



## DUAL CHARGER OPERATION WITH BATTERY DISCHARGE ALARM OR AMMETER

### BACKGROUND

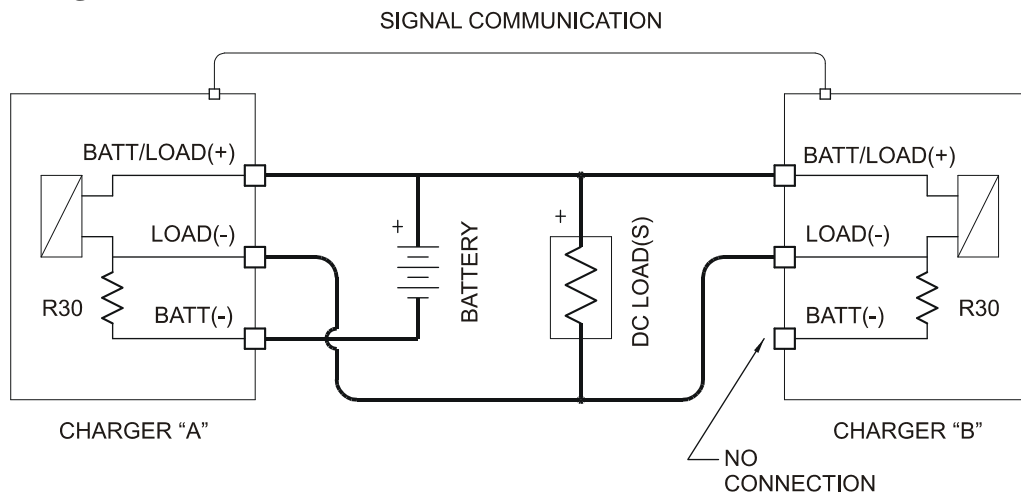
Industrial battery charger options that indicate if a connected battery is charging or discharging are specifically designed for one (1) battery charger, one (1) battery bank, and a common dc load connection. Some installations require a battery and dc loads linked to two (2) independent chargers, connected in parallel. These arrangements can cause an incorrect battery discharge alarm, or incorrect battery discharge indication.

When an ATevo, AT10.1, AT30, or SCR/SCRF Series battery charger has an optional Battery Discharge Alarm or Battery Discharge Ammeter installed, the I/O panel is supplied with a *third* dc output terminal, labeled **BATT(-)**. The existing dc output terminals are labeled **LOAD(-)**, and **BATT/LOAD(+)**. Refer to the table below:

Option Description	Product Line	Option / Drawing No.	DC Output Terminals	Supplied Components
Battery Shunt (Alarm/Meter)	ATevo	EJ5306-##	I/O- L(-),L(+),B/L(+)	A18, R30
Battery Discharge Alarm	AT10.1/AT30	EJ5136-##	TB1- L(-),L(+),B/L(+)	A18, R30, TB9
Battery Discharge Ammeter	AT10.1/AT30	EJ0138-6#	TB1- L(-),L(+),B/L(+)	M7, R30
Battery Discharge Alarm	SCR/SCRF	EJ0120-##	TB2- L(-),L(+),B/L(+)	A5, DS10, SH3, TB3
Battery Discharge Ammeter	SCR/SCRF	EJ0138-0#	TB2- L(-),L(+),B/L(+)	M7, SH2

### CONNECTING CHARGERS IN PARALLEL

To prevent problems with false alarms, connect the two (2) chargers to the battery and dc load as shown in **Figure 1** below.



**Figure 1**

With this arrangement the Battery Discharge Alarm or Ammeter in Charger "A" operates normally. The Battery Discharge Alarm or Ammeter in Charger "B" is prevented from working, so that it cannot give false alarms.

If the dc loads are very light, ensure that Charger "A" supplies the load current. Set the float voltage on Charger "A" about 0.1 Vdc higher than the float voltage on Charger "B".

## TO SERVICE OR MAINTAIN CHARGERS

If Charger "A" needs to be taken out of service, move the battery negative (-) terminal connection from Charger "A" to Charger "B", connecting it to the **BATT(-)** terminal. Now the Battery Discharge option in Charger "B" will operate normally. After service, return connections to previous arrangement.

## USING PARALLEL FORCED LOAD SHARING OPTIONS

### **ATevo Series** (p/n EJ5306-##)

- 1) Connect the battery and load to the charger dc output terminals, as described in **Figure 1**.
- 2) Wire the load share signal connections to **A13** pc boards in both chargers, according to user instructions ([JA5054-50](#)).
- 3) During normal operation, the chargers will supply equal charging current. During a battery discharge event, the Battery Shunt option in Charger "A" will operate normally.

### **AT10.1/AT30 Series** (p/n EJ5126-##)

- 1) Connect the battery and load to the charger dc output terminals, as described in **Figure 1**.
- 2) Wire the load share signal connections to **A1-J4** in both chargers, according to option drawing ([JE5154-00](#)) and/or user instructions ([JA5054-00](#)).
- 3) During normal operation, the chargers will supply equal charging current. During a battery discharge event, the Battery Discharge option in Charger "A" will operate normally.

### **SCR/SCRF Series** (p/n EJ0133-00)

- 1) Connect the battery and load to the charger dc output terminals, as described in **Figure 1**.
- 2) Wire load share signal connections to **TB4** in both chargers, according to standard drawing (EJ0133-00) in Section 7, Page 42 of the *Operating and Service Instructions* manual.
- 3) During normal operation, the chargers will supply equal charging current. During a battery discharge event, the Battery Discharge option in Charger "A" will operate normally.