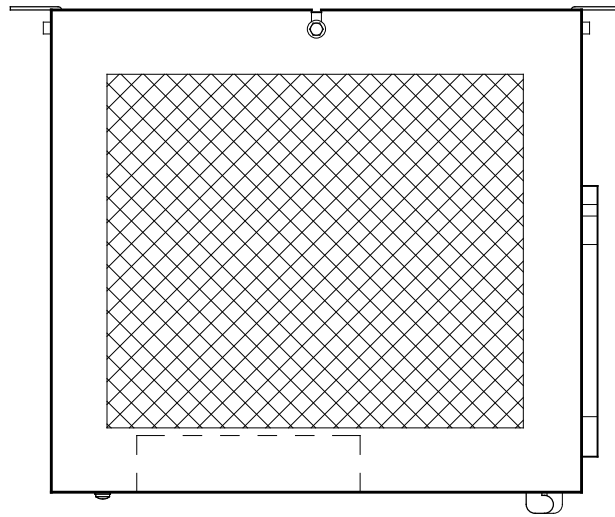


TOP VIEW



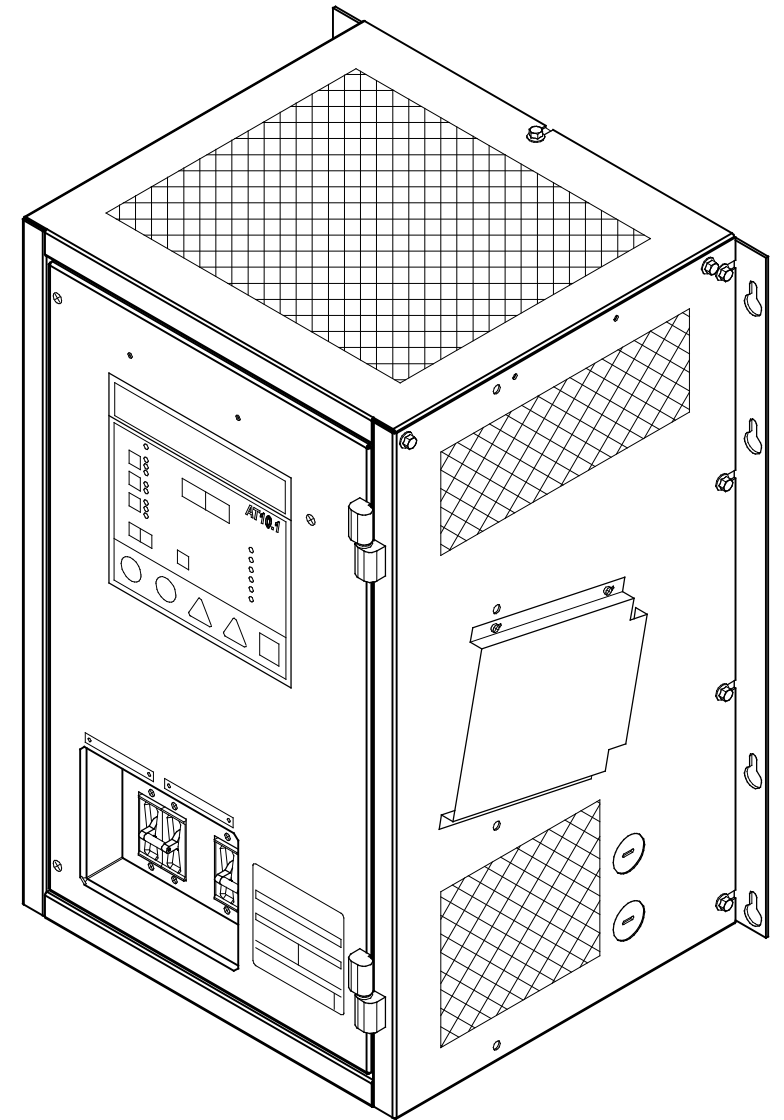
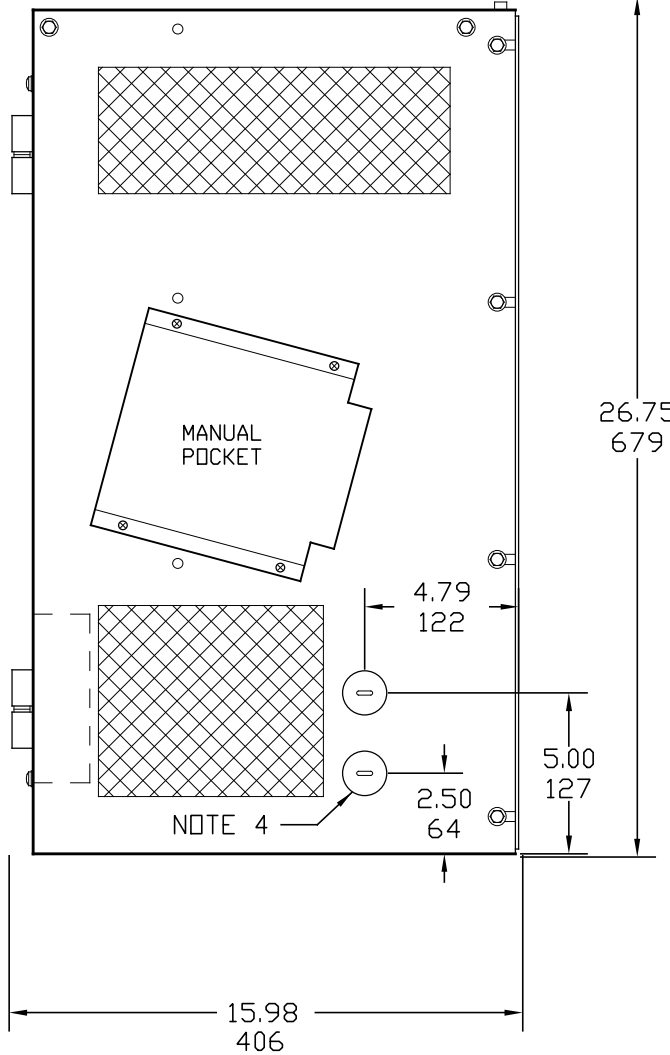
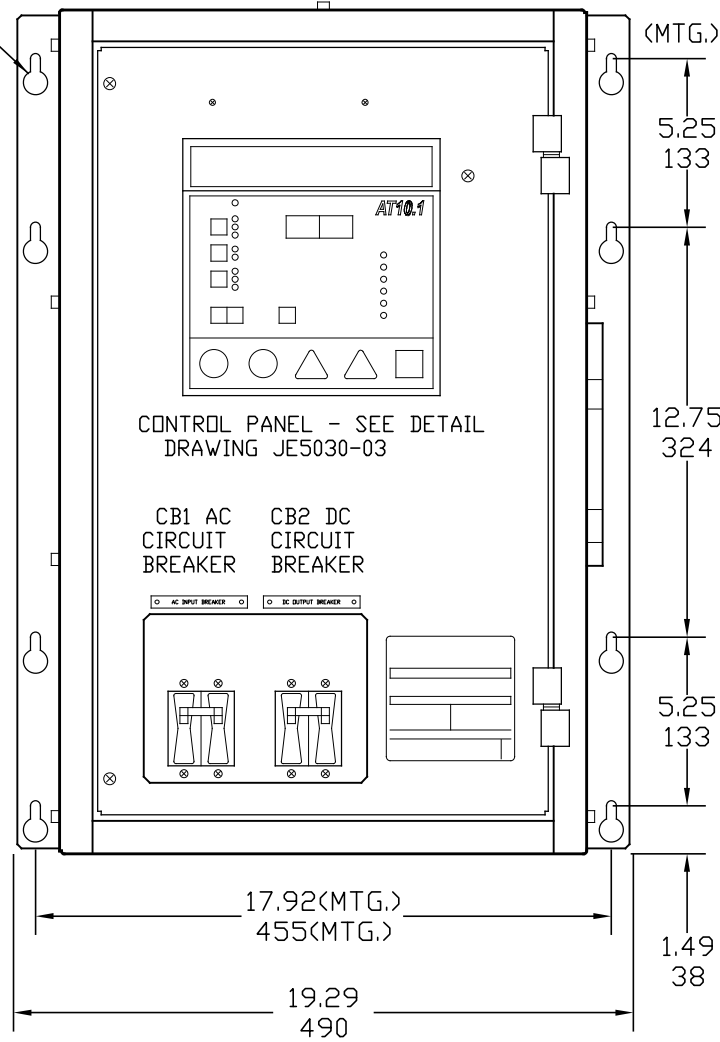
NOTES:

- 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) OF CABINET FOR COOLING.
- 3) EIGHT (8) KEY-HOLE SLOTS ARE PROVIDED ON BACK OF ENCLOSURE AS SHOWN, FOR WALL-MOUNTING WITH 0.25in/6.25mm HARDWARE.
- 4) TWO (2) 1.31in/33mm DIA STANDARD PRE-FAB KNOCKOUTS ARE PROVIDED, AS SHOWN FOR UP TO 1in/25mm CONDUIT. IF ADDITIONAL CONDUIT ENTRANCES ARE REQUIRED BY USER, ENCLOSURE SHOULD BE FIELD-MODIFIED BY INSTALLER.
- 5) BATTERY CHARGER SHIPPING WEIGHT: SEE PRODUCT LITERATURE.

