

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

UNIVERSAL MAINTENANCE CHARGER - UNIT CERTIFICATION

- DESIGNED, MANUFACTURED AND TESTED TO NEMA PE5-1996

BATTERY CHARGER / RECTIFIER			
MODEL No. BB0443-01			
SERIAL No. CUST. PO#/MFG. SALES#			
INPUT		OUTPUT	
AC VOLTS	120/208/240/480	DC VOLTS	24/48/130
AC AMPS	**/62/54/27	DC AMPS	10-50
HERTZ	60	PHASE	1
		RIPPLE mV rms	100
BATTERY TYPE	N/A	No. OF CELLS	N/A
** - 55 AMPS (120 VAC INPUT REQUIRES OUTPUT REDUCED TO 50% OR LESS)			

NOTE 1 ←

NOTE 2 ←

NOTE 3 ←

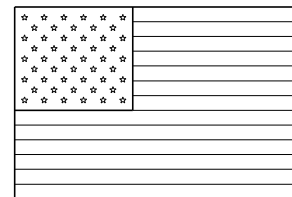
NOTE 4 →

NOTE 5 →

NAMEPLATE NOTES:

- 1) FEATURED SERIAL NUMBER REPRESENTS ONE UNIT. MULTIPLE UNITS WILL BE NUMBER-SEQUENCED (e.g. -1,-2,-3, etc.). DATE CODE ALSO ADDED AT TIME OF MANUFACTURING.
- 2) UMC SERIES BATTERY CHARGERS ARE DESIGNED AND TESTED TO MEET NEMA PE5-1996 STANDARD. LISTED RIPPLE VALUE REPRESENTS MAXIMUM ALLOWABLE LIMIT. ACTUAL CHARGER OUTPUT RIPPLE MAY BE LOWER WHEN CONNECTED TO BATTERY.
- 3) NAMEPLATE PART No. IS FK5007-XX.
- 4) MOBILE UNIVERSAL MAINTENANCE CHARGER APPLICABLE TO VARIOUS BATTERY TYPES.
- 5) "AC AMPS" FEATURED ON DATAPLATE IS A CALCULATED VALUE OF CHARGER'S INPUT CURRENT AT MAX OUTPUT, MEASURED AC INPUT CURRENT DURING NOMINAL OPERATION WILL BE LOWER.

MADE IN



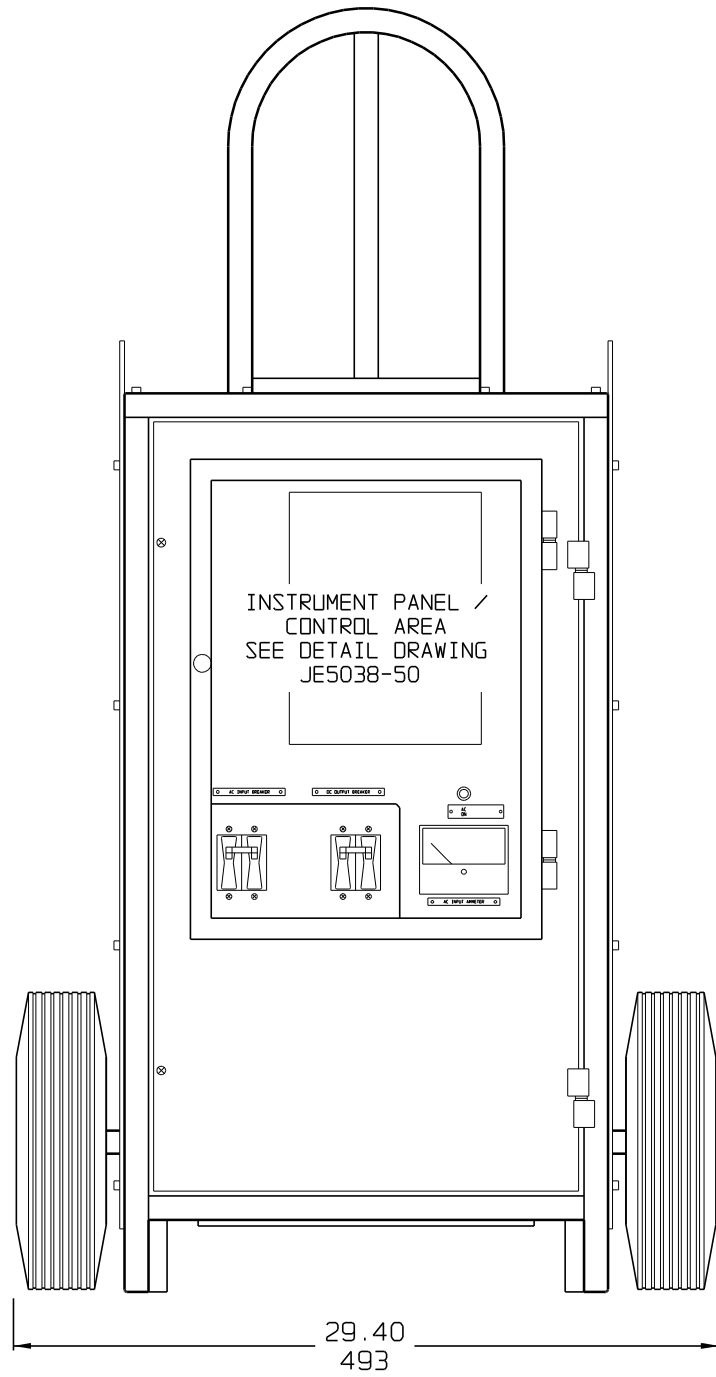
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DRAWING PACKAGE NOTES:

