



TLD1-CO₂-TT-MOD



- 24V AC /DC supply voltage
- Three colour LCD backlight indicating ventilation requirement based on CO₂ measurement
- High accuracy temperature sensor
- Non dispersive infrared sensing technology
- Two analogue outputs (0 - 10VDC or 2 - 10VDC - selectable by jumper)
- Configurable measuring ranges and outputs
- Wall mounted
- Suitable for airports, train stations, shopping centres, offices, classrooms etc.

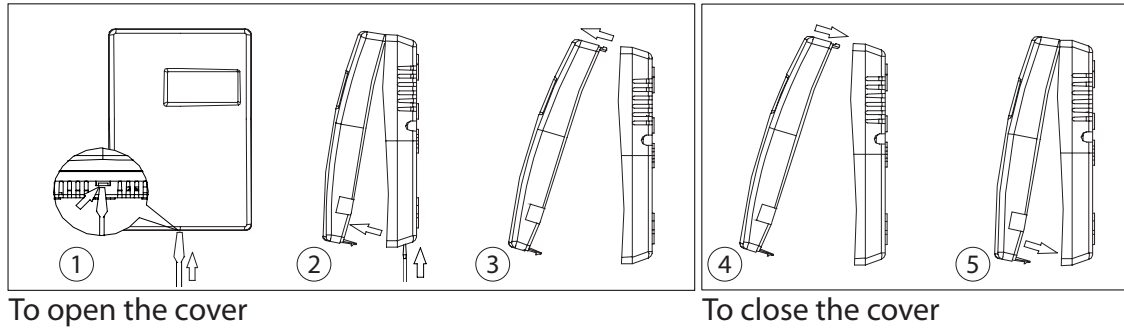
Specification

| | |
|---------------------------------|---|
| Gas detected | Carbon dioxide (CO ₂) |
| Sensing element | Non-dispersive infrared detector (NDIR) |
| Stability | < 2% of FS over life of sensor (15 years typical) |
| Calibration interval | ABC logic self calibration algorithm |
| Response time | < 2 minutes for 90% step change |
| Warm up time | 24 hours (first time), 5 minutes (operation) |
| CO ₂ measuring range | 0 ~ 2,000ppm |
| CO ₂ accuracy @ 25°C | ± 30ppm + 3% of reading |
| Temperature measuring range | -20 ~ +60°C |
| Temperature accuracy | ± 0.4°C |
| Power supply | 24VAC/24VDC |
| Consumption | 1.8W max.; 1.2W average |
| Analogue outputs | Two analogue outputs (CO ₂ and temperature) - 0 - 10VDC or 2 - 10VDC (selectable via jumper) |
| RS485 interface | RS-485 with Modbus protocol, 19,200bps rate, 15KV antistatic protection, independant base address |



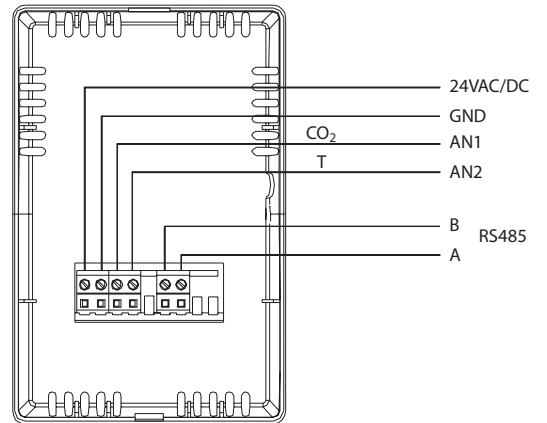
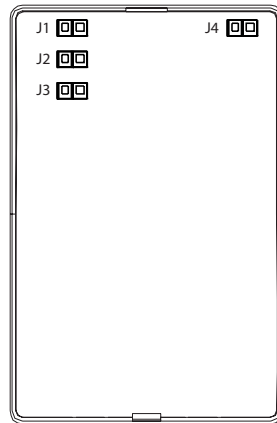
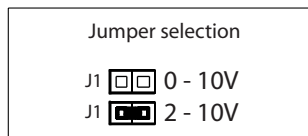
Carefully read the following instructions prior to installation of this device. Always keep this pamphlet for future reference.

Opening & Closing the Cover



Wiring Diagram

| Connection Terminal | | Function | Electrical Data |
|---------------------|---------------------|------------------------|--|
| 1 | G+ | Power (+) | 24VAC / 24VDC + |
| 2 | G0 | Power ground (-) | 24VAC/24VDC |
| 3 | OUT CO ₂ | Analogue output (+) | 0 ~ 10VDC corresponds to CO ₂ measurement |
| 4 | OUT Temp. | Analogue output (+) | 0 ~ 10VDC corresponds to -20 ~ +60°C |
| 6 | B- (Rx) | Modbus RS485 interface | |
| 7 | A+ (Tx) | | |



| J1 | Output |
|--------------|------------|
| Connected | 2 - 10 VDC |
| Disconnected | 0 - 10 VDC |

NOTE: The labelling of RS485 Data + and Data - wires as A and B is not standard. Be sure to connect your Data - wire to terminal 6 and your Data + wire to terminal 7 when wiring up your RS485 connection, regardless of the cable manufacturers A and B labelling system.

