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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.).

Although the system is capable of accepting any 14 mm diameter crystal up to 10MHz, it is optimized for the RC Crystal, which is uniquely immune to radiation spikes and film stress caused by shutter openings, film condensation, and source radiation.

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 System with Temp. Measurement

Features

- Temperature measurement for greater accuracy
- Sensor available in different lengths and with different flanges for flexibility
- New, easy-to-learn interface that conveniently installs on your PC
- Dual channels for expanded capability
- Standard SMA air side connection for crystal measurement
- Accepts all crystals crystals within 4-10 MHz, 1-200 Ω
- Industry Standard RS232 communication protocol

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

PHXSYSPC-07/06/17
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Specifications

Measurement	
Frequency Resolution	0.001 HZ @ 6 MHz (1 Sample per Second)
Sample Rate	0.5 Hz to 100 Hz
Display Update Rate	0.5 Hz to 100 Hz (Depending on sampling rate)
Sensor Crystal Frequency	5,6,7,8,9,10 MHz
COMM	
Standard	RS232
	USB (Process Programming)
Optional	Ethernet
Creating Programs	All settings can be programmed using the touchscreen and embedded keypad. Keyboard can be connected via the USB port. CactusProg™ software can be used on a PC to create layers and can be transferred using a USB flash drive.
Capabilities	Unlimited Layer and Process programs

Standard Hardware	
Sensor	2 BNC Connections (External Oscillator Required)
Temperature	2 type K TC
Sources	2 0-5 VDC source controls
Relays (non-programmable)	2 SPST NO for abort & thickness set-point
Input (programmable)	8 isolated 5V inputs
Output (programmable)	8 5A SPST relays
Remote Power	Front panel FOB connector for manual power control
Expandable sensor card (1 incl., expandable to 2)	2 sensors, 2 sources, 2 relays, 2 Type K TC
Expandable I/O card (1 incl., expandable to 2)	Input: 8 isolated 5 VDC inputs
	Output: 8 5A SPST relays
Input setup	Inputs can trigger events depending on user selected conditions
Output Setup	Outputs can be triggered depending on user selected conditions
DAC Recorder	Either or both source outputs can be used as recorder outputs
Parameters	User scalable 0-5V output for rate and thickness
Dimensions	
Length	4” to 30” depending on customer requirements
Cross Section	Able to be passed through a 2.75” ConFlat port
Ordering Information	
Phoenix™	Standard sensor with embedded thermocouple
Eon-LTC™	Temperature measurement & source control
Eon-LTM™	Temperature measuring film thickness monitor