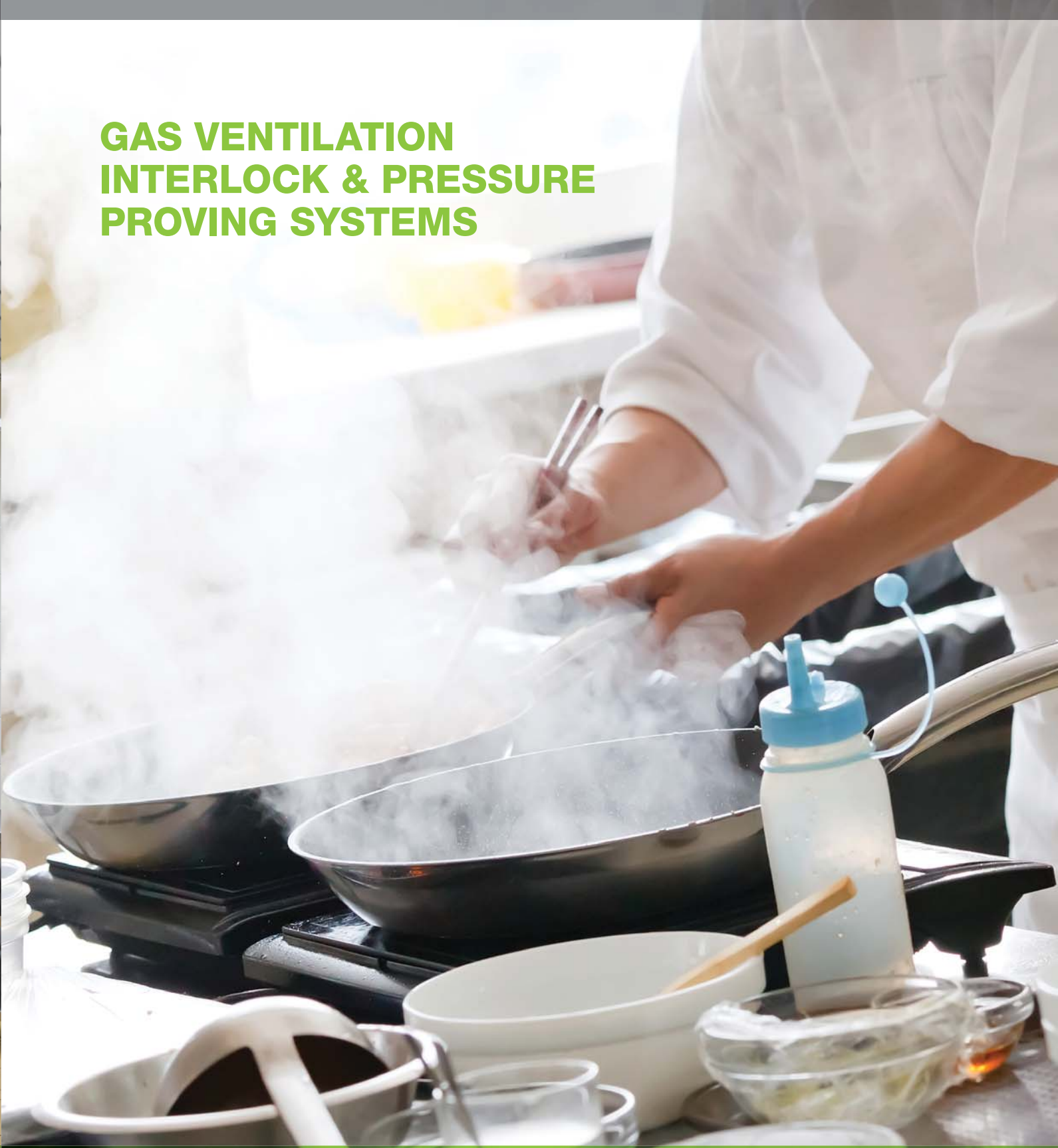


# GAS VENTILATION INTERLOCK & PRESSURE PROVING SYSTEMS



VENTILATION INTERLOCK KITCHEN EQUIPMENT - ENGINEERED IN THE UK TO MEET BS6173

**THE MERLIN RANGE**  
DESIGNED FOR COMMERCIAL KITCHENS

**S&S**<sup>TM</sup>  
NORTHERN  
[www.snsnorthern.com](http://www.snsnorthern.com)

# S&S NORTHERN

## GAS VENTILATION, INTERLOCK SYSTEMS & PRESSURE PROVING SPECIALISTS

*S&S Northern is one of the UK's leading designers, manufacturers and suppliers of the latest range of gas safety products including gas ventilation and gas interlock systems for use in commercial kitchens. We also design and manufacture a full range of gas pressure proving systems and gas detection systems for school laboratories and boiler houses.*

S&S Northern was established in 1995 and has become the trusted name to provide gas safety and installation solutions to the commercial market throughout the UK. Our fully-qualified designers, engineers and fitters keep up to date with industry changes and health and safety requirements, meaning that our customers can rest assured that the service and technical back-up they receive is second to none. A family-run business with excellent customer service and value for money at its heart, S&S Northern's position as the UK's gas safety experts is based on nearly two decades of excellent customer service and satisfaction.

