

FFDIFF differential fuel flow adapter

version 5
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The FDIFF adapter makes life simpler and cheaper when interfacing engines with fuel/vapor return lines (eg Rotax 912/914) to engine monitoring equipment (fuel flow meters, engine monitors, EFIS systems).

This normally requires additional hardware (a second flow sensor and an extra RDAC). It also means some of the integrated engine monitoring units with a single flow sensor input are not able to be used.

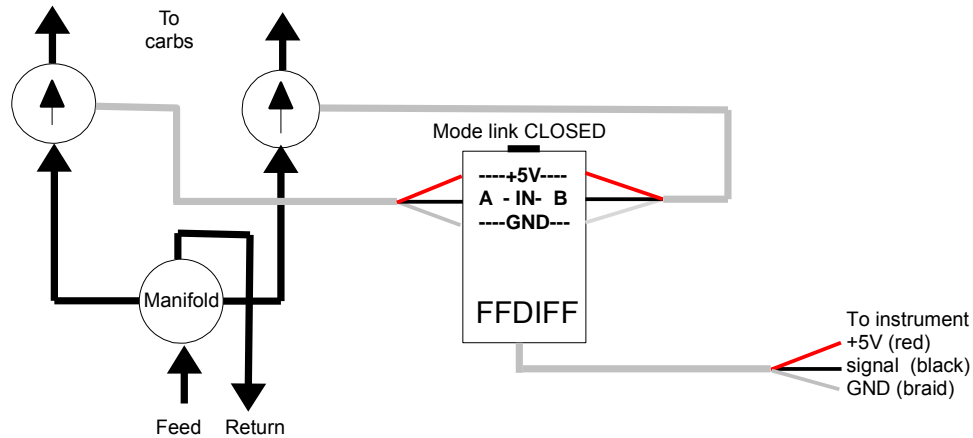
The FDIFF solves those problems. It connects between the two flow sensors and the engine monitoring equipment and behaves like a single fuel flow sensor, outputting the true fuel flow. Easy to install, the compact unit can be placed in your engine bay or behind the panel.

Modes of operation

The FDIFF can operate in two modes- SUM or DIFFerence mode.

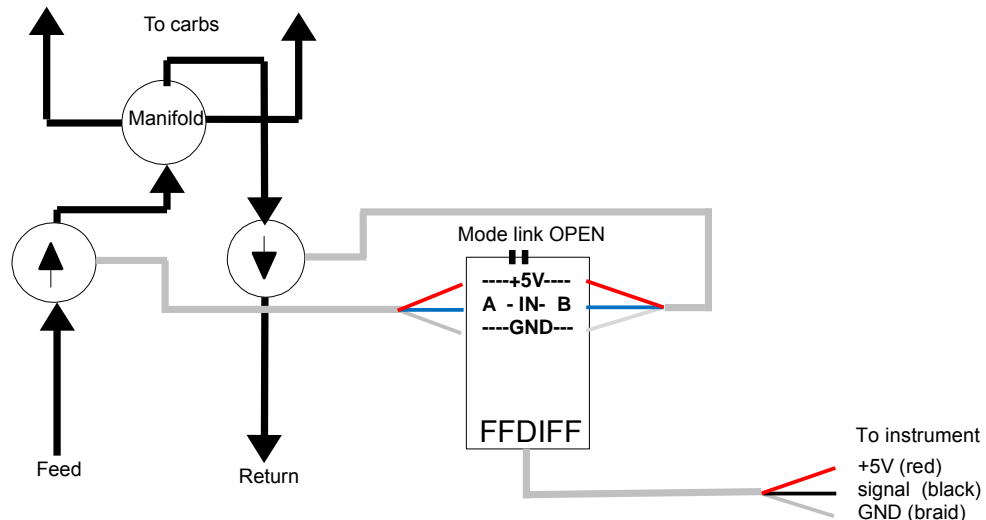
SUM (A+B) mode

- suitable for dual carb engines with accessible fuel hose feeds to each carb
- the fuel flow sensors are fitted in the feed to each carb
- the FDIFF outputs the sum (**A+B**) of the two fuel flows
- this is the recommended installation, as both flow sensors are working at similar flow rates
- SUM mode is selected by leaving the mode link closed



DIFF (A-B) mode

- suitable for single or dual carb engines where the main and return lines are more accessible
- the fuel flow sensors are fitted in the main and return lines
- the FDIFF outputs the difference (**A-B**) of the two fuel flows
- this may be less accurate as the return flow sensor operates at a lower flow rate than the main line
- DIFF mode is selected by opening the mode link (cut wire loop)



Notes

- Observe normal installation and orientation rules for flow sensors to minimize pulsed flow, air entrainment, and turbine friction.
- Both flow sensors must be fitted with the same jet (same K factor).
- Set the instrument K factor to match the sensors.

Specifications

- Size: 40mm x 20mm x 20mm
- Weight: approx 50gm
- Power: +5VDC nominal (2V min to 5.5V max), 350uA plus sensor current draw
- Sensor interfaces: screw terminal +5VDC, signal, GND
- Instrument interface: flying lead +5VDC (red), signal (white), GND (braid)
- Max pulse rate: ~250Hz (150 l/hr for K factor of 6000)

Installation examples

MGL flow sensor and Stratomaster RDAC

