

# Gas Safety Products

## Merlin CH4CO Sensor



## Installation, operating and maintenance



Read these instructions carefully before operating or servicing

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## 1 General information

The CH4CO (Mini Merlin) is a dual sensor protecting tenants against the dangers of natural gas and Carbon Monoxide.

If there is a dangerous build-up of gas or unsafe levels of carbon monoxide present in the property, the Mini Merlin will shut off the supply via a gas safety valve. The Mini Merlin has additional features for resetting the system, as well as audible and visual alarms.

It is recommended that the user reads this guide before using the system. Please do NOT attempt to operate the unit until the contents of this document have been read and are thoroughly understood.

## 2 Installation

**2.1 Panel Mounting** The control sensor is designed for surface mounting using 2 mounting screws. Removing the cover on the panel gives access to the circuit board.

**2.2 Mains Supply** A 230-volt electrical supply should be supplied to the sensor. This should be externally fused at 3 Amps using a fused spur and should be connected to the terminals marked "LNE Power"

**2.3 Gas solenoid valve** The gas solenoid valve should be powered using the terminals on the Merlin CH4CO marked "LNE TO VALVE".

**2.4 Internal Buzzer** Operates at 65dB measured 30cm from closed panel.

**Note: all low voltage connections should be made using a screened cable to avoid electrical interference.**

## 3 Operation Instructions

### 3.1 How to turn the system on and off

1. To turn on the Merlin CH4CO sensor you need to supply 230V into the "LNE POWER" terminal.
2. To turn off the Merlin CH4CO sensor you need to turn the power supply to the sensor off or disconnect the fuse spur.

### 3.2 Explanation of LED status

#### 3.2.1 Power LED

When the system is connected to the power supply, the Green Power LED will illuminate. When no power is present, this LED will not light up.

GREEN = OK

OFF = No power to the CH4CO or the fuse may not be intact.

#### 3.2.2 Methane LED

When the gas detector has reached alarm state for Methane, this will illuminate Amber.

Please see Heading 4 on page 4 for further information.

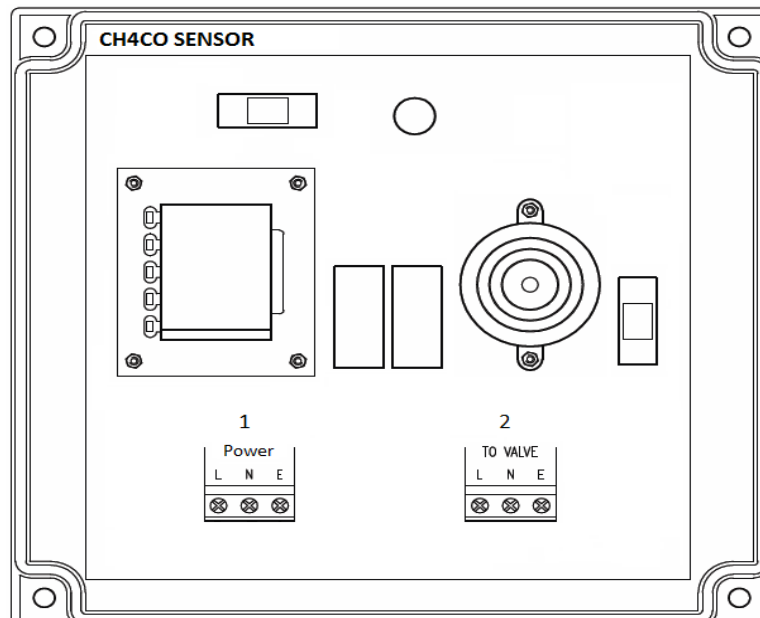
#### 3.2.3 CO LED

When the gas detector has reached alarm state for CO, this will illuminate Amber. Please see Heading 4 on page 4 for further information.

## 4 Specifications

Power Supply	230VAC, 50HZ (Max 1VA without load)
Gas Sensor	Methane: Semiconductor type detector Carbon Monoxide: Electrochemical Detector
Typical Measuring Range	Methane: 50-10000ppm Carbon Monoxide: 0-1000ppm
Accuracy @25 °C (77 °F)	± 1ppm ± 5% reading
Warm up Time for each turning on	30 seconds
Output rating	230VAC (Max 500ma)
Alarm Thresholds	Methane: 10% LEL ----- Carbon Monoxide: 30ppm – 2hrs 50ppm – 1hr 100ppm – 10 mins 300ppm – 1 min
Storage Conditions	-40 - 70 °C (-40 - 158 °F); 0 - 95%RH, Non Condensing
Operation Conditions	0 - 50 °C (-32 – 122 °F) ; 0 - 95%RH, Non Condensing
Net Weight / Dimensions	220g / 135mm (W) x 95mm (H) x 37mm (D)
Install standard	Wall – surface mounted
Standard Approval	CE – Complies with EN50194 and EN50291
Version	CH4CO Ver 3.1

## Merlin CH4CO Wiring Diagram



1. Mains Input 230V Single Phase.
2. Gas Solenoid Valve Power Output, 230VAC.

**INFORMATION ON WASTE DISPOSAL FOR CONSUMERS OF ELECTRICAL & ELECTRONIC EQUIPMENT**

When this product has reached the end of its life it must be treated as Waste Electrical & Electronics Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used. Please contact your supplier or local authority for details of recycling schemes in your area.

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