Fuel Flow Meter
AIC - 4000 NEMO

- **Accuracy better than 0.5 %**
- Diesel, Gasoline, Bio-fuel, Light oil, Alcohol fuels consumption flow meter 4000 KW (5400 HP)
- Permanent mounting system
- Ideal for fleet management applications
- PT 1000 temperature probe for fuel consumption in volume and mass flow as well as CO2 exhaustion

NEMO
New Environmental Mastering Option

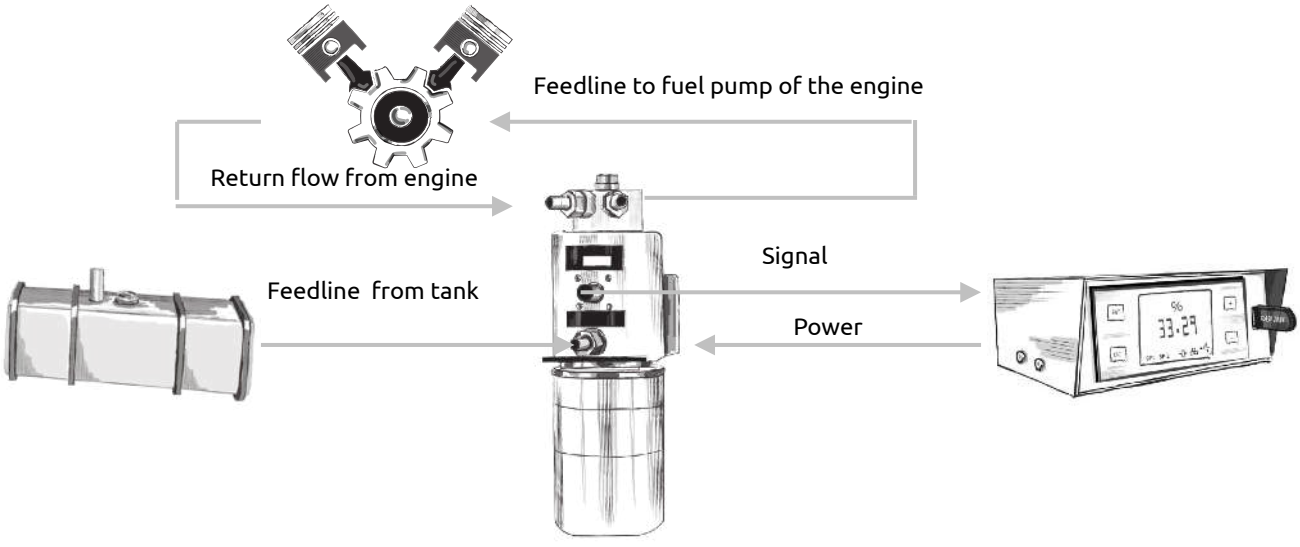
Made for pulsating liquids, the true consumption of the vehicle engine is measured by switching the return flow from the tank directly to the fuel supply line.

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 for more than 40 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

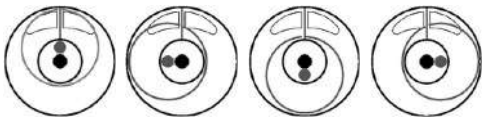
System Setup



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.



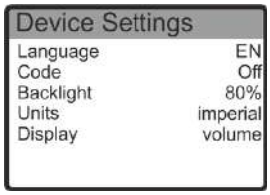
Direct measuring principle

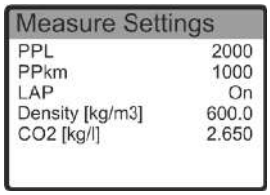
With the Direct Measurement principle, the installation of only one AIC Fuel Flowmeter is required.
The fresh and cool fuel consumed is aspirated from the tank and its volume measured by the AIC fuel Flowmeter before arriving in the AIC vortex head. In the Vortex head, the fresh fuel from the tank is 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.

