

No.	DRAWING No.	REV	SHT	DRAWING TITLE
1	JE5035-50	9	1	UMC DRAWING LIST / DATA NAMEPLATE (THIS SHEET)
2	JE5036-50	9	1	UMC OUTLINE: NEMA-1 STYLE-5018 ENCL W/HAND TRUCK
3	JE5037-50	9	1	UMC INTERNAL COMPONENT LAYOUT: STYLE-5018
4	JE5038-50	9	1	UNIVERSAL MAINTENANCE CHGR INSTRUMENT PANEL DETAIL
5	JE5039-50	9	1	UMC SCHEMATIC: BB0443-01 (10-50 ADC)
6	JE5040-50	9	1	UMC CONNECTION DIAGRAM: BB0443-01 (10-50 ADC)

INPUT		OUTPUT	
AC VOLTS	120/208/240/480	DC VOLTS	24/48/130
MAX. AC AMPERES	**/62/54/27	DC AMPERES	10-50
HERTZ	60	PHASE	1
		RIPPLE mV rms	200 W/O BATT
BATTERY TYPE	N/A	No. OF CELLS	N/A
** - 55Aac (120 Vac INPUT REQUIRES OUTPUT REDUCED TO 50% OR LESS)			
			MADE IN USA

NOTE 1 ←

NOTE 2 ←

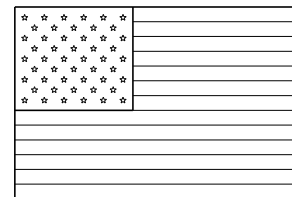
NOTE 3 →

NOTE 4 →

NAMEPLATE NOTES:

- 1) FEATURED SERIAL NUMBER REPRESENTS ONE UNIT. MULTIPLE UNITS WILL BE NUMBER-SEQUENCED (e.g. -1,-2,-3, etc.).
- 2) UNIVERSAL MAINTENANCE CHARGER DESIGNED FOR TEMPORARY MOBILE USE ON BATTERY, NOT FOR STATIONARY SUPPORT OF CRITICAL/SENSITIVE DC LOADS. LISTED VALUE REPRESENTS MAXIMUM ALLOWABLE LIMIT WITHOUT BATTERY.
- 3) MOBILE UNIVERSAL MAINTENANCE CHARGER APPLICABLE TO VARIOUS BATTERY TYPES AND NUMBER OF CELLS.
- 4) AC AMPERES LISTED ON DATAPLATE IS A CALCULATED VALUE OF CHARGER'S INPUT CURRENT AT MAX OUTPUT. MEASURED AC CURRENT DURING NOMINAL OPERATION WILL BE LOWER. USER WIRING AND FEEDER BREAKER TO AC INPUT TERMINAL BLOCK (TB1) SHOULD CONFORM TO NEC AND SITE CODES, AND BE SIZED FOR THE TRIP RATING OF AC INPUT BREAKER (CB1).

MADE IN



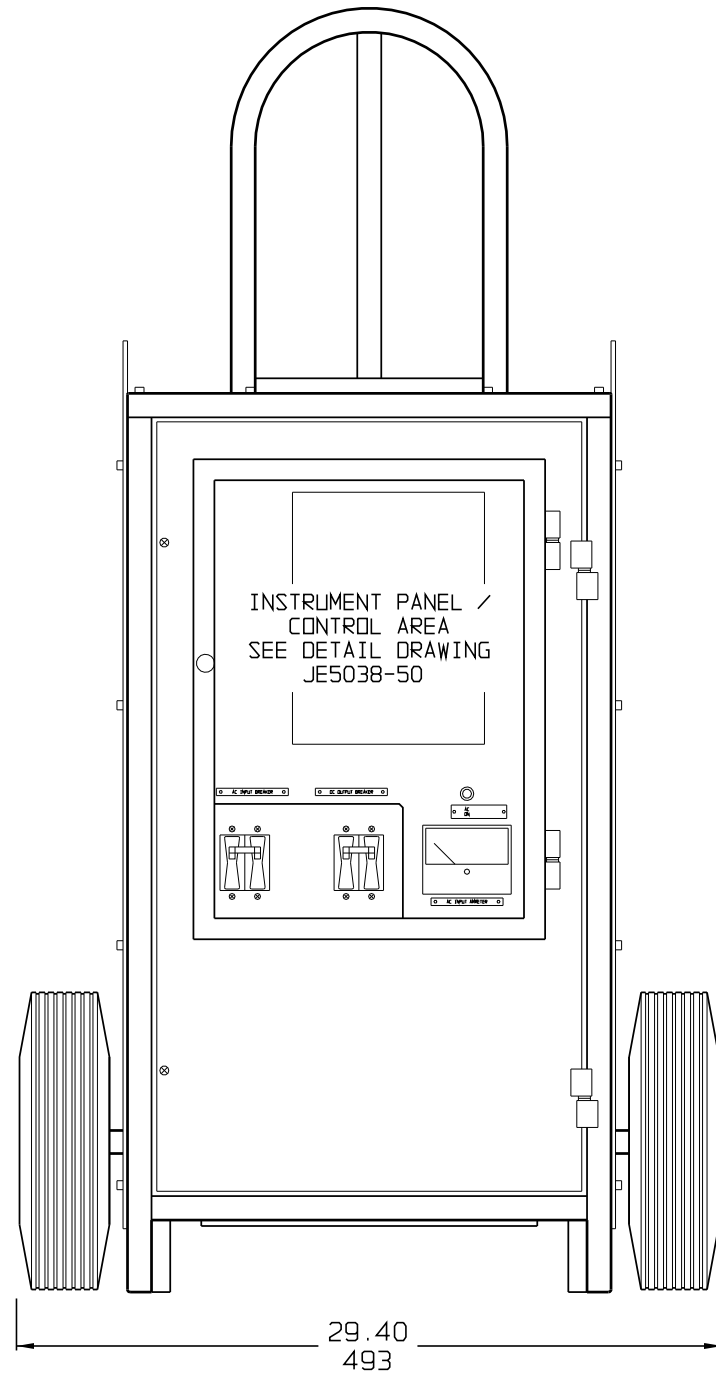
U. S. A.