### **Meeting Gas Safety Standards Is Our Business And Our Passion**

The gas ventilation and interlock panels we manufacture for commercial kitchen applications will allow you to fully meet the requirements of BS6173. We supply gas pressure proving systems for use when flame failure devices are not fitted to catering equipment, ensuring a safe working environment at all times. Also available is a full range of ventilation and gas interlock panels, which can be used if gas pressure proving is not required. Six of our systems have recently been installed in the Palace of Westminster, so whether it's a single gas system for a popular takeaway restaurant or a number of systems for the nation's seat of government, we are able to offer a complete gas system to suit every customer.

### **Advantages Of Working with S&S Northern Ltd**

- Full technical team available
- Competitively priced
- Complete After Sales Care
- First rate customer service
- Full product catalogue available at [www.snsnorthern.com](http://www.snsnorthern.com)
- Simple and easy installation
- All S&S Northern systems available on next day
- Web Support
- Full product operating and maintenance available online.
- Full UK coverage



# CONTENTS

## FIND THE PANEL YOU NEED IN AN INSTANT

	Gas ventilation interlocking system	Fire alarm interface	Monitor up to 2 fans	Built-in current monitors	CO2 mode facility	Built in Speed Controller	Monitor up to 4 fans	External gas detector	Gas pressure proving system
CT1200S PAGE 4	Green	Green	Green	White	White	White	White	White	White
CT1250 PAGE 6	Green	Green	Green	Green	White	White	White	White	White
CT1650 PAGE 8	Green	Green	Green	Green	Green	White	White	White	White
CT1400 PAGE 10	Green	Green	Green	Green	Green	Green	White	White	White
CT1450 PAGE 12	Green	Green	Green	Green	Green	Green	White	White	White
CT1500S PAGE 14	Green	Green	Green	White	Green	White	Green	Green	White
CT2000S PAGE 16	Green	Green	Green	White	Green	White	Green	Green	Green

# THE MERLIN RANGE

## CT1200S SYSTEM

*The Merlin CT1200S ventilation interlock system is designed specifically for use in commercial kitchens to meet BS6173. This panel is to be used when the kitchen appliances do have flame failure devices, therefore Gas proving is not a requirement.*

The Merlin CT1200S acts as an interlock between the ventilation system and the gas solenoid valve.

This system can work in conjunction with both external current monitors and air pressure differential switches in order to interlock with up to 2 fans.



### Key Features of the Merlin CT1200S System

- Allows compliance with BS6173 for commercial kitchens
- To be used when all appliances have flame failure devices
- Interlocking with fans using Air pressure differential switches.
- Can also be used to interlocked with Merlin CS1 and CS2 Switches
- Reliable method of interlock, with no moving parts there's little to go wrong
- BMS Terminals Normally Closed or normally open and common.
- Will accept remote emergency knock-off buttons
- Clear LED display for system indications
- Easy installation
- Covered by S&S Northern Ltd 3 year warranty.





# KITCHEN EQUIPMENT ENGINEERED TO MEET BS6173

To operate the Merlin CT1200S the fans should be turned to the “on” position, once our panel receives a signal to indicate the fans are operating turn the key to the “on” position this will open the gas solenoid valve. If the fans should fail, the “fan fault” LED on the panel will illuminate and the gas solenoid valve will close. When there is a “fan fault” the supply fan or extract fan led will flash to inform the electrician or kitchen staff which fan has failed. Installation for the Merlin CT1200S is easy as there is no calibration. Wiring of the system is straightforward using volt free connections for all air pressure differential switches and remote emergency stops. A corgi-registered installer would be required to fit the gas solenoid valve. All Gas solenoid valves supplied by S&S Northern carry a full 3-year manufactures warranty.

We only supply the highest quality air pressure differential switches for increased longevity and reliability. Electrical connections are made by use of two-core cable. Incorporated in the Merlin CT1200S is a 10 seconds Airflow dropout delay. In the event of interruptions to airflow for less than 10 seconds the delay will allow the gas solenoid valve to remain open, preventing nuisance tripping. Should the airflow be interrupted for 10 seconds or more the fan fail LED will illuminate and the gas solenoid valve will close.

Alternatively to air pressure differential switches, the Merlin CT1200S system can also be used to work in conjunction with external current monitors, the Merlin CS1 and CS2.



## Merlin CT1200S System Wiring Diagram

1. 230v AC Supply
2. 230v AC output to valve
3. Terminal for BMS connections
4. Remote emergency stop Input
5. Fan sensor input- close when fan on -  
(for use with PD switches)

S&S Northern has a full technical team available on 01257 470 983 or if you are based in the South East please call 01702 291 725

## Merlin CT1200S Box Dimensions

Height	113mm
Length	163mm
Depth	62mm



# THE MERLIN RANGE

## CT1250 SYSTEM

*The Merlin CT1250 ventilation interlock system, with built in current monitoring, is designed specifically for use in commercial kitchens to meet BS6173. This panel is to be used when the kitchen appliances do have flame failure devices, therefore Gas proving is not a requirement.*

The Merlin CT1250 acts as an interlock between the ventilation system and the gas solenoid valve.

