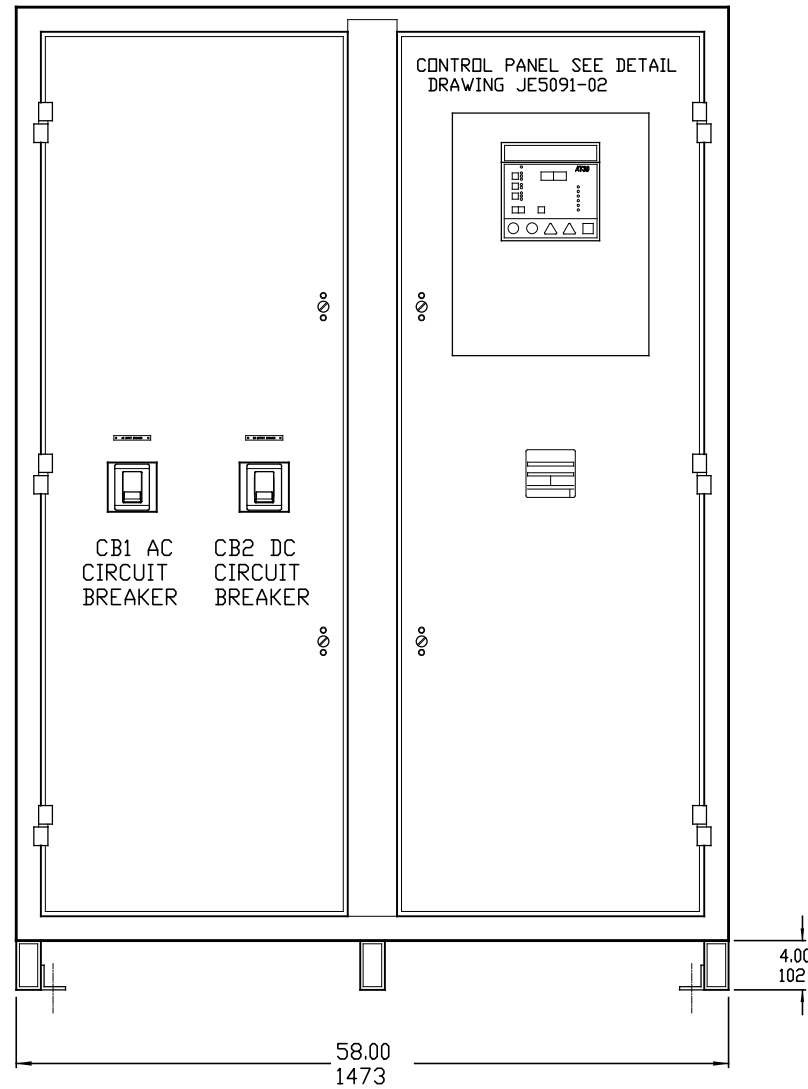
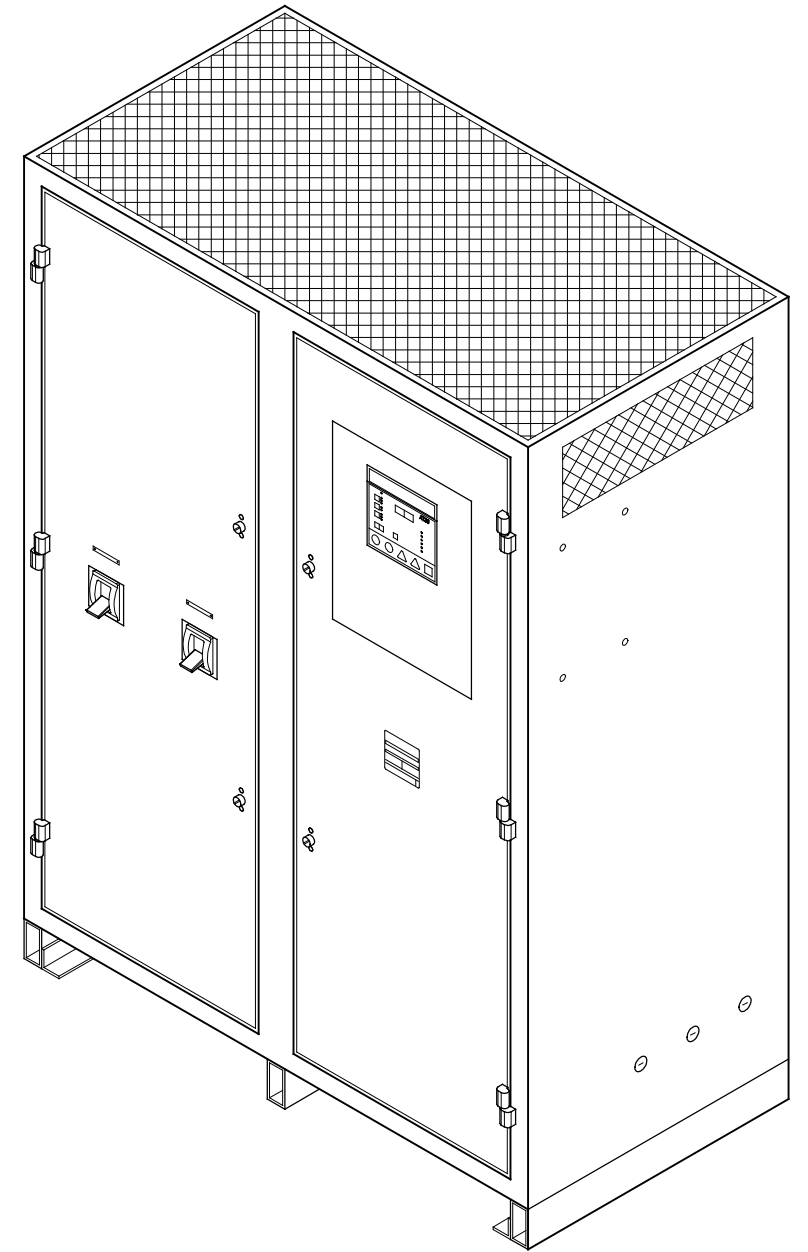
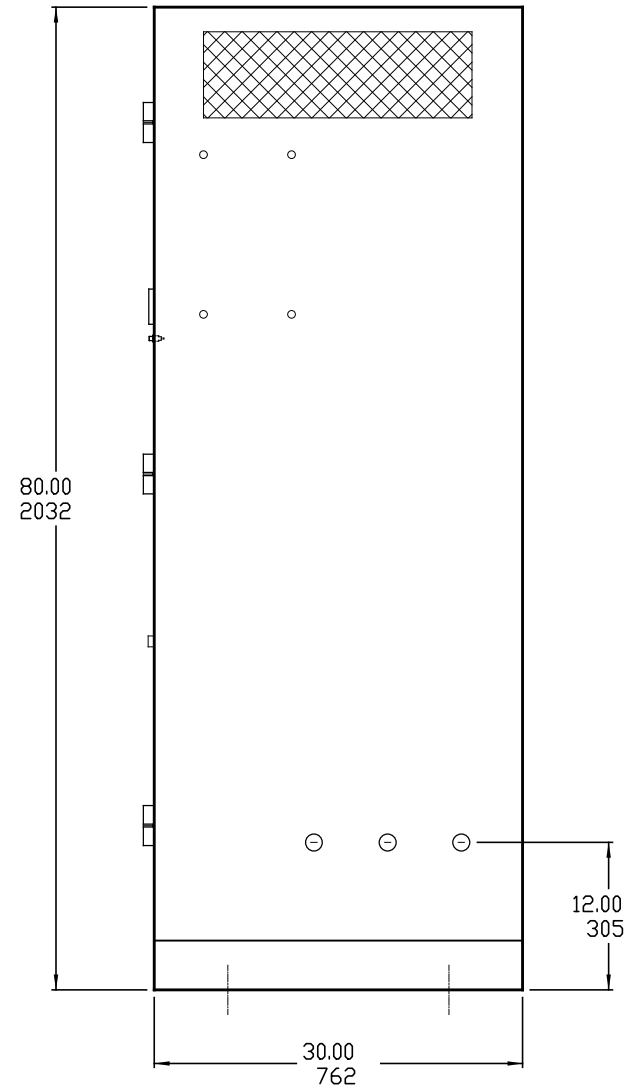


