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## AFR-1R

# Rich-Burn Air/Fuel Ratio Control System

The AFR-1R is the simplest to use rich-burn engine, single set point air/fuel ratio control system available. The system is designed to maximize the efficiency of a 3-way catalyst by maintaining the proper air/fuel ratio. Maintaining the correct air/fuel ratio to enhance the performance of your catalytic converter shouldn't be that hard. And it's not if you choose the right equipment.

The Murphy AFR-1R features a single pre-catalyst set point target to optimize the catalysts performance. And when activating the optional post-catalyst set point target, the AFR-1R monitors the catalyst performance and adjusts the air/fuel ratio to maintain and prolong the catalyst performance.

The system includes the Murphy PV-450 full-color graphical user interface for control functions, monitoring, programming and diagnostic displays. The eight-button display includes comprehensive built-in help files for added operator convenience.

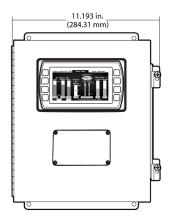
The Enovation Controls AFR-1R air/fuel ratio controller represents cutting edge technology in many areas: hardware, microprocessor power, control system software, operator interface options, adaptability to variable engine conditions and control requirements, software upgrade capability, in addition to comprehensive on-board diagnostics system (OBD).

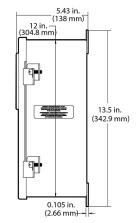
#### **Technical Features**

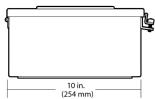
- Designed for low horsepower gas fueled, carbureted rich-burn industrial engines.
- Microprocessor-based controller with a single set point.
- Set point and operation done entirely through the full-color graphic display, enclosure or remote mounted.
- Post catalyst, oxygen sensor input for real-time adaptation to changing catalyst performance (post catalyst sensor is optional).
- Pre and post catalyst thermocouple input for catalyst over temperature protection (ungrounded Type K thermocouples, optional).
- Pre and post catalyst differential temperature displayed.
- Separate alarm and shutdown dry-contact relays for flexibility in setup and operation.
- High-speed full-authority butterfly fuel control valves for quick response time. (available)
- Proportional solenoid fuel control valves for auxiliary fuel control (available)



#### **Dimensions**







### Technical Features (continued)

- Heated exhaust gas oxygen sensors for optimum AFR control.
- NEMA 12 enclosure, 10 in. W x 13 in. H x 5 in. D.
- 24 VDC standard with optional 12 VDC configuration.
- CD ignition input for engine speed reference with optional magnetic pickup input.
- Upgradeable to command multi-set point targets and accept additional end devices.

#### **How To Order**

Options listed below applies to all Air/Fuel Controllers. All configurations may not be available. Call your sales representative or Enovation Controls for more information.

### **AFR Model Number Strategy**

