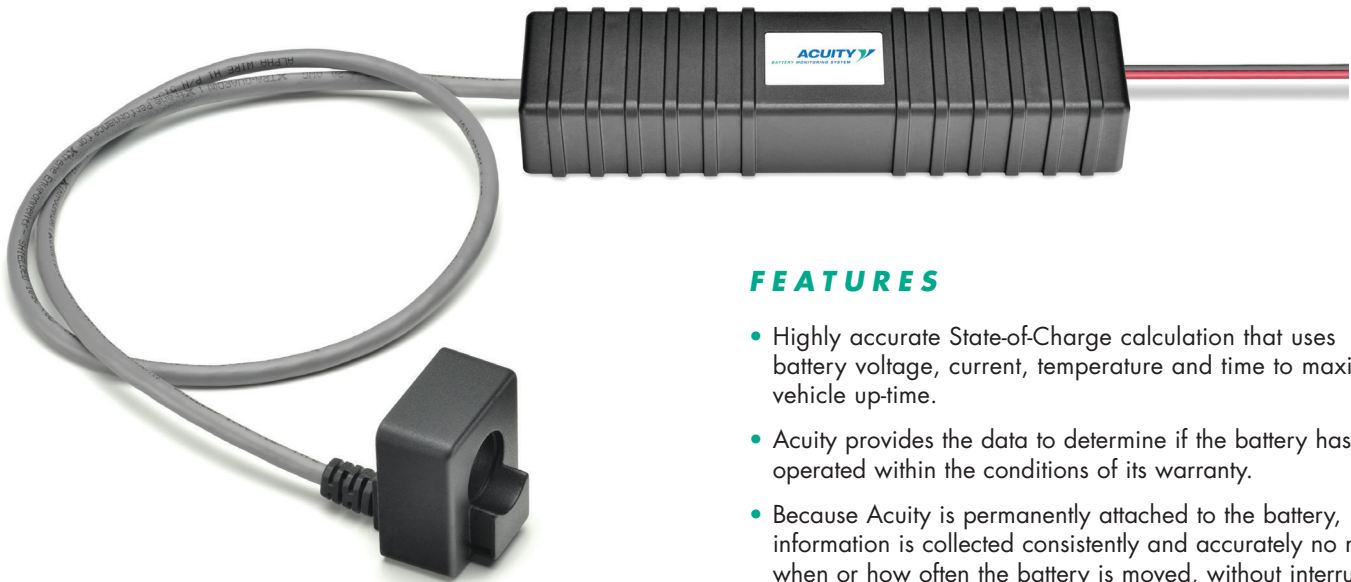




### FEATURES

- Highly accurate State-of-Charge calculation that uses battery voltage, current, temperature and time to maximize vehicle up-time.
- Acuity provides the data to determine if the battery has been operated within the conditions of its warranty.
- Because Acuity is permanently attached to the battery, information is collected consistently and accurately no matter when or how often the battery is moved, without interruption.
- The data from Acuity allows the optimization of a battery fleet to ensure that vehicle productivity is maximized.
- Acuity data is communicated via CAN bus, which allows easy integration with Curtis enGage displays, motor controllers and hand-held programmers.
- Installation of Acuity is simple and non-invasive to minimize cost and the need for special hardware. No cutting of cables or drilling into the battery.
- Integral Real-Time-Clock allows date and time stamping of significant events related to the battery or any vehicle component on the CAN bus.
- By measuring, recording and communicating battery current, voltage, temperature and use-time, Acuity can compensate for the effects of variations in load, duty cycle and operating temperature of any given application.
- Acuity calculates the Percent of Rated Capacity remaining in the battery as an indication of remaining battery life.
- Curtis Acu-Set software, when installed on a computer that is connected to an Acuity via a CAN-to-USB dongle, allows:
  - Acuity to be configured to match the specific battery on which it is mounted.
  - Historical data from Acuity to be uploaded a PC.
  - Instantaneous battery performance data to be viewed on a PC (Power Prover mode).
  - Recording of battery data for a user-specified period of time or specific vehicle operation.