DRAWING PACKAGE NOTES:

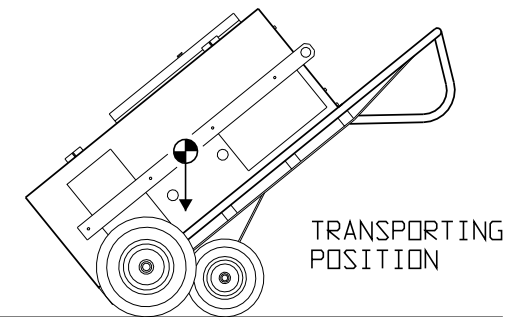
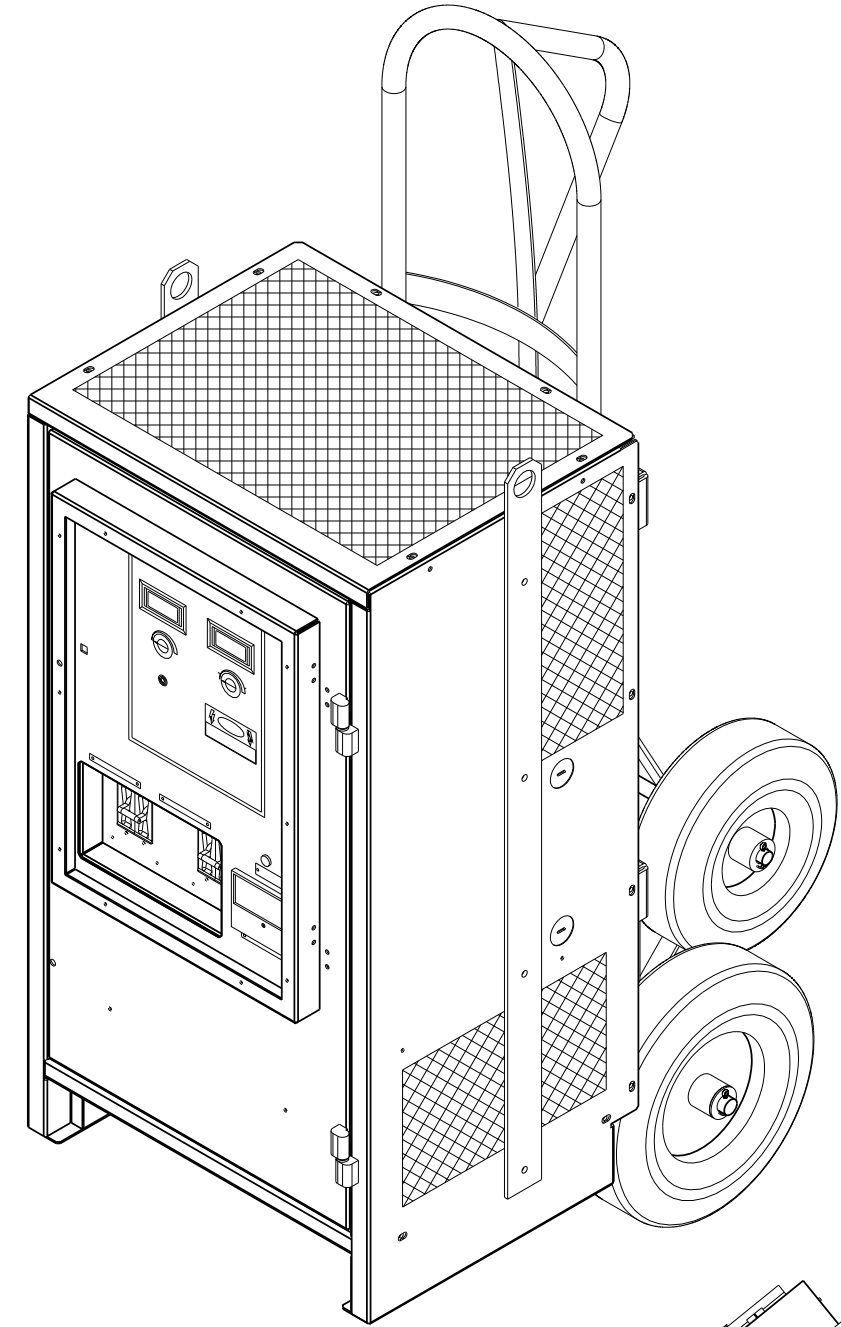
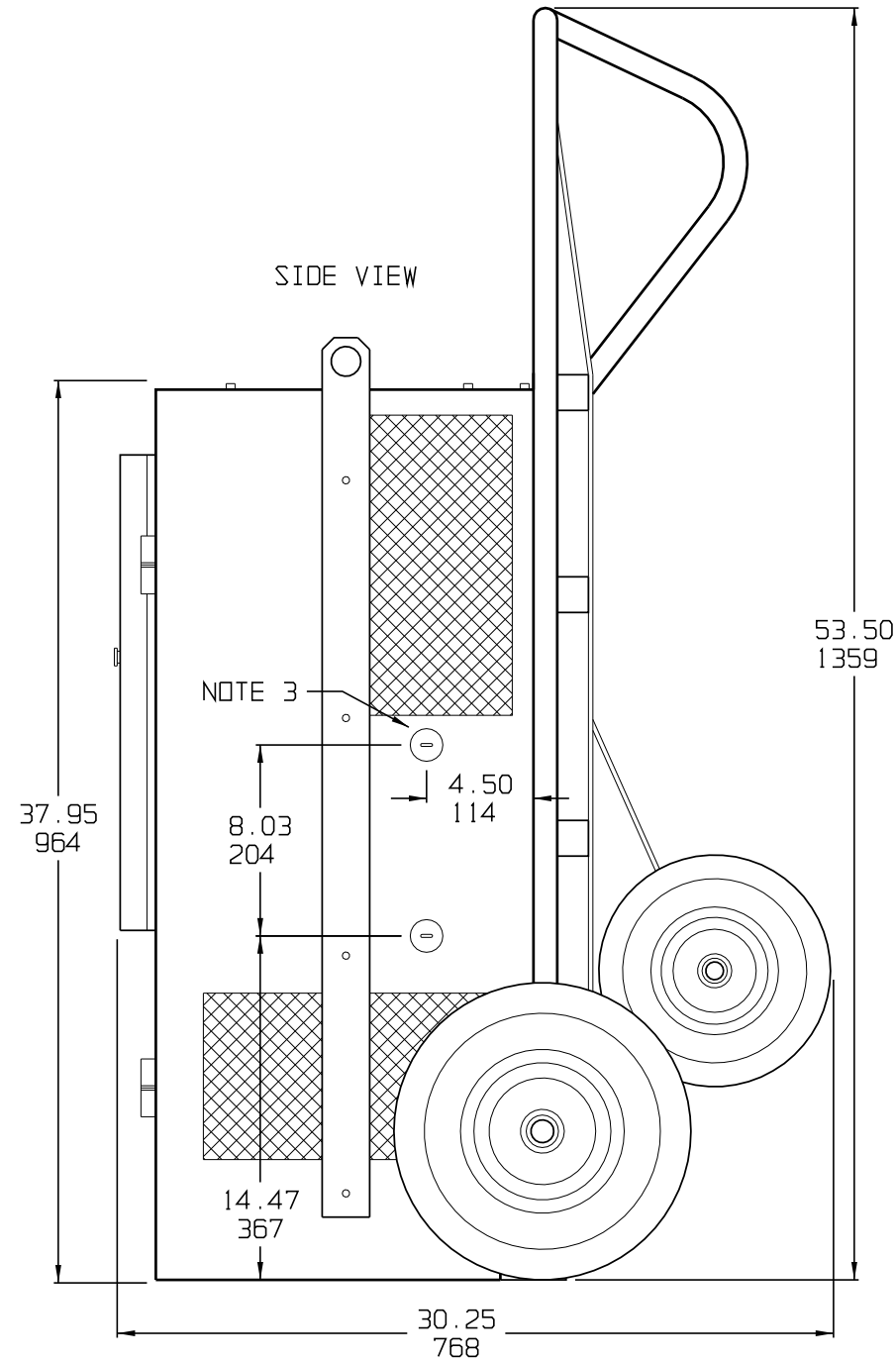
- A) THIS DRAWING PACKAGE REPRESENTS PART No. JH0003-UMC-50.
- B) ALL SHEETS OF THE ABOVE LIST ARE A COMPLETE PACKAGE AND SHOULD NOT BE SEPERATED FROM ONE ANOTHER.
- C) ELECTRONIC VERSIONS OF THESE DOCUMENTS ARE AVAILABLE IN AutoCAD (DWG) FORMAT AND/OR Adobe Acrobat (PDF) FORMAT.

