BATTERY "FUEL" GAUGE
MODEL 906

GACELL®
The right battery
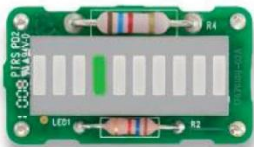
DESCRIPTION

Model 906 is an inexpensive, one piece, easy to install battery fuel gauge. It is completely solid state and provides a reliable, accurate, and easy to read display of battery state-of-charge. Model 906 is available in six panel mount packages and a printed circuit board mounted module for custom dash panel applications.

APPLICATION

This battery fuel gauge features Curtis patented technology and is ideal for golf cars, commercial cleaning equipment, mobility aids, electric bicycles, electric marine motors, medical devices, and similar equipment.

FEATURES

- All principal circuits are integrated in a single chip for long-life reliability.
- A 10-bar LED displays the state-of-charge successively, bar by bar, from full to empty.
- At 70% depth of discharge, a flashing LED signals an "energy reserve" alert.
- At 80%, alternately flashing LEDs provides an "empty" status warning.
- Model 906 is compact and easily installed in panel cut-outs as small as 36.8 X 24.1 mm, with as little as 35 mm behind panel clearance needed, see dimensions of various case styles.
- Recognizes improperly charged battery.
- Keyswitch activated LED display (state-of-charge is monitored as long as 906 is connected to battery).
- Memory allows gauge to recall state-of-charge whenever battery is disconnected.
- Three possible reset methods:
    1. Open Circuit Reset (OCR): Upon reconnection of a battery the gauge will reset if it measures 2.09 volts/cell or higher (example "B" profile) (for units with memory option).
    2. High Voltage Reset (HVR): Gauge must measure >2.35 volts per cell for 6 continuous minutes during charging (example "B" profile).
    3. Charge Tracking Reset (CTR): Display tracks charge level during opportunity charging (requires gauge to be connected to battery when charging).

OPTIONS

- The Output Signal option causes the voltage on pin 3 to drop from 5 to 0 volts at 80% discharge. It can be used to signal another component or to allow for the disabling of a specified vehicle function, insuring against abusive deep discharge conditions. The Output Signal can also be used to drive the Curtis 1178 Relay Module.
- Special models and custom panels are available.

