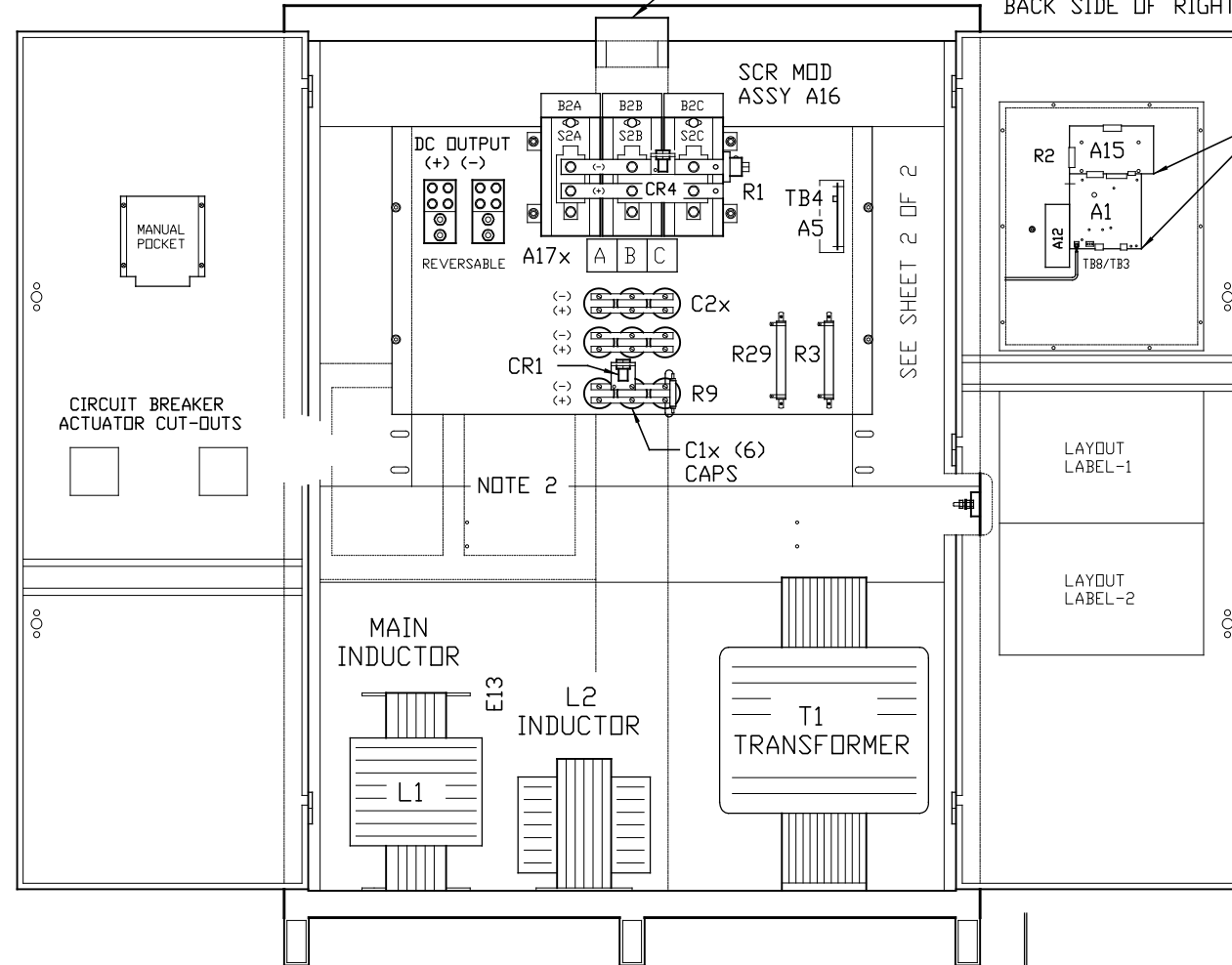
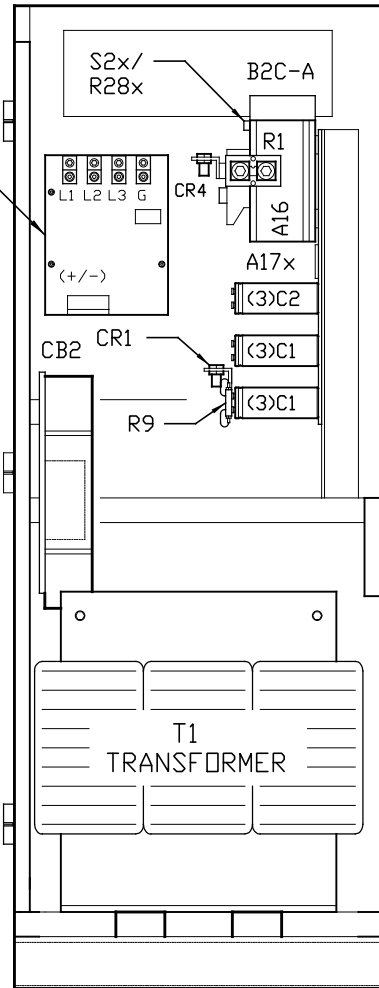
NOTE 3

