

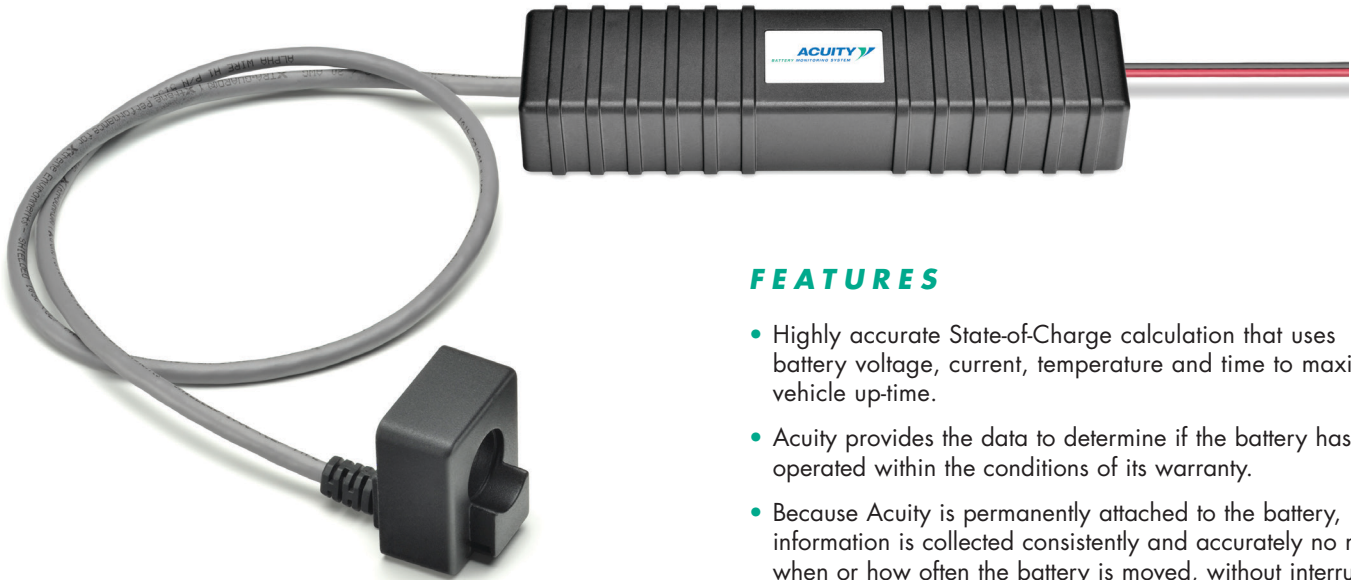
ACUITY® BATTERY MONITORING SYSTEM



MODEL 1030

PRELIMINARY

CURTIS



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.