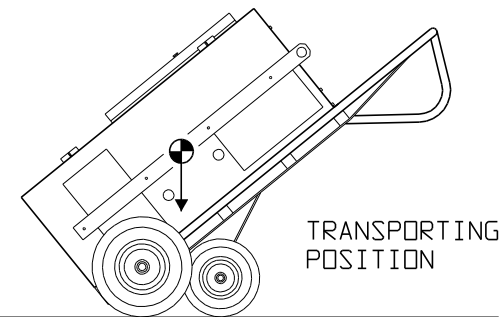
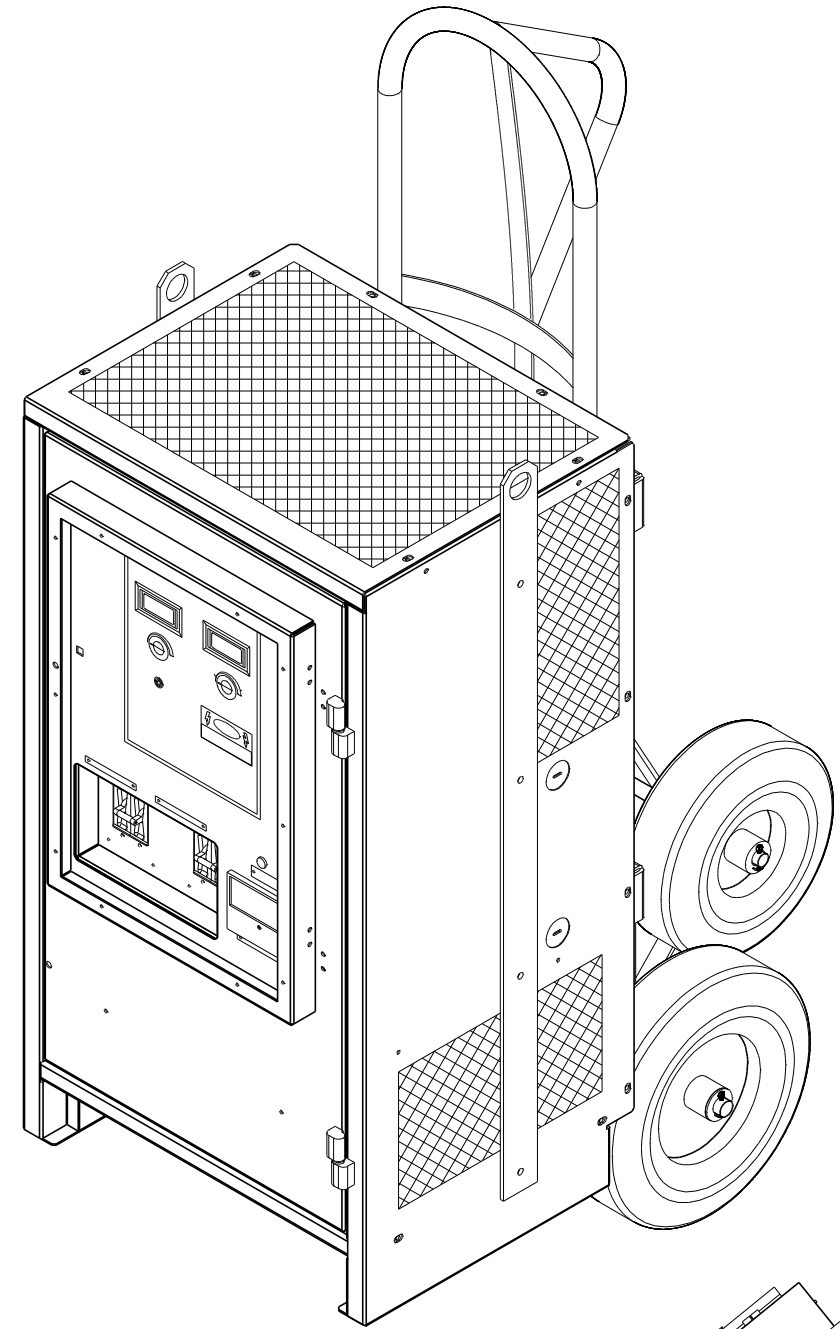
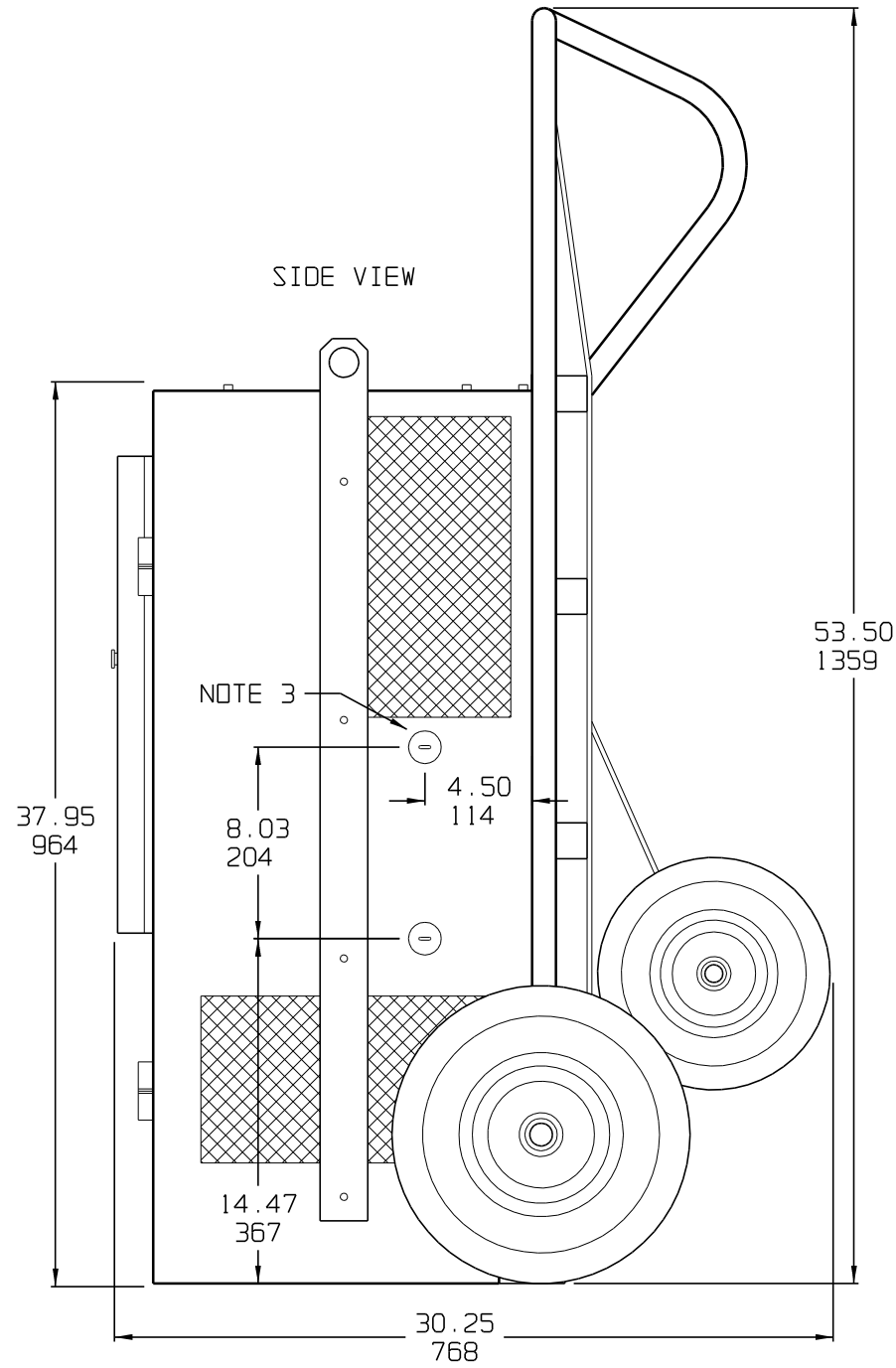
- A) THIS DRAWING PACKAGE REPRESENTS PART No. JH0003-UMC-50.
- B) ALL SHEETS OF THE ABOVE LIST ARE A COMPLETE PACKAGE AND SHOULD NOT BE SEPERATED FROM ONE ANOTHER.
- C) ELECTRONIC VERSIONS OF THESE DOCUMENTS ARE AVAILABLE IN AutoCAD (DWG) FORMAT AND/OR Adobe Acrobat (PDF) FORMAT.