FRONT VIEW

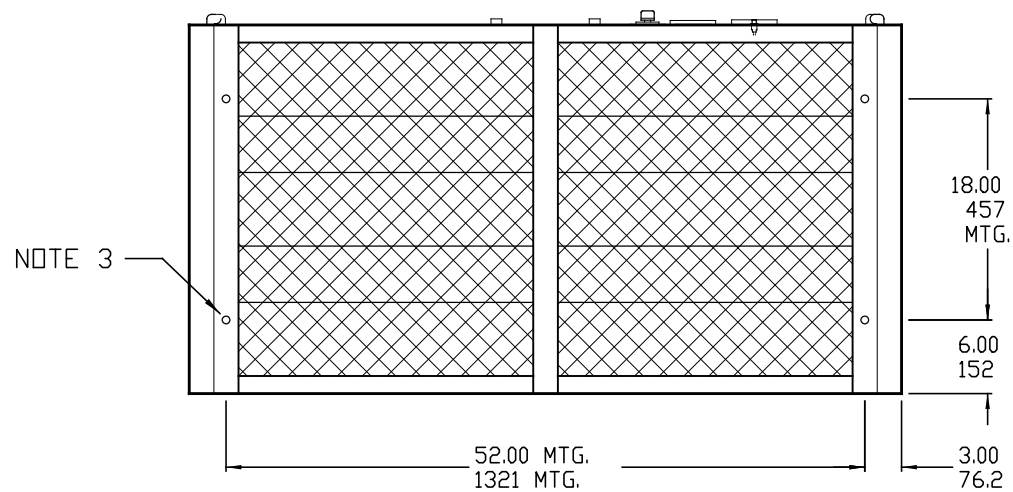


RIGHT SIDE VIEW



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



BOTTOM VIEW

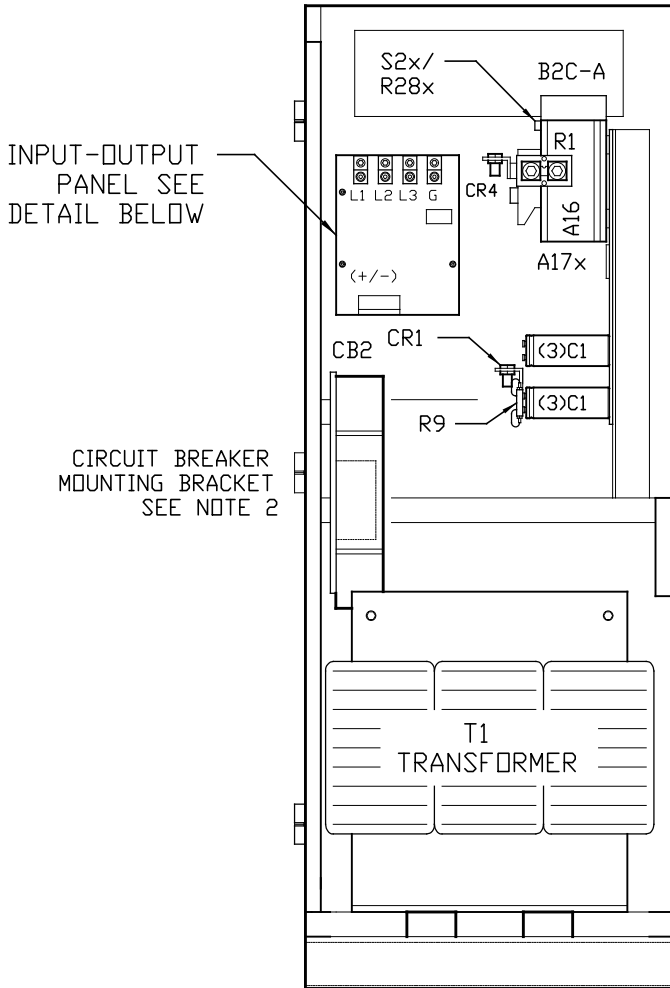
DUAL DIMENSIONS in mm

500-1,000ADC W/O 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 BATTERY CHARGER OUTLINE: NEMA-1 STYLE-198 ENCLOSURE			
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5096-02		REV 0	B
0	-N/A-	111021	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS	SALES No	SHEET 1 OF 1	
REV	ECN No	DATE						