Selecting the output

Cut off all power to the unit and open the cover using the instructions on the next page. Inside there are four sets of jumpers: J1, J2, J3 & J4. J1 is used to select the output voltage.

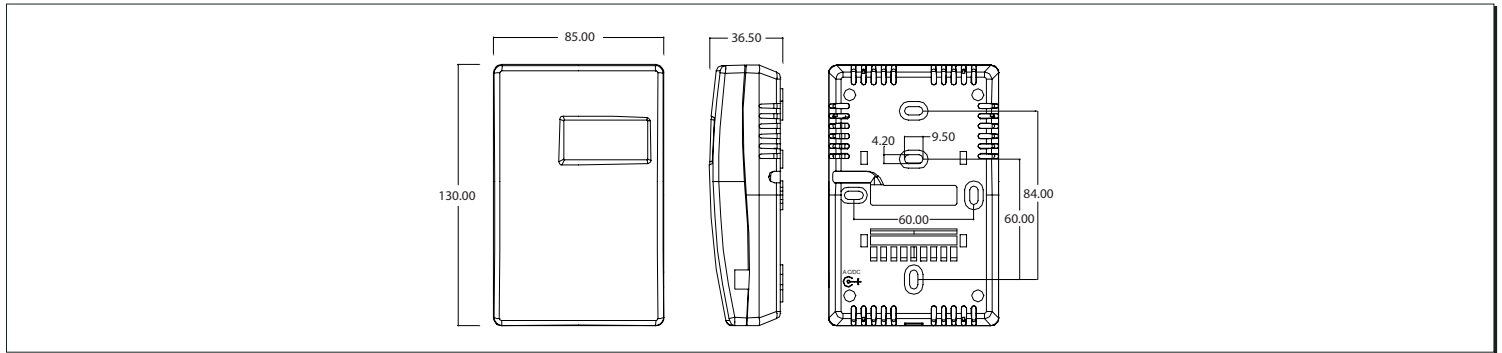
The chart above details how to set J1 for the required voltage output.

To select a 2 - 10VDC voltage output, place the jumper over the 2 pins. To select a 0 - 10VDC voltage output, remove the jumper. **DO NOT** touch J2, J3 or J4.

TLD1-CO₂-TT-MOD Fascia



Layout & Dimensions



Installation

Do not install the detector on voltages higher than marked on the detector.

- Open the cover (see diagram on previous page).
- Do not mount the unit near a diffuser or any steam source, or in direct sunlight.
- Mount the wall plate first (1.2 - 1.3m from the ground); there are two dimensions available (see diagram).
- Place the detector against the wall at desired location; make sure wires can be passed through the notch on the wall plate.
- Connect wires to terminal strips. Make sure wiring connection correct and secure.
- Close the cover (see diagram on previous page).

Important Instructions

1. Do not shake or hit the transmitter too much during shipment or mounting to protect the internal infrared CO₂ sensor from any damage.
2. Do not detach the upper PCB from the lower one without instruction from our engineers. Doing so may cause damage to the CO₂ sensor.

Notice:

a. Use of cellular telephones or radio transceivers within two feet of the sensor during calibration could cause sensor interference, calibration errors and affect sensor accuracy. Please refrain from using these devices during sensor calibration.

b. When checking the analogue output, avoid breathing directly on to the CO₂ transmitter.

Please complete this order form and fax it back to us on 01905 774296.

Company : _____
Contact Name : _____
Contact Number : _____
Email Address : _____

| | | |
|---|---|--|
| CO₂ Setpoint (0V / 4mA) | → | |
| Default: 0ppm Range: 0 - 10,000ppm | | |
| CO₂ Setpoint (10V / 20mA) | → | |
| Default: 2000ppm Range: 0 - 10,000ppm | | |
| Temperature Setpoint (0V / 4mA) | → | |
| Default: -20°C Range: -20 ~ +60°C | | |
| Temperature Setpoint (10V / 20mA) | → | |
| Default: +60°C Range: -20 ~ +60°C | | |
| Green to Yellow Setpoint | → | |
| Default: 1000ppm Range: 0 - 10,000ppm | | |
| Yellow to Red Setpoint | → | |
| Default: 1400ppm Range: 0 - 10,000ppm | | |
| Temperature Display | → | |
| Default: °C Range: °F - °C | | |
| Warm-up Time | → | |
| Default: 10 secs. Range: 0 - 600 secs. | | |
| Maximum CO₂ Measurement | → | |
| Default: 2000ppm Range: 0 - 10,000ppm | | |
| CO₂ Adjustment | → | |
| Range: -200 ~ +200ppm | | |
| Temperature Adjustment | → | |
| Range: -3°C ~ +3°C | | |

