



CURTIS

Instrumentation



# Solid State Battery “Fuel” Gauge

## Model 908R



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Curtis Model 908R is a completely solid state battery discharge indicator and lift lockout, housed in a 52mm case. Void of moving parts, this combination instrument is exceptionally reliable even in severe operating environments. Model 908R is a battery state-of-charge gauge ideally suited for electrically powered vehicles.

### FEATURES

#### Fuel Gauge Features

- ▶ Multi-color 10-bar LED displays state-of-charge (5 green, 3 yellow, 2 red LEDs. Single red LED also available).
- ▶ Flashing red LED signals “energy reserve” alarm at 70% discharged.
- ▶ Double flashing red LEDs signal “empty” alarm at 80% discharged.
- ▶ Normally closed relay opens at 80% discharge for lift lockout. Holding relay option also available.
- ▶ Recognizes improperly charged battery.
- ▶ Keyswitch activated LED display (Fuel gauge electronics are energized as long as they remain connected to the battery).
- ▶ Wide range of factory programmable discharge profiles available.
- ▶ Dual reset methods in each gauge: Open Circuit Reset for vehicles that exchange batteries and Charge Tracking Reset for vehicles whose batteries remain connected to the gauge during recharge.

#### System Voltages

- ▶ Available in single voltages from 12 VDC to 80 VDC, or in dual voltage of 24/36, 36/48, 24/48 or 72/80 VDC. Operating range is  $\pm 25\%$  of nominal voltage.

### SPECIFICATIONS

#### Temperature Range

Operating Temperature:  
-40°C to +85°C.

#### Shock & Vibration

Meets SAE J 1378.

#### Humidity

95% RH (non-condensing)  
at +38°C.

#### Mating Connector

Molex 8 pin, 39-01-2085.

#### Discharge Profiles

Factory Set (non-adjustable),  
see sheet 2 for various profiles.

#### Reset Levels

Open Circuit Reset (OCR)  
at 2.09 volts/cell.

#### Charge Tracking Reset

(CTR) tracks battery recharge.

See a 360° view of the 908R at:  
[curtisinstruments.com/360view](http://curtisinstruments.com/360view)



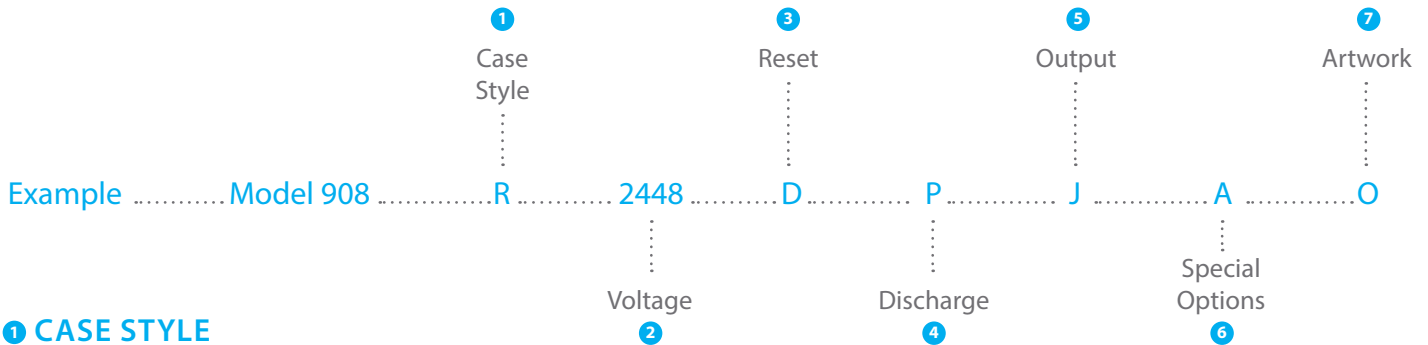
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### MODEL NUMBER ENCODING

Determine your model number by selecting the correct attribute for each item from the charts provided. Choose the appropriate letter that corresponds to the proper specification. Enter the code sequentially per the example below.



#### 1 CASE STYLE

R	Round (52mm)
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#### 2 VOLTAGE OPTIONS

Single	Dual
12	24/36
24	24/48
36	36/48
48	72/80
72	
80	

#### 3 RESET PROFILE OPTIONS

Letter Code	Volts Per Cell		
	Open Circuit Reset	Charge Tracking Reset Full	Charge Tracking Reset Empty
B	2.090	2.35	2.10
C	2.135	2.400	2.10
D	2.060 <sup>1</sup>	2.32	2.10
G	2.090 <sup>1</sup>	2.40	2.10
K	1.928	2.167	2.10
N	1.980	2.230	2.10
T	2.028	2.28	2.10
Y	2.083	2.167	2.10

