

### Features

- Real time detection of 10 - 500ppb
- Indicates when O<sub>3</sub> level has been reached and stabilized
- Special design with 6 indicator lights to indicate different O<sub>3</sub> levels
- Six different ozone range corresponds with different indicating lights
- On/off output to control a fan, O<sub>3</sub> generator or an alarm
- Four setting ozone level ranges can be selectable to control the relay output via a set of jumpers
- Addressing for RS485 mode. eg. Modbus RTU

### Technical Data

<b>Gas</b>	Ozone - O <sub>3</sub>
<b>Detection principle</b>	Semiconductor ozone gas sensor
<b>Signal update</b>	2 seconds
<b>Consumption</b>	2,2 W
<b>O<sub>3</sub> Measuring precision</b>	±15 ppb + 20 % of reading
<b>Warm up time</b>	
First time	96 hours
Operational	1 hour
<b>Mounting height</b>	<b>300 mm above floor</b>
<b>O<sub>3</sub> Measuring range</b>	10 - 500ppb
<b>Relay output</b>	One dry contact output
Current	2A switching (resistance load)
Ranges ppb	Four to be selected to control the relay turn-on/ turn-off 50/100/200/300, (100 = default)
<b>Serial Interface RS485</b>	4800, 9600, 14400, 19200 and 38400 bps.
<b>Nodes</b>	Max 31 in a network
<b>Power supply</b>	24Vac/dc or 12Vdc
<b>Expected lifetime</b>	5 years normal operating environment
<b>Humidity range</b>	0-95% rH non-condensing
<b>Operating range</b>	0 up to +50C
<b>Protection Class</b>	IP30 Fire proof ABS material

### Description

O<sub>3</sub>-detector including digital measurement value processing and temperature compensation for the continuous monitoring of ozone concentration in the ambient air.

For the detection of ozone within a wide range of industrial and commercial applications.

### Six indicator lights

The first green indicator light:	O <sub>3</sub> < 49ppb
The first/second green indicator lights:	50ppb ≥ O <sub>3</sub> < 99ppb
The first yellow indicator lights:	100 ≤ O <sub>3</sub> < 199ppb
The first/second yellow indicator lights:	200 ≤ O <sub>3</sub> < 299
The first red indicator lights:	300 ≤ O <sub>3</sub> < 399
The first/second red indicator lights:	O <sub>3</sub> ≥ 400ppb

### Ordering Codes

<b>O3 L</b>	Ozone Indicator 10 - 500ppb (0,01 -- 0.5ppm) Modbus
<b>O3 SWL</b>	Ozone Detector 10 - 500ppb (0,01 -- 0.5ppm) c/w one relay output, Modbus

### Alarm units

<b>AAW</b>	Warning Siren 24Vdc 98-108dB
<b>AAW 230</b>	Warning Siren 230Vac 98-108dB
<b>OA 24</b>	Flash Light 24Vdc red
<b>OAW 24</b>	Combined Warning Siren and Flash Light 24Vdc
<b>OAW 230</b>	Combined Warning Siren and Flash Light 230V

### Warning Sign

<b>Gas Alarm</b>	Warning Sign "GAS ALARM" 24Vac/dc
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**Dimensions:** 100 x 80 x 28 mm

