



# Red Dragon Valves®

The Solutions Specialists



## Gas Safety Controls

## Gas interlock system - 100 S & 100 CS

### Features:

- Available as a stand-alone panel or supplied complete with air pressure switches (100 S) or integral current sensors (100 CS)
- Comprehensive fan, fire & emergency stop inputs & status indication
- Audible signal for failure & system ready
- On board emergency stop button
- All connections on front panel, leaving the complete enclosure for cable entry
- Clearly-marked terminals for easy installation
- 5 year guarantee





## Gas interlock system - 100 S & 100 CS

The Intelligas 100 S and 100 CS are the simplest, most economical systems that we offer. They meet the requirements of BS 6173 and are easy to install - even if you're not the most technical of installers, our clear instructions and 24 hour help line will guide you through to completion.

The 100 S system has been designed for use with air differential pressure switches. The 100 CS system has 2 on board current sensors as an alternative interlock method to air differential pressure switches.

The 100 CS system is a perfect unit to have on a service van. It can replace units that are using current sensors but also has terminals to connect air differential pressure switches.

### Technical details:

- Enclosure dimensions H190 x W120 x D60
- Electrical supply 230v upto 700w depending on outputs used
- **Outputs:**  
230v ac gas valve output
- **Inputs:**  
2 x air pressure switch interlocks or current sensors (CS Model)  
1 x remote emergency stop  
1 x fire alarm interlock  
On board emergency stop





# 100P Automatic Gas Proving System

## Features:

- Gas pressure proving for elements of IGE/UP/11 compliance.
- On board emergency knock off button.
- Key switch start to prevent tampering.
- Clear user LED display.
- Microprocessor controlled.
- Clearly marked terminals for ease of installation.





## 100P Automatic Gas Proving System

The Intelligas 100P is the latest product in the 100 Series. Designed for the sole purpose of providing a low cost & safe means of controlling a gas supply in the Lab environment.

This system is ideal when you're adding gas proving to an existing interlock system or, in the Lab environment, where CO2 is measured and controlled by another system.

Simple to install and use. It's an ideal solution to regulatory requirements, particularly when budgets are tight.

### Panel Dimensions

H 190 x W120 x D60

### Outputs:

230v gas valve output

### Inputs:

Fire interlock  
Emergency stop  
Gas pressure switch





# INTELLIGAS

## EGI Gas Ventilation Interlock System

### Features:

- Micro-processor controlled BS6173 ventilation interlock system.
- Can be used as boiler house gas detection and fire alarm interface system.
- Low voltage field wiring, sensor outputs and interlocks are all 24v.
- On board power to supply for up to 2 x 0-10v sensor heads (CO2, Methane, LPG etc)





## EGI Gas Ventilation Interlock System

The EGI panel is a ventilation interlock system with the added benefit of gas detection. It is ideal for use in the commercial catering environment where ventilation interlocking is a requirement. If gas detection or CO2 control is a consideration then the EGI panel is equally equipped to deal with it.

The EGI range offers flexibility and reliability. If for example an EGI panel is fitted and after installation it's decided that electric control or gas proving is required, it's just a case of swapping the front fascia panel. The main PCB is common throughout the range and it's only a matter of changing a few dip switches to gain other functionality.

### Technical details:

- Enclosure dimensions 240 x 195 x 90 (keyswitch protrudes upto 50mm more)
- Electrical supply 230v upto 700w depending on outputs used
- **Outputs:**
  - 230v gas valve output
  - 24v aux supply
  - 2 x 0-10v analogue
- **Inputs:**
  - Fan interlock
  - Fire alarm interlock
  - Auxiliary interlock
  - Emergency stop interlock
  - Gas pressure switch
  - 2 x 0-10v analogue



## EGIP-1 Automatic Gas Proving & Interlock System

### Features:

- Combined gas proving and ventilation interlock control
- Adjustable purge and prove time
- Automatic detection of downstream leaks and open gas valves
- Simple to install single valve and pressure switch arrangement
- Low voltage field wiring, sensor outputs and interlocks are all 24v
- On board power to supply for up to 2 x 0-10v sensor heads (CO2, Methane, LPG etc)
- Also supply BD100 compliance for boiler houses







## EGIP-1 Automatic Gas Proving & Interlock System

The EGIP is a multifunction gas pressure proving and ventilation interlock system. It is ideal for use in the commercial kitchen where some or all of the appliances don't have FFD's. This system is equally at home in the lab environment or boiler room and, in particular, where CO2 control or explosive gas detection is a consideration.

The unit can be set up to provide bb100 compliance in the boiler room, you can select between automatic reset after mains failure or after both mains failure and fire alarm test.

Our specific software, tailored for the school laboratory provides CO2 control regardless of whether the gas or electric is in use. When the system is off i.e the gas or electric isn't in use, if the CO2 rises above the set point of POT1 the system will operate "aux relay 1" this can in turn operate ventilation fans to ventilate the room. When the gas is turned on for use the "aux relay 1" is operated ensuring the ventilation is on ready for the use of gas. Should the CO2 level rise above the setting of POT2 then the gas will be isolated for safety. Software can always be tweaked to allow for specific site requirements.

