

NOTES:

- 1) AT SERIES DC MAINFRAME COMPONENTS (C4/C5/VR6/VR7/TB1) NOT PART OF EJ5136-## OPTION BILL OF MATERIAL, SHOWN FOR REFERENCE PURPOSES ONLY.
- 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) THEORY OF OPERATION:

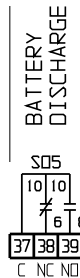
EJ5136-## AT SERIES BATTERY DISCHARGE ALARM

The AT10.1/AT30 is equipped with a Battery Discharge Alarm, which indicates the condition when the battery is no longer receiving adequate charging current from the AT10.1/AT30, and the battery has become a source of current for the dc load(s). Under normal operation, the AT10.1/AT30 is providing dc load current, while also charging the battery at its recharge (or float) current. If ac power fails, the AT30 shuts down, and current would begin to flow from the battery to the dc load(s).

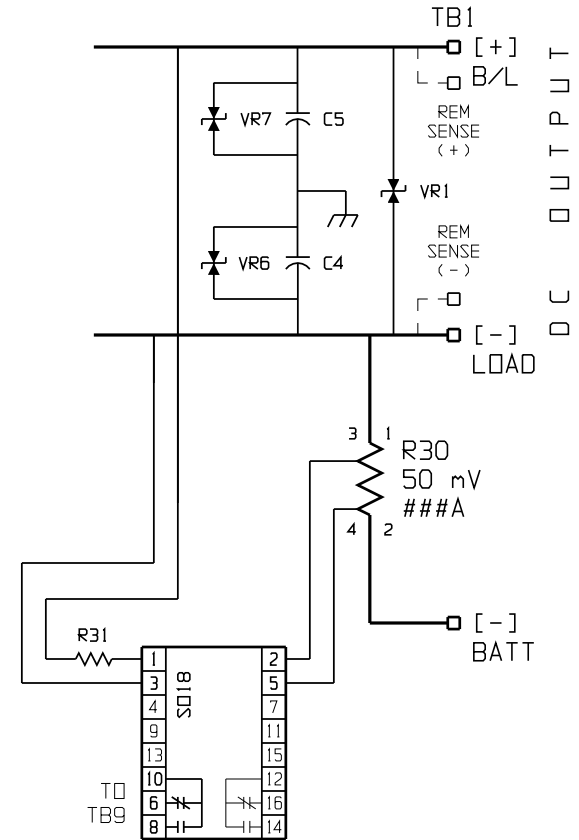
Discharge sensing and alarm activation is performed by control pc board (A18). This board monitors the direction of current flow through a special dc shunt (R30), which lies between the negative output terminals TB1(-) BATT and TB1(-) LOAD, connected to the main battery leads. When current polarity through R30 changes from negative to positive, the alarm circuit is activated. An adjustment potentiometer (R5), located on the A18 pc board, is supplied for fine-tuning of the discharge alarm level. The option specifically features a battery shunt (R30) and dc lugs sized for a user-specified maximum load profile. The battery discharge alarm utilizes a custom I/O panel with extra CU-AL compression lugs for battery connections.

The alarm relays are not latched, and no indicator lamp is provided. One (1) set of form-C alarm contacts are provided at terminal block (TB9-37/38/39). Remote alarm terminal block (TB9) is a molded phenolic "barrier" type, with 6-32 binder head screw terminals, accepting ring or spade lugs for #16-14 AWG wire. Alarm contact rating (from pc board) is 0.5A at 120Vac/Vdc resistive

Battery Discharge options are specifically designed for a one battery, shared load, and one charger installation. See Application Note (JD0052-00) for utilizing the alarm in a dual charger system.



NON-STANDARD ALARM
AUXILIARY ALARM
TERMINAL BLOCK
TB9 (NOTE 2)



