



# FOR STATIONARY GAS ENGINES CATALYST EMISSIONS MONITOR AND AFR SYSTEM CONTROLLER

## Health Monitoring of NSCR or Oxidation Catalysts

ISO 9001 CERTIFIED

## BENEFITS

**PARAMETER  
MONITORING FOR  
NATIONAL OR LOCAL  
REGULATIONS**

**MONITORS KEY  
CATALYST OPERATING  
PARAMETERS**

**ALARM OR SHUT DOWN  
ON TEMPERATURE OR  
PRESSURE**

**DATA LOGGING ON  
BOARD FOR PERIODIC  
OR CONTINUOUS  
DOWNLOAD OR  
RETRIEVAL**

**AUTOMATIC  
ADJUSTMENT TO CCC  
AFR VALVES**

**OPERATOR  
CONFIGURABLE**

**VARIETY OF I/O  
SUPPORTED OPTIONS**

**NON-RESETABLE REAL  
TIME CLOCK**

## THE CONTINENTAL CONTROLS SOLUTION

CCC technology is the key to integrating Air Fuel Ratio Controls (AFRC) and catalysts for Gas Engines. The CCC Catalyst Monitor is the central communication hub for various inputs and outputs for NSCR and Oxidation catalysts that doubles assurance that these devices were working as designed. The CCC Catalyst Monitor provides this function and is available in two versions:

### 1. Data logging (CMI)

This version will monitor various inputs as configured by a user over an extended period of time.

### 2. Emission Control System (CM2-Single/CMI Dual)

The "Intelligent" version will communicate via CAN-Bus with the CCC Air Fuel Ratio Valve Controller to make O<sub>2</sub> set Pt corrections and lower engine emissions levels, and this further extends the useful life of the central catalyst system option by adding our patented post catalyst NOx sensor.

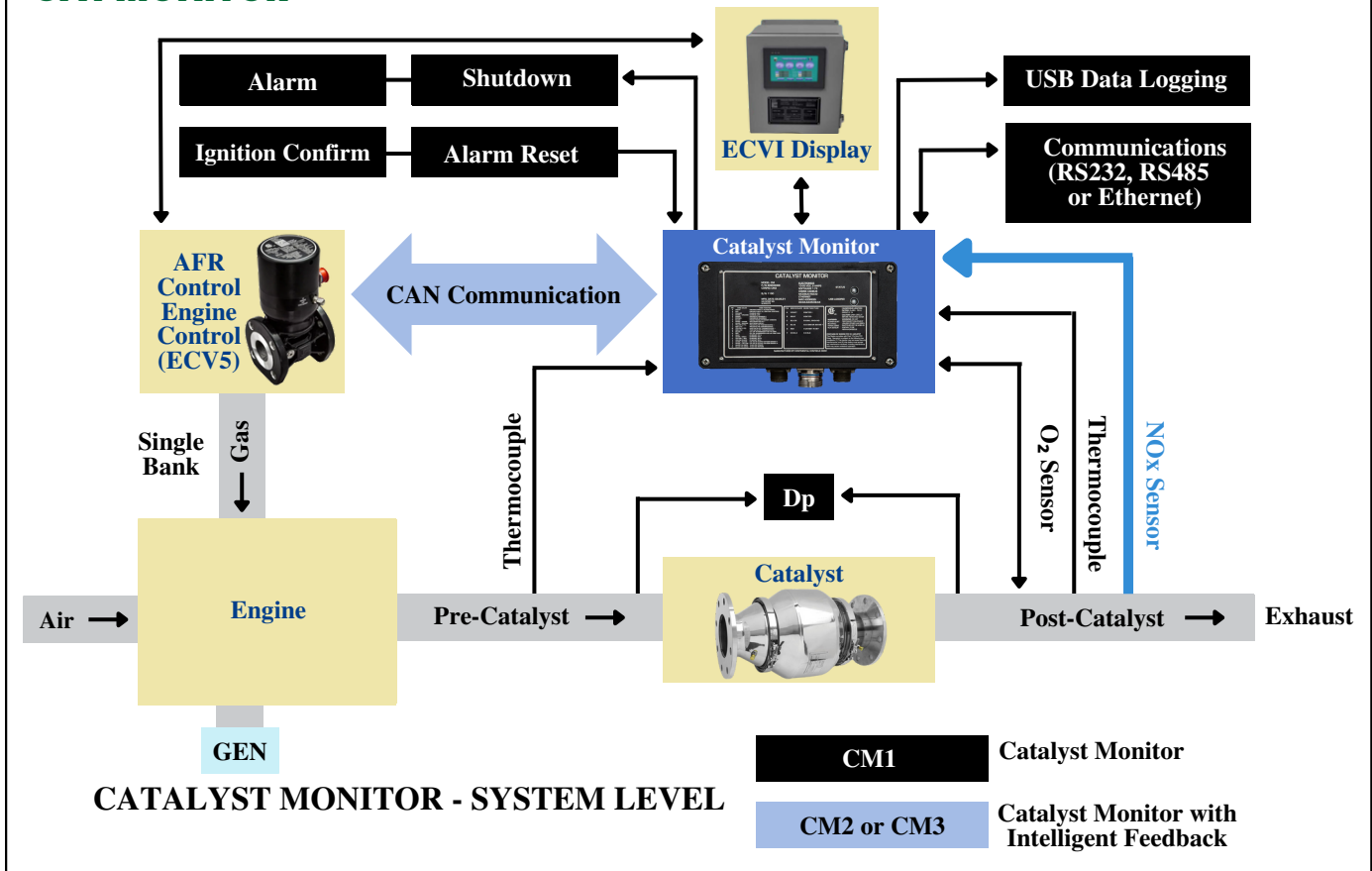
### 3. Health Monitoring

Gas Engines subject to national or local regulation are required to monitor catalyst temperatures continuously. Catalysts require heat to react with targeted emissions. When this reaction occurs, it is exothermic (produces heat). The Cat Monitor will monitor both pre- and post-catalyst temperature and notify the user if either a minimum or maximum temperature is exceeded as well as provide evidence by a higher post-catalyst temperature, that the catalyst is likely working.



The CCC Cat Monitor is available as a Data Logger and a real-time emissions controller with a CCC AFR valve system.

## CAT MONITOR



### MAINTENANCE ALERTS

Increased Differential Pressure (Dp) across the catalyst indicates masking/fouling of the catalyst elements. A substantial decrease in this Differential Pressure can indicate severe damage. The CCC Cat Monitor will log the Differential Pressure, notify the user of any unacceptable conditions and ensure your engine remains in compliance continuously.

### OUTPUTS

- CAN-Bus Communications
- Mod-Bus RS-232/485 for SCADA Interface or PC
- 2 Digital Discrete Outputs (Shutdown and Alarm)
- USB Interface LED Status Indication Lamp
- Ethernet Communications via ModBus
- 2 Wide Band O<sub>2</sub> controls

### OPERATING TEMPERATURE

From -40 to 185 Degrees F

### ADDITIONAL SPECIFICATIONS

9-32vdc Input Power

### HAZARDOUS ENVIRONMENT

Designed to be Class 1  
 Div 2 Compliant  
 IP 66 Compliant

### INPUTS

- 2 Wide Band O<sub>2</sub> Sensors
- 2 NO<sub>x</sub> Sensors
- 2 Thermocouples (Pre + Post Catalyst)
- 1 Differential Pressure (Dp)
- 1 4-20 ma (Possibly for Flow Measurement)
- 2 CAN-Bus Inputs (Reserved for NO<sub>x</sub> Sensors)



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