6	21450	120808	 THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER (UMC) DRAWING LIST / DATA NAMEPLATE DETAIL		
5	20462	121506				
4	20385	102006	DRAWN BY MCR 021403	DRAWING No JE5035-50 REV 6 <b>B</b>		
3	20277	072006	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG			
2	20100	051606	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

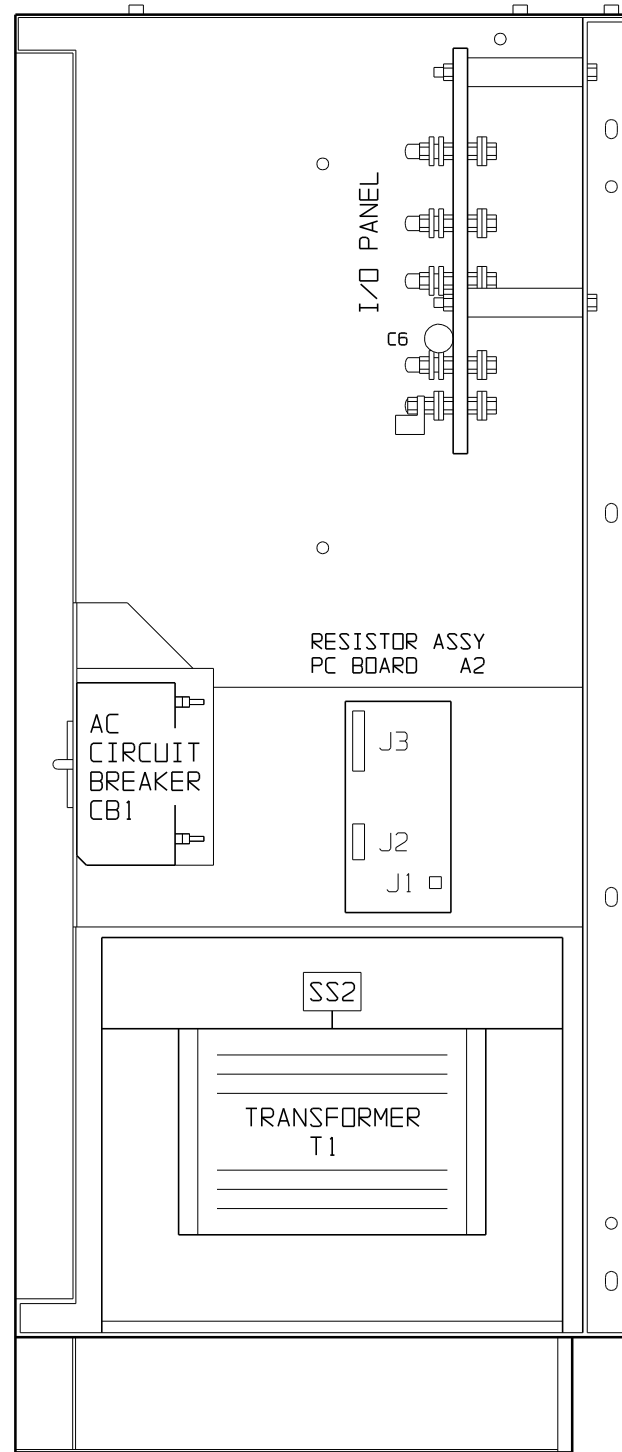
NOTES:

- 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.

