

The New Standard in Measurement

Colnatec has built its reputation on understanding and answering the need for high-quality, competitively-priced film thickness measurement equipment. In line with this philosophy, Phoenix™ System PC features exclusive, cutting-edge technology and elegant design.

With Phoenix™ System PC, users can take advantage of temperature measurement technology to reduce the effects of temperature on the crystal and improve process stability.

In many high-temperature applications, sensors will often fail due to their low temperature rating. The Phoenix™ sensor head is capable of not only measuring temperature but of operating in temperatures higher than any other sensor head on the market. This allows for monitoring processes up to 500°C (e.g., ALD, CVD, etc.).

With higher frequency resolution and temperature measurement Phoenix™ System PC outperforms any comparable technology. This remarkable set of features enables more efficient process control at highly competitive prices.



PHOENIX SYSTEM PC

FILM THICKNESS MONITORING WITH TEMPERATURE MEASUREMENT

Features

- Temperature measurement for greater accuracy
- Sensor available in different lengths and with different flanges for flexibility
- New, easy-to-learn software interface that conveniently installs on your PC
- Dual channels for expanded capability
- Standard SMA air side connection for crystal measurement
- Industry standard RS232 communication protocol
- Real-time graphing of temperature and frequency alongside corresponding rate and thickness values
- Two programmable relays

Applications

- Atomic Layer Deposition (ALD)
- Chemical Vapor Deposition (CVD)
- Molecular Beam Epitaxy (MBE)
- CIGS (thin film solar)
- OLED (display & lighting)
- Multi-Layer Optical Thin Film Deposition

Specifications

Phoenix™ Sensor	Monitoring Connection	SMA connector (SMA-to-BNC adapter included)
	Temperature Monitoring	Sensor head temperature monitoring Type K thermocouple (TC). This built-in feature helps stabilize temperature for heating or cooling applications
	Cooling	Built-in cooling tubes
	Crystal Compartment Access	Sturdy, no-fuss screw cap
	Temperature Rating	≤500°C
	Max Pressure	5 atm
	Construction	Stainless Steel
	Dimensions	Length: 4" to 30" depending on customer requirements. Width: Able to be passed through a 2.75" ConFlat port

			Phoenix-LTM™ (Monitor)	Phoenix-LTC™ (Controller)
Monitor / Controller	Frequency Resolution	0.001 HZ @ 6 MHz	✓	✓
	Sample Rate	100 Hz to 10 Hz (10 samples per data point)	✓	✓
	Data Point Update Rate	10 Hz - 1 Hz	✓	✓
	Sensor Crystal Frequency	6 MHz	✓	✓
	Crystal Cable Length (Total Distance from Crystal to Device)	Standard internal oscillation: Max 36". Optional external oscillation configuration required for lengths exceeding 36" (tested up to 50')	✓	✓
	Relays (programmable)	(2) SPST N.O.	✓	✓
	LED	Power up notification and transmission status.	✓	✓
	Communication Protocol	RS232 (RS232 Commands Manual)	✓	✓
	DAC Recorder	Either or both source outputs can be used as recorder outputs. User scalable 0-5V output for rate	✓	✓
	Software	Optional PC software included	✓	✓
	Source Power Supply Analog Signal	(2) 0-5 VDC source controls. Controls a power supply that is providing output power to a source		✓
RS232 Functionality	Real-Time Data Point Updates		✓	✓
	Set Material Parameters		✓	✓
	Command Error Checking		✓	✓
	Communication Error Checking		✓	✓
	Firmware Identify		✓	✓
	Period Adjustment		✓	✓
	DAC Recorder Control for Rate		✓	✓
	Thickness Zeroing		✓	✓
	Filter Control		✓	✓
	Predeposition Process			✓
	Source Power Supply Control	Controls a power supply that is providing output power to a source		✓
	Run Programmed Layers			✓
	PID Source Control			✓
	Max Source Power Limiting			✓
	Sensor Controlling Source Selection			✓

Specifications

		Phoenix-LTM™ (Monitor)	Phoenix-LTC™ (Controller)
Software	Process Creation	(Monitoring Only)	✓
	Layer Creation	(Monitoring Only)	✓
	Logging	✓	✓
	Real-Time Data Monitoring	✓	✓
	Real-Time Graphing	✓	✓
	Relay Control	✓	✓
	Zeroing	✓	✓
	Period Setting	✓	✓
	Screen Lock	✓	✓
	Process Control		✓
	Manual Control		✓
Dimensions	4.5" x 2.5" x 1"	✓	✓

Ordering Information	
Phoenix-LTM™ (Monitor)	Thin Film Monitoring System
Phoenix-LTC™ (Controller)	Thin Film Monitoring & Control System