

Discover AES Lithium Battery CAN Bus Battery Discharge Indicator

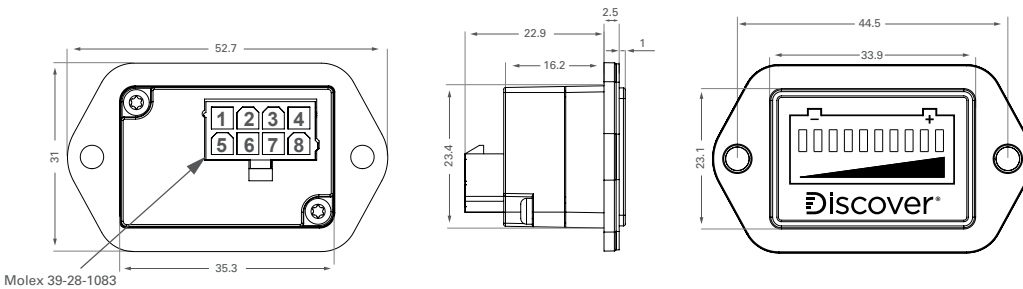
The discharge curve of the Discover Advanced Energy Systems (AES) Lithium batteries are very flat, and 80 percent of the stored energy remains in the flat voltage profile. While this characteristic is desirable as an energy source, it presents a challenge for standard voltage-based fuel gauging as it 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.

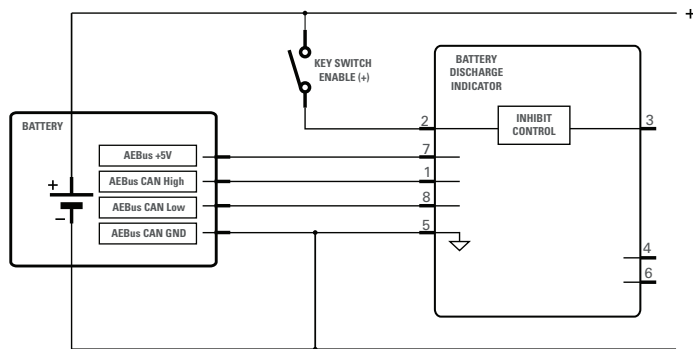
Functionality

State of Charge

MECHANICAL DRAWINGS



ELECTRICAL DRAWINGS



PIN ASSIGNMENTS

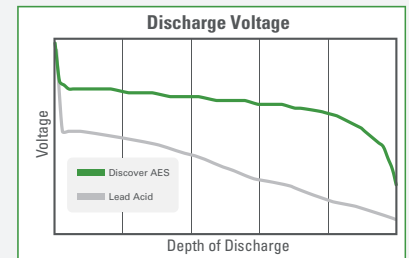
PIN	Function
1	AEBus CAN High
2	Key Switch Enable (+)
3	Inhibit Output +5V
4	
5	AEBus CAN GND
6	
7	AEBus CAN +5V
8	AEBus CAN Low

The BDI will connect to and summarize up to 20 AES Batteries. The inhibit signal will transition from 5V to 0V when any individual cell in a connected battery reaches 2.8 V. The signal will remain 0V until the cell voltage has recovered to 3.2 V.

COMPATIBLE BATTERIES

- 12-48-6650
- 12-36-6700
- 42-48-6650
- 14-24-2800
- 44-24-2800
- 14-12-3000
- 14-24-3000
- 14-36-3000
- 14-48-3000

DISCOVER AES VS. LEAD ACID DISCHARGE CURVE



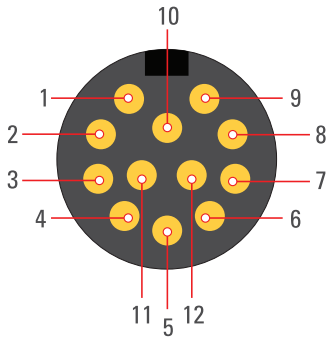
Discover AES batteries have a flat and stable discharge curve, which can not be accurately monitored by a voltage based SOC indicator. For accurate fuel gage and SOC an AES compatible Battery Discharge Indicator is necessary.

FEATURES

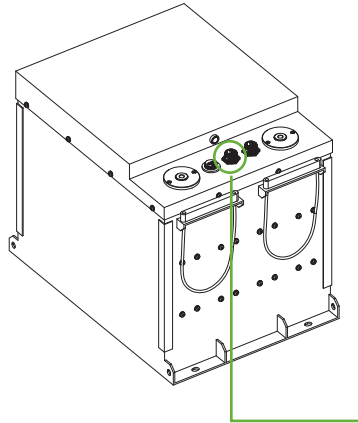
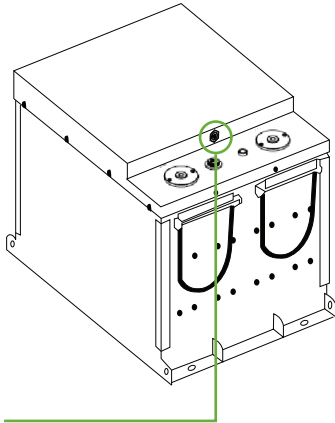
- Battery voltage of 24/36/48 V
- 10 LED battery fuel gage and SOC indicator
- Inhibit Output signal
- Protection IP30 (frontal IP65)

CAN Battery Discharge Indicator Connection

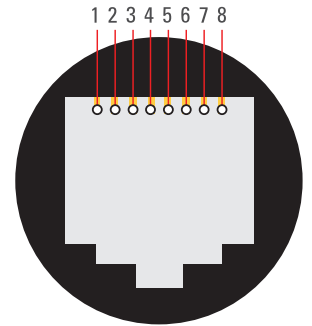
IEC M12 A-Coding 12 Pin



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



RJ45



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