

Compliance  
Controls

# Rich Burn Natural Gas Engines Air/Fuel Ratio Controller

## Infinite Control Options. One Easy Controller



### AFR-64R One Easy Controller for Rich-Burn Natural Gas Engines

Need a lot of control in a single package?

The AFR-64R air/fuel ratio controller monitors ambient changes, reacts with precision and diagnoses potential problems before they become costly.

#### Emissions Compliance:

The AFR-64R controller precisely tracks the air/fuel mix to maintain targeted emissions levels – regardless of variance in load, ambient air temperature or fuel composition.

#### Flexibility:

The AFR-64R controller stores up to 64 load-specific air/fuel set points and automatically tracks engine load changes based on engine rpm and manifold air pressure.

#### Cost Savings:

Pinpoint performance problems as soon as they occur – misfires, detonations and more – to cut the costs of maintenance, downtime, labor and replacement parts.

Whether you need better emissions compliance, engine prognosis/diagnosis and trouble-free equipment life, the AFR-64R air/fuel ratio controller helps maximize the efficiency of the engine and its three-way catalytic converter.



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## Main Features

- Multi-set point (64), load tracking, air/fuel ratio controller
- Pre- and post-catalyst engine exhaust monitoring
- Critical engine and catalyst function diagnostics
- Continuous health monitoring of the oxygen sensors
- Tracking includes engine load, tailpipe emissions, ambient air temperature, fuel composition and more

## Benefits

- Ongoing emissions compliance
- Elimination of operator guesswork
- Reduced maintenance costs
- Ability to identify problems early and save on repairs
- Minimal operator intervention and training

## Technical Features:

- Fast, easy, low-cost installation
- Fits virtually any gas-fueled, carbureted, rich-burn industrial engine – with (or without) a catalytic converter
- Windows®-based platform compatible with most computers
- Software can be installed on laptop, PC, or network
- Comprehensive 38-fault diagnostics, including continuous oxygen sensor health monitoring
- Data plotting for easy, accurate troubleshooting
- Separate alarm and shut-down dry contact relays
- Pre-catalyst closed loop, exhaust oxygen feedback control
- Post-catalyst exhaust oxygen feedback; cascade control for fast, real-time adaptation to changing catalyst performance
- Variable set-point for pre-catalyst and post-catalyst exhaust oxygen control – for real-time response to varying engine loads
- Catalyst temperature monitoring for catalyst over temperature protection
- Drives up to two control banks for operation on “V” type engine configurations
- Multiple valve control options:
  - Full Authority Valve controls all engine fuel via system-controlled butterfly valve
  - Trim Fuel Valve adds supplemental fuel to the air intake via system-controlled proportional fuel valve
- Display – Viewable monitor (optional)
- RS-485/MODBUS® communications support for high-speed data transmission



Compliance Controls, LLC  
Tel: 918.317.4100 Fax: 918.317.4266  
Web: [www.compliancecontrols.com](http://www.compliancecontrols.com)  
e-mail: [info@compliancecontrols.com](mailto:info@compliancecontrols.com)