BACK SIDE OF RIGHT DOOR

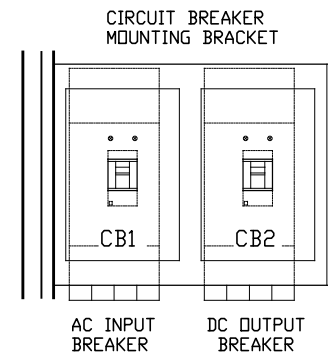
NOTE 1

INPUT-OUTPUT
PANEL SEE
DETAIL BELOW

CIRCUIT BREAKER
MOUNTING BRACKET
SEE NOTE 2



SEE SHEET 2 OF 2

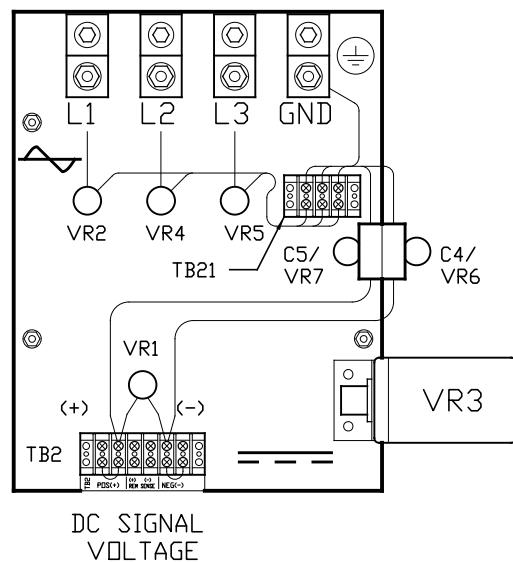


SYM	STANDARD COMPONENT DESCRIPTION
A1	MAIN CONTROL PC BOARD
A15	THREE PHASE GATE DRIVER PC BRD
A16	3PH SCR MODDLE ASSY (1x6 Q1-Q6)
A17x	SCR SNUBBER PC BOARD - QTY. (3)
B2x	SCR MODULE (A16) COOLING FAN
C4	EMI OUTPUT FILTER CAP (NEG-GND)
C5	EMI OUTPUT FILTER CAP (PDS-GND)
CB1	AC INPUT CIRCUIT BREAKER (LGL4)
CB2	DC OUTPUT CIRCUIT BREAKER (LGL4)
CR4	FREE-WHEELING DIODE
L1	MAIN INDUCTOR
R1	MAIN DC SHUNT, NEG(-) BUS
R2	CURRENT RATING RESISTOR
R3	PWR SUPPLY BALLAST RES (130VDC)
R28x	THERMOSTAT (S2x) SENSE RESISTOR
S2x	SCR MODULE (A16) THERMOSTAT
T1	POWER ISOLATION TRANSFORMER
TB1	I/O TERMINAL BOARD
TB2	INT DC VOLTAGE (+/-) CONTACTS
TB3	SUMMARY ALARM CONTACTS
TB8	OPT. TEMPCD PROBE TERM BLOCK
TB21	INTERNAL GROUND (≡) CONTACTS
VR1	OUTPUT SURGE SUPPRESSOR (+TD-)
VR2	INPUT SURGE SUPPRESSOR (LINE 1)
VR4	INPUT SURGE SUPPRESSOR (LINE 2)
VR5	INPUT SURGE SUPPRESSOR (LINE 3)
VR6	OUTPUT SURGE SUPPRESSOR (-)
VR7	OUTPUT SURGE SUPPRESSOR (+)

SYM	FEATURED OPTION COMP DESCRIPTION
A5	AUXILIARY ALARM RELAY PC BOARD
A10	TEMPERATURE COMPENSATION PROBE
A12	COMMUNICATION MODULE PCB
C1x	DC OUTPUT FILTER CAPACITOR
C2x	BATTERY ELIMINATOR FILTER CAP
CR1	POLARITY DIODE
E13	INDUCTOR INTER-CONNECT POINT
L2	FILTER INDUCTOR
R9	FILTER CAP (C1) BLEED RESISTOR
TB4	AUX ALARM PCB (A5) TERM BLOCK
R29	COMM PCB (A12) PWR RES (130VDC)
VR3	AC INPUT LIGHTNING ARRESTOR

I/O TERMINAL BOARD
(TB1) DETAIL

AC INPUT



NOTES:

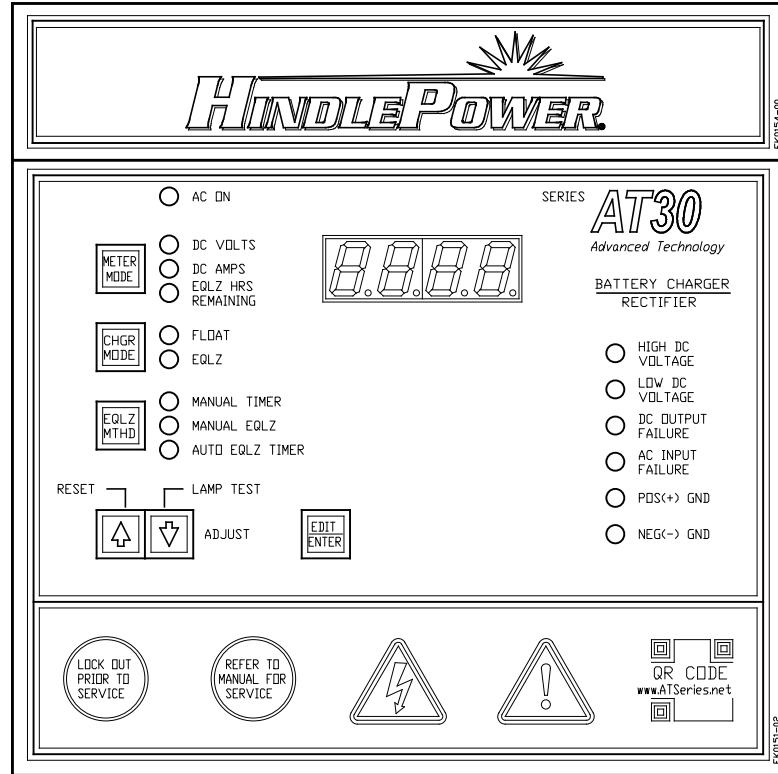
- 1) FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A5, A15, A17, etc.) SEE DRAWING JE5091-22.
- 2) CIRCUIT BREAKER(S) MOUNTED ON SIDE BRACKET, NOT FULLY SHOWN FOR CLARITY.
- 3) CENTER DIVIDER NOT SHOWN FOR CLARITY OF INTERNAL VIEW.