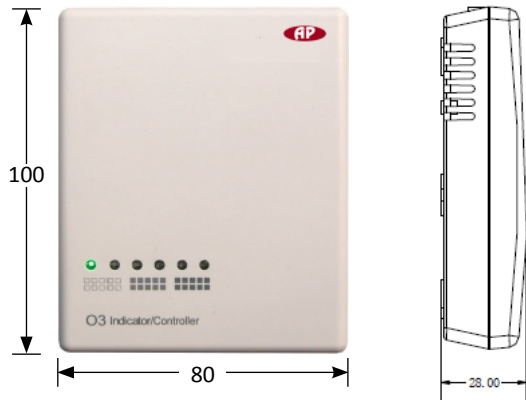
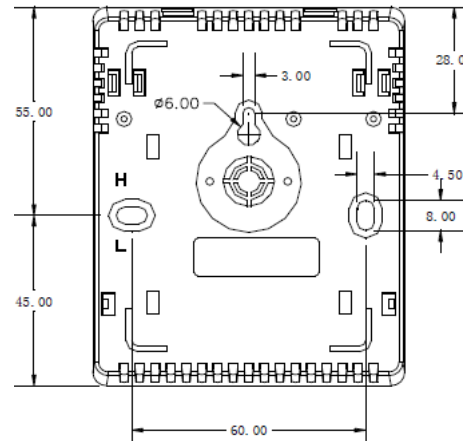
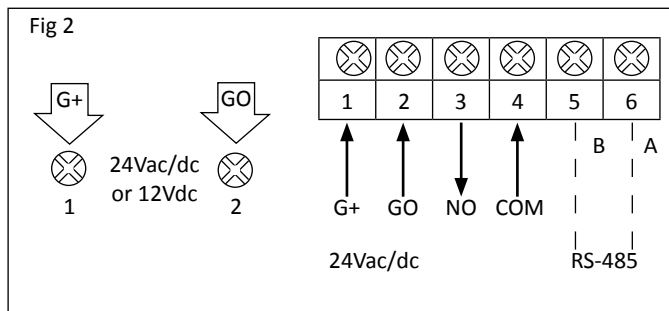


Fig 1.



### Wiring Diagram



Terminal	Function	Electrical Data
1	G+ Power +	24Vac/dc+ (12Vdc)
2	GO Power ground (-)	24Vac/dc (12Vdc)
3	Output Relay output	220Vac/30Vdc 2A
4	Common Relay output	220Vac/30Vdc 2A
5	B RS485 Interface	19200 Modbus RTU
6	A RS485 Interface	19200 Modbus RTU

### Relay Output Control Selectable

Opening the cover of the ozone indicator/ detector you can see two jumpers, J1 and J2.

Now you can select O<sub>3</sub> level via the two jumpers as below table to control the relay action and the buzzer alarm.

OFF means jumper disconnection, ON means jumper connection.

Jumper Setup		O <sub>3</sub> Setting Level	Relay Action & Buzzer Alarm
J1 = OFF	J2 = OFF	100ppb	The relay turns off when O <sub>3</sub> ≤ 90ppb and turns on when O <sub>3</sub> ≥ 110ppb
J1 = OFF	J2 = ON	70ppb (default)	The relay turns off when O <sub>3</sub> ≤ 60ppb and turns on when O <sub>3</sub> ≥ 80ppb
J1 = ON	J2 = OFF	200ppb	The relay turns off when O <sub>3</sub> ≤ 190ppb and turns on when O <sub>3</sub> ≥ 210ppb
J1 = ON	J2 = ON	500ppb	The relay turns off when O <sub>3</sub> ≤ 290ppb and turns on when O <sub>3</sub> ≥ 310ppb

### Important information

1. Always cut off power before mounting, removing and cleaning the monitor.
2. Notice the supply power voltage of the transmitter: 24Vac/dc or 12Vdc. Do not install the transmitter on voltages higher than marked on the transmitter

### Mounting and Wire Connection

1. Cut off power and simultaneously depress the 2 clips on either of the sides of the transmitter to remove the face plate from the wall plate. Follow the step 1 to 4 in figure 3.
2. Mount the transmitter on the place where you want to detect O<sub>3</sub> level 0.3m above floor. Do not mount it near diffuser or near steam source, in direct sunlight.
3. Mount the wall plate first. There are two dimensions available (see fig. 1)  
Place the transmitter against the wall at desired location; make sure wires can be passed through the notch on the wall plate.
4. Connect wires to terminal strips, (see the label attached on the wall plate and fig.2). Make sure wiring connection correct and secure.
5. Follow the step in figure 4 to close the cover.