SPECIFICATIONS

System Voltages: 12V, 24V, 36V, 48V

Operating voltage: +/−25% of nominal voltage

Operating temperature: −40°C to +85°C

Storage temperature: −50°C to +90°C

Shock & Vibration: Meets SAE J 1378

MODEL 906

DIMENSIONS mm

Case Style T

53.2 MAX.
31.2 MAX.
36.7
Ø3.8 (2X)
28.8
18.0
3.2
1.5
23.8
3/16" (4.8mm) wide (4X)
44.5
35.5
0   1

Case Style D

44.6±0.3
32 Max
22±0.15
Thumbnut 4mm
Washer 4mm
"U" Clamp For 0.76-6.35
Panel Thickness
4±0.2
0   1
24±0.3
48±0.3
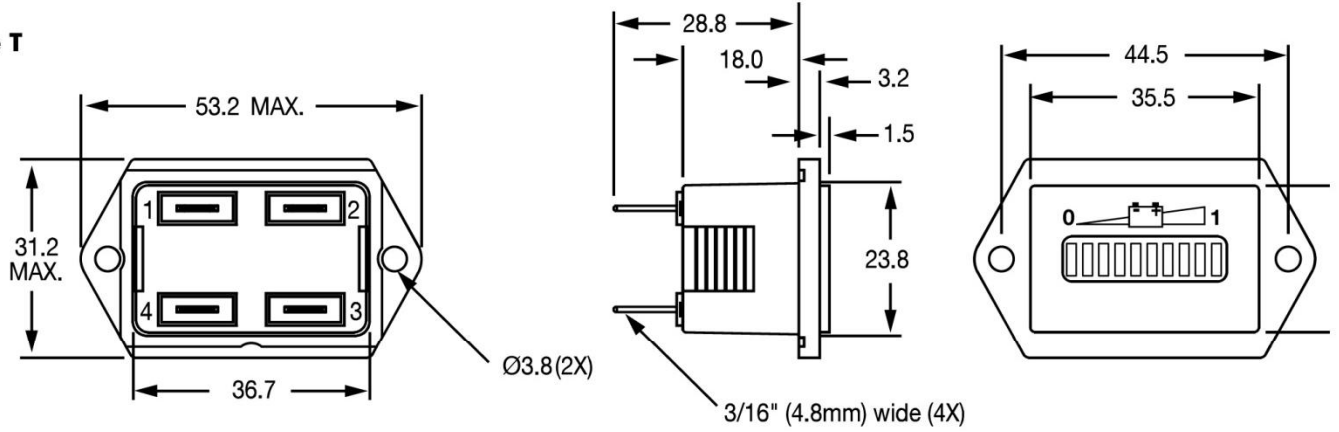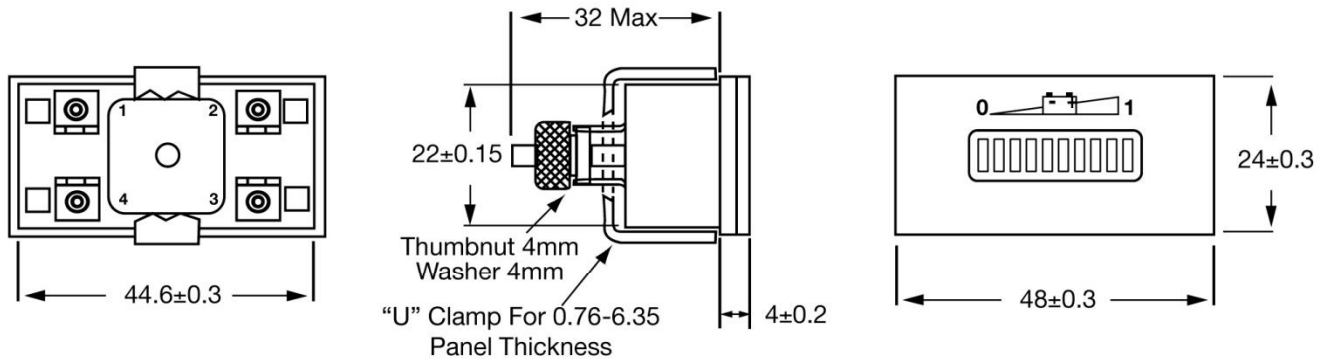
NOTE: 3/16" fast on spade terminals.

Case Style N

22.0
14.4
14.3
21.9
0   1
24
48

Case Style Y

36.7
36.5
18.0
4.7
23.8
40.6
0   1
27.5
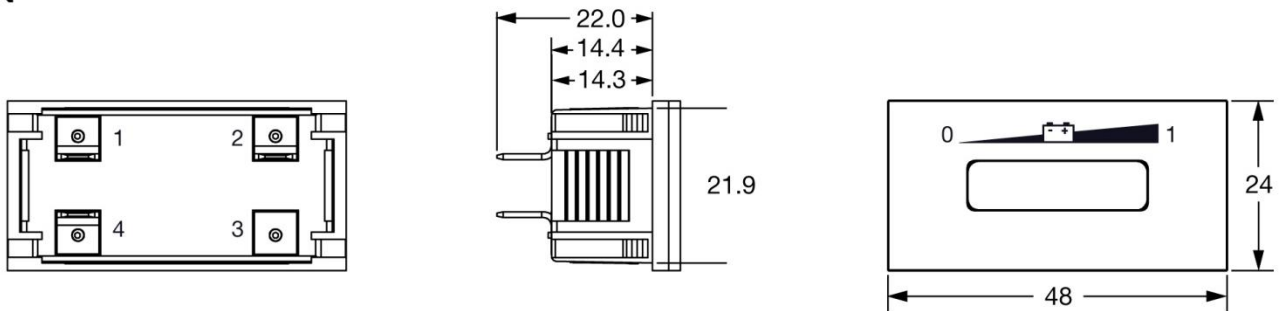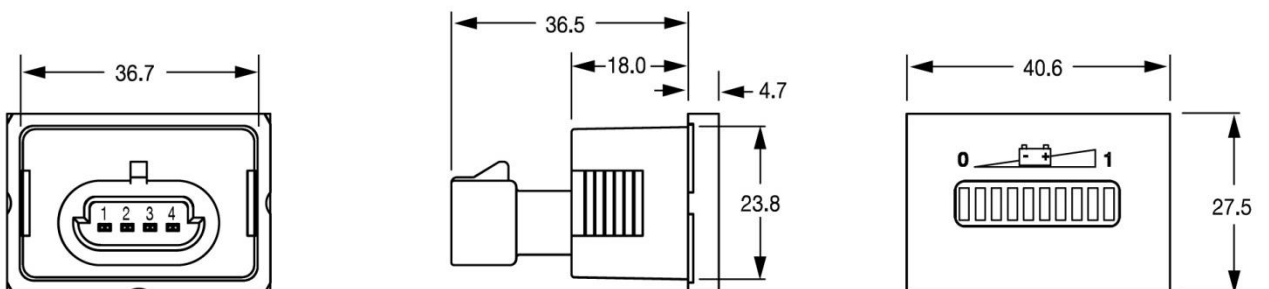
NOTE: Equivalent to Delphi-Packard connector P/N 15336035 4-pin.