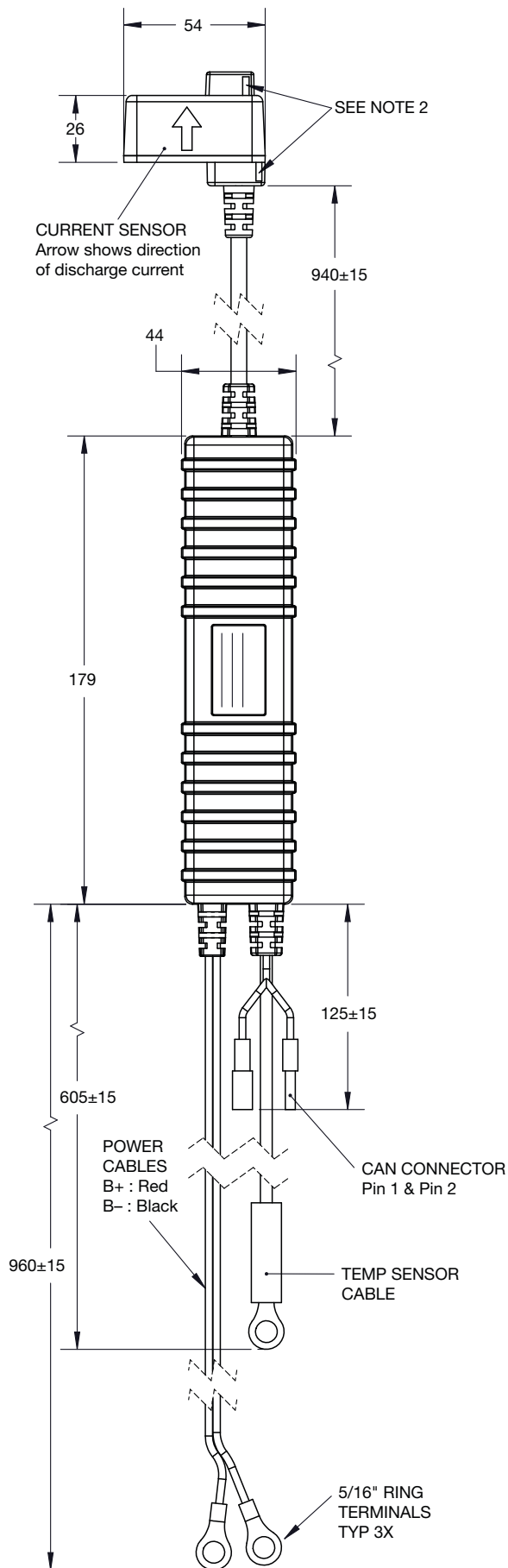
### DESCRIPTION

The Curtis Acuity® Battery Monitoring System is a device that mounts directly to an industrial vehicle lead acid battery. It measures, records and transmits battery performance data throughout the battery's life.

### APPLICATION

Curtis Acuity is ideal for use in electric vehicles for material handling, airport ground support, floor cleaning, light-on-road, golf/utility and aerial work platforms.

## ***DIMENSIONS* mm**



1. Case & Current Sensor Housing Material: Glass-filled PBT.
2. Current Sensor can accommodate most cable sizes up to 4/0.
3. Current Sensor to be held to battery cable by tie-wraps (2 places).
4. Acid resistant tie-wraps should be used to secure unit.
5. This unit not fitted with a CAN termination resistor.

**PIN 1:** CAN Hi — White Mates with Molex 19038-0001.

**PIN 2:** CAN Low — Black mates with Molex 19034-0005.

# MODEL 1030

## SPECIFICATIONS

### Electrical

Operating Voltage Range:

2448D = 18 to 60 VDC

72140D = 60 to 180 VDC

Isolation: 500 VAC per UL 583

Shock: UL 583

Transients: IEC 6100-4-4, test level 2

Reverse Voltage Protection: Acuity will not be damaged if connected to the battery with inverted polarity.

