SCIENCE LAB UTILITY CONTROLLERS

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INCORPORATING GAS PRESSURE PROVING, ENGINEERED TO DELIVER EXCEPTIONAL LEVELS OF SAFETY

AGS
AMERICAN GAS SAFETY

GAS SAFETY IN EVERY ENVIRONMENT

Modern designs developed by experts in gas safety

Our fully qualified engineers and designers keep up to date with industry advancements and solution developments, adhering to all building codes and regulations, as well as health and safety legislation.

Our customers can feel assured that the solutions we are providing along with the technical backup are second to none.

American Gas Safety is a family run and operated business with excellent customer service and value for money at its core.

Full technical support available

Competitively priced

Complete after sales care

Easy Installation

Modern digital design
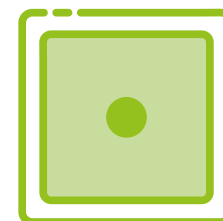
Express delivery available nationwide

Full product catalogue and operating and maintenance guides are available online at AMERICANGASSAFETY.COM

Key feature icons

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The benefits of each of our products are illustrated in an icon format throughout this brochure, aiding you to select the product and design features most suited for your requirements.

The icons are located at the bottom of each product description with accompanying detail for ease of reference and comparison of the solutions we have available.

If you have any questions about any products and their features please contact info@americangassafety.com.

UTILITY ISOLATION

KEY LOCK CONTROL
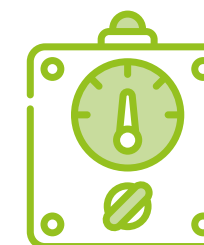
UNIQUE GAS PRESSURE PROVING

EMERGENCY SHUTDOWN

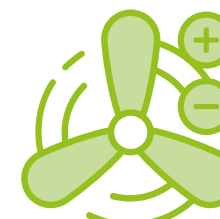**FIRE PANEL INTEGRATION**

BAS INTEGRATION

TIME OUT FACILITY

EXTERNAL GAS DETECTOR

FAN CONTROL

UL LISTED

Unique pressure proving technology, providing confidence and peace of mind

—

Providing pressure drop analysis on the gas train upon each activation ensures all gas taps and appliances are closed and in the off position before allowing gas into the space. The pressure drop test also ensures all pipe work is intact and free from fault or damage. This simple 30 second test provides a unique safe start up environment for the user.

The AGS solutions are already protecting hundreds of academic properties across the United States. With over 20 years of experience manufacturing and developing a complete line of high quality gas safety systems that are UL certified and designed to meet all the relevant NFPA & ICC codes and standards, we can help you design safe and code compliant projects.
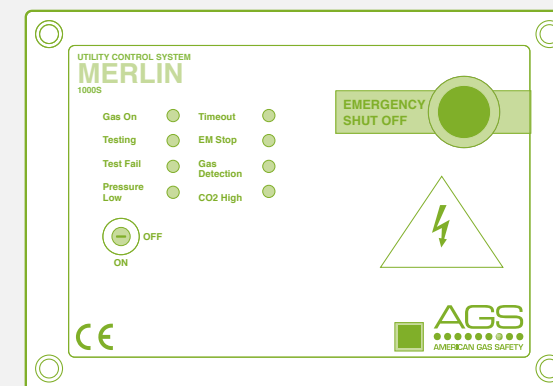
SAFE

SMART

SIMPLE

DAVIDSON

Yale

Quinnipiac
UNIVERSITY

MERLIN 1000S
UTILITY CONTROLLER
INCORPORATING GAS
PRESSURE PRVOING

UTILITY CONTROL SYSTEM
MERLIN
1000S

Gas On   Timeout
Testing   EM Stop
Test Fail   Gas Detection
Pressure Low   CO2 High

