

ECM baroCAN Ambient, Intake Air, and Cabin Air Module

• Humidity • %O₂ • Dew Point • Temperature • Pressure



The performance of all air-breathing engines is highly dependant on intake air conditions. Engine testing and calibration that ignores intake air conditions will be biased by the ambient conditions of that particular day of testing. This is most evident with on-the-road testing where ambient conditions cannot be controlled and are most extreme. As a result, the test results or calibration will have a random effect due to weather, and sub-optimal emissions and fuel economy may result. As emissions and fuel economy regulations get more severe, this randomness in test and calibration quality cannot be tolerated. ECM's baroCAN module is a compact and rugged measurement system that provides all the important air conditions: humidity, %O₂, dew point, water vapor pressure, temperature, and absolute pressure. These parameters are available in all known units via CAN communication. By including these parameters in the test data set, correction of the test data and modification of the calibration can be performed resulting in better optimized engine operation. baroCAN's sensors can be easily mounted in a variety of locations and contain calibration memory chips. PC software to set-up CAN communication, view and log data, and calibrate the sensors is included. An optional remote display is available (dashCAN). Although primarily intended for intake air use, baroCAN can be used for ambient air and cabin air applications in single and multi-module arrangements.

Specifications

Inputs	1 RH & Temperature Sensor 1 Pressure Sensor			
Ranges	RH	0 to 100%	Dew Point	0 to 125°C
	Temperature	-40 to 125°C	%O₂	0 to 20.946%
	Pressure	70 to 140 kPa Absolute		
Accuracies	RH	±2%	Dew Point	±0.88°C
	Temperature	±0.3°C	%O₂	±0.02%
	Pressure	±0.2 kPa		
Response Time	1 sec (RH, Temperature, Dew Point, %O ₂), 25 msec (Pressure)			
CAN	High Speed according to ISO 11898			
Configuration	Via CAN Bus with Configuration Software. Programmable Node ID.			
Size & Weight	145mm x 120mm x 40mm (4.75" x 1.5" x 5.75"), 234 gm (8.25 oz)			
Environmental	IP67, -55 to +125°C, 100% humidity, environmentally sealed			
Sensor Cables	0.6m (sensor), 1m (standard extension), 2m (optional extension)			
Power	6 to 32 VDC, (optional AC/DC supply available)			
Sensor Mounting	1/4" NPT/ISO (RH & Temperature) 1/4" NPT/ISO (Pressure)			

Ordering Information

baroCAN-USA Kit	Includes: module, all sensors, cables.
baroCAN-MET Kit	Includes: module, all sensors, cables. Metric.

P/N 10-32	Optional 2m Extension Cable
P/N 04-01	Optional AC/DC Power Supply
P/N 01-04	Optional dashCAN Display



ECM ENGINE CONTROL
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