9	-N/A-	091121	 THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER (UMC) DRAWING LIST / DATA NAMEPLATE DETAIL	
8	25942	042417			
7	25864	030817	DRAWN BY MCR 021403	DRAWING No JE5035-50 REV 9 B	
6	21450	120808	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		
5	20462	121506	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	SCALE NTS PART No JE5035-50 SHEET 1 OF 1	
REV	ECN No	DATE			

FRONT VIEW



SIDE VIEW



TRANSPORTING POSITION

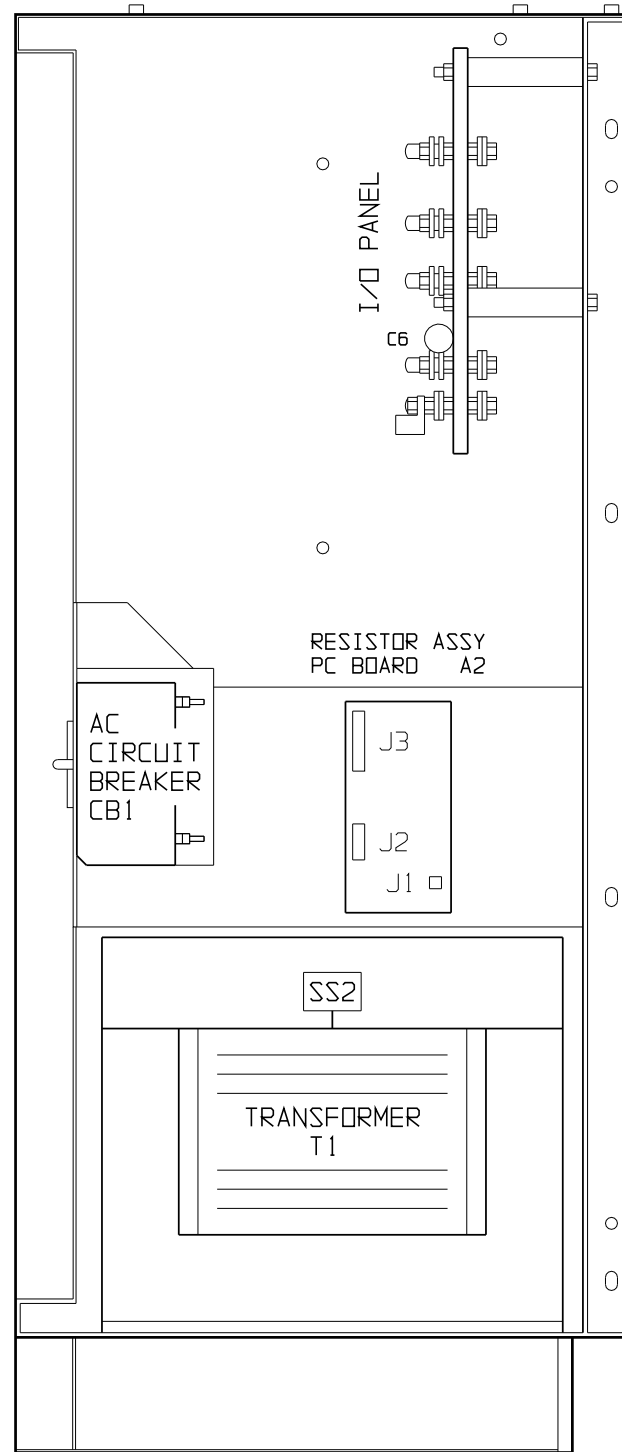
NOTES:

