PRI-ECO
普瑞亿科

PRI-8600 Multiplexed Soil Gas Flux(Community Photosynthesis) System

Soil respiration is one of the largest and most important carbon fluxes in terrestrial ecosystems. The spatial variability of soil respiration is obvious due to the soil heterogeneity. Multicompartmental and multiscale monitoring systems will play an important role in soil respiration research. PRI-8600 is a newly designed automated soil gas flux system suitable for long term multipoint soil flux measurment. Comparing with other brands, PRI-8600 has excellent compatibility and extensibility, it's easy to combine with different analyzers such as various GHGs and trace gas concentration analyzers, various isotope analyzers and other gas measurements devices.

Standard PRI-8600 includes CO_2 H_2O analyzer and 8/16 channels with dark or clear chambers for soil gas flux or community photosynthesis research, the patented vents of chambers reduce the effects of both internal pressure of chamber and outside wind interference. As option, the patented dual circulation configuration for minimal interference of subsequent chamber, enables low gas flow analyzer to obtain fastest response. Reserved calibration channels supply another option for scientists to calibrate gas isotope online.

PRI-8600 is a rugged, weatherproof mechanical design intergated with sophisticated software, flexible chamber configuration with multiple sensor interface, server-based control unit coupled with web APP. The entire system enables scientists to measure soil flux or community photosynthesis with different gases and isotopes. PRI-8600 can be widely used in ecology, agriculture, forestry, fertilizer, frozen soil, seismology, landfill and sewage treatment.

Key Feature

Flexiable for chambers and channels selection

Options for both dual circulation and calibration

Excellent compatibility and extensibility

Customized is available (consult on specific requirements)

Specifications

PRI-8600-8/16 port multiplexer

Channels	Standard 8/16 channels (customized is acceptable)
Calibration Channels	3
Operation	Touch Screen
Coverage Area	Standard radius 15 m (customized is acceptable)
Flow Rate	~4.0 lpm to/from chambers. Control unit to analyzer according to analyzer model
Sampling Temperature	-10 to 45 °C
Sampling Pressure	50 to 133 kPa
Sampling Humidity	0-100% R.H, non-condensing
Fittings	1/4" Swagelok

8800-1 CO_2 H_2O analzyer

CO_2 Accuracy	± 2%
CO_2 Measurement Range	0-5000 ppm
H_2O Precision (Typical)	± 2%
H_2O Measurement Range	0~100% RH
Sampling Temperature	-10 to 45 °C
Sampling Pressure	80 to 115 kPa
Sampling Humidity	0-100% R.H, non-condensing
Fittings	1/4" Swagelok

8600-2012 Long-Term Chambers(Stabdard)

Chamber Dimensions	220mm(D) x 120mm(H), customized chamber is acceptable
Chamber Volume	3750 cm^3
Soil Area Exposed	315 cm^2
Air temperature Range	-40 to +85 °C
Air temperature Pricesion	± 0.2 °C
Cable length	15 m (Special request is acceptable)
Dimensions	440 mm(L) x 260 mm(W) x 260 mm(H)
Weight	7.5 kg

PRI-1000 Long-Term Chambers(Clear)

Chamber Volume	90500 cm^3
Soil Area Exposed	1936 cm^3
Air temperature Range	-40 to +85 °C
Air temperature Pricesion	± 0.2 °C
Cable length	15 m (Special request is acceptable)
Dimensions	500 mm(L) x 500 mm(W) x 400 mm(H)
Weight	20 kg

8600-201 Soil Temperature Sensor

Range	-40 to 85 °C
Pricesion	± 0.2 °C
Cable length	15m

8600-202 Soil Moisture Sensor

Range	0~100%
Pricesion	± 3%
Cable length	15m

AMBA i3211 CO_2 Isotope analyzer

$\delta^{13}C$ Precision（1σ）	<0.5‰ (1σ) @ 0.25s <0.3‰ (1σ) @ 1s <0.08‰ (1σ) @ 60s <0.05‰ (1σ) @ 300s
CO_2 Measurement Range	0-10000 ppm
Measurement Frequency	4Hz or 1Hz
Sample Flowrate	15 mL/min or 5 mL /min
Cavity Volume	0.1 mL
Sampling Temperature	-10 to ~45 °C
Mini Vacuum Pump Flowrate	100sccm@50 Torr
Sampling Pressure	50~ 133 kPa
Sampling Humidity	0-100% R.H, non-condensing
Calibration	Automatic online calibration
Outputs	Digital (RS-232)，Ethernet, USB
Fittings	1/8" Swagelok
Dimensions	48 cm（W）× 80 cm（D）× 47.5 cm（H）
Weight	25 kg
Power Requirements	100-240VAC，50/60 Hz，<350 W（start-up），200 W (stable)

Configuration

8800-1 CO_2 H_2O analyzer; PRI-8600-8/16-port multiplexer; 8600-2012(built-in 8600-201 and 8600-202); 8600-1000(built-in 8600-201 and 8600-202)

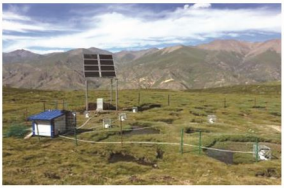
Options

AMBA i3211 CO_2 isotope analyzer

AP2E ProCeas CO_2 CH_4 NH_3 N_2O H_2O analyzer

Application

Nagqu, Tibet（Altitude >4450m）



Qilian Mountain（Altitude >3200m）

Xilinhot Inner Mongolia

Manufacturer: PRI-ECO

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