



# Industrial Air Quality Detector VOC/ CO2 Single Point Controller 1/2 Detector PBIO

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## Technical Data

<b>Gas</b>	VOC and CO2
<b>Detection principle</b>	Metal oxide semiconductor
<b>Measuring range</b>	450-4000ppm
<b>Accuracy</b>	+/- 150ppm
<b>Repeatability</b>	+/- 5% of reading
<b>Response time</b>	t90 <60 sec.
<b>Warm-up time</b>	20 min.
<b>Mounting height</b>	1,5 to 1,8 metres above floor
<b>Output signal</b>	0(4)4-20mA,/ 0(2)-10Vdc
D/A resol.	10 Bit, 10mV
Parameters	Rout<100ohm, 5Rload >5 kOhm
Relay 1	30Vac/dc, 0,5A, pot.free SPDT
Relay 2	30Vac/d 0,5A potfree SPNO/SPNC
Bin.output	30Vdc / 0,05A open-collector
<b>Input signal</b>	4-20mA, input resistance 200ohm
<b>Voltage external detector</b>	24Vdc, max, charge 50mA
<b>Power supply</b>	18-28Vac/dc, reverse polarity prot.
<b>Power consumption</b>	100mA, max (2,5VA)
<b>Expected lifetime</b>	> 10years, norm. amb. conditions
<b>Humidity range</b>	15-90% rH non-condensing
<b>Operating range</b>	-10 up to +50C
<b>Rating</b>	IP65 Protection Class
<b>Certificates</b>	VDI 2053 Air treatments for garages and tunnels

## Features

- Integrated gas sensor, long life expectancy
- Continuous monitoring
- Standard version with display/LED/keypad
- Modular plug-in technology
- Easy maintenance/calibration
- Reverse polarity protected, overload-proof
- (0)4-20mA or (0)2-10Vdc output signal
- 2 relays output 30Vac/dc 0,5A
- 2 binary outputs 30Vdc, 0,05A
- 4-20mA input for external gas detector
- 4 x status LED without display (option)
- 2 power relays, potential-free, 250Vac/dc 5A (option)
- Integrated buzzer with reset function internal/ external (option)
- Serial Interface (option)

## Application

For detection of Air Quality/ CO2 in rooms where changes of the vapours concentration are possible..

As option PBIO is provided with an input for one external analog gas detector.

4 alarm thresholds per detector are free programmable.

Configuration and operation are possible via logical, simple system menu structure without specific programming knowledge

Free programmable parameters and setpoints enable the individual adaption to a variety of possible applications of gas measuring and monitoring.

## Ordering Codes

<b>PBIO 24</b>	Single point gas controller VOC/ CO2 24Vac
<b>PBIO 230</b>	Single point gas controller VOC/ CO2 230Vac

<b>MOD</b>	Protocol for Modbus
<b>GCD</b>	Protocol for GCD-series
<b>DUCT</b>	Duct Mounting
<b>POW 2</b>	Power relays 250Vac, 5A, potential-free, changeov
<b>EPS</b>	Supply duration 60min., maintenace-free, changeov
<b>CAL 2</b>	Calibration Kit for Tox-transmitters
<b>HEAT</b>	Temp.controlled heating element 3C +/-2C0,3VA
<b>BUZZ</b>	Internal warning summer 85dB
<b>STAIN</b>	Enclosure of stainless steel
<b>AIN</b>	4-20mA analogue input
<b>GAS 17</b>	Calibration gas 17 liter
<b>REG</b>	Pressure regulator flow adjusted to 0,5 lit/min.

<b>Warning devices</b>	See special datasheet
<b>Warning signs</b>	See special datasheet

### Physical characteristics

<b>Enclosure</b>	Polycarbonate, plastic <b>On request stainless steel</b>
<b>Flammability</b>	UL94 V2
<b>Enclosure colour</b>	RAL light grey
<b>Dimensions WxHxD</b>	130 x 130 x 75mm
<b>Weight</b>	approx 0,6kg
<b>Cable entry</b>	Standard 6 x M20
<b>Wire connection</b>	Screw terminal, min 0,25mm <sup>2</sup> and max 2,5mm <sup>2</sup>
<b>Wire distance</b>	Current signal 500m Voltage signal 200m
<b>Guidelines</b>	EMC Directive 2004/108/EEC

### Warning buzzer

<b>Accoustic pressure</b>	85db (distance 300m)
<b>Frequency</b>	3,5 kHz
<b>Power consumption</b>	30mA, (max 0,8VA)

### LCD display

<b>LCD</b>	Two lines, each 16 characters
<b>Status LED (4)</b>	Normal operation - Fault - Alarm 1- Alarm 2
<b>Operation</b>	4 push-buttons - menu-driven
<b>Power consumption</b>	10mA (max 0,3VA)

### Heating

<b>Temperature controlled</b>	3C +/-2C
<b>Ambient temperature</b>	-40C
<b>Power supply</b>	18-28Vdc/ac
<b>Power consumption</b>	0,3A, 7,5VA

### Options

<b>Status LED (without display)</b>	Power - Alarm 1 - Alarm 2 - Fault
<b>Power supply 230Vac</b>	90-250Vac 50/60Hz
<b>Power relays (2)</b>	250Vac, 5A, potential-free, change-over contact
<b>Emergency power supply</b>	Supply duration 60min, maintenance-free

