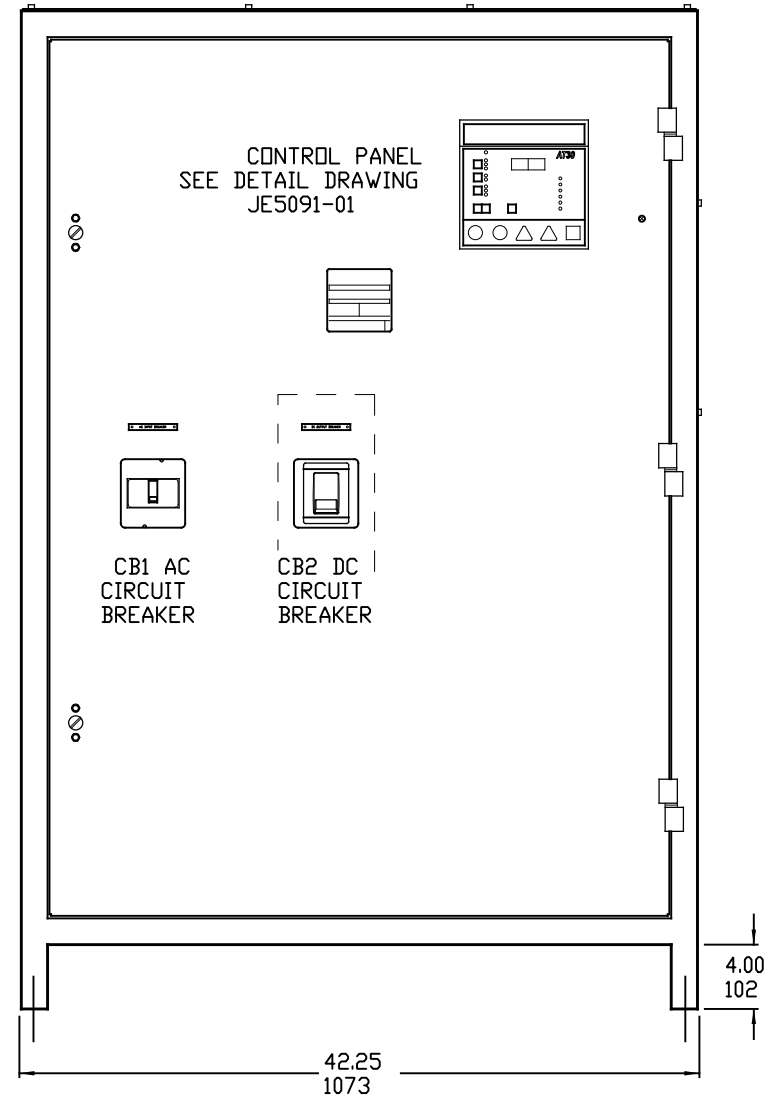
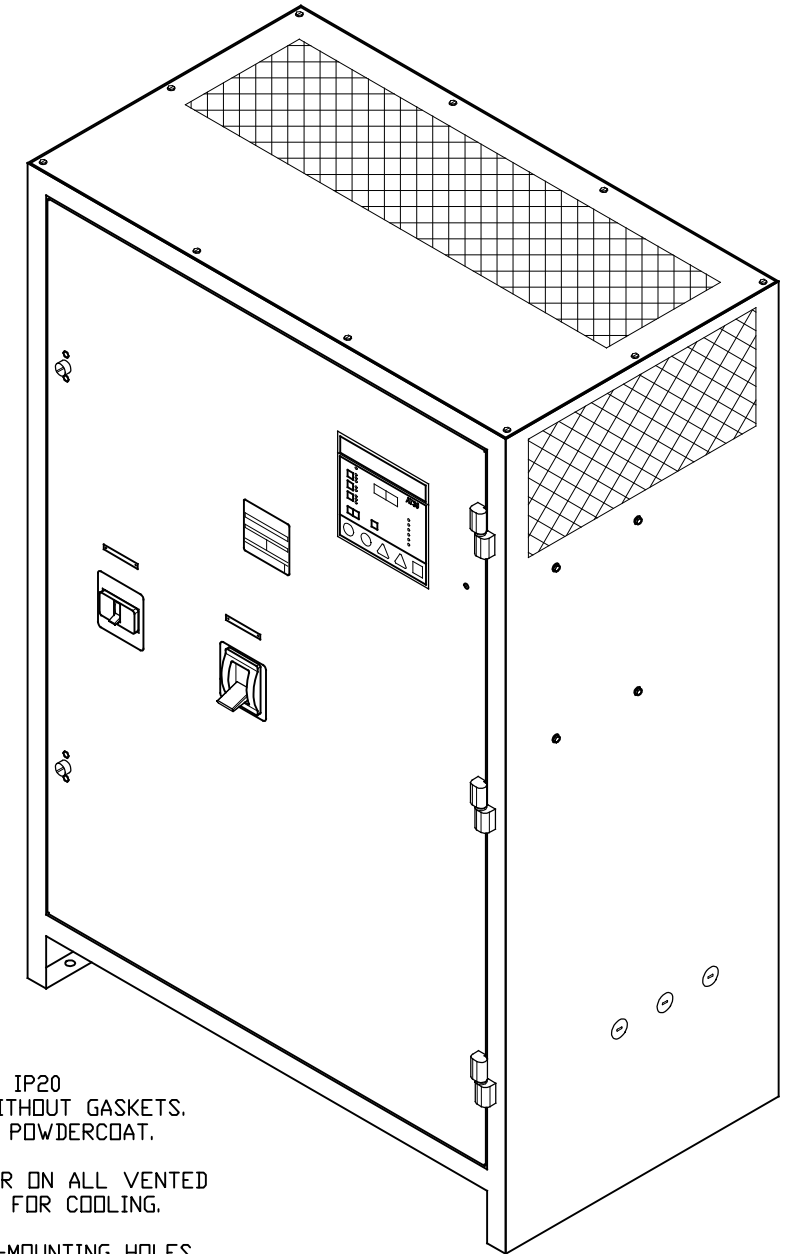
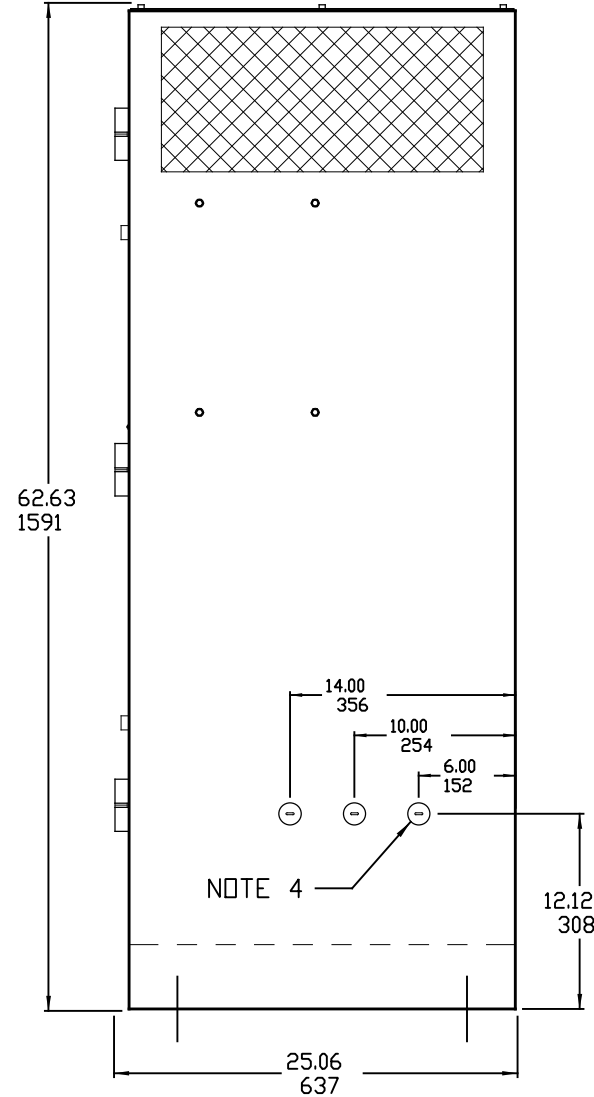


