

Sable Systems TR-SS3 SubSampler: Brief Technical Specifications

- **Input power:** Nominal 12 Volts DC (10.5-15 Volts DC range) at up to 250 mA, depending on the operation mode. Fully protected against reverse polarity connection. A 120 VAC 1A power source is supplied with the unit (other voltages to special order; a universal (80-250 VAC, 2A) supply is also available).
- **Display:** 16 character, 2 line alphanumeric display with user-controllable backlight.
- **Pump:** 12V diaphragm pump, long-life motor and diaphragm (user replaceable: one spare diaphragm included with unit). With the TR-SS3 turned on, power to the pump may be controlled in hundreds of steps from full on to full off. Low pump drives cause the pump to run almost silently, and increase diaphragm life.
- **Needle Valve:** Solid brass body, thumbwheel setting.
- **Mass flow meter:** Powered by stabilized internal supply. Output is available from a front-panel BNC connector and is a linear function of mass flow rate. Meter is accurate to 10% of reading and can be user-calibrated for zero and span for greater accuracy. Individual calibration, derived from 70 points via NIST-traceable calibrated mass flow controllers, is available from Sable Systems for \$250. User-adjustable averaging from 0.1 to 30 seconds. Flow meter is readable to 0.1 ml/minute (-5.0 - 99.9 ml/minute) or 1 ml/minute (100 ml/minute and above). Range is 0-1000 sccm (ml/minute); unit can overrange to ca. 1500 ml/minute at reduced accuracy.
- **Analog output:** 0 - 4 volts, 12 bits resolution, settable to any of 8 flow ranges from 0 - 2000 ml/minute to -5 to +20 ml/minute, updated at 10x/second. In addition a raw (non-linearized) flow meter output can be selected for access to the flow meter's fastest response times (up to 300 Hz).
- **Serial output:** ASCII character string at 115200 baud, 8 bits, 1 stop bit, no parity. Comma delimited, consisting of unit ID, mass flow rate in ml/minute and pump drive in percent.
- **Multiplexer control:** User can input any multiplexer channel number (1 - 255) and serial command will be sent to any attached Sable Systems [air stream multiplexers](#), causing the target channel to open