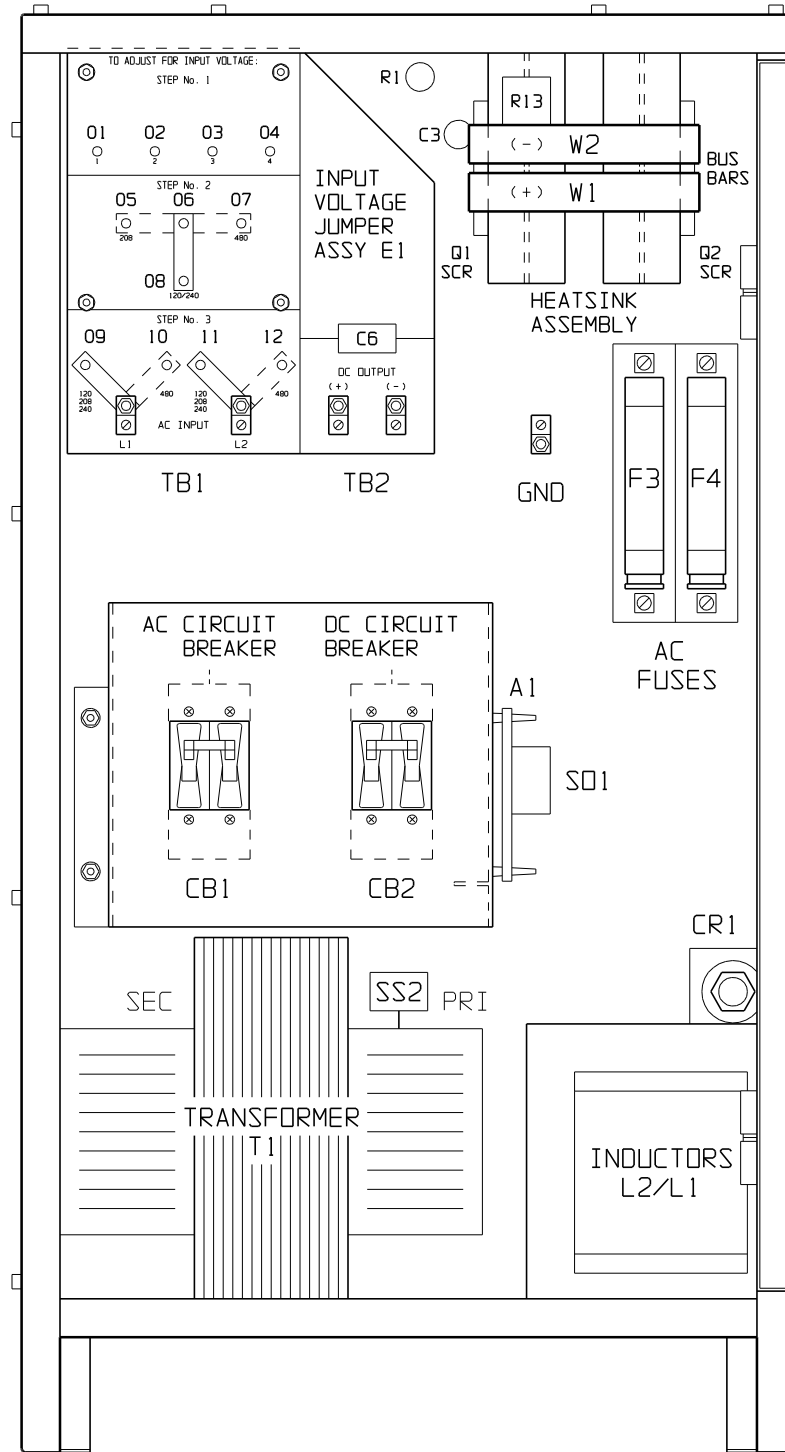
DUAL DIMENSIONS in mm

6	21450	120808	THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER OUTLINE: NEMA-1 STYLE-5018 ENCL W/HAND TRUCK							
5	20462	121506									
4	20385	102006	DRAWN BY MCR 021403	DRAWING No JE5036-50 REV 6 <b>B</b>							
3	20277	072006	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG								
2	20100	051606	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	SCALE	NTS	PART No	JE5036-50	SHEET	1	OF	1
REV	ECN No	DATE									