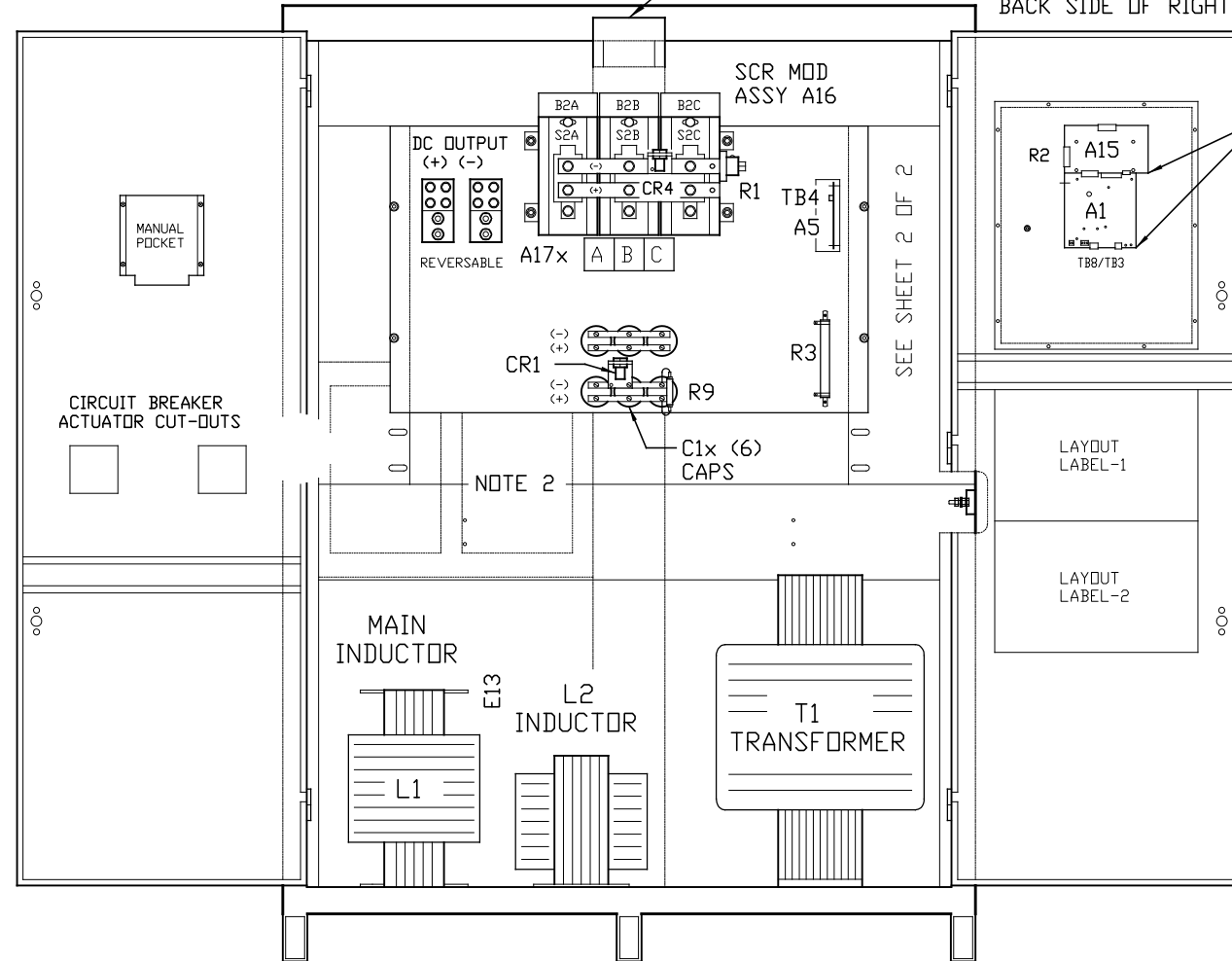
SIDE SECTION

FRONT VIEW



INPUT-OUTPUT
PANEL SEE
DETAIL BELOW

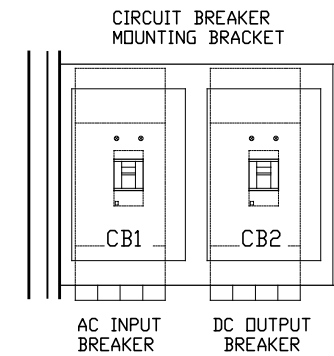
CIRCUIT BREAKER
MOUNTING BRACKET
SEE NOTE 2



NOTE 3

BACK SIDE OF RIGHT DOOR

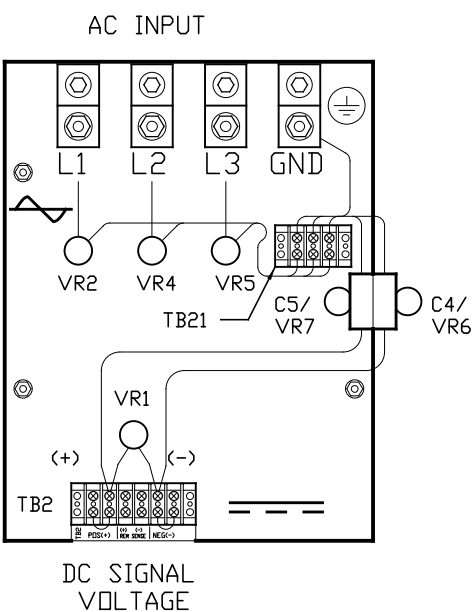
NOTE 1



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
C1x	DC OUTPUT FILTER CAPACITOR
CR1	POLARITY DIODE
E13	INDUCTOR INTER-CONNECT POINT
L2	FILTER INDUCTOR
R9	FILTER CAP (C1) BLEED RESISTOR

I/O TERMINAL BOARD
(TB1) DETAIL



NOTES:

- 1) FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A5, A15, A17, etc.) SEE DRAWING JE5091-02.