I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB1(+)	POS(+) DC OUTPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	(2) 350-800 MCM
TB1(-)	NEG(-) DC OUTPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	(2) 350-800 MCM
REM SENSE(+/-)	POS/NEG REMDTE SENSE TERMINALS - 6-32 COMPRESSION SCREW	#16-14 AWG
TB1-GND	USER GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG	#6 AWG-350 MCM
TB1-L1/L2/L3	AC INPUT TERMINALS - CU-ALUMINUM COMPRESSION LUG	#6 AWG-350 MCM
TB3	SUMMARY ALARM TERMINAL BLOCK - SOLDERLESS COMP SCREW	#22-14 AWG
TB4	AUX ALARM RELAY (A5) TERM BLOCK - SOLDERLESS COMP SCREW	#22-14 AWG
TB8	TEMPCD PROBE (A10) TERM BLK - SOLDERLESS COMP SCREW	#22-14 AWG

500-1,000ADC W/ COMMON OPTIONS

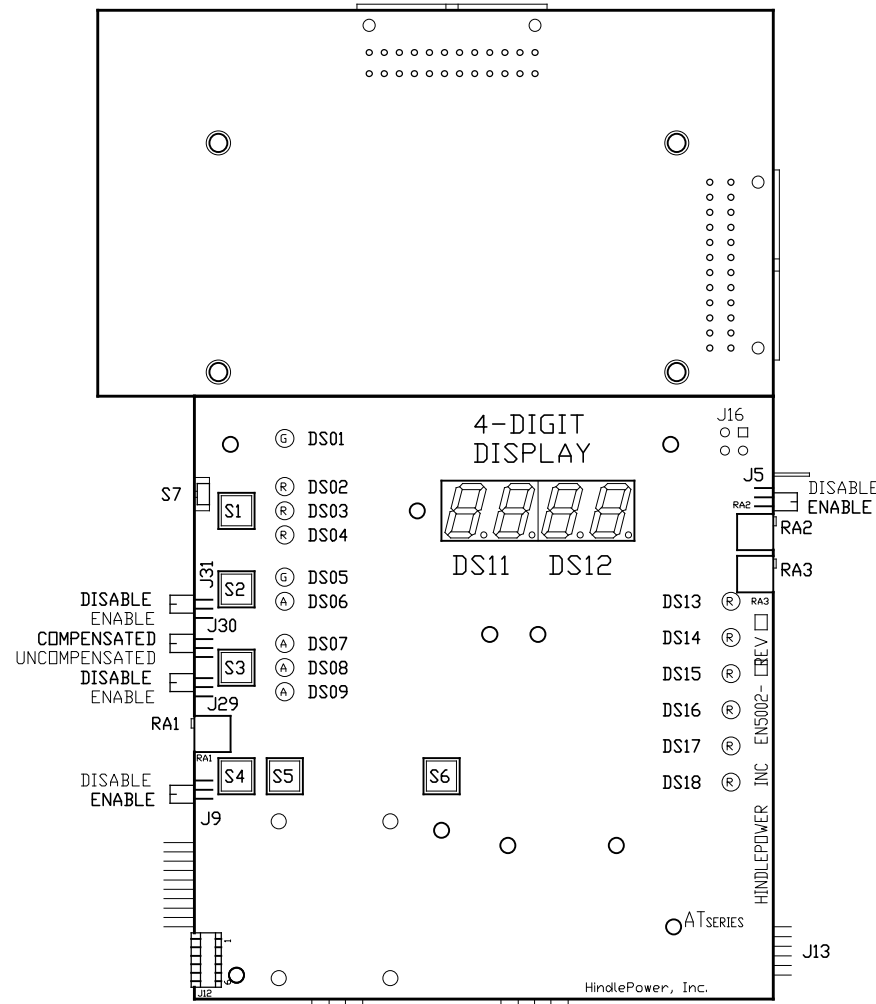
			THIRD ANGLE PROJECTION		HINDLEPOWER		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KMW 111021		TITLE AT30 SERIES BATTERY CHARGER INTERNAL COMPONENT LAYOUT: STYLE-198			
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5099-22		REV 1 B	
0 N/A 111021			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS		SHEET 1 OF 1	
REV	ECN No	DATE			SALES No			

- INDICATOR LIGHTS (LEDs):
- DS01 - GREEN - AC ON
 - DS02 - RED - DC VOLTS
 - DS03 - RED - DC AMPERES
 - DS04 - RED - EQUALIZE HRS REMAINING
 - DS05 - GREEN - FLOAT
 - 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



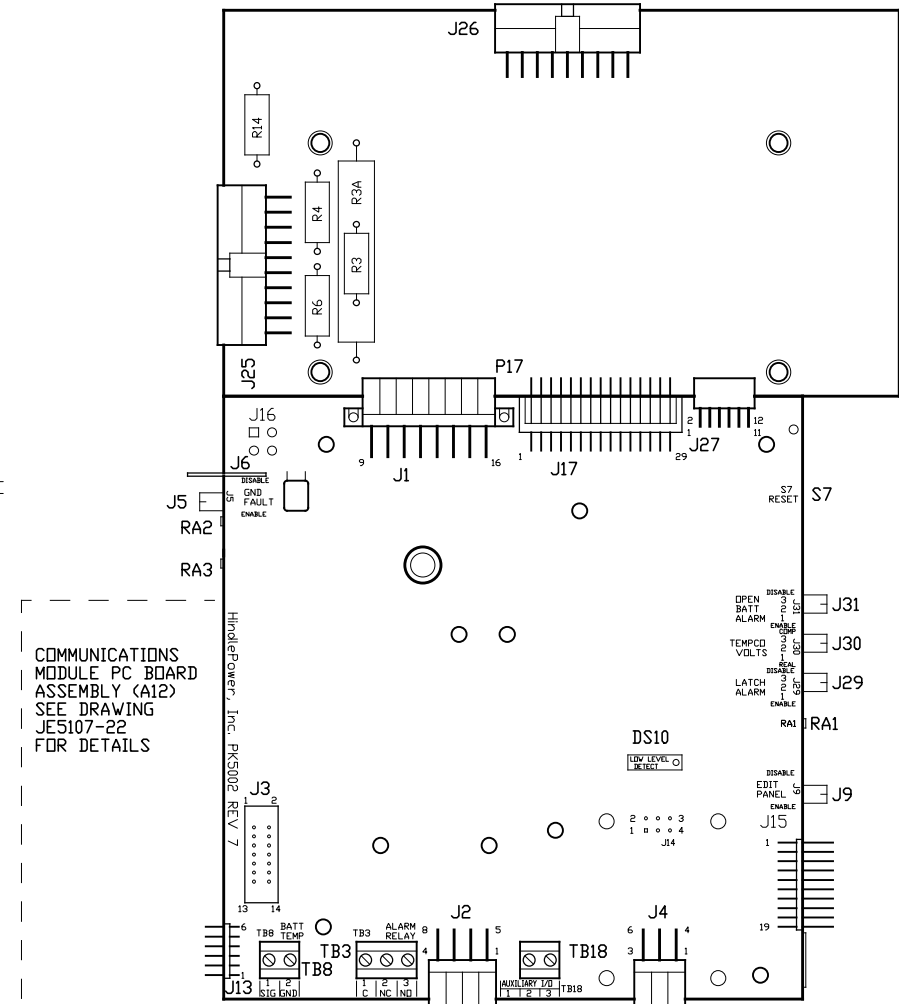
CONTROL PANEL
(PART No. FK0151-02)

