

# Merlin FAM 1



## Gas Service Manual Reset Controller



## INSTALLATION & OPERATION INSTRUCTIONS

Please read these instructions carefully and retain for future use.

These instructions can be downloaded in electronic form on the product website.



[americangassafety.com](http://americangassafety.com)

## CONTENT

<b>Important Safety Statements .....</b>	<b>3</b>
<b>Installation .....</b>	<b>4</b>
Introduction.....	4
Mounting.....	4
Connections Overview.....	4
BMS Switch.....	5
Auto Reset Switch.....	5
Fire Alarm Integration.....	5
<b>Operation .....</b>	<b>6</b>
System On & Off.....	6
Emergency Shut Off.....	6
LED Status .....	6
<b>Maintenance .....</b>	<b>6</b>
<b>Specifications .....</b>	<b>7</b>

## Important Safety Statements

- ⚠ **Where this symbol is used, the manual must be consulted to understand the nature of any potential hazards and how to avoid them.**
- ⚠ **Before any installation, use or maintenance read this manual carefully.**
- ⚠ **The information contained within this manual is referenced for typical installation and operation only.**
- ⚠ **For site specific requirements that may deviate from the information in this guide – contact your supplier.**
- ⚠ **If this device is used in a manner not specified, the safety provided may be impaired.**
- ⚠ **This device is designed for indoor operation only.**
- ⚠ **The internal fuse should be replaced only with the same type. Anti-surge fuse 3.15A 250Vac 5x20.**
- ⚠ **It is recommended that this device be commissioned upon installation and serviced annually.**
- ⚠ **This device requires a continual supply of electrical power – it will not work without power.**
- ⚠ **Your product should reach you in perfect condition, if you suspect it is damaged, contact your supplier.**

---

## Manufacturer's Warranty

**Warranty coverage:** The manufacturer warrants to the original consumer purchaser, that this product will be free of defects in material and workmanship for a period of twelve months (1 year) from date of purchase.

The manufacturer's liability hereunder is limited to replacement of the product with repaired product at the discretion of the manufacturer. This warranty is void if the product has been damaged by accident, unreasonable use, neglect, tampering or other causes not arising from defects in material or workmanship. This warranty extends to the original consumer purchaser of the product only.

**Warranty disclaimers:** Any implied warranties arising out of this sale, including but not limited to the implied warranties of description, merchantability and intended operational purpose, are limited in duration to the above warranty period. In no event shall the manufacturer be liable for loss of use of this product or for any indirect, special, incidental, or consequential damages, or costs, or expenses incurred by the consumer or any other user of this product, whether due to a breach of contract, negligence, strict liability in tort or otherwise. The manufacturer shall have no liability for any personal injury, property damage or any special, incidental, contingent, or consequential damage of any kind resulting from gas leakage, fire, or explosion. This warranty does not affect your statutory rights.

**Warranty Performance:** During the above warranty period, your product will be replaced with a comparable product if the defective product is returned together with proof of purchase date. The replacement product will be in warranty for the remainder of the original warranty period or for six months – whichever is the greatest.

---

## Waste disposal for consumers of electrical & electronic equipment.

When this product reaches the end of its life it must be treated as Waste Electrical & Electronics Equipment (WEEE). WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used.

Please contact your supplier or local authority for details of recycling schemes in your area.



# Installation

## Introduction

⚠ **It is recommended that the user reads this guide before using the system.**

The FAM1 is an isolation panel with gas solenoid valve output. The FAM1 is designed to provide an effective way of isolating gas supply by means of a key switch on the panel or by the operation of the emergency shut off button. The FAM1 can be integrated with a BMS, fire alarm and remote shut-off device(s).

## Mounting

- ⚠ **Take care when making connections to line voltage connectors!**
- ⚠ **Any damage attempting to remove the circuit board may void any warranty!**
- ⚠ **All Class 2 wiring is to be installed within flexible tubing to maintain segregation between circuits!**
- ⚠ **Wiring of different circuits shall be separated by means of routing, clamping or barrier!**

The control panel is designed for surface mounting using 4 mounting screws. Removing the cover on the panel gives access to the circuit board. The PCB should be removed before drilling entry holes into the case. A flush mount kit is available, comprising of a mounting bracket and decorative surround strip.

## Connections Overview

### UTILITY 1

Power Output for gas solenoid valve, 110-120VAC, Max 3A.

### POWER

Line Voltage Input 110-120VAC Single Phase. 50-60Hz.

### AUTO RESET & BMS

See sections: BMS Integration & Auto reset.

### EM REMOTE

This terminal is for remote emergency shut-off buttons and detailed on the circuit board as [EM REMOTE]. This is linked out as a factory setting. Remote emergency shut-off buttons should be volt free and wired to the FAM1 using a plenum security cable, white, 18/2 (18AWG 2 conductor), stranded, CMP or similar.

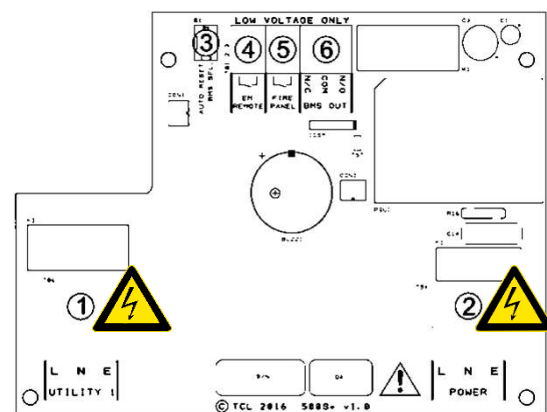
### FIRE PANEL

The terminal for fire alarms is detailed on the circuit board as [FIRE PANEL]. This connection is linked out as a factory setting. Fire alarms should be volt free and wired to the FAM1 using two-core cable.

