

# CGSLPGCO

## Mini Merlin

## Datasheet

### Combined LPG & Carbon Monoxide Monitor



## Product Overview



The CGS Mini Merlin LPGCO is a dual gas sensor designed and tested to UL standards for the purpose of monitoring levels of Liquefied Petroleum Gas (LPG) and Carbon Monoxide (CO) in the air.

If there is a dangerous build-up of gas or unsafe levels of carbon monoxide at the sensor, this device can shut off fuel supplies or power supplies via gas valves and/or electrical contactors. On board relays can interrupt appliances built in safety circuits such as fan proving switch or louver proving switch.

This device has a manual reset button, as well as audible and visual alarm - it can also be integrated with a Building Management Systems and fire alarm control panels.

General							
Model:	Mini Merlin LPGCO						
Target Gases:	LPG Gas & Carbon Monoxide						
Size: (H x W x D)	5.95 x 4.37 x 1.97” (151 x 111 x 50mm)						
Housing Material:	ABS PA765 (Flame Rating UL94 V-1)						
Mounting:	Safe Zone - Indoor use - Wall Mounted						
Weight:	12.24oz (0.347kg)						
Display:	1.8” TFT						
Visual Indicators:	TFT visual. Green: Normal; Yellow: Pre-Alarm; Red: Alarm						
Audible Alarm:	>70dB @ 3.28ft (1m). Quiet conditions.						
Buttons:	Multi-Function – Initial Start / Reset / Circuit Test						
Power Consumption:	3W max						
AC Power:	100-120V~ 50/60Hz						
Internal Fuse:	Anti-Surge 3.15A 250Vac						
Overvoltage Category:	II						
Volt Free BMS relay output:	0.5A switching current (resistive load)						
Ingress Protection:	Not Formally Evaluated						
Operating:	-10 ~ 50°C / 14 ~ 122°F 30 ~ 80% RH (non-condensing)						
Storage:	-25 ~ 50°C / -13~122F° up to 95% RH (non-condensing)						
Wiring	Min. 18-22AWG						
Electrical Safety and Electromagnetic Compatibility	UL61010-1/2012/R:2019-07. UL2075 R:2013-02 Gas and Vapor Detectors and Sensors. CAN CSA C22.2 No. 61010-1-12/A1:2018-11 / EMC EN 61326-1:2013						
Sensor Specification ▲ Rising Alarm ▼Falling alarm *EOL – Expected Operational Life							
Gas Sensor	Indicating Range	Steps	Response (t90)	Recovery (t10)	Alarm: 1 (Pre alarm warning)	Alarm: 2	*EOL (Years)
Electrochemical Sensors							
Carbon Monoxide (CO)	0-999ppm	1	<60s	<60s	▲ 20ppm	▲ 20ppm @ 2 hours / 50ppm @ 1 hour / 100ppm @ 10 minutes / 300ppm @ 1 min.	5
Semiconductor Sensors							
Liquefied Petroleum Gas (LPG)	0-20% LEL	0.1	<30s	<30s	▲ 8% LEL	▲ 10% LEL	10

## Circuit Board Overview

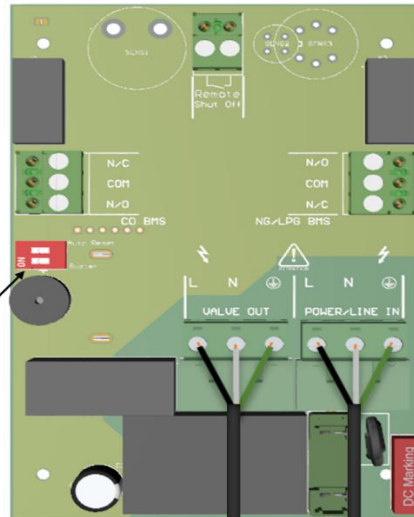
### REMOTE SHUT OFF

Open / Close Circuit Connector

Shuts off gas valve if external devices are activated i.e. fire alarm etc.

**BMS CO**  
**0.5A Switching Current (Resistive Load)**  
Switches when CO gas reaches alarm level or if detector encounters a power failure.

Auto Reset & Buzzer Switches



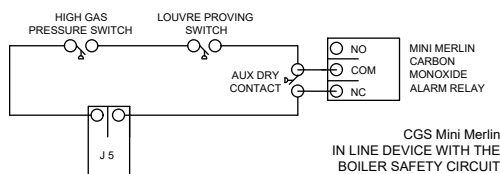
**BMS LPG**  
**0.5A Switching Current (Resistive Load)**  
Switches when Methane gas reaches alarm level or if detector encounters a power failure.

**VALVE OUT**  
Gas Valve Power Output:  
100-120V~

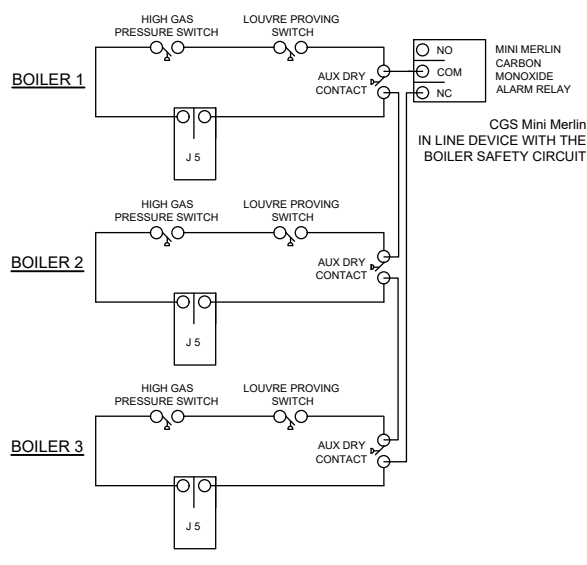
**POWER/LIVE IN**  
Mains Input: 100-120V~  
50/60Hz

## Wiring Examples

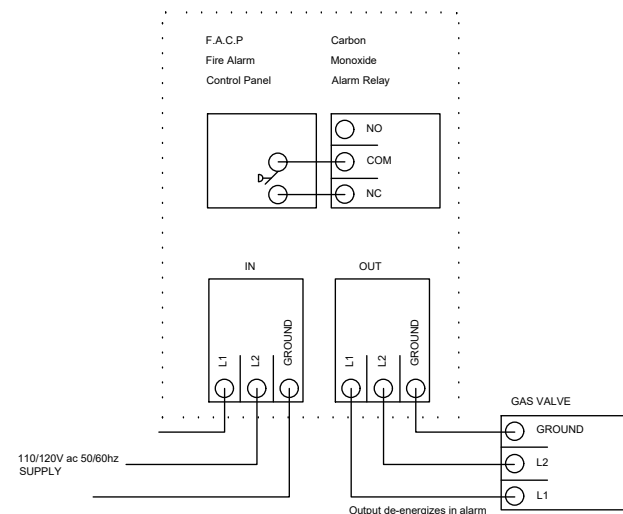
### TYPICAL APPLIANCE



### MULTIPLE APPLIANCES



### CGS MINI MERLIN



Find out more  
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