FRONT VIEW

SIDE VIEW

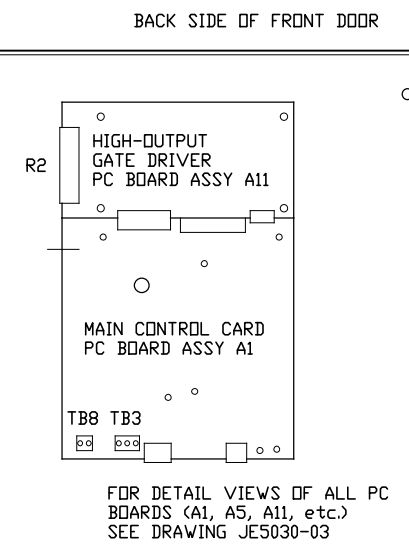
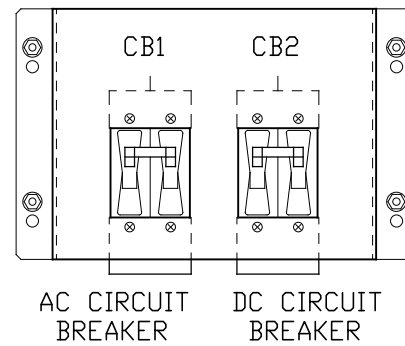
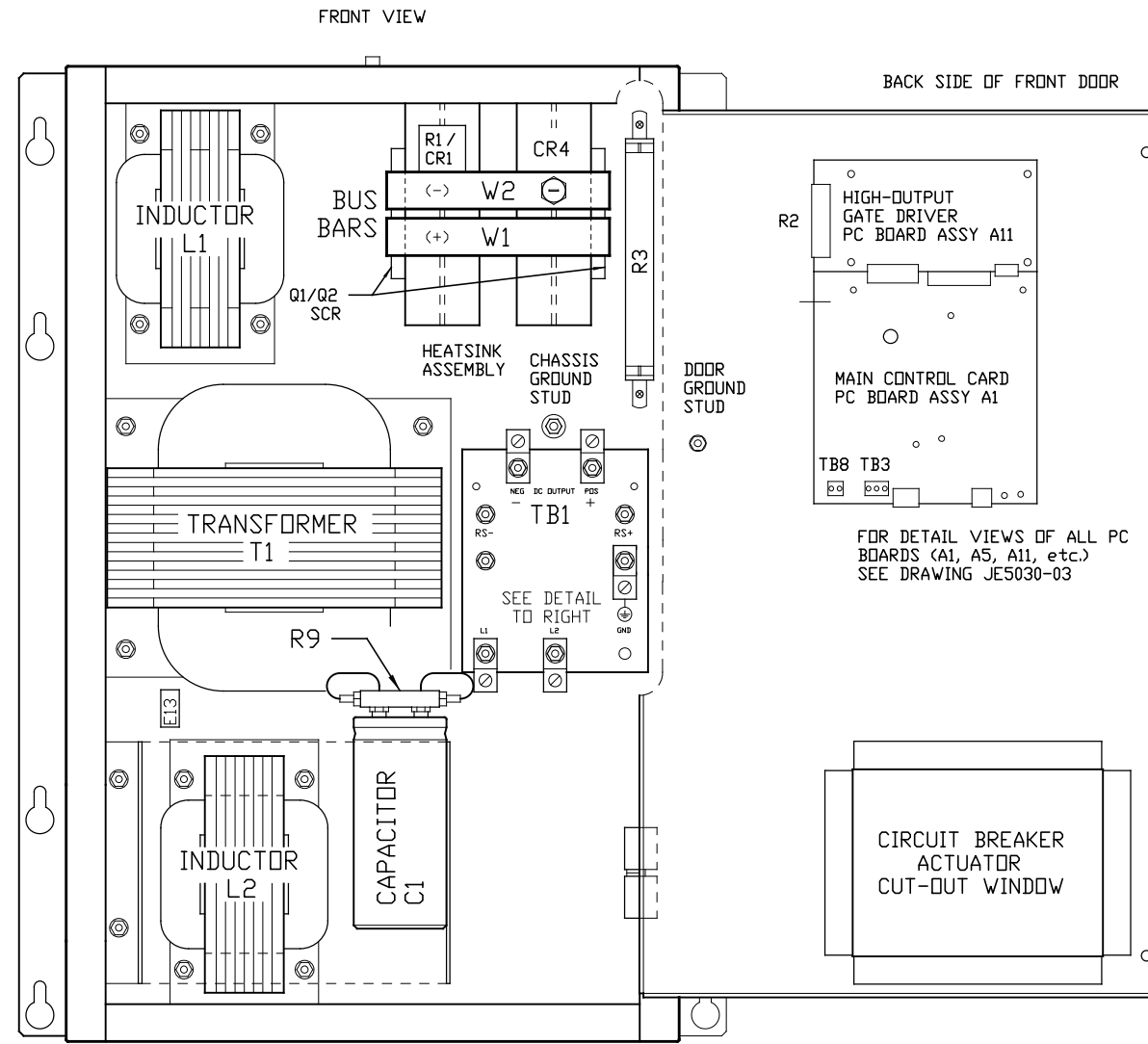
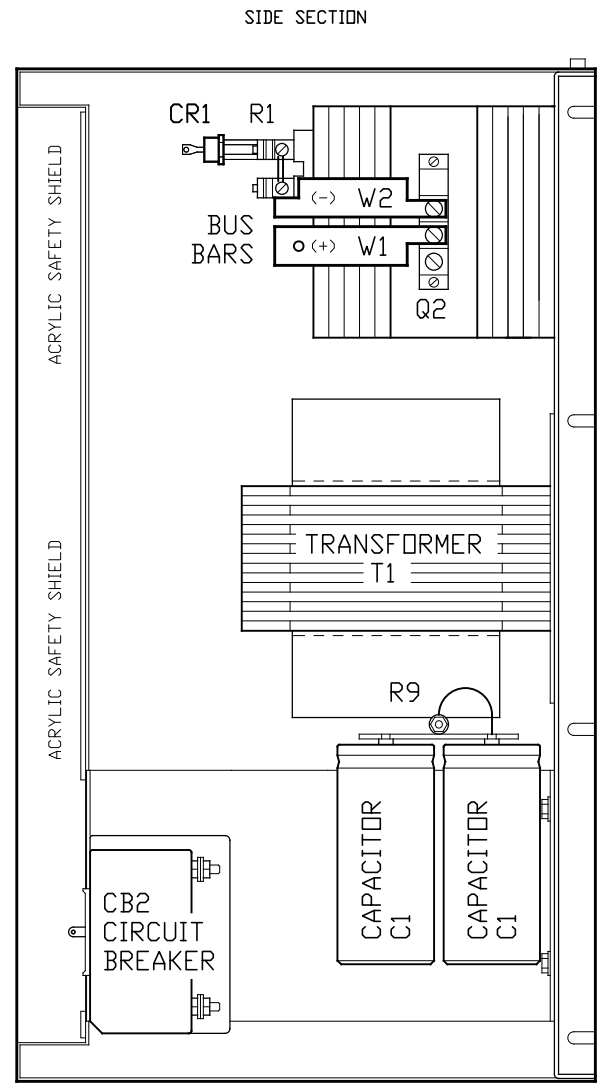
NOTE 3