BATTERY DISCHARGING
PC BOARD ASSY. A18

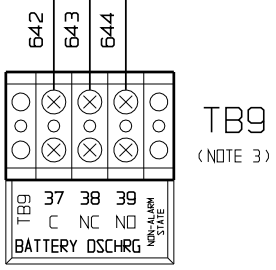
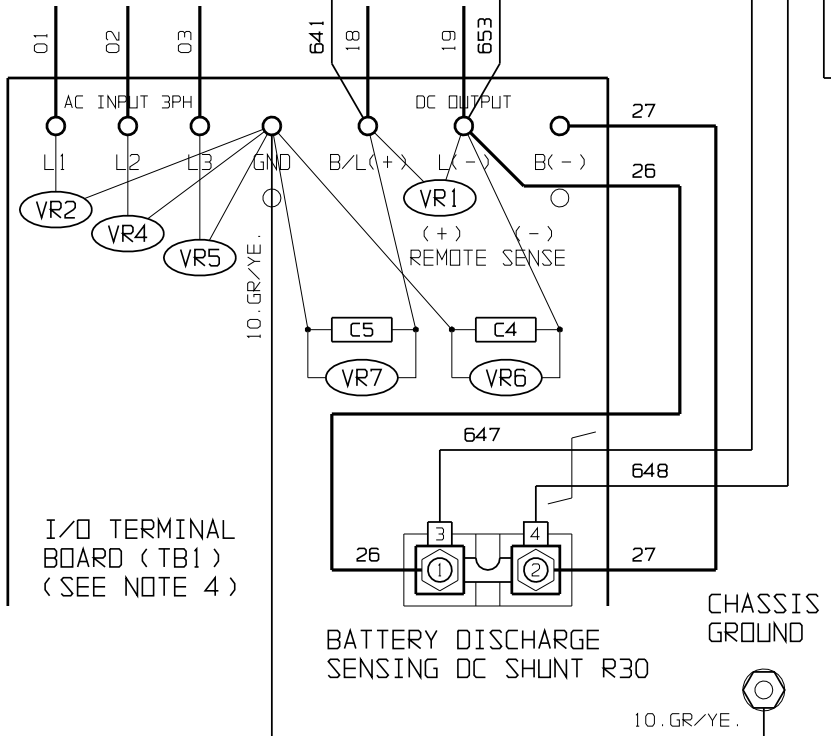
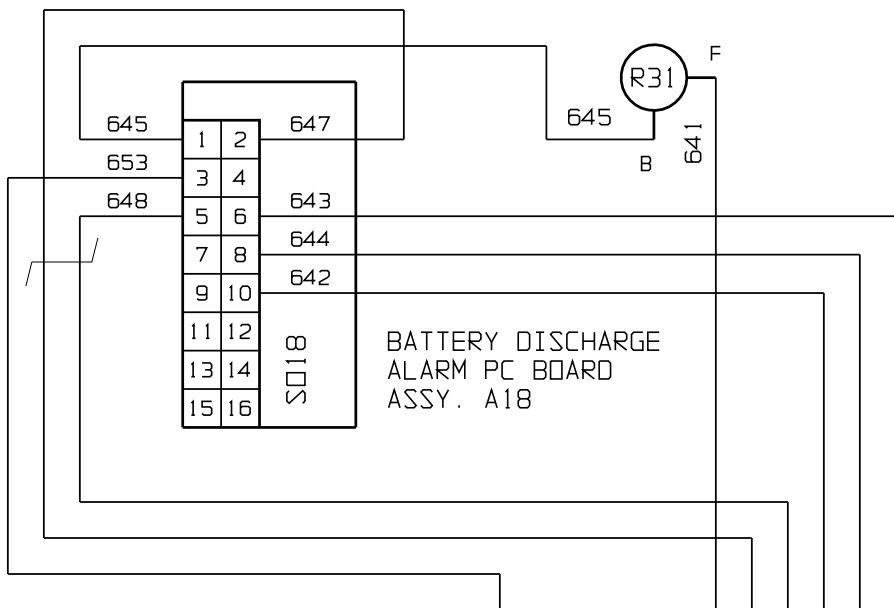
EJ5136-## OPTION BOM COMPONENTS:

- A18 BATTERY DISCHARGE ALARM PC BOARD
- R30 BATTERY DISCHARGE SENSING DC SHUNT
- R31 BATTERY DISCHARGE ALARM CIRCUIT RESISTOR
- TB9 NON-STANDARD ALARM BARRIER AUX TERMINAL BLOCK

				 THIRD ANGLE PROJECTION		TITLE AT SERIES BATTERY DISCHARGE ALARM OPTION: SCHEMATIC AND USER OPERATION NOTE			
0	22110	050610	ND	DRAWN BY	MCR				100407
B	N/A	110509	N/A	APPROVED	ND	050610	EJ5136-XX		
A	N/A	100407	N/A	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:			REV	OB	A
REV	ECN No	DATE	APP				SCALE	NTS	PART No