THREE PHASE GATE DRIVER PC BOARD (A15)



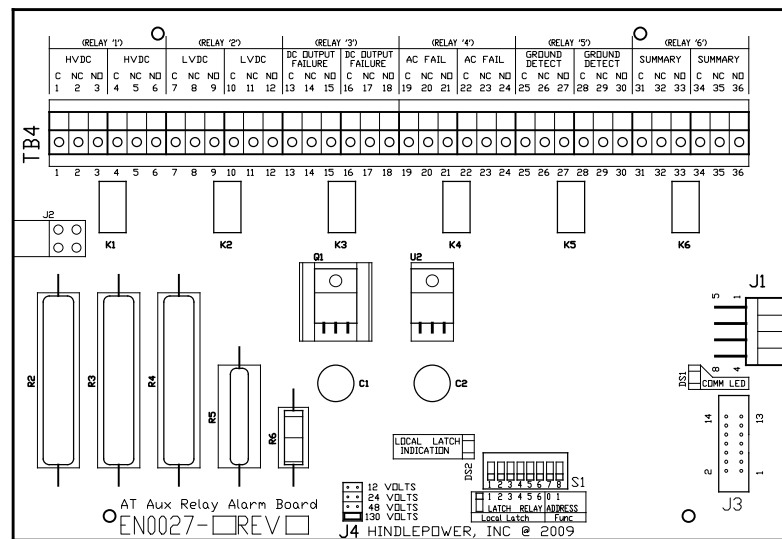
MAIN CONTROL PC BOARD (A1)
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED

THREE PHASE GATE DRIVER PC BOARD (A15)

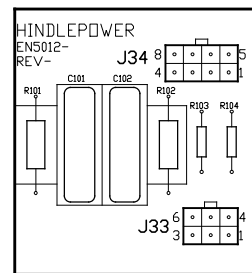


MAIN CONTROL PC BOARD (A1)
BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

NOTE: UNLESS OTHERWISE SPECIFIED, ALL USER 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)



SCR SNUBBER PC BOARD (A17x)
THREE (3) REQ'D PER CHARGER

USER JUMPERS:

- J1 - not used with 3PH (MAINFRAME SIGNAL HARNESS)
- 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 - 3PH GATE DRIVER PC BOARD (A15) INTERCONNECTOR
- J25 - MAINFRAME CONTROL SIGNAL HARNESS
- J26 - SCR FIRING CONTROL HARNESS (3 PHASE/6 PULSE)
- J27 - 3PH GATE DRIVER PC BOARD (A15) 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 - ΔADJUST
- S5 - ▽ADJUST
- S6 - EDIT / ENTER
- S7 - PROCESSOR MANUAL RESET

TERMINAL BLOCKS:

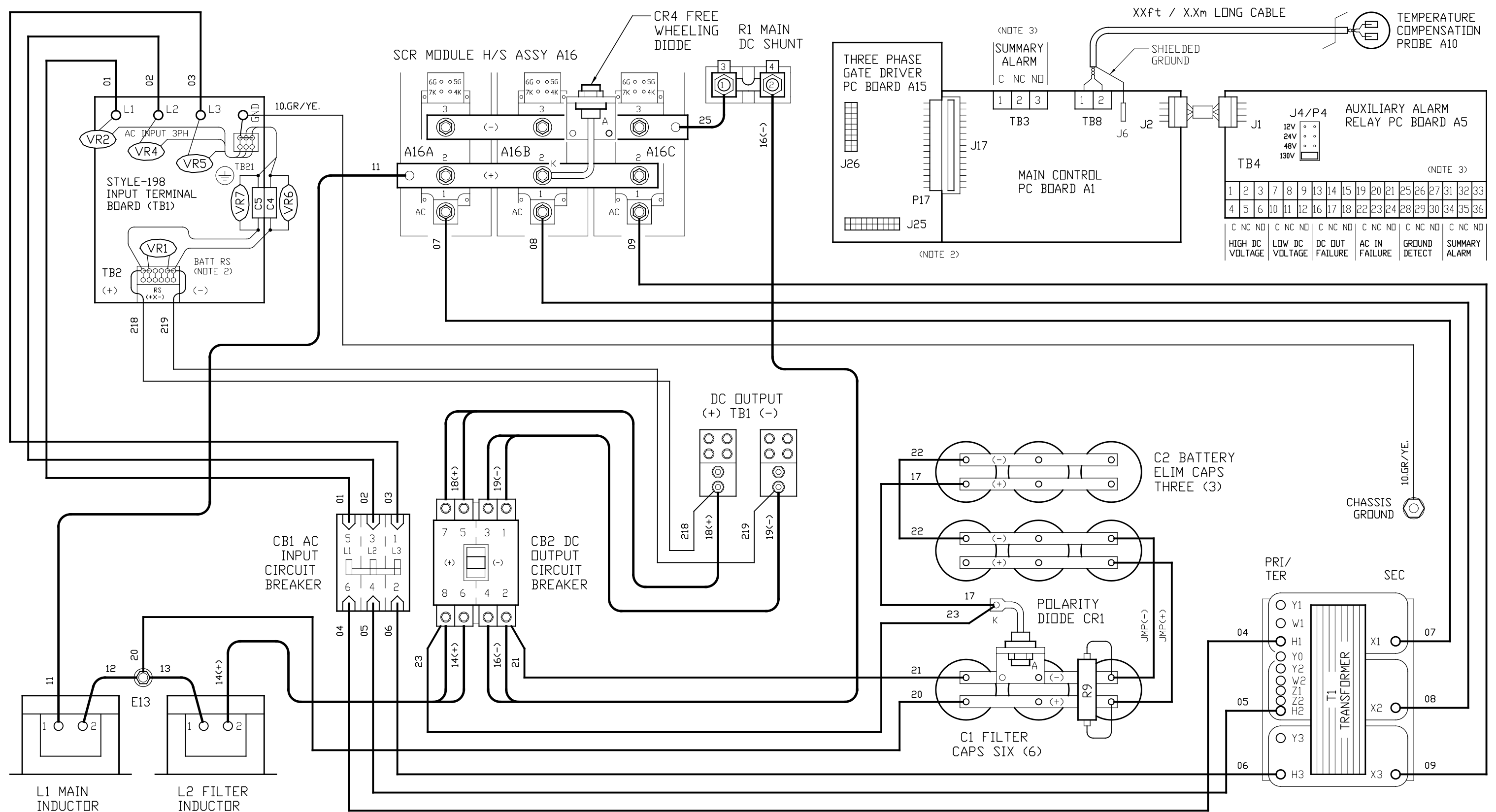
- TB3 - SUMMARY ALARM RELAY CONTACTS
- TB4 - AUX ALARM RELAY CONTACTS
- TB8 - DPT TEMPCO PROBE (A10) CONN
- TB18 - REM SHUTDOWN INTERFACE