DUAL DIMENSIONS in mm

30-50ADC W/O OPTIONS

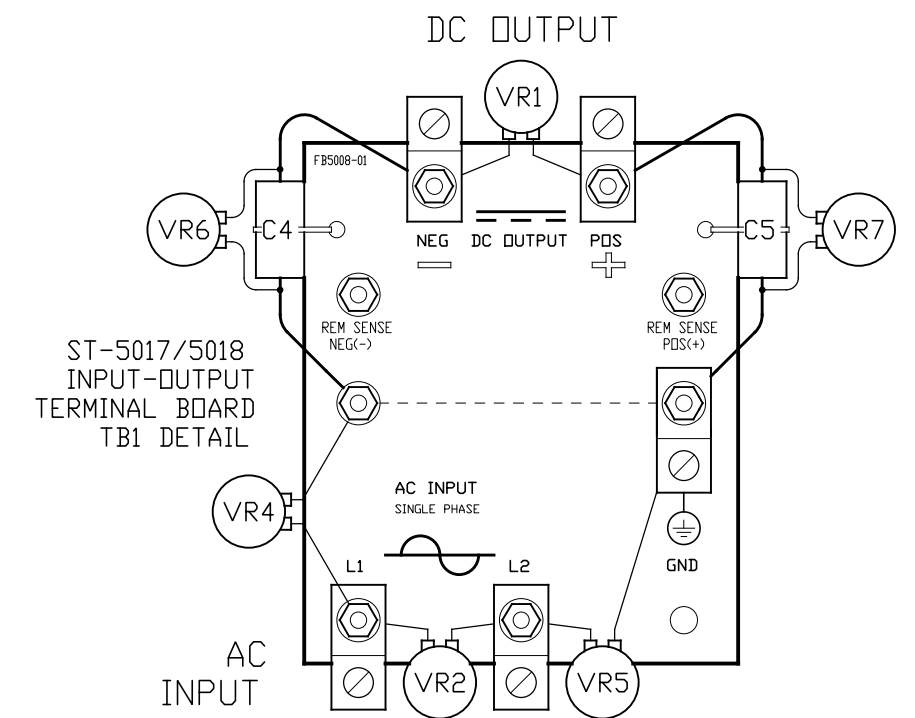
			THIRD ANGLE PROJECTION		1075 Saint John Street Easton, PA 18042-6661 PH 610-330-9000 FAX 610-330-8510 www.hindlepowerinc.com	
			DRAWN BY <b>KMW</b>	<b>110421</b>	TITLE <b>AT10.1 SERIES BATTERY CHARGER OUTLINE: NEMA-1 STYLE-5017 ENCLOSURE</b>	
<b>0</b>	<b>N/A</b>	<b>110421</b>	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			DRAWING No <b>JE5025-03</b>
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:					REV <b>0</b>	<b>B</b>
REV	ECN No	DATE	SCALE <b>NTS</b>	SALES No	SHEET <b>1</b> OF <b>1</b>	