ACUITY®
BATTERY MONITORING SYSTEM

DESCRIPTION

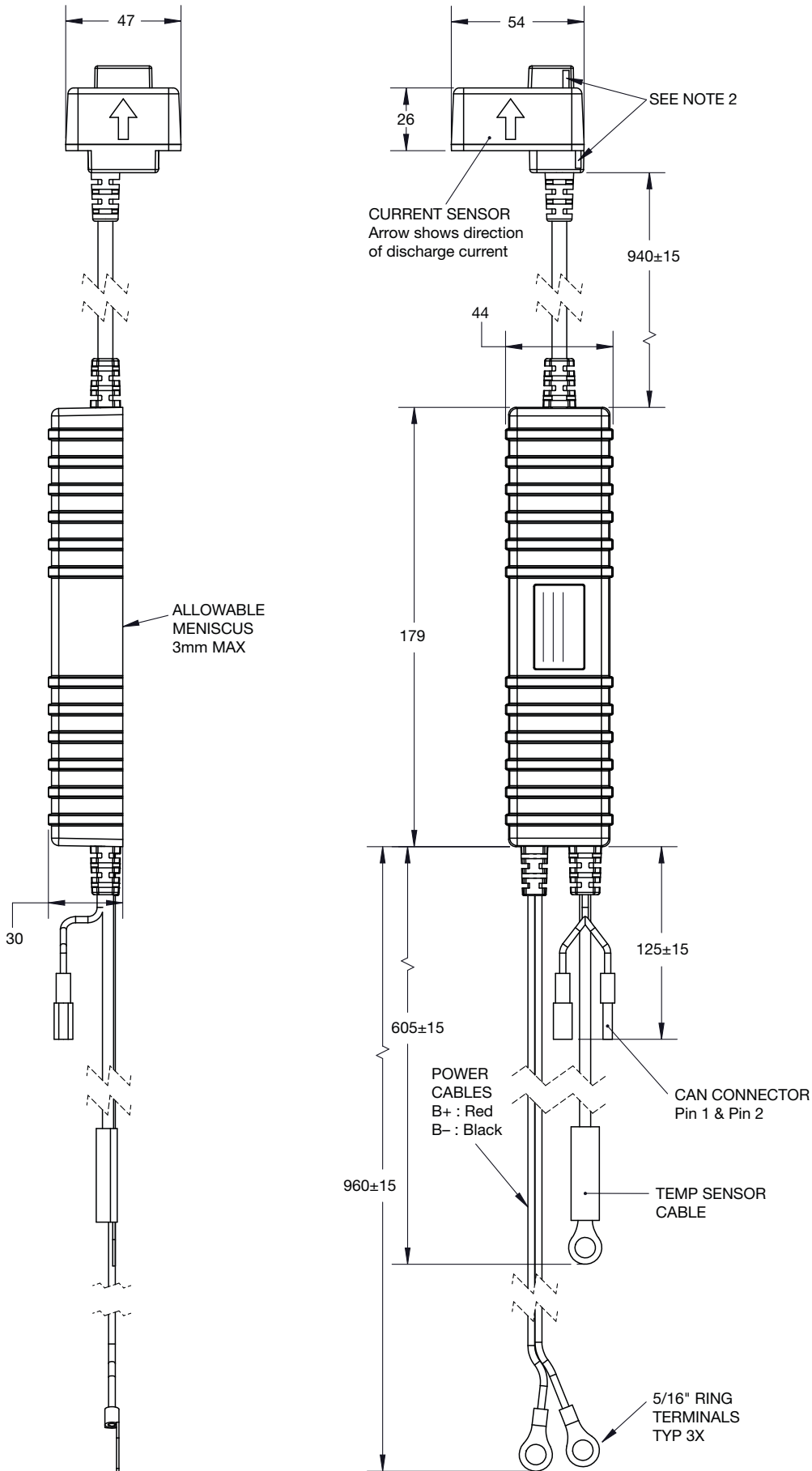
The Curtis Acuity® Battery Monitoring System is a device that mounts directly to an industrial vehicle lead acid battery. It measures, records and transmits battery performance data throughout the battery's life.

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.

MODEL 1030

DIMENSIONS mm



NOTES:

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.

CAN CONNECTOR

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:

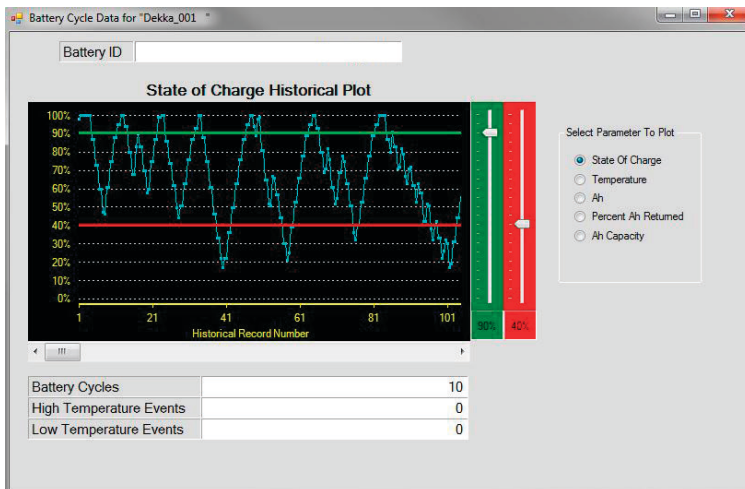
EN61000-4-2 (Component Test)

EN12895 (Vehicle Test)

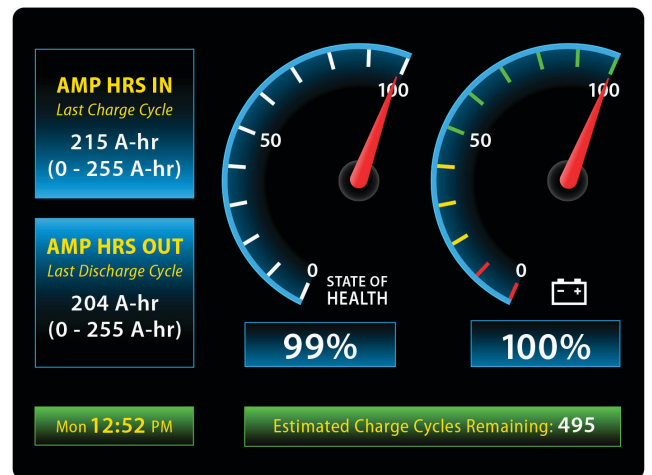
Regulatory Approvals

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.

