

# FIRE & GAS MANAGEMENT SYSTEM

## Life Safety Systems – FGS 1100

AE Solutions and Siemens Energy and Automation have established a partnership to create a new generation of high reliability Fire & Gas Systems (FGS). The FGS 1100 Fire & Gas Management System is Factory Mutual Approved to be compliant with NFPA 72 requirements for combining both Fire & Gas monitoring/control into a single PLC based system. The FGS 1100 Fire & Gas Management System is a pre-engineered, pre-configured and pre-packaged system that is suitable for a wide variety of applications and is available as a turnkey solution.

The FGS 1100 has been designed to the same levels of safety availability and reliability that are applied to Safety Instrumented Systems (SIS) applications. By using a safety-certified PLC as the logic solver, the FGS 1100 provides the same demanding levels of performance required by the ISA and IEC safety standards for safety critical applications. The end user can reap the benefits of a high reliability and high availability safety PLC based system for their Fire and Gas applications.

A critical component of the FGS 1100 is a NFPA 72 compliant secondary power supply system consisting of a charger panel and an associated self-contained battery set. To support system design, AE Solutions has developed an FM approved Battery Sizing Calculator tool, which optimizes the battery system design based on the specific requirements of each project.





## Features Of The FGS 1100

- A complete system that is FM Approved to be compliant with NFPA 72 for both fire and gas monitoring in the same safety PLC
- Developed around the Siemens QUADLOG redundant Safety PLC platform
- The system includes interface capability to a wide variety of sensors and final control elements
- Designed to levels of reliability and availability commensurate with international safety standards for safety instrumented systems (SIS)
- Communication to control systems via hardwired I/O or Modbus
- FGS 1100 includes a complete battery back-up system with charger
- No on-site programming required
- Simple touchpad HMI with graphics capable display for diagnostic, alarm and operational data. Provides fire or gas circuit bypass option
- Powerful engineering workstation incorporating cause and effect alarm configuration and display
- Configurable

## Specifications

- **Processor:** QUADLOG with redundant processors
- **Inputs/Outputs:** Application dependent
- **Power Supply:** 120 Vac with battery back-up system
- **Touch Pad HMI:** Siemens TP270 10.4" color graphics-capable display
- **Temperature - Operating:** 32-122°F (0-50 °C)
- **Relative Humidity - Operating:** 0-90 % non-condensing
- **Cabinet:** Red epoxy paint over 14 ga. steel; Size is application dependent
- **Area Classification:** General purpose
- **Weight:** Application dependant
- **Certifications:** FM approved for compliance with NFPA 72
- **Initiating Device Circuits:** Class B Style A/ Both analog 4-20 mA and discrete
- **Notification Appliance Circuits:** Class B Style W

## Typical Hardware Options

- Heat & Smoke Detectors
- Toxic Gas Detectors
- Suppression Subsystems
- Environmental protection
- IR Fire Detectors
- Temperature Rate-of-Rise Sensors
- Combustible Gas Detectors
- Local Alarm Horn / Beacon
- Host Communication capability
- Multi-Spectrum Fire Detectors

## System Integration Options

AE Solutions has a staff of Certified Functional Safety Experts (CFSE) that can apply years of fire & gas system expertise to provide:

- A complete single-source turnkey solution for the optimum FGS 1100 solution
- Implementation of all phases of design, fabrication, configuration and documentation
- System verification and validation including factory acceptance, integration and client acceptance testing
- Training at both the engineering and technician levels
- Commissioning and start-up support



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