

FGS 5000

Fire & Gas System

aeSolutions' next generation of fire and gas alarm and control solutions for the industrial market has arrived. The FGS 5000 combines the required functionality into a Rockwell control logix control platform.

The FGS 5000 was designed to give customers a reliable, easy-to-maintain fire and gas platform that instrument techs familiar with the Rockwell control system platform can maintain and troubleshoot. The system is designed to be highly scalable, from small 50 I/O systems up to systems with 500+ I/O.

A critical component of the FGS 5000 is an FM Approved secondary power supply system consisting of a charger panel and an associated self-contained battery system. To support system design, aeSolutions has developed an FM Approved battery sizing tool which confirms the battery system design based on the specific requirements of each application.

By using the same hardware/software platform as end users using Rockwell BPCS systems and infrastructure, the FGS 5000 can be integrated into the entire plant system solution. It offers the advantages of common HMIs, spare parts, training, engineering/configuration tools, maintenance, and procedures to save installed and lifecycle costs dramatically.



Gas Monitoring & Control

The FGS 5000 has also been FM Approved to be in conformance with FM Approval's Combustible Gas Standard 6320, Toxic Gas Detection Standard 6340 and ANSI/ISA 12.13.01 Performance Requirements for Combustible Gas Detectors standard.

Fire System Monitoring & Control

The FGS 5000 has been FM Approved to be in conformance with the requirements of NFPA 72 and FM 3010 standard for fire alarming and mitigation control. The system has approval for either simplex or redundant processors, a variety of I/O configurations, including remote I/O, and a battery back-up/charger subsystem.

The aeSolutions FM Approved family of Fire & Gas systems are designed to the latest standards using our first-hand industry experience.

Features

The FGS 5000 Fire & Gas 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.

- A complete turnkey Fire & Gas System that is FM Approved to be compliant with NFPA 72 (2022 Edition) and FM 3010 standard for both fire and gas monitoring in the same PLC
- Approved for combination system I/O – Can be used to control HVAC
- Developed around the Rockwell ControlLogix® Series PLC platform
- Supports simplex I/O and either simplex or redundant processors: offers a remote I/O option
- Uses Rockwell Flex5000 I/O cards
- The system includes interface capability to a wide variety of sensors and final control elements with fully supervised circuits (IDC, NAC, FSF, and SDC)
- Communication to control systems via Industrial Ethernet, hardwired I/O, or Modbus
- FGS 5000 includes a complete battery backup system with charger
- No on-site programming required
- The FGS 5000 has 2 operator interface options: 12" Panelview Plus, or Industrial PC's running RS-View

Field Device Options

- Manual pull stations
- Heat & smoke detectors
- Temperature rate-of-rise sensors
- Toxic gas detectors
- Combustible gas detectors
- Suppression subsystems
- Local alarm horn / beacon
- Environmental protection
- Host communication capability
- IR fire detectors
- Multi-spectrum fire detectors
- Addressable detectors from Apollo

System Integration Options

Our qualified engineers apply years of expertise to provide:

- A complete single-source turnkey solution for the optimum FGS 5000 solution
- Detector placement and modeling services
- Complete field construction package
- 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 startup support

System Specifications

Processor	Rockwell ControlLogix® 5580 Series with redundant processor option
I/O	Both analog and discrete supervised circuits and remote I/O option
Inputs/Outputs	Application-dependent
Power Supply Options	PS1400-20-252: 20 Amp 24VDC Output Nominal; 115/230 VAC Input/252 Amp Hour Battery Backup. PS1400-50-600: 50 Amp 24VDC Output Nominal; 115/230 VAC Input/600 Amp Hour Battery Backup. PS1400-100-1200: 100 Amp 24VDC Output Nominal; 115/230 VAC Input/1200 Amp Hour Battery Backup. PS1400-150-1800: 150 Amp 24VDC Output Nominal; 208/240/480 VAC Input/1800 amp hour battery set. Optional Rack assembly to stack charger and battery set.
Temperature	Operating: 0 to 50 Deg C. Storage: -40 to 60 Deg C
Humidity	Operating: 0 to 95% non-condensing
Cabinet	Nema 4, 4X, 12, powder coated or stainless steel; size is application-dependent
Area Class	General purpose or Class I Div 2
Weight	Application-dependent
Certifications	FM Approved for compliance with NFPA 72 and FM 3010 for both Fire & Gas; FM Approval's Combustible Gas Standard 6320, Toxic Gas Detection Standard 6340 and ANSI/ISA 12.13.01 Performance Requirements for Combustible Gas Detectors standard.
Initiating Device Circuits	Class A & B for discrete dry contact IDCs; Class B for Analog IDCs
Notification Appliance Circuits	Class B