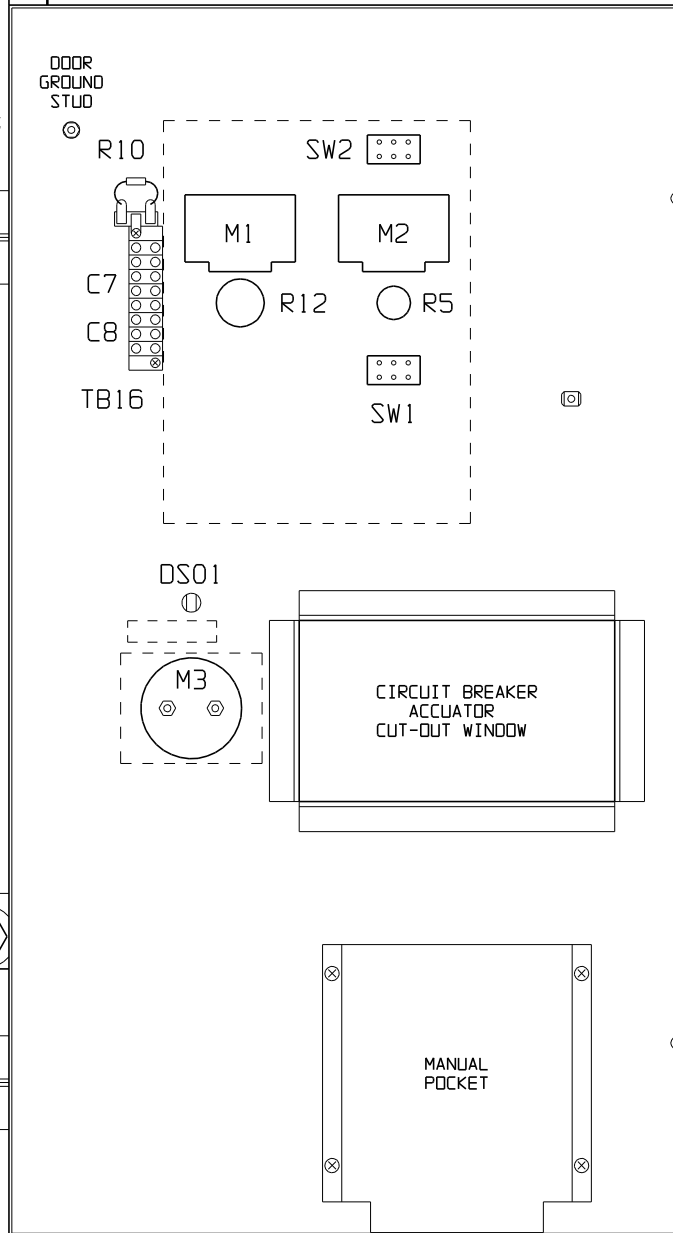
LEFT SIDE SECTION



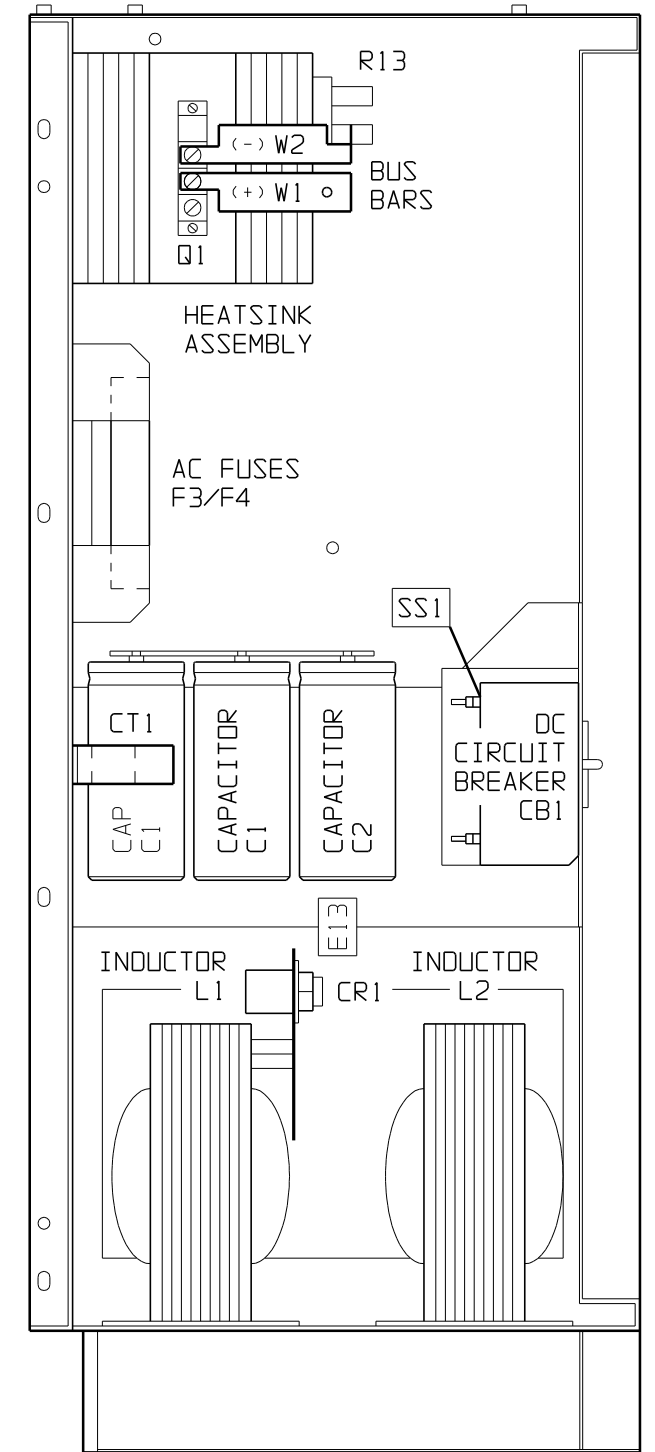
FRONT VIEW



BACK SIDE VIEW OF OPENED FRONT DOOR



RIGHT SIDE SECTION

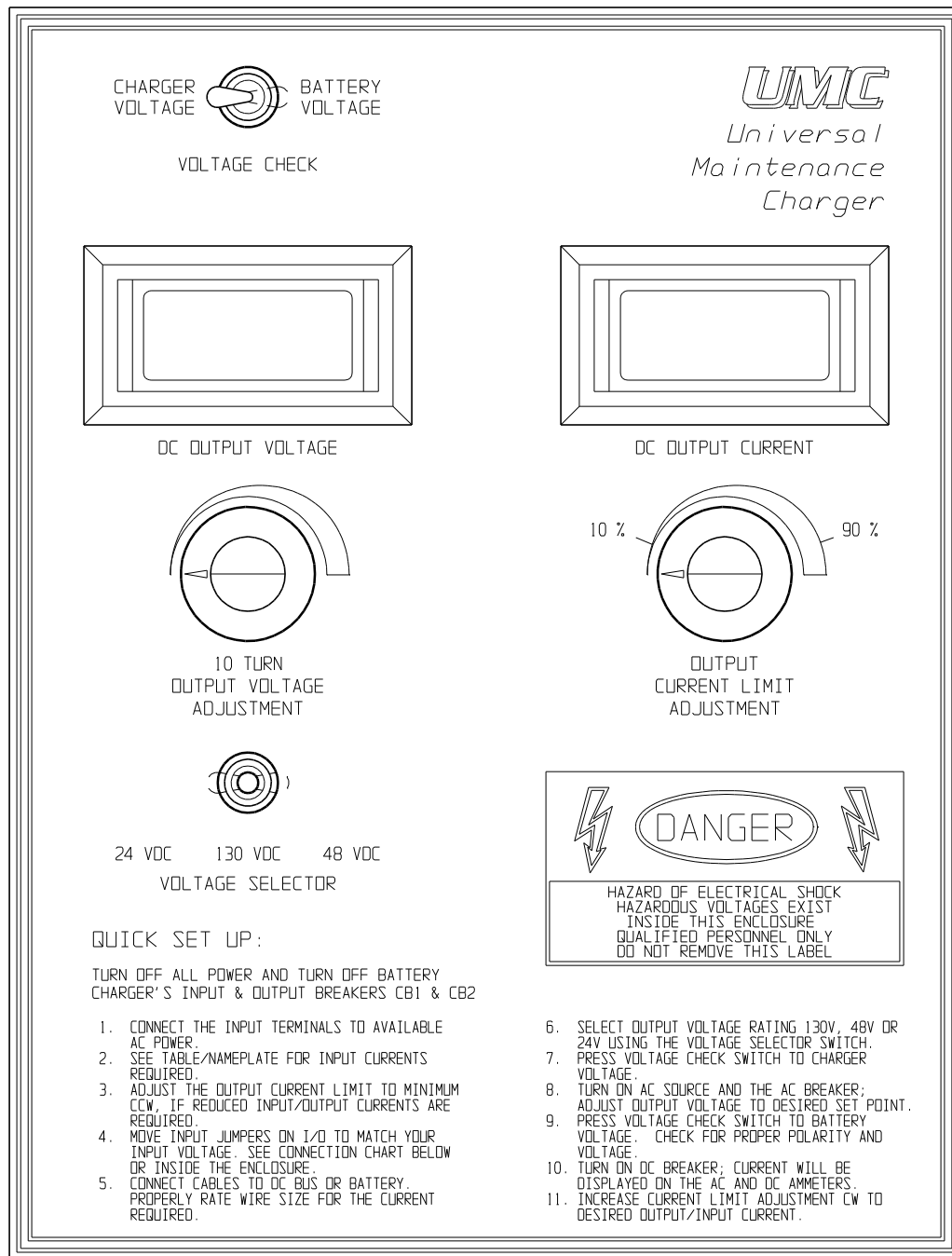


NOTE :

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

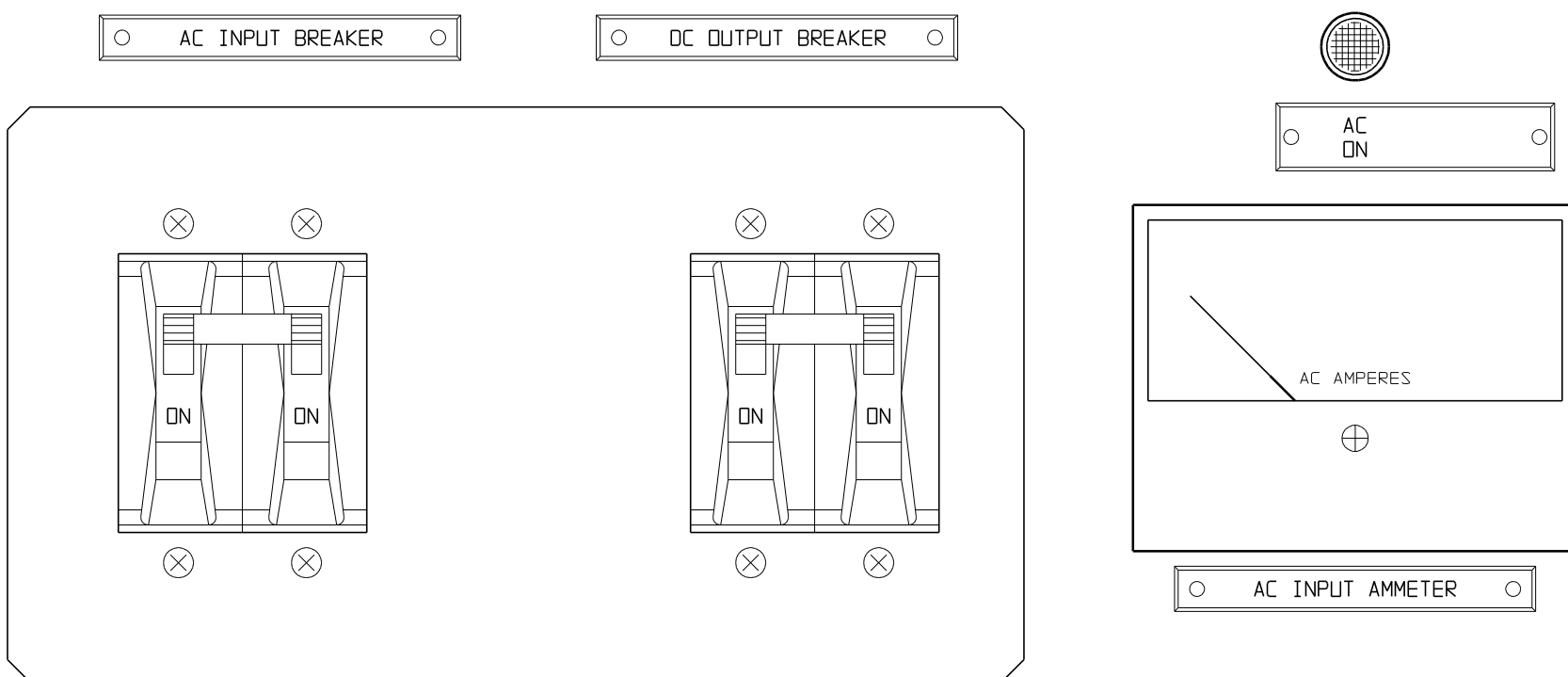
6	21450	120808	THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER INTERNAL COMPONENT LAYOUT: STYLE-5018
5	20462	121506		
4	20385	102006	DRAWN BY MCR 021403	DRAWING No JE5037-50 REV 6A <b>B</b>
3	20277	072006	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG	
2	20100	051606	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	SCALE NTS PART No JE5037-50 SHEET 1 OF 1
REV	ECN No	DATE		