### Touch Button



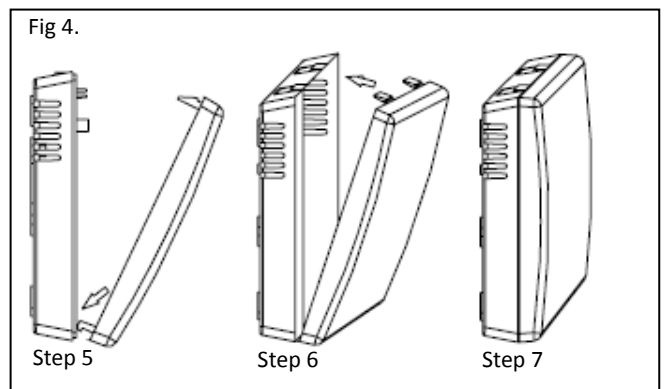
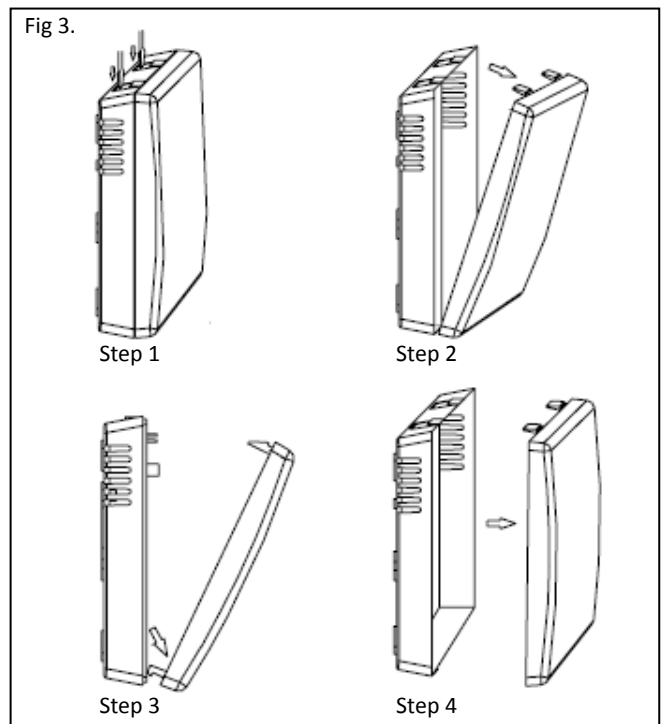
- |                                |   |
|--------------------------------|---|
| <b>Touching the button</b>     | Touching this button switches the working mode of the controlled ventilation device                               |
| <b>Touching it once</b>        | Constant working  |
| <b>Touching it twice</b>       | Stops working   |
| <b>Touching it three times</b> | Working mode of the controlled ventilation device will be automatically adjusted according to pre-set ozone value |

### Guidelines on How to Measure Ozone

The following information is presented to help users operate their Ozone Detector in the most effective and efficient manner.

#### General

- Ozone is heavier than air and tends to sink. Thus detection of leaks from ozone generating equipment should be performed at the most appropriate position.
- Ozone will react and decompose on surfaces such as walls, furniture etc.
- Smell is not a reliable test for the presence or concentration of ozone as the odour threshold varies widely between people and is affected by local ambient conditions.



### Permanent Controller Placement

- The Ozone Detector has been designed to measure the ambient concentration of ozone.  
The controller must not be placed directly in an ozone stream.
- For indoor local area monitoring attach the controller to an inert surface with the inlet unobstructed.
- For leak detection mount the unit near the ozone equipment.
- Ensure that the controller is protected from excessive water plashing, dust, vibration, excessive heat or cold, high concentrations of ozone and excessive swings in humidity.

### False Readings

The Ozone Detector has been designed to respond selectively to ozone, however other oxidizing gases such as chlorine and nitrogen dioxide can generate false readings if they are at high concentrations.

High concentrations of hydrocarbon gases such as vapours of alcohol, oils and solvents can reduce and mask the concentration of ozone.