The system has built in current monitors in order to interlock with up to 2 fans and offers an alternative to using air pressure differential switches.



### Key Features of the Merlin CT1250 System

- Allows Compliance with BS6173 for commercial kitchens
- To be used when all appliances have flame failure devices
- 2 built in current monitors can be easily adjusted to the user's requirements
- Reliable method of interlock, with no moving parts there's little to go wrong
- BMS Terminals Normally Closed or Normally open and common.
- Will accept remote emergency knock-off buttons.
- Can monitor 2 fans with running currents between 0.1A – 20A.
- Clear LED display for system indications
- Can be used when pressure differential switches cannot be used e.g. wall-mounted fans
- Straightforward to install and calibrate. The CT1250 can be easily adjusted to the user's requirements
- Easy installation
- Covered by S&S Northern Ltd 3 year warranty.

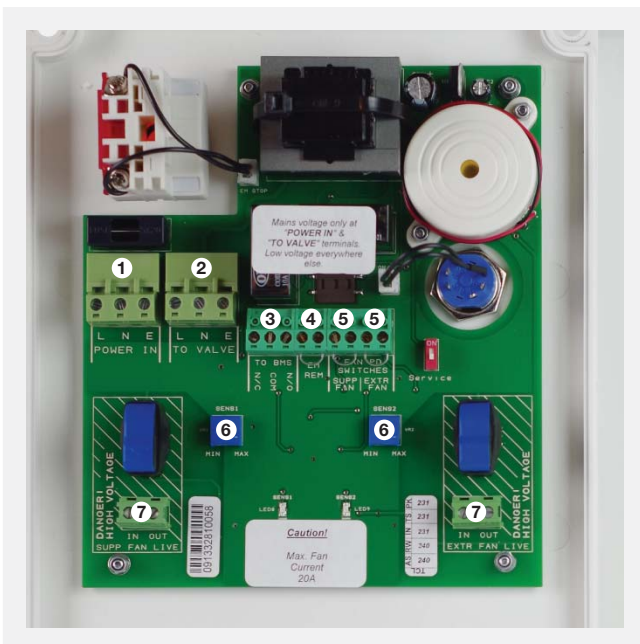
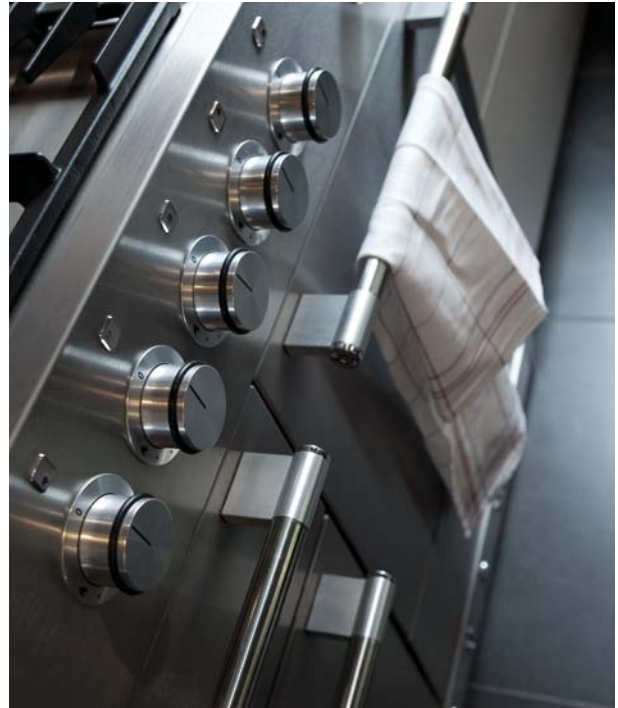


# KITCHEN EQUIPMENT ENGINEERED TO MEET BS6173

When the fan is turned “on” the CT1250 monitors the electrical current going to the fan motor, when there is sufficient current going to the fan motor our panel receives a signal to indicate the fans are operating. Turning the key to the “on” position will open the gas solenoid valve. If the fans should fail, the “fan fault” LED on the panel will illuminate and the gas solenoid valve will close.

When there is a “fan fault” the supply fan or extract fan led on the Merlin CT1250 panel fascia will flash. This informs the electrician or kitchen staff which fan has failed. Operating the system in the above manner will ensure the requirements of BS6173 are fully met where all the catering equipment has flame failure devices fitted. Wiring of the system is straightforward using volt free connections for all BMS and remote emergency stops. A corgi-registered installer would be required to fit the gas solenoid valve.

Calibration of the current monitor is easy, once wired set the fan speed controller to setting 1 (or low setting) for example. Turn the blue rotary switches anti-clockwise until the green LED goes out, and then slowly turn clockwise until the green LED is again illuminated. This will give you the minimum current requirement, if the fan is turned off the LED will go out; send a signal to the Merlin panel, which will in turn shut off the gas.