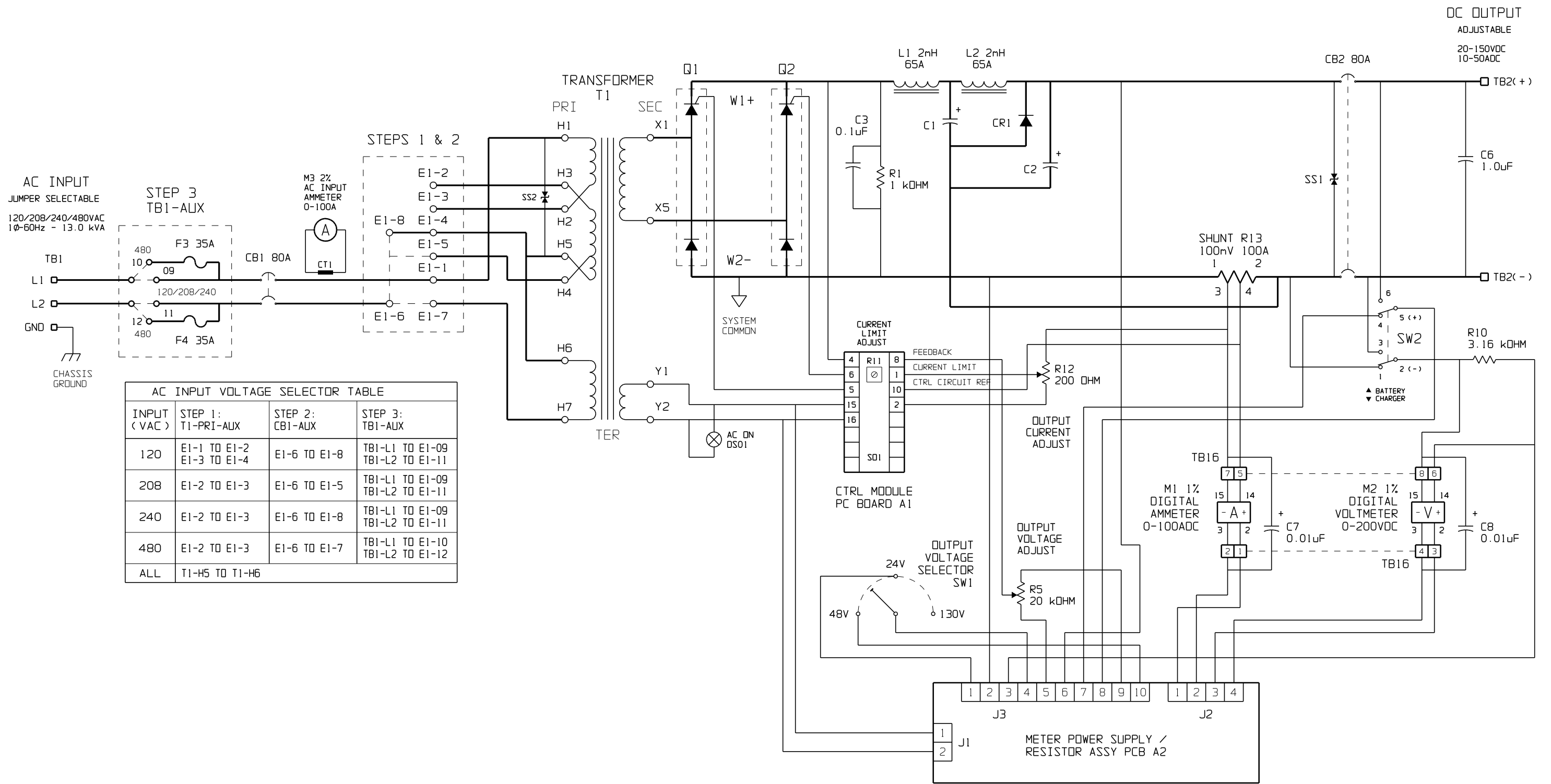
**QUICK SET UP:**

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 CCW, 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.



