

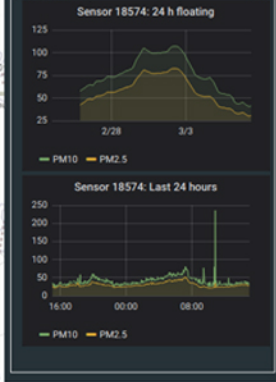
# WNDS-01-7S-S DC

## Wireless Network Dust Sensor PM1.0 PM2.5 PM10



### Froggie 1

Sensor ID	PM10 $\mu\text{g}/\text{m}^3$	PM2.5 $\mu\text{g}/\text{m}^3$
mean	33	28
(-) 18574	33	28



- 7th generation laser particulate sensor measuring PM1.0, PM2.5, PM4 and PM10 with high accuracy and repeatability
- Digital temperature, humidity and barometric, pressure sensor
- 2.4GHz WiFi communication, 4G LTE, LoRa (special order)
- Solar powered model available for remote locations incl. MPPT charger and LiFePO4 batteries
- AP mode for easy setup
- just select your WiFi station name and enter your KEY
- Integrated Li-Ion battery backup and power monitor for enhanced reliability
- Multi-API compatible with open architecture supporting MQTT and web protocols
- Free web and mobile applications for data visualization
- Free unlimited data storage and history
- Measurement 3 min update cycle
- MCERTS certified European Air Quality Standard DIN EN 15267
- Outdoor enclosure
- 1 year warranty



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## Features

German air pressure sensor and Swiss fine dust sensor with MCERTS, certification according to European Air Quality Standard DIN EN 15267 Certificate No: Sira MC 200350/00

### Digital laser sensor

Measurement output: PM1.0, 2.5, 4.0, PM10

Range: 0.0-999.9  $\mu\text{g}/\text{m}^3$

Particle size: 0.3 to 10 $\mu\text{m}$

Resolution: 0.3  $\mu\text{g}/\text{m}^3$

Response time: 10s

Relative error: max.  $\pm 15\%$  and  $\pm 10\mu\text{g}/\text{m}^3$  @ 25°C and 50%RH

### Digital temperature & humidity sensor:

Accuracy:  $\pm 2\%$  RH,  $\pm 0.5^\circ\text{C}$

Resolution: 0.1%RH, 0.1°C

Repeatability:  $\pm 1\%$ RH,  $\pm 0.2^\circ\text{C}$

### Digital barometric pressure sensor:

Operation range (full accuracy): Pressure: 300...1100 hPa, Temperature: -40...85°C

Absolute accuracy (Temp. @ 0...+65°C):  $\sim \pm 1$  hPa

Relative accuracy p = 700...900hPa (Temp. @ +25...+40°C):  $\pm 0.12$  hPa (typical) equivalent to  $\pm 1$  m

### Solar 4G model options

Solar panel:

- Model A: 30W

- Model B: 50W

Rechargeable battery: LiFePO4

Capacity: (A) 10Ah or (B) 20Ah

Network: integrated 4G LTE WiFi AP

Solar charger: 20A MPPT

Enclosure: steel with roof (outdoor)

Size excl. solar panel:

(A): 300x445x160 mm

(B): 400x570x200 mm

Weight: (A): 15kg, (B): 20kg

### Network protocol:

TCP/IP communication (HTTP/HTTPS/MQTT)

WiFi: IEEE 802.11 b/g/n with built-in antenna

### Operating mode:

Network sensor with 3 min update cycle

Free cloud service and Android app

### General device information:

Operating temperature: -10 to +50°C

Operating humidity range: 0-95%RH (non-condensing)

Air pressure: 86KPa to 110KPa

Service life battery: 8,000h @ 25°C, 6,000h @ 35°C

Service life particulate sensor: > 3 years

Outdoor enclosure

### Conformity / standards:

- MCERTS certified (European Air Quality Standard DIN EN15267

- CE/FCC/RoHS compliant

Warranty: 1 year