



(FBXDQM)

Monitor to measure
Dust PM2.5

FORBIX SEMICON Co.

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Specifications

Model: FBXDQM

Parameters	Specifications
PM2.5 sensor element	Optical
PM2.5 sensor range	40 – 1400 $\mu\text{g}/\text{m}^3$
Accuracy	$\pm 5\%$ for values below $400\mu\text{g}/\text{m}^3$ $\pm 10\%$ for values above $400\mu\text{g}/\text{m}^3$
Resolution (Sensitivity)	$\sim 15 \mu\text{g}/\text{m}^3$
Long term stability	$\pm 0.5 \%$ rh



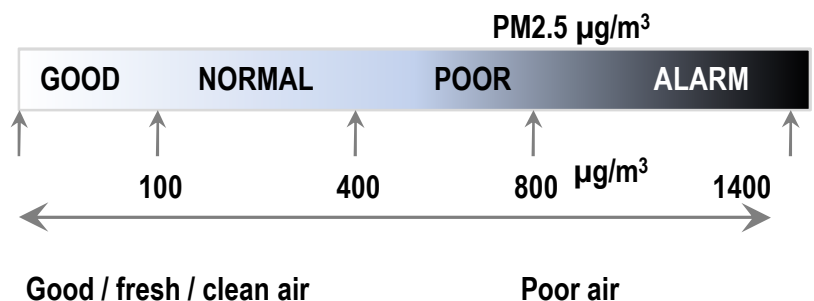
Instantaneous value of
dust PM2.5 $121\mu\text{g}/\text{m}^3$



% of clear air $121\mu\text{g}/\text{m}^3$
value is equivalent to $\sim 85\%$

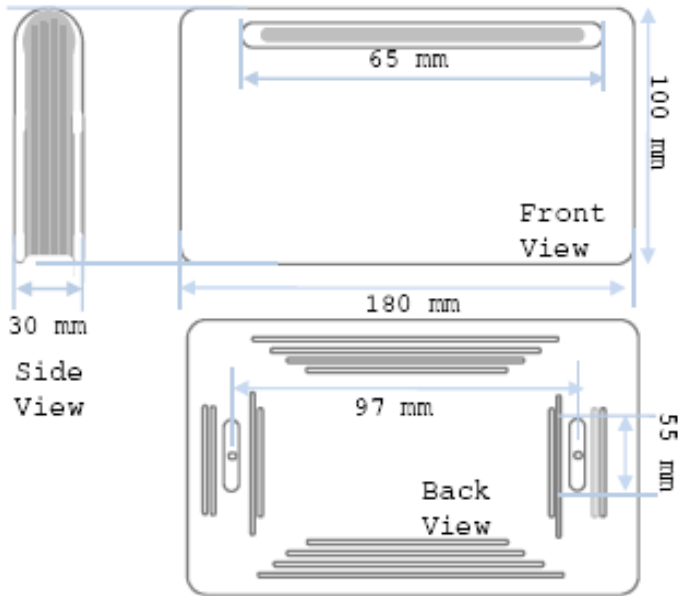
Minimum $20\mu\text{g}/\text{m}^3 \sim 2\%$
Maximum $1400\mu\text{g}/\text{m}^3 \sim 99\%$

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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Physical Dimensions

How to operate

- Connect the dust monitor to 12VDC adapter
- Wait for 5-6 minutes before the readings start showing up
- “dust Sense” (for atleast 30 seconds), shows up on boot up screen after a countdown time of 90 seconds. Blow some air into the left orifice if needed. This will speedup the booting process
- Dust Quality Monitor machines (DQM) can be kept on a table or mounted on the wall

The sensor is located inside the left orifice of the machine. The display shows the present and average value of PM2.5 pollution levels.

The monitor is capable of checking values from 10 – 1400 $\mu\text{g}/\text{m}^3$. On the left bottom corner of the display shows the AQI (Air Quality Index) bar. The PM2.5 values are categorized as GOOD, NORMAL, POOR and ALARM.



Air Quality Index
GOOD

Value less than 100 $\mu\text{g}/\text{m}^3$



Air Quality Index
NORMAL

Value 100 – 400 $\mu\text{g}/\text{m}^3$



Air Quality Index
POOR

Value 400 – 800 $\mu\text{g}/\text{m}^3$

Air Quality Index
ALARM

Value exceeding 800 $\mu\text{g}/\text{m}^3$

Corresponding value of air quality index to the displayed PM2.5 readings

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