



CURTIS

Instrumentation

# Battery Monitoring System

**ACUITY**  
BATTERY MONITORING SYSTEM



## FEATURES

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- The diagram illustrates the CANbus system architecture for a forklift. At the top, a laptop displays "Fleet Management Software". A dashed blue line connects the laptop to a "CAN wifi" module, which is a black device with a green antenna. Below the "CAN wifi" module is a blue box labeled "CANbus". A double-headed blue arrow connects the "CAN wifi" module to the "CANbus" box. To the left of the "CANbus" box is a circular inset showing a forklift's instrument cluster with a digital display and analog gauges. A double-headed blue arrow connects the "CANbus" box to this inset. Below the "CANbus" box is another circular inset showing a black CANbus module with a cable and a connector. A double-headed blue arrow connects the "CANbus" box to this inset. At the bottom, a yellow and grey forklift is shown. Two blue lines connect the circular insets to the forklift: one from the instrument cluster inset to the driver's seat area, and another from the CANbus module inset to the front of the forklift.



# Acuity Battery Monitoring System

## 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 CANbus) shall withstand continuous short circuit to negative (B-) or positive (B+) voltage.

#### CANbus Isolation

Eliminates ground loops that can cause component damage as well as data errors due to differences in ground potentials among the nodes on the CANbus.

### Environmental

#### Operating & Storage Temperature Range

-30 to +55°C

#### Humidity

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

### Environmental con't

#### Protection

IP67 per EN60529

#### Vibration

IEC 60068-2-6, Fc

#### Shock

IEC 60068-2-29, Eb

#### Chemical Resistance

Immune to the effects of contact with battery electrolyte, hydraulic fluid, water, baking soda.

### EMC Specifications

#### Emissions

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)

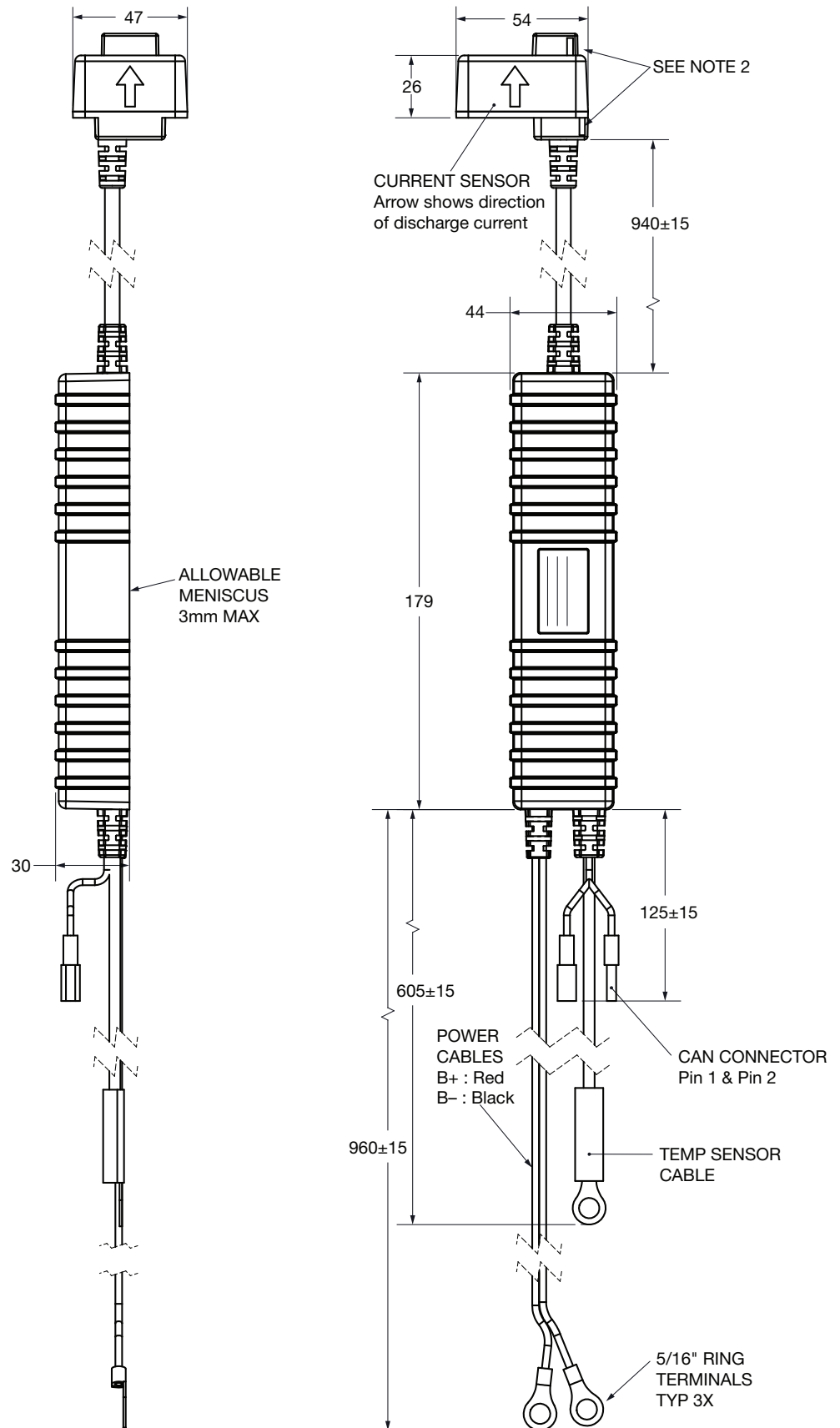
Recognition or component listing (UL583)





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## DIMENSIONS mm



### NOTES:

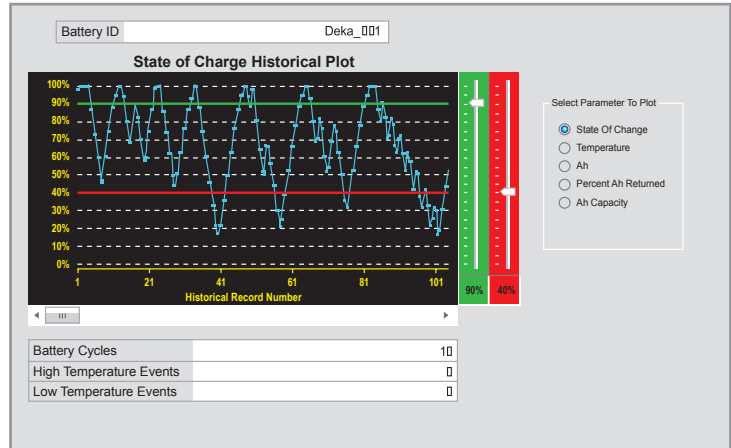
1. Case & Current Sensor Housing Material: Glass-filled PBT.
2. Current Sensor can accommodate most cable sizes up to 4/0.
3. Current Sensor to be held to battery cable by tie-wraps (2 places).
4. Acid resistant tie-wraps should be used to secure unit.
5. This unit not fitted with a CAN termination resistor.

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## INFORMATION READOUT

### Acu-Set<sup>TM</sup> ACUITY<sup>®</sup> SOFTWARE

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<sup>®</sup> VII or any other CAN-based display.

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

The Curtis Difference  
**You feel it when you drive it**