- 2) CIRCUIT BREAKER(S) MOUNTED ON SIDE BRACKET, NOT FULLY SHOWN FOR CLARITY.
- 3) CENTER DIVIDER NOT SHOWN FOR CLARITY OF INTERNAL VIEW.

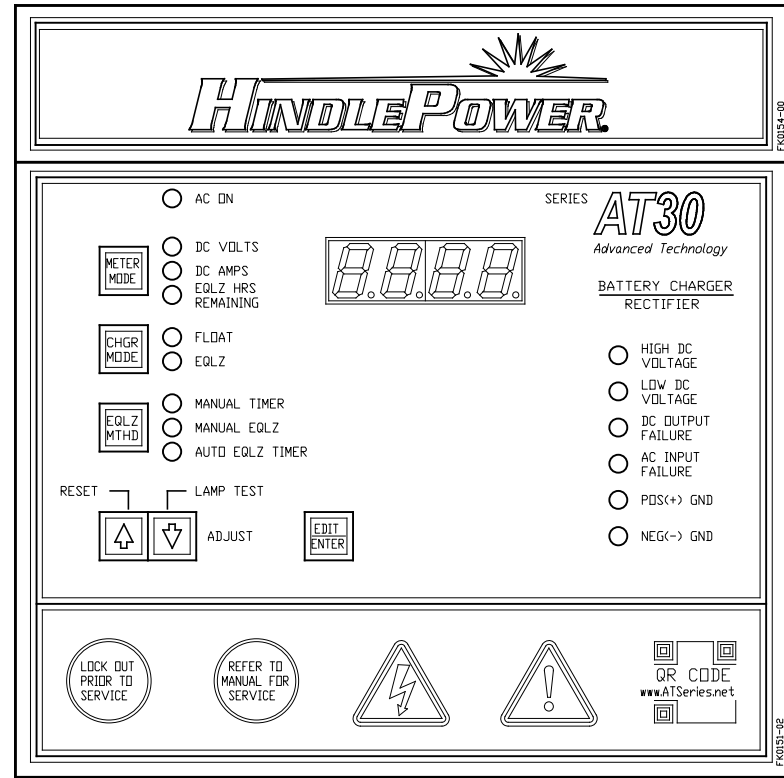
I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB1(+)	POS(+) DC OUTPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	(2) 350-800 MCM
TB1(-)	NEG(-) DC OUTPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	(2) 350-800 MCM
REM SENSE(+/-)	POS/NEG REMDTE SENSE TERMINALS - 6-32 COMPRESSION SCREW	#16-14 AWG
TB1-GND	USER GROUND 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/O OPTIONS

