Technical
Information
TI 900/e/11.05

FUEL FLOW METER
AIC - 904 / 908 Veritas

Diesel consumption flow meter for engines up to 515 KW (700 HP) Permanent mounting system, ideal for fleet management systems

888 Instruktor

900 Veritas

1000

4000 Veritas

5000 Fuel flow Master

6000 Swissline

FS

Board Computer and Totalizer

The AIC-900 VERITAS flow meter has been designed for a permanent mounting for the fleet management whereas the cumulated values can be monitored.
Made for pulsating liquids, the true consumption of the vehicle engine is measured by switching the return flow from the tank, directly to the fuel supply line.

Application
- Medium and large trucks, buses, building machines, tractors, etc.

Media that can be measured
- any fuel oil, incl. any bio-fuel oil.

Features and benefits
- **Up to 15 % of fuel economy,** through a constant control of the driver
- Reliable display of flow totalising
- Instrument protected via in-line fuel filter
- Mechanical meter of proven technology since more than 20 years
- No interferences with vehicle existing on-board electronic (CAN-Bus)
- AIC flow meters works on all fuel injection type (except systems with open injectors)
- Suitable for engines with fuel injection of latest generation

CE certified
EME Test according
to 95/54/CE directives

AIC SYSTEMS AG
Switzerland
Automotive Information and Control Systems

Measuring Systems

A complete measuring systems consist of :

- flow meter AIC-904 or 908
- fuel oil filter (included)
- totalizer
- cables for electrical connection (included)
- couplings for installation

Fuel Oil meter AIC-904
AIC Ref. S904.00
+
filter heater (optional)
AIC ref. 1480.0

Fuel Oil meter AIC-908
AIC Ref. S908.00

Measuring principle

Each unit is produced as one module in the interests of simple installation. All holders and housing parts are made of stainless steel or anodized aluminium.

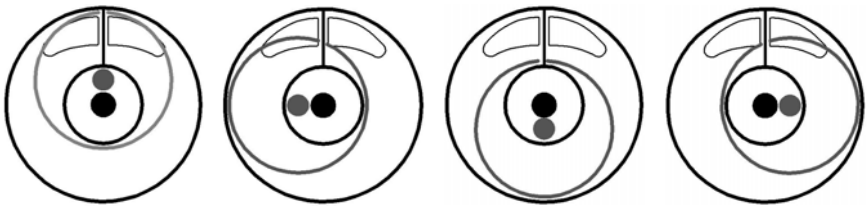
Fuel flow measurement:
The consumption of fuel for engines can be measured by 2 ways :

- Direct (means that there is no fuel returning to the tank, the return flow is reinjected in the fuel circulation flow of the injection circuit.
- Differential (means that the supply and return flow are subtracted. The return fuel flow goes back in the tank.

AIC SYSTEMS Ltd. has strongly developed the best measuring solution : the **DIRECT flow** measurement. This solution allows a true measurement of the fuel flow, within a uncertainty better than +/- 1 % (+/- 0.2 % repeatability). The differential fuel flow allows only an accuracy of best 5 % or worse.

High pulse rate output:
The control and pulse technology is based on the latest SMD technology and is moulded to be water tight and vibration resistant (Pat. AIC). This allows high pulse count per flow quantity unit. The AIC-904 VERITAS is supplied with 200 ppl, and the AIC-908 VERITAS is supplied or 80 ppl (pulses per one litre).