OFF
ON

EMERGENCY
SHUT OFF
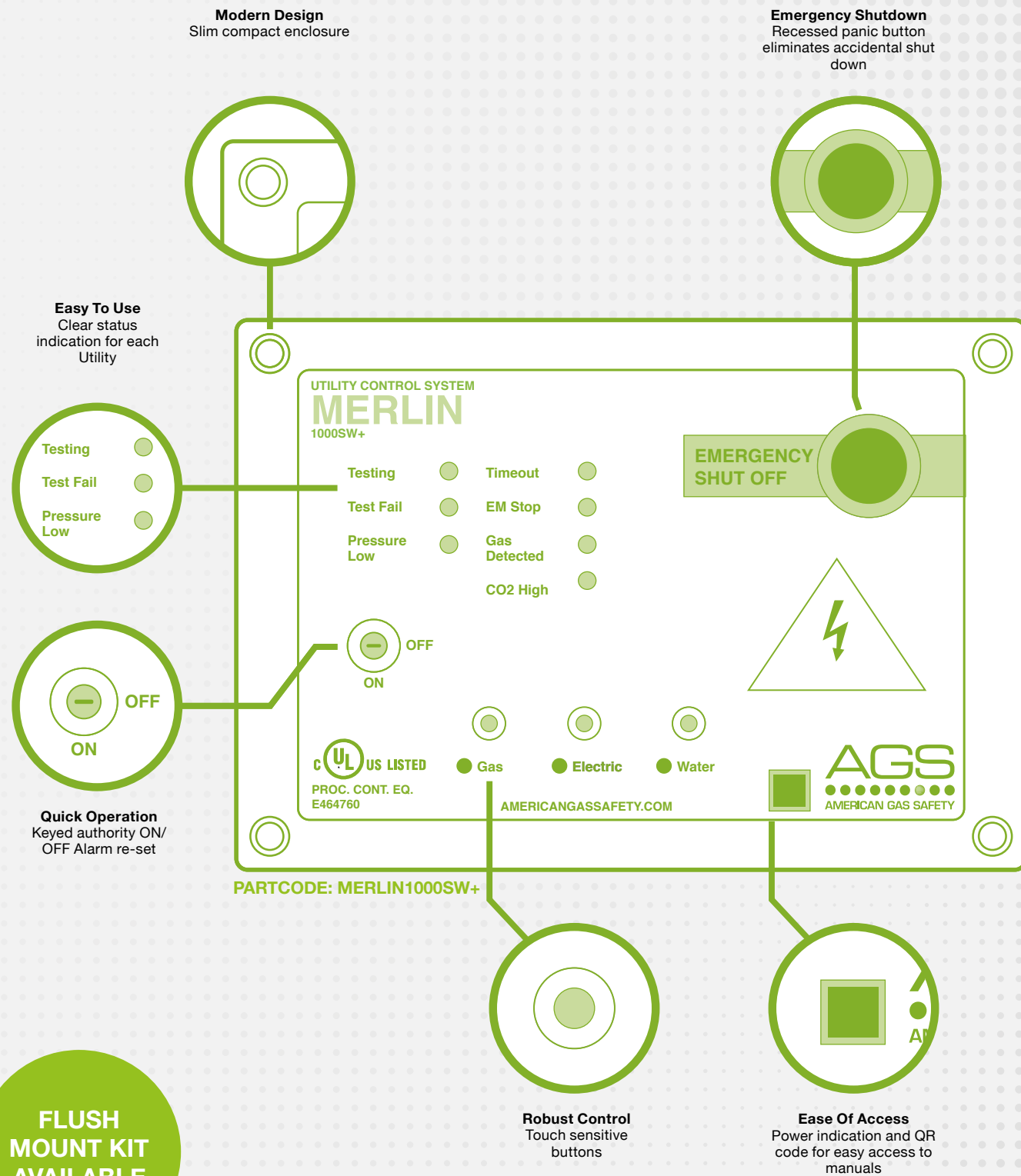
CE

AGS
AMERICAN GAS SAFETY

120VAC
GAS SOLENOID VALVE

GAS LINE

GAS LINE

AGSPT
GAS PRESSURE
PROVING TRANSMITTER

WHEN USING GAS IN A CLASSROOM ENVIRONMENT PROVIDE MORE THAN JUST ON OFF CONTROL. THE MERLIN RANGE OF PRESSURE PROVING PANELS PROVIDE SAFE START UP ALONG WITH LOW PRESSURE AND OVER PRESSURE SAFETY.

Modern Design
Slim compact enclosure

Emergency Shutdown
Recessed panic button eliminates accidental shut down

Easy To Use
Clear status indication for each Utility

Testing
Test Fail
Pressure Low

Quick Operation
Keyed authority ON/ OFF Alarm re-set

UTILITY CONTROL SYSTEM
MERLIN
1000SW+

Testing	Timeout
Test Fail	EM Stop
Pressure Low	Gas Detected
	CO2 High

EMERGENCY SHUT OFF

OFF
ON

OFF
ON

c UL us LISTED
PROC. CONT. EQ.
E464760
AMERICANGASSAFETY.COM

● Gas   ● Electric   ● Water

AGS
AMERICAN GAS SAFETY

PARTCODE: MERLIN1000SW+

FLUSH MOUNT KIT AVAILABLE

Robust Control
Touch sensitive buttons

Ease Of Access
Power indication and QR code for easy access to manuals

Compact, robust and reliable utility controllers for wall or flush mounting

—

Intuitive and accessible design makes the AGS range easy to specify, easy to install and very user friendly.