A5-J1 CONNECTED TO A1-J2 VIA EHS045-0# 8-PIN SERIAL CABLE

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

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

500-1,000ADC W/ COMMON OPTIONS			1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
DRAWN BY KMW 110921			TITLE AT30 SERIES BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL	
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			DRAWING No JE5091-22 REV 0 B	
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:			SCALE NTS SALES No SHEET 1 OF 1	
0	N/A	110921		
REV	ECN No	DATE		



NOTES:

- COMPONENTS ARE CONNECTED WITH BLACK FLAME-RETARDANT SWITCHBOARD INSULATION SYSTEM (SIS) TYPE WIRING, IDENTIFIED ON EACH END WITH NUMBER-CODED MARKERS. GROUND WIRE #10 IS GREEN WITH YELLOW STRIPE. DIODES (CR1 & CR4) ARE ANODE-MOUNTED TYPE, WIRE TO CATHODE.
- THIS DRAWING (SHEET 1) SHOWS THE MAINFRAME POWER WIRING AND CUSTOMER CONNECTION CONTACTS TO CONTROL PC BOARDS (A1 & A5). SEE SHEET 2 FOR ALL CONTROL (SIGNAL) WIRING, INCLUDING REMOTE SENSE MODIFICATIONS, IF APPLICABLE.
- STANDARD USER ALARM CONTACTS (TB3, TB4, etc.) ARE SOLDERLESS COMPRESSION SCREW TERMINALS, ACCEPTING #22-14 AWG WIRE.

