Made in INDIA

Monitor for Dust + CO_2 + Temperature + Humidity

Model No. **FBXDTHCO2W**

Model No. **FBXDTHCO2G**

Pollution monitors for indoor purpose

Parameters	Specifications
CO_2 sensor element	NDIR
CO_2 sensor range	0-2000 ppm
CO_2 sensor accuracy	± 50 ppm + 5% reading value
Sensor Element	Polymer Humidity Capacitor
Operating range	Humidity (0-100%rH) Temperature 0°C -70°C
Accuracy	Humidity (±2%rH), max ±2%rH Temperature ± 0.5 °c
Resolution (Sensitivity)	Humidity ±0.1%rH Temperature 0.1 °C
Repeatability	Humidity ±1 %rH Temperature 0.2 °C
Humidity Hysteresis	±0.3 % rH
Long term stability	±0.5 %rH

Parameters	Specifications
Dust sensor element	Optical sensor
PM 2.5 to PM 10 range	10 µg/m³to 1400 µg/m³
Dust sensor accuracy	± 20 %
Operating temperature	10°C - 45°C
Operating range	Humidity (0-100%rH) Temperature 0°C -70°C
Oxygen condition	21% standard condition. Change in O_2 concentration may affect sensitivity of the machine
Operating voltage	12Volts DC. 110V-220VAC/50-60Hz to 12VDC @ 1Amps converter adapter provided along with the monitor
Enclosure Material	ABS plastic (white and black)
LCD backlight	Lemon Green / Bluish White

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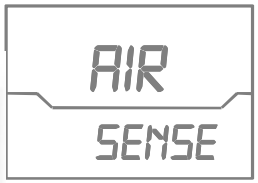
Model: FBXDTHCO2W

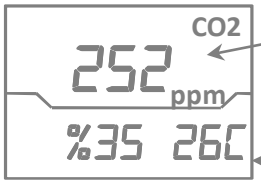
Model: FBXDTHCO2G



Initial screen

Current CO_2 value

Screen changes after around 10 seconds



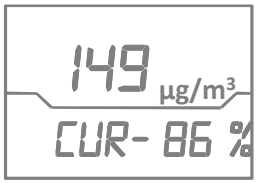
Current CO_2 value screen

Current reading CO2 (in ppm)

Temperature (°C) and Humidity (%rH)

Screen stays for around 30 seconds

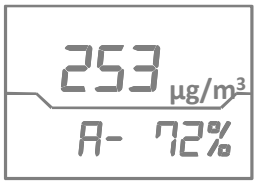
Current dust particle value



Current reading (ug/m^3)

Current Percentage of CLEAN air (for the day)

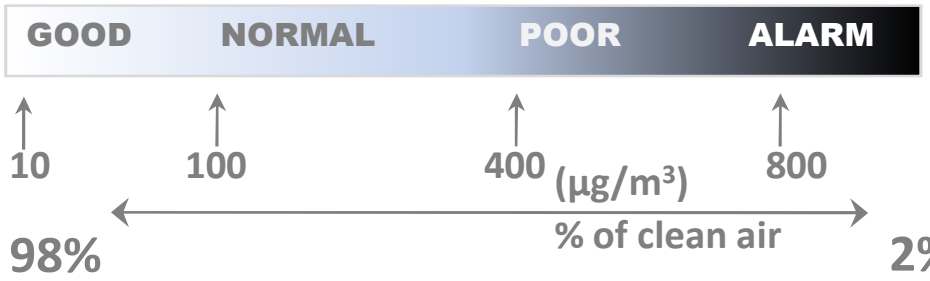
Average dust particle value



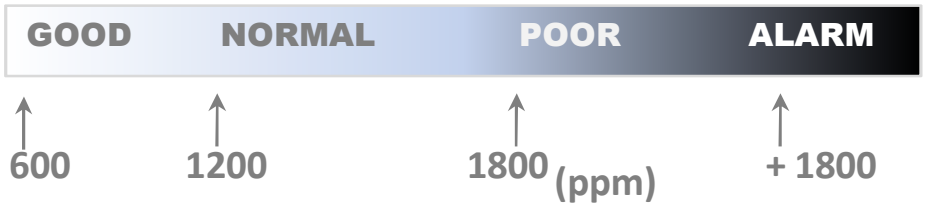
Average reading (ug/m^3) (for the day)

