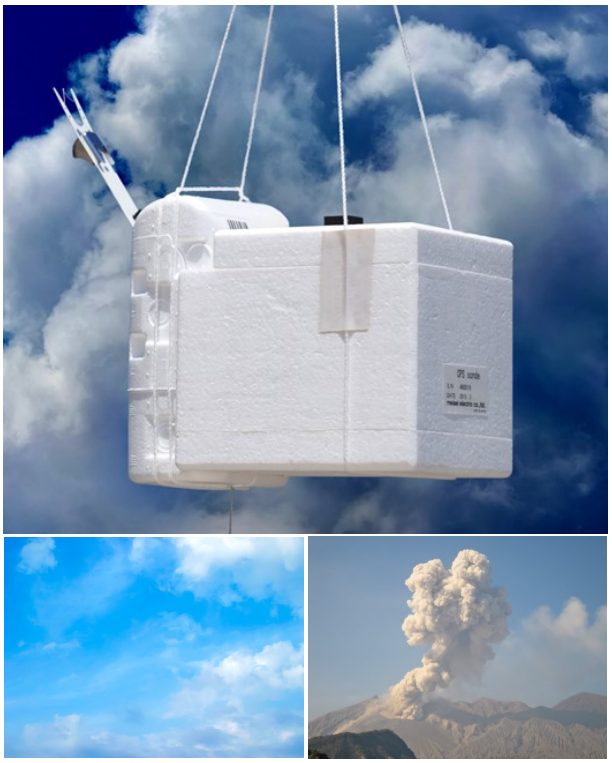
CPS sonde

Cloud Particle Sensor



Outline

CPS（Cloud Particle Sensor）, combined with GPS radiosonde, provides in-situ cloud measurements including vertical distribution of cloud particles (number density, size, and the phase (water cloud-ice clouds)/shape) in addition to the fundamental meteorological elements (Temperature, Humidity, Height and Wind direction/velocity).

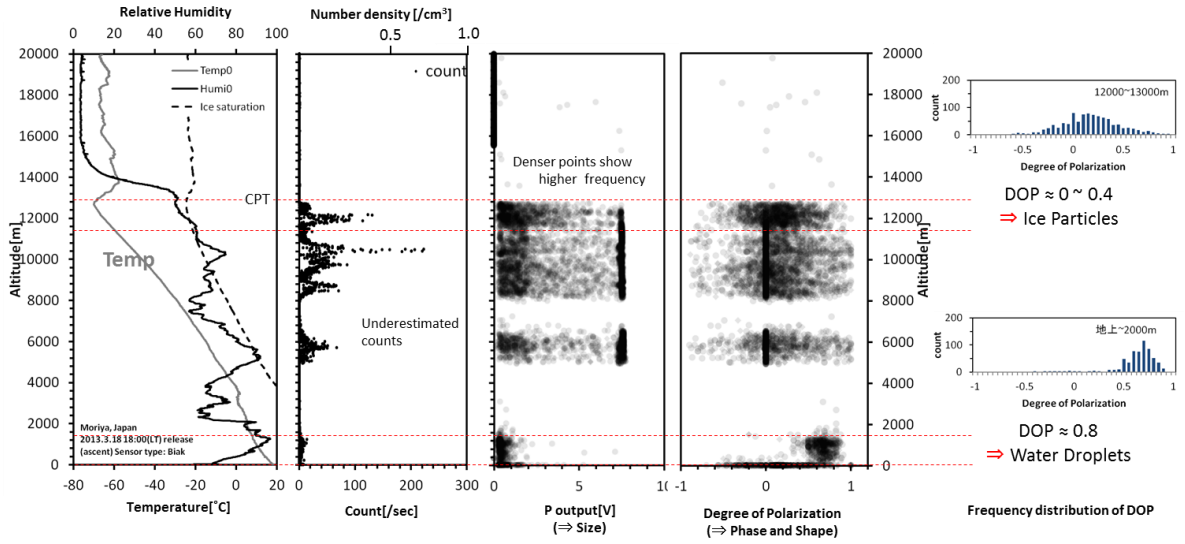
CPS collects ambient air samples through its duct during radiosonde's ascent and measures floating particles with light scattering method by using one linearly polarized light source and two photodiode detectors. One detector directly measures the scattered light from the particle, and the other detects the polarization components of the scattered light.

CPS sonde is compatible with MEISEI standard GPS sonde ground system (RD-08AC) and software (MGPS-R). Output data include the number of counts per second, scattered light intensity and degree of polarization, which provide us with number density, particle size and the phase (water cloud-ice clouds)/ shape of cloud particles.

Features:

- Measurement of accurate vertical distribution of cloud and ash, etc. simultaneous with the fundamental meteorological elements
- Easy to handle/launch without special preparation because of its compact size and lightweight (approximately 320g).
- Compatible with GPS sonde ground system RD-08AC and sounding software MGPS-R.