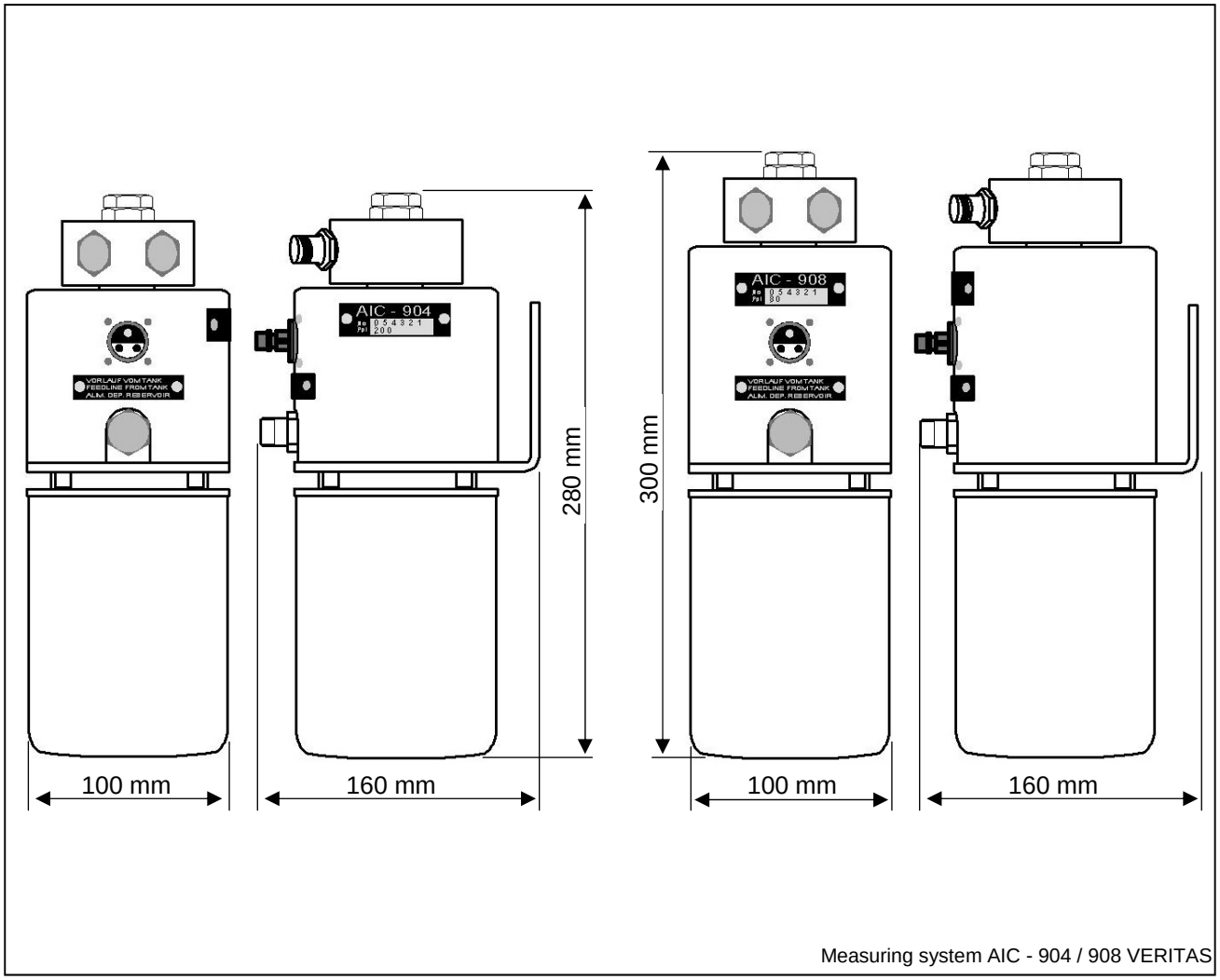
Rotary piston technology:
After decades of experience, AIC SYSTEMS Ltd. make his choice for the most reliable volumetric flow meter technology existing, with the less weir and moving parts.
The rotary piston technology fits the fuel consumption measuring principle perfectly, a single moving piston oscillates softly in a measuring chamber protected by a thin layer of fuel maintaining the piston self floating. This allows the meter to have the less possible mechanical friction. Under normal working conditions the pressure loss ahead of the meter is of max. 100 mbar.