Short Circuit Protection: All inputs and outputs (except CAN Bus) shall withstand continuous short circuit to negative (B-) or positive (B+) voltage.

### Environmental

Operating & Storage Temperature Range: -30 to +55°C

Humidity: 100% condensing per IEC 60068-2-30, Db

Protection: IP67 per EN60529

Vibration: IEC 60068-2-6, Fc

### Environmental cont'd

Shock: IEC 60068-2-29, Eb

Chemical Resistance: Immune to the effects of contact with battery electrolyte, hydraulic fluid, water, baking soda

### EMC

Emission:

EN55022 Class B (Component Test)

EN12895 (Vehicle Test)

Immunity:

EN61000-4-3 (Component Test)

EN12895 (Vehicle Test)

ESD:

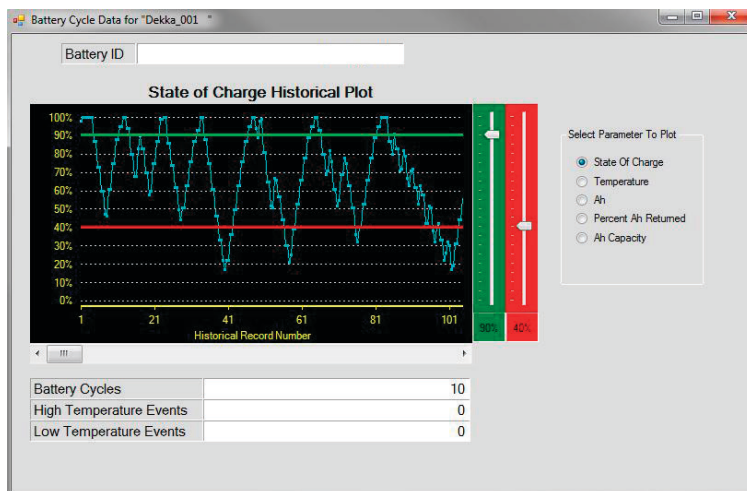
EN61000-4-2 (Component Test)

EN12895 (Vehicle Test)

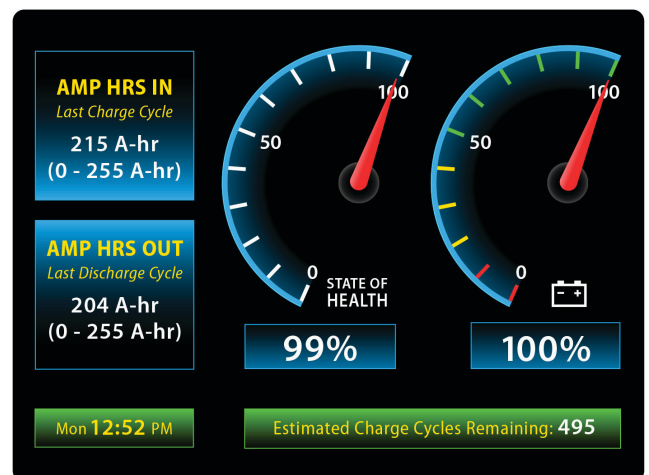
### Regulatory Approvals

UL (Pending): Recognition or component listing (UL583)

## INFORMATION READOUT



The Acu-Set software translates the Acuity battery data into easy-to-read performance data. It also calculates Percent Rated Capacity (PRC) – the actual energy the battery can deliver as compared to its rated capacity.



Battery information is displayed in real time on the Curtis enGage® VII or any other CAN-based display.

**WARRANTY** Two year limited warranty from time of delivery.



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Specifications subject to change without notice

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The Curtis Difference  
You feel it when you drive it