Model: AGSCT2000S
Technical Specification Sheet
2018

Merlin Gas Ventilation Interlock

Key Features

- True ventilation interlock.
- Clear LED status display.
- Gas Pressure Proving technology to check for open taps and weak supply pressure.
- Protects kitchen employees from exposure to harmful gases.
- Interlock with up to 4 fans.
- Built-in connectivity to existing BAS and fire alarms.
- Additional external gas detection sensors available.
- CO2 mode interlock in case of fan fault (requires Merlin CO2 Monitor).
- Key lock for authorization control.

Overview

The unit will only allow gas to be supplied to the appliances once the fans have been proven to be operational and once the gas line has been tested for open gas taps and damaged pipework. Long term exposure to low levels of CO, CO^2, NO^2 and SO^2 gases generated by the combustion process have been proven to cause serious ailments. The Merlin CT2000S does not allow the combustion of gas to occur unless the environment is sufficiently ventilated. Gas control is via an electronic solenoid valve. The Merlin CT2000S can interlock up to 4 fans via air pressure differential switches or through a current monitor. The PM2 current monitor allows the fan speed to be calibrated on site to match environmental circumstances. The minimum required fan speed can be easily set to lock in a predetermined exhaust requirement. After establishing that the fans are operational the Merlin CT2000S will commence a 30second pressure drop test to establish that all gas taps and appliances are in the off position. Once the gas is supplied the Merlin CT2000S will monitor the fans. If a fan fault occurs, the unit will warn the end user with flashing LED's or ten seconds before going into fan fault mode. In fan fault mode the unit will display a red LED display, signal an audible alarm and close the gas solenoid valve. Once the fan fault has been investigate and remedied, the unit can be re-set using the authorization key. If the Merlin CT2000S has been installed along with a Merlin CO2 monitor the unit can supply gas to the appliances for a further 24hrs during a fan fault mode. Allowing the fans to be repaired or replaced at a convenient time. As long as the environment in the kitchen is safe the CO2 monitor will act as the interlock. The Merlin CT2000S will also continuously monitor the gas supply pressure and will isolate the gas supply if the incoming supply pressure drops below 12mbar for more than ten seconds. This ensures naked flames will not be extinguished by drafts or the exhaust fans. A clearly labelled PCB board and detachable wiring connections ease installation and make the unit perfect for renovation work and new build alike. Built in connectivity is available for existing fire alarms and the buildings BAS. Remote emergency stop buttons can be added along with optional gas detection sensors to compliment the safety of the Kitchen.

Application

- Restaurants.
- Care Facilities.
- School and College Kitchens.
- Interlock for appliances with flame failure devices already fitted.
- Automatic isolation of the gas supply upon EM stop or gas detection.

Gas Safety Systems **Utility Control**

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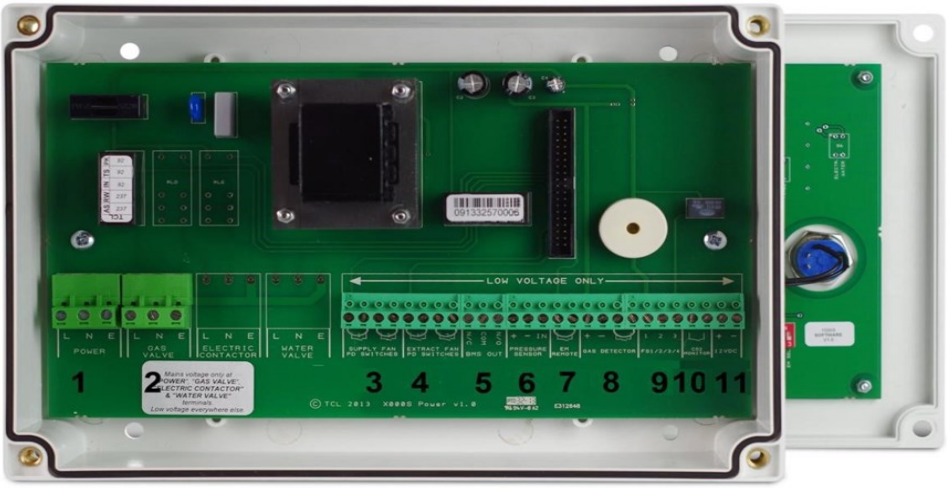
Technical Specifications

Power Supply	100-240vac, 50/60HZ
Protection	Overvoltage, overcurrent, surge protection (3amp)
Enclosure	Wall mounted Fully UL certified enclosure. Flush Mount kit available.
Dimensions	W255 x H180 x D77 mm
Gas Solenoid Control Signal Output	100-240vac, 50/60HZ
BAS Output	N/C COM N/O - Max 1A @ 120vac
EM Stop Input	Volt Free*
Fan Switch Output	Volt Free*
Sensor Power Output Sensor Signal Input	24VDC Volt Free
Gas Pressure Transducer Power Output Gas Pressure Transducer Signal Input	12VDC 0-5VDC
CO^2 Monitor Signal Input	Volt Free*
Adjustable Gas Fill Time	5 seconds or 10 seconds
Adjustable Prove Time	30 seconds or 60 Seconds
Adjustable BAS Signal Output	Alarm “on” or Gas “on” / Gas “off”

***Volt Free. Do Not connect any device which generates a separate source of voltage on this circuit. Any voltage applied to these connections will damage the microcontroller.**



1. Mains Supply Input, Single phase 100/240VAC 50/60HZ
2. Gas Solenoid Valve Power Output, Single phase 100/240VAC 50/60HZ
3. Make Up Air Fan pressure switch or current monitor connection. (see user manual)
4. Exhaust Fan pressure switch or current monitor connection. (see user manual)
5. BAS Output Contacts. Common, Normally Closed and Normally - Open low voltage relay.
6. Gas Pressure Transducer, Power Supply and Return Signal.
7. Remote Emergency Stop Button and Fire Alarm input (wired in series) **Volt Free**.
8. Gas Detector (Nat Gas, CO, CO^2, LPG or NOX) power supply and returned signal.
9. Fan Switch Output (purchased separately) see Fan Switch User Manual for Wiring Diagram.
10. CO^2 Monitor Signal Return. **Volt Free**
11. Permanent 12vdc output. Usually used to power the PM2 current monitor.