

# medem CM2M-LCD

## 2 Channel Fan Current Monitor

**Note:** These instructions are designed to be read in conjunction with those for a Medem control panel which has ventilation interlock, herein referred to as the main panel.

The CM2M-LCD is a two channel current monitoring devices designed to monitor the power being drawn by the ventilation and provides the interconnection to the main panel in order to correctly interlock the ventilation.

It comprises two current monitor circuits S1 & E1 and can therefore interlock two separate fans.



- Dual channel current monitor.
- LCD Display to view fan current loads.
- "Learn" mode to set minimum fan speeds.
- Range 24 mAmps to 24 amps
- Reduces nuisance dropouts

**The CM2M-K must be installed before any speed controllers or inverters.**

Mains rating: 240/440 VAC 50HZ, 24 Amps Maximum Continuous.

When using with a 3phase fan, wire one single phase only through the current monitor.

**NOTE: MAINS WIRING AND SIGNAGE MUST BE IN ACCORDANCE WITH CURRENT IEE WIRING REGULATIONS.**

The maximum cable length between the CM2M-K and the main panel should not exceed 100 metres, whilst we would always recommend using screened cable if the distance between the main panel and the detectors is greater than 20metres a 1mm screened cable must be used on the +VE, 0v terminals

We recommend a six core screened Belden type security cable or 600v rated BMS cable (max cable length of 100meters.)

Warranty will be void if Fire Protection Cable or cable over 1mm dia. is used on the SELV side.

### Description and Operation

The CM2M-LCD is a current monitor designed for use with Medem ventilation interlock systems (main panel). It's connected via a 6 core low voltage cable.

There is a 12volt supply for the CM2M-LCD (from the main panel) the CM2M-LCD then provides 2 NC contacts S1 & E1 for connecting to the main panel terminals S1 & E1 .

Each CM2M-LCD can be used to interlock 2 fans (sides Supply & Extract), the fans are connected by taking the live feed for each fan through the "Live In and Live Out" terminals (before any speed controllers/inverters), fan load sensitivity range on each fan is 24 milliamps to 24amps.(max).

