ETC
Energy • Technology • Control

ETC6000 Series Burner Control System

ETC6002 Burner Control System

The ETC6002 Burner Control System is a versatile, "IoT-ready" solution designed for dual fuel burners, delivering precise modulation for gas and stage-fired oil burners. Engineered for efficiency and compliance, it simplifies combustion control while enhancing performance.

Features:

- **Fuel flexibility:** Suitable for single and dual fuel burners.
- **Streamlined operations:** All burner start up sequence functions and timings fully integrated.
- **Ignition system integration.**
- **Multi sensor flame monitoring:** IR, UV, photocell and ionisation flames detection supported.
- **Dual drive management:** Control of two variable speed drives for combustion air and fuel pump control.
- **Extensive actuator support:** Up to 10 rotary actuators can be assigned allowing complex applications to be addressed.
- **Enhanced safety measures:** Fuel safety valve control and proving.
- **Multi-curve configuration:** Up to 4 fuel:air ratio profile curve sets can be programmed.
- **Comprehensive application support:** Versatile programming options allowing most applications to be addressed.
- **Integrated oxygen trimming:** Oxygen trim option using dedicated ETC oxygen probe and interface.
- **Iot connectivity:** Equipped with Modbus and Profibus protocols, the ETC6002 enables seamless integration into IoT networks for smarter management.
- **Enhanced data capabilities:** Advanced trend logging facilitates Pre-emptive maintenance and informed decision-making.

Benefits:

- **Energy-efficient performance:** Improved combustion and improved turndown saves up to 5% on fuel costs and significantly reduces harmful CO2 and other flue gas emissions.
- **Enhanced positioning accuracy:** Rotary actuators with a positioning accuracy of ±0.1° replace conventional characterising cams and linkages and eliminates backlash and hysteresis.
- **Energy-saving strategy:** Using a second setpoint during periods of low demand can save up to 10% in fuel usage.
- **Secure system operation:** Passcode protection to prevent untrained/unauthorised changes to combustion set-up.
- **Enhanced operational insights:** Software allows advanced interfacing functions and collection/trend logging of data.
- **Fuel-saving optimisation:** Oxygen trim saves up to 3.5% fuel usage.
- **Sustainability-driven:** Reduces CO2 emissions and supports adherence to evolving global environmental standards.
- **Pre-emptive maintenance ready:** Real-time logging identifies potential issues early, ensuring reliability and efficiency.

The ETC6002 Burner Management System is engineered to manage dual-fuel burners, delivering precise control and enhanced efficiency in both gas and oil-fired operations. For gas burners, the ETC6002 supports full modulation, enabling the burner to adjust its output continuously in response to varying load demands. This capability ensures optimal fuel usage and performance, enhancing operational efficiency. For oil-fired burners, the system provides staged firing control, supporting configurations with two, three, four, or five stages. The staged firing system is integrated with a modulating air damper, ensuring the correct amount of combustion air is delivered at each stage, resulting in improved fuel efficiency and combustion performance.

Beyond managing fuel and air flow, the ETC6002 offers advanced options to further enhance burner efficiency. One such option is fan speed control via a Variable Frequency Drive (VFD). By modulating the fan speed in accordance with combustion demand, the VFD reduces energy consumption while improving overall system efficiency. This capability allows the burner to respond more precisely to load changes, minimising excess air and maximising fuel use efficiency.

A key feature of the ETC6002 is its compatibility with oxygen trim systems. Oxygen trim continuously monitors the oxygen levels in exhaust gases, adjusting the air-fuel ratio in real-time to maintain optimal combustion efficiency. This not only reduces fuel consumption but also lowers emissions, ensuring the burner operates at peak efficiency under varying conditions. The combination of VFD fan control and oxygen trim enables the ETC6002 to deliver substantial improvements in energy efficiency while ensuring safe and reliable operation across a wide range of scenarios.

Designed with flexibility in mind, the ETC6002 is ideally suited for facilities requiring dual-fuel capabilities and high performance. It ensures smooth transitions between gas and oil operations, while the advanced control features optimise fuel use in every mode. Whether operating on gas or oil, the ETC6002 offers superior control, enhanced efficiency, and the adaptability to meet diverse operational needs. By integrating fan speed control and oxygen trim, the system fine-tunes combustion processes to achieve maximum efficiency, leading to lower energy costs and reduced environmental impact.

For further information on the ETC6002 Burner Control System contact ETC today for bespoke solutions tailored to your needs.

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