FRONT VIEW

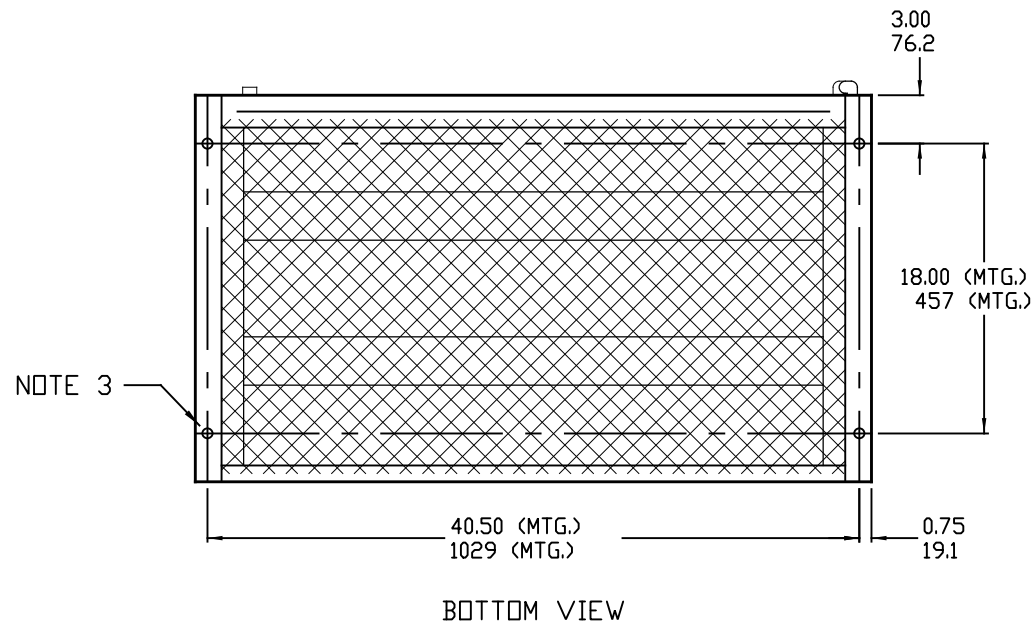


SIDE VIEW



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) 0.625in / 16mm FLOOR-MOUNTING HOLES ARE PROVIDED ON BOTTOM OF ENCLOSURE AS SHOWN.
- 4) SIX (6) 1.31in / 33mm DIA STANDARD PRE-FAB CONDUIT KNOCKOUTS ARE PROVIDED AS SHOWN FOR 1in / 25mm CABLE ENTRY. BOTTOM CONDUIT ENTRY IS POSSIBLE THROUGH EXPANDED METAL UNDERSIDE. IF ADDITIONAL CONDUIT ENTRANCES ARE REQUIRED, ENCLOSURE SHOULD BE FIELD-MODIFIED BY INSTALLER.
- 5) BATTERY CHARGER SHIPPING WEIGHT: APPROXIMATELY TBD lb / TBD kg



