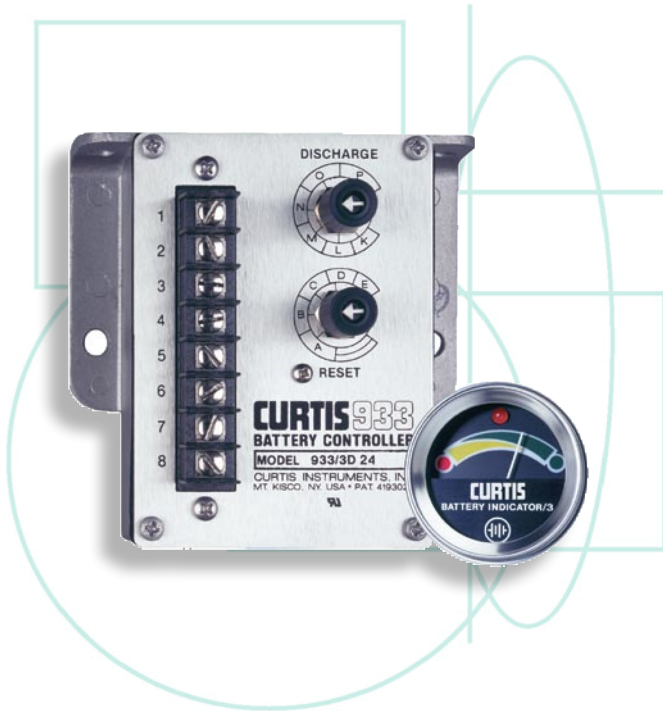


# ELECTRIC "FUEL" GAGE & BATTERY CONTROLLER

MODEL 933/3D



CURTIS



## DESCRIPTION

Curtis Model 933/3D is a battery "fuel" gage and controller with lift lockout and adjustable reset and discharge settings. These proven instruments, with more than a half million units installed, feature a rugged aluminum controller for reliable operation, even in the most severe conditions.

## APPLICATION

The Curtis Model 933/3D prolongs battery life and protects vehicle components from the effects of deep discharge in material handling and other battery powered industrial vehicles.

## FEATURES

- Flashing red LED signals "energy reserve" warning at 75% discharge.
- At 80% discharge this instrument locks out the lift coil circuit on industrial lift trucks and provides optional warning signals in other vehicles.
- If 80% discharge is reached during a lift, the lift is completed before the lift circuit is locked out.
- Recognizes improperly charged battery.
- Non-volatile memory (EEPROM) retains "state-of-charge" level memory when external power is removed.
- Adjustable reset level and discharge profile (lockout point). (Factory settings are: Reset level at 2.09VPC. Lockout at 1.73VPC).
- Controller is easy to install and mounts to body of truck with two 1/4" bolts. The gage is installed in the dash in a standard 2-1/16" round cut-out.

## Options

- Dual-voltage models can be used with either of two different system voltages selectable with jumpers.
- Auto ranging, dual-voltage models automatically adjust to the correct system voltage.
- High voltage reset is available for vehicles in which the controller stays connected to the battery during charging.
- 933/3D XX AV has an isolated N.C. relay with 150 VA max. resistive load capacity. It can be installed in any portion of the lift coil circuit. AX output is similar to model AW except it is N.O. and closes at lockout.
- Model 1156 10-bar LED gage which flashes to signal low "fuel".

## SPECIFICATIONS

- Operating Temperature:  
-20 to +85°C
- Storage Temperature:  
-55 to +85°C
- Discharge Level (standard):  
1.56 to 1.82VPC,  
factory set to 1.73VPC
- Reset Level (standard):  
2.00 to 2.18VPC, factory set to 2.09VPC

## System Voltages

Available in voltages from 24 to 48 volts, and dual voltage models in 24/36 and 36/48.

