PRI-ECO
普瑞亿科

PRI-8300 Underground Online CO_2 Profile Continuous Measurement System

Soil respiration is one of the largest and most important carbon fluxes in terrestrial ecosystems. Surface flux research can not discover entire soil biochemistry processes. Undergrand gas reaserch will help us understand better on soil gas migration and soil biochemistry processes. PRI-8300 is a newly designed automated underground soil CO_2 profile measurement system, suitable for long term multilevel soil flux measurments.

Standard PRI-8300 includes CO_2 analyzer and 6 sampling channels with simi-permeable membrane gas exchange module. Innovative simi-permeable membrane design can minimize sampling error caused by soil heterogeneity. Scientific and sophisticated gas exchange module also minimizes sampling interference within the soil. As option, the patented dual circulation and CO_2 pretreatment module for minimal interference of subsequent level soil, enables scientists to obtain more accurate data.

PRI-8300 is a rugged, weatherproof mechanical design intergated with a large dynamic measurement range, which can be used for various soil research. The system can be widely used in the fields of ecology, agriculture, forestry, fertilizer, permafrost, plant rhizosphere physiology and ecology.

Key Feature

Innovative membrane gas exchange technology

No disturb on soil internal gas circulation metabolism

0~100% large dynamic measurement range

Continuous sampling and minimal interference

Specifications

Measurement Range (CO_2, stanard; N_2O, NH_3, CH_4 options)	0~1%，0~3%，0~5%，0~10%，0~30%，0~100% (optional)
Concentration Uncertainty	>2%
H_2O Range	0~100%
Interval	1 s
Rise-Fall(10-90%，90-10%)	10 s
Channals	6 (standard), customizable
Calibration Channals	3
Sampling Tube	1 m(standard) for each channal, customizable
Sampling Temp.	-10 tp 50 °C
Sampling Flowrate	50 mL/min@760 Torr
Sampling Pressure	700 to1000 Torr（93 to133 kPa)
Operating Temp.	-10 to 45°C；-30 to 45°C
Dimensions	43.2 x 17.8 x 44.5 cm
Weight	18 kg
Power Requirements	50 W, 110~220 VAC, 50/60 Hz