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GAS DETECTION

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To comply with IGEM/UP/11 Edition 2, it is a requirement for any Gas Solenoid Valve installed into a teaching environment to incorporate pressure proving to ensure the closure of all downstream outlets prior to restoration of the gas supply.

A system must be fitted to each separate teaching area in which gas is being used.

ADDITIONAL INFORMATION REQUIRED

- What is the size of the Gas Solenoid Valve required?
- What are the sizes of any Water Solenoid Valves required?
- Do you require any Remote Stops to cover additional exits?

LAB / FOOD TECH / WORKSHOP

1 | Is there a requirement to Isolate Water and/or Electric?

YES **ServiceGuard**
Service Isolation System



OPTIONS

- SG-PT00
- SGE-PT00
- SGW-PT00

NO **GasGuard**
Gas Proving System



OPTIONS

- GG-PT00

2 | Is there any mechanical ventilation in the area?

YES System must be interlocked with the Ventilation



OPTIONS

- FCMON
- AIRDPS

NO System must be interlocked with a CO2 Sensor



OPTIONS

- CO2M
- CO2T-L

BOILER / PLANT ROOM



Boiler and Plant rooms are governed in general by IGEM/UP/2 Edition 3, with stricter requirements under IGEM/UP/11 Edition 2 for educational establishments.


Although Gas Detection is usually down to a risk assessment for commercial and industrial applications, the risks are outlined in IGEM/UP/11 and are mandatory for educational establishments.

ADDITIONAL INFORMATION REQUIRED

- What is the size of the Gas Solenoid Valve required?
- How many items of plant are installed (for Thermal Link and Gas Sensor quantities)?
- Do you require any Remote Stops to cover additional exits?

1 | Are all items of plant fitted with Flame Failure Devices?

YES **BoilerGuard Panel**
or **GasMonitor**



OPTIONS

- BG-PO
- GM-PO

NO **BoilerGuard**
c/w Pressure Transmitter




OPTIONS

- BG-PT00

2 | Is the room connected to the main building?

YES Combustible Gas detection must be installed



OPTIONS

- FGS-NG
- FGS-LPG

3 | Is the room accessible from the main building?

YES Carbon Monoxide detection must be installed



OPTIONS

- FGS-CO

COMMERCIAL KITCHEN



Under BS6173:2009 and IGEM/UP/19 it is a requirement for the gas supply in a commercial kitchen to be interlocked with any mechanical ventilation, this includes any supply ventilation where it is required as part of the ventilation strategy.

With commercial kitchens (as with plant rooms), if all appliances are fitted with Flame Failure Devices (thermocouples) gas pressure proving is not required. However, due to the frequency of which ventilation interlocks are switched on and off and as appliances are regularly moved for cleaning, gas pressure proving is often installed to provide additional protection for leaks on the pipework as well as critical loss of gas pressure.

ADDITIONAL INFORMATION REQUIRED

- What is the size of the Gas Solenoid Valve required?
- How many fans are installed?
- Are the fans single or 3 phase?
- Do you require any Remote Stops to cover additional exits?

IF ALL APPLIANCES ARE FITTED WITH FLAME FAILURE DEVICES:

1 | How would you like to interlock the ventilation?

2 | Is there a variable speed controller installed?

AIR DP SWITCHES **VentGuard**

OPTIONS • VG-DP2

FAN CURRENT MONITORING **VentGuard Plus**

OPTIONS • VGP-PO

YES System must be interlocked with a CO2 Sensor

OPTIONS • CO2M

IF ALL APPLIANCES ARE NOT FITTED WITH FLAME FAILURE DEVICES:

1 | How would you like to interlock the ventilation?

2 | Is there a variable speed controller installed?

AIR DP SWITCHES **GasGuard**

OPTIONS • GG-PT00
• AIRDPS

FAN CURRENT MONITORING **GasGuard**

OPTIONS • GG-PT00
• FCMON

YES System must be interlocked with a CO2 Sensor

OPTIONS • CO2M
• CO2T-L



Automatic Gas Proving System

Suitable for schools, hospitals, laboratories, kitchens and industry. Provides Protection against fire and explosion in the event of a gas leak.