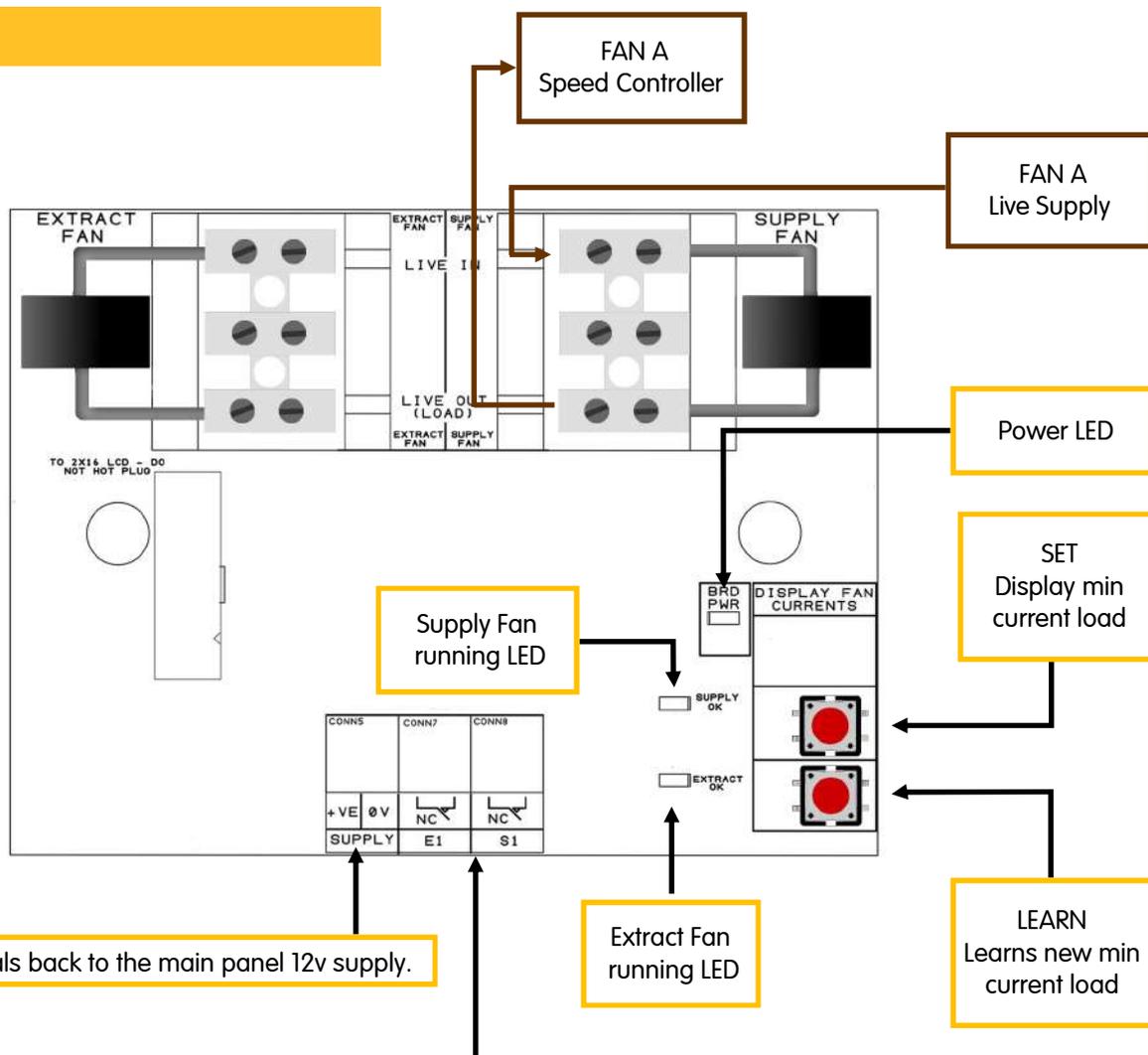
There are 3 LED indications,

1x Green, for the 12 volt power to the CM2M-LCD

2x Red, one for Supply Fan and another for Extract Fan load detection.

When the fans are switched on and the load is detected (see sensitivity adjustment) the corresponding side's NC contact (S1 or E1) will close and the red LED will light.

### PCB Connections



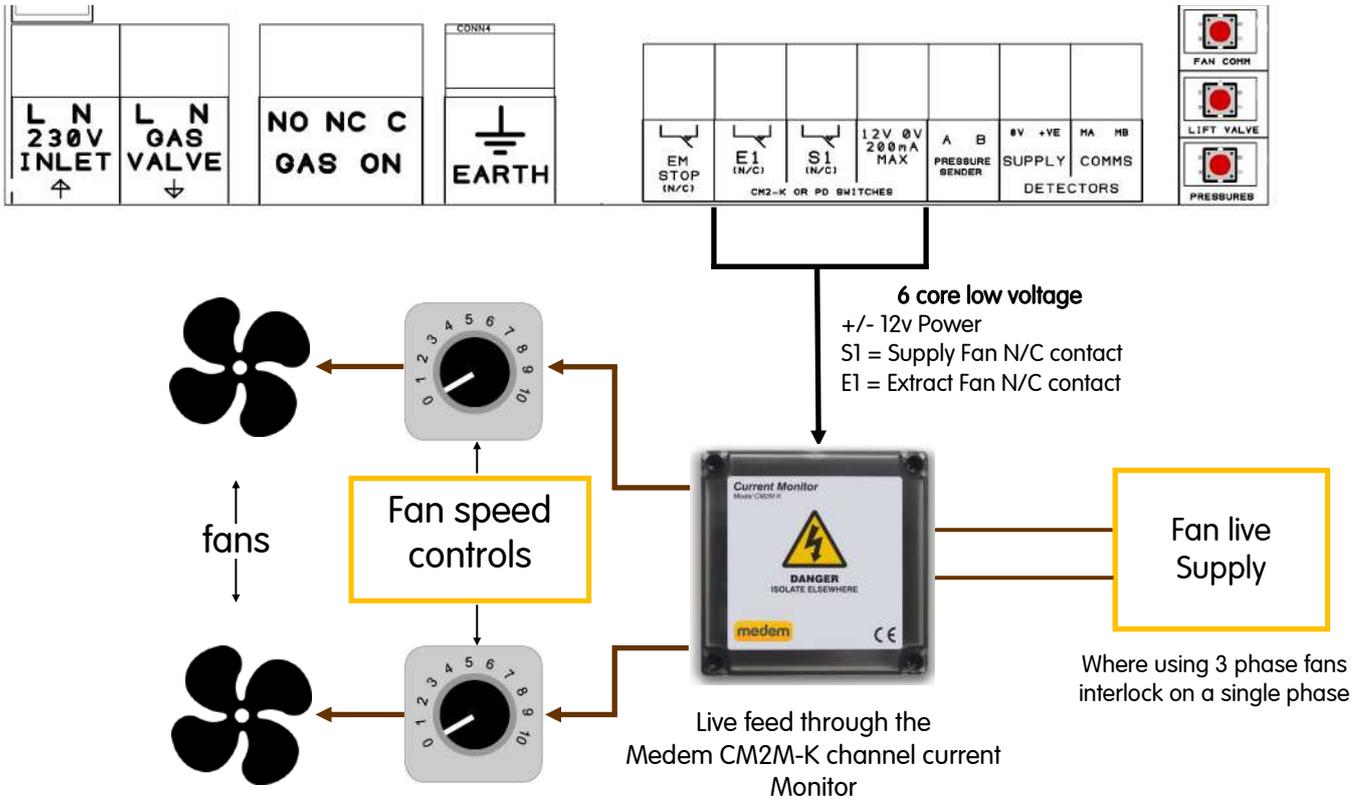
Connect the 12 volt terminals back to the main panel 12v supply.