The EGI range offers flexibility and reliability. If for example an EGIP is fitted to a lab and after installation it's decided that electric control is required, it's just a case of swapping the front fascia panel. The main PCB is common throughout the range and it's only a matter of changing a few dip switches to gain extra functionality.

### Technical details:

- Enclosure dimensions 240 x 195 x 90 (keyswitch protrudes upto 50mm more)
- Electrical supply 230v upto 700w depending on outputs used
- **Outputs:**
  - 230v gas valve output
  - 24v aux supply
  - 0 - 10v analogue
- **Inputs:**
  - Fan interlock
  - Fire alarm interlock
  - Auxiliary interlock )
  - Emergency stop interlock
  - Gas pressure switch
  - 2 x 0 - 10v analogue



## tempus+

### Features:

- TB140 compliant 24 hour emergency bypass feature.
- Energy saving 0-10v fan speed control option.
- Gas proving or interlock only selectable in settings (gas pressure switch may be required).
- 3rd level protection by way of traffic light CO2 level indicator.
- CO2 detector included.
- PCB mounted, interlock status LED's enables speedy problem diagnosis and aids installation.
- 24 hour bypass "timeout" reminders at certain time intervals 12, 6 and 2.
- 5 year "back to base" warranty.





# INTELLIGAS Gas Safety & Control Systems

## tempus+

The tempus+ system provides not only compliance with BS6173 in a commercial kitchen but it also provides the added benefits of the legislation laid out in technical bulletin 140. This unit covers all bases because of the site selectable option to use the system as a gas proving or straight forward interlock panel.

The defining feature of the tempus+ is its ability, in the event of a ventilation failure, to give end users a 24 hour window of gas usage. This gives them more than enough time to call an engineer without any downtime and loss of earnings.

After ventilation failure or failure of the primary interlock device such as an air pressure switch, the system, by way of a key switch, can be put into bypass mode. Once in bypass the tempus+ will look at the CO2 level in the kitchen and ignore the primary interlock input for a pre-set period of 24 hours.

In normal operation the tempus+ constantly samples the air quality and so can regulate the fan speeds in accordance with the CO2 level in the kitchen. This provides an energy saving and ultimately a money saving solution for end users.

The 24hour window and energy saving options of the tempus+ makes the system a formidable opponent to lost income for restaurants and a natural choice for restaurant owners.

### Technical details:

- Enclosure dimensions 240 x 195 x 90 (keyswitch protrudes upto 50mm more)
- Electrical supply 230v upto 700w depending on outputs used
- **Outputs:**
  - 230v gas valve output
  - 24v CO2 detector output x 2
  - 0-10v automatic fan speed control
- **Inputs:**
  - Fan interlock
  - Fire alarm interlock
  - Auxiliary interlock (switch selectable,time delayed)
  - Emergency stop interlock
  - Gas pressure sensor
  - 0-10v CO2 detector x 2.





# INTELLIGAS

## Kitchen Ventilation Controller (KVM)

### Features:

- Onboard supply fan and extract fan speed controllers (up to 8 amps)
- In built fan current sensors (terminals available for the use of air pressure switches if desired)
- Comprehensive fan, fire & emergency stop status indication
- Fan speed PCB is separate to the interlock PCB
- On board emergency stop button
- Clearly-marked terminals for easy installation
- Fire alarm interlock





## Kitchen Ventilation Controller (KVM)

The Intelligas KVM system has all the benefits of the popular 100 CS panel but with the added benefit of having built in fan speed controllers.

This system provides a complete ventilation control solution for the typical kitchen installation. Fan speed controllers are built on a separate PCB so, if in the event of a damaged speed controller as a result of a fan failure, only the speed controller will require replacement.

Minimum fan speed pots are mounted on the main PCB to enable the commissioning of the system and thus negating nuisance tripping of the interlock.

### Technical details:

- Enclosure dimensions 240 x 195 x 90 (keyswitch protrudes upto 50mm more)
- Electrical supply 230v upto 700w depending on outputs used
- **Outputs:**
  - 230v gas valve output
  - Variable speed supply fan output
  - Variable speed extract fan output
- **Inputs:**
  - 230vac 5amp
  - 2 x Onboard fan current sensors
  - 1 x Fire alarm interlock
  - 1 x Remote emergency stop connections
  - Onboard emergency stop



## Multi Function Controller MSC 101

### Features:

- Combined gas proving and ventilation interlock control
- Adjustable purge and prove time
- Automatic detection of downstream leaks and open gas valves
- Simple to install single valve and pressure switch arrangement
- Low voltage field wiring, sensor outputs and interlocks are all 24v
- On board power to supply for up to 2 x 0-10v sensor heads (CO<sub>2</sub>, Methane, LPG etc)
- Also supply BD100 compliance for boiler houses
- Keyswitch controlled relay output for the connection of an electrical contactor





## Multi Function Controller MSC 101

The MSC101 is a microprocessor based multi services & multi function controller. It provides not only the control of building services but also compliance with building bulletin 101 (carbon dioxide levels in classrooms). This makes the unit ideally suited to the school laboratory environment for example.