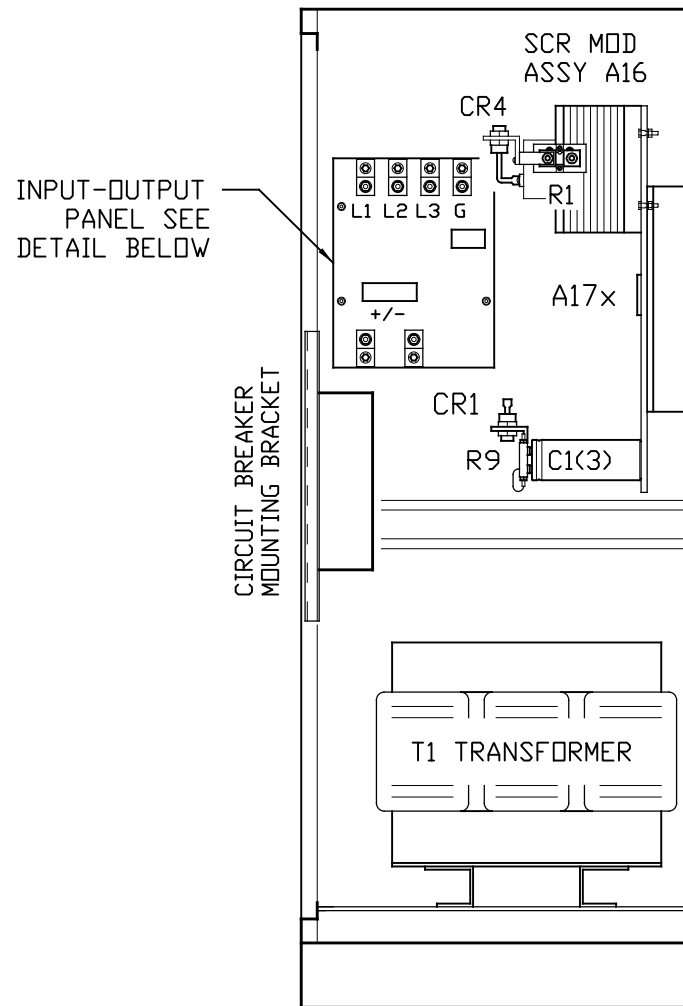
BOTTOM VIEW

DUAL DIMENSIONS in mm

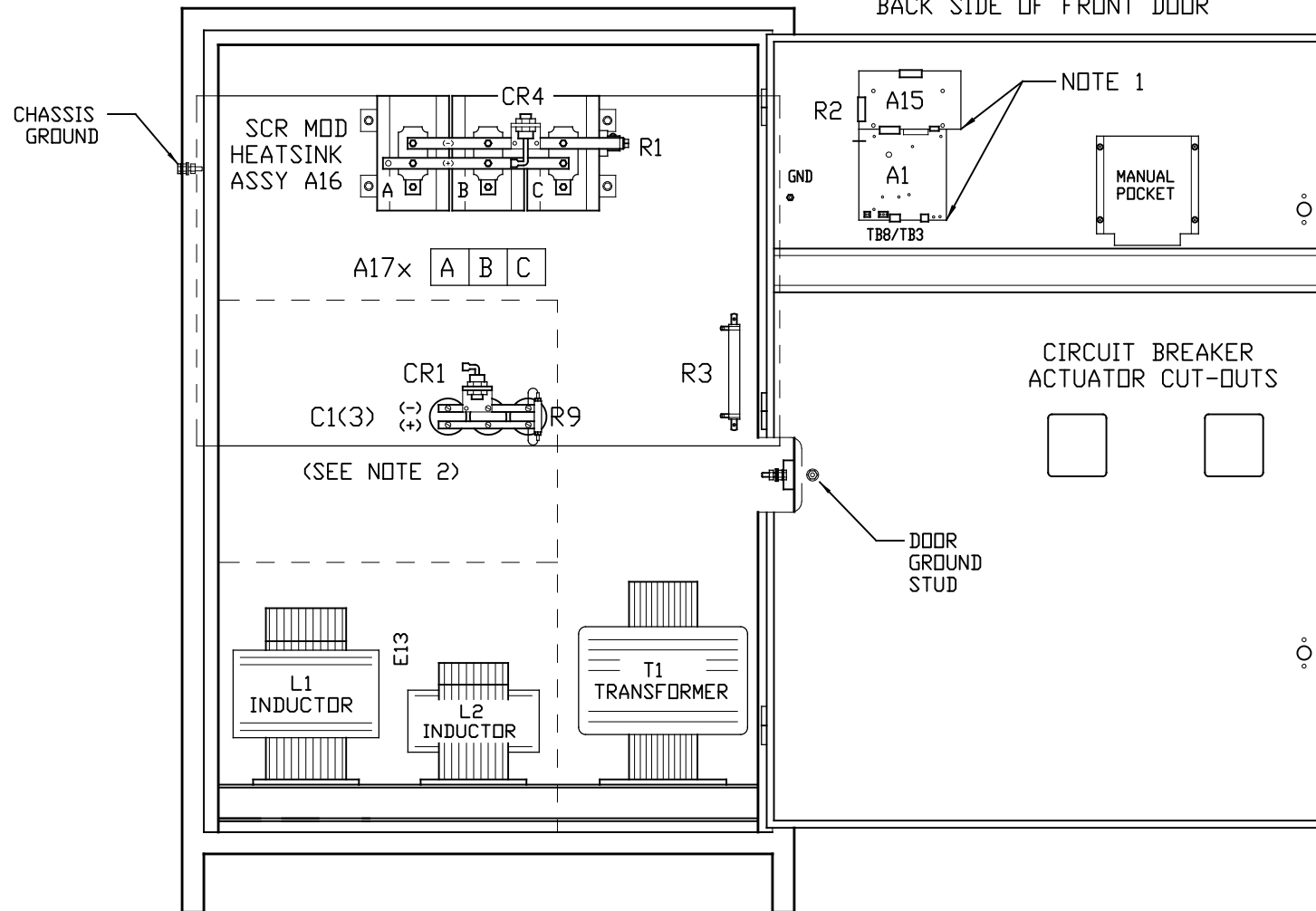
250-600ADC W/ COMMON OPTIONS

			THIRD ANGLE PROJECTION		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY KJB 110921		TITLE AT30 BATTERY CHARGER OUTLINE: NEMA-1 STYLE-163 ENCLOSURE	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5095-01	
			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		REV 0 B	
0	-N/A-	110921			SCALE NTS SALES No SHEET 1 OF 1	
REV	ECN No	DATE				