Modern components compliment years of industry experience to provide a total solution to classroom safety.

Multiple inputs available to adapt the operation of the controllers, including fire alarm shit down and BMS communications.

✔ Modern adaptable design to meet all of your requirements
✔ Unique safe start technology incorporating gas pressure proving
✔ Incredibly easy to use & install
✔ Adjustable time-out facility
✔ Industrial Grade Polycarbonate Material to withstand daily use
✔ UL Listed 61010 to laboratory spaces

Choose the right controller for your application

MASTER CONTROL PANEL

✔ Three models available for single, double or triple outputs

✔ Key switch authority - ON/OFF

✔ Available in flush or wall mounted

✔ Gas detection - explosive gas & carbon dioxide monitoring

✔ Adaptable switched outputs can be used to shut off electrical outlets and purge fans

Integral Emergency Stop	Isolates gas, water and electric	Fully UL Certified and listed to UL61010 for laboratory spaces	Fire Alarm Input & BMS Output	Gas proving feature*

BUILD A SYSTEM

✔ Smaller unit for Prep room or Teacher Desk Control

✔ Key switch authority - ON/OFF

✔ Available in flush or wall mounted

✔ Can be used to shutdown science laboratory utilities in emergency as well as the prep room/ teachers desk supplies

Single Zone Utility Output	110-120V 3amp line voltage output for each utility

AGSFS1 FAN CONTROLLER

✔ Selectable power off delay to allow residual fumes to dissipate. 20, 40, 60 minutes. Suitable for single and duel speed fans

Manual fan on and off	Purge in Alarm

EMERGENCY SHUTDOWN BUTTONS

✔ ADA compliant

✔ Shield protects against accidental shutdown

✔ Various color & button types available - typically twist release or key lock rest

✔ UL Listed

Take control of your utilities & ancillaries

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AGS GAS SOLENOID VALVES

✔ Sizes available from 3/8" through 3" NPT. Other sizes available upon request

✔ Normally closed valves offer safety shut off with fast-open, fast-close operation

✔ Rugged design and construction

✔ Die cast aluminum body

✔ Approvals: UL, AGA, CGA, ANSI Z21.21-CGA6.5, CAN/CGA-6.5-M89CAN/CGA-3.9-M87

AGS WATER SOLENOID VALVES

✔ Sizes available from 1/2" through 1 1/2" NPT. Other sizes available upon request

✔ Normally closed valves offer safety shut off with fast-open, fast-close operation

✔ Rugged design and construction

✔ NSF Approved lead free brass body

AGS VALVE ENCLOSURES

✔ Available as a flush mount, wall mount or semi-recessed

✔ A wide range of sizes and practical accessories, lockable enclosure to reduce cost of project

