

<http://git.rot13.org/?p=air-quality;a=blob:f=pms3003.pl;hb=HEAD>

[PMS3003 series data manual_English_V2.5.pdf](#)

<http://www.plantower.com/en/content/?107.html>

<http://aqicn.org/sensor/pms3003/>

https://github.com/avaldebe/AQmon/blob/master/Documents/PMS3003_LOGOELE.pdf (different manufacturer)

http://download.kamami.pl/p563980-PMS3003%20series%20data%20manual_English_V2.5.pdf

fa=0x0.127a80 [0, 0]

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spec

Parameters :Index (Unit)

Measuring range: 0.3-1.0um ; 1.0-2.5um ; 2.5-10um

Measurement units: ug/m3

3 Measurement accuracy: ug/m3

4 Response time: <10s

5 Work current: 5V200ma@ Work State 5V2ma@ Standby Fitness

Counting efficiency :50%@0.3um 98% @> = 0.5 um

Response time :â 10 sec

DC supply voltage :5 V

Operating current :120 mA

Standby Current :â 200 ÅA

Data interface level :L <0.8 @ 3.3 H> 2.7@3.3 V

Operating temperature range :-20 ~ + 50 ÅC

Operating humidity range :0 to 99%

MTBF :â 3 Year

Size :65 Å 42 Å 23 mm

pinout

PIN1 :VCC :Power Supply (5V).
PIN2 :GND :Ground.
PIN3 :SET :Standby mode (when 0), operating mode (when 1) TTL 3V3
PIN4 :RXD :Serial receive / TTL level @ 3.3V.
PIN5 :TXD :Serial transmit / TTL level @ 3.3V.
PIN6 :RESET :Module reset / TTL level @ 3.3V.
PIN7,8 :NC :Not connected.

serial

9600

starts with 0x42 0x4d

| Byte | index | Description |
|------|-------|--|
| 1 | â | Constant value (0x42) |
| 2 | 0 | Constant value (0x4d) |
| 3 | 1 | Frame length |
| 4 | 2 | |
| 5 | 3 | PM1.0 concentration unit ($\hat{1}/4g/m3$) |
| 6 | 4 | |
| 7 | 5 | PM2.5 concentration unit ($\hat{1}/4g/m3$) |
| 8 | 6 | |
| 9 | 7 | PM10 concentration unit ($\hat{1}/4g/m3$) |
| 10 | 8 | |
| 11 | 9 | PM1.0 concentration unit under atmospheric environment ($\hat{1}/4g/m3$) |
| 12 | 10 | |
| 13 | 11 | PM2.5 concentration unit under atmospheric environment ($\hat{1}/4g/m3$) |
| 14 | 12 | |
| 15 | 13 | PM10 concentration unit under atmospheric environment ($\hat{1}/4g/m3$) |
| 16 | 14 | |
| 17 | 15 | reserved |
| 18 | 16 | |
| 19 | 17 | reserved |
| 20 | 18 | |
| 21 | 19 | reserved |
| 22 | 20 | |
| 23 | 21 | Control sum |
| 24 | 22 | |

code

Arduino

doesn't check checksum: <https://github.com/suda/PMS3003/blob/master/src/PMS3003.cpp>

much better library: <https://github.com/fu-hsi/pms>

Node MCU

https://github.com/avaldebe/AQmon/blob/master/lua_modules/pms3003.lua