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

0	N/A	111021	THIRD ANGLE PROJECTION
REV	ECN No	DATE	

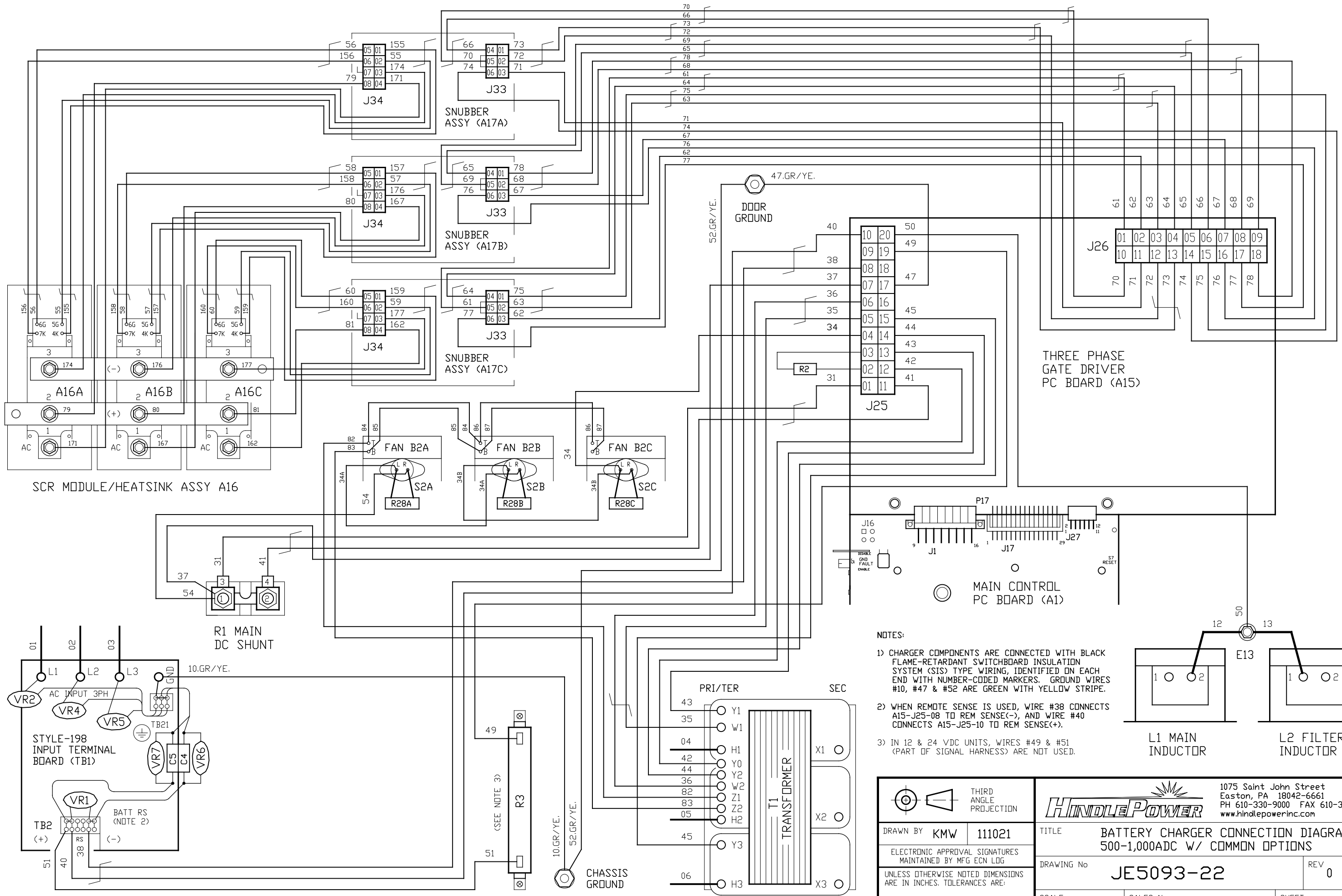
HINDLE POWER

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

TITLE BATTERY CHARGER CONNECTION DIAGRAM:
 500-1,000ADC W/ COMMON OPTIONS

DRAWING No JE5093-22 **REV** 0 **B**

SCALE NTS **SALES No** **SHEET** 1 **OF** 3



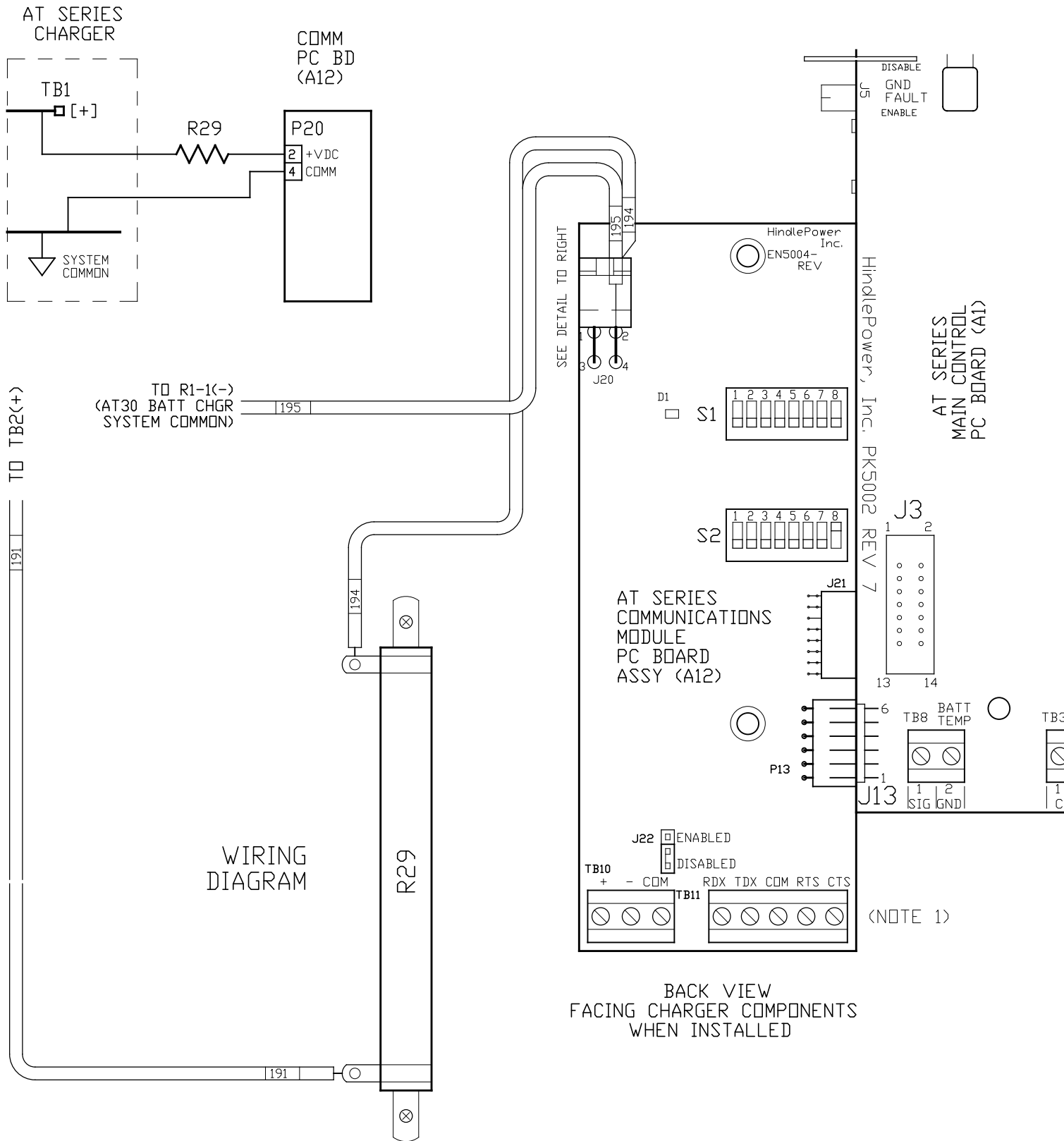
NOTES:

- 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 & #52 ARE GREEN WITH YELLOW STRIPE.
- 2) WHEN REMOTE SENSE IS USED, WIRE #38 CONNECTS A15-J25-08 TO REM SENSE(-), AND WIRE #40 CONNECTS A15-J25-10 TO REM SENSE(+).
- 3) IN 12 & 24 VDC UNITS, WIRES #49 & #51 (PART OF SIGNAL HARNESS) ARE NOT USED.