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 (CD2)
CB2	DC OUTPUT CIRCUIT BREAKER (CD2)
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	TEMPCO 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
C1	FILTER CAPACITOR
CR1	POLARITY DIODE
E13	INDUCTOR INTER-CONNECT POINT
L2	FILTER INDUCTOR
R9	FILTER CAP BLEED RESISTOR

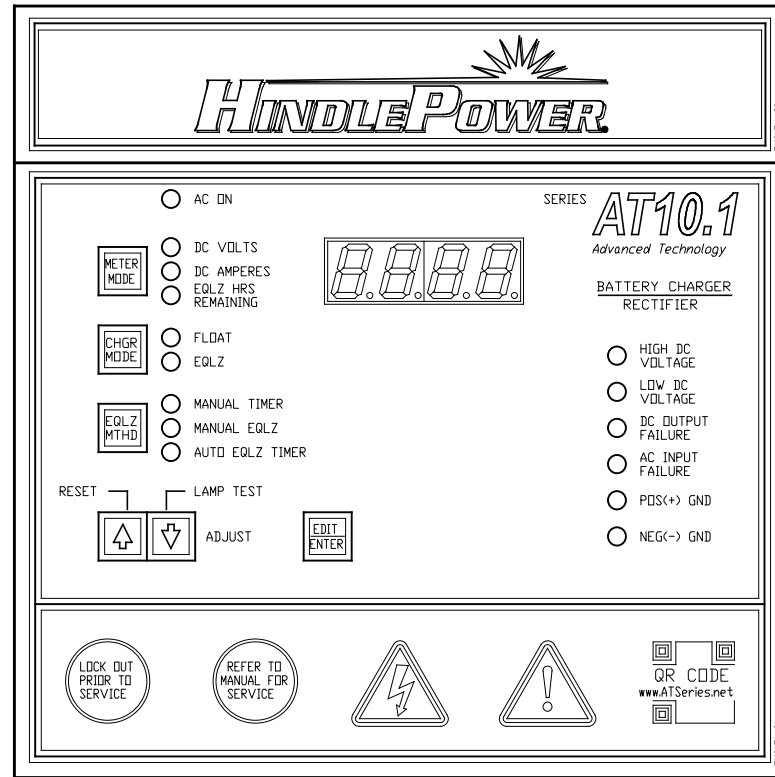


I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB1(+/-)	PDS/NEG DC OUTPUT TERMS - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
REM SENSE(+/-)	PDS/NEG REMOTE SENSE TERMINALS - 1/4-20 ZPS STUDS	1/4in RING LUG
TB1-GND	USER GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
TB1-L1/L2	AC INPUT TERMINALS - CU-ALUMINUM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

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DRAWN BY			KMW	110421		TITLE		AT10.1 SERIES BATTERY CHARGER INTERNAL COMPONENT LAYOUT: STYLE-5017			
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG					DRAWING No		JE5028-03		REV	0	B
0	N/A	110421	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

