

**SwisensPoleno Jupiter** is the latest generation of optical particle measurement systems for real-time measurement and monitoring of bioaerosols. It combines the latest measuring methods with artificial intelligence and transparent data evaluation to create reliable autonomous measuring and identification of pollen, spores, other bioaerosols and solid particles in the air.



### SwisensEcosystems

: ; Hardware Add-ons Software

Swisens Poleno Jupiter

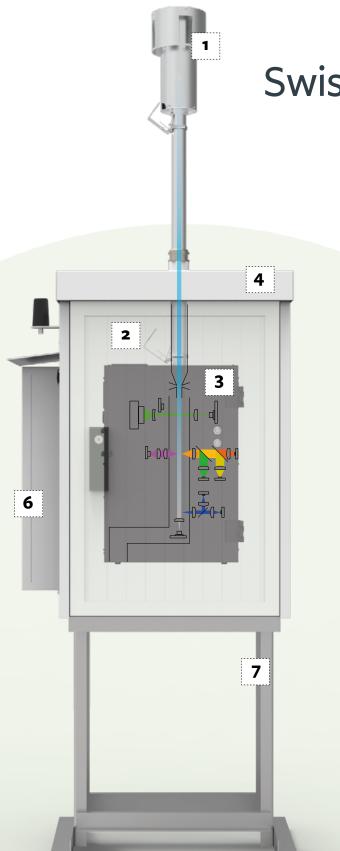
### The new way of real-time Bioaerosol Monitoring

- stable long-term measurement
- unique identification
- transparent data
- lab & field compatible



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## Swisens Poleno Jupiter

### The new way of real-time Bioaerosol Monitoring

#### **SwisensEcosystems**

Multiple systems can be linked with the combination of add-on technology, unique software and advanced services to create a reliable solution for real-time aerosol particle measurement.

**Hardware:** SwisensPoleno Mars

**SwisensPoleno Jupiter** 

**Add-ons:** SwisensAtomizer

Software: SwisensData Explorer

SwisensData Analyzer

**Service:** SwisensCare

SwisensData

SwisensAccelerators SwisensAlFactory

#### **Monitoring Station Components**

- 1. Sigma-2 inlet
- 2. Mobile router (up to 4G)
- 3. SwisensPoleno
- 4. Insulated weather protection housing with lightning protection
- 5. Integrated service station with 22" display and hinged keyboard (inside)
- 6. Air conditioning and mobile antenna (external weather station on request)
- 7. Adaptable easy to mount sub construction

#### **Specifications of SwisensPoleno Jupiter**

Ambient Conditions: Outdoor proof -20°C to +50°C,

and 0% to 100% R.H.; in 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 / uninterruptible power supply (UPS)

**Dimensions:** 63 x 73 x 150 cm<sup>3</sup> (L x W x H)

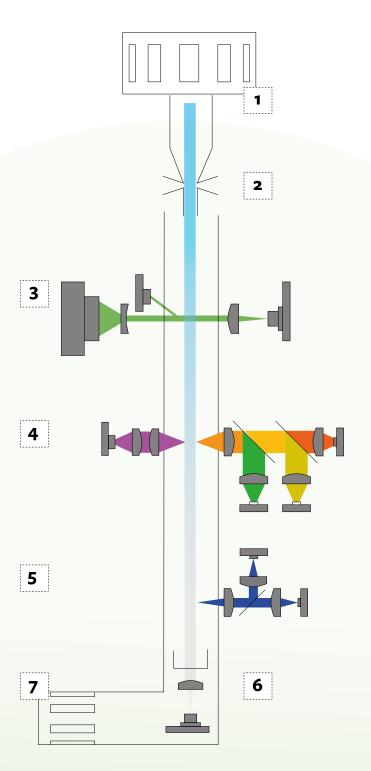
(incl. roof, inlet and post mounting adapter)

Weight: 134 kg

**Power Supply:** 100-240 VAC, 50/60 Hz,

750W peak incl. IPC & AC

## Swisens Poleno Jupiter



# The new way of real-time Bioaerosol Monitoring

#### **Swisens Technology**

Designed for the discovery of the aerosol microcosm and the pioneering autonomous measurement and monitoring of bioaerosols. Both for scientific measurement campaigns in the laboratory and long-term measurements outdoors.

The technology used in SwisensPoleno Jupiter base on the following elements:

- Holographic images
- Light scattering
- Polarisation and
- UV-induced fluorescence intensity and lifetime
- Artificial intelligence
- Open source software

#### **Technical Components**

- 1. Sigma-2 inlet
- 2. Particle concentrator
- 3. Trigger and holography
- 4. Measurement of fluorescence lifetime and fluorescence spectrum.
- 5. Polarized time-resolved scattered light measurement
- 6. Insertable sample collector
- 7. Air outlet

#### **Technical Performance Data**

#### **Measurement & Monitoring:**

- Particle classes within 0.5 300 µm
- Air measuring volume 40l/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

## Swisens Poleno Jupiter







#### **As Outdoor Monitoring Station**

Space Requirements:  $0.8 \times 0.8 \text{ m}$ 

Weight: 134 kg

Power Supply: 230VAC, 50/60Hz, 9A

#### For Laboratory Application

**Dimensions:** 28 x 32 x 47 cm<sup>3</sup> (L x W x H)

Weight: 26 kg

Power Supply: 230VAC, 50/60Hz, 9A

#### **Possible Applications**

SwisensPoleno Jupiter can be operated in the field as well as in the laboratory and indoors. The installation and removal of the measurement system is done with a few simple steps. With the Lab configuration, SwisensPoleno Jupiter can be used in various applications:

- Research projects with laboratory experiments
- Targeted measurements under laboratory conditions
- Reference measurements & algorithm development
- Measurement of pollutants under protective equipment like an aerosol chamber
- Indoor air quality measurement

The hardware add-ons such as the SwisensAtomizer enable direct nebulization and measurement of dry particle samples. A Hepa filter plug at the air outlet of the measuring system provides filtering of the measured air volume. Both can be quickly and easily mounted or removed as desired.

You have individual requirements for the laboratory use of SwisensPoleno Jupiter? – Our team is looking forward to hearing from you.

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