- 1) ENCLOSURE IS A NEMA-1 / IP20 TYPE STEEL CABINET WITHOUT GASKETS, FINISH IS ANSI-61 GRAY EPOXY POWDERCOAT.
- 2) ALLOW 12in / 305mm OF FREE AIR ALL AROUND CABINET FOR VENTILATION.
- 3) TWO (2) 1in/25mm I/O CONDUIT KNOCKOUTS ARE PROVIDED AS SHOWN ON THE LOWER-RIGHT SIDE OF ENCLOSURE.
- 4) BATTERY CHARGER SHIPPING WEIGHT: APPROXIMATELY 390 lbs. / 177 kg.

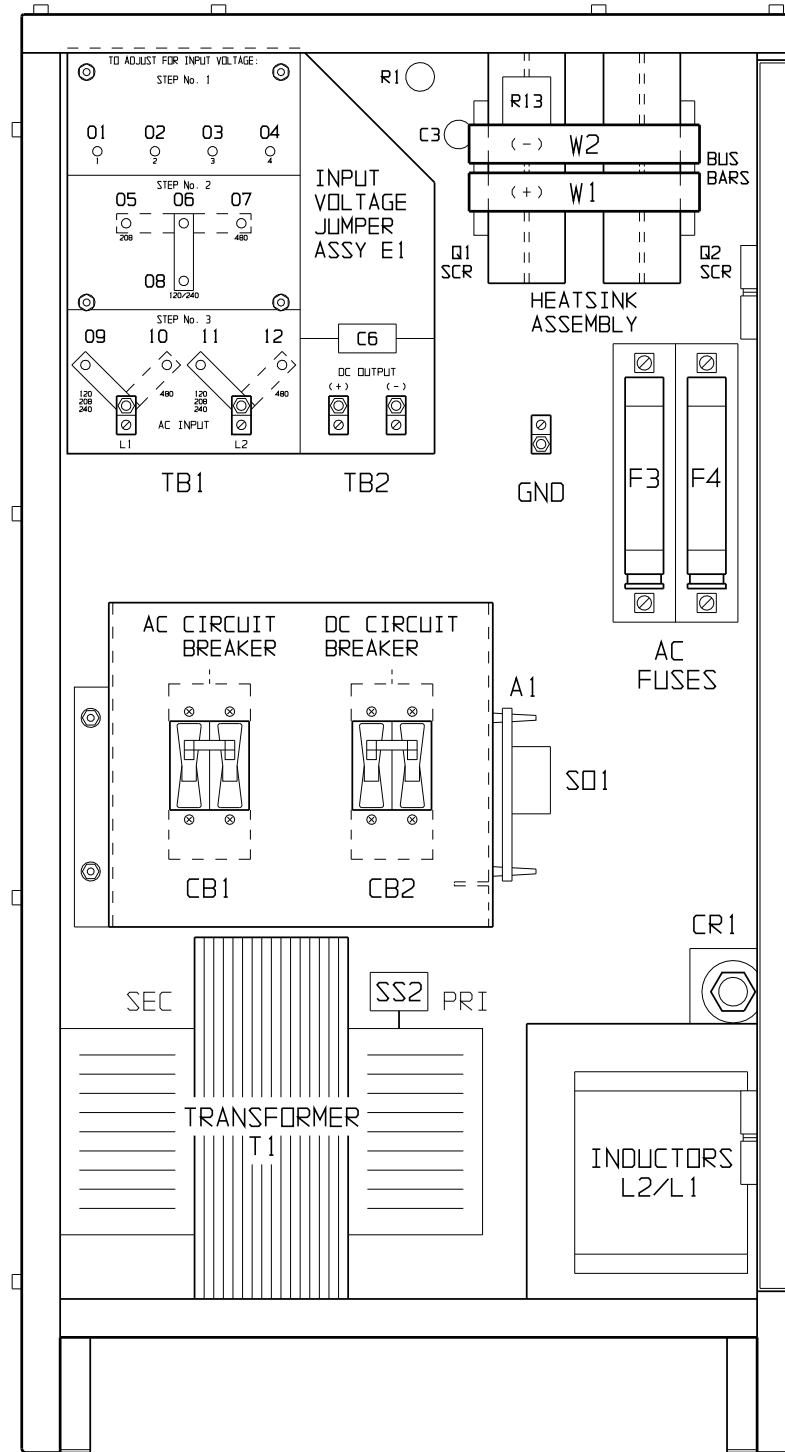
DUAL DIMENSIONS in mm

9	-N/A-	091121	THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER OUTLINE: NEMA-1 STYLE-5018 ENCL W/HAND TRUCK		
8	25942	042417				
7	25864	030817	DRAWN BY MCR 021403	DRAWING No JE5036-50 REV 9 B		
6	21450	120808	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			
5	20462	121506	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	SCALE NTS	PART No JE5036-50	SHEET 1 OF 1
REV	ECN No	DATE				

