

Discover AES Lithium Battery CAN Bus Battery Discharge Indicator

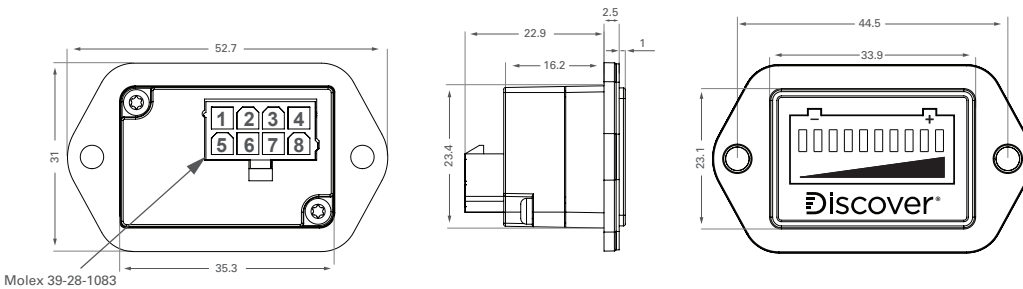
The discharge curve of the Discover Advanced Energy Systems (AES) Lithium batteries are very flat, and 80 percent of the stored energy remains in the flat voltage profile. While this characteristic is desirable as an energy source, it presents a challenge for standard voltage-based fuel gauging as it can only indicate full charge and low charge; the important middle section cannot be estimated accurately.

To solve the problem and offer accurate fuel gage and State of Charge indicators, Discover introduced a series of AES compatible accessories. The 950-0005 is a reduced feature Battery Discharge Indicator (BDI) that communicates with AES batteries and allows for visualization of the battery's State of Charge. The BDI is housed in a compact and easily installed form factor.

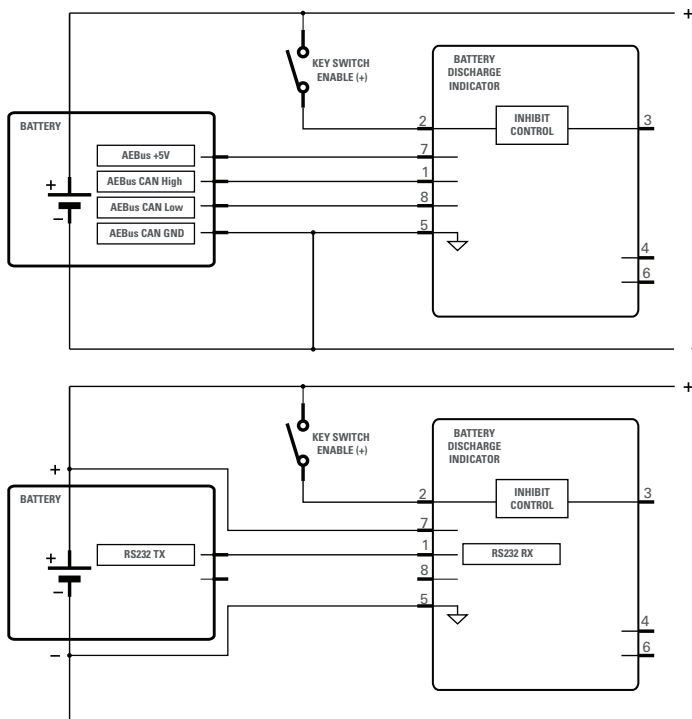
Functionality

State of Charge

MECHANICAL DRAWINGS



ELECTRICAL DRAWINGS



PIN ASSIGNMENTS

CAN

PIN	Function
1	AEBus CAN High
2	Key Switch Enable (+)
3	Inhibit Output +5V
4	
5	AEBus CAN GND
6	
7	AEBus CAN +5V
8	AEBus CAN Low

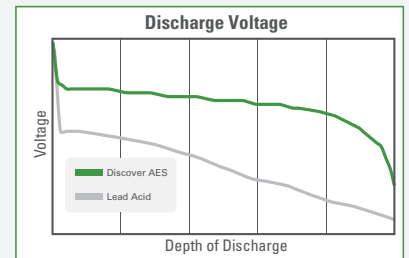
RS232

PIN	Function
1	RS232 (RX)
2	Key Switch Enable (+)
3	Inhibit Output +5V
4	
5	Battery Negative (-)
6	
7	Battery Positive (+)
8	

COMPATIBLE BATTERIES

CAN	RS232
12-48-6650	15-24-1000
12-36-6700	15-36-1000
42-48-6650	
14-24-2800	
44-24-2800	

DISCOVER AES VS. LEAD ACID DISCHARGE CURVE



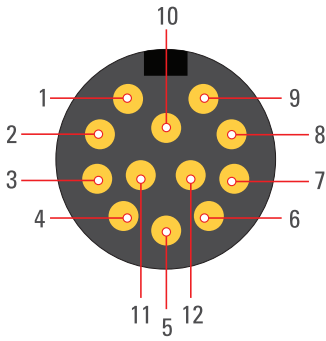
Discover AES batteries have a flat and stable discharge curve, which can not be accurately monitored by a voltage based SOC indicator. For accurate fuel gage and SOC an AES compatible Battery Discharge Indicator is necessary.