## Merlin CT1250 System Wiring Diagram

1. 230v AC Supply
2. 230v AC output to valve
3. Terminal for BMS connections
4. Remote emergency stop Input
5. Fan sensor input- close when fan on - (for use with PD switches)
6. Pots are adjusted to increase or decrease sensitivity
7. Live wire going to the fan goes in and back out onto the fan

**S&S Northern has a full technical team available on 01257 470 983 or if you are based in the South East please call 01702 291 725**

### Merlin CT1250 Box Dimensions

Height	254mm
Length	178mm
Depth	62mm



# THE MERLIN RANGE

## CT1650 SYSTEM

*The Merlin CT1650 ventilation interlock system is specifically designed for use in commercial kitchens to meet BS6173. This panel is designed for use when kitchen appliances do have flame failure devices fitted, therefore gas proving is not a requirement.*

The Merlin CT1650 System acts as an interlock between the ventilation system and the gas solenoid valve.

The system uses built-in current monitors in order to interlock with up to 2 fans. The Merlin CT1650 is fitted with CO2 Mode which suits new Gas Safe Bulletin TB140 and allows the kitchen to have access to their gas supply for up to 24 hours in the event of a fan fault providing they have a CO2 Monitor fitted and the air quality is at a safe level.



### Key Features of the Merlin CT1650 System

- Allows Compliance with BS6173 for commercial kitchens and also suits TB140
- To be used when all appliances have flame failure devices
- Allows Kitchen Staff to have gas supply for up to 24 hours in event of a fan failure using the Merlin CO2 Monitor
- 2 built-in current monitors can be easily adjusted to the user's requirements
- Reliable method of interlock, with no moving parts there is little to go wrong
- BMS Normally Closed or Normally Open and Common
- Will accept remote and emergency knock-off buttons
- Can monitor 2 fans with running currents between 0.1A – 20A.
- Clear LED display for system indication
- Includes auto-calibration to make it easy on installation
- Covered by S&S Northern Ltd 3 year warranty.



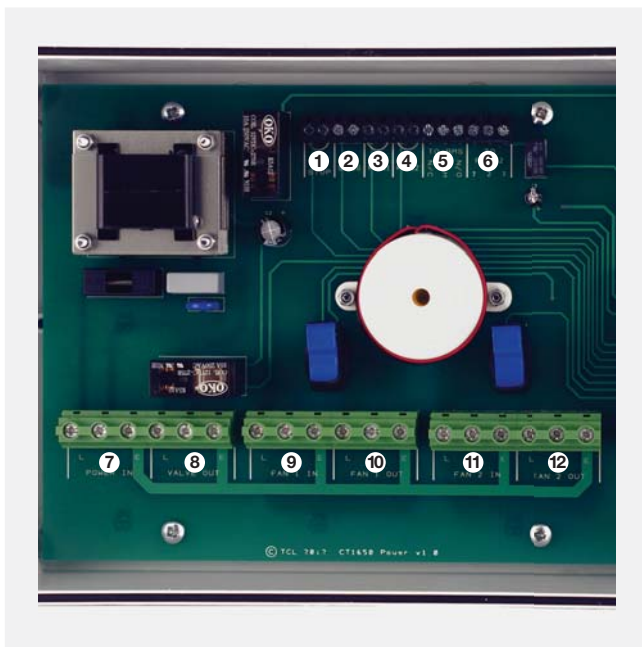


# KITCHEN EQUIPMENT ENGINEERED TO MEET BS6173

When the fan is turned “on” the CT1650 monitors the electrical current going to the fan motor, our panel would then receive a signal to indicate the fans are in operation, manually turning the key to the “on” position will open the gas solenoid valve. If the fans should fail or stop operating, the “fan fault” LED on the panel will illuminate and the gas solenoid valve will close. The installer is able to set their low limits to ensure that there is always an adequate level of ventilation in the kitchen using an auto-calibration facility on the Merlin CT1650.

The Merlin CT1650 also suits the new Gas Safe TB140 as it is fitted with CO2 mode, assuming a carbon dioxide sensor is fitted this allows the kitchen to have access to the gas supply in the event of fan failure. When the ‘fan fault’ light is illuminated red, the kitchen staff can hold the CO2 Mode button in for 5 seconds the ‘fan fault’ will then go off and the CO2 Mode will come on.

The Merlin CT1650 System and the external Merlin CO2 Monitor will monitor the CO2 Levels only and allow the gas solenoid valve to stay open for a maximum of 24 hours assuming the CO2 are is a safe level. If the CO2 level reaches 4500ppm the panel will go into alarm and the gas solenoid valve will close.



