

Fuel Flow Meter AIC - 4004/4008 VERITAS

- Diesel consumption flow meter for engines up to 662 KW (900 HP)
- Permanent mounting system
- Ideal for fleet management applications



The AIC-4000 VERITAS flow meter has been designed for a permanent mount and for the fleet management whereas the instantaneous, average and 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.

Applications:

- Small, medium and large trucks
- Buses
- Construction, demolition machines
- Agriculture machines
- Boats
- Railway

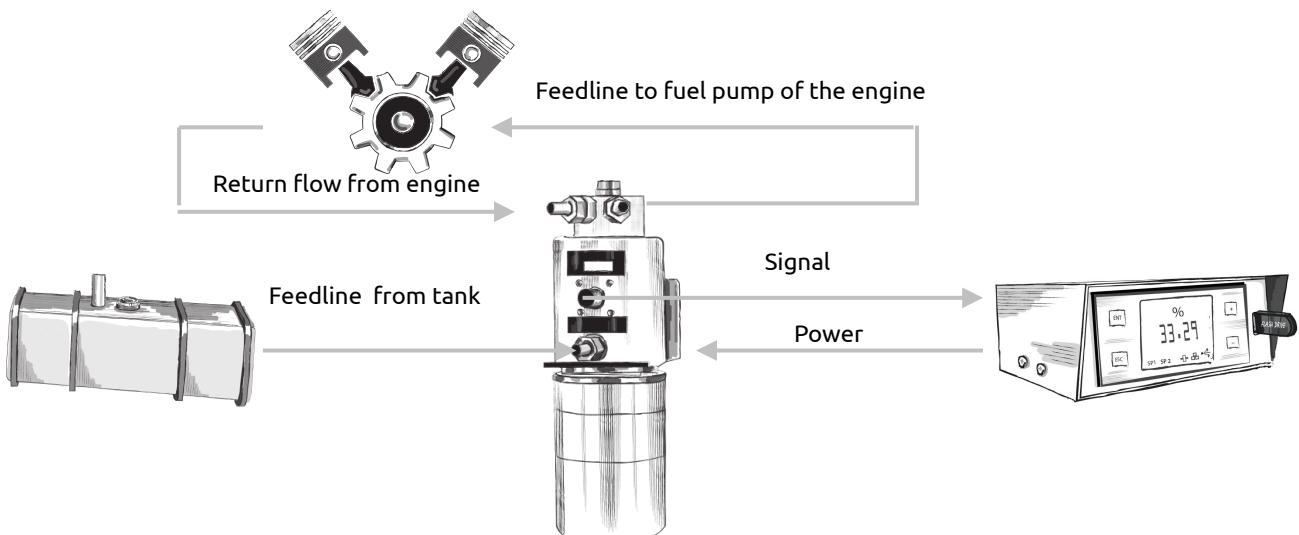
Media that can be measured:

- any fuel oil

Features and benefits:

- Up to 15 % of fuel economy, through a constant control of the driver
- Reliable instantaneous consumption display and flow totalisation
- Average fuel consumption visualisation with 3 digits after coma
- Instrument protected via in-line fuel filter
- Mechanical meter of proven technology since more than 30 years
- No interferences with vehicle existing on-board electronic (CAN-Bus)
- AIC flow meters work on all fuel injection types including engines with fuel injection of latest generations