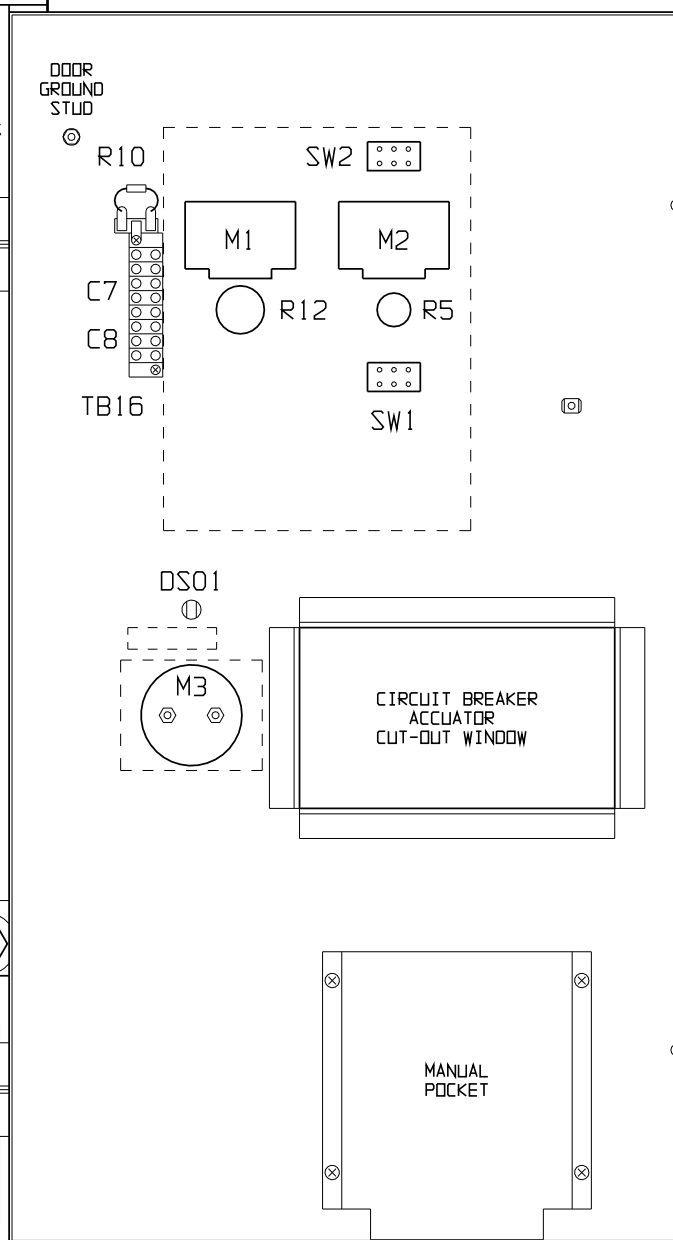
LEFT SIDE SECTION



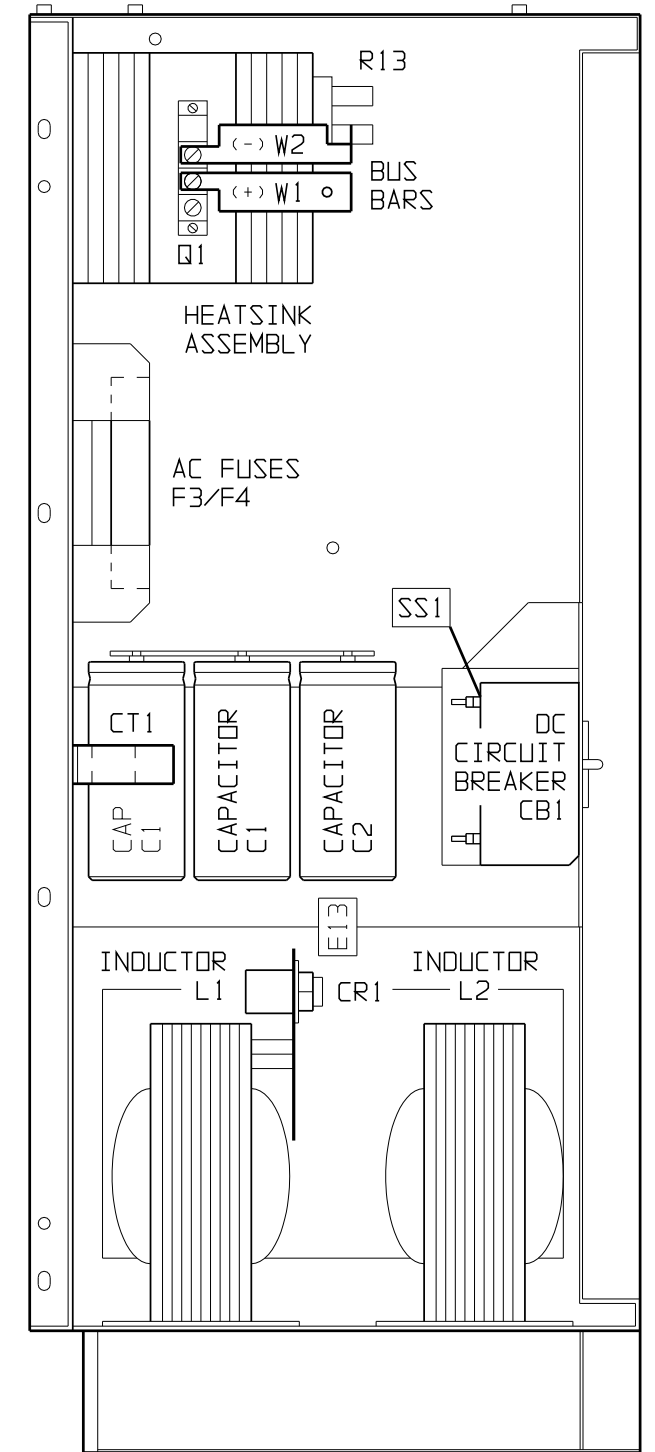
FRONT VIEW



BACK SIDE VIEW OF OPENED FRONT DOOR



RIGHT SIDE SECTION



NOTE :

SEE SCHEMATIC (JE5039-50) FOR COMPONENT INDICATORS (CIRCUIT SYMBOL) DESCRIPTIONS.

