

OY1700 LoRaWAN[®] Particles meter

LoRaWAN[®] sensor that measures temperature, humidity and particulate matter (PM 10, PM2.5 and PM1.0), in indoor environments. Easy to use, configurable over the air and stylish in design to fit into indoor spaces.

High quality PM measurement

Nordic Propeye's LoRaWAN[®] sensor for particulate matter (PM) uses a laser scattering sample method as operating principle. In combination with this, there is a small fan in the device that briefly spins before a measurement is taken. This allows representative air to fill the sample area for a reliable measurement.

Air quality and human health

Particulate matter is one of the key parameters in air quality, related to human health. It consists of small particles, too small for the eye, that get affect human health at high dosages over time. Especially small particles (PM2.5) are dangerous because they can get into the deep parts of your lungs and even into the bloodstream. Particulate matter is often generated in industrial processes, such as welding, and combustion of gasoline, oil, diesel fuel or wood produce much of the PM2.5 pollution found in outdoor air.

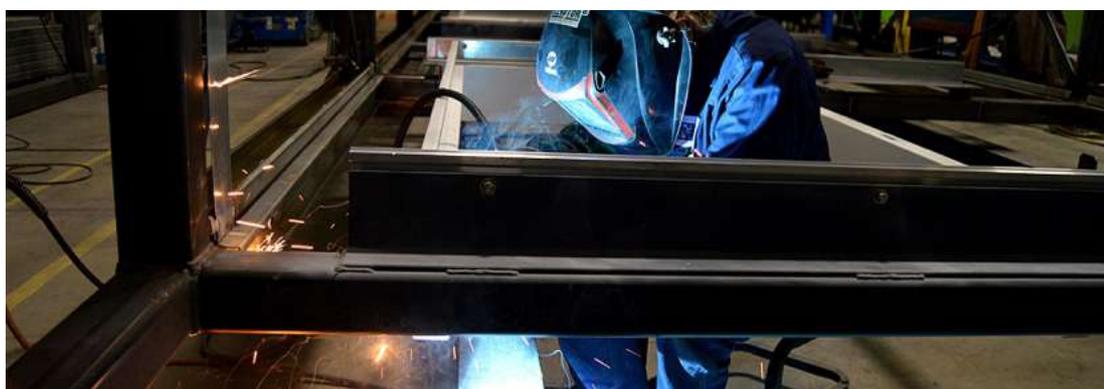


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Green, healthy building certifications

One of the primary use cases for the OY1700 LoRaWAN® Particles meter is in the monitoring of air quality for green, healthy building certifications.

Leading building certification standards require the monitoring of air quality parameters, such as particulate matter. With these certifications, real estate owners profile themselves on the international real estate market.



Operating principle

Laser scattering Yes

Accuracy and range

Temperature accuracy $\pm 0,2$ °C (conditions 0 °C to +50 °C)

Temperature range 0 °C to +55 °C

Humidity accuracy $\pm 2\%$ (conditions 10-90% RH)

Humidity range 0% to 90% non-condensing

Particulate matters ranges PM_{1.0}, PM_{2.5}, PM₁₀

Accuracy of $\pm 0,1$ °C and $\pm 1,5\%$ humidity available upon request

Connectivity

Network LoRaWAN®

Frequency bands 868 MHz

Provisioning Over the air & personalization

Size

Size 111 x 77 x 26 mm

Weight 75g

Security

Algorithms AES-128

Hardware Cryptographic co-processor

Features Secure boot

Secure firmware upgrade

Hardware based ultra-secure key storage

Power

Power source 5V-26V DC,
USB power cable included,
0.25 A max current

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Configuration

Measurement intervals	15 minutes, OTA configurable
Transmission intervals	15 minutes, OTA configurable
Measurement stabilization time	30 sec, configurable over the air

Unique App EUI available upon request

Enclosure

IP30

Certifications

RoHS compliant

CE

LoRaWAN®

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Order Product Numbers (OPN)

Version	OPN
OY1700 LoRaWAN Particles meter	TP-T1700-000-1-EU

Nordic Propeye AB

Östergatan 11
SE-43430 Kungsbacka, Sweden

Nordic Propeye stands for smart, sustainable choices. We have made it our mission to help our customer to make their real estate and condominiums lean, clean & green.