DIMENSIONS mm continued

Case Style Z
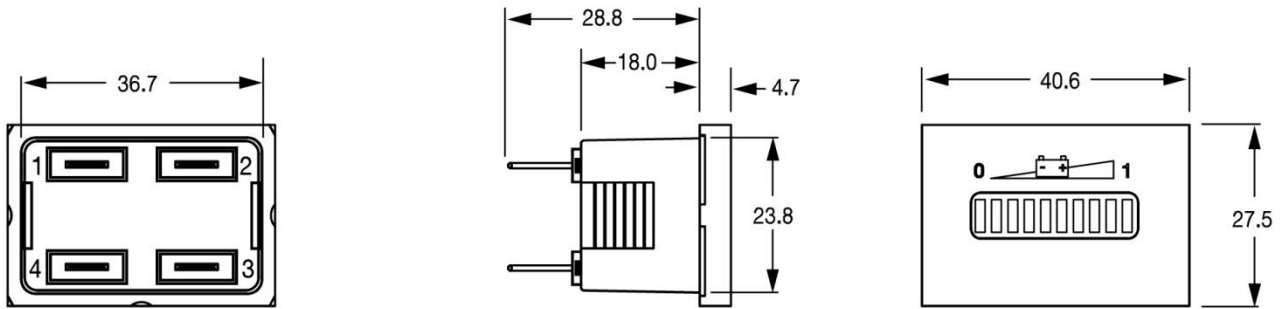
NOTE: 1/4" fast on spade terminals.