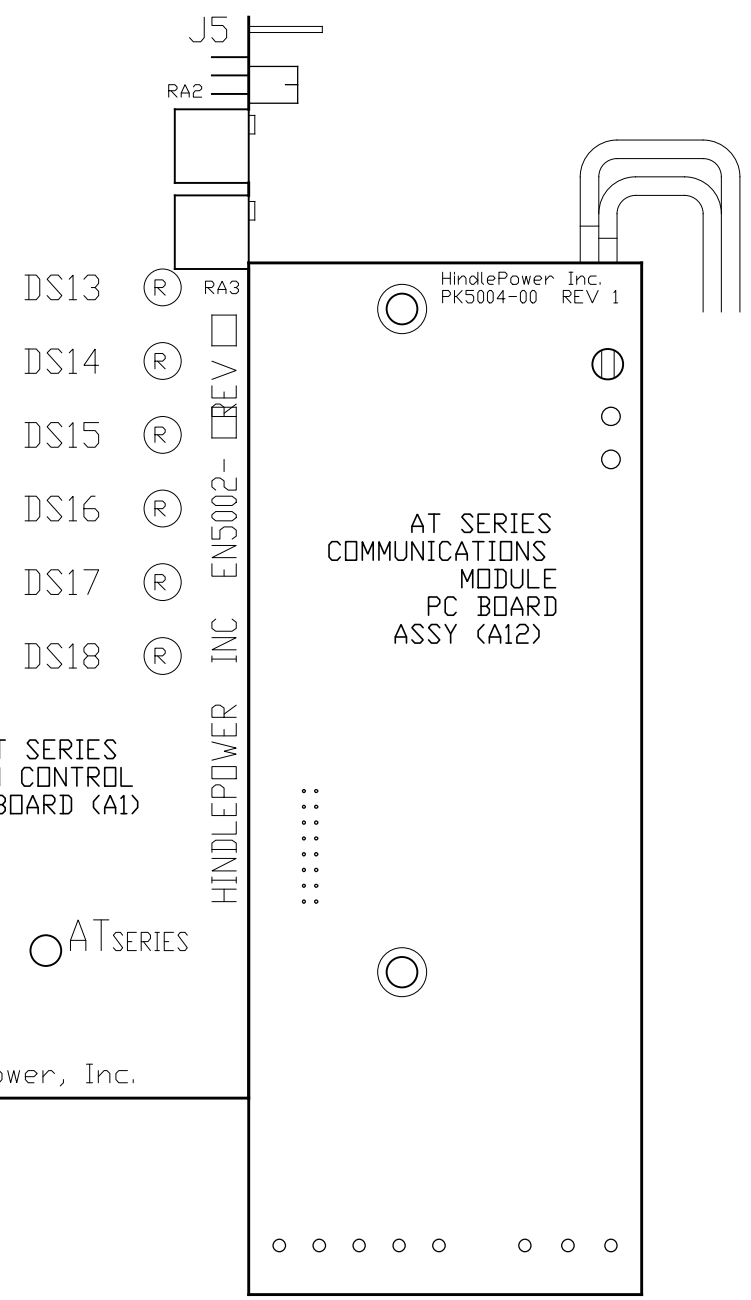
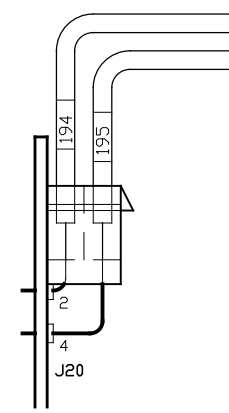
THIRD ANGLE PROJECTION	
DRAWN BY	KMW 111021
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG	
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	

		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
TITLE		BATTERY CHARGER CONNECTION DIAGRAM: 500-1,000ADC W/ COMMON OPTIONS	
DRAWING No		JE5093-22	
SCALE	NTS	SALES No	REV 0 B
SHEET 2 OF 2			