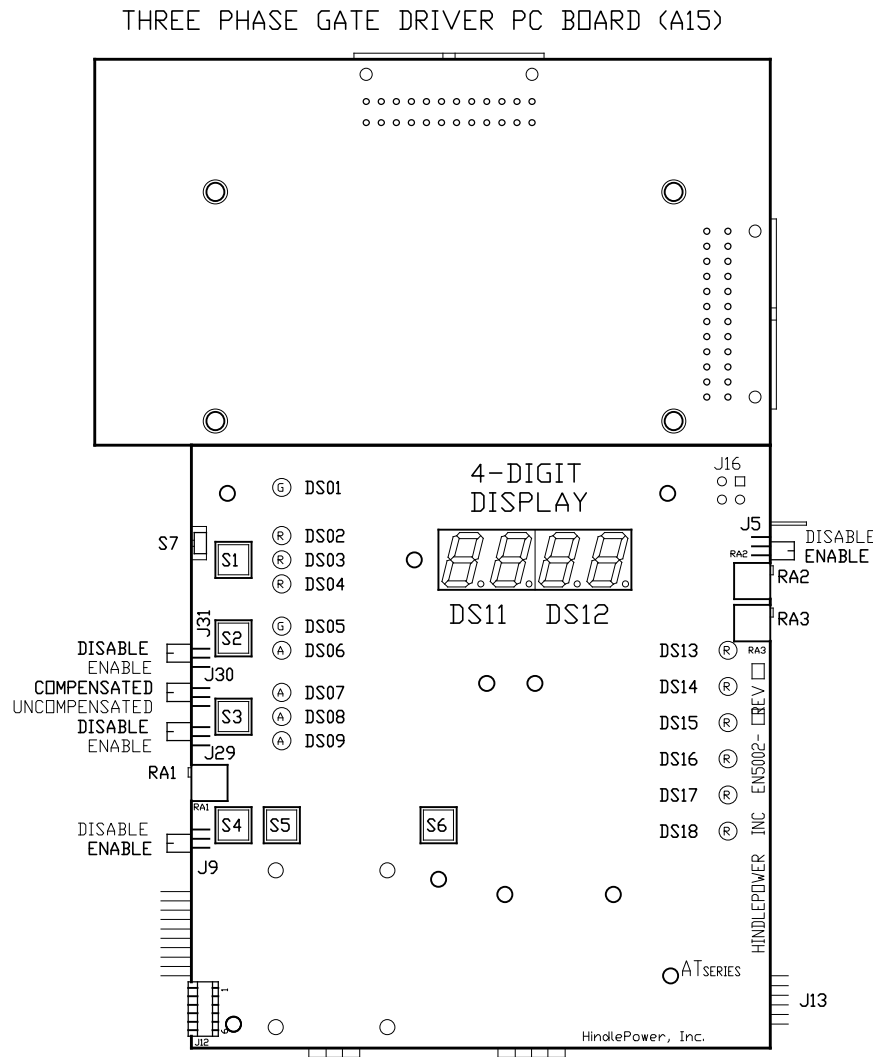
			THIRD ANGLE PROJECTION				1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY	KMW	111021	TITLE AT30 SERIES BATTERY CHARGER INTERNAL COMPONENT LAYOUT: STYLE-198		
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			DRAWING No		REV
0	N/A	111021	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:			JE5099-02		1
REV	ECN No	DATE	SCALE	NTS	SALES No	SHEET 1 OF 1		B

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

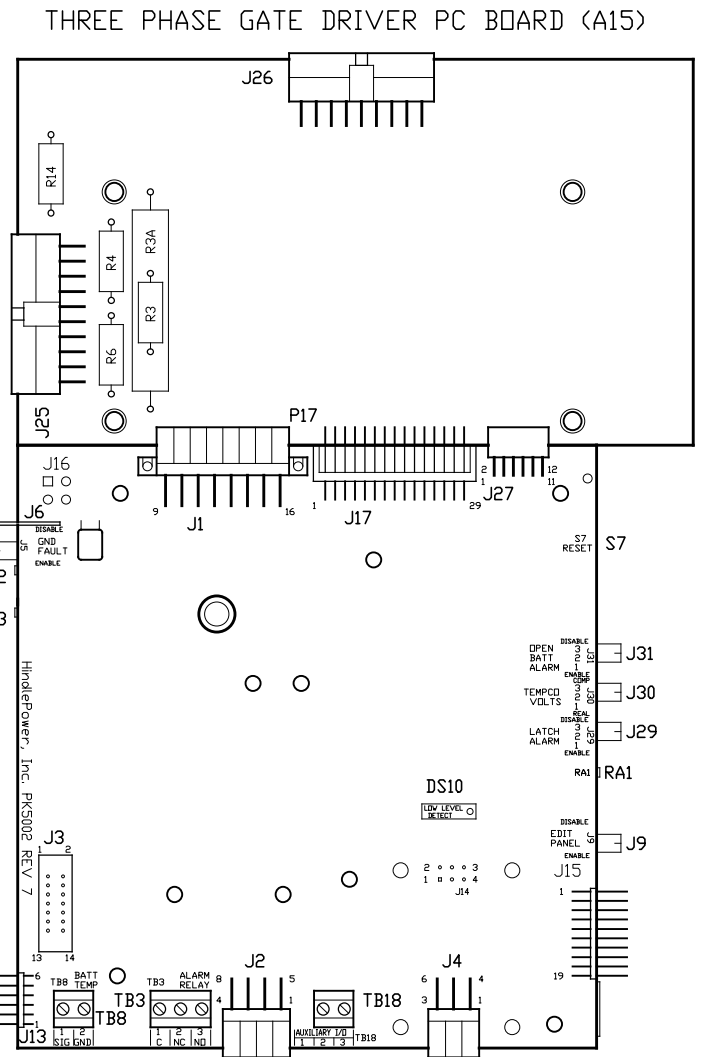


CONTROL PANEL
(PART No. FK0151-02)



