

Bankisa Controls ECM-Series Engine Consumption Manifold

Fuel consumption of an internal combustion engine requires the measurement of supply and return flow, along with the temperature of each line. Often, the supply and return fuel flow temperatures are different due to the temperature difference between fuel supply tank and running temperature of the engine. This difference in temperature can contribute considerably to the errors attained in your fuel consumption figures.

With the aid of a consumption flow computer, a more accurate measurement can be calculated using the thermal coefficient of expansion for the process fluid, and based on the flow rates and temperature difference between the supply and return lines.

A typical system will require hard plumbing of meters and valves, along with fittings to allow the meter to be removed from the line. These systems can be quite cumbersome to assemble, deliver and install.

BanksiaControls **ECM-Series** Engine Consumption Manifolds have been developed to simplify the installation of such systems by combining flowmeter, strainer, temperature probe and isolate, and divert valves onto the one, easy to mount, engine consumption manifold.

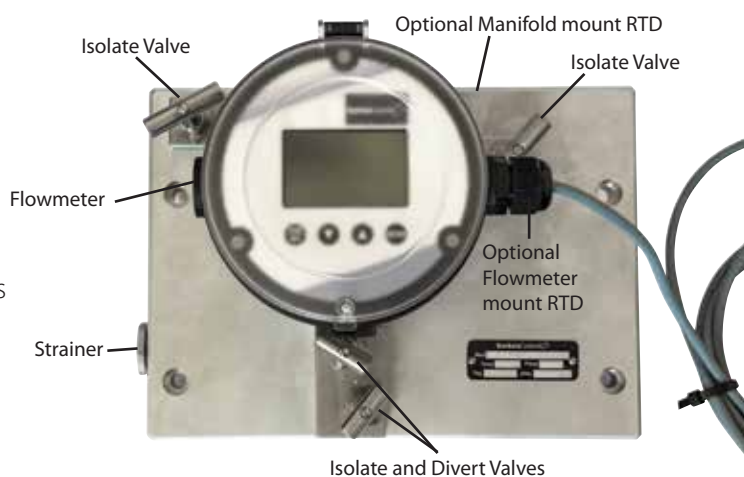
Features | Benefits

- Compact size for “fit anywhere” installations
- Integration of flowmeter, strainer, temp sensor, as well as, isolation and diverter valves
- Wide range of flowmeters can be used with the manifold with flow ranges as below:
 - 0.5 to 36 LPH
 - 2 to 100 LPH
 - 15 to 550 LPH
 - 1 to 40 LPM
- Separate manifold used for supply and return fuel lines so they can be mounted independently.
- Flexibility of design. If you need something we don't have, it is likely we can add it onto the manifold. i.e.:
 - integrated pulsation dampener
 - integrated air eliminator
 - non return valve
 - pressure gauge or transmitter/s
- Reduced risk of leakage due to manifold design

- Easy to maintain with all parts removable/replaceable without the need to break open pipework
- Easy to change flowmeter with one of a different range, without the need to remove the manifold from the line.
- Can be used with other flowmeters by way of adaptor plates and alterations to the manifold design.
- Cost effective solution



A typical fuel consumption setup.



Model Coding

Model	Flow Range
ECM004	Engine Consumption Manifold fitted with flowmeter of 0.5 to 36 LPH flow range
ECM006	Engine Consumption Manifold fitted with flowmeter of 2 to 100 LPH flow range
ECM008	Engine Consumption Manifold fitted with flowmeter of 15 to 550 LPH flow range
ECM008	Engine Consumption Manifold fitted with flowmeter of 15 to 550 LPH flow range
ECM0XX	Engine Consumption Manifold with no flowmeter fitted

Manifold/Flowmeter Body/Rotor/Bearing			
A	X	X	Aluminium Manifold only, no flowmeter
A	0	0	Aluminium/Aluminium/PPS/No Bearing
S	X	X	Stainless Steel Manifold only, no flowmeter
S	0	0	Stainless Steel/Stainless Steel/PPS/No Bearing
S	5	1	Stainless Steel/Stainless Steel/Stainless Steel/Carbon Ceramic