**S&S Northern has a full technical team available on 01257 470 983 or if you are based in the South East please call 01702 291 725**

## Merlin CT1650 System Wiring Diagram

1. Remote Emergency Stop Input/Fire Alarm Low Voltage Connection
2. CO2 Monitor (External Part)
3. Fan 1 PD Switch (External Part)
4. Fan 2 PD Switch (External Part)
5. Terminal for BMS Connections
6. FS1&2 Output (External Part)
7. Mains Input 230V Single Phase
8. Gas Solenoid Valve Output, 230V
9. Fan 1, Mains Input 230V Single Phase
10. Fan 1, Mains Output 230V Single Phase
11. Fan 2, Mains Input 230V Single Phase
12. Fan 2, Mains Output 230V Single Phase

## Merlin CT1650 Box Dimensions

Height	178mm
Length	254mm
Depth	62mm



# THE MERLIN RANGE

## CT1400 SYSTEM

*The Merlin CT1400 System is microcontroller based ventilation interlock & fan speed controller for one single phase fan, this system has been designed specifically for use in commercial kitchens to meet BS6173. This panel is to be used when the kitchen appliances do have flame failure devices, therefore gas proving is not a requirement.*

The Merlin CT1400 acts as an interlock and control between the ventilation system and the gas solenoid valve. The system has a built-in current monitor and speed controller to interlock and control one single phase fan with running current 0.3A and 12A. The Merlin CT1400 is fitted with CO2 Mode which suits new gas safe bulletin TB140 and allows the kitchen to have access to their gas supply for up to 24 hours in the event of fan fault as long as they have a CO2 Monitor fitted and the air quality is at a safe level.



### Key Features of the Merlin CT1400 System

- Allows Compliance with BS6173:2009 for commercial kitchens and also suits TB140
- To be used when all appliances have flame failure devices
- Interlocks, and works as a fan controller all in one box
- Allows Kitchen Staff to have gas supply for up to 24 hours in event of a fan failure using the Merlin CO2 Monitor
- Includes Auto-Calibration to make it easy on installation
- BMS Normally Closed or Normally Open and Common
- Will accept remote and emergency knock-off buttons
- Can control one fan with current between 0.3A and 12A
- Clear LED display for system indications
- Covered by S&S Northern Ltd 3 year warranty



# KITCHEN EQUIPMENT

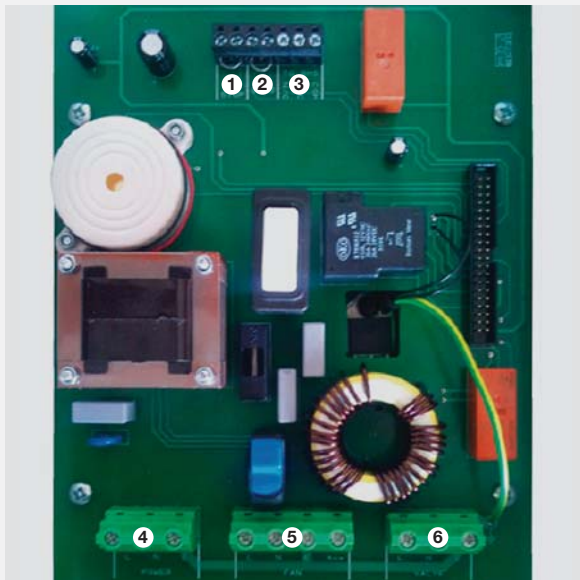
## ENGINEERED TO MEET BS6173

The Merlin CT1400 can monitor and control one single phase fan up to 12A (minimum 0.3A) The system uses an auto-calibration. When the system is first fitted and the correct wiring is in place, the installer must press and hold the 'calib' button inside the Merlin 1400 System, this is located on the back of the front fascia. After 3 seconds the panel will run the fan through 9 different speeds and then the system will refer to these values to constantly monitor the status of the fan. The installer is able to set their high and low limits to ensure that there is always an adequate level of ventilation in each particular kitchen.

When switching the system on, as long as the power LED is illuminated red then the Fan Control Switch should be put in the "on" position, and then the "Up" and "Down" arrows should be used to adjust the ventilation speed to the user's need. The gas key switch can be turned to "on", the supply and extract fan LED should be

illuminated green if the Merlin CT1400 System is satisfied the fans are running at the correct speed, the gas valve will open and "Gas on" LED will be illuminated.

The Merlin CT1400 also suits the new Gas Safe TB140 as it is fitted with CO2 mode, assuming a carbon dioxide sensor is fitted this allows the kitchen to have access to the gas supply in the event of fan failure. When the 'fan fault' light is illuminated red, the kitchen staff can hold the CO2 Mode button in for 5 seconds the 'fan fault' will then go off and the CO2 Mode will come on. The Merlin CT1400 System and the external Merlin CO2 Monitor will monitor the CO2 Levels only and allow the gas solenoid valve to stay open for a maximum of 24 hours considering the CO2 Levels are at a safe level. If the CO2 level reaches 4500ppm the panel will go into alarm and the gas solenoid valve will close.