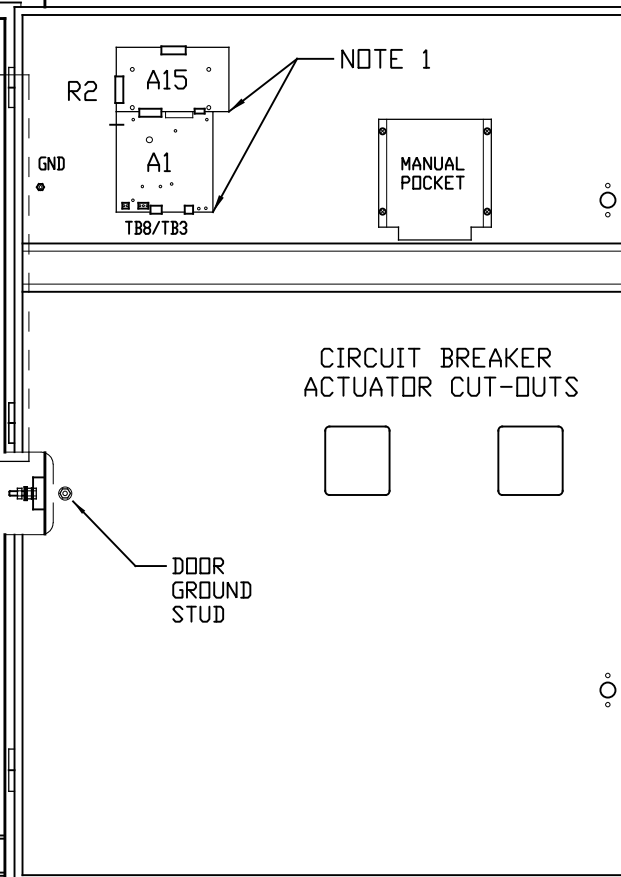
LEFT INSIDE VIEW



FRONT VIEW



BACK SIDE OF FRONT DOOR

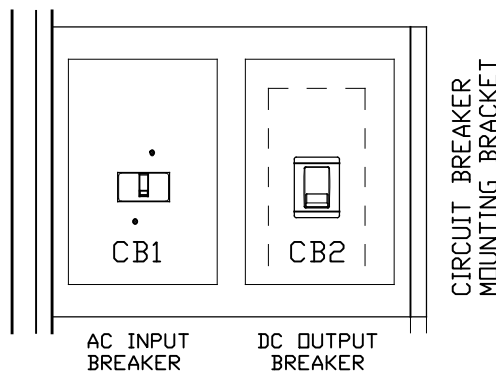
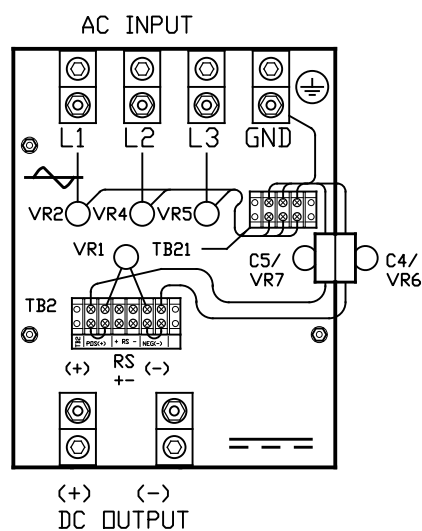


SYM	STANDARD COMPONENT DESCRIPTION
A1	MAIN CONTROL PC BOARD
A15	THREE PHASE GATE DRIVER PC BRD
A16	6-PULSE SCR MODULE HEATSINK ASSY
A17x	SCR SNUBBER PC BOARD - QTY. (3)
C4	EMI OUTPUT FILTER CAP (NEG-GND)
C5	EMI OUTPUT FILTER CAP (POS-GND)
CB1	AC INPUT CIRCUIT BREAKER (Bx3)
CB2	DC OUTPUT CIRCUIT BREAKER (LAL2)
CR4	FREE-WHEELING DIODE
L1	MAIN INDUCTOR
R1	MAIN DC SHUNT, NEG(-) BUS
R2	CURRENT RATING RESISTOR
R3	PWR SUPPLY BALLAST RES (130VDC)
T1	POWER ISOLATION TRANSFORMER
TB1	I/O TERMINAL BOARD
TB2	INT DC VOLTAGE (+/-) CONTACTS
TB3	SUMMARY ALARM CONTACTS
TB8	OPT. TEMPCO PROBE TERM BLOCK
TB21	INTERNAL GROUND (↔) CONTACTS
VR1	OUTPUT SURGE SUPPRESSOR (+TO-)
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



I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB1(+)	POS(+) DC OUTPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	#6 AWG-350 MCM
TB1(-)	NEG(-) DC OUTPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	#6 AWG-350 MCM
REM SENSE(+/-)	POS/NEG REMOTE SENSE TERMINALS - 6-32 BINDER HEAD 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
TB8	TEMPCO PROBE (A10) TERM BLK - SOLDERLESS COMP SCREW	#22-14 AWG

NOTES:

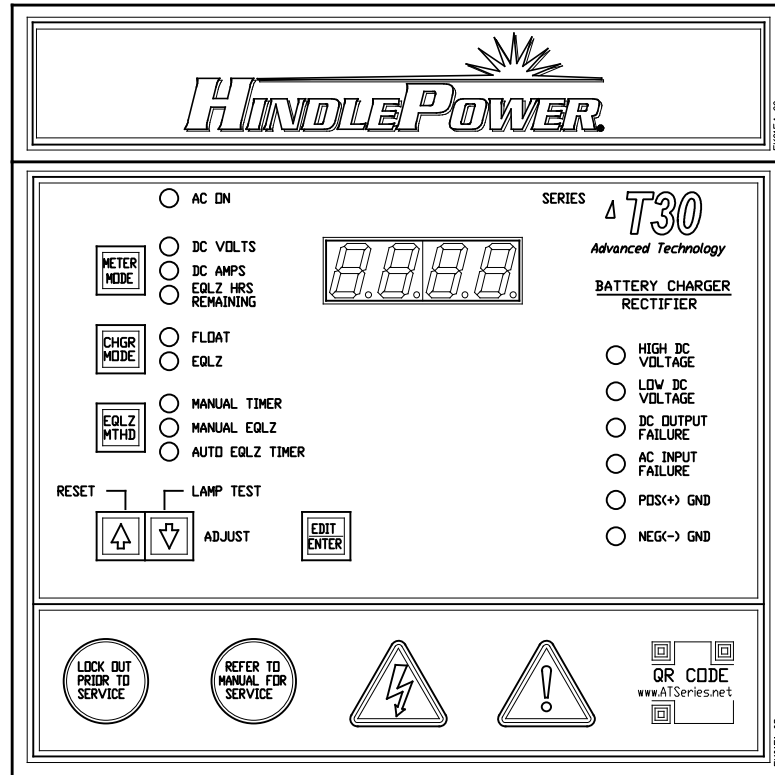
- FOR DETAIL VIEWS OF ALL PC BOARDS (A1, A5, A15, A17, etc.) SEE DRAWING JE5091-01.
- CIRCUIT BREAKER(S) MOUNTED ON LEFT SIDE BRACKET, NOT SHOWN FOR CLARITY OF VIEW.