FEATURES

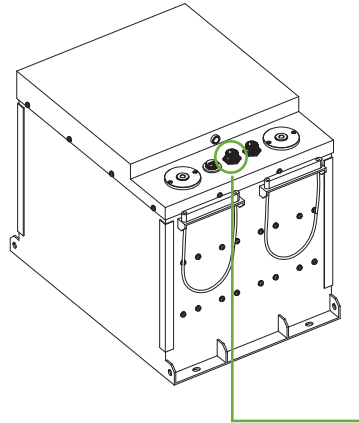
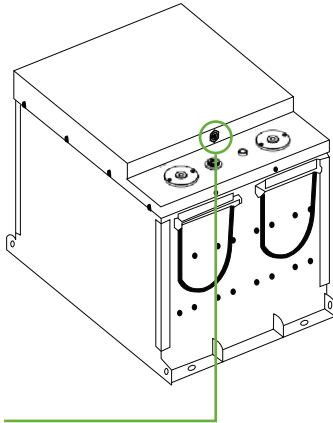
- Battery voltage of 24/36/48 V
- 10 LED battery fuel gage and SOC indicator
- Inhibit Output signal that transitions from 5V to 0V when battery reaches recommended Low Voltage Disconnect (3V per cell)
- Protection IP30 (frontal IP65)

CAN Battery Discharge Indicator Connection

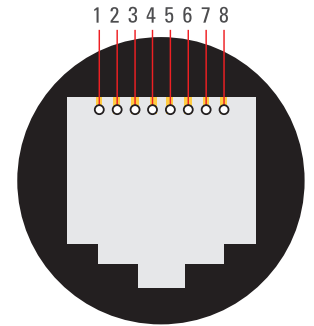
Circular 12 PIN (12-48-6650)



Pin 3	AEBus CAN GND
Pin 4	AEBus CAN High
Pin 5	AEBus CAN Low
Pin 11	AEBus CAN +5V



RJ45 AEBus (42-48-6650)



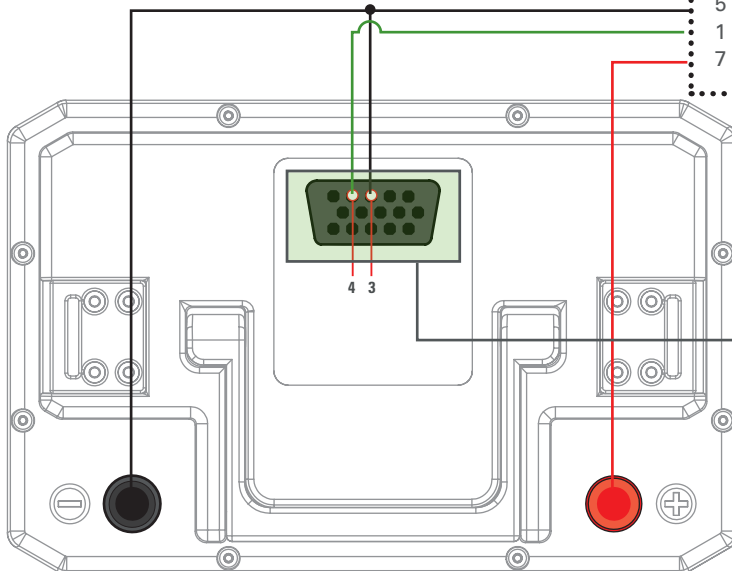
Pin 3	AEBus CAN GND
Pin 4	AEBus CAN Low
Pin 5	AEBus CAN High
Pin 6	AEBus + 5V

RS232 Battery Discharge Indicator Connection

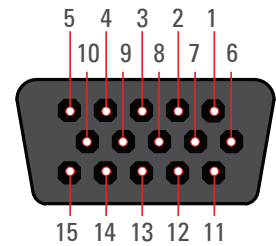
NOTE: RS232 GND must be connected to battery negative terminal.

BDI Connection

- 5 - Battery Negative (-)
- 1 - RS232 (RX)
- 7 - Battery Positive (+)



FEMALE



Pin 3	RS232 GND	RS232 Ground
Pin 4	RS232 TX	RS232 Transmit