Belite’s Improved LED Fuel Gauge provides a LED display which shows the current amount of fuel in your fuel tank. Calibrated from 0% to 100%, it features unusually bright LEDs which are completely readable in direct sunlight.

It is available in a single or dual version, for support of one or two fuel tanks. The input compatibility is selectable between traditional float style fuel senders and newer style capacitive fuel senders. It may be calibrated to match the full and empty point of any fuel sender / tank at the push of a button. The unit uses digital electronics to interpret, calibrate and display the fuel tank level. Calibration of the fuel level is done via a single button for each tank.

- Extraordinarily bright, daylight readable display
- Lightest Weight
- Smallest Size
- Best visibility of any fuel gauge
- LED color changes from green, then yellow, then red, and also increases in brightness as fuel level goes down
- Single or Dual tank versions
- Compatible with Capacitive (0-5v) and Resistive Fuel Probe Senders
- May be calibrated to any individual Fuel Probe Sender
- Dimmable

**DISCLAIMER:**

Products from Belite Electronics are not designed to be used in applications where their failure would endanger safe flight or human life in any way. They are intended solely for use in VFR conditions. They are not certified to meet any Technical Standard Order, and are not produced under a Parts Manufacturing Authority (TSO / PMA). As a result, they are suitable only for use in experimental and ultralight aircraft, and in Light Sport Aircraft, if meeting the requirements of the respective manufacture.

**WARRANTY:**

Your new Belite Avionics instrument carries a one year warranty. Please contact us at info@beliteaircraft.com should your product need warranty service. International warranty service will be charged $50.00 USD for repairs, which includes return shipping after repair. Payment must be received before service begins.

**RETURN/REFUND INFORMATION:**

Must be returned in new, resalable condition within 14 days.
SPECIFICATIONS

Dimensions: 2 3/8” x 2 3/8” x 5/8” (not including connector height). Fits standard 2 ¼” instrument hole. Including connector, complete depth of instrument is 1.0”.

Power Supply: Attaches to any DC power supply between 8 and 14 volts. Alternatively, you may use LITHIUM 9V batteries. DO NOT USE ALKALINE 9V batteries. Battery life is approximately 4 – 8 hours using a lithium 9V battery.

Power Consumption: <30ma @ full brightness, single display; <50ma @ full brightness, dual display.

Weight: 1.2 ounce / 35 grams (includes electrical connector).

Color LED Range: Green (full), Yellow and Red (empty).

Probe Compatibility: Use with any capacitive probe (standard 0-5v output); use with any resistive probe (EG: 30 – 240 ohm; will also work with any other ohm range such as 40 – 90 ohm)

Slosh Damping: Electronic filtering built into the Belite Fuel Gauge controls minor errant reading due to fuel sloshing.

FCC Part 15: Compliant by EXEMPTION, Section 15.103(a)

For other directives: THIS EQUIPMENT IS DESIGNED FOR USE IN AIRCRAFT and VEHICLES.

Internal Fusing: None, use external fuse <= 1A.

Power: use external switching.

Power On Self Test: Observe all LEDs illuminated through pattern check and variable brightness check.

Dimming Control: 0 – 12V; 0 = full bright; 12V = full dim. Use external 5K potentiometer. Dimming the LEDs substantially reduces power consumption.

TSO/PMA: No. For use in non-certified aircraft.


Humidity: Non-condensing.

Cabling: Black = ground; Red = 8-14v; Yellow = Dimming (leave unconnected if unused). Remaining wires are for left / right fuel sender input.

INSTALLATION

Install in any 2 ¼” instrument hole using provided screws and lock nuts.

Attach ground and power to black and red wires by cutting off the 9V connector. The supplied 9V battery connector may be used for temporary unit testing, or may be used as a permanent source of power. Use only Lithium 9V batteries. Walmart sells them, as do many other battery retailers. They are usually found in the photo section of the store.