250-600ADC W/ COMMON OPTIONS

					1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
DRAWN BY KJB 110921			TITLE AT30 SERIES BATTERY CHARGER INTERNAL COMPONENT LAYOUT: STYLE-163			
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			DRAWING No JE5098-01		REV 0	B
0 -N/A- 110921 UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:			SCALE NTS		SALES No	SHEET 1 OF 1

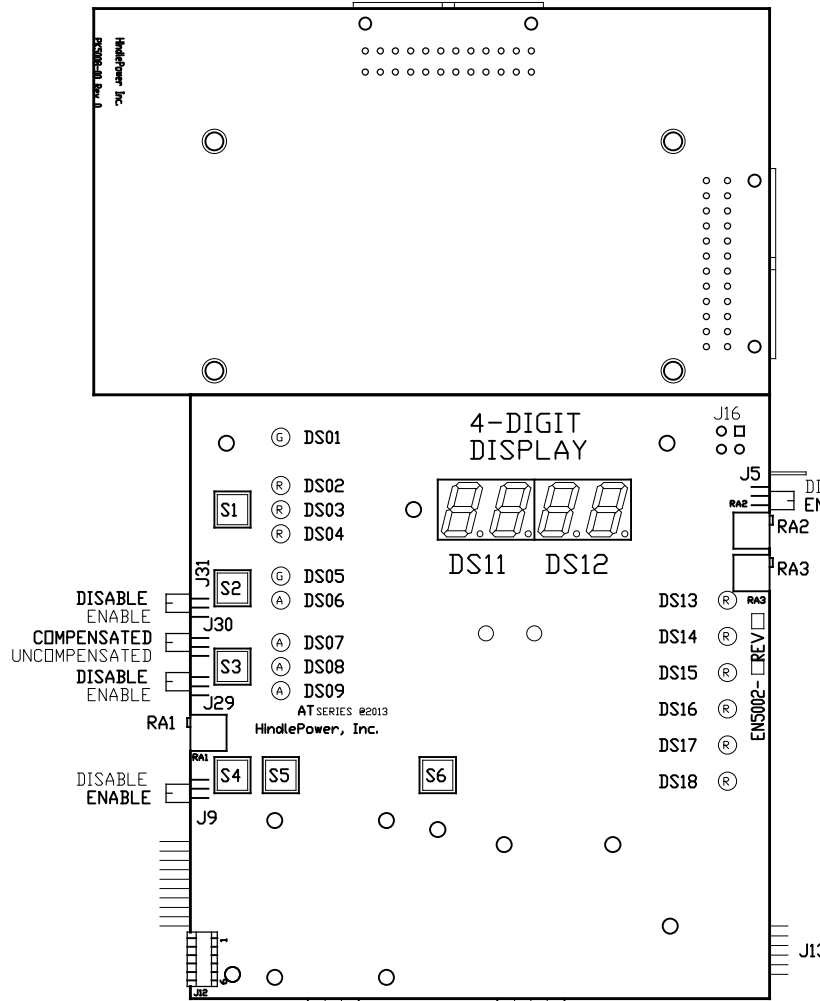
- INDICATOR LIGHTS (LEDs):
- DS01 - GREEN - AC ON
  - DS02 - RED - DC VOLTS
  - DS03 - RED - DC AMPERES
  - DS04 - RED - EQUALIZE HRS REMAINING
  - DS05 - GREEN - FLOAT
  - DS06 - AMBER - EQUALIZE
  - DS07 - AMBER - MANUAL TIMER
  - DS08 - AMBER - MANUAL EQUALIZE
  - DS09 - AMBER - AUTO EQUALIZE TIMER

- 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  
(p/n FK0151-01)

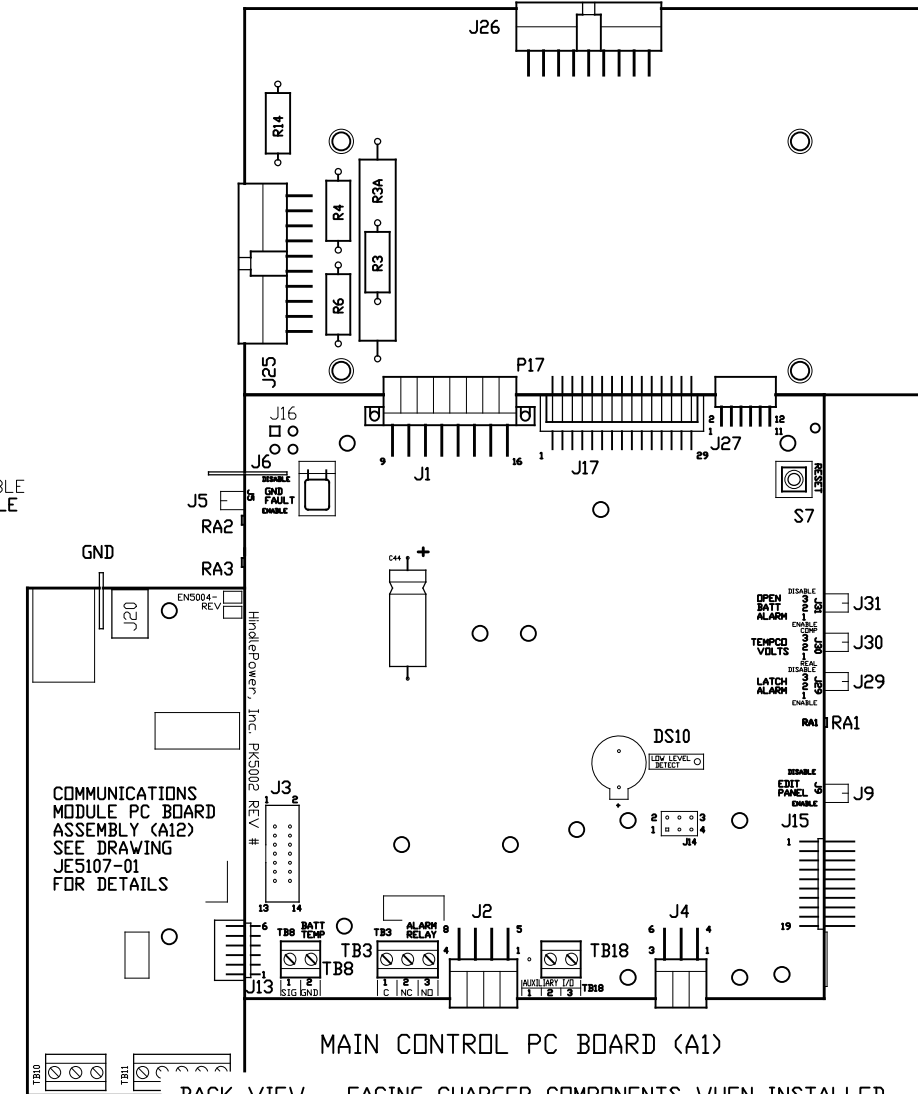
THREE PHASE GATE DRIVER PC BOARD (A15)