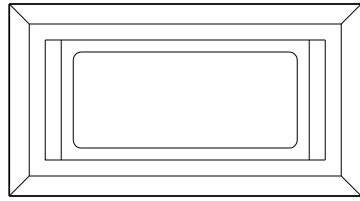
I/O TERMINAL	DESCRIPTION - TYPE	CONNECTION
TB1-L1	AC INPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
TB1-L2	AC INPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
GND	GROUND TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-2 AWG
TB2(+)	POSITIVE OUTPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG
TB2(-)	NEGATIVE OUTPUT TERMINAL - CU-ALUMINUM COMPRESSION LUG	#14-1/0 AWG

9	-N/A-	091121	THIRD ANGLE PROJECTION
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5	20462	121506	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
REV	ECN No	DATE	

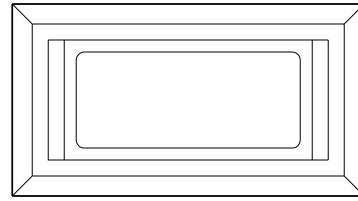
TITLE		UNIVERSAL MAINTENANCE CHARGER	
INTERNAL COMPONENT LAYOUT: STYLE-5018			
DRAWING No	JE5037-50	REV	9
SCALE	NTS	PART No	JE5037-50
SHEET	1	OF	1

CHARGER VOLTAGE  BATTERY VOLTAGE
VOLTAGE CHECK

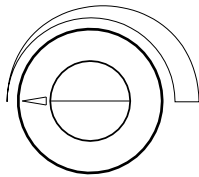
UMC
Universal
Maintenance
Charger



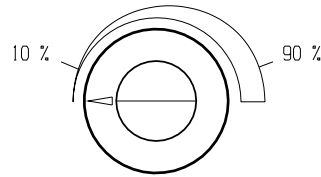
DC OUTPUT VOLTAGE



DC OUTPUT CURRENT



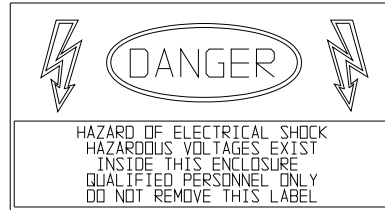
10 TURN
OUTPUT VOLTAGE
ADJUSTMENT



OUTPUT
CURRENT LIMIT
ADJUSTMENT



24 VDC 130 VDC 48 VDC
VOLTAGE SELECTOR



QUICK SET UP:

TURN OFF ALL POWER AND TURN OFF BATTERY CHARGER'S INPUT & OUTPUT BREAKERS CB1 & CB2

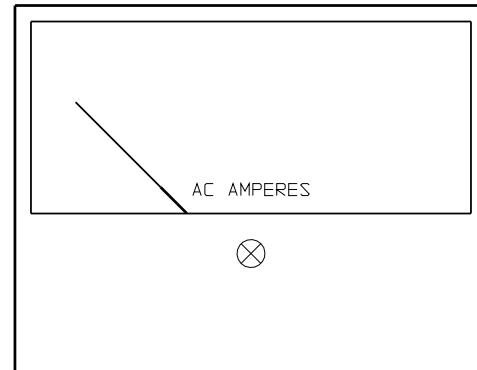
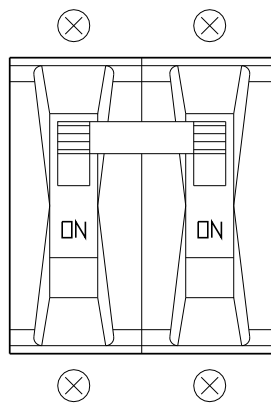
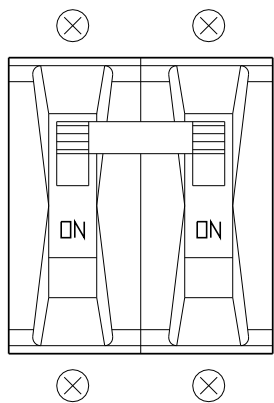
1. CONNECT THE INPUT TERMINALS TO AVAILABLE AC POWER.
2. SEE TABLE/NAMEPLATE FOR INPUT CURRENTS REQUIRED.
3. ADJUST THE OUTPUT CURRENT LIMIT TO MINIMUM CW, IF REDUCED INPUT/OUTPUT CURRENTS ARE REQUIRED.
4. MOVE INPUT JUMPERS ON I/O TO MATCH YOUR INPUT VOLTAGE. SEE CONNECTION CHART BELOW OR INSIDE THE ENCLOSURE.
5. CONNECT CABLES TO DC BUS OR BATTERY. PROPERLY RATE WIRE SIZE FOR THE CURRENT REQUIRED.
6. SELECT OUTPUT VOLTAGE RATING 130V, 48V OR 24V USING THE VOLTAGE SELECTOR SWITCH.
7. PRESS VOLTAGE CHECK SWITCH TO CHARGER VOLTAGE.
8. TURN ON AC SOURCE AND THE AC BREAKER; ADJUST OUTPUT VOLTAGE TO DESIRED SET POINT.
9. PRESS VOLTAGE CHECK SWITCH TO BATTERY VOLTAGE. CHECK FOR PROPER POLARITY AND VOLTAGE.
10. TURN ON DC BREAKER; CURRENT WILL BE DISPLAYED ON THE AC AND DC AMMETERS.
11. INCREASE CURRENT LIMIT ADJUSTMENT CW TO DESIRED OUTPUT/INPUT CURRENT.