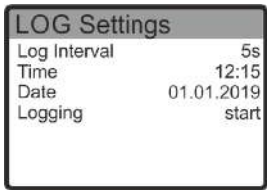
Typical AIC 4000 Installation

Flow Meter AIC 4000

Board computer BC 3329







Board Computer BC3329

- 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

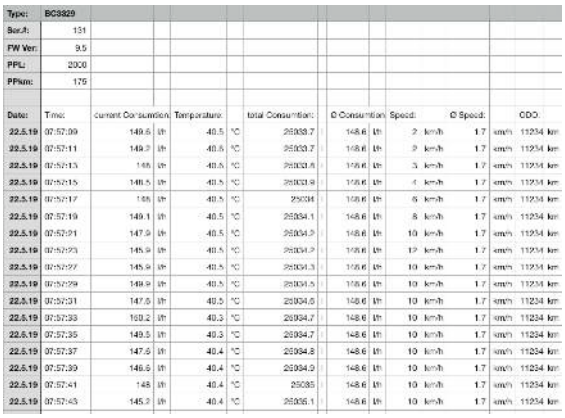
NEMO option:

- Improved fluid management implemented
- Instantaneous mass flow indication in kg or lbs
- Indicating the real time CO_2 exhaustion

For the temperature compensation the measuring cell is upgraded with an PT 1000 high sensitive temperature probe

The masse calculation is based upon the the manually density input (according to DIN 51757 regulation).

All data are available in the log file



Typ:	BC3829											
Ser.#:	131											
FW Ver:	9.5											
PPL:	2000											
PPkm:	176											
Date:	Time:	current Consumption:		Temperature:		total Consumption:	Ø Consumption:		Speed:		Ø Speed:		ODO:	
22.5.19	07:57:09	149.6	l/h	40.5	°C	25933.7	148.6	l/h	2	km/h	1.7	km/h	11234	km
22.5.19	07:57:11	149.2	l/h	40.5	°C	25933.7	148.6	l/h	2	km/h	1.7	km/h	11234	km
22.5.19	07:57:13	148	l/h	40.5	°C	25933.8	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	25933.8	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	25934	148.6	l/h	6	km/h	1.7	km/h	11234	km
22.5.19	07:57:19	149.1	l/h	40.5	°C	25934.1	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	25934.3	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	25934.3	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	25934.3	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	25934.5	148.6	l/h	10	km/h	1.7	km/h	11234	km
22.5.19	07:57:31	147.5	l/h	40.5	°C	25934.6	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	25934.7	148.6	l/h	10	km/h	1.7	km/h	11234	km
22.5.19	07:57:35	149.5	l/h	40.3	°C	25934.7	148.6	l/h	10	km/h	1.7	km/h	11234	km
22.5.19	07:57:37	147.6	l/h	40.4	°C	25934.8	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	25934.9	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	25935	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	25935.1	148.6	l/h	10	km/h	1.7	km/h	11234	km

Technical data

AIC 4004 / 4008 / 4008s / 4015 / 4020

Model		**4004**	**4008**	**4008s**	**4015**	**4020**
Measuring range	l/h (gph)	1 …80 (0.26 … 21)	4…200 (1.05 …. 53)	4…240 (1.05 …. 63)	10 …600 (2.6 … 159)	30…1500 (7.9 …. 396)
App.starting flow rate	l/h (gph)	0.25 (0)	1 (0.26)		4 (1.05)	12 (3.2)
Max. permissible error of actual value		< ±0.5 %				
Repeatability		Better than 0.2 % of reading				
Admissible pressure	bar/psi	-1 to 6 / -14 to 87			-1 to 16 / -14 to 232	
Operating temperature	C°/F°	-30 … 100 / -22 … 212				
Ingress protection		Sensor and electronic, IP 64				
Power supply		8 - 28 VDC				
Pulse signal		NPN open -collector; square 0.7 ms pulse width				
Dimensions (incl.filter)	mm inch	280 x 94 x 126 11 x 3.7 x 4.9 "	300 x 94 x 126 11.8 x 3.7 x 4.9 "		425 x 190 x 140 16.7 x 7.5 x 5.5	
Weight (incl.filter)	Kg lb	2.5 5.5	2.8 6.1		7.8 15.4	8.2 17.6

All informations are subject to change.

www.flowmeter-aic.com

AIC SYSTEMS AG
Ringstrasse 9
4123 Allschwil
Switzerland
info@flowmeter-aic.com