



Remote Access Sampler - 100 ml

Application:

The Remote Access Sampler (RAS-100) is a deep ocean or coastal time-series water sampler that autonomously collects pure, unbiased specimens under an operator-programmed sample schedule. The RAS-100 collects ambient water and suspended material in individual clear or opaque sample bags for biological, dissolved major and minor nutrient, dissolved trace metal, or dissolved organic carbon analysis. The more compact frame is a lighter system to deploy for applications where a larger RAS-500 sample may not be required.

Features:

Water flows directly to sample bags without passing through the pump. Non-volatile memory stores critical deployment data. Options include in-line prefilters available on each sample, and acid flush for intake cleaning between samples.

Sampling:

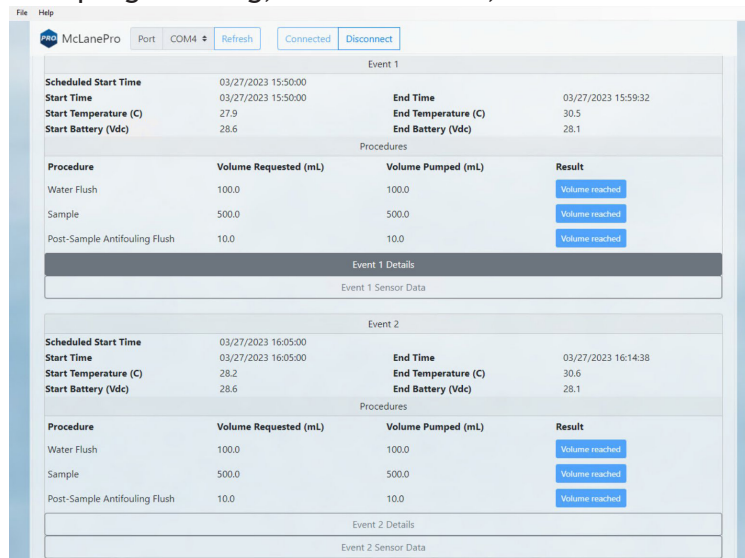
User-defined schedule controls sampling event time limits, data collection periods, flow and volume of collected samples. Programmable controls also define volume and frequency of optional acid flushes and rinsing cycles. Commands for adaptive, external control of sampling are also available.

- ▼ Number of samples: 48 with 100 ml sample bags.
- ▼ Power: 24 commercially available, user replaceable “D” cell alkaline batteries.
- ▼ Patented multi-port valve isolates each sample.
- ▼ Optional programmable biofouling pre- and post- acid flushes clean intake.
- ▼ Sample collection with or without inline pre-filters.
- ▼ For more information about this sampler, see the [RAS](#) pages at [mclanelabs.com](#).

*U.S. Patent Nos. 5,341,834 & 5,441,071
Japan Patent No. 248282

McLanePro:

The RAS-100 uses McLanePro, a graphical user interface built for McLane’s Gen3 electronics. McLanePro eases the steps of event programming, data offload, and firmware updates.



Event 1			
Scheduled Start Time	03/27/2023 15:50:00		End Time
Start Time	03/27/2023 15:50:00		03/27/2023 15:59:32
Start Temperature (C)	27.9	End Temperature (C)	30.5
Start Battery (Vdc)	28.6	End Battery (Vdc)	28.1
Procedures			
Procedure	Volume Requested (mL)	Volume Pumped (mL)	Result
Water Flush	100.0	100.0	Volume reached
Sample	500.0	500.0	Volume reached
Post-Sample Antifouling Flush	10.0	10.0	Volume reached
Event 1 Details			
Event 1 Sensor Data			
Event 2			
Scheduled Start Time	03/27/2023 16:05:00		End Time
Start Time	03/27/2023 16:05:00		03/27/2023 16:14:38
Start Temperature (C)	28.2	End Temperature (C)	30.6
Start Battery (Vdc)	28.6	End Battery (Vdc)	28.1
Procedures			
Procedure	Volume Requested (mL)	Volume Pumped (mL)	Result
Water Flush	100.0	100.0	Volume reached
Sample	500.0	500.0	Volume reached
Post-Sample Antifouling Flush	10.0	10.0	Volume reached
Event 2 Details			
Event 2 Sensor Data			

Remote Access Sampler - 100 ml Specifications

DIMENSIONS:	Height:	165 cm (65 in)
	Width:	43 cm (17 in)
	Length:	43 cm (17 in)

WEIGHT (APPROX):	In air (sample tubes empty):	~75 kg (165 lbs)
	In air (sample tubes filled):	~86 kg (190 lbs)
	In water:	~42 kg (93 lbs)

MULTI-PORT VALVE:	Number of ports:	50 (48 samples)
	Material:	HYDEX plastic valve stators and Kynar plastic rotor
	Drive:	High torque stepper motor with 100:1 planetary gear head
	Positioning:	Optical sensor with slotted disk

SAMPLE BAGS (48):	Size:	Approximately 100 ml
	Material:	2 mil Tedlar® (clear), 4 mil Mylar laminated (opaque) or 4 mil Kynar (clear)

PUMP:	Flow rate:	75 ml/min fixed rate ($\pm 10\%$ error)
	Type:	Gear pump
	Drive:	Brushless 3 phase DC motor

CONTROLLER:	Pressure housing:	Aluminum, 6061-T6 hard coat anodized
	Power supply:	36 VDC
	Power consumption:	3.1 Ah (1 year deployment)
	Communications:	Serial (RS-232)

OPERATIONS:	Maximum depth:	5,500 m
	Battery:	24 user replaceable "D" cell alkaline batteries
	Min/Max deployment time:	5 minutes per sample/18 months
	Operating temperature:	0° to 50°C (electronics tested to -10 C°)

FRAME:	Material:	316 electro-polished stainless steel (titanium available)
	Structure & bridle configuration:	In-line mooring, weldment, 4 in-line
	Frame & bridle eyes:	19 mm (3/4"), insulated
	Maximum in-line tension:	2,300 kg (5,000 lbs)