✔ Approvals: UL 508 Type 3R, 4 and 12 / CSA Type 3R, 4 and 12

Complies with: NEMA Type 3R, 4 and 12

AGS ELECTRICAL CONTACTORS

✔ Various models available

✔ Most commonly used to control classroom bench electrics
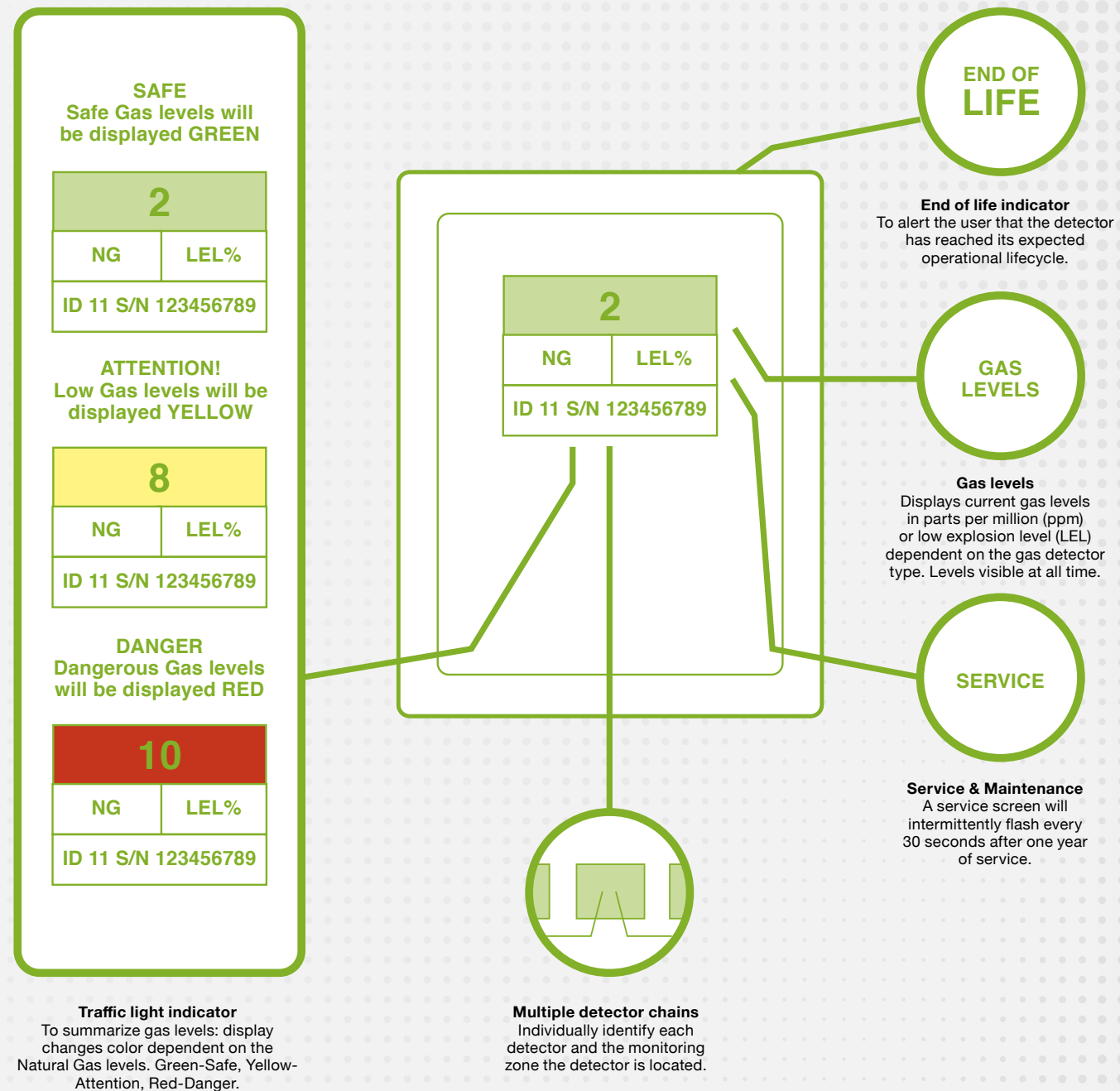
Approvals: UL, GOST, CSA & CCC

AGS ELECTRICAL CONTACTOR ENCLOSURES

✔ Designed to house electrical contactors - A wide range of sizes available

✔ Hinged cover with latch provides easy access during installation and maintenance

✔ Approvals: UL 50 Type 1, CSA Type 1

Complies with: NEMA Type 1, IEC 60529, IP20

SAFE
Safe Gas levels will be displayed GREEN

2	
NG	LEL%
ID 11 S/N 123456789	

ATTENTION!
Low Gas levels will be displayed YELLOW

8	
NG	LEL%
ID 11 S/N 123456789	

DANGER
Dangerous Gas levels will be displayed RED

10	
NG	LEL%
ID 11 S/N 123456789	

Traffic light indicator
To summarize gas levels: display changes color dependent on the Natural Gas levels. Green-Safe, Yellow-Attention, Red-Danger.

2	
NG	LEL%
ID 11 S/N 123456789	

Multiple detector chains
Individually identify each detector and the monitoring zone the detector is located.

END OF LIFE

End of life indicator
To alert the user that the detector has reached its expected operational lifecycle.

GAS LEVELS

Gas levels
Displays current gas levels in parts per million (ppm) or low explosion level (LEL) dependent on the gas detector type. Levels visible at all time.

SERVICE

Service & Maintenance
A service screen will intermittently flash every 30 seconds after one year of service.