○ AC INPUT BREAKER ○

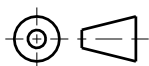
○ DC OUTPUT BREAKER ○

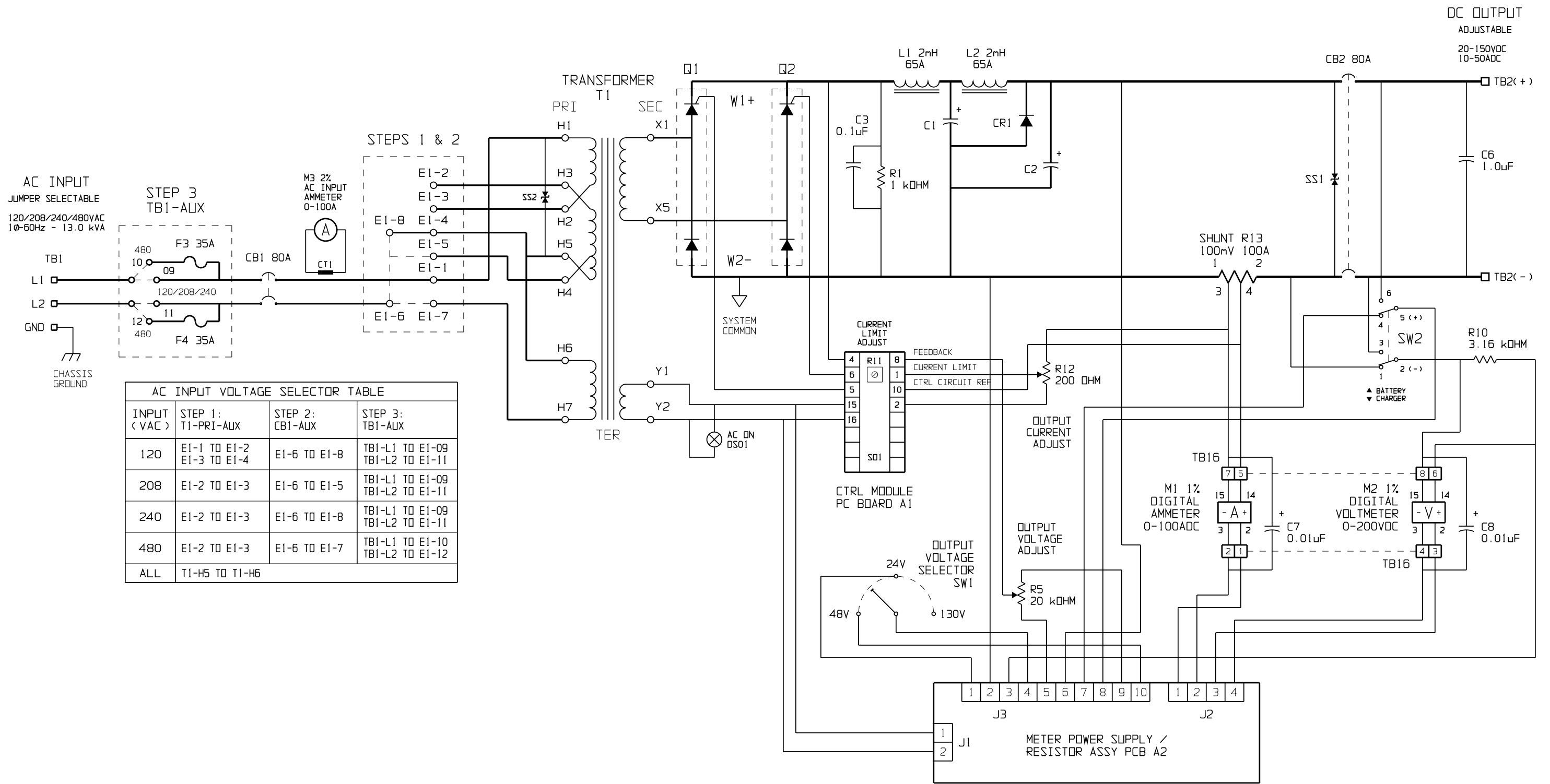


○ AC ON ○



○ AC INPUT AMMETER ○

9	-N/A-	091121	 THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER (UMC) INSTRUMENT PANEL DETAIL		
8	25942	042417				
7	25864	030817	DRAWN BY MCR 021403	DRAWING No JE5038-50 REV 9 B		
6	21450	120808	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			
5	20462	121506	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	SCALE NTS PART No JE5038-50 SHEET 1 OF 1		
REV	ECN No	DATE				