### BMS OUT

Terminal connections are available on the circuit board for Building Management systems etc.

Detailed on the circuit board as [BMS OUT - N/C, COM and N/O] (Normally Closed / Common / Normally Open). These are dry contacts. This is a relay that changes state in alarm or when the utility is on/off.



## BMS Switch

---



The FAM1 can be integrated with a BMS to make or break a circuit on utility status on/ off. This will tell the BMS whether or not power is being sent to the utility.

AUTO RESET  
BMS SEL

There is a dipswitch located on the circuit board labelled [BMS SEL]. This is factory set to 'OFF' which signals the BMS on Utility status on/off.

When switched to 'ON', the FAM1 will only signal the BMS on a fault, i.e., emergency stop pressed.

## Auto Reset Switch

---



The FAM1 has an auto reset feature.

There is a dipswitch located on the circuit board labelled [AUTO RESET]. This is factory set to 'OFF'. When the power is restored after the power loss, the panel has to be restarted manually.

AUTO RESET  
BMS SEL

Upon installation, this can be switched to 'ON' - this will instruct the system to restart automatically when power is restored in the event of a power cut/failure.

## Fire Alarm Integration

---

The FAM1 can be integrated with a fire alarm to close the gas supply automatically in the event of a fire. The dry contact fire alarm signal can be wired to FAM1 using two-core cable.

# Operation

## System On & Off

---

When the control panel is powered, the [POWER] LED will illuminate.

Turn the key switch on, the [Gas On] LED will illuminate green. To turn the utility off, turn the key switch off.

## Emergency Shut Off

---

The emergency shut off button is located on the front of the panel.

There is also a facility for remote shut off buttons to be wired in series on the circuit board – see [EM REMOTE].

The emergency shut off button(s) will cut off the gas supply when activated.

To reinstate the system, the emergency shut off button(s) will need to be reset and the panel restarted.

## LED Status

---

- **Power**

When the system is connected to the mains supply, the Power LED will illuminate.

- **Gas On**

When the key switch is OFF or an emergency shut off has been pressed, the GAS ON LED will be OFF.

GREEN = Gas ON

OFF = Gas OFF

- **Fire Alarm Lockout/EM Stop**

If an emergency shut off button (either remote or on the panel) is pressed or the fire alarm panel has been activated, the LED will illuminate AMBER and the gas supply will be turned off. The EM Stop button must be re-set before restarting the system.



---

# Maintenance

Keep your device in good working order - follow these basic principles.

- Remove any dust/debris from the outer enclosure regularly using a slightly damp cloth.
- Never use detergents or solvents to clean your device.
- Never spray air fresheners, hair spray, paint or other aerosols near the device.
- Never paint the device. Paint will seal vents and interfere with the device.

# Specifications

General	
<b>Model:</b>	AGS FAM1
<b>Size: (H x W x D)</b>	5.51 x 7.48 x 2.44" (140 x 190 x 62mm)
<b>Housing Material:</b>	ABS PA765 (Flame Rating UL94 V-1)
<b>Mounting:</b>	Safe Zone - Indoor use - Wall Mounted
<b>Weight:</b>	2.2lb (1.0kg)
User Interface	
<b>Visual Indicators:</b>	3 LED – POWER / GAS ON / EM STOP / FIRE ALARM LOCKOUT
<b>Audible Alarm:</b>	70dB @ 3.28ft (1m). Quiet conditions.
<b>Buttons:</b>	None
<b>Language:</b>	English
Power Supply	
<b>Power Consumption:</b>	1.2W max
<b>AC IN Power:</b>	100-120V~ 50/60Hz
<b>Internal Fuse:</b>	Anti-Surge 3.15A 250Vac
Equipment	
<b>Overvoltage Category:</b>	II
<b>Pollution Degree:</b>	2
Relays	
<b>Dry Contact BMS relay output:</b>	0.5A switching current (resistive load)
Environmental	
<b>Ingress Protection:</b>	IP 6X Not Formally Evaluated
<b>Operating:</b>	-10 ~ 50°C / 14 ~ 122°F 30 ~ 80% RH (non-condensing)
<b>Storage:</b>	-25 ~ 50°C / -13~122F° up to 95% RH (non-condensing)
<b>Altitude Rating:</b>	2000m
Wiring	
<b>Typical</b>	Min. 18AWG / 75°C min / Tinned copper.
Compliance	
<b>Electrical Safety and Electromagnetic Compatibility</b>	IEC 61010-1 EMC EN 61326-1:2013

## Installation Details

Please pass this manual to the system owner / user.

Date of Installation:	
Installation Location:	
Organisation:	
Stamp / Signature of the installer:	

Every effort is made to ensure the accuracy of this document; however, AGS can assume no responsibility for any errors or omissions in this document or their consequences. AGS would greatly appreciate being informed of any errors or omissions that may be found in the content of this document. Information not covered in this document, or if there is a requirement to send corrections, contact AGS using the contact details.

## American Gas Safety LLC

Head office:

6304 Benjamin Road, Suite 502, Tampa, FL 33634

Tel: (727) 608-4375

[info@americangassafety.com](mailto:info@americangassafety.com)



American Gas Safety LLC is the owner of this document and reserves all rights of modification without prior notice.