

## Discover AES Lithium Battery CAN Bus Battery Discharge Indicator

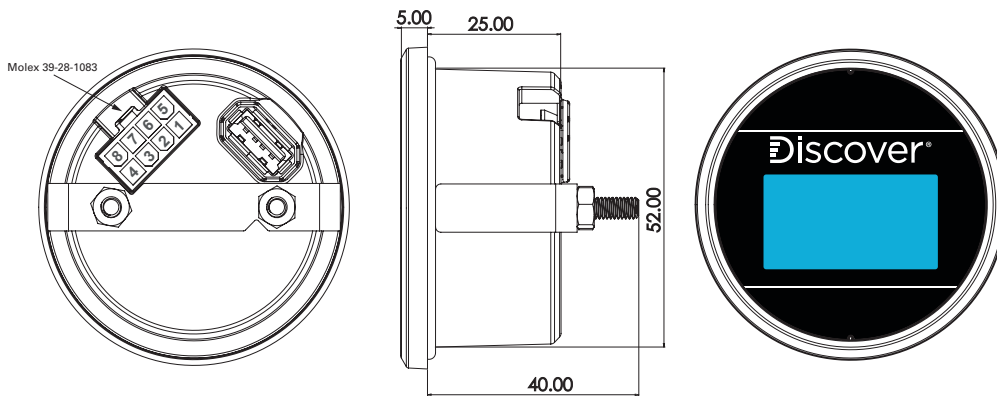
The discharge curve of the Discover Advanced Energy Systems (AES) Lithium batteries are very flat, and 80 percent of the stored energy remains in the flat voltage profile. While this characteristic is desirable as an energy source, it presents a challenge for standard voltage-based fuel gauging as it 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 950-0006 is a fully featured Battery Discharge Indicator (BDI) that communicates with AES batteries and allows for visualization of the battery's State of Charge, Voltage, Power, Charge and Discharge Energy, and Battery Firmware, and Time to Go. The indicator is housed in a standard 52mm circular package requiring limited installed time and equipment.

### Functionality

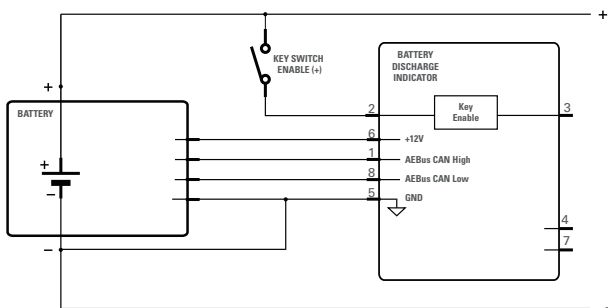
State of Charge | Voltage | Power | Time to Go | Battery Firmware Version Read Out | Battery Energy Throughput Read Out

### MECHANICAL DRAWINGS



Units in mm

### ELECTRICAL DRAWINGS



### PIN ASSIGNMENTS

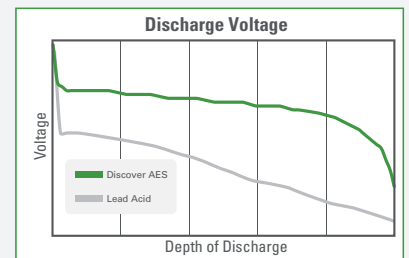
Molex mating connector 39-01-2080

PIN	Function
1	AEBus CAN High
2	Key Switch Enable (+)
3	
4	
5	Battery / AEBus CAN GND
6	AEBus +12V
7	
8	AEBus CAN Low

### COMPATIBLE BATTERIES

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

### DISCOVER AES VS. LEAD ACID DISCHARGE CURVE



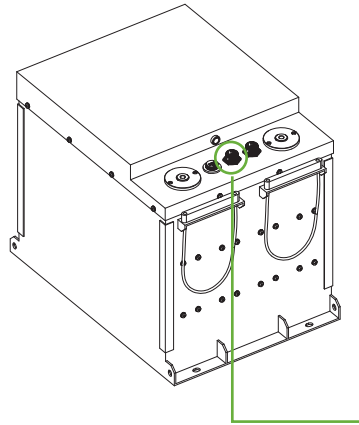
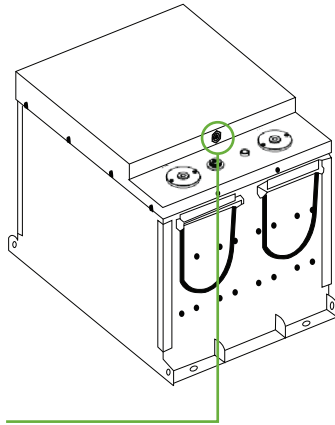
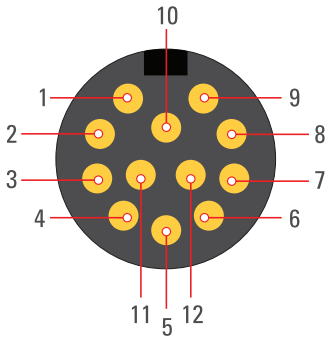
Discover AES batteries have a flat and stable discharge curve, which can not be accurately monitored by a voltage based SOC indicator. For accurate fuel gage and SOC an AES compatible Battery Discharge Indicator is necessary.

### FEATURES

- Battery voltage of 12/24/36/48 V
- 10 bar battery's fuel gauge
- Time-to-Go read out
- Power read out
- Voltage read out
- Inhibit management
- Illuminated display (knock 3 times to turn on, knock 2 times to turn off)
- Protection IP30 (frontal IP65)
- Fastening with U-bolt and M4 nuts
- USB host for BDI firmware update

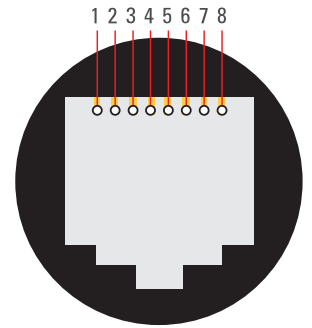
## Battery Discharge Indicator Connection

**IEC M12 A-Coding 12 Pin**



Pin 1	
Pin 2	
Pin 3	AEBus CAN GND
Pin 4	AEBus CAN High
Pin 5	AEBus CAN Low
Pin 6	
Pin 7	
Pin 8	
Pin 9	
Pin 10	
Pin 11	AEBus +5V
Pin 12	AEBus +12V*

**RJ45**



Pin 1	AEBus +12V*
Pin 2	AEBus +12V*
Pin 3	AEBus CAN GND
Pin 4	AEBus CAN Low
Pin 5	AEBus CAN High
Pin 6	AEBus +5V
Pin 7	AEBus CAN GND
Pin 8	AEBus CAN GND



\*Not all models are equipped with an internal 12V power supply. Discover 950-0019 12V Power Over AEBus accessory is available separately for applications requiring an external 12V power supply.