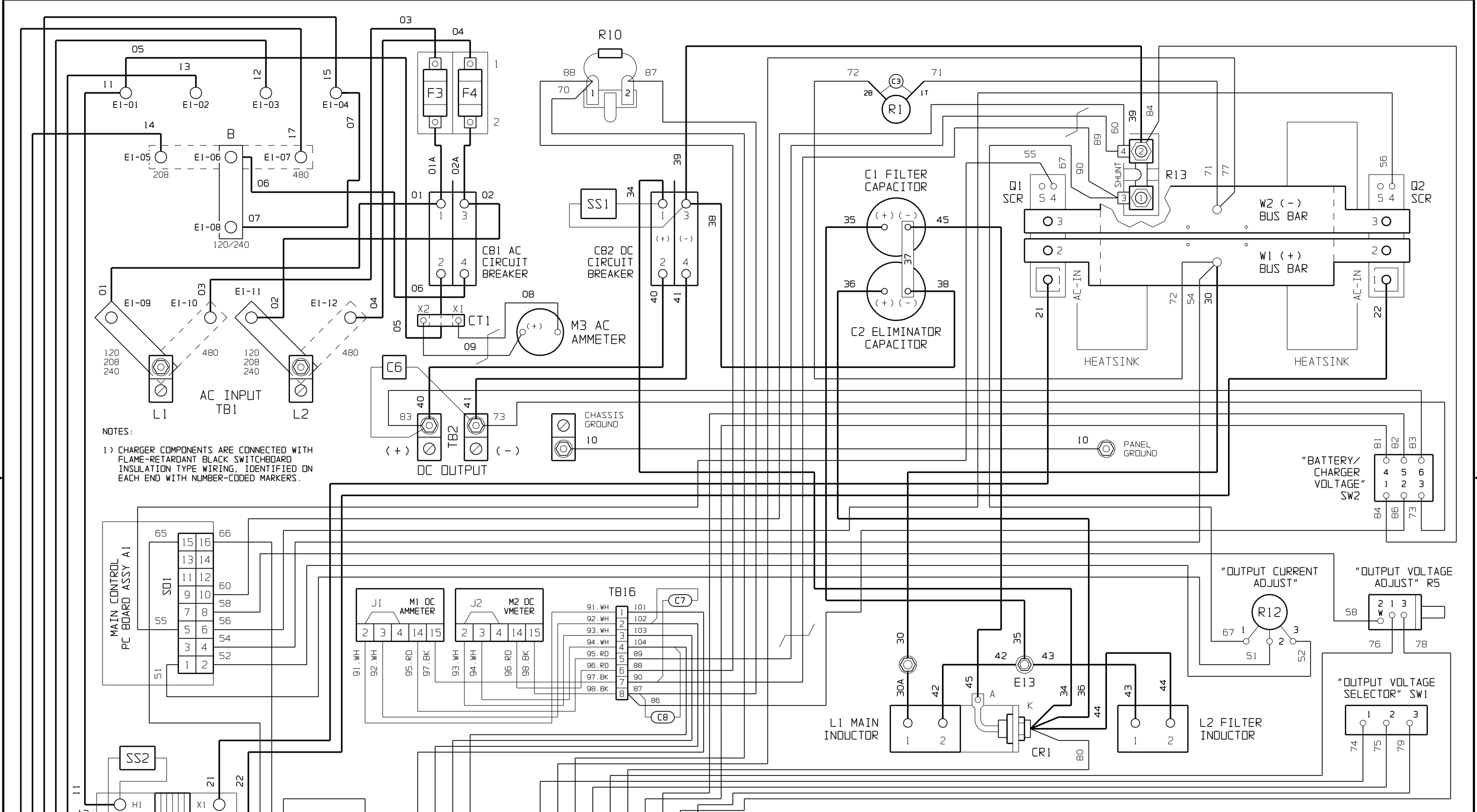
6	21450	120808	 THIRD ANGLE PROJECTION	TITLE UNIVERSAL MAINTENANCE CHARGER ( UMC ) INSTRUMENT PANEL DETAIL		
5	20462	121506				
4	20385	102006	DRAWN BY MCR 021403	DRAWING No		REV 6
3	20277	072006	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG	JE5038-50		<b>B</b>
2	20100	051606	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:	SCALE NTS	PART No JE5038-50	SHEET 1 OF 1
REV	ECN No	DATE				



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)

REV	ECN No	DATE	THIRD ANGLE PROJECTION	TITLE	SCALE	PART No	SHEET	OF
6	21450	120808	DRAWN BY MCR 021403	UNIVERSAL MAINTENANCE CHARGER (LMC) SCHEMATIC: BB0443-01 (10-50ADC)	NTS	JE5039-50	1	1
5	20462	121506						
4	20385	102006	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG	DRAWING No	REV	B	6	1
3	20277	072006						
2	20100	051606	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:					
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.

REV	ECN No	DATE	DRAWN BY MCR 021403		TITLE UNIVERSAL MAINTENANCE CHARGER (UMC) CONNECTION DIAGRAM: BB0443-01 (10-50ADC)	
6	21450	120808	THIRD ANGLE PROJECTION		DRAWING No JE5040-50	
5	20462	121506	ELECTRONIC APPROVAL SIGNATURES MAINTAINED BY MFG ECN LOG		REV 6A <b>B</b>	
4	20385	102006	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:		SCALE NTS	
3	20277	072006			PART No JE5040-50	
2	20100	051606			SHEET 1 OF 1	