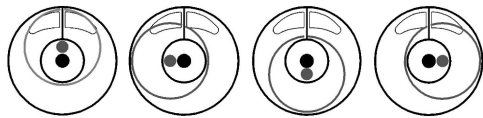
System Setup



Technology

Rotary piston technology

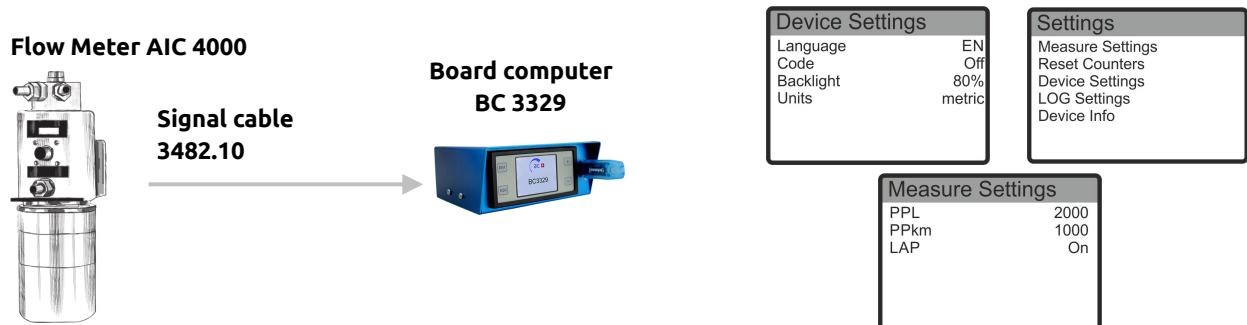
After decades of experience, AIC SYSTEMS Ltd. has opted for the reliable volumetric flow meter technology. The rotary piston technology fits the fuel consumption measuring principle ideally. A single moving piston oscillates softly in a measuring chamber protected by a thin layer of fuel maintaining the piston self floating. This allows the meter to have the less possible mechanical friction, thus reduced wear. Under normal working conditions the line pressure loss ahead of the measuring cell is of max. 100 mbar.



Direct measuring principle

With the Direct Measurement principle, the installation of only one AIC Fuel Flowmeter is required. The fresh and cool fuel consumed is aspirated from the tank and its volume measured by the AIC fuel Flowmeter before arriving in the AIC vortex head. In the Vortex head, the fresh fuel from the tank is mixed with the fuel returning from the engine. From the AIC Vortex head, the fuel is forwarded to the engine. With this solution no fuel is returning back to the tank and the fuel passing through the AIC Volumetric measuring chamber represents precisely the real engine consumption. The great benefit is that an AIC fuel consumption measuring system is ready to use right after installation.

Typical AIC 4000 VERITAS Installation



Board Computer BC3329

The Board Computer BC3329 Display has input for Flow and Speed sensors. All measured values can be easily seen and written off the large display.

The Board Computer BC3329 LOG has in addition the manual input for a lap routine. With the LOG version all values are logged on the USB stick in CSV format for a better evaluation and further processing.

- View instantaneous fuel consumption
- Average fuel consumption (3 decimals)
- Fuel consumption accumulation
- Lap routine for later calculations of the individual lap characteristic
- Reading in Metric or US unit
- Easy control with start, stop logs and reset functions
- All settings are stored and will not be lost in the event of power failure
- Languages: English, German, French, Spanish and Portuguese

Type: BC3329										
Seq#:	131									
FW Ver:	8.5									
PPk:	2000									
PPkm:	175									
Date:	Time:	current Consumption:	Temperature:	total Consumption:	O Consumption:	Speed:	O Speed:	ODO:		
22.5.19	07:57:09	148.6 l/h	40.5 °C	25033.7 l	148.6 l/h	2 km/h	1.7 km/h	11234 km		
22.5.19	07:57:11	149.2 l/h	40.6 °C	25033.7 l	148.6 l/h	2 km/h	1.7 km/h	11234 km		
22.5.19	07:57:13	148 l/h	40.6 °C	25033.8 l	148.6 l/h	3 km/h	1.7 km/h	11234 km		
22.5.19	07:57:15	148.5 l/h	40.5 °C	25033.9 l	148.6 l/h	4 km/h	1.7 km/h	11234 km		
22.5.19	07:57:17	148 l/h	40.5 °C	25034 l	148.6 l/h	6 km/h	1.7 km/h	11234 km		
22.5.19	07:57:19	148.1 l/h	40.5 °C	25034.1 l	148.6 l/h	8 km/h	1.7 km/h	11234 km		
22.5.19	07:57:21	147.9 l/h	40.5 °C	25034.2 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:23	145.9 l/h	40.5 °C	25034.2 l	148.6 l/h	12 km/h	1.7 km/h	11234 km		
22.5.19	07:57:27	145.9 l/h	40.5 °C	25034.3 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:29	149.9 l/h	40.5 °C	25034.5 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:31	147.6 l/h	40.5 °C	25034.6 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:33	150.2 l/h	40.3 °C	25034.7 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:35	148.5 l/h	40.3 °C	25034.7 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:37	147.8 l/h	40.4 °C	25034.8 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:39	146.6 l/h	40.4 °C	25034.9 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:41	148 l/h	40.4 °C	25035 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		
22.5.19	07:57:43	145.2 l/h	40.4 °C	25035.1 l	148.6 l/h	10 km/h	1.7 km/h	11234 km		