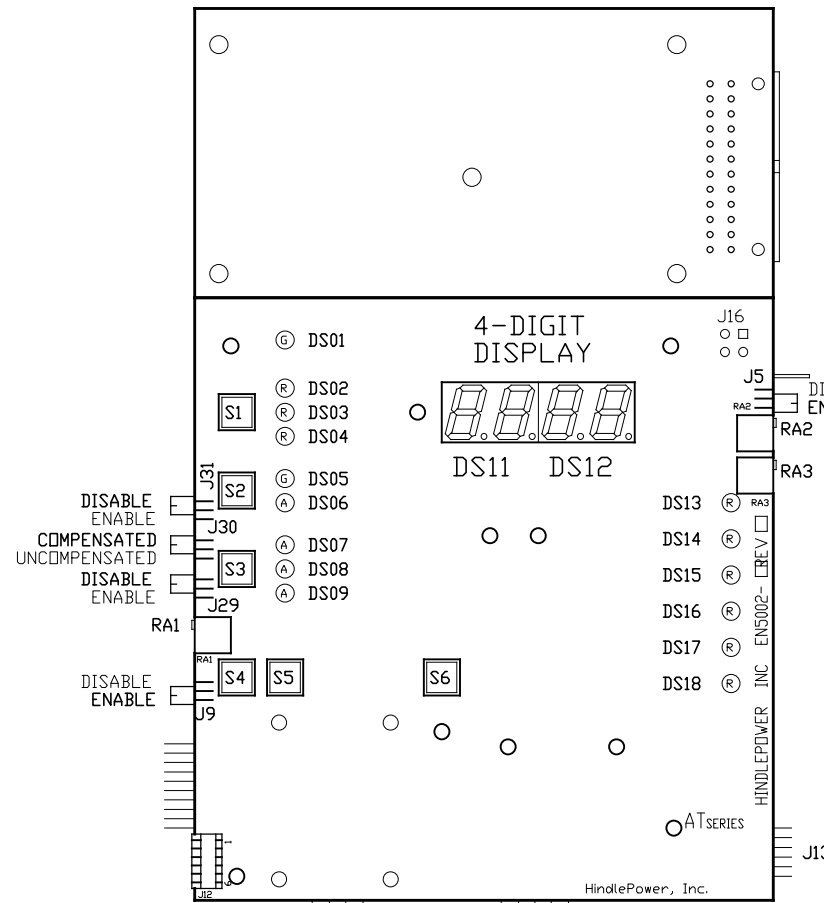
DS10 - RED - LOW LEVEL DETECT  
 DS11 - RED - (METER DISPLAY)  
 DS12 - RED - (METER DISPLAY)  
 DS13 - RED - HIGH DC VOLTAGE  
 DS14 - RED - LOW DC VOLTAGE  
 DS15 - RED - DC OUTPUT FAILURE  
 DS16 - RED - AC INPUT FAILURE  
 DS17 - RED - POS(+) GROUND FAULT  
 DS18 - RED - NEG(-) GROUND FAULT



CONTROL PANEL  
 (PART No. FK0151-01)

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.

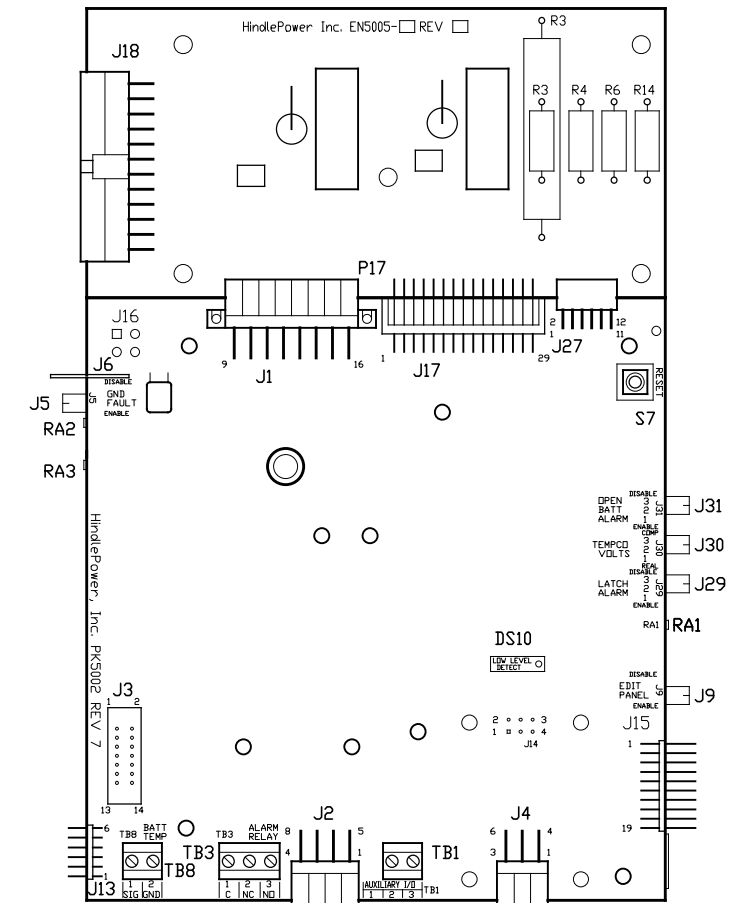
HIGH-OUTPUT GATE DRIVER PC BOARD (A11)



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

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
- TB8 - OPT TEMPCD PROBE (A10) CONN
- TB18 - REM SHUTDOWN INTERFACE

OTHER CONTROLS:

