

Merlin Utility Control



Key Features

- Automatic Control of the gas and electricity supply.
- Clear LED status display.
- Gas pressure drop test and continuous supply pressure check.
- Built-in connectivity to existing BAS and fire alarms
- Additional external gas detection sensors available.
- Key lock for authorization control.

Overview

The Merlin 1000S+ utility control panel gives the user complete automatic control over the gas and electricity within the room. Utilizing a solenoid valve and a pressure transducer the Merlin 1000S+ will check for a pressure drop or leak in the downstream gas line before allowing the gas to be supplied. Once gas has been supplied the unit will constantly check the incoming gas supply pressure to ensure that a naked flame cannot be extinguished by a weak draft. The bench electrics are controlled via a contactor. The key lock ensures that only authorized personnel can operate the utilities. The emergency knock off button is shrouded to ensure no accidental shutdowns occur.

All the Merlin utility controls come with clearly labelled PCB boards to ensure easy installation. The emergency knock off button is shrouded to ensure no accidental shutdowns occur. All the Merlin utility controls come with clearly labelled PCB boards to ensure easy installation. Additional gas detection sensors can be wired to the unit for extra safety. Built-in connectivity to existing BAS systems and inputs for existing fire alarms make the unit perfect for renovation projects as well as new build. Dip switches on the reverse side of the facia panel allow for onsite adjustments of various parameters including, the gas fill and prove times, how the unit communicates with the BAS system and the time-out function. The included time-out function can be adjusted between 2hrs, 4hrs and 8hrs or even disabled.

Application

- K-12 and Higher Ed Science Classrooms.
- Designed to meet NSTA guidelines.
- Isolation of the gas supply in the event of high CO or CO2 concentrations.

- Decorative gas powered fire pits.
- Gas BBQ's installations.
- Commercial industrial spaces.
- Automatic isolation of the gas supply upon EM stop or gas detection.



Gas Safety Systems

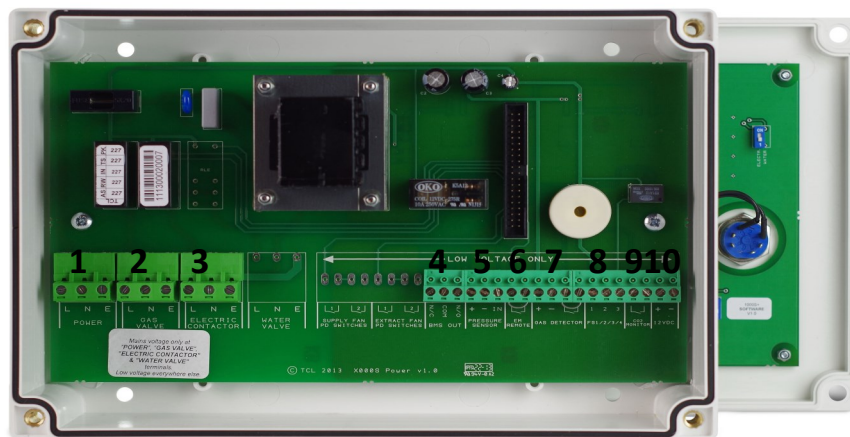
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Utility Control

Technical Specifications

Power Supply	110-120vac, 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	110-120vac, 50/60HZ
Electric Control Signal Output	110-120vac, 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	24VDC
Sensor Signal Input	Volt Free
Gas Pressure Transducer Power Output	12VDC
Gas Pressure Transducer Signal Input	0-5VDC
CO ² Monitor Signal Input	Volt Free*
Adjustable Time-out period	2 hour, 4 hour, 8 hour or disabled
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 110-120VAC 50/60HZ
2. Gas Solenoid Valve Power Output, Single phase 110-120VAC 50/60HZ
3. Electrical Contactor Output, Single phase 110-120VAC 50/60HZ
4. BAS Output Contacts. Common, Normally Closed and Normally Open.
5. Gas Pressure Transducer, Power Supply and Return Signal.
6. Remote Emergency Stop Button and Fire Alarm input (wired in series) Volt Free
7. Gas Detector (Nat Gas, CO, CO², LPG or NOX) power supply and returned signal.
8. Fan Switch Output (purchased separately) see Fan Switch User Manual for Wiring Diagram.
9. CO² Monitor Signal Return
10. Not Applicable

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