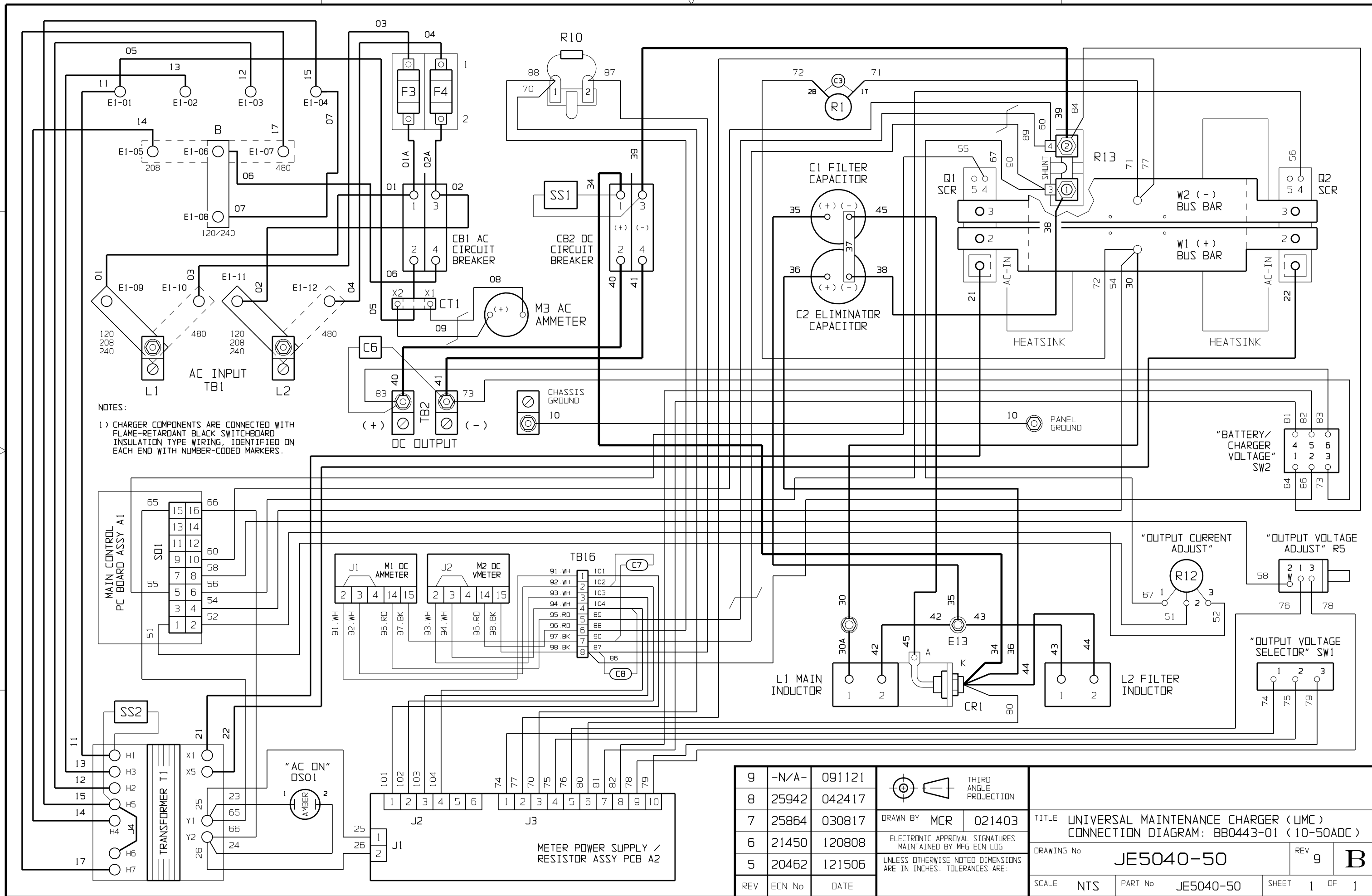


AC INPUT VOLTAGE SELECTOR TABLE

INPUT (VAC)	STEP 1: T1-PRI-AUX	STEP 2: CB1-AUX	STEP 3: TB1-AUX
120	E1-1 TO E1-2 E1-3 TO E1-4	E1-6 TO E1-8	TB1-L1 TO E1-09 TB1-L2 TO E1-11
208	E1-2 TO E1-3	E1-6 TO E1-5	TB1-L1 TO E1-09 TB1-L2 TO E1-11
240	E1-2 TO E1-3	E1-6 TO E1-8	TB1-L1 TO E1-09 TB1-L2 TO E1-11
480	E1-2 TO E1-3	E1-6 TO E1-7	TB1-L1 TO E1-10 TB1-L2 TO E1-12
ALL	T1-H5 TO T1-H6		

SYM	DESCRIPTION	SYM	DESCRIPTION	SYM	DESCRIPTION
A1	MAIN CONTROL PC BOARD	F3	AC INPUT FUSE	R12	"OUTPUT CURRENT ADJUST" POT
A2	METER POWER SUPPLY / RES ASSY PCB	F4	AC INPUT FUSE	R13	MAIN DC CURRENT-SENSING SHUNT
C1	FILTER CAPACITOR	L1	MAIN INDUCTOR	SD1	MAIN CTRL PCB (A1) INTERCONNECTOR
C2	BATTERY ELIMINATOR FILTER CAP	L2	FILTER INDUCTOR	SS1	DC OUTPUT SURGE SUPPRESSOR
C3	SNUBBER CAPACITOR	M1	DC OUTPUT AMMETER	SS2	AC INPUT SURGE SUPPRESSOR
C6	DC OUTPUT EMI FILTER CAP (+ TO -)	M2	DC OUTPUT VOLTMETER	SW1	"OUTPUT VOLTAGE SELECTOR" SWITCH
C7	DC AMMETER (M1) SIGNAL FILTER CAP	M3	AC INPUT AMMETER	SW2	"BATTERY/CHARGER VOLTAGE" SWITCH
C8	DC VMETER (M2) SIGNAL FILTER CAP	Q1	SILICON-CONTROLLED RECTIFIER	T1	POWER ISOLATION TRANSFORMER
CB1	AC INPUT CIRCUIT BREAKER	Q2	SILICON-CONTROLLED RECTIFIER	TB1	AC INPUT TERMINALS
CB2	DC OUTPUT CIRCUIT BREAKER	R1	BLEED RESISTOR	TB2	DC OUTPUT TERMINALS
CR1	POLARITY DIODE	R5	"OUTPUT VOLTAGE ADJUST" POT	TB16	METER POWER SUPPLY INTERFACE
CT1	AC CURRENT TRANSFORMER	R10	VMETER VOLTAGE DIVIDER RESISTOR	W1	COPPER BUS BAR (POS LEG)
DS01	"AC ON" INDICATOR LIGHT	R11	CURRENT LIMIT ADJUST POTENTIOMETER	W2	COPPER BUS BAR (NEG LEG)

9	-N/A-	091121	 THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER (LMC) SCHEMATIC: BB0443-01 (10-50ADC)	
8	25942	042417			
7	25864	030817	DRAWN BY MCR 021403	DRAWING No JE5039-50	
6	21450	120808	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG	REV 9	B
5	20462	121506	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	SCALE NTS PART No JE5039-50 SHEET 1 OF 1	
REV	ECN No	DATE			



NOTES:
 1) CHARGER COMPONENTS ARE CONNECTED WITH FLAME-RETARDANT BLACK SWITCHBOARD INSULATION TYPE WIRING, IDENTIFIED ON EACH END WITH NUMBER-CODED MARKERS.

9	-N/A-	091121	 THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER (UMC) CONNECTION DIAGRAM: BB0443-01 (10-50ADC)	
8	25942	042417		DRAWING No JE5040-50	
7	25864	030817	DRAWN BY MCR 021403	REV 9	B
6	21450	120808	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		
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REV	ECN No	DATE	SCALE NTS	PART No JE5040-50	SHEET 1 OF 1