



FloTrac

Diesel Fuel Flow Monitoring Systems

FloTrac is the latest addition to FloScan's fuel flow line of digital instruments for diesel engines rated from 30 – 5000 kW.

In areas where EPA air quality regulations apply, FloTrac addresses the need for accurate flow measurement to determine baselines for NOx emission reporting.

FloTrac can also point out poor engine performance (poor injection, failed turbo's, etc.) as well as possible fuel pilferage. Discrepancies between tank fill-up records and the totalizer reading will identify this problem immediately.

FloTrac can also be used for fuel billing purposes by monitoring precise fuel consumption per job or contract.



FloTrac Model Features:

- Instantaneous net fuel burn rate.
- Cumulative (non-resettable) fuel totalizer.
- Resettable fuel totalizer.
- Engine hour meter.
- Pulse and analog (0-5V / 0-10V / 4-20mA) signal outputs available for logging net fuel consumption totals.
- (+/-) 2% accuracy on generator applications.
- Models available in U.S. gallons or liters.



Uses include:

- Provides accurate fuel usage data for determining NOx emissions.
- Identifies poor engine performance with increases in normal fuel consumption.
- Possible fuel pilferage can be identified immediately by comparing fill-up records with totalizer reading.
- Provides accurate fuel usage data for billing purposes.
- Cumulative fuel totalizer can be used for determining engine service intervals.
- Pinpoints optimal engine speed under any load or operating condition.

Principal of Operation:

Most diesel engine fuel systems employ forward and return fuel flow lines. The return flow amount must be measured and subtracted from the forward flow amount to determine net consumption. The amount of return flow varies by engine type – from as little as 10% of net fuel consumption to as much as 1000% or more... necessitating very tight margins for error when measuring flows and calculating the difference. With regard to engines that use the return flow to cool the injectors (i.e., Detroit Diesel and CAT 3500 Series), the return flow temperature is substantially higher than the forward flow – leading to the possibility of error in measurement caused by the expansion of fuel due to high heat. FloScan has designed special temperature-compensated systems to accurately measure and account for these inconsistencies. Each pair of FloScan flow sensors (forward and return) is individually calibrated and matched to the microprocessor-driven instrument head.



Series K

Flow Diagrams for Diesel Engines