#### 4 DISCHARGE PROFILE OPTIONS

Letter Code	Volts Per Cell	
	Full	Empty
G	1.97	1.75
H	1.97	1.70
J	1.97	1.63
K	2.01	1.65
L	2.10	1.92
M	2.00	1.83
N	2.04	1.73
O	2.08	1.88
P	2.08	1.98
Q	2.10	1.88
R	2.02	1.90
S	2.08	1.85
T	2.03	1.90
V	1.98	1.85
W	2.02	1.85
X	1.95	1.75
Y	2.00	1.90
Z	2.04	1.82

#### 5 OUTPUT OPTIONS

Letter Code	Relay	Contact Rating
J	Holding	3 Amps when continuously closed, 1 Amp when opening
K	N.C.	1 Amp
Y	N.O.	1 Amp

#### 6 SPECIAL OPTIONS

A	(TBD)
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#### 7 ARTWORK OPTIONS

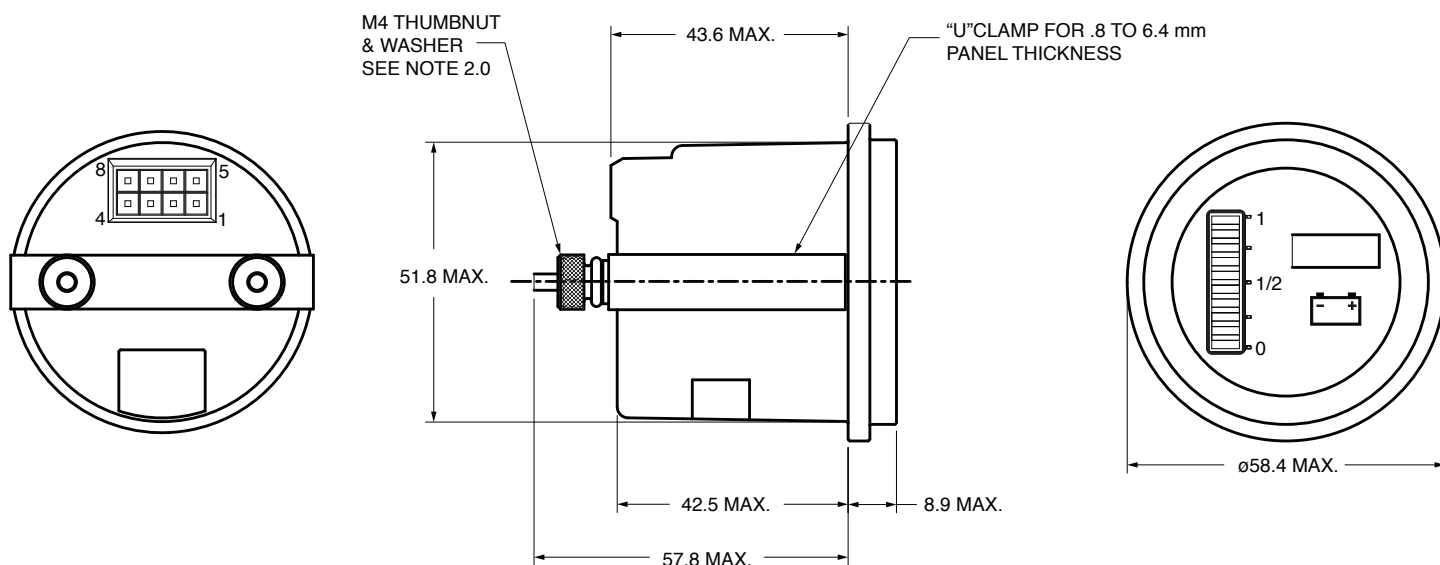
Letter Code	Logo
O	Curtis
N	None

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### DIMENSIONS mm



Pin	Output Option J	Output Option K	Output Option Y
1	N/C	N/C	N/C
2*	+ Keyswitch	+ Keyswitch	+ Keyswitch
3	N.C. Holding Relay +	N.C. Relay	N.O. Relay
4	N.C. Holding Relay -	N.C. Relay	N.O. Relay
5	Common	Common	Common
6	N/C	N/C	N/C
7**	Low Voltage +	Low Voltage +	Low Voltage +
8**	High Voltage +	High Voltage +	High Voltage +

\* Keyswitch turns on "fuel gauge" display.

\*\* Single voltage units: apply B+ to pin 7;  
Dual voltage units: apply lower B+ voltage to pin 7 or the higher B+ voltage to pin 8.

**NOTE:** In addition to a "U" clamp and thumbnuts/washers shown in the drawing, individually packed units are provided with a mating connector and female pins. Bulk packed units are provided with a "U" clamp and hex nuts/washers only.

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

The Curtis Difference  
You feel it when you drive it



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Specifications subject to change without notice

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