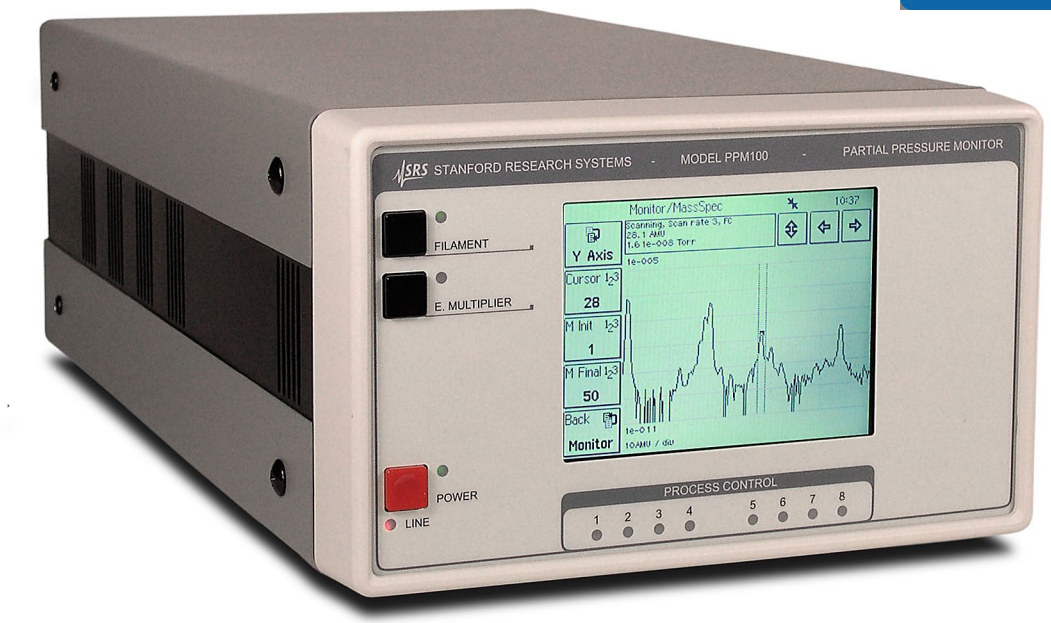
Partial Pressure Monitor for RGA

PPM100 — Stand-alone monitor for RGA



PPM100 Partial Pressure Monitor

- **Stand-alone RGA controller**
- **8-channel process control**
- **Pressure vs. time curves**
- **4 analog input/output ports**
- **RS-232, GPIB, Ethernet and USB**
- **PPM100 ... $2495** *(U.S. list)*

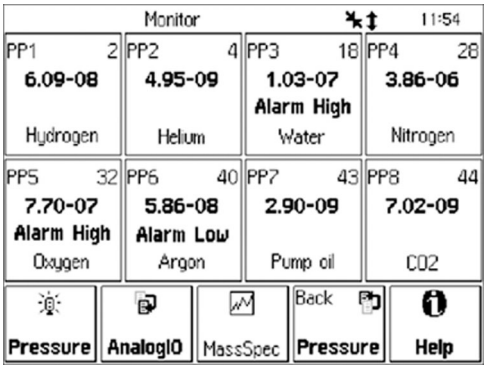
The PPM100 is a stand-alone controller/monitor for SRS residual gas analyzers. It measures partial pressures from SRS RGAs and total pressure from up to four capacitance manometers. Graphical output is available on a touchscreen LCD display. The PPM100 includes 8-channel process control capability, four analog I/O ports, RS-232, USB and GPIB computer interfaces, and a web interface.

Residual Gas Analysis

The PPM100 is designed to monitor and control a single SRS RGA. A menu driven user-interface allows the operator to easily program RGA parameters from the front panel (i.e., no host PC is required). RGA data can be viewed as an analog scan, partial pressure vs. time, leak trend (with audio signal), or single mass readings. This data can also be linked to alarms, process control relays, and analog ports for closed-loop control of specific component gases.