#### Terminal Connections

The S1 & E1 terminals correspond to each side of the current monitor and provide a closed contact, connect these back to the S1 or E1 terminals on the main panel.

Please note that when using more than one CM2M-K the signal connection should be in series.

### Fan Interlock Connections

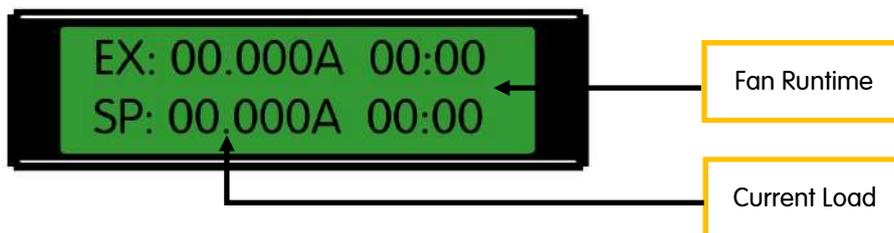


### Mains Wiring:

The live supply to one fan speed controller is connected through "one channel" (A or B) of the CM2M-K. The "supply" is taken in to "Live in" and back out via "Live out" and then connected to the speed controller.

This can then be repeated for another fan using the second channel.

### Display, and setting minimum speed speeds



The display shows the fan current load in amps and the running time in mins and seconds. The default minimum fan load is 24mA, anything less than this will be considered as fans switched off. To set a new/higher minimum fan load, switch the fans to their desired running speed and press the "LEARN" button. The CM2M-LCD will set the minimum allowed load to be 80% of the running load. This can be view by pressing the "SET" button.

To revert back to the default 24mA trip level, press the "LEARN" button with the fans switched off (i.e. zero load)



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## Commonly asked questions

- When installing with a three phase fan, interlock using just one phase of the fan.
- Always install the current monitor before any speed controllers or invertors.
- The current monitor will detect a current as low as 35mAmps.
- Wire the connection for any supply air into the main panel terminals S1 and the extract air into E1, this will allow correct reporting of the fans on the LCD screen.
- If you only have extract air/one fan installed (and connected to E1) leave the shorting link fitted into S1 to avoid the main panel waiting for another fan start.

## Warranty

### Medem UK Warranty Terms & Conditions

1. The warranty is a parts warranty and Medem UK Ltd will not cover or accept any labour or other expenses that may be incurred in the process of changing faulty product.
2. All panels and sender units are covered by a five year warranty.
3. Gas detector units and other remote detectors carry a two year warranty. Installation of the detectors should not be undertaken until all building and construction work is completed.
4. Gas solenoid valves carry the original manufacturers warranty, though as the supplier Medem UK will exchange faulty valves for return to the manufacturer.
5. Where a Medem UK engineer (or another company appointed by Medem UK) commission and installed system then that system will carry a ten year warranty. This applies to the main panel and the sender unit. At the time of commissioning a security label with a serial number will be attached to the main panel box. photographs and a comprehensive record of the installation will be held by Medem UK.
6. Where a warranty claim is made then, where appropriate, a written order to attend site must be provided to Medem UK A cost for labour and travel to site will be prepared as a quote. The cost must be included in the order.
7. Where it is found that the installation and/or the quality of workmanship has contributed to or wholly caused the failure of the product then we reserve the right to charge the whole or a proportion of the cost of the faulty item.