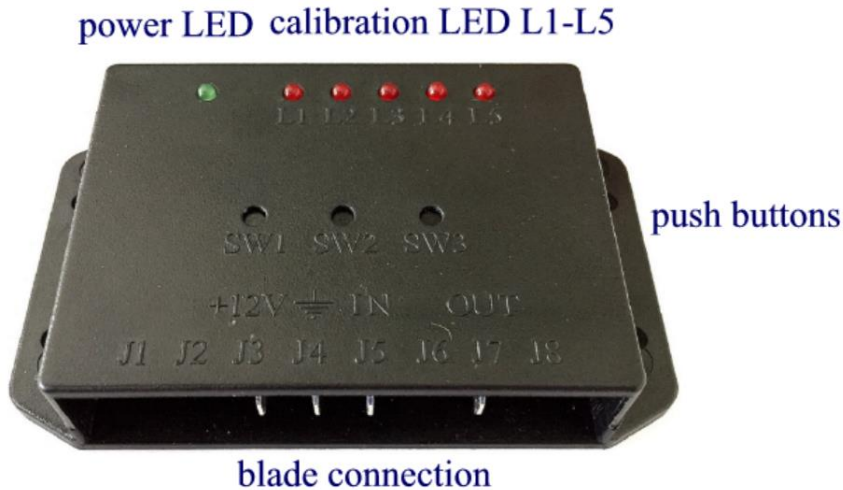# Analog Sender (volt-resistance) Converter Setup

This VR converter will convert 0.5 – 4.5V analogue output sender to almost any gauge's resistance input. Normally used for oil or fuel sender, such as pressure transducer or capacitive fuel sender.

Here are some examples:
1) Using a solid state stain gauge pressure transducer instead of a mechanical pressure sender, and keep the old oil pressure gauge.
2) Using a non-moving capacitive fuel sender instead of float arm fuel sender, and keep the old fuel gauge.

The sender must be adjusted to give a voltage output of 0.5 volts to 4.5 volts.

Wiring for VR converter:
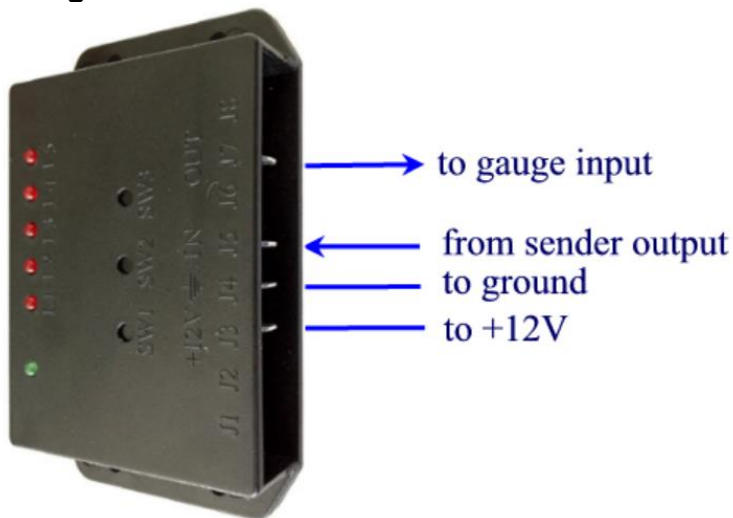
Switch functions:
1) SW1: move the gauge pointer to the correct scale position.
2) SW2: confirm and go next step;
3) SW3: move the gauge pointer to the correct scale position.
   Note depending on your actual gauge type SW1 or SW3 may move the pointer up or down.
4) L1: 0% of gauge reading;
5) L2: 25% of gauge reading;
6) L3: 50% of gauge reading;
7) L4: 75% of gauge reading;
8) L5: 100% of gauge reading;

Calibration steps are done at 5 positions on the gauge dial.
This calibration will calibrate the sender to match your actual gauge at 5 points over the gauge scale, 0%, 25%, 50%, 75% and 100%.

Switch power on while pressing SW2, all the LED's will light, count to 5 and release SW2, L1 and the green power LED will remain lit. Now you are set up to calibrate zero or 0% of gauge reading.
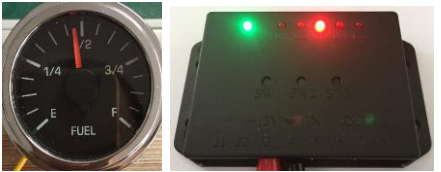
1. With L1 lit, adjust the pointer position to zero (0%) with SW1 and SW3. For fuel gauge, you may adjust the pointer to a position below empty to make sure you never accidentally run out of fuel.
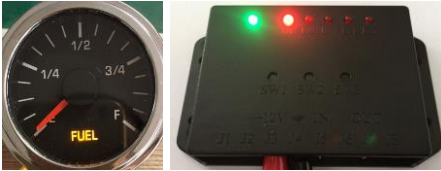
2. When the reading is correct, press SW2, L1 will go out and L5 (far right) will illuminate. Now you are set up to calibrate 100% of gauge reading.

3. With L5 lit, adjust the pointer position to full scale (100%) with SW1 and SW3. You may adjust the pointer above full to make sure it always reads full on your sender.
4. When the reading is correct, press SW2, L5 will go out and L3 (middle) will illuminate. Now you are set up to calibrate 50% of gauge reading.

5. With L3 lit, adjust the pointer position to 1/2 scale (50%) with SW1 and SW3.
6. When the reading is correct, press SW2, L3 will go out and L2 will illuminate. Now you are set up to calibrate 25% of gauge reading.

7. With L2 lit, adjust the pointer position to 1/4 scale (25%) with SW1 and SW3.
8. When the reading is correct, press SW2, L2 will go out and L4 will illuminate. Now you are set up to calibrate 75% of gauge reading.

9. With L4 lit, adjust the pointer position to 3/4 scale (75%) with SW1 and SW3.
10. When the reading is correct, press SW2, L4 will go out. All red LED should be go out and only green power LED is on. The calibration is now completed.

END.