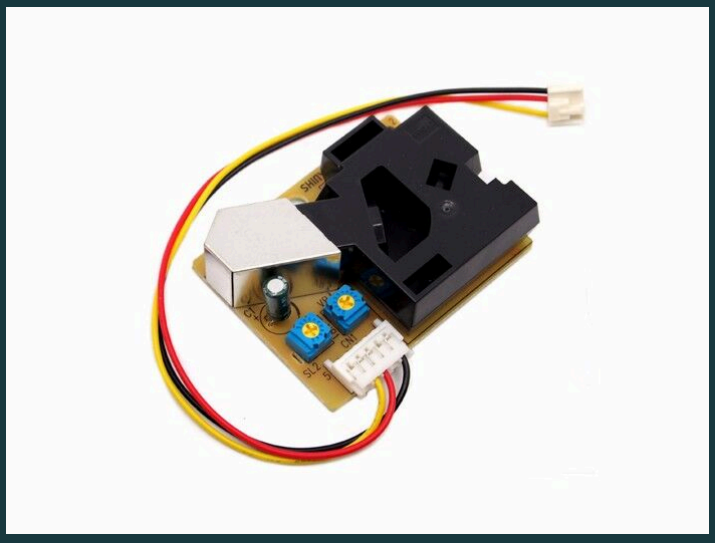
seeed studio

INDUSTRIAL PRODUCT DATASHEET

Grove - Dust Sensor(PPD42NS) - measuring PM 2.5,dual PWM output

Grove - Dust Sensor(PPD42NS) - measuring PM 2.5,dual PWM output: a compact, self-priming dust sensor for PM1.0/PM2.5 detection in air purifiers, air quality monitors, air conditioners, and ventilators.

SKU	UPDATED	PRICE
101020012	2026-04-24 02:19:40	$9.99(Excl. VAT)



Overview

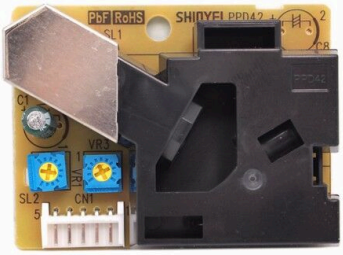


The Grove - Dust Sensor(PPD42NS) - measuring PM 2.5,dual PWM output detects particles over 1 and 2.5 microns, providing stable and sensitive dual PWM output for indoor dust and cigarette smoke measurement. Its self-priming air mechanism with built-in heater and compact design ensure long-term easy maintenance, while Grove port compatibility enables seamless plug-and-play integration into air purifiers, air quality monitors, air conditioners, and ventilators.

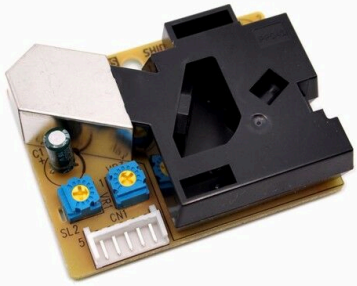
Key Features

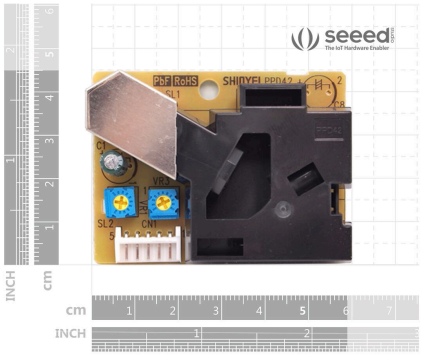
- **Wide measurement range:** Not only cigarette smoke, but also indoor dust, an asthma trigger, can be detected.
- **Stable and sensitive measurements:** Dual PWM output for particle sizes over 1 micron and 2.5 microns (approx.)
- **Long-term use:** Air is self-priming through the current of the air generating mechanism with built-in heater, easy to maintain
- **Compact and light design:** Compact size makes installation easier
- **Easy to use:** Compatible with Grove port, just plug-and-play

Product Gallery









Specification

Dimensions	59mm x45mm x22mm
Weight	G.W 28g
Battery	Exclude
VCC	4.75~5.75V
Standby Current Supply	90mA
Detectable range of concentration	0~28,000 / 0 ~ 8000 pcs/liter / pcs/0.01cf
Operating Temperature Range	0~45 °C
Output Method	Negative Logic, Digital output, High: over 4.0V(Rev.2), Low: under 0.7V
Detecting the particle diameter	>1μm
Dimensions	59(W) × 45(H) × 22(D) mm
Humidity Range	95% rh or less

Applications

- **Air Purifier**
- **Air Quality Monitor**
- **Air Conditioner**
- **Ventilator**

Part List

Grove - Dust Sensor	1
Grove Cable	1

Compliance & Logistics

HSCODE	9031809090
USHSCODE	9031808085
UPC	841454108498
EUHSCODE	9013101000
COO	CHINA

Resource Links

- https://www.seeedstudio.com/Grove-Dust-Sensor-PPD42NS.html
- Grove-Dust_sensor datasheet
- De-construction of the Shinyei PPD42NS dust sensor Made by Tracy Allen
- Building a low-cost networked PM2.5 monitor
- Measuring the Pickle Jr. – a modified PPD42 with an attached fan.
- Testing the Shinyei PPD42NS
- Air Quality Monitoring

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