Calibration

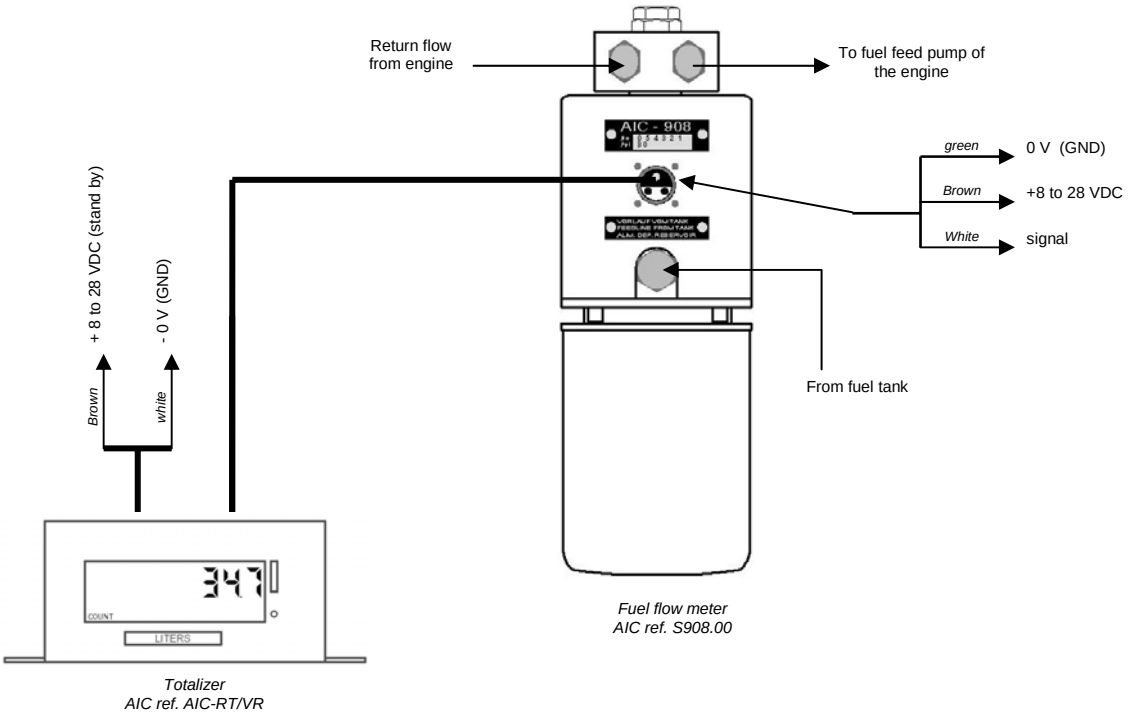
Each flow meter unit, is subject to careful calibration at the factory. Customer calibration can also be saved on simple demand.

Dimensions



Measuring system AIC - 904 / 908 VERITAS

Installation



Fuel flow meter
AIC ref. S908.00

Totalizer
AIC ref. AIC-RT/VR

Technical data

AIC 904 et 908 VERITAS

General data

Manufacturer	AIC SYSTEMS S.A.
Product designation	AIC-904 Veritas AIC-908 Veritas

Mechanical data

Dimensions (L x l x p)	AIC-904 280 x 100 x 160 mm (incl. filter) AIC-908 300 x 100 x 160 mm (incl. filter)
Weights	AIC-904 2,5 kg (incl. filter) AIC-908 2,8 kg (incl. filter)

Materials

Flow meter sensor	Brass, aluminium
O-rings	Viton®
Connectors	Steel protection TAAC3, stainless steel, anodised aluminium
Casing	Anodised Aluminium
Mounting bracket	Stainless steel

Flow meter

Measurement Principle	Volumetric, oscillating piston, with microprocessor controlled pulse emitter (Pat. AIC)
Measuring range	AIC-904 : 1 to 80 l/h AIC-908 : 4 to 200 l/h
Accuracy	better than 1 % of reading
Repeatability	better than 0.2 % of reading
Admissible pressure	- 1 to 10 bar
Mounting position	indifferent
Operating temperature	-30 ... 90°C
Ingress protection	Sensor and electronic, IP 68

Electrical connection

Power supply	8 - 28 VDC
Pulse signal	rectangular, duty cycle 50%
Pulse rate	AIC-904 : 200 ppl AIC-908 : 80 ppl

Ordering structure

Flow meter

Model Type	Designation	Order code
AIC-904 VERITAS	for engines up to max. 220 KW (300 HP) 200 ppl, pulse rectangular, duty cycle 50% (10 m connection cable delivered with)	S904.00
AIC-904 VERITAS	for engines up to max. 515 KW (700 HP) 200 ppl, pulse rectangular, duty cycle 50% (10 m connection cable delivered with)	S908.00

Accessories

Connection kit	Universal connection kit CS-1, includes various connection fitting (metric), fuel hose not included	S1450.1
Connection kit	Connection kit for MB Actros	S1456.0
Fuel hose	Fuel hose unipress 9.5 x 18 mm, NBR reinforced (not for Bio-diesel purposes)	S1440.0
Connection cable	Cable connecting the fuel oil meter to the BC 2022	
	15 m instead of 10 m	5615.01
	18 m instead of 10 m	5618.01
	24 m instead of 10 m	5624.01

Board computer

Totalizes		References
AIC-RT/VR	without zero resetting	1550.0
AIC-RT/VR/R	with zero resetting by push button	1550.1
AIC-RT/VR/KS	with zero resetting by key switch	1570.0
	LCD display 8 digits, totalizing up to 99 999 999, programmable. Display in litres, US Gal. or Imp. Gal. Body made in stainless steel, dimensions 75 x 60 x 38 mm	

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