### Merlin CT1400 System Wiring Diagram

1. Remote Emergency Stop Input/Fire Alarm Low Voltage Connection
2. External CO2 Monitor
3. Terminal for BMS Connections
4. Mains Input 230V Single Phase
5. Power Output 230V to fan
6. Mains Output 230V to Gas Solenoid Valve

S&S Northern has a full technical team available on 01257 470 983 or if you are based in the South East please call 01702 291 725

### Merlin CT1400 Box Dimensions

Height	254mm
Length	178mm
Depth	118mm



# THE MERLIN RANGE

## CT1450 SYSTEM

*The Merlin CT1450 System is microcontroller based ventilation interlock & fan speed controller for two single phase fans, this system has been designed specifically for use in commercial kitchens to meet BS6173. This panel is to be used when the kitchen appliances do have flame failure devices, therefore gas proving is not a requirement.*

The Merlin CT1450 acts an interlock and control between the ventilation system and the gas solenoid valve. The system has two built in current monitors and speed controllers to interlock and control two single phase fans with running currents between 0.3A and 8A. The Merlin CT1450 is fitted with CO2 Mode which suits new gas safe bulletin TB140 and allows the kitchen to have access to their gas supply for up to 24 hours in the event of fan fault providing they have a CO2 Monitor fitted and the air quality is at a safe level.



### Key Features of the Merlin CT1450 System

- Allows Compliance with BS6173:2009 for commercial kitchens and also suits TB140
- Clear LED display for system indications
- To be used when all appliances have flame failure devices
- Interlocks, and works as a fan controller all in one box
- Allows Kitchen Staff to have gas supply for up to 24 hours in event of a fan failure using the Merlin CO2 Monitor
- Includes Auto-Calibration to make it easy on installation
- BMS Normally Closed or Normally Open and Common
- Will accept remote and emergency knock-off buttons
- Can control two fans with current between 0.3A and 8A
- Covered by S&S Northern Ltd 3 year warranty





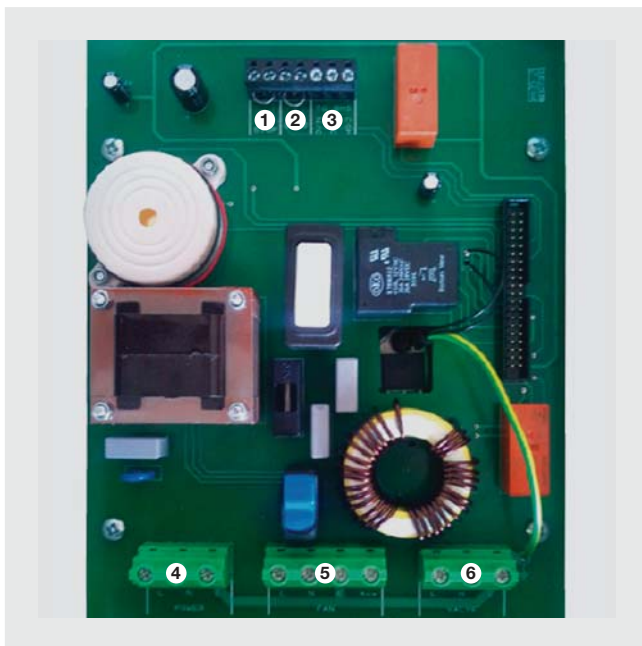
# KITCHEN EQUIPMENT ENGINEERED TO MEET BS6173

The Merlin CT1450 can monitor and control two single phase fans up to 8A (minimum 0.3A) The system uses an auto-calibration. When the system is first fitted and the correct wiring is in place, the installer must press and hold the 'calib' button inside the Merlin 1450 System, this is located on the back of the front fascia. After 3 seconds the panel will run the fan through 9 different speeds and then the system will refer to these values to constantly monitor the status of the fan. This process must be repeated for fan 1 and fan 2. The installer is able to set their high and low limits to ensure that there is always an adequate level of ventilation in each particular kitchen.

When switching the system on, as long as the power LED is illuminated red then the Fan Control Switch should be put in the "on" position, and then the "Up" and "Down" arrows should be used to adjust the ventilation speed to the user's need. The gas key switch can be turned to "on", the

supply and extract fan LED should be illuminated green if the Merlin CT1450 System is satisfied the fans are running at the correct speed, the gas valve will open and "Gas on" LED will be illuminated.

The Merlin CT1450 also suits the new Gas Safe TB140 as it is fitted with CO2 mode, assuming a carbon dioxide sensor is fitted this allows the kitchen to have access to the gas supply in the event of fan failure. When the 'fan fault' light is illuminated red, the kitchen staff can hold the CO2 Mode button in for 5 seconds the 'fan fault' will then go off and the CO2 Mode will come on. The Merlin CT1450 System and the external Merlin CO2 Monitor will monitor the CO2 Levels only and allow the gas solenoid valve to stay open for a maximum of 24 hours considering the CO2 Levels are at a safe level. If the CO2 level reaches 4500ppm the panel will go into alarm and the gas solenoid valve will close.



