



SQM-160 Multi Film Rate/Thickness Monitor

- Up to 6 Measurement Channels
- Displays either Thickness/Rate or Frequency
- RS-232 Port Connects to PC, Save Data in Excel Format
- Large Bright LED Displays are visible from across the room



Six Channel Quartz Crystal Monitor

The SQM-160 is a film thickness measurement instrument using a quartz crystal as the sensor device. Either 6MHz or 5MHz crystals can be used. Two independent measurement channels are included in the base unit. An option card can be added to provide 4 additional channels. These can be assigned to different films, and you can also average different sensors together to provide a more uniform reading of your deposition process. The measurement rate can be changed from 0.15 to 2 seconds. You can also set the instrument to display frequency to a resolution of 0.1 Hz. Four relays and four input control lines are standard. This allows you to match the SQM-160 to your control needs.

Easy to Use

The user interface of the SQM-160 is done through a single line alphanumeric display, a numeric entry display, and a spinner knob. Parameters are arranged in groups of menus, with those that are frequently changed most easily accessible. Seldom changed system parameters are buried deeper. Nine different film parameter sets can be stored in the SQM-160.

Windows 95/NT Software Included

Included in the base unit is an RS-232 communications port and software that allows the SQM-160 to be connected to a PC. The software can graph the rate of the individual sensor channels, average rate reading, and save the data to a file

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in Microsoft Excel spreadsheet format. Parameters can be loaded and stored to your PC, making setting up experiments easier.

Available Accessories

The SQM-160 also offers a high stability oscillator option. This is a temperature compensated oscillator, about 25 times more stable than the standard oscillator. This option is used for low deposition rates where the sensor crystal can be held to a stable temperature.

Up to 2 option cards can be installed in the SQM-160. In addition to the 4 sensor input card, an analog output card with two outputs is available. This allows rate and thickness analog information to be provided for recorders or deposition control.

A complete set of sensors, feedthroughs, and cables are also available. Contact Ceramisis Ltd for your requirements.



SQM-160 Specifications

Measurement

Frequency Range	Programmable from 6.0 to 4.0 MHz
Measurement Rate	Programmable from 0.15 to 2 Seconds
Rate Averaging	Selectable from 1 to 20 Readings 2
Number of Sensors	Standard, 4 Optional

Display

Type	.54" LED Alphanumeric (Rate, Thickness, Frequency, Setup) .30" LED 7 Segment (Time)
Thickness Resolution	1 Å
Rate Resolution	Selectable 0.1 Å/s or 0.01 Å/s
Frequency Resolution	0.1 Hz

Input/Output

Relays	4 (Shutter, Thickness Setpoint, Time Setpoint, Crystal Fail)
Inputs	4 (Open Shutter, Close Shutter, Zero Thickness, Zero Time)

Mechanical & Operation

Power Requirements	120/240 VAC 20 VA
Temperature Range	0 to 50 C
Weight	6 lbs.
Dimensions	3.5" h x 8.5" w x 8" d

Pricing

SQM-160	SQM-160 Rate/Thickness Monitor
502-020	4 Sensor Option Card
502-021	2 Channel Analog Output Option Card
900-010	Remote Analog Oscillator Module
902-011	6" M/F BNC Cable
902-012	10' M/M BNC Cable
TCXO Option	High Stability Temp. Comp. Oscillator Option

Contact
office
for
latest
pricing

Note: Specifications and pricing are subject to change. Contact Ceramisis Ltd for the latest pricing, options, and custom configuration information.

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