SwisensPoleno Mars

The new way of real-time
Pollen Monitoring

Detect what's in the air

SwisensPoleno Mars

## The latest generation of particle measurement

SwisensPoleno Mars is the future of real-time pollen monitoring. It combines advanced measurement technologies with artificial intelligence and transparent data analysis. This ensures reliable and autonomous detection and identification of pollen, spores, and other airborne particles.

Features of Swisens technology

Holographic images: Precise capture of airborne particles for accurate identification and analysis.

Artificial Intelligence: Fast, accurate identification of particles without human intervention.

Open source software: Full control over data, customization capabilities, and expertise of the open source community.
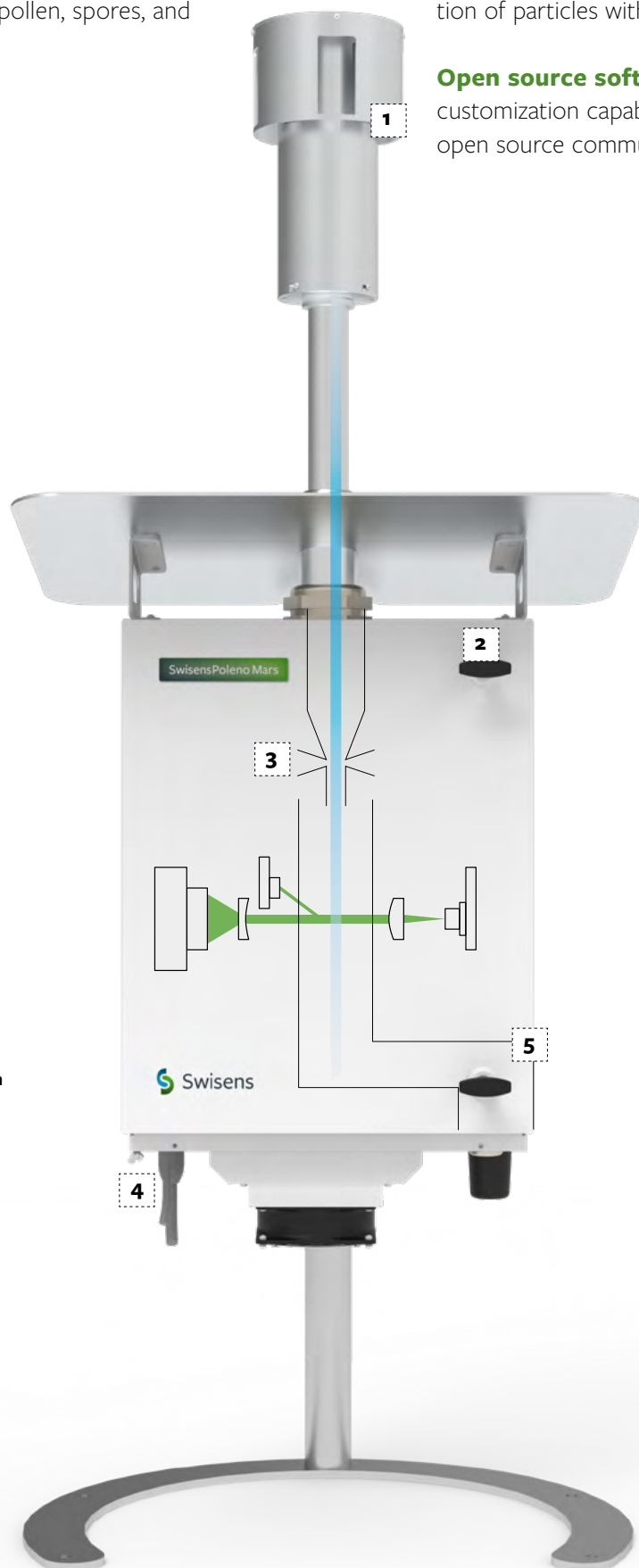
Components of the measuring station

1. Sigma-2 inlet
2. Weatherproof SwisensPoleno Mars
   - highly efficient aerosol concentrator
   - integrated calculation system
   - cleaning mechanism
   - holographic measurement setup
3. Trigger and holography
4. Air conditioning
5. Air outlet
6. Post holder (back side)

Possible applications

Our technology is based on an airflow cytometer that uses digital holography and image recognition to identify pollen. The integrated aerosol concentrator allows us to analyze an impressive volume flow of 40 liters per minute, which enables us to precisely detect local pollen concentrations in the minute range.

We can accurately detect local pollen concentrations in the minute range. The holographic images are captured in a few microseconds as the particle passes by. Our artificial intelligence processes the collected information from the images and identifies each particle. The AI recognizes and assigns the specific particle to the appropriate pollen class based on the known particle properties. By applying supervised machine learning and our SwisensEcosystem, new particle classes can be continuously generated and identified.

SwisensPoleno Mars – Your solution for advanced and continuous real-time pollen identification.

SwisensPoleno Mars rear view on post mount

Technical Performance Data

Measurement & Monitoring:
- Particle classes within 2 to 300 µm
- Air measuring volume 40 l/min
- Integrated particle concentrator
- 30'000 particles/m³ or 1000 particles/min

Control & Operation:
- Automatic data transmission
- Remote maintenance and access
- Automatic self-cleaning function
- Continuous operation
- High time resolution in the minute range

Data Generation:
- 1-10 GB Raw data & identification results per day
- <100 MB Identification results per day

Specifications

Ambient Conditions: Outdoor proof at -20°C to +50°C, and 0 % to 100 % R.H.; for non-corrosive environment (contact us for close proximity to sea water)

External Interfaces: Power, Ethernet (if not using integrated mobile router)

Optional Accessories: Integrated mobile router, Stand for floor mounting, uninterruptible power supply (UPS), Solar cell power supply

Dimensions: 60 x 47 x 125 cm³ (L x W x H) (incl. roof, inlet and post mounting adapter)

Weight: 34 kg

Power Supply: 100-240 VAC, 50/60 Hz, 750 W peak incl. IPC & AC

You have individual requirements?
Our team is looking forward to hearing from you.
sales@swisens.ch