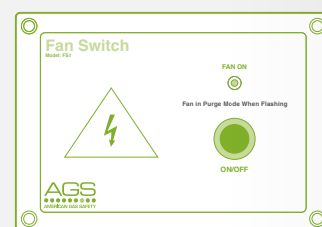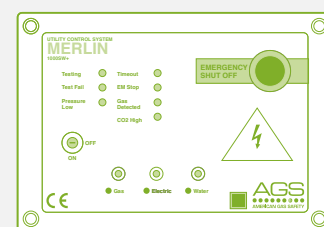# Pre-calibrated and compact gas detectors

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The TFT range of AGS detectors work in combination with the AGS Merlin range of Utility Controllers and features semiconductor type sensors for commercial indoor applications.

Compact, modern, digital design makes the units aesthetically pleasing and easy to install.

✔ No calibration required - pre-calibrated in the factory

✔ Power supply 12-24V AC/DC (Supplied from AGS Merlin utility controller)

✔ Various outputs to work with control panels

Merlin1000SW+
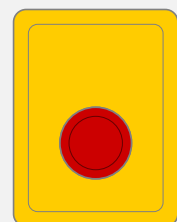Gas, Electric & Water
Control Behind
teachers desk.

AGSFS1
Fan Controller Behind
teachers desk.

AGSCON4P20ANO / AGSCONENC
Electrical contactor(s) in an AGSCONENC
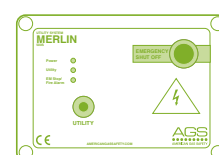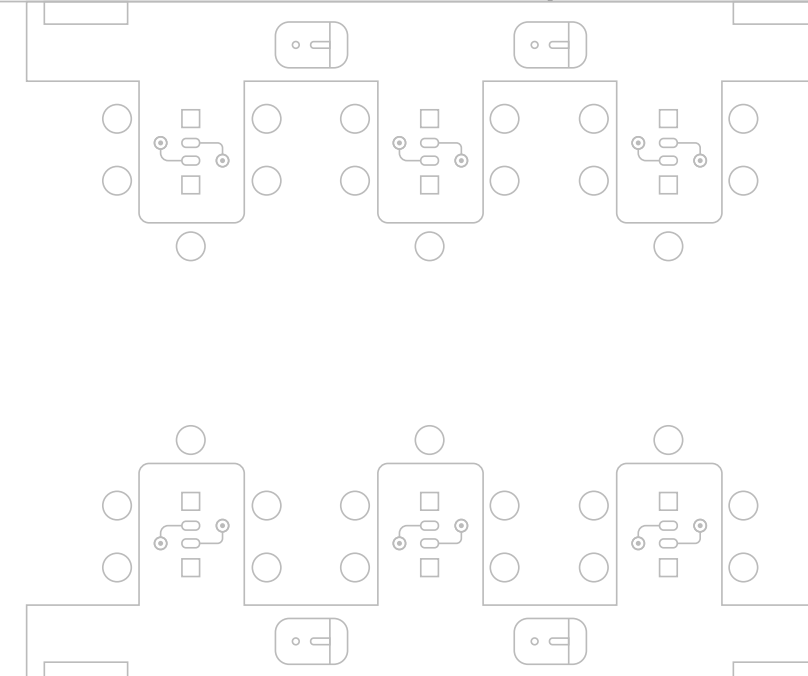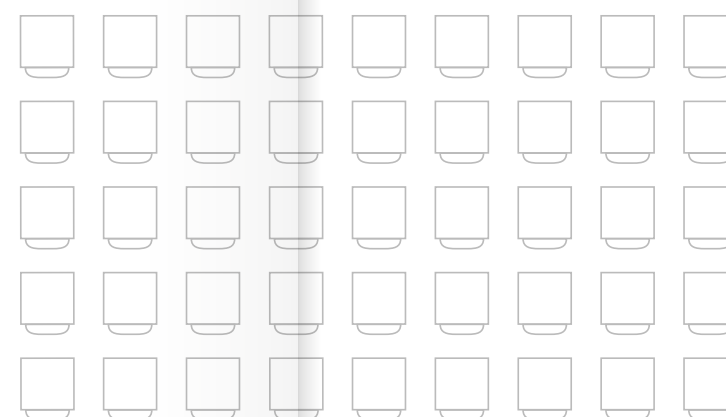metal enclosure underneath teachers desk.