MAIN CONTROL PC BOARD (A1)

FRONT VIEW - FACING CHARGER DOOR WHEN INSTALLED

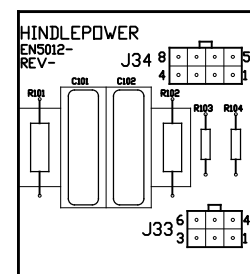
THREE PHASE GATE DRIVER PC BOARD (A15)



MAIN CONTROL PC BOARD (A1)

BACK VIEW - FACING CHARGER COMPONENTS WHEN INSTALLED

NOTE: UNLESS OTHERWISE SPECIFIED, ALL ALARM TERMINAL BLOCKS (TB3/TB4/TB8) ARE SOLDERLESS COMPRESSION SCREW 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 - TEMPCD VOLTAGES (COMPENSATED/UNCOMP) SELECTOR
- J31 - BATTERY OPEN ALARM ENABLE/DISABLE SELECTOR

SWITCHES:

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

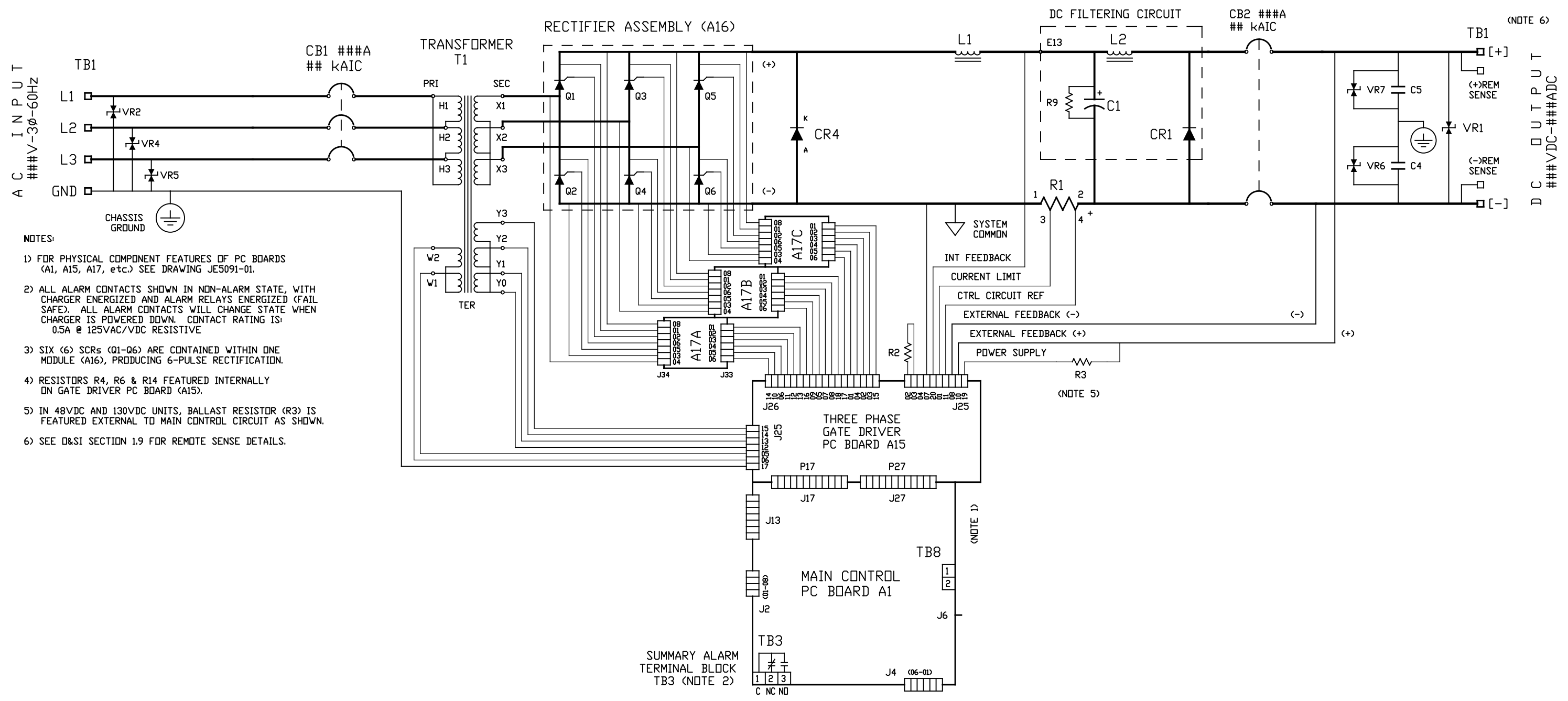
OTHER CONTROLS:

- 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

250-600ADC 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	KJB			110921	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			TITLE	AT30 SERIES BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL	
0	-N/A-	110921	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:			DRAWING No	JE5091-01	
REV	ECN No	DATE				SCALE	NTS	SALES No
						SHEET	1	OF 1



- NOTES:
- FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A15, A17, etc.) SEE DRAWING JE5091-01.
  - 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
  - SIX (6) SCRs (Q1-Q6) ARE CONTAINED WITHIN ONE MODULE (A16), PRODUCING 6-PULSE RECTIFICATION.
  - RESISTORS R4, R6 & R14 FEATURED INTERNALLY ON GATE DRIVER PC BOARD (A15).
  - IN 48VDC AND 130VDC UNITS, BALLAST RESISTOR (R3) IS FEATURED EXTERNAL TO MAIN CONTROL CIRCUIT AS SHOWN.
  - SEE Q&SI SECTION 1.9 FOR REMOTE SENSE DETAILS.