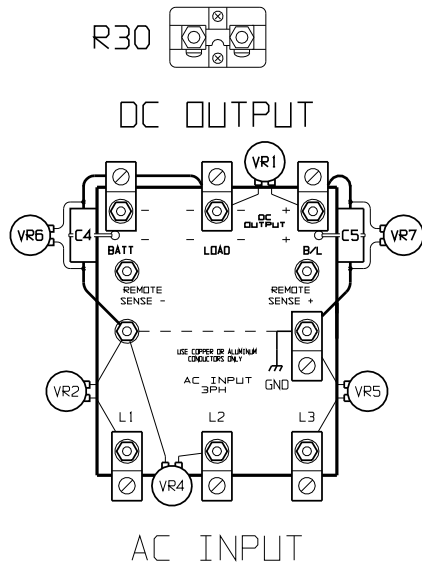
NOTES:

- 1) CHARGER COMPONENTS ARE CONNECTED WITH FLAME-RETARDANT SWITCHBOARD INSULATION SYSTEM (SIS) TYPE WIRING, IDENTIFIED ON EACH END WITH NUMBER-CODED MARKERS. GROUND WIRE #10 IS GREEN WITH YELLOW STRIPE.
- 2) SIZE WIRES # 26 & 27 PER CB0009-00 FOR DC LOAD CURRENT (ADC) OF BATTERY DISCHARGE ALARM OPTION (EJ5136-##) LISTED IN MEMO FIELD OF TRAVELER (MAY BE LARGER OR SMALLER THAN WIRES # 18 & 19).
- 3) TB9 REMOTE ALARM TERMINAL BLOCK, BARRIER TYPE, 6-32 BINDER HEAD SCREW TERMINALS, WILL ACCEPT LUGS FOR #16-14 AWG WIRE.
- 4) AT30 STYLE-5030 I/O PANEL (TB1) ARRANGEMENT SHOWN FOR REFERENCE PURPOSES. EJ5136-## OPTIONS MAY BE INSTALLED INTO AT10.1 OR AT30 STYLE-5017, -5018, -5030, -163, OR -198 ENCLOSURES. WIRE TO TB1 DC OUTPUT TERMINALS (B/L+, L- & B-) ACCORDINGLY. SEE SHEET 3 OF 3 FOR ENCLOSURE-SPECIFIC I/O PANEL MODIFICATION DRAWINGS.
- 5) THIS OPTION MAY BE FEATURED IN UNITS ALONG WITH OTHER "NON-STANDARD" AT SERIES ALARM OPTIONS. USE "BEST JUDGMENT" WHEN COMPONENT MOUNTING CONFLICTS OR SPACING ISSUES OCCUR. SEE SHEET 3 OF 3 FOR ENCLOSURE-SPECIFIC I/O PANEL MODIFICATION DRAWINGS, BATTERY DISCHARGE CURRENT SENSING DC SHUNT (R30) MOUNTING, AND ENCLOSURE-SPECIFIC COMPONENT MOUNTING INSTRUCTIONS. SEE ENGINEERING DEPARTMENT WITH ANY FURTHER QUESTIONS.

