

TELEMARK

Model 861 Deposition Controller

A direct pin-to-pin compatible replacement for Telemark 860 / 880 and Maxtek 360 controllers



- High frequency internal reference oscillator provides <math><0.01\text{A}</math> resolution for aluminum
- Operates with 5 MHz or 6 MHz crystals
- All new innovative crystal oscillator design for outstanding stability and noise immunity
- Extensive materials library, also allowing for user definable materials
- Color LCD touch screen for graphical and numerical display of primary real-time process data, providing an intuitive and user friendly operator interface
- Touch screen capabilities:
 - In-process parameter modification
 - Process and Layer editor
 - I/O status and control
 - Real time graphical display of: Power v/s time, Rate v/s time, Thickness v/s time, Rate deviation v/s time
- All system, film and setup files may be saved via a front panel USB port, as well as uploaded to instrument
- Can accommodate up to 99 processes of 999 layers each
- Standard unit has 2 crystal sensor inputs and 2 isolated rate control analog output drivers, expandable to 4 each.
- 8 relay isolated outputs and 8 optically isolated inputs (for both active and passive mode), with the option to upgrade to 16 ea. (Model 880 configuration) or 32 ea. (Model 360/860 configuration), for ancillary operations such as pocket indexing, sweep selection and sensor selection.

Specifications

Sensor Crystal Frequency	5 or 6 MHz
Resolution	<math><0.02\text{Hz}</math> (<math><0.01\text{A}</math> for Al @ 6MHz)
Accuracy	+/- 0.5% thickness
Thickness Display	0.000 - 999.9 kÅ
Power Display	0.00 - 99.9 %
Rate Display	0.00 - 999 Å/s
Measurement Update	10 per second
Control signal Update	10 per second
Inputs	8 optically isolated, active (4 to 24V DC or AC), or passive (contact closure)
Outputs	8 relay contacts NO/NC @ max 1A, 24 DC or AC
Analog Outputs	0-5VDC or 0-10VDC (either polarity)
Power Input	90-260VAC, 50-60 Hz

Model 851 Thickness Monitor



- High frequency internal reference oscillator provides $<0.01\text{\AA}$ resolution for aluminum
- Operates with 5 MHz or 6 MHz crystals
- All new innovative crystal oscillator design for outstanding stability and noise immunity
- Extensive materials library, also allowing for user definable materials
- Color LCD touch screen for graphical and numerical display of primary real-time process data, providing an intuitive and user friendly operator interface
- Touch screen capabilities:
 - In-process parameter modification
 - I/O status and control
 - Real time graphical display of: Rate v/s time and Thickness v/s time
- All system, film and setup files may be saved via a front panel USB port, as well as uploaded to instrument
- Can accommodate up to 99 materials
- 2 crystal sensor inputs and 2 isolated DAC analog outputs for chart recorders
- RS-232 interface

Specifications

Sensor Crystal Frequency	5 or 6 MHz
Resolution	$<0.02\text{Hz}$ ($<0.01\text{\AA}$ for Al @ 6MHz)
Accuracy	$\pm 0.5\%$ thickness
Thickness Display	0.000 - 999.9 kÅ
Rate Display	0.00 - 999 Å/s
Measurement Update	10 per second
Inputs	Start, Stop, Film Number, Increase, Decrease (optically isolated, active (4 to 24V DC or AC), or passive (contact closure)
Outputs	1 relay for Source Shutter, 1 relay for Sensor Shutter (max 1A, 24 DC or AC)
DAC Outputs	0-5VDC or 0-10VDC (either polarity)
Power Input	90-260VAC, 50-60 Hz