- 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
  - CB1 AC INPUT CIRCUIT BREAKER
  - CB2 DC OUTPUT CIRCUIT BREAKER
  - 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/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

- SUPPLIED 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

0	-N/A-	110921	THIRD ANGLE PROJECTION
REV	ECN No	DATE	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG
			DRAWN BY KJB 110921

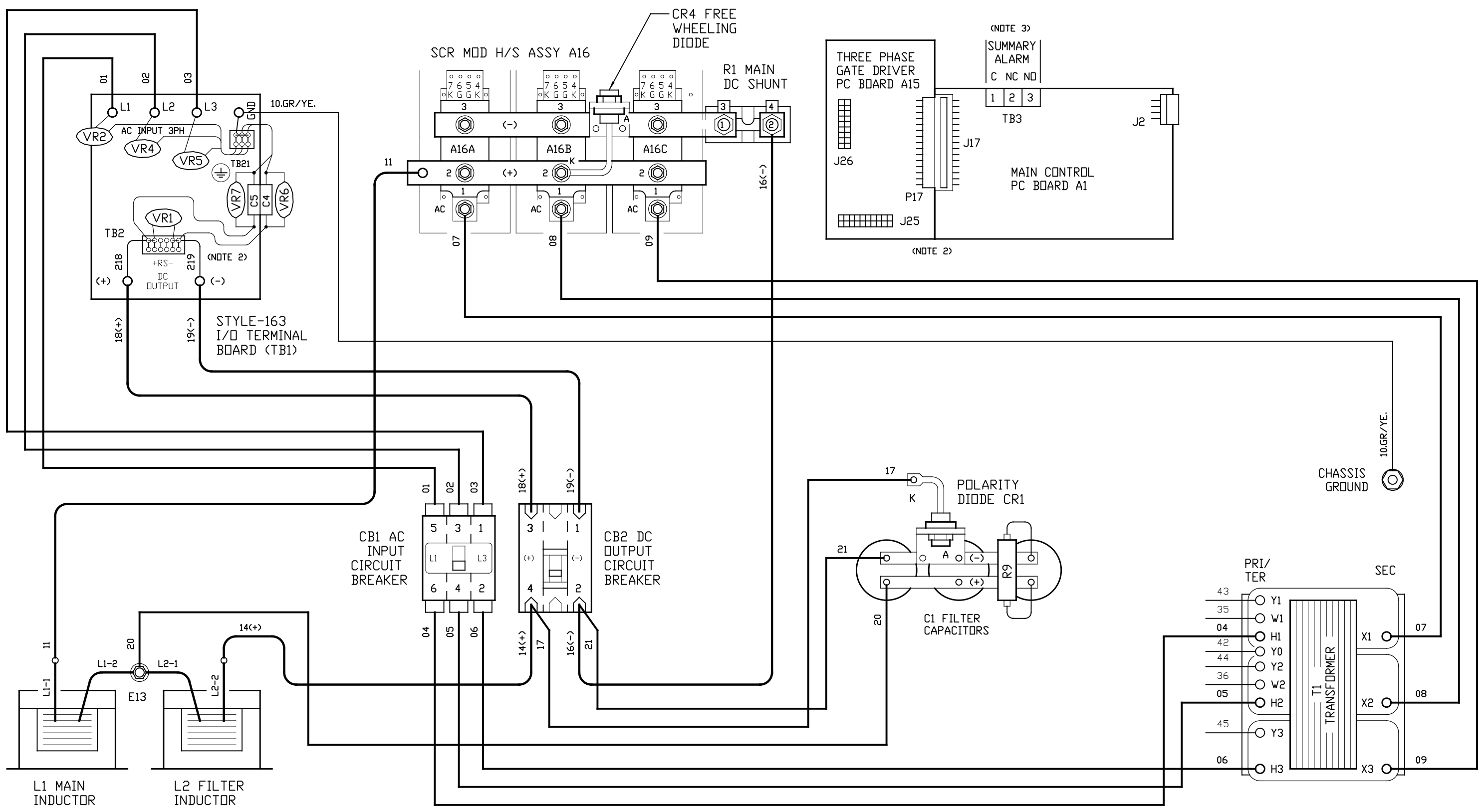
250-600ADC W/ COMMON OPTIONS

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

TITLE BATTERY CHARGER SCHEMATIC:  
250-600ADC W/ COMMON OPTIONS

DRAWING No JE5092-01 REV 0 B

SCALE NTS SALES No SHEET 1 OF 1



NOTES:

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

FEATURED OPTIONS:

- STD DC OUTPUT FILTERING
- AC INPUT CIRCUIT BREAKER
- DC OUTPUT CIRCUIT BREAKER

0	-N/A-	110921	THIRD ANGLE PROJECTION
REV	ECN No	DATE	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG
			DRAWN BY KJB 110921