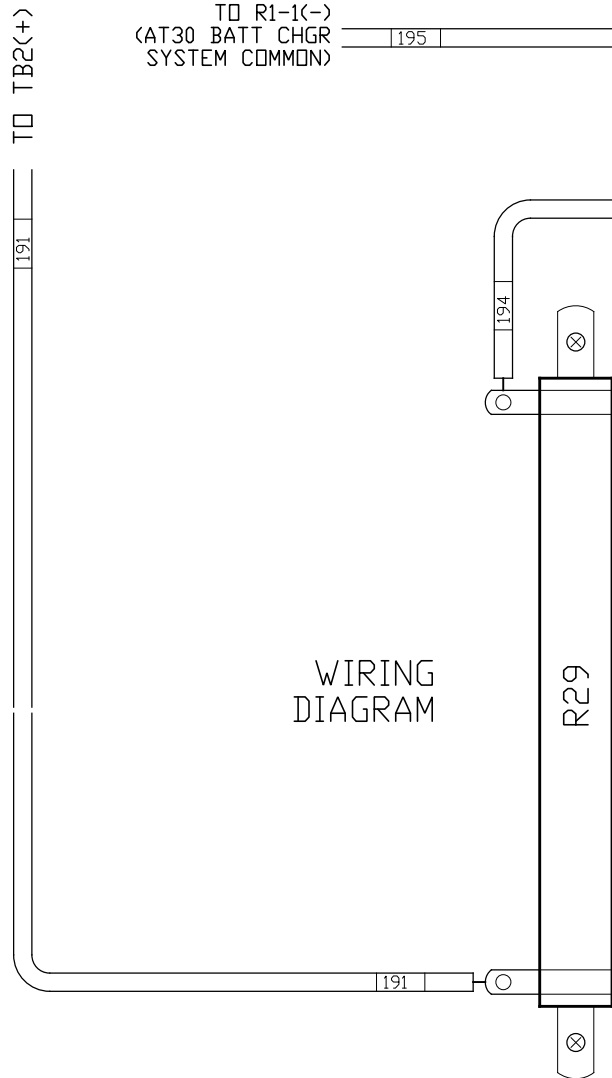
SYSTEM SCHEMATIC



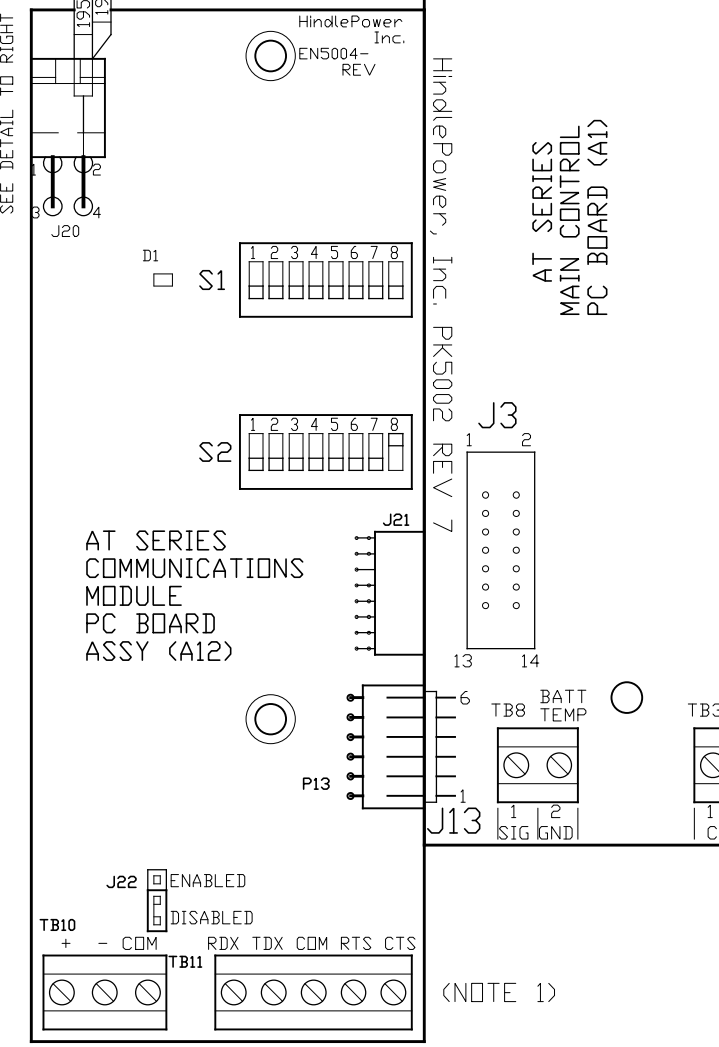
SIDE VIEW OF PC BOARD



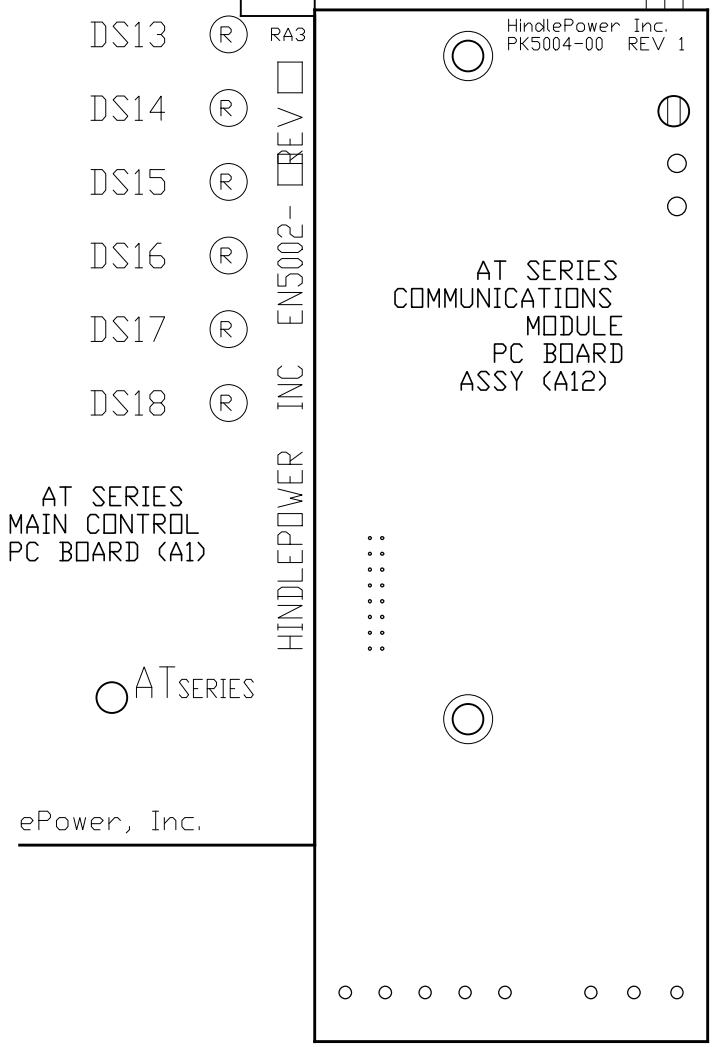
WIRING DIAGRAM



BACK VIEW FACING CHARGER COMPONENTS WHEN INSTALLED



AT SERIES MAIN CONTROL PC BOARD (A1)



- INDICATOR LIGHTS:
 D1 - STATUS LED
- JUMPERS:
 J20 - POWER SUPPLY CONNECTION
 J21 - FACTORY CONNECTION
 J22 - RS-485 TERMINATING RESISTOR (ENABLE/DISABLE)
- CONNECTORS:
 P13 - PLUG FOR MAIN CONTROL PCB (A1)
 J13 CONNECTION
- SWITCHES:
 S1 - CONFIGURATION SWITCHES
 S2 - MODBUS ADDRESS
- TERMINAL BLOCKS:
 TB10 - RS-485 USER CONNECTION
 TB11 - RS-232 USER CONNECTION

NOTES:
 1) UNLESS OTHERWISE SPECIFIED, ALL USER TERMINAL BLOCKS (TB10/TB11) ARE SOLDERLESS COMPRESSION TERMINALS. CONTACT RATING IS 0.5A @ 125VAC/DC, ACCEPTING #22-14 AWG WIRE.
 2) FOR COMPLETE MANUAL OF AT SERIES COMMUNICATIONS MODULE OPTION, SEE OPERATING INSTRUCTIONS: JA0102-04.pdf

- FEATURED OPTIONS:
 - AT SERIES COMM MOD PCB (A12)
 - 130Vdc POWER SUPPLY RESISTOR (R29)

			THIRD ANGLE PROJECTION		500-1,000ADC W/ COMMON OPTIONS	
			DRAWN BY KMW 110921		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 AT SERIES BATTERY CHARGER COMMUNICATIONS MODULE OPTION DETAIL	
0	N/A	110921	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		DRAWING No JE5107-22 REV 0 B	
REV	ECN No	DATE	SCALE NTS SALES No		SHEET 1 OF 1	