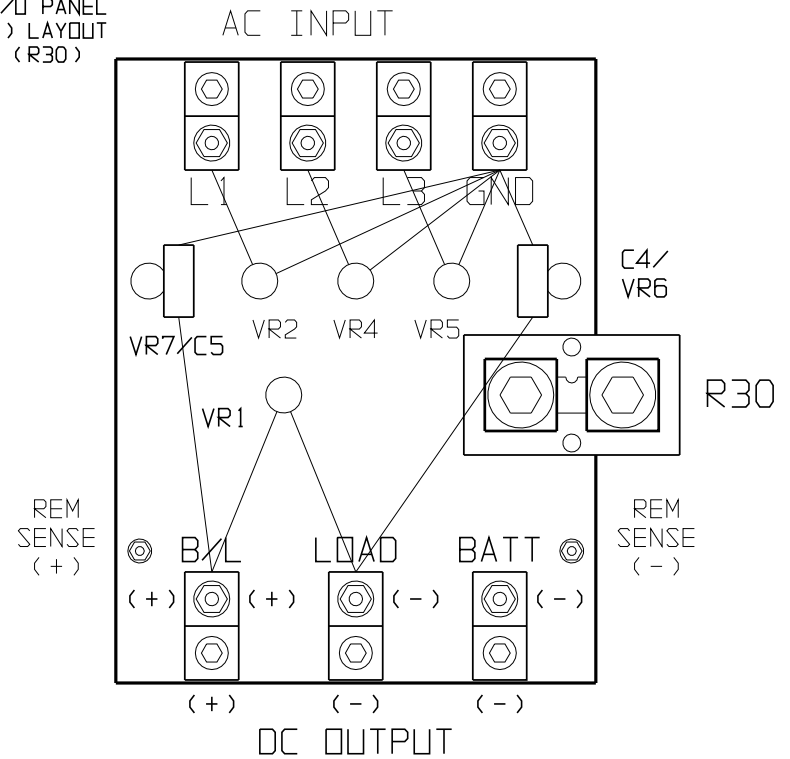


THIRD ANGLE PROJECTION		TITLE AT SERIES BATTERY DISCHARGE ALARM OPTION: CONNECTION DIAGRAM & MECH ASSY NOTES		
DRAWN BY	MCR	100407	DRAWING No	
APPROVED	ND	050610	EJ5136-XX	
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:			REV	OB
			A	
SCALE	NTS	PART No	EJ5136-##	SHEET
			2 OF 3	

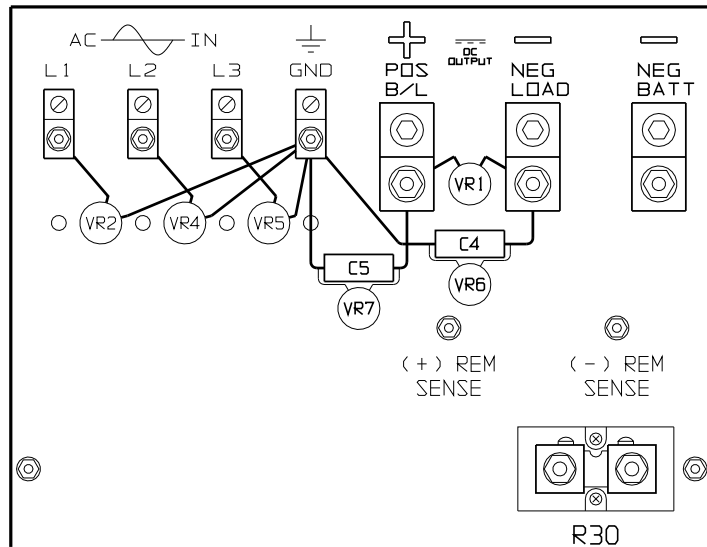
STYLE-5018 I/O PANEL (FB5008-SP) LAYOUT WITH SHUNT (R30) REFERENCE



STYLE-163 I/O PANEL (FB5009-SP) LAYOUT WITH SHUNT (R30) REFERENCE



AC INPUT DC OUTPUT



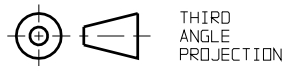
STYLE-5030 I/O PANEL (FB5012-SP) LAYOUT WITH SHUNT (R30) REFERENCE

NOTES:

- 1) MODIFY DC OUTPUT TERMINALS OF STANDARD I/O PANEL PER ENCLOSURE-SPECIFIC DRAWINGS SHOWN.
- 2) MOUNT BATTERY DISCHARGE SENSING DC SHUNT (R30) AS CLOSE AS POSSIBLE TO TB1(L-/B-) DC OUTPUT TERMINALS ON I/O PANEL AS SHOWN.
- 3) USE RC0053-## MARKING STRIP AND LABEL TB9 REMOTE ALARM CONTACTS "37,38,39" BACK-TO-FRONT OR LEFT-TO-RIGHT AS REQUIRED BY ENCLOSURE.

NOTES:

- 3) ENCLOSURE-SPECIFIC COMPONENT MOUNTING INSTRUCTIONS:
 - A) STYLE-5017/5018: MOUNT A18 & R31 TO GALVANIZED BACK PANEL NEAR FLOOR, AND MOUNT TB9 (37,38,39 B-TO-F) TO FLOOR
 - B) STYLE-5030: MOUNT FB5016-0# PHENOLIC PANEL TO UPPER-RIGHT VERTICAL POSTS, AND MOUNT A18, R31 & TB9 (37,38,39 L-TO-R) TO FB5016-0# PHENOLIC
 - C) STYLE-163/198: LOCATE AREA IN UPPER-RIGHT CORNER OF REAR MAIN PHENOLIC MOUNTING PANEL, AND MOUNT A18, R31 & TB9 (37,38,39 L-TO-R) TO PHENOLIC



DRAWN BY	MCR	100407
APPROVED	ND	050610

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:

TITLE AT SERIES BATTERY DISCHARGE ALARM OPTION: MECHANICAL ASSEMBLY INSTRUCTIONS

DRAWING No EJ5136-XX REV 0B A

SCALE NTS PART No EJ5136-## SHEET 3 OF 3