Features

- Clear LCD indication & instructions
- No commissioning required
- Annual service reminder
- 24V DC auxiliary power output
- Interfaces for: Gas sensors, CO2 sensors, Ventilation systems, Remote emergency stop buttons
- System status button to aid with fault finding
- High accuracy Pressure Transmitter
- Built in time delays to avoid nuisance tripping
- 5 Year Warranty
- UK Manufactured

Gas Safety Panels

Description	Part No.
GasGuard system	GG-PT00
ServiceGuard system (Gas, Water & Elec)	SG-PT00
ServiceGuard system (Gas & Elec)	SGE-PT00
ServiceGuard system (Gas & Water)	SGW-PT00
BoilerGuard panel only (Non-proving)	BG-PO
BoilerGuard c/w pressure transmitter	BG-PT00
GasMonitor panel	GM-PO
VentGuard panel	VG-PO
VentGuard Plus panel	VGP-PO

Gas Sensors

The Flamefast gas sensor is one of the most cost effective and versatile units available on the market. With a voltage output, and volt free contact the FGS can connect directly into most third party controllers or can easily connect to the New LCD based range of panels using the BACnet output.

Features

- 24V AC/DC power supply
- Pre-calibrated
- Traffic light LCD readout
- Volt free contact output
- BACnet interface (16 address)
- Latching function with reset input
- Analogue output
- Touch button setup and calibration
- Calibration and 'End of Life' reminder
- Oxygen sensor monitors for enrichment and depletion as standard
- Mounts onto any standard single gang junction box or conduit box
- UK Manufactured

Gas Sensors

Description	Part No.
Flamefast gas sensor - Carbon monoxide	FGS-CO
Flamefast gas sensor - Natural gas	FGS-NG
Flamefast gas sensor - LPG	FGS-LPG
Flamefast gas sensor - Hydrogen	FGS-H2
Flamefast gas sensor - Oxygen	FGS-O2
Flamefast gas sensor - Nitrogen dioxide	FGS-NO2
Flamefast gas sensor - Nitric oxide	FGS-NO
Flamefast gas sensor - Hydrogen (EC)	FGS-H2e
Flamefast gas sensor - Chlorine	FGS-CL2
Flamefast gas sensor - Ozone	FGS-O3
Flamefast gas sensor - Sulphur dioxide	FGS-SO2
Flamefast gas sensor - Carbon dioxide	FGS-CO2
Flamefast gas sensor - Natural gas (Infra-red)	FGS-NGIR

Gas Sensors - Duct Mount

Description	Part No.
Flamefast gas sensor - Duct mount - Carbon monoxide	FGSD-CO
Flamefast gas sensor - Duct mount - Natural gas	FGSD-NG
Flamefast gas sensor - Duct mount - LPG	FGSD-LPG
Flamefast gas sensor - Duct mount - Hydrogen	FGSD-H2
Flamefast gas sensor - Duct mount - Oxygen	FGSD-O2

CO2, Temperate & RH Monitors

The Flamefast carbon dioxide, temperature & relative humidity monitor provides a bold visual indication using a traffic light LCD, as well as having a digital readout for all three signals.

Using the built in volt free contact, the unit can be easily interfaced with ventilation and window control systems, as well as gas safety systems. The unit can also simply be used as a traffic light indication to raise awareness of high CO2, temp or RH levels.

Features

- 100-240V power supply
- CO2 readout (Temp & RH on - H model only)
- CO2 traffic light indication (can be configured for Temp & RH)
- Volt free contact output based on CO2 (can be configured for temp & RH)
- Typical 15 Year life expectancy
- Self-calibrating CO2 sensor
- Audible alarm
- Mounts onto any standard single gang junction box or conduit box
- UK Manufactured

CO2, Temperate & RH Monitors

Description	Part No.
CO2 monitor c/w relay output (230V AC)	CO2M
CO2, temp & RH monitor c/w relay output (230V AC)	CO2M-H

Gas Detectors

Pre-Alarm for panel mounting.

