

Safety Instrumented *Fire & Gas System*



FGS 1300 Fire & Gas Alarm & Control System

aeSolutions' newest offering for fire and gas alarm and control solutions for the industrial market has arrived. The FGS1300 was developed to provide fire and gas monitoring, and suppression control for modules in remote locations that have less than 40 I/O. It is designed to be installed in both general area, or as an option, Class 1 Div 2 groups B-D, temp code T3 zones areas.

A critical component of the FGS 1300 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 the Siemens Simatic PCS7 series, the FGS 1300 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 produce a dramatic saving in both installed cost as well as lifecycle costs.

Fire System Monitoring & Control

The FGS 1300 has been FM-approved to be in conformance with the requirements of NFPA 72 and FM 3010 standard for fire alarming and mitigation control.

Gas Monitoring & Control

The FGS 1300 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.

Other members of the Life Safety Systems™ family of products have been developed by aeSolutions to bring highly reliable and cost-effective SIS solutions to market for a wide variety of fired equipment Safety Instrumented – Burner Management System™ applications.



aeSolutions can provide a turnkey solution from philosophy to field installation.

Features

The FGS 1300 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 (2013 Edition) for both fire and gas monitoring in the same PLC
- Developed around the Siemens Simatic S7-315 Series PLC platform
- 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 Profibus, Industrial Ethernet, or hardwired I/O
- FGS 1300 includes a complete battery backup system with charger
- No on-site programming required
- The FGS 1300 operator interface is a 7" TP700 Comfort Touch Panel and is programmed with TIA portal.

Field Device Options

- 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

System Integration Options

aeSolutions' qualified engineers can apply years of fire & gas system expertise to provide:

- A complete single-source turnkey solution for the optimum FGS 1300 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 startup support

System Specifications

Processor:	Siemens Simatic S7-315 series CPU
I/O:	Both analog and discrete supervised circuits
Inputs/Outputs:	Application-dependent
Power Supply:	PS1400-20-208: 20 Amp 24VDC Output Nominal; 115/230 VAC Input/208 Amp Hour Battery set. Optional Rack assembly to stack charger and battery set.
Temperature:	Operating: 0 to 50 Deg C. Storage: -20 to 60 Deg C
Humidity:	Operating: 0 to 95% non-condensing
Cabinet:	Nema 12 Gauge 12, powder coated; 30" wide by 42" tall by 10" Deep
Area Class.:	General purpose, Class 1 Div 2 Groups B-D, T4
Weight:	Application-dependent. Typical 250 Lbs
Certifications:	FM-Approved for compliance with NFPA 72 and FM 3010 standard 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
Initiating Device Circuits:	Class A & B for discrete dry contact IDCs; Class B for Analog IDCs.
Notification Appliance Circuits:	Class B