Average Percentage of CLEAN air (for the day)

Air Quality Index



CO_2 Index



Air Quality

GOOD
NORMAL
POOR
ALARM

Displayed in bottom left corner of the screen

Air Quality Index	Recommended actions
Good	Breathing air quality is healthy
Normal	Air purifier is preferable. Might cause breathing troubles (like coughing, sneezing) if exposed for a prolonged duration
Poor	Not good for health. Will cause health hazard if continuously exposed under these breathing conditions
ALARM	Smoky air, not fit to breathe even for more than 10-15 minutes. Recommend to turn off the monitor in such cases

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Dust + CO_2 + Temperature + Humidity Monitor – Frequently asked questions (FAQ)

• ***What is the difference between FBXDTHCO2G and FBXDTHCO2Gw models?***
Both the models are functionally the same. The background light of the LCD screen is bluish-white in FBXDTHCO2W model and lemon-green in the case of FBXDTHCO2G model

• ***Can the machine be hand operated or on battery?***
The monitor operates on 12VDC power supply. We provide 220VDC to 12VDC converter adapter along with the package. User can use a 12V battery **EXTERNAL** pack as well. The life of the battery would depend on the battery capacity. On an average, 4-6AH/12VDC rechargeable lead acid battery may last for 16-18 hrs.

• ***How do I use the machine?***
The best way to use the monitor is to keep it on a table or mantelpiece. Power on the machine and allow a settling time of around 2-3 minutes. Boot up CO_2 readings instantly start showing up. Followed by dust PM2.5 values after every 30 seconds. Make sure not to disturb the orientation of the meter. Keeping it vertical on a table is the best way to keep it. Shaking the sensor or the monitor too often will disturb the readings

• ***How do I infer from the readings?***
The monitor displays CO_2 concentration in **ppm** (part s per million), PM2.5 to 10 concentration in **µg/m³**, temperature in **ºC** and humidity in **%rH**. The bar on the left side displays the quality of air. All 3 bars active means good quality of breathing air. For higher concentrations of these gases ALARM is shown on the display

• ***Do I need to calibrate the machine?***
No. The monitor comes with inbuilt memory where factory calibration settings are stored. At factory, the calibration is done with known concentration of targeted gas(es)

• ***What are the values that can I expect to see in my room?***
Usually the concentration of CO_2 should be below 300-400ppm and dust below 300 µg/m³. If the meter is showing values higher than this, it is recommended to open doors and windows to allow fresh air to circulate in, till the VOC concentration is reduced. Newly painted house shows a high value of VOC concentration

• ***Where is sensor located in the monitor?***
The sensors are located at multiple different locations in the monitor, the front panel orifice on the left hand side has the dust sensor behind it

• ***Can the unit be used for outdoors as well?***
The unit enclosure is designed for indoors. Though the machine can still be used outdoor with proper sheds and covering to avoid from direct heat/sunlight/rain etc. Ensure the sensor area is open for the environment

• ***Where can the monitor show high readings?***
Areas near roads or construction sites show high values of dust. Congested and suffocating rooms with no proper ventilation shows high values of CO_2

• ***What are the precautionary measures and maintenance needed by he VOC monitor?***
When subjected to rooms which are full of smoke or dust, and the reading says ALARM, the monitor should be turned OFF. After prolong use, there may be some dust accumulation on the sensor lens. Use a soft dry silk cloth or swab to gently wipe away the dust and clean the sensor. Do not use alcohol or water to clear the dust.

• ***I noticed the numbers are jumping, why so?***
The monitor checks for particles suspended in the air. The random (Brownian) motion of the particles, makes the sensor show values differently. It is not possible for particle density to be constant in a room (even though it is closed). The sensor is internally calibrated to nullify such changes for sudden variation. User should ignore the specific reading, if sudden change is visible on the monitor

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