MAIN CONTROL PC BOARD (A1)

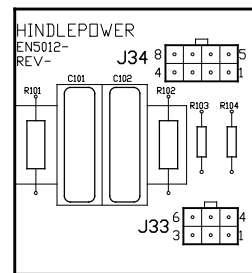
FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED



MAIN CONTROL PC BOARD (A1)

BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

NOTE: UNLESS OTHERWISE SPECIFIED, ALL 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.



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:

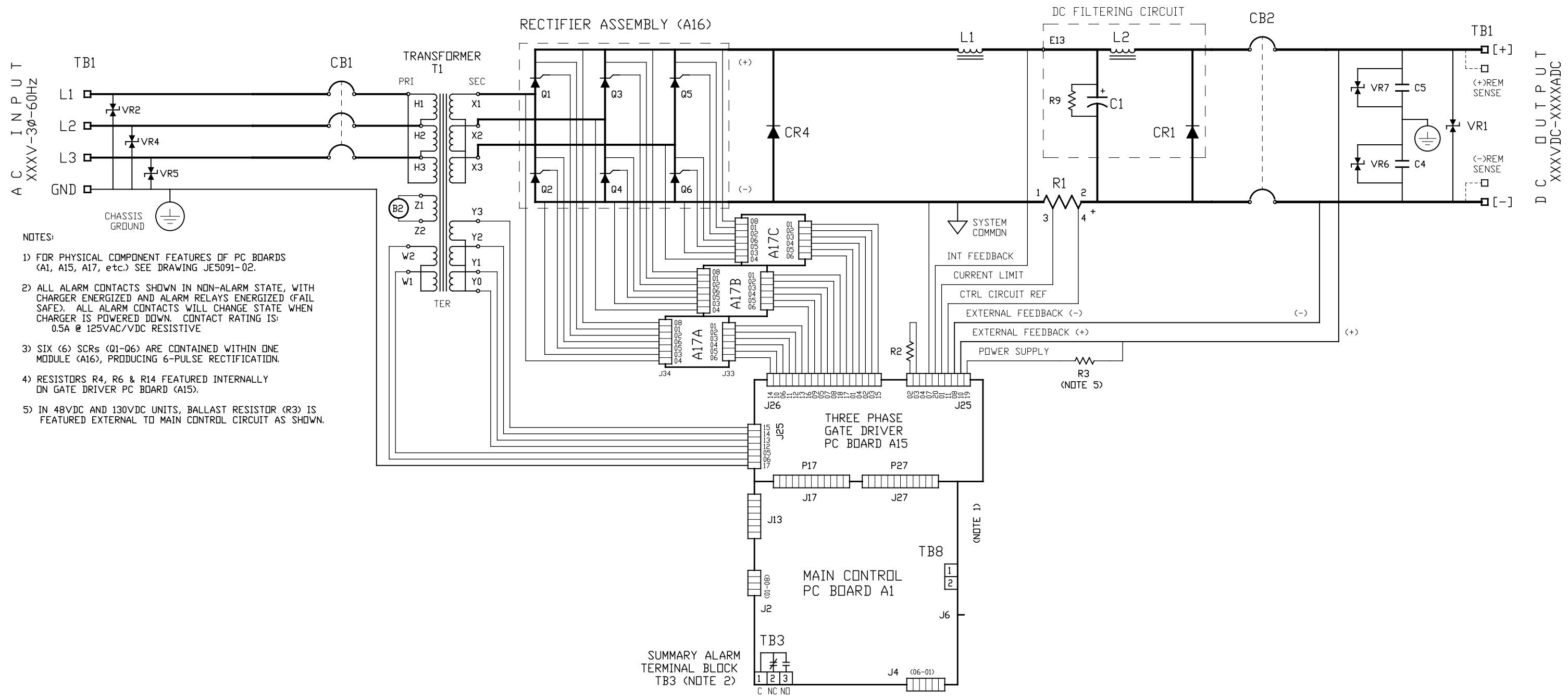
- TB3 - SUMMARY ALARM RELAY CONTACTS
- TB8 - OPT TEMPCO PROBE (A10) CONN
- TB18 - REM SHUTDOWN INTERFACE

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

500-1,000ADC W/D 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 111021		TITLE AT30 SERIES BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5091-02 REV 0 B	
			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS SALES No SHEET 1 OF 1	
0	N/A	111021				
REV	ECN No	DATE				



- NOTES:
- 1) FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A15, A17, etc.) SEE DRAWING JE5091-02.
 - 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) SIX (6) SCRS (Q1-Q6) ARE CONTAINED WITHIN ONE MODULE (A16), PRODUCING 6-PULSE RECTIFICATION.
 - 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.

