



CAPACITANCE-TYPE MICRO-CONTROLLER FUEL LEVEL SENDING UNIT

ATL KS-300 Series
Replaces KS-100 Series

Aero Tec Laboratories' new microcontroller-based capacitance senders can be distinguished from our older analog style by an "A" in the part number ex: AFLS, and no trim-adjust potentiometers on the top of the sender. Senders with aluminum tubing are for oil, diesel, or gasoline of up to 10% ethanol; and senders with PVC tubing are for potable water. We do not offer units for non-potable water.

▶ How The Senders Measure Liquid Level

Aero Tec Laboratories' senders work by measuring capacitance. This means that no moving parts are required. Electronics in the head convert the measured capacitance to the programmed output of ohms or volts. In fuel senders, capacitance is measured between the inner-sensing tube and the grounded outer tube, and it requires the fluid to be non-conductive. In water senders, capacitance is measured between the inner insulated sense wire and the water, which is grounded by the outer wire.

▶ Shortening Senders (if required)

A fuel sender's outer tube can be shortened using a tubing cutter and the inner tube snipped. Unless the sender was ordered as bendable, bending the tubing risks shorting the inner to outer tube which causes a false Empty reading. A sender can be special ordered if it needs to be bent.

▶ Connections for 2 Terminal Sender

NEG: Connect this to DC ground. NOTE: Our senders work with negative-ground systems only.

SEND: Connect this to the input terminal of your gauge or display. NOTE: The signal is an electronic output which will confuse your ohmmeter if you try to take a resistance reading between the sender and ground. The 2-terminal sender works with +12V DC or +24V DC systems.

▶ Connections for 3 Terminal Sender

POS: Connect to +12 volt DC source only.

NEG: Connect this to DC ground. NOTE: Our senders work with negative-ground systems only.

SEND: Connect this to the input terminal of your gauge or display. NOTE: The signal is an electronic output which will confuse your ohmmeter if you try to take a resistance reading between the sender and ground.



Two Terminal Sending Unit
(Power from Gauge)



Three Terminal Sending Unit
(Power from Ignition Switch)





MICRO-CONTROLLER FUEL LEVEL SENDING UNIT

► Calibration

The output range (ex: 240/33 ohms) and low-level warning (if ordered) are pre-set at the factory per the customer's order. They cannot be changed in the field by the end user, but can be changed at the factory if needed.

► Factory Calibrations

If you did not need to shorten the sender, the factory Empty and Full settings should be correct. Please contact us for advice if they seem wrong, rather than recalibrating.

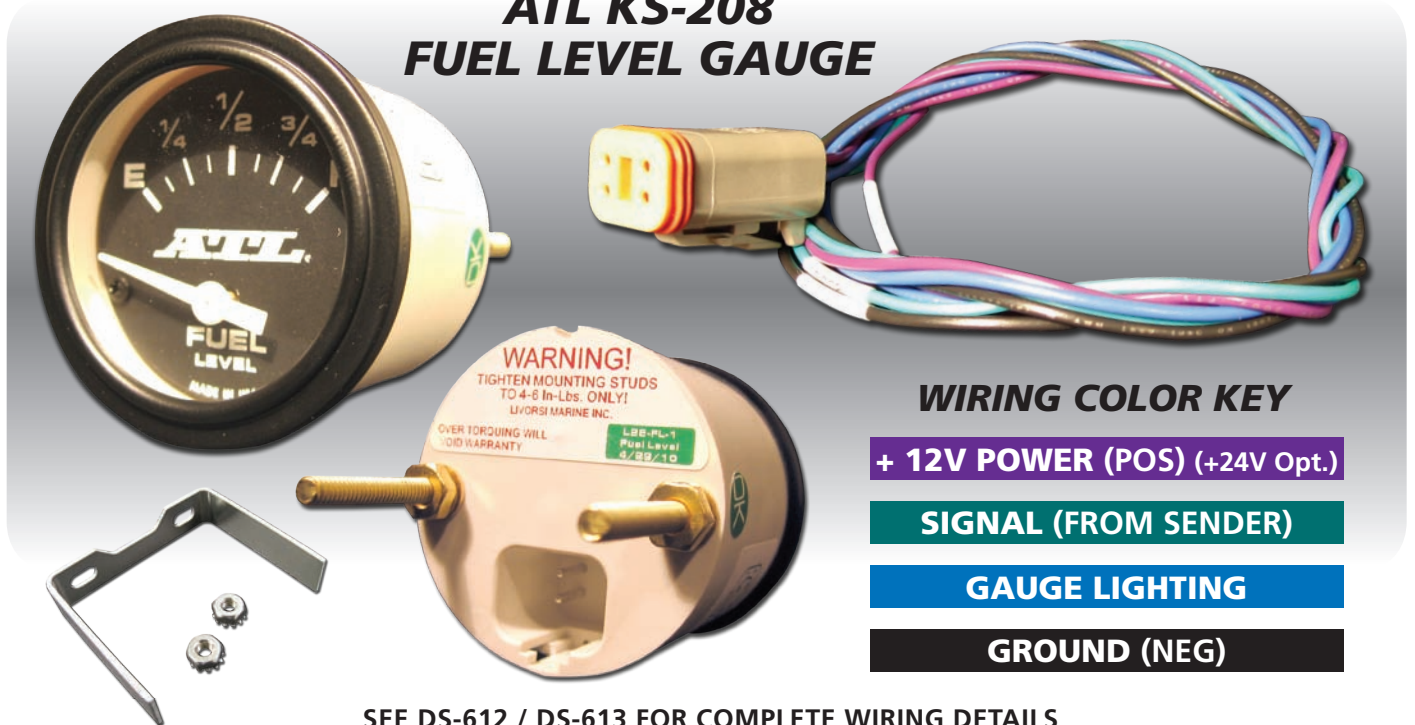
► Autocal Calibrations

Empty: After shortening the sender and with sender out of the tank, connect the sender to the system wiring and turn on the power. The gauge needle should swing between Empty and Full a couple of times and return to Empty as the sender discovers its shorter length.