## Merlin CT1450 System Wiring Diagram

1. Remote Emergency Stop Input/Fire Alarm Low Voltage Connection
2. External CO2 Monitor
3. Terminal for BMS Connections
4. Mains Input 230V Single Phase
5. Power Output 230V to fan
6. Mains Output 230V to Gas Solenoid Valve

S&S Northern has a full technical team available on 01257 470 983 or if you are based in the South East please call 01702 291 725

## Merlin CT1450 Box Dimensions

Height	254mm
Length	178mm
Depth	118mm



# THE MERLIN RANGE

## CT1500S SYSTEM

*The Merlin 1500S ventilation interlock system is specifically designed for use in commercial kitchens to meet BS6173. This panel is designed for use when the kitchen appliances do have flame failure devices fitted, therefore gas proving is a not a requirement.*

The Merlin 1500S System acts as an interlock between the ventilation system and the gas solenoid valve. The systems can work in conjunction with both current monitors and air pressure differential switches in order to interlock with up to 4 fans.

The Merlin 1500S is fitted with CO2 Mode which suits new Gas safe bulletin TB140 and allows the kitchen to have access to their gas supply for up to 24 hours in the event of a fan fault as long as they have a CO2 Monitor fitted and the air quality is at a safe level.



### Key Features of the Merlin CT1500S System

- Allows Compliance with BS6173 for commercial kitchens and also suits TB140
- Clear LED display for system indications
- BMS Normally Closed or Normally Open and Common
- Allows Kitchen Staff to have gas supply for up to 24 hours in event of a fan failure using the Merlin CO2 Monitor
- Interlocking with fans using either Air PD switches or fan current sensors
- Easy installation
- Will accept remote and emergency knock-off buttons
- Covered by S&S Northern Ltd 3 year warranty.



# KITCHEN EQUIPMENT ENGINEERED TO MEET BS6173

Ventilation/gas Interlock ensures the gas solenoid valve cannot be opened until any fans connected to the panel are operating. If at any time the fan fails a signal will be sent to close the gas solenoid valve, the panel will read "fan fault" and the "LED" relating to the fan that has failed will flash.

The Merlin 1500S also suits the new Gas Safe TB140 as it is fitted with CO2 mode, assuming a carbon dioxide sensor is fitted this allows the kitchen to have access to the gas supply in the event of fan failure. There is a CO2 mode button, when the 'fan fault' light is illuminated red, the kitchen staff can hold the CO2 Mode button in for 5 seconds the 'fan fault' will then go off and the CO2 Mode will come on. The Merlin 1500S System and the external Merlin CO2 Monitor will monitor the CO2 Levels only and allow the gas solenoid valve to stay open considering the CO2 Levels are at a

safe level if the CO2 level reaches 4500ppm the panel will go into alarm and the gas solenoid valve will close. The CO2 Mode stays on for 24 hours before the gas will shut-off.

Natural gas, carbon monoxide and LPG detectors can be used with the Merlin 1500S. If the detector goes into alarm due to a build-up of gas the system will sound an alarm and shut the gas solenoid valve preventing further gas leakage and the "gas detected" light will be illuminated red.



## Merlin CT1500S System Wiring Diagram

1. 230v AC Supply
2. 230v AC output to valve
3. Input - close when fan on  
(for use with PD switches or current monitor)
4. Terminal for BMS connections
5. Disabled
6. Remote emergency stop button input
7. Gas detector input & Permanent 12v DC output
8. CO2 Monitor output
9. Permanent 12v DC output  
(normally used to power PM2 current monitor)

S&S Northern has a full technical team available on 01257 470 983 or if you are based in the South East please call 01702 291 725

## Merlin CT1500S Box Dimensions

Height	178mm
Length	254mm
Depth	62mm



# THE MERLIN RANGE

## CT2000S SYSTEM

*The Merlin 2000S ventilation interlock system is specifically designed for use in commercial kitchens to meet BS6173. This panel is designed for use when the kitchen appliances do not have flame failure devices fitted, therefore gas proving is a requirement.*

The Merlin 2000S System acts as an interlock between the ventilation system and the gas solenoid valve. The system is compatible with both current monitors and air pressure differential switches in order to interlock with up to 4 fans. The Merlin 2000S is fitted with CO2 Mode which suits new Gas safe bulletin TB140 and allows the kitchen to have access to their gas supply for up to 24 hours in the event of a fan fault as long as they have a CO2 Monitor fitted and the air quality is at a safe level. The Merlin 2000S can also work in conjunction with natural gas, carbon monoxide and LPG sensors.



### Key Features of the Merlin CT2000S System

- Allows Compliance with BS6173 for commercial kitchens and also suits TB140
- Clear LED display for system indications
- Gas proving for when kitchen appliances are not fitted with flame failure devices
- BMS Normally Closed or Normally Open and Common
- Low Pressure monitoring for incoming gas supply
- Allows Kitchen Staff to have gas supply for up to 24 hours in event of a fan failure using the Merlin CO2 Monitor
- Interlocking with fans using either Air PD switches or fan current sensors to interlock up to 4 fans
- Easy Installation
- Will accept remote emergency knock-off buttons
- Covered by S&S Northern Ltd 3 year warranty.