STANDARD AT30 COMPONENTS:

- A1 MAIN CONTROL PC BOARD (NOTE 1)
- A15 THREE PHASE GATE DRIVER PC BOARD (NOTE 1)
- A16 6-PULSE SCR (Q1-Q6) MODULE (NOTE 3)
- A17A SCR SNUBBER ASSY PC BOARD (NOTE 1)
- A17B SCR SNUBBER ASSY PC BOARD (NOTE 1)
- A17C SCR SNUBBER ASSY PC BOARD (NOTE 1)
- C4 DC OUTPUT EMI FILTER CAPACITOR (-) TO GROUND
- C5 DC OUTPUT EMI FILTER CAPACITOR (+) TO GROUND
- CR4 FREE-WHEELING DIODE
- L1 MAIN INDUCTOR
- Q1 SILICON-CONTROLLED RECTIFIER (A16A) (NOTE 3)
- Q2 SILICON-CONTROLLED RECTIFIER (A16A) (NOTE 3)
- Q3 SILICON-CONTROLLED RECTIFIER (A16B) (NOTE 3)
- Q4 SILICON-CONTROLLED RECTIFIER (A16B) (NOTE 3)
- Q5 SILICON-CONTROLLED RECTIFIER (A16C) (NOTE 3)
- Q6 SILICON-CONTROLLED RECTIFIER (A16C) (NOTE 3)

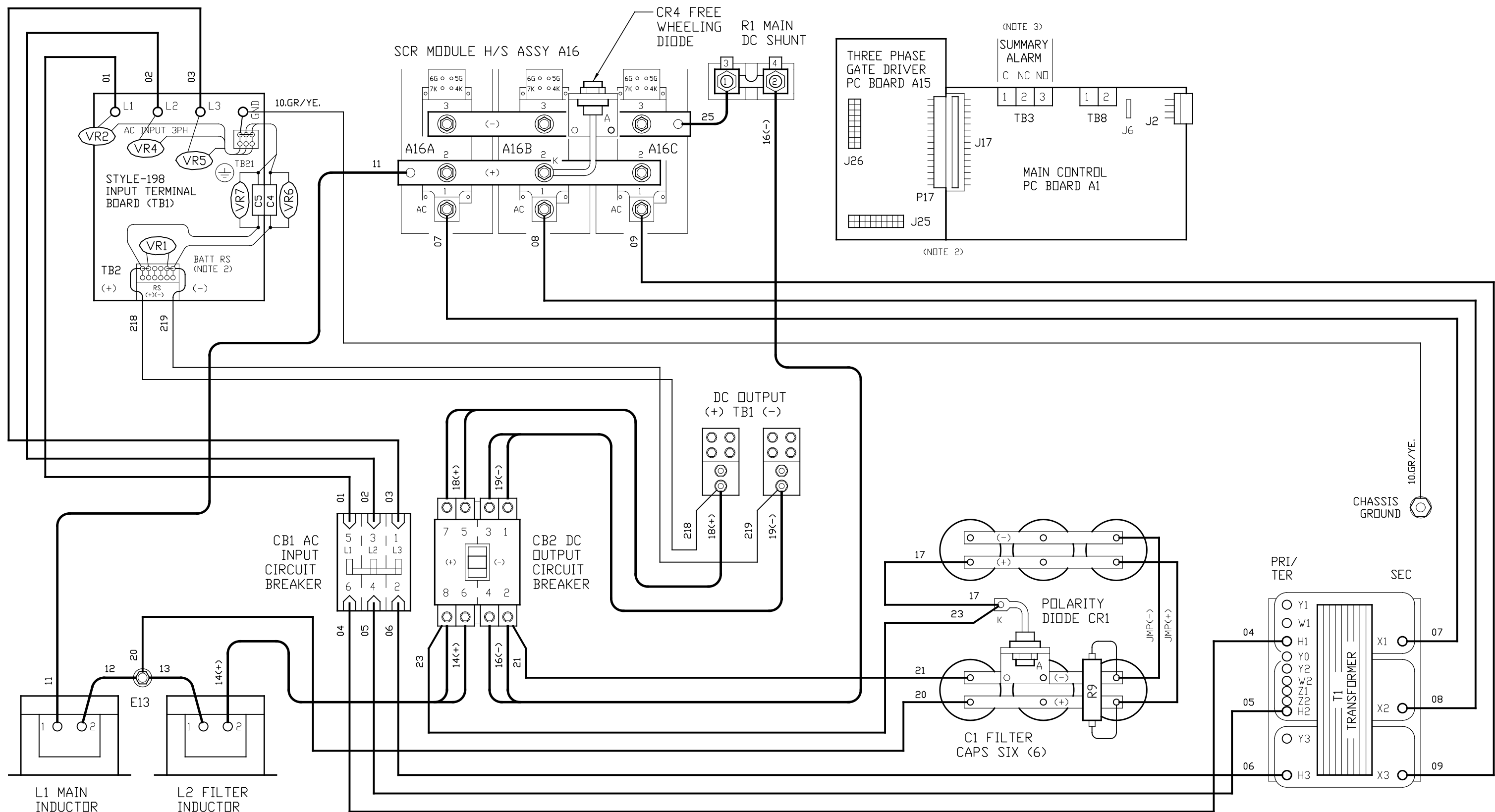
STANDARD AT30 COMPONENTS:

