AMERICAN GAS SAFETY

AGSLPGCO-50 Mini Merlin Datasheet

Combined LPG & Carbon Monoxide Monitor

Product Overview

c UL US LISTED

The AGS Mini Merlin LPGCO-50 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. Meets the Texas Carbon Monoxide Interlock TDLR Code - Section 65.206 Boiler Room & Georgia Carbon Monoxide Interlock Code - Rule 120-3-26-.07.

General	
Model:	Mini Merlin LPGCO 50
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:	85db
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

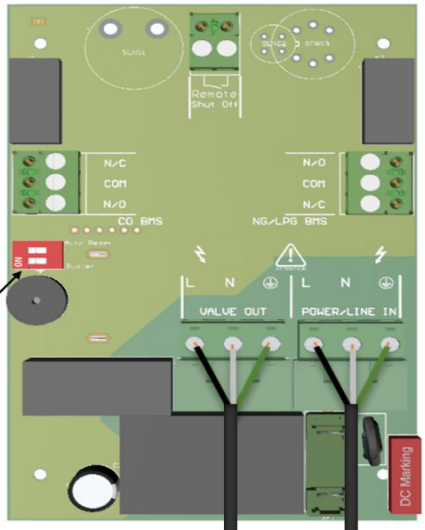
Circuit Board Overview

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



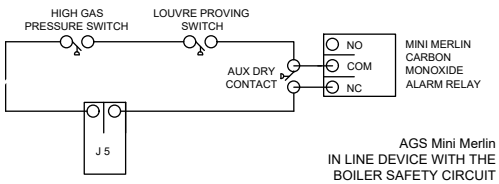
BMS LPG
0.5A Switching Current (Resistive Load)
Switches when Methane gas reaches alarm level or if detector encounters a power failure.

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

POWER/LIVE IN
Mains Input: 100-120V~ 50/60H/z

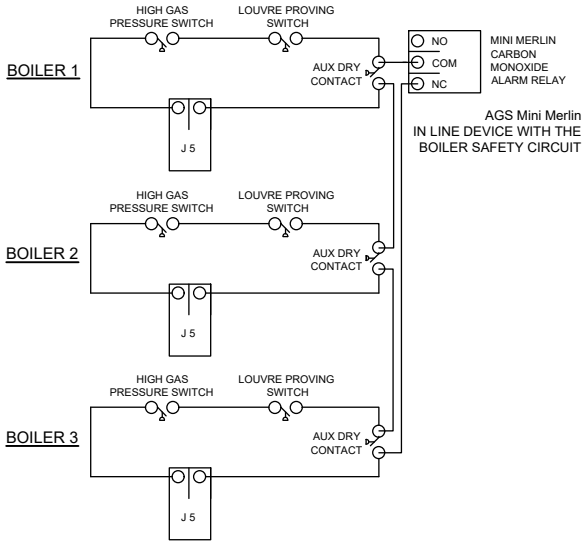
Wiring Examples

TYPICAL APPLIANCE



AGS Mini Merlin
IN LINE DEVICE WITH THE BOILER SAFETY CIRCUIT

MULTIPLE APPLIANCES



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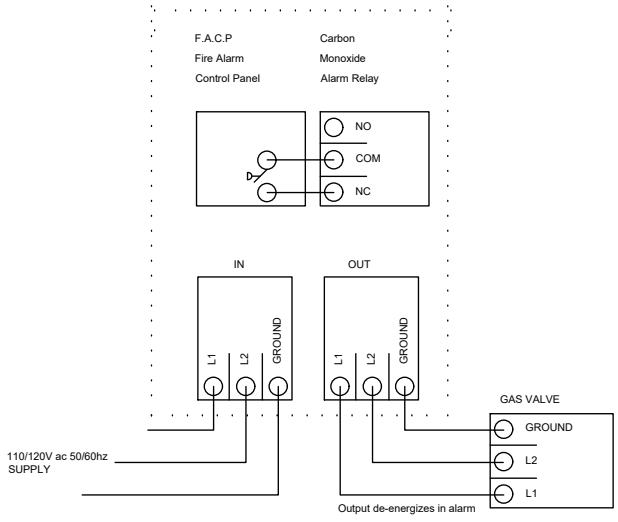

Find out more

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