

# Air Fuel Ratio Controls (Compliance Controls)

## AFR-FI - Air-Fuel Ratio Controller for Fuel Injected Engines

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# Simply the Best Value



### AFR-FI Air/Fuel Ratio Controller

Compliance Controls' AFR-FI air/fuel ratio controller is your best value for fuel injected, lean-burn natural gas engines. What do you get with the microprocessor-based AFR-FI?

**FUEL EFFICIENCY.** No more traditional pneumatics. The AFR-FI is a "smart system" that automatically optimizes the lean-burn air-fuel mix to ensure top performance and fuel efficiency.

**AUTOMATED COMPLIANCE.** The AFR-FI maintains tight control of the lean-burn air-fuel mix with computer speed and precision.

**LOWER MAINTENANCE.** The AFR-FI delivers optimized engine operation and stays alert with 26 alarms and shutdowns – covering fuel flow and fuel pressure, intake manifold temperature, exhaust temperature and air manifold pressure.

Other AFRs for lean-burn, fuel-injected engines deliver a whole lot less. But the MEC-FI – with easy installation, automatic operation, state-of-the-art technology – is simply the best value you can find.



Compliance Controls is a division of



# Simply The Best Value for Fuel Injected Engines.

Compliance Controls

## Main Features

- Improved engine performance and efficiency
- Automated emissions compliance
- User-friendly display and keypad interface
- Price-competitive
- High-speed ModBus communications

## Benefits

- Compliance assured
- Eliminates time-consuming, unreliable pneumatic air-fuel control
- Better engine performance
- Less maintenance – lower maintenance costs
- Improved troubleshooting
- Better fuel economy
- Easy installation and setup
- Fully automatic
- Easy integration with other control systems and data collection / analysis systems
- Supports high-speed communications



## Technical Features:

- D100 MHz, 586-compatible microprocessor: 8 MB of RAM
- User-programmable: Windows-based ladder-logic software (IEC-61131-3 standard programming languages)
- Daylight-filtered vacuum fluorescent display (4 lines with 20 characters each line)
- 16-Key pad: for set-point entry, alarm acknowledgement, start, stop, reset, etc.
- Wall / bracket mount enclosure or free standing
  - Window in door
  - Internal swing panel
  - DIN rail-mounted terminal blocks
  - Panduit Wireway
  - Ample room for customer connection
- Canadian standard for separation of incandive and non-incandive wiring
- 4 RS485 serial ports
- Digital I/O module– reads up to 18 thermocouples or mA sources
- 10 sets of data points (air / fuel map)
- Fuel flow totalization (optional)
- Hour meter
- Shutdown or fault snapshot– provides a complete picture of system conditions at shutdown
- 4 discrete inputs – normally closed
- 2 discrete relay outputs
- Shutdowns
  - GOV-10 shutdown (optional)
  - Low / high fuel flow
  - Low / high fuel pressure
  - Low / high air pressure
  - Air manifold pressure xmitter fail
  - Fuel pressure / flow xmitter fail
  - Air manifold temperature xmitter fail
  - TC break
  - Air manifold temperature
  - Overspeed
- 12 Alarms
- Accommodates wide range of engine configurations
  - V-type engines, inline
  - Waste gate or air damper
  - Other special configurations
- Operating temperature: -40 to +85°C (-40 to +185°F)
- Controller approved for Cl. 1, Div. 2, Grps. C & D Areas

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