The capabilities of the MSC101 may at first sound complicated but the functionality of the unit is controlled by dip switches mounted on the main PCB and are simple to set up. We've taken care of the complicated bit in the software, so installers don't have to. As always clear and concise instructions are provided as is the 24 hour technical support line.

We think we've got all bases covered but as always we can provide bespoke software to satisfy all requirements. The unit is future proofed as extra interlock terminals and 0 - 10v outputs are provided. The unit can process 0 – 10v inputs or switched inputs making it completely “open protocol” meaning virtually any sensors existing or new can be connected and work effectively to satisfy the regulations.

The system can be wired to communicate with building BMS systems and there are terminals for the external switching on and off of the system. This means the system can be shut off at the end of the day to ensure energy wastage is kept to a minimum and gas and electric services are safely isolated.

### Technical details:

- Enclosure dimensions 240 x 195 x 90 (keyswitch protrudes upto 50mm more)
- Electrical supply 230v upto 700w depending on outputs used
- **Outputs:**
  - 230v Gas valve
  - 230v Water valve
  - 230v contractor supply
  - 3 x aux relay outputs
  - 2 x 0-10v analogue
- **Inputs:**
  - Switched or 0-10v CO2 detector
  - BMS all off digital in
  - Fire alarm
  - Aux interlock
  - Emergency stop
  - 2 x 0-10v analogue





# Gas Detection & Monitoring System (GDMS)

## Features:

- 2 zones expandable to 4.
- 1 to 4 detectors per zone (with the use of a zone expander).
- Zone expanders available separately.
- Faulty / detector removed warning.
- Zone fault, pre alarm and alarm indicators.
- Pre alarm and alarm threshold individually set per zone.
- Time multiplexed output for real time reporting to BMS.
- Connections for indicator beacons and sounders.
- Fire alarm and emergency stop inputs.
- Uses industry standard 2-10 volt output, 3 or 4 wire connection.
- 5 year “back to base” warranty.







## Gas Detection & Monitoring System (GDMS)

The Intelligas GDMS system provides a cost effective and aesthetically pleasing solution to gas detection needs.

With a variety of outputs and zone options the GDMS won't leave you high and dry onsite wanting that extra relay output or detector option. Simple easy to use "pots" on the main PCB adjust the pre-alarm and alarm set points. Relay outputs can be used to control any number of indicating devices.

For a more comprehensive report on the system status our pioneering "time multiplexed output" can be fed into a Bacnet multiplexer or other such device to give a real time report on the system status.

Standard 2-10v detector heads can be used with the system, all of which are available from stock.

### Technical details:

- Enclosure dimensions 240 x 195 x 90 (keyswitch protrudes upto 50mm more)
- Electrical supply 230v upto 700w depending on outputs used

• **Outputs:**  
230v 3.15A 50hz  
Up to 16 x 2-10v

• **Inputs:**  
24v 2A power supply  
Multiple relay outputs (general and per zone).  
0-10v multiplexed.  
24v beacon output.  
24v sounder output.  
Optional gas valve output.





Red Dragon Valves®

## Ancillaries

### Switches and sensors

- EMERGENCY STOP (KNOCK OFF) BUTTONS
- CO2 DETECTORS
- DIFFERENTIAL PRESSURE SWITCHES (AIR FLOW DETECTION)
- GAS PRESSURE TRANSDUCERS & SWITCHES
- FAN CURRENT SENSOR
- THERMAL MASS GAS FLOW METER

### Solenoid valves

- AUTO RESET EN161 GAS SOLENOID VALVES
- MANUAL RESET EN161 GAS SOLENOID VALVES
- ATEX CERTIFIED EN161 GAS SOLENOID VALVES UP TO DN150
- ATEX CERTIFIED EN161 SOLENOID PILOT OPERATED VALVES UP TO DN300
- DUAL BODY EN161 SOLENOID VALVES
- OPENING SPEED CONTROL
- HIGH PRESSURE UP TO 40BAR
- POSITION FEEDBACK SWITCHES
- 2 STEP OPERATION FOR MIN & MAX FLOW





**Red Dragon Valves®**

## **Some Of Our Other Products...**

### **Solenoid Valves**

We have a range of Solenoid Valves for a huge variety of applications including air, water, light oil, steam, cryogenic, liquid CO2 and many more. ATEX certification is also available for many of our valves.

### **Air/Gas Preparation and Flow Control Instrumentation**

We have a range of high quality European manufactured regulators, filters, valves and accessories all in 316L stainless steel and carrying ATEX and GOST certification. Some models are available in aluminium alloys suitable for use in ammonia plants or where weight saving is an important factor.

### **Condition Monitoring**

Air & gas quality is crucial to production standards, plant reliability and user safety. Our range of dew point, flow, oil content, power, temperature, pressure, particle and leakage sensors combine with displays, data logging and software to offer complete monitoring solutions for improved plant performance and reduced operating costs.

### **Bespoke Solutions**

Red Dragon can produce individual components or complete assemblies and turnkey control panels designed to your specific requirements.

Please contact us to discuss how we can help further.

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