



Energy • Technology • Control



ETC6000 Series Burner Control System

ETC6094 and ETC6095 Flame Detectors

The ETC6094 and ETC6095 flame detectors provide reliable UV Flame detection with integrated shutters. These detectors ensure safe, unsupervised boiler operation and feature enhanced sensitivity.

Features:

- **Automatic Integrity Checks:** Regular "dark tests" ensure flame detection reliability, reducing risks during unsupervised operation.
- **Designed for Unsupervised Boiler Operation:** With their ability to function reliably without constant supervision the ETC6094 and ETC6095 are ideal for environments where continuous unmanned operations occur such as remote or automated facilities.
- **Wide Ambient Temperature Range:** The detectors are designed to operate in a wide range of temperatures (-20 to 60C {6094}, 0 to 60C {6095}) making them suitable for both indoor and outdoor installations in various environmental conditions.
- **Diverse Mounting Options:** The ETC6094 is designed to be mounted radially and the ETC6095 axially, offering flexibility in burner configurations.
- **IP65/NEMA 4 Protections:** With an IP65 rating, the flame detectors are dust-tight and protected against water jets, ensuring durability in harsh environments. The NEMA 4 rating further guarantees resistance.

Benefits:

- **Safety Enhancement:** The combination of UV detection and regular flame signal checks with the shutter mechanism ensures that the system can detect any issues with the flame integrity, reducing the risk of operational failures and increasing safety in combustion applications.
- **Consistent Low Voltage Performance:** Improved sensitivity ensures reliable flame detection even in low voltage conditions, making them dependable solutions for systems where power supply may be inconsistent of lower than typical levels.
- **Reduced Maintenance and Operational Cost:** The built-in shutter mechanism automatically tests flame integrity which reduces the need for manual inspection and maintenance, leading to lower operational costs and less downtime.
- **Reliable CANBus Communication:** The sensor uses a CANBus interface, offering stable, high-speed communication with the controller. This ensures real-time data transfer and reliable system performance.

The ETC6094 and ETC6095 flame detectors are sophisticated ultraviolet (UV) flame detection devices designed for seamless integration with the ETC6000 series burner controllers. These detectors are specifically engineered for applications that demand continuous, unsupervised operation of burner or boiler systems, ensuring that combustion processes remain safe and efficient without the need for constant manual supervision.

The ETC6094 and ETC6095 employ advanced UV light detection technology to reliably sense the presence of a flame. These detectors are equipped with an integrated shutter system that periodically interrupts the flame signal to perform "dark tests." The shutter automatically blocks the flame signal at regular intervals, verifying the integrity of the flame detection system and ensuring that the detectors are functioning as intended. This self-checking feature is essential for maintaining operational safety, especially in systems where the burner or boiler is operating without direct supervision for extended periods.

The regular interruption of the flame signal, facilitated by the shutter mechanism, ensures that any potential faults or anomalies with the flame signal are detected and communicated immediately. This process significantly enhances the overall safety of the combustion system, as it ensures that the flame is continuously monitored, and any failure in flame detection can be swiftly identified. The ability to perform automatic integrity checks reduces the need for manual intervention, minimising the risk of undetected issues and improving the reliability of the system.

The ETC6094 and ETC6095 flame detectors are designed to work in conjunction with the ETC6000 series burner controllers. They communicate through a CANBus link, which ensures seamless integration and enables real-time feedback on flame status. This communication system allows the controller to receive continuous updates on the health and integrity of the flame, providing operators with critical information to manage combustion processes efficiently. This integration simplifies system monitoring and troubleshooting, making it easier for operators to identify potential issues before they impact system performance.

One of the key advancements of the ETC6094 and ETC6095 is their enhanced sensitivity to flame detection. This is particularly beneficial in environments where the supply voltage may be lower than the standard 230V. The improved sensitivity ensures that the detectors can reliably detect flames even in low-voltage conditions, making these models ideal for installations in areas where power supply consistency is a concern.

This capability contributes to the overall versatility of the flame detectors, allowing them to perform effectively in a wide range of operating environments.

The ETC6094 and ETC6095 offer flexible installation options to accommodate a wide range of burner and boiler configurations. The ETC6094 is designed to be mounted through the side of the burner wind-box using a clamp ring, similar to the mounting style of the ETC6090. The ETC6095, on the other hand, is designed to view the flame in-line with a sight tube mounted at the front of the burner. These mounting options provide the flexibility to choose the most appropriate installation method based on the specific requirements of the combustion system, ensuring ease of integration and installation.

The ETC6094 and ETC6095 are built to withstand the demanding conditions often found in industrial environments. With an IP65 and NEMA 4 protection rating, these detectors are resistant to dust, water, and other environmental contaminants, ensuring they remain operational even in harsh conditions. This robust design makes them suitable for both indoor and outdoor installations, offering long-term reliability in a variety of settings. Whether used in high-temperature industrial applications or outdoor environments exposed to the elements, these flame detectors are engineered to maintain consistent performance.

Both the ETC6094 and ETC6095 flame detectors are CE approved and comply with the requirements of EN298:2012, ensuring that they meet the stringent safety and quality standards for combustion control systems. This certification further validates the reliability and performance of the detectors, making them a trusted component for modern combustion applications.

In summary, the ETC6094 and ETC6095 flame detectors offer reliable, safe, and efficient flame detection for continuous, unsupervised burner and boiler operations. With their advanced features, such as integrated shutter technology, enhanced sensitivity, and seamless integration with the ETC6000 series controllers, they provide a robust solution for modern combustion systems. These detectors help to minimise the risk of undetected flame failures, reduce maintenance requirements, and improve overall system reliability, making them an essential component in any industrial combustion application.

For further information on the ETC609x UV Shuttered Flame Detectors contact ETC today for bespoke solutions tailored to your needs.

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