Features

- Power supply 230V AC or 12V AC
- Adjustable pre alarm and alarm threshold
- Voltage free SPDT outputs for control of NO or NC valves

RFG

Description	Part No.
Gas detector single channel 3 modules wide	RFG361
For RFG 361	Panel Kit ACD316 Wall Kit ACD315
Gas detector single channel 6 modules wide	RFG651
Gas detector two channel 6 modules wide	RFG652
For RFG 652	Panel Enclosure ACD644 Wall Mount Enclosure ACD615
Gas detector three channel 6 modules wide	RFG653

Gas Sensors

Used to monitor gas or carbon monoxide in the air and process a voltage output to the electronic detector RFG.

Features

- Power supply 12V AC
- Plastic housing
- Wall mounting
- Housing dimensions: Commercial 80 x 80 x 42mm

SRS Series

Type	Gas Sensed	IP Rating	Connection Length (m)		Part No.
			3 x 1mm ²	3 x 1.5mm ²	
Commercial	Methane	30	50	75	SRS150
	LPG	30	50	75	SRS250
	CO	30	50	75	SRS350



Gas Detectors

Wall or panel mounted microprocessor based gas detector control units. The range can be configured to meet specific customer requirements. The following parameters can be changed using on board DIP switches.

Features

- Number of sensors from 1 to 3
- 3 Zone protection
- Intrinsically safe option (on or off)
- IP44 protective rating
- 4 - 20mA signal input from each sensor
- EN50194 for explosive gases

Gas Detection Control Panels

Description	Part No.
Gas detection panel single sensor	GS100M
Gas detection panel up to 3 sensors	GS300M
Gas detection panel 4 channel	BX444-M

Gas Sensors

Description	Part No.
Natural gas sensor IP55	SGM595
Natural gas sensor IP30	SG500
Carbon monoxide sensor	CO100AR
Carbon monoxide duct sensor	CO200/DUCT
LPG sensor	SGM595-LPG





Gas Safety Interlock Systems

Merlin Series Kitchen Panels

Type	Part No.
Kitchen gas pressure proving with ventilation interlock	Merlin 2000S
Kitchen fan current monitoring	Merlin CT1250
Kitchen fan air dp monitoring up to 2 fans	Merlin CT1200S
Kitchen fan air dp monitoring - up to 4 fans	Merlin 1500
Kitchen fan air dp monitoring c/w fan speed controller	Merlin CT1400
Kitchen fan air dp monitoring c/w 2 x fan speed controller	Merlin CT1450
Kitchen gas pressure proving with ventilation interlock & 2 x fan speed controllers	Merlin CT1750

External Interlocking Options

Current monitor	PM2
Current sensor	CS1
Current sensor x 2	CS2

Laboratories

Gas pressure proving	Merlin 1000S
Gas pressure proving c/w electric	Merlin 1000S+
Gas pressure proving c/w electric & water	Merlin 1000SW+

Gas Detectors

Methane (NG)	Methane (NG)
Carbon monoxide (CO)	Carbon Monoxide (CO)
LPG	LPG

CO2 Monitoring

CO2 monitor inc PPM & coloured LEDs	CO2 Monitor
CO2 monitor colour LEDs only	CO2-C1



Gas Sensors

A range of stand-alone gas leak alarm Systems for use in commercial / industrial gas installations to provide safety alarm and shutdown facilities on detection of gas leakage.