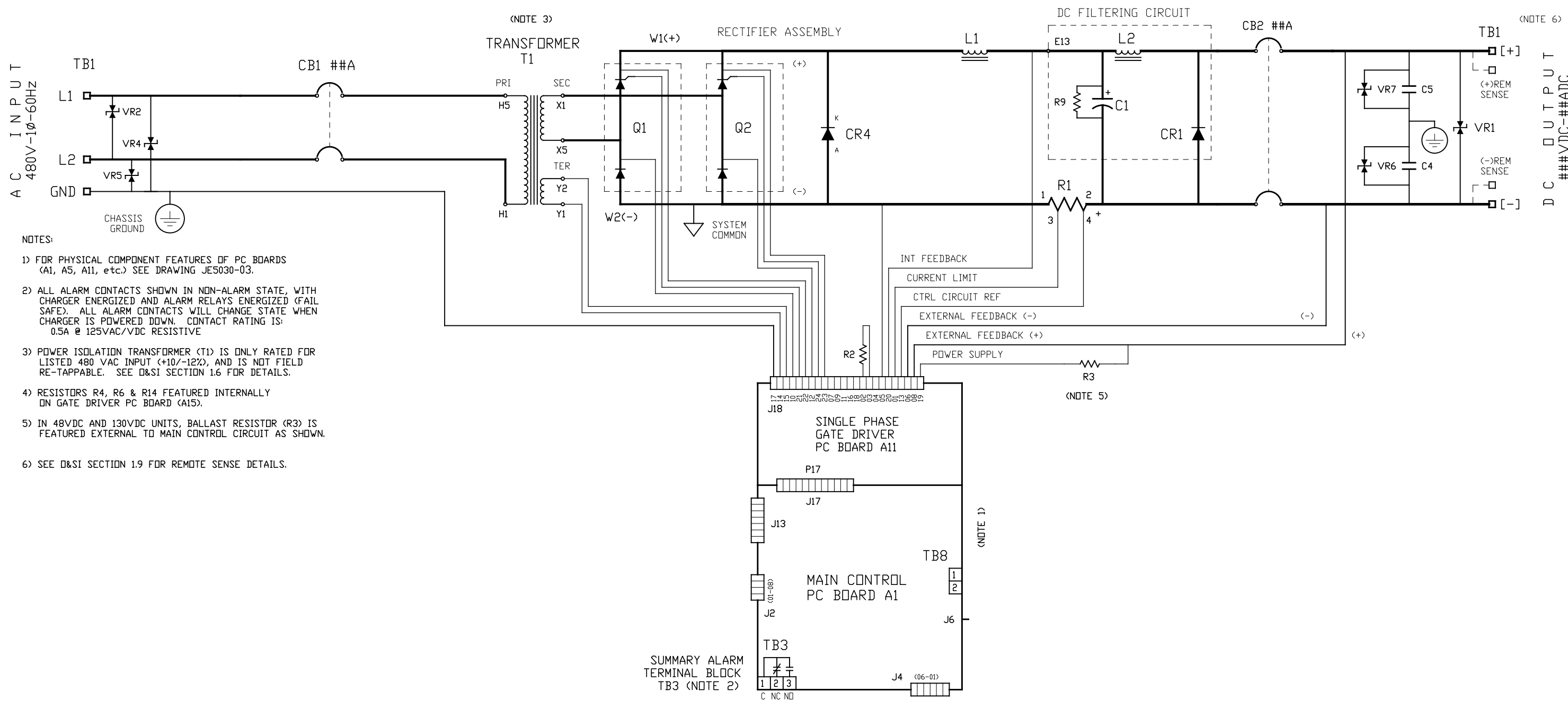
- RA1 - LOW LEVEL DETECT ADJUST
- RA2 - GROUND FAULT BALANCE
- RA3 - GROUND FAULT SENSITIVITY

NON-USER ACCESSED JUMPERS:

- J3 - OLD A5 RIBBON CONNECTOR
- J12 - BOARD PROGRAMMING
- J14 - OLD FORCED LOAD SHARING
- J15 - MANUFACTURING TEST
- J16 - OLD INTERNAL TEMP

30-50ADC W/O OPTIONS

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			DRAWN BY KMW 110421		HindlePower	
			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		TITLE AT10.1 SERIES BATTERY CHARGER CONTROL PANEL / PC BOARD DETAIL	
0 N/A 110421			UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		DRAWING No. JE5030-03 REV 0 B	
REV	ECN No	DATE	SCALE NTS	SALES No	SHEET 1 OF 1	



- NOTES:
- 1) FOR PHYSICAL COMPONENT FEATURES OF PC BOARDS (A1, A5, A11, etc.) SEE DRAWING JE5030-03.
  - 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 ONLY RATED FOR LISTED 480 VAC INPUT (+10/-12%), AND IS NOT FIELD RE-TAPPABLE. SEE D&SI SECTION 1.6 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
- 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