The Belite gauge is extraordinarily bright. If it is too bright for your eye comfort, you MUST install a dimmer circuit and adjust accordingly. If you decide to install a dimmer, attach the yellow wire to the middle lug of a 5K potentiometer. The other lugs of the potentiometer must be attached to ground and +12/+14V. (Using +9V for the dimming potentiometer will not provide full dimming.)

INSTALLATION - SELECTING CAPACITIVE OR RESISTIVE FUEL SENDERS

SEPTEMBER, 2013: Your unit has two jumper shunt pull tabs protruding from the rear of the case. Leave them inserted if you are using a resistive (FLOAT) fuel sender. PUL THEM BOTH OUT if you are using a capacitive fuel sender. You must still configure the unit so that the LED test pattern is bottom to top (capacitive) or top to bottom (float / resistive) as discussed in the following paragraphs. DO NOT USE ANY EXTERNAL RESISTORS.

When you turn the fuel gauge on, it will perform a Power On Self Test (POST). If the LEDs light up from bottom to top, your unit is configured for capacitive fuel senders. If the LEDs light up from top to bottom, your unit is configured for resistive fuel senders.

To reverse from one mode to the other, depress the switch before you power the unit up. After self-test, the fuel gauge will sense this condition and permanently
reconfigure the gauge form capacitive to resistive, or vice versa. (Each side [left tank / right tank] of the display
gauge has an independent switch.)  

We recommend ‘playing’ with this capability before you install the fuel gauge in your airplane. You may
switch the configuration back and forth as many times as you wish. The jumper shunt pull tabs MUST BE
INSERTED for resistive/float operation, and MUST BE REMOVED for capacitive operation.

You MUST have the correct configuration of POST and jumper shunt pull tabs set in your fuel gauge
(relative to your type of fuel sender) or you will have improper operation.

INSTALLATION - WIRING – CAPACITIVE FUEL SENDERS

The remaining one or two wires are attached to the capacitive fuel senders. (You may verify the right / left
wires by touching them briefly to the positive 9V battery post.) After verification of right / left, the gauge may
be attached to the fuel senders. Each capacitive fuel sender has an ‘output’ that supplies a voltage indication
of the fuel tank level, 0 – 5 volts. This voltage level is interpreted by the LED fuel gauge to show the amount of
fuel in your tank. Just connect the fuel sender to the fuel gauge and it will work.

INSTALLATION – CALIBRATION

Calibration is easy. Each side of the gauge is calibrated independently. Calibration is performed AFTER you’ve
selected fuel sender type (capacitive vs resistive) and after you’ve attached the senders.

When the fuel tank condition is empty, depress the switch for less than one second. The fuel gauge will
permanently remember this level as being the empty level.

When the fuel tank condition is full, depress the switch for more than three seconds.
The fuel gauge will permanently remember this level as being the full level.

Calibration for each tank is done independently.
The fuel gauge will retain these calibration levels in permanent flash memory storage within the fuel gauge.
Resistive probe fuel tank wiring. **THE RESISTOR IS NOW INSIDE THE FUEL GAUGE.** Figure 2.

1. We STRONGLY!!! recommend ‘playing’ with the unit prior to installation in your aircraft. Sender type should be set and verified.

2. Operation of the LED scale for each side of the fuel gauge may be verified simply by brushing the input wire against a positive voltage source. You'll see the LED jump up and then slowly dissipate down. If the unit is configured for capacitive senders, a positive voltage will cause the LED indication to rise. If configured for resistive senders, a positive voltage will cause the LED indication to fall.

3. **IT IS MUCH EASIER TO RESOLVE ISSUES PRIOR TO INSTALLATION IN YOUR FUEL TANKS!!!!!!**

4. We've had customer use these to replace classic analog (coil /dial) fuel display indicators. Our fuel display will not work if the original classic display indicator is left in circuit ---- it must be disconnected. PLEASE BE ADVISED: our units are not approved for use in anything but ultralight and experimental aircraft. If used in a S-LSA, you must have manufacturer approval.