

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.

Target Gases: LPG Gas & Carbon Monoxide	Model:		Mini Merlin LPGCO						
Housing Material: ABS PA765 (Flame Rating UL94 V-1)	Target Gases:		LPG Gas & Carbon Monoxide						
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. Cas Sensor Indicating Range Steps Response (190) Recovery (10) Alarm: 1 (Pre alarm warning) Alarm: 2 *EOL - Expected Operational Learning (100pm @ 10 minutes / 300ppm @ 1 min. 5	Size: (H x W x D)		5.95 x 4.37 x 1.97" (151 x 111 x 50mm)						
Weight: 12.24oz (0.347kg) 1.8" TFT	Housing Material:		ABS PA765 (Flame Rating UL94 V-1)						
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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 CAN CSA C22.2 No. 61010-1-12/A1:2018-11 / EMC EN 61326-1:2013 Sensor Specification A Rising Alarm ▼ Falling alarm *EOL - Expected Operational L Gas Sensor Indicating Range Steps Response (190) Recovery (110) Recovery (110) Electrochemical Sensors Carbon Monoxide (CO) 0-999ppm 1 < <60s	Buttons:		Multi-Function – Initial Start / Reset / Circuit Test						
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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 L (Pre alarm warning) Gas Sensor Indicating Range Steps (190) Recovery (110) Alarm: 1 (Pre alarm warning) Alarm: 2 *EOL (Years) Electrochemical Sensors Carbon Monoxide (CO) 0-999ppm 1 <60s	Volt Free BMS relay output:		0.5A switching current (resistive load)						
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Wiring Min. 18-22AWG Electrical Safety and Electromagnetic Compatibility CAN CSA C22.2 No. 61010-1-12/A1:2018-11 / EMC EN 61326-1:2013 Sensor Specification Cas Sensor Indicating Range Steps Response (190) Response (190) Response (190) Response (190) Alarm: 1 (Pre alarm warning) Alarm: 2 *EOL (Years) Electrochemical Sensors Carbon Monoxide (CO) 0-999ppm 1 <60s A20ppm A20ppm @ 2 hours / 50ppm @ 1 hour / 100ppm @ 10 minutes / 300ppm @ 1 min. 5	Operating:		-10 ~ 50°C / 14 ~ 122°F 30 ~ 80% RH (non-condensing)						
Electrochemical Sensors Carbon Monoxide (CO) 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 **Recovery (t10)** Alarm: 1 (Pre alarm warning)** Alarm: 2 **EOL (Years)** **EOL (Years)** **EOL (Years)** **EOL (Years)** **COL (Years)** **EOL (Y	Storage:		-25 ~ 50°C / -13~122F° up to 95% RH (non-condensing)						
Electromagnetic Compatibility CAN CSA C22.2 No. 61010-1-12/A1:2018-11 / EMC EN 61326-1:2013 Sensor Specification A Rising Alarm ▼ Falling alarm *EOL − Expected Operational L Gas Sensor Indicating Range Steps Response (t90) Recovery (t10) Alarm: 1 (Pre alarm warning) Electrochemical Sensors Carbon Monoxide (CO) 0-999ppm 1 < <60s ◆20ppm A20ppm ② 2 hours / 50ppm ② 1 hour / 100ppm ② 10 minutes / 300ppm ② 1 min. 5	Wiring		Min. 18-22AWG						
Sensor Specification 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	,								
Gas Sensor Indicating Range Steps Response (190) Recovery (110) Alarm: 1 (Pre alarm warning) Alarm: 2 *EOL (Years) Electrochemical Sensors Carbon Monoxide (CO) 0-999ppm 1 <60s	0 1 7		CAN CSA C22.2 No. 61010-1-12/A1:2018-11 / EMC EN 61326-1:2013						
Gas Sensor Range Steps (t90) (t10) (Pre alarm warning) (Years) Electrochemical Sensors Carbon Monoxide (CO) 0-999ppm 1 <60s	Sensor Specification		▲ Rising Alarm ▼Falling alarm *EOL – Expected Operational Life						
Carbon Monoxide (CO) 0-999ppm 1 <60s ≤60s ▲20ppm ≜ 20ppm @ 2 hours / 50ppm @ 1 hour / 100ppm @ 1 min. 5	Gas Sensor		Steps				Alarm: 2		
Carbon Monoxide (CO) 0-999ppm 1 https://doi.org/10.2009/pm.@10.minutes/300ppm@1.min.	Electrochemical Sensors								
Semiconductor Sensors	Carbon Monoxide (CO)	0-999ppm	1	<60s	<60s	▲20ppm		5	
Liquefied Petroleum Gas (LPG) 0-20% LEL 0.1 <30s	Liquefied Petroleum Gas (LPG)	0-20% LEL	0.1	<30s	<30s	▲8% LEL	▲ 10% LEL	10	

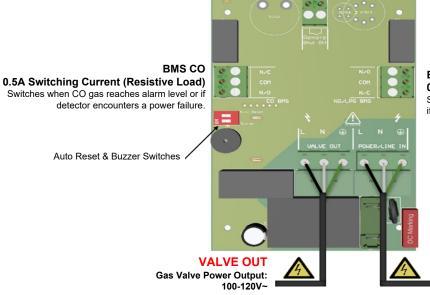




Circuit Board Overview

REMOTE SHUT OFF

Open / Close Circuit Connector Shuts off gas valve if external devices are activated i.e. fire alarm etc.



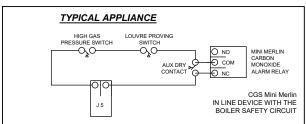
BMS LPG

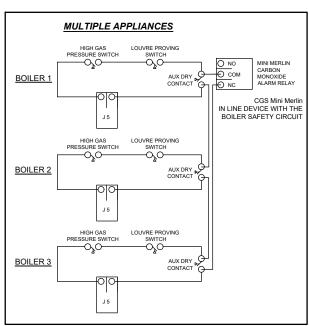
0.5A Switching Current (Resistive Load)

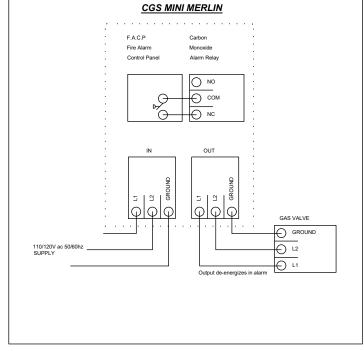
Switches when Methane gas reaches alarm level or if detector encounters a power failure.

POWER/LIVE IN
Mains Input: 100-120V~

Wiring Examples







Find out more

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