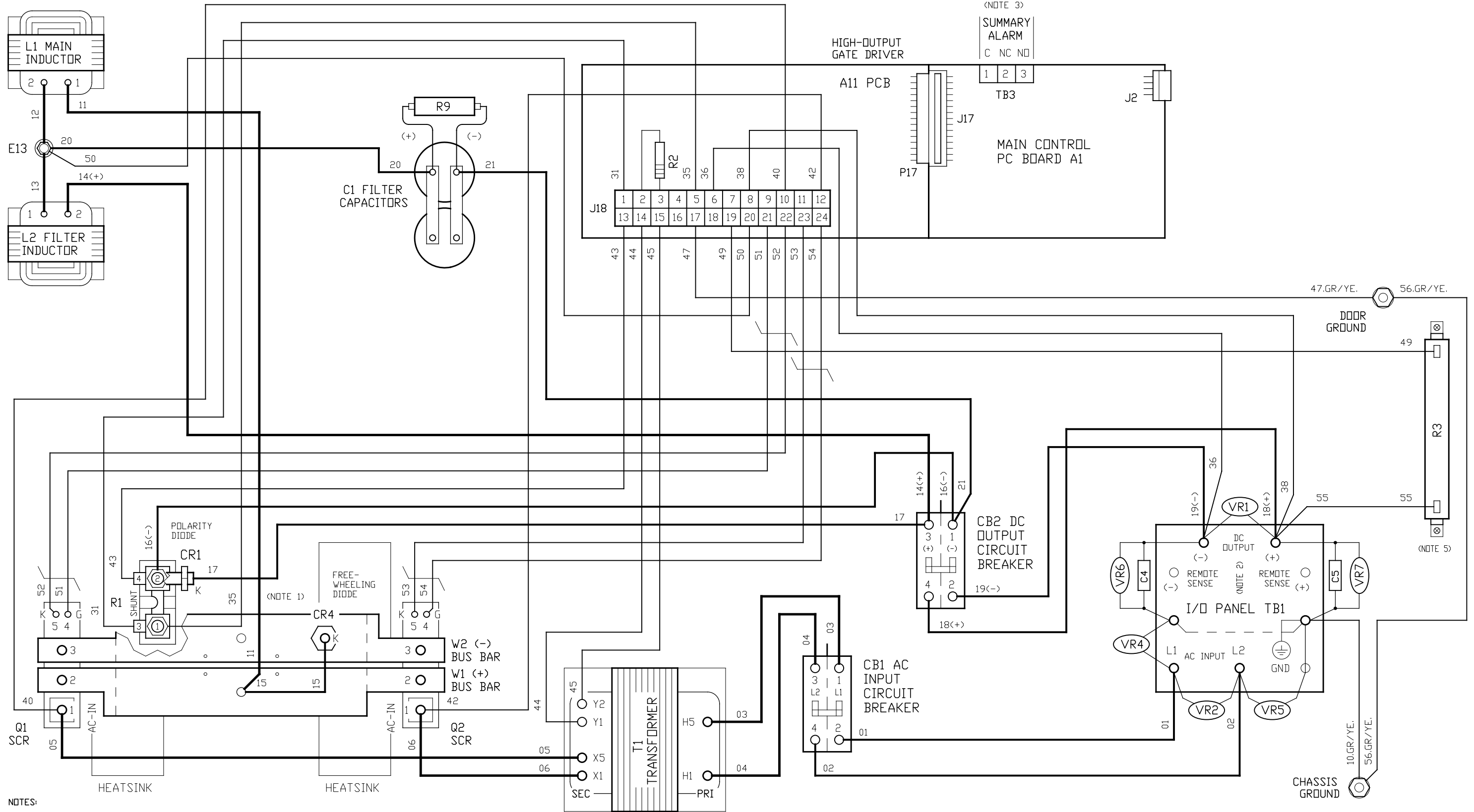
0	N/A	110421	THIRD ANGLE PROJECTION
REV	ECN No	DATE	DRAWN BY KMW 110421
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:			ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG

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 PH 610-330-9000 FAX 610-330-8510  
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TITLE BATTERY CHARGER SCHEMATIC:  
 30-50ADC W/O OPTIONS

DRAWING No JE5032-03 REV 0 B

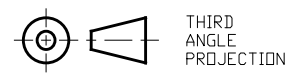
SCALE NTS SALES No SHEET 1 OF 1



- 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) (not used - reserved)
  - 5) IN 130 VDC UNITS, BALLAST RESISTOR (R3) IS SUPPLIED EXTERNALLY AS SHOWN.

- FEATURED OPTIONS:
- STANDARD DC OUTPUT FILTERING
  - AC INPUT CIRCUIT BREAKER
  - DC OUTPUT CIRCUIT BREAKER

REV	ECN No	DATE	0	N/A	110421
DRAWN BY			KMW	110421	
ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG					
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:					



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TITLE **BATTERY CHARGER CONNECTION DIAGRAM:  
 30-50ADC W/O OPTIONS**

DRAWING No **JE5034-03** REV **0** **B**

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