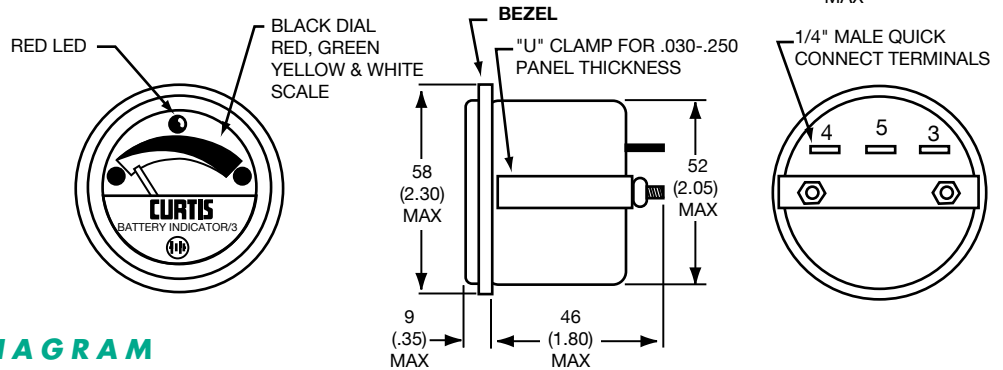
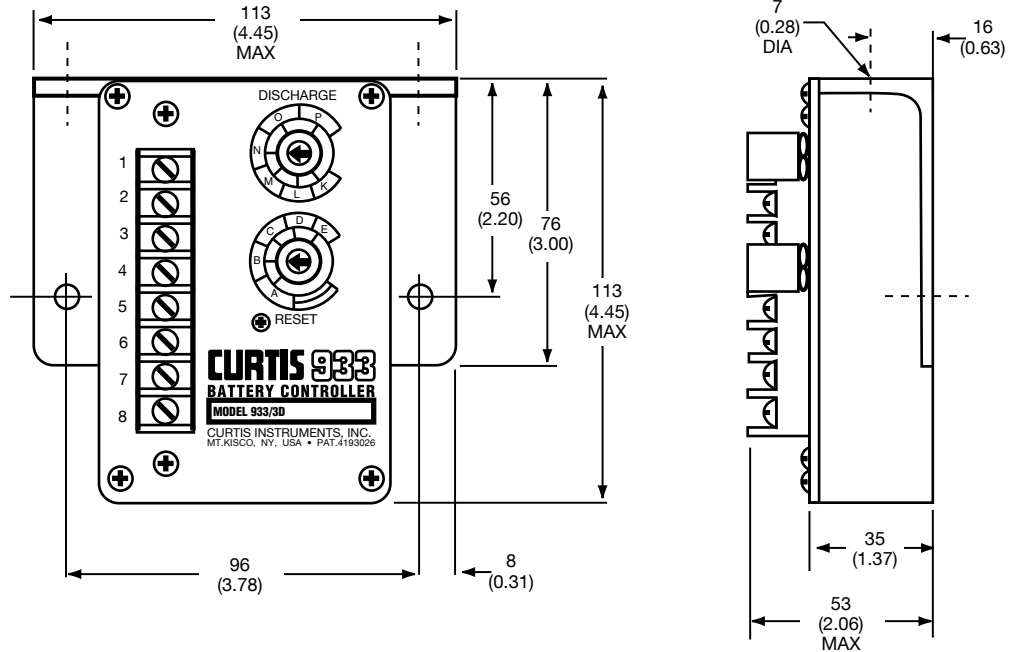
[www.curtisinstruments.com](http://www.curtisinstruments.com)

# MODEL 933/3D

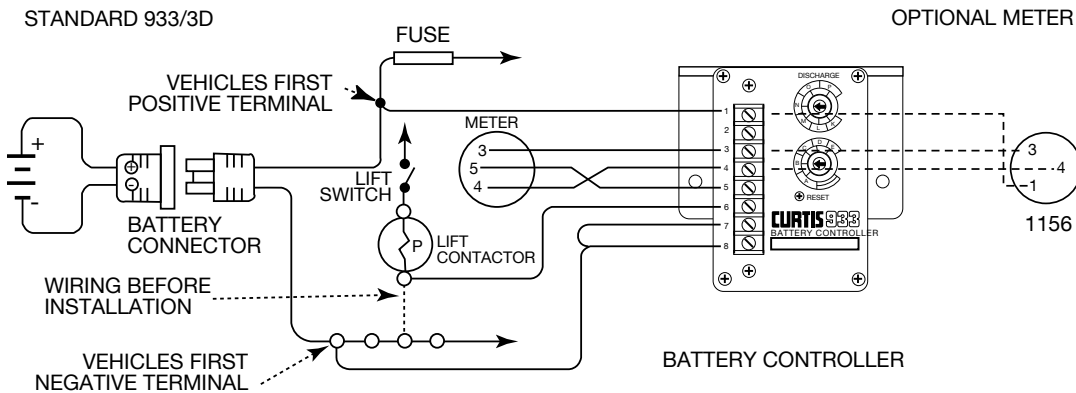
## MODEL CHART

Model	System Voltage(s)	Non-Standard Reset Option	Non-Standard Output or Discharge Option
933/3D	48	X	X

## DIMENSIONS mm



## TYPICAL WIRING DIAGRAM



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