Features

- 1, 2 & 3 channel options
- Audio and visual alarms
- Adjustable alarm sensitivity
- Relay output for gas shut-off valves
- Relay output for remote alarms
- Auto or manual reset selectable
- Self-diagnosis fault system

GL-CO Series

Description	Part No.
Controllers (DIN-rail mount)	
1-channel, 1 x SPDT	GL-CO-RFG-361
1-channel, 2 x SPDT	GL-CO-RFG-651
2-channel, 2 x SPDT	GL-CO-RFG-652
3-channel, 2 x SPDT	GL-CO-RFG-653
Options	
Panel door mounting kit for RFG361	GL-CO-RFG-FMK3
Panel door mounting kit for RFG65x	GL-CO-RFG-FMK6
Wall mounting kit for RFG65x	GL-CO-RFG-WMK6
Sensors	
Combustibles Sensor (natural gas)	GL-CO-SRS-150
Propane/LPG Sensor	GL-CO-SRS-250
Carbon Monoxide Sensor	GL-CO-SRS-350

Gas Sensors

The GS-S range of 4-20mA loop powered gas sensors are fitted into a robust housing, to detect the following gases:

- Nitrogen dioxide
- Oxygen
- Sulphur dioxide

Features

- 4-20mA output
- Wide supply voltage range (7.5 to 35V DC)
- Excellent long term stability
- Accuracy unaffected by position

GS-S Series

Type	Range	Resolution	Part No.
NO ₂ - Nitrogen Dioxide Sensors	0 to 10ppm	0.1ppm	GS-S-ND10
O ₂ - Oxygen Sensor	15 to 25%	0.1%	GS-S-OX25
SO ₂ - Sulphur Dioxide Sensor	0 to 20ppm	0.5ppm	GS-S-SD20

Duct Smoke Detector

The AX-GS-SD2000 Series Duct Smoke Detector has the option of either a photoelectric sensor or an Ionisation sensor or high temperature applications, the sensor heads are interchangeable. The sensors samples air currents passing through a duct using a range of sampling tubes and has 2 alarm relay outputs to switch on fans, blowers etc and send an alarm to the BMS or alarm panel.

Features

- 24V AC/DC or 120/240V AC versions
- Simple change out of photo or ion heads
- Range of sampling tubes for ducts 1' to 12'
- Clear cover for easy visual inspection
- Built in reset switch that is also alarm test switch
- 2 x alarm relay outputs

AX-GS-SD2000 Series			
Type	Ambient Temp range	Sensor	Part No.
Duct mounted	0 to +70°C	Ionisation	AX-GS-SD2000-N
	0 to +60°C	Photoelectric	AX-GS-SD2000-P

Sampling Tubes	
Description	Part No.
30-60cm Sampling Tube	AX-GS-SD-1
2400-3500cm Sampling Tube	AX-GS-SD-10
600-1200cm Sampling Tube	AX-GS-SD-2.5
100-240cm Sampling Tube	AX-GS-SD-5

AXIO



Emergency STOP Button / Electro Thermal Link

Firemans switch for remote override of ventilation plant in the event of fire.

ES... & TFL Series	
Type	Part No.
Twist knob	ES02
Key lock	ES03
Electro thermal link	TFL72



Duct Smoke Detectors

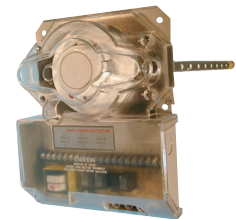
Detects smoke/combustion products in air moving through HVAC ducts.

Features

- Ionisation model - Detects small smoke particles 0.1-1 micron and combustion gases as in fast burning fires.
- Photoelectric model - Best suited to detect large smoke particles 1-10 micron e.g. PVC insulation, fabrics & furnishings.

RWE... Series		
Detector Head	Supply	Part No.
Ionisation	230V AC or 24V AC/DC	RWE-N
Photoelectric	230V AC or 24V AC/DC	RWE-P
Sampling Tube		
750mm		ST750
1500mm		ST1500
3000mm		ST3000

Electro Controls



Duct Smoke Detector

The SD-622 provides relay outputs on the detection of smoke or fault conditions. The alarm output relay can be either manual or auto reset depending on application type.

Features

- Manual or auto reset
- Fault relay output
- Self-test feature

SD-622 Series			
Type	Supply	Protection	Part No.
Duct mounted	24V AC/DC	IP65	SD-622

Sontay®