Full: Turn OFF the power and install the sender into a full tank of the appropriate fuel. Turn ON the power. The reading should go above Full and then finish on Full. This Autocal feature will reset full after at each fill up.

Note: For the Full Detection feature to work properly, sender must be installed in a full tank or test rig, otherwise only an estimated fuel level will be displayed on the gauge until the tank is filled completely.

ATL KS-208 FUEL LEVEL GAUGE



WIRING COLOR KEY

+ 12V POWER (POS) (+24V Opt.)

SIGNAL (FROM SENDER)

GAUGE LIGHTING

GROUND (NEG)

SEE DS-612 / DS-613 FOR COMPLETE WIRING DETAILS

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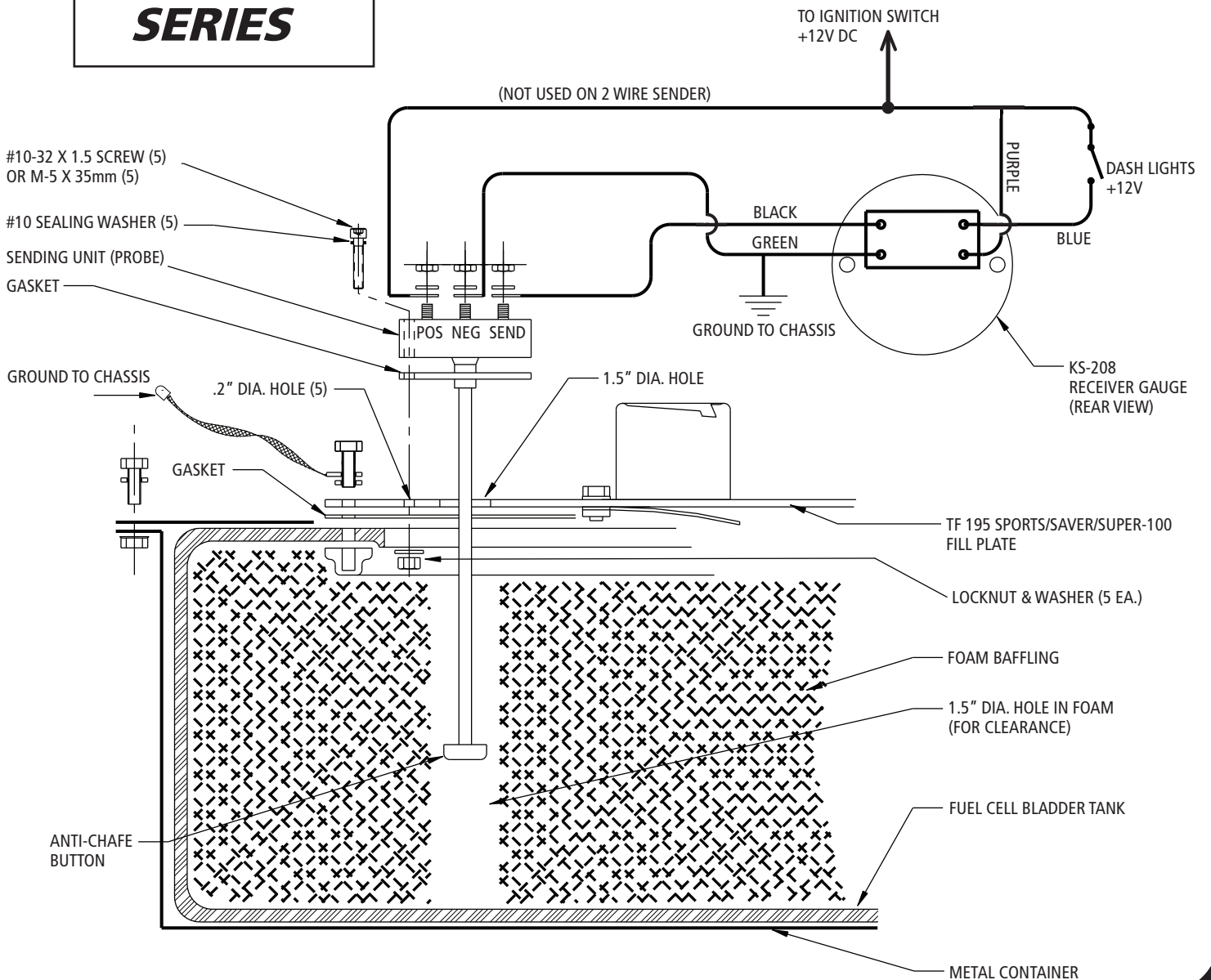
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ATL FUEL CELL LEVEL GAUGE KIT TYPICAL INSTALLATION DIAGRAM FOR CAPACITANCE - TYPE SENDERS

ATL KS-300 SERIES



**FOR USE WITH DIESEL & GASOLINE
CONTAINING UP TO 10% ETHANOL**

****REPLACES DS-448**

ATL
**DS-612
10x10**