- 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 TEMP/CO PROBE (A10) INTERCONNECTOR
- VR1 DC OUTPUT SURGE SUPPRESSOR (-) TO (+)
- VR2 AC INPUT SURGE SUPPRESSOR (LINE 1)
- VR4 AC INPUT SURGE SUPPRESSOR (LINE 2)
- VR5 AC INPUT SURGE SUPPRESSOR (LINE 3)
- VR6 DC OUTPUT SURGE SUPPRESSOR (-) TO GROUND
- VR7 DC OUTPUT SURGE SUPPRESSOR (+) TO GROUND

FEATURED AT30 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
 - B2 SCR MODULE (Q1-Q6) COOLING FAN (PART OF A16)

			 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	111021		TITLE BATTERY CHARGER SCHEMATIC: 500-1,000ADC W/O OPTIONS		
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5092-02		REV 0	B
0	N/A	111021	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS		SALES No	SHEET 1 OF 1

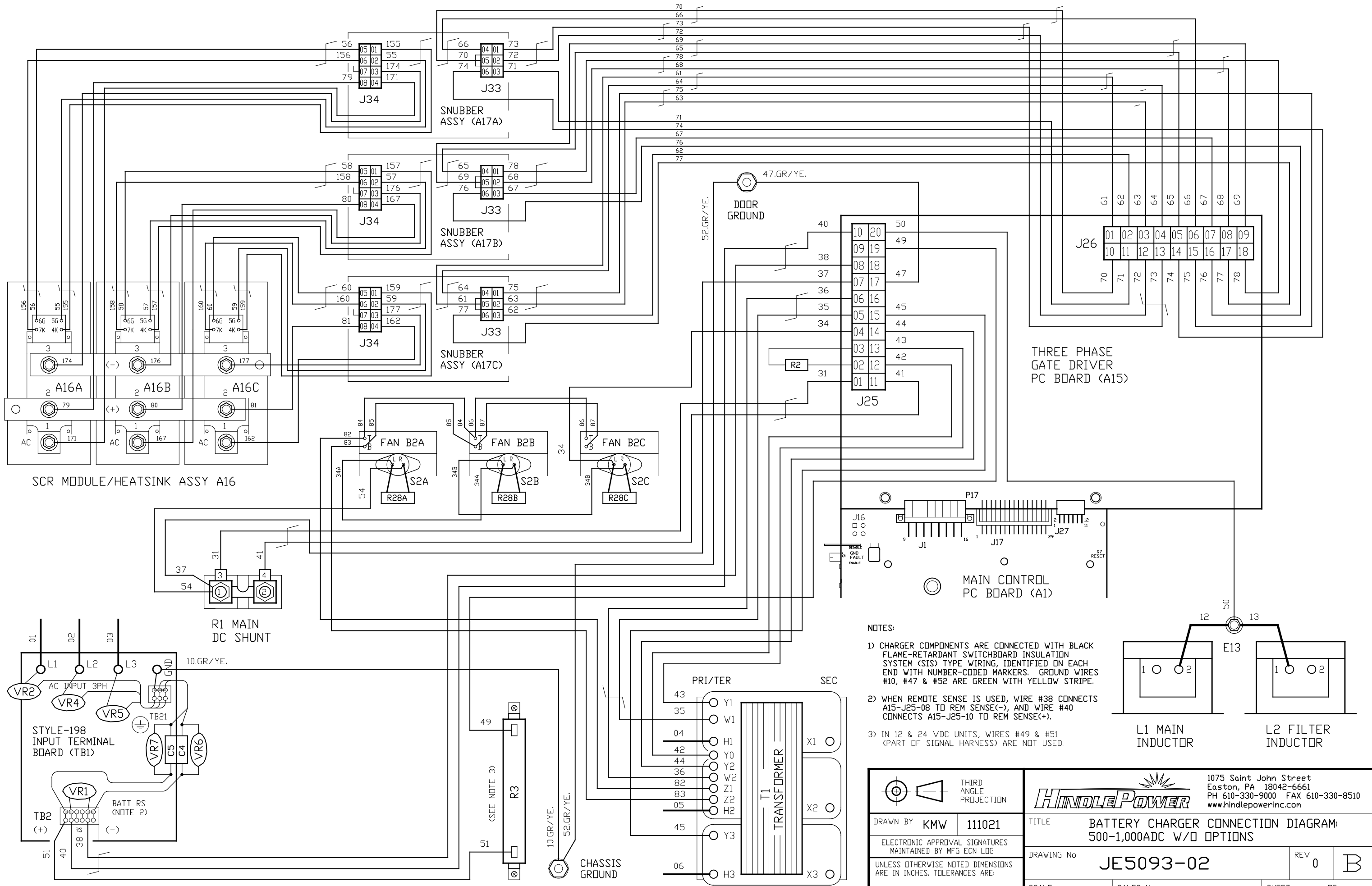


NOTES:

- 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
 - AC INPUT CIRCUIT BREAKER
 - DC OUTPUT CIRCUIT BREAKER

			THIRD ANGLE PROJECTION		Hindle Power 1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KMW	111021	TITLE BATTERY CHARGER CONNECTION DIAGRAM: 500-1,000ADC W/O OPTIONS	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5093-02	
0	N/A	111021	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		REV 0	B
REV	ECN No	DATE	SCALE NTS	SALES No	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 #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/O OPTIONS		REV 0 B	
DRAWING No JE5093-02		SHEET 2 OF 2	
SCALE	NTS	SALES No	