250-600ADC W/ COMMON OPTIONS

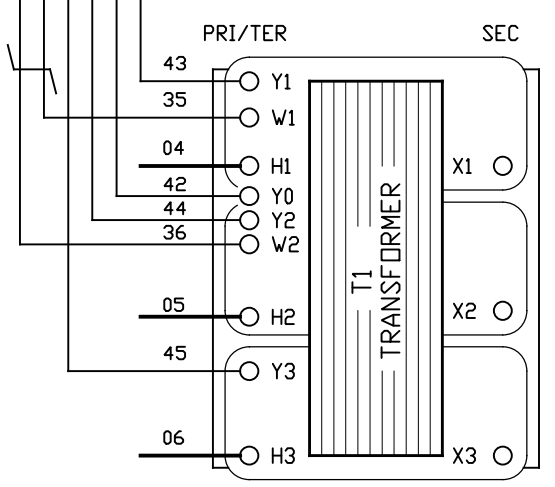
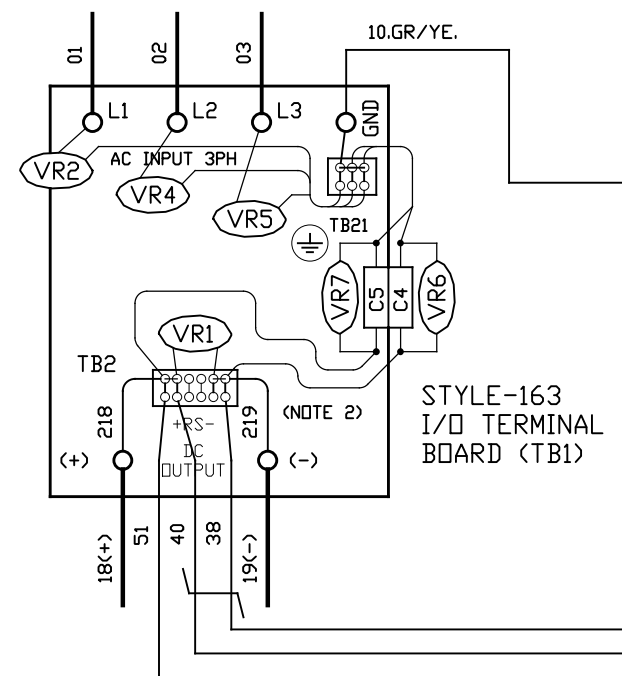
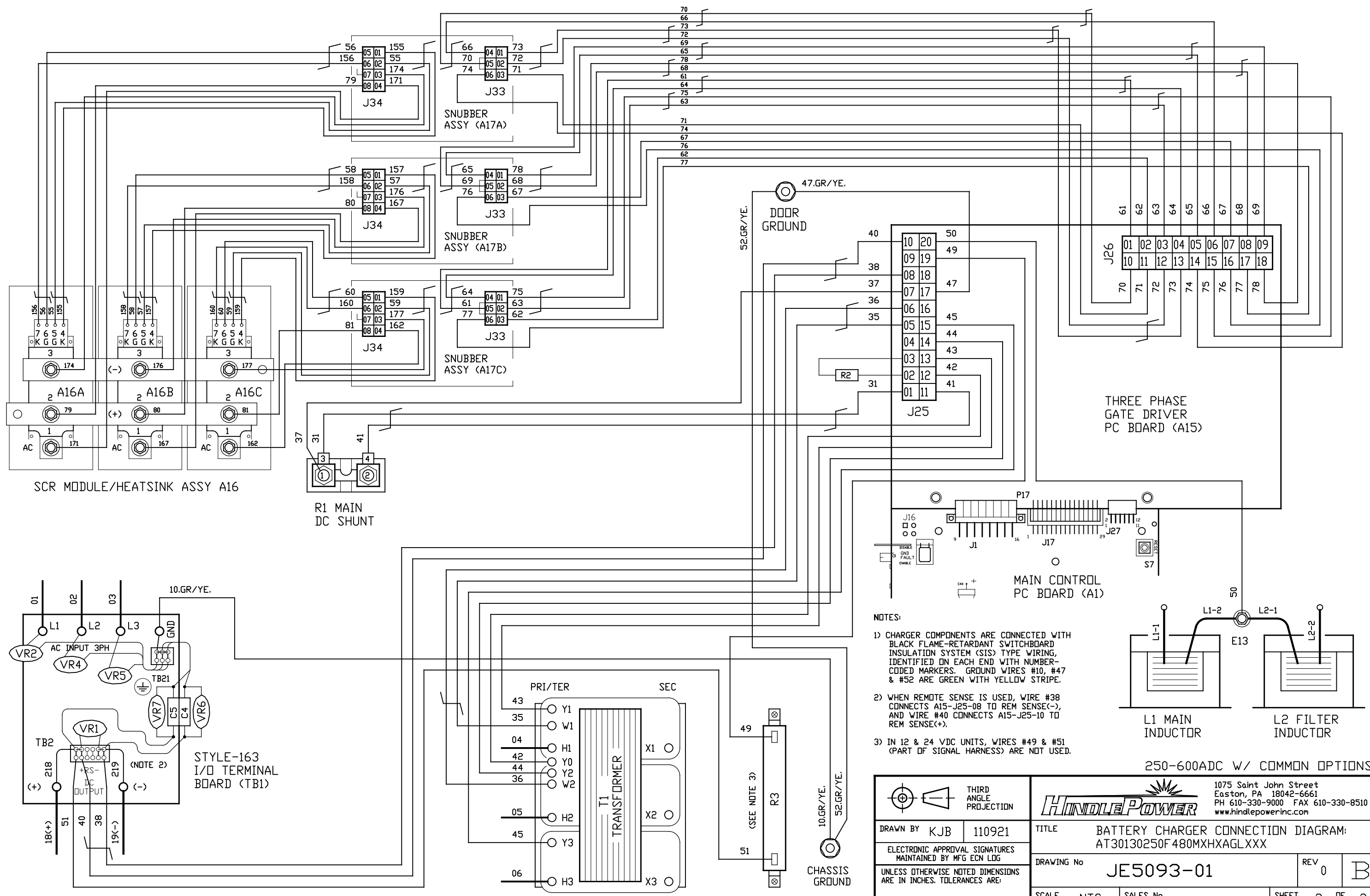
1075 Saint John Street  
Easton, PA 18042-6661  
PH 610-330-9000 FAX 610-330-8510  
www.hindlepowerinc.com

**HINDLEPOWER**

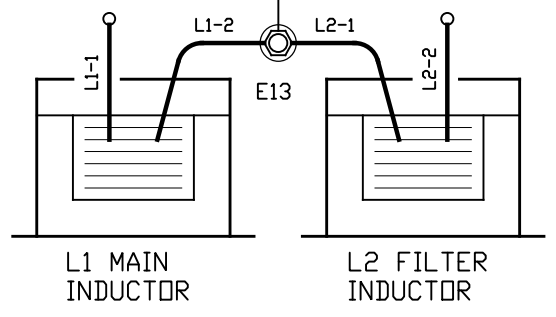
TITLE BATTERY CHARGER CONNECTION DIAGRAM:  
250-600ADC W/ COMMON OPTIONS

DRAWING No JE5093-01 REV 0 B

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				1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
DRAWN BY KJB		110921		TITLE BATTERY CHARGER CONNECTION DIAGRAM: AT30130250F480MXHXAGLXXX	
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		DRAWING No JE5093-01		REV 0 B	
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS		SALES No	
				SHEET 2 OF 2	