Module P

COMPONENT SIDE

Case Style R

"U"CLAMP FOR .8 MM TO 6.4 MM. PANEL THICKNESS

THUMBNUT 4MM
LOCKWASHER 4MM
SEE NOTE 2.0
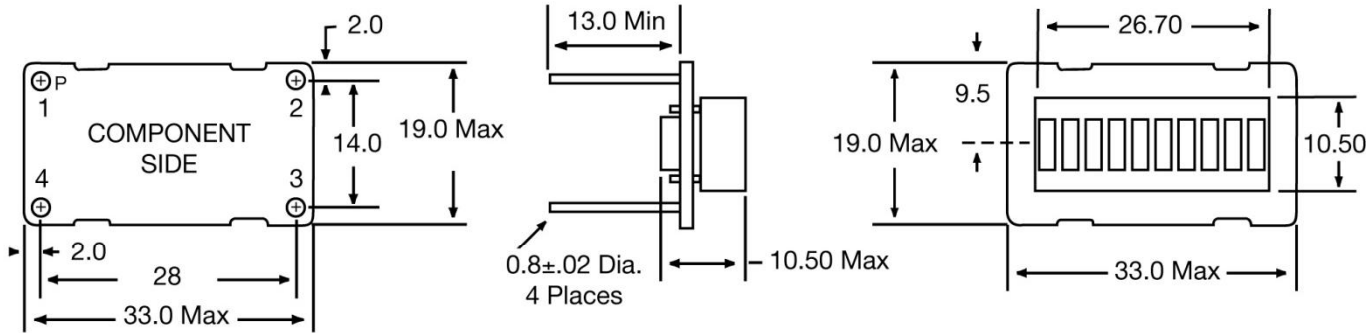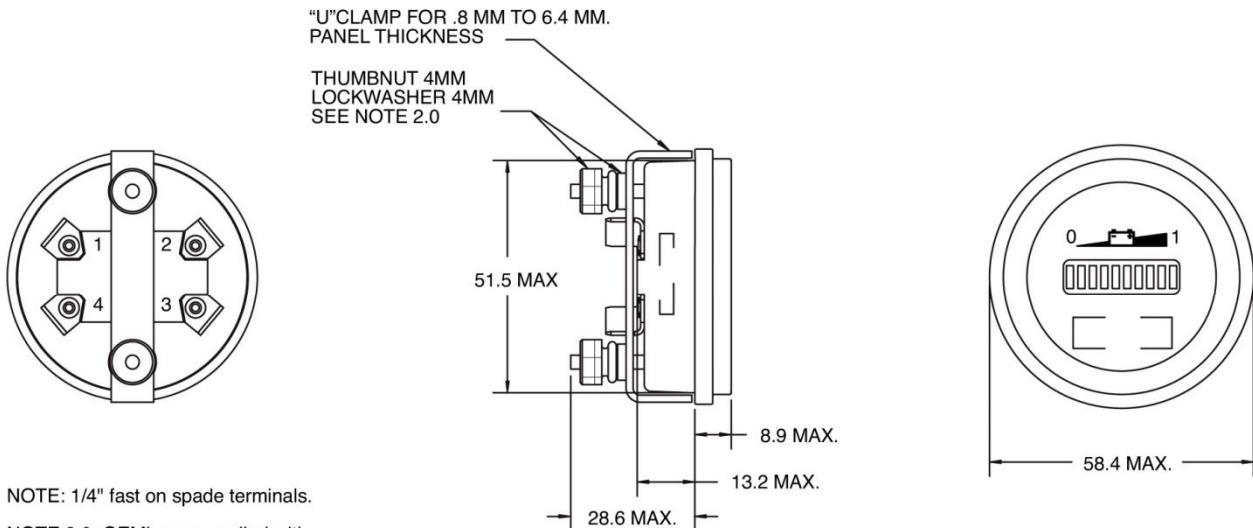
NOTE: 1/4" fast on spade terminals.

NOTE 2.0: OEM's are supplied with hex nuts and lock washers only. They do not receive thumbnuts.

PIN ASSIGNMENT

1 B+
2 B−
3 Output Signal + or No Option
4 Keyswitch +

MODEL 906

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.

	❶ Case Style	❸ Reset	❺ Output	❼ Artwork
Example: Model 906	D	24 M	C D	A O
		❷ Voltage	❹ Discharge	❻ Special Options

❶ Case Styles

D	DIN case – rectangular
F	Hex bezel w/1/4" spade terminals (enGage I)
J	Hex bezel w/Packard connector (enGage I)
N	DIN case - rectangular, snap-fit
P	Pin mount (module)
R	52mm Round bezel & case (same as 700Q)
T	Hex bezel w/3/16" spade terminals (enGage I)
TX	Hex bezel w/3/16" spade terminals (old T case)
Y	Rectangular bezel w/Packard connector (enGage I)
Z	Rectangular bezel w/1/4" spade terminals (enGage I)

❷ Voltage Options

12
24
36
48

❸ Reset Profile Options

Profile with Memory Option	Profile without Memory Option	OCR	HVR	CTR Full	CTR Empty
K		1.928	2.167	2.167	2.10
	J	N/A	2.167		
Y		2.083	2.167	2.167	2.10
N		1.980	2.230	2.230	2.10
	E	N/A	2.230		
T		2.028	2.280	2.28	2.10
	L	N/A	2.280		
D		2.060	2.320	2.32	2.10
	P	N/A	2.320		
B		2.090	2.350	2.35	2.10
	H	N/A	2.350		
C		2.135	2.400	2.400	2.10
	M	N/A	2.400		
	F	N/A	2.416		

❹ 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
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

❺ Output Options

Letter Code	Signal
A	No option
B[1]	Both output & memory options
C[1]	Both output & memory options and CTR reset instead of HVR
D	Output option only
M	Memory option only

[1] option is for micro versions only

❻ Special Options

Letter Code	Options
A	(TBD)
G	Tri-color LED array

❼ Artwork Options

Letter Code	Logo
O	Curtis
N	None

Note: This gauge is not intended to measure the state-of-charge of batteries subject to extended periods of inactivity since it does not account for self-discharge effects. Consult factory for details.

WARRANTY Two year limited warranty from time of delivery.