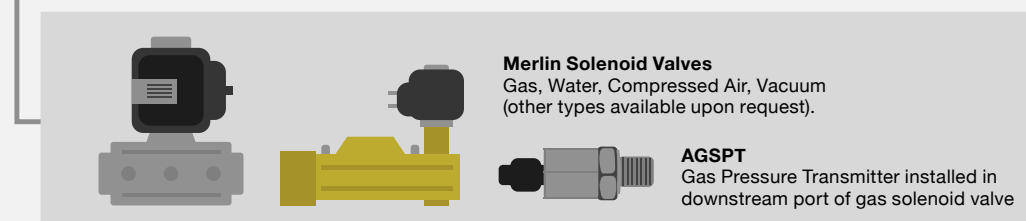**AGSNGTFT**
Fuel Gas Sensor 12inch
from ceiling.

**EMERGENCY
SHUT OFF**

AGSEPOTW
Emergency shutdown
button next to main exit.

Take precautionary action in your school project

This diagram illustrates an
example room layout for
science laboratory control.

Merlin 500s
Provide individual control
over teachers demo desk
or prep room utilities

PREP ROOM UTILITY CONTROL PANEL

Merlin Solenoid Valves
Gas, Water, Compressed Air, Vacuum
(other types available upon request).

AGSPT
Gas Pressure Transmitter installed in
downstream port of gas solenoid valve

CEILING SPACE WITH GAS & WATER LINES

Introducing the
MERLIN SI range
—

NOT USING GAS? But still need the authority control and adaptable outputs of the Merlin range.

The adaptable range by American Gas Safety can be used to control all types of utilities, such as electric, water, compressed air, vacuum, ventilation & many more.

Available as a single, dual or triple output utility controller the Si range is the perfect solution for key-lock authority control over your chosen utilities.
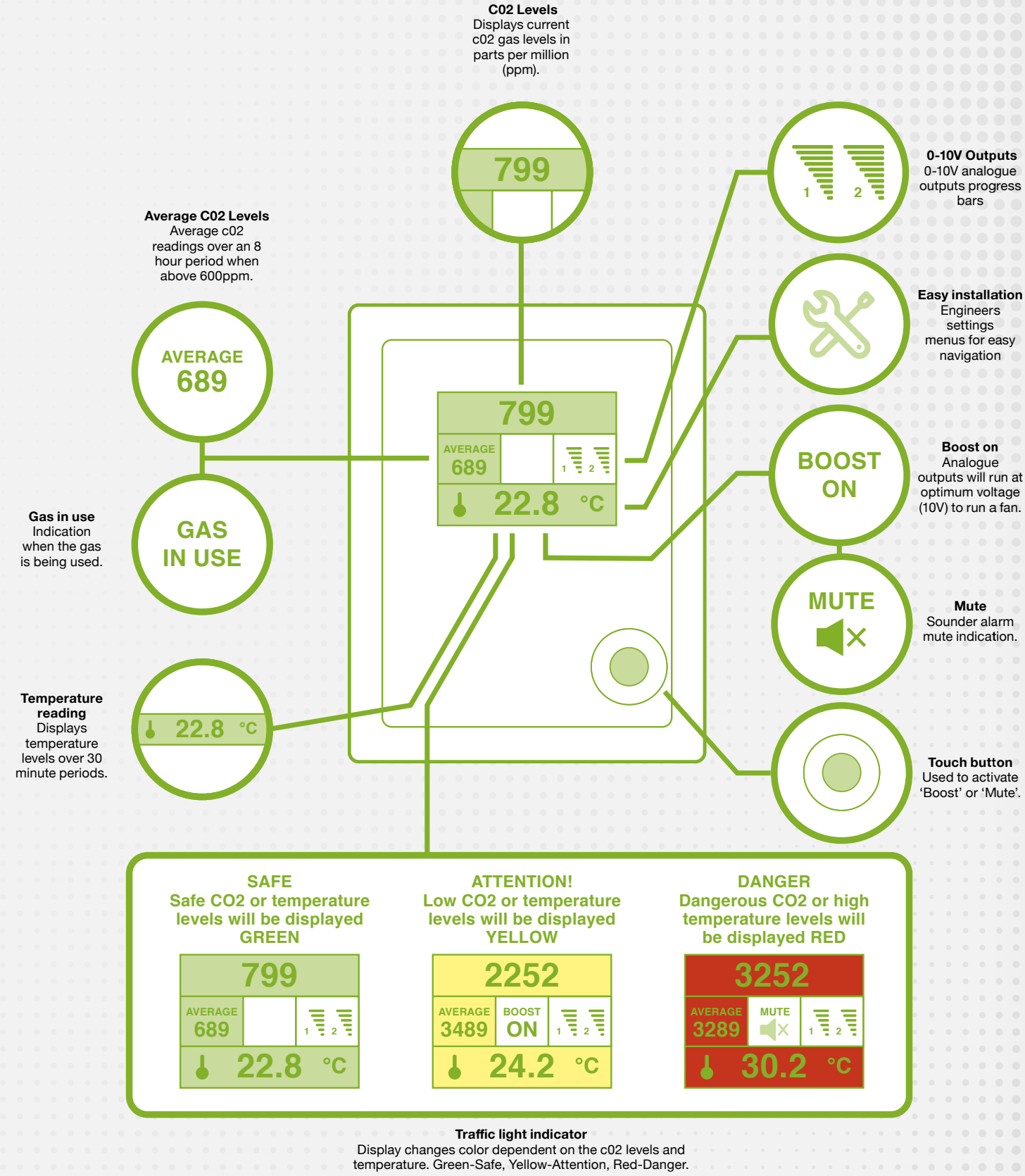
The Si range is identical to the 1000S range, with all features included aside from the gas pressure proving.