# KITCHEN EQUIPMENT ENGINEERED TO MEET BS6173

Ventilation/gas Interlock ensures the gas solenoid valve cannot be opened until any fans connected to the panel are operating. If at any time the fan fails a signal will be sent to close the gas solenoid valve, the panel will read "fan fault" and the "LED" relating to the fan that has failed will flash.

The gas pressure proving is carried out using our gas pressure transducer fixed into the downstream port of the gas solenoid valve. If the Merlin 2000S detects there is a drop in gas pressure, or a gas leak, within the 30 second start-up period, the gas solenoid valve will not be allowed to open and the panel will show "test fail". Is the gas line is found to be sound the panel will go to "Gas on" and the gas solenoid valve will open. If the incoming gas pressure drops below 12mb, for more than 10 seconds, the gas valve will shut and the "pressure low" LED will illuminate.

The Merlin 2000S also suits the new Gas Safe TB140 as it is fitted with CO2 mode, assuming a

carbon dioxide sensor is fitted this allows the kitchen to have access to the gas supply in the event of fan failure. When the 'fan fault' light is illuminated red, the kitchen staff can hold the CO2 Mode button in for 5 seconds the 'fan fault' will then go off and the CO2 Mode will come on. The Merlin 2000S System and the external Merlin CO2 Monitor will monitor the CO2 Levels only and allow the gas solenoid valve to stay open for a maximum of 24 hours considering the CO2 Levels are at a safe level. If the CO2 level reaches 4500ppm the panel will go into alarm and the gas solenoid valve will close.

Natural gas, carbon monoxide and LPG detectors can be used with the Merlin 2000S. If the detector goes into alarm due to a build-up of gas the system will sound an alarm and shut the gas solenoid valve preventing further gas leakage and the "gas detected" light will be illuminated red.



S&S Northern has a full technical team available on 01257 470 983 or if you are based in the South East please call 01702 291 725

## Merlin CT2000S System Wiring Diagram

1. 230v AC Supply
2. 230v AC output to valve
3. Input - close when fan on  
(for use with PD switches or current monitor)
4. Terminal for BMS connections
5. Pressure sensor input  
(wire to pressure transducer using 3 core wire)
6. Remote emergency stop button input
7. Gas detector input & Permanent 12v DC output
8. CO2 Monitor output
9. Permanent 12v DC output  
(normally used to power PM2 current monitor)

## Merlin CT2000S Box Dimensions

Height	178mm
Length	254mm
Depth	62mm



# THE MERLIN RANGE

## CO2 DETECTOR

*The Merlin CO2 Monitor is designed specifically for use in commercial kitchens and also suits Gas Safe Bulletin TB140. The Merlin CO2 Monitor gives a LED display reading to show the customer a clear and precise reading of the CO2 level in the room and also uses a traffic light colour system to show the customer whether the air quality in the room is at a safe, adequate or dangerous level.*

The Merlin CO2 Monitor can be used independently or can work in conjunction with one of our Merlin gas interlock systems. In the event where the CO2 levels rose to a dangerous level the Merlin CO2 Monitor would sound an audible alarm to alert the customer of the danger, and send a signal to the gas interlock system which will in turn close the gas solenoid valve.



### Key Features of the Merlin CO2 Detector

- Clear digital readings of the CO2 levels.
- Can work independently or in conjunction with Merlin Gas Interlock System
- Audible alarm alerts user of dangerous levels
- Can be easily wall mounted
- Easy Installation
- Traffic light warning system very easy to understand
- Covered by S&S Northern Ltd 3 year warranty.



# ANCILLARY PRODUCTS FROM S&S NORTHERN

## Gas Solenoid Valve

Our Gas Solenoid Valves are used for safety and control of gas for shut-off in gas feed pipes and are suitable for various gases, including Natural gas, Propane and LPG. They are slam shut auto reset valves, so when power is supplied to the gas solenoid valve it will automatically open and as soon as that power is taken away the gas solenoid valve will close.

The valves supplied are all covered by the S & S Northern 3 year warranty and are tested and certified to European Standard EN161 as Class "A". The valves are also rated to IP65 thus allowing them to be deployed in wet or dirty environments.



## Air Pressure Differential Switch

We only supply the highest quality air pressure differential switches for increased longevity and reliability, they measure between 20-200Pa. Electrical connections are made by use of two-core cable.

Incorporated in each Merlin Gas Interlock system is a 10 seconds Airflow dropout delay. In the event of interruptions to airflow for less than 10 seconds the delay will allow the gas solenoid valve to remain open, preventing nuisance tripping. Should the airflow be interrupted for 10 seconds or more the fan fault LED will illuminate and the gas solenoid valve will close.



## Emergency Knock-Off Button

We only supply the highest quality emergency knock-off buttons for increased longevity and reliability. The Emergency Knock-off button uses a resettable Perspex screen to enable the customer to press multiple times without having to replace the button.

When the Perspex screen has been pressed inwards an activation indicator drops into view at the top of the window after the 'Reset' has been operated. The unit is then simply reset with a key and is ready for re-use straight away.