Example in Moriya, Japan at 18th March 2013 18LT



IHI GROUP
Realize your dreams

No. MSPA4-037

Specifications

Sensor	Cloud particle sensor CPS *a	SHINYEI Technology Co., LTD.
Measuring Range	Number density	< 1 / cm^3 *b The presence/absence of particle can be detected even > 1 / cm^3
	Particle size	15 µm (>2 µm can be detected) *c
	Output signal voltage	0 — 8 V
	Sampling rate	1 sec

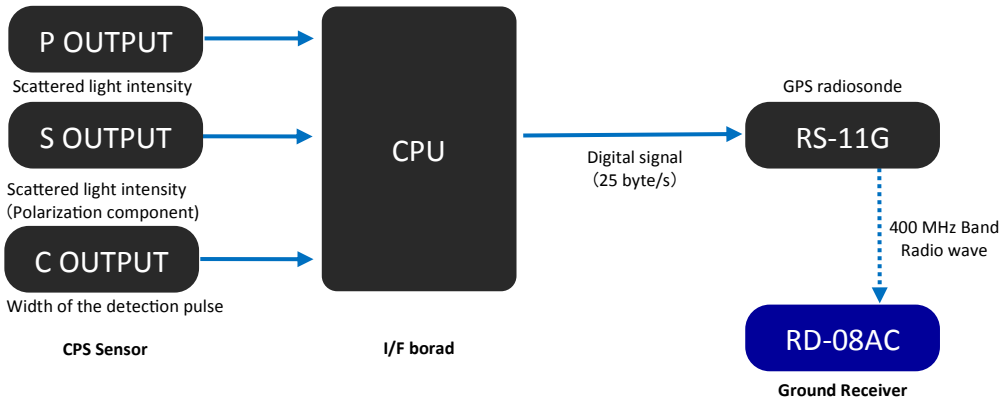
Operation Environment	Temperature	-70℃～+40℃
	Humidity	0%～100%
	Pressure	1050 hPa～5 hPa
Power Source	Voltage	9 VDC (CPS), 3 VDC (RS-11G)
	Model	Lithium battery (CR123) × 3 (CPS)
		Lithium battery (CR123) × 1 (RS-11G)
Size & Weight	Dimensions	188(W) x 113 (D) x 123 (H) mm
		Except protuberance, with RS-11G
	Weight	320 g (with RS-11G)

*a) When using in day time observation, inlet tube is required to prevent light penetration from the influence of solar radiation.

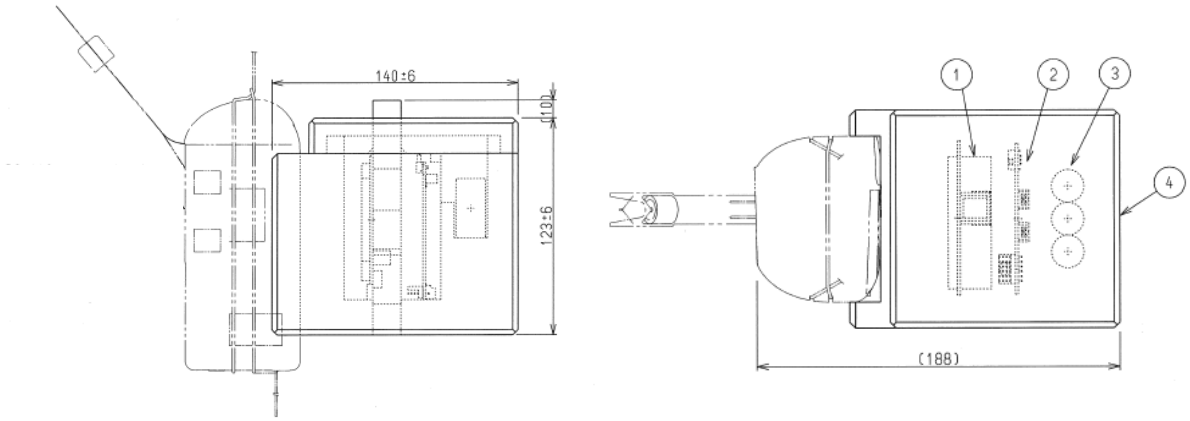
*b) Number density is calculated on the assumption that particle's fall velocity in the CPS is equal to ascent rate of sonde itself.

*c) Please contact us for more details.

Block Diagram



Outline View



Cautions

- For safe and correct usage, please read the "Operation Manual" prior to the use of the products.
- The specifications and appearances might be changed without prior notice, which please understand.
- The specifications shown in the catalog are of our standard products. We are pleased to customize it to meet customer's requirements. For the details, please contact us.
- Please understand in advance that our company cannot assume the responsibility of any claims made by the third party about any monetary damages or any loss of profits arising out from the use of our products.
- The color of the product photography on catalog might be different from that of actual product because of printing.

meisei electric co.,ltd.

1-1, Toyosu 3-chome,Koto-ku, Tokyo 135-8115, Japan
Tel: +81-3-6204-8254 Fax: +81-3-6204-8888
http://www.meisei.jp/sonde/

IHI GROUP
Realize your dreams

The specifications this catalog are current as of April 2015.

No. MSPA4-037