

# EL-AD-152

The EL-AD-152 is a fuel level sender which outputs a voltage in proportion to the fuel level in your tank.

## Technical Specifications

**Fuel types:** Typically, Diesel, Biodiesel, Kerosene and Petrol (Water is not measurable).

### Dimensions

**Probe length:** Min 200mm max 540mm

**Mounting:** SAE5 Hole

### Electrical

**Supply voltage:** 10-32v DC

**Supply Current:** 28mA @ 12v DC

**Supply Protection:** Over-voltage 80v DC for 2 minutes, Reverse Polarity

**Signal output:** 0-5v DC or 5-0v DC, 20mV steps, Max 10mA source

**Connections:** 500mm long with either flying leads or an AIM plug fitted

**Accuracy:**  $\pm 3\%$  of depth @20°C

### Materials

**Enclosure:** 30% Glass filled Nylon

**Enclosure Bush:** Polypropylene

**Internal Electrode:** Aluminium

**Sensor tube:** 316 Stainless Steel

**Internal Spacers:** Polypropylene

**End plug:** PTFE

**Wetted Seals:** Viton (FKM) & Nitrile

**Gasket:** Nitrile

**Cable:** Polyurethane

## Environmental Ratings

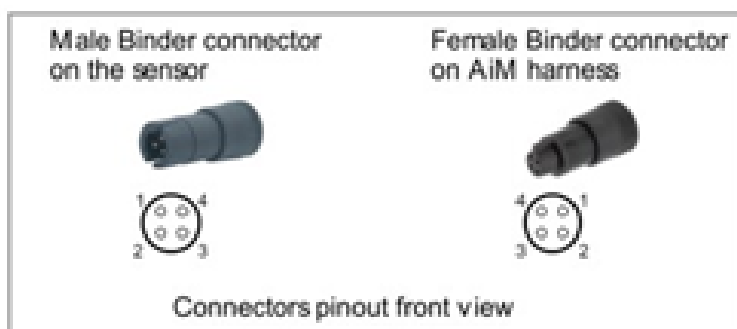
**Sealing:** ip67 (Assuming suitably sealed cable breakout)

**Operating Temp:** -20°C to 85°C

**Shock:** 50g,6.3ms.

**Vibration:** 9.7g BS EN 60068-2-64:1993

# Connections



Wire Colour	Pin Number	Function	Comment	
RED	3	Power	12V	
Green	2	Ground	0V	
Blue	1	Signal	0-5v	
White		Calibration	Do Not Cut Away	
Yellow		Alarm	Not used. Can be cut away.	
	4	5V	Do not connect	

The supplied fuel sender will be calibrated for its full length; however you may need to shorten the fuel sender for your fuel tank.

If shortening the length of the fuel sender is required, please ensure that the length is 10mm short of the full depth of the tank but cannot be cut shorter than 200mm from where the gasket sits.



When cutting the metal shaft can be lightly gripped in a soft jaw vice but do not crush the outer shaft as this would render the sender unusable. The outer shaft can be cut with a pipe cutter. Don't advance the cutter too quickly as this could deform the outer shaft.



Once the outer is cut, slide it away from the head unit and the internal aluminium rod is exposed. The cut off outer can be discarded. In the cutting process, make sure not to rotate the inner rod as this would render the unit unusable. The inner rod needs to be kept away from the outer shaft and in the kit you will find a white spacer. Put this on the inner rod and slide it up into the outer shaft. The inner rod can then be cut with a fine saw or a pair of cutters making sure to deburr the end and using a vacuum remove all swarf from the cutting process. There is a black foot for the sender which is a push fit to the end of the sender with no other mechanical fixing required. Do not jam the black foot right up to the end of the inner rod as this would trap the fuel and give a false reading.





# Calibration.

The signal will NOT be correct during calibration (this is normal).

**IMPORTANT: The power should not be disconnected during the calibration process or calibration will need to be restarted.**

1. Connect the white wire to ground (join white wires on an aim ended unit).
2. Apply power.
3. After 10 seconds disconnect the white wire from ground, keeping power applied. (empty calibrated).
4. Fill the tank with fuel.
5. Connect the white wire to ground for another 10 seconds
6. Disconnect the white wire and tape the wire so no accidental contact can be made to any metal (full calibrated) (don't cut the white wire away in case a recalibration is required).

The calibration is now complete and power can be disconnected as required with the unit retaining the calibration values.

When power is reconnected the output signal will go from empty to full and then back to the fuel level, this is normal.

Recalibration is required when a different fuel is used.