The Merlin utility controller has the functionality to control 120 volt or 24 utilities, as well as communicate with BMS systems & fire alarm panels to indicate panel status.

The Merlin SI range can work in conjunction with any AGS gas detector such as carbon dioxide or carbon monoxide sensors. The controller also features a built in "timeout" facility which will automatically shut off the connected utility at the end of a specific time period, this time period can be adjusted to 2, 5, 8 hours or can be overridden if required.

UTILITY CONTROLLER WITHOUT GAS

C02 Levels
Displays current c02 gas levels in parts per million (ppm).

799

Average C02 Levels
Average c02 readings over an 8 hour period when above 600ppm.

AVERAGE
689

0-10V Outputs
0-10V analogue outputs progress bars

1 2

Easy installation
Engineers settings menus for easy navigation

799

AVERAGE
689

1 2

22.8 °C

Gas in use
Indication when the gas is being used.

GAS
IN USE

**BOOST
ON**

Boost on
Analogue outputs will run at optimum voltage (10V) to run a fan.

MUTE

Mute
Sounder alarm mute indication.

Temperature reading
Displays temperature levels over 30 minute periods.

22.8 °C

Touch button
Used to activate 'Boost' or 'Mute'.

SAFE
Safe CO2 or temperature levels will be displayed **GREEN**

799
AVERAGE 689
22.8 °C

ATTENTION!
Low CO2 or temperature levels will be displayed **YELLOW**

2252
AVERAGE 3489 BOOST ON
1 2
24.2 °C

DANGER
Dangerous CO2 or high temperature levels will be displayed RED

3252
AVERAGE 3289 MUTE
1 2
30.2 °C

Traffic light indicator
Display changes color dependent on the c02 levels and temperature. Green-Safe, Yellow-Attention, Red-Danger.

Merlin CO2 TFT Carbon Dioxide monitor

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A simple efficient and reliable Carbon Dioxide and temperature monitor.

✔ 120V AC or 12-24V AC/DC

✔ Modern design with a slim and compact enclosure

✔ Can be used to automatically shut down utilities or drive ventilation depending on CO2 or temperature levels

✔ Pre alarm & alarm relay outputs

✔ Alarm threshold can be changed depending on the install environment

895
889
62.0

Mounting your controller

WALL MOUNTING

Each utility controller by American Gas Safety have been designed to be wall mounted via four bolts located at each corner by a socket wrench provided.
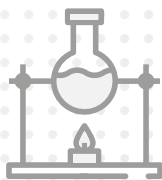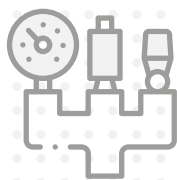
FLUSH MOUNTING

The AGSMK Flush Mount bracket is similar to an electrical rough in box. It allows for the electrical conduit to be brought to a space in the wall prior to the installation of the Merlin Control Panel.

SCAN WITH YOUR SMART PHONE TO VIEW OUR FULL LAB RANGE ONLINE

For our full range of products & services visit us at

WWW.AMERICANGASSAFETY.COM