O-Ring Materials	
1	Viton (-15C min.)
3	Teflon Encapsulated Silicone (-40 to 120C)
4	Nitrile (-40C min)

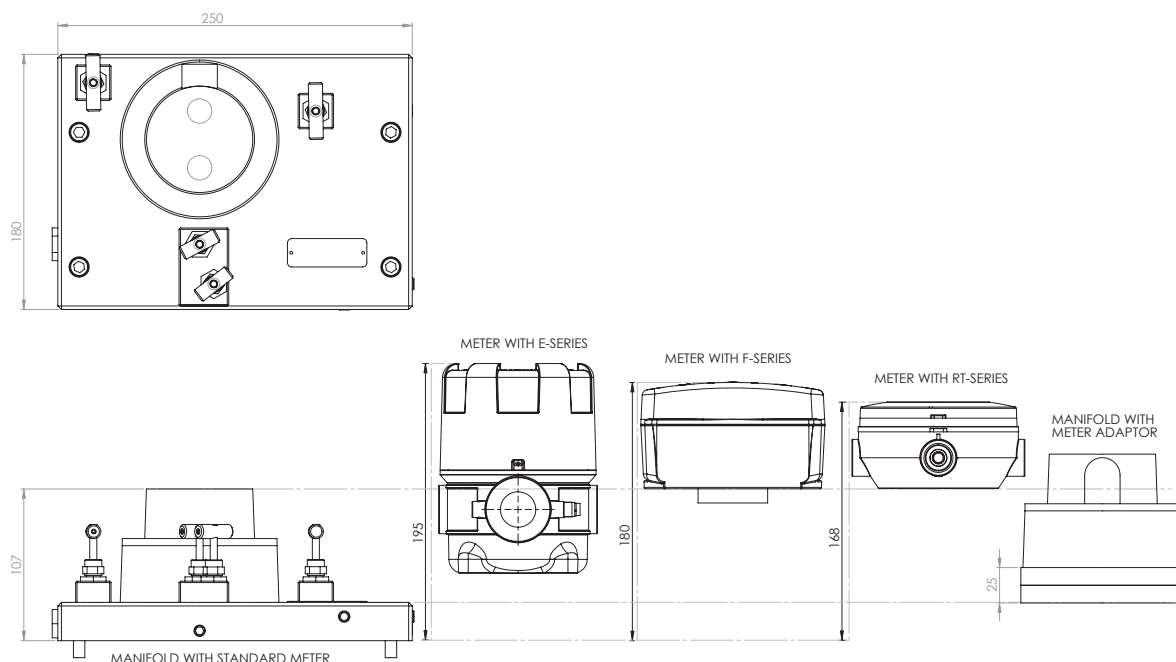
Temperature/Process Connection		
-	2	B 120C max. /3/8" NPT Female Process Connections
-	8	B 80C max. for integral electronics/3/8" NPT Female Process Connections

Integral Options	
0	Flowmeter with Hall Sensor and Reed, Manifold Mt RTD port, no temp probe
1	Flowmeter with Integral Pt100 RTD, Hall and Reed
2	Integral Rate Totaliser, Hall and Reed, Manifold Mt RTD port, no temp probe
3	Integral Rate Totaliser, Flowmeter with Pt100 RTD, Hall and Reed
4	Integral Consumption Computer, Flowmeter with Pt100, Hall and Reed
5	Flowmeter with Hall and Reed, Manifold Mt RTD, with temp probe
6	Integral Rate Totaliser, Hall and Reed, Manifold Mt RTD, with temp probe
7	Integral Consumption Computer, Manifold Mt RTD, with temp probe
8	No flowmeter, No Temp probe
9	No Flowmeter, with temp probe

Model Number Examples

ECM006 A 0 0 1 - 8 B 3
 Banksia Controls Engine Consumption Manifold with Integral Temp Option, 2 to 100LPH flow range, Aluminium body, PPS rotors, no bearings, Viton O-Ring, 80C Max temp, for Manifold Mount, with Integral Rate Totaliser, Pt100 RTD, Hall and Reed Switch

Overall Dimensions:



Part No. BCSXECM0517