Technical data

AIC 4004 and 4008 VERITAS ©

General Data

Manufacturer	AIC SYSTEMS AG
Product designation	AIC 4004 VERITAS©
	AIC 4008 VERITAS/ AIC 4008s VERITAS©

Mechanical Data

Dimensions (L x l x p)	AIC 4004 VERITAS
	280 x 94 x 126 mm / 11 x 3.7 x 4.9 " (incl.filter)
	AIC 4008 VERITAS/ AIC 4008s VERITAS
	300 x 94 x 126 mm / 11.8 x 3.7 x 4.9 "(incl.filter)
Weights	AIC 4004 VERITAS
	ca. 2.5 kg / 5.5 lb (incl.filter)
	AIC 4008 VERITAS / AIC 4008s VERITAS
	ca. 2.8 kg / 6.1 lb (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

Flowmeter

Measurement principle	Volumetric, oscillating piston, with microprocessor controlled pulse emitter (Pat.AIC)
Measuring range	AIC 4004: 1 to 80 l/h
	AIC 4008: 4 to 200 l/h
	AIC 4008s: 4 to 240 l/h
Accuracy	Better than 1% of reading
Repeatability	Better than 0.2 % of reading
Admissible pressure	-1 to 6 bar
Mounting position	Vertical
Operating temperature	-30.....90 C°
Ingress protection	Sensor and electronic, IP 67

Electrical connection

Power supply	8 - 28 VDC
Pulse signal	Rectangular NPN, open collector, pulse width 0,7 ms
Pulse rate	AIC 4004: 2000 ppl
	AIC 4008/AIC 4008s: 804 ppl

Ordering structure

Model Type	Designation	Order code
Flow Meter		
AIC-4004 VERITAS	for engines up to max. 220 KW (300 HP) 2000 ppl	s4004.00
AIC-4008 VERITAS	for engines up to max. 515 KW (700 HP) 804 ppl	s4008.00
AIC-4008 S VERITAS	for engines up to max. 662 KW (900 HP) 804 ppl	s4008S.00
Accessories		
Connector kits		
	Connector kit 11 pcs small	s1450.0
	Connector kit 22 pcs standard delivered in plastic bag	s1450.1
Vortex XL	Vortex XL head for 904, 908 (high fuel pump flow)	450 069
Signal cables		
	Signal cable 10m (from AIC 800, 900, 4000 to BC 3329)	3482.10
	Signal cable 10m 1 end free	5620.10
BC 3329		
BC 3329 LOG	Bord Computer BC 3329 LOG for 20-28V DC No USB stick incl	3329.03
	Bord Computer BC 3329 LOG for 09-12V DC No USB stick incl	3329.04
BC 3329 Display	Bord Computer BC 3329 Display for 20-28V DC	3329.05
	Bord Computer BC 3329 Display for 09-12V DC	3329.06

All informations are subject to change.



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