

# Debugging de la trama de datos del sensor PMS5003

- Logic analyzer → <http://vdwaa.nl/logic%20analyzer/pulseview/arch/linux/5-euro-usb-logic-analyzer/>

## Communication protocol

Serial port baudrate: 9600; Parity: None; Stop Bits: 1; packet length is fixed at 32 bytes.

Start Character 1	0x42(fixed bit)
Start Character 2	0x4d(fixed bit)
Frame Length 16-byte	Frame Length = 2*9+2 (data+check bit)
Data 1, 16-byte	concentration of PM1.0, ug/m3
Data 2, 16-byte	concentration of PM2.5, ug/m3
Data 3, 16-byte	concentration of PM10.0, ug/m3
Data 4, 16-byte	Internal test data
Data 5, 16-byte	Internal test data
Data 6, 16-byte	Internal test data
Data 7, 16-byte	the number of particulate of diameter above 0.3um in 0.1 liters of air
Data 8, 16-byte	the number of particulate of diameter above 0.5um in 0.1 liters of air
Data 9, 16-byte	the number of particulate of diameter above 1.0um in 0.1 liters of air
Data 10, 16-byte	the number of particulate of diameter above 2.5um in 0.1 liters of air
Data 11, 16-byte	the number of particulate of diameter above 5.0um in 0.1 liters of air
Data 12, 16-byte	the number of particulate of diameter above 10.0um in 0.1 liters of air
Data 13, 16-byte	Internal test data
Check Bit for Data Sum, 16-byte	Check Bit = Start Character 1 + Start Character 2 + ...all data

- [https://www.dfrobot.com/wiki/index.php/Air\\_Quality\\_Monitor\\_\(PM\\_2.5,\\_Formaldehyde,\\_Temperature\\_%26\\_Humidity\\_Sensor\)\\_SKU:\\_SEN0233#Board\\_Overview](https://www.dfrobot.com/wiki/index.php/Air_Quality_Monitor_(PM_2.5,_Formaldehyde,_Temperature_%26_Humidity_Sensor)_SKU:_SEN0233#Board_Overview)
- [https://www.dfrobot.com/wiki/index.php/PM2.5\\_laser\\_dust\\_sensor\\_SKU:SEN0177](https://www.dfrobot.com/wiki/index.php/PM2.5_laser_dust_sensor_SKU:SEN0177)

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