Analog I/O

The PPM100 has four configurable analog I/O ports. These can be used as outputs to control auxiliary vacuum equipment such as heaters, actuators, ion sources, programmable logic controllers, and throttle controllers. As inputs, up to four capacitance manometers can be monitored simultaneously.



Monitor mode

PPM100 Specifications

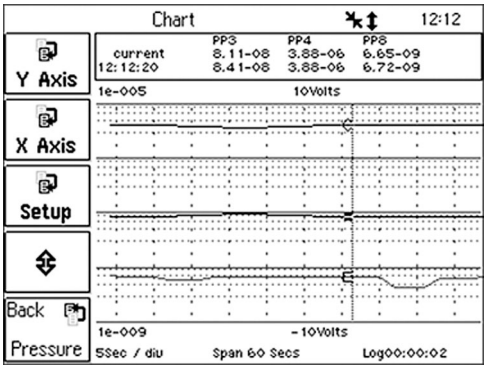


Chart recording mode

Data Logging

Data from all gauges (and all analog inputs) is stored at a user-defined rate. Typical applications include capturing pump down or venting curves, monitoring mass flow controller signals during deposition processes, and monitoring temperatures and other time dependent variables during bakeouts or heat treatments.

Process Control

The PPM100 provides eight relays with corresponding TTL outputs. Each channel can be linked to a specific partial pressure, status conditions (like filament on/off), the system clock, the analog I/O ports, or TTL input signals. The relays and TTL outputs can also be manually controlled from the front panel, and the status of all eight channels can be displayed.

Additionally, there are seven dedicated TTL inputs for triggering functions like filament on/off, degas, etc. All process control events are time stamped and recorded in memory, and can be viewed at any time. User-programmable audible alarms and text messages can provide advance warning of potential problems.

Web Access

An embedded web server connects the PPM100 to the world wide web (password protected). The EWS can deliver measurement data to any standard internet browser. Use the EWS to monitor and control your vacuum system or to get automatic email notification of potential or real system problems.

PPM100 rear panel

Display

Type	Back-lit, touchscreen LCD (4.7" diag.), 320 × 240 pixels
Modes	Numeric, bar graph, P vs. T
Units	Torr, mbar, bar, Pa and micron
Numeric resolution	3-digit mantissa plus exponent
Update rate	2 samples per second

Analog I/O

Ports	4 configurable analog ports
Range	±12 VDC
Resolution	14-bit (In), 12-bit (Out)
Update rate	2 Hz
Connector	BNC

Capacitance Manometer

Number of gauges	Simultaneous readout of up to four capacitance manometers using the auxiliary inputs.
Auxiliary power output	±15 VDC, 100 mA (for CM power)

Process Control

Number of channels	8 channels with programmable setpoint, polarity, hysteresis, delay, audio signal, and text messages.
Input signals	Total pressure (CM gauge), partial pressure (RGA), voltage (analog I/O ports), time (internal clock), TTL and gauge status.
Output signals	Relay and TTL level
Relays	SPDT (form C), 5 A/250 VAC/30 VDC, resistive load
TTL outputs	Active low, opto-isolated
Manual control	All channels can be operated from the front panel.
Remote TTL control	7 opto-isolated channels (Fil on/off, Degas on/off, Fil lockout, Keypad lockout, Data logging reset, screen enable/disable, remote enable/disable)

General

Interfaces	RS-232, USB, GPIB and Ethernet interface w/ embedded web server
Power	90 to 264 VAC, 47 to 63 Hz, 60 W
Operating temperature	0 °C to 40 °C, non-condensing, <90 % humidity
Weight	11 lbs.
Dimensions	8.5" × 5.25" × 16" (WHD)
Warranty	One year parts and labor on defects in materials and workmanship

Ordering Information

PPM100	Partial pressure monitor	$2495