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Thickness Monitor – MTM10 / MTM20



Fig 1. Thickness Monitor

The MTM-10 is a compact, low cost thickness monitor. Originally designed for electron microscopy applications, it is also suitable for multiple use in complex deposition systems. It stores parameters for two deposition materials. The MTM-20 version includes a presettable thickness control feature but only stores parameters for one material.

The main features are:-

- Compact, low cost system designed for multiple use.
- Simple parameter input (material density; sensor head tooling factor).
- High speed: 5 measurements per second.
- High resolution: better than 0.1nm for aluminium.
- High crystal capacity: up to 15µm total thickness for Al @ unit tooling.
- Measurement range of 1000nm with crystal life display feature.
- Installation package includes feedthrough, oscillator, cables, sensor head and control box.

Specifications:

Display	4 digit red LED (0.56") Constant update rate 10/sec Push button zeroing
Thickness range	-99.9nm to +999.9nm
Resolution	Better than 0.1nm
Density range	0.50 - 30.00gm/cm3
Tooling factor range	0.25 - 8.00
Quartz crystal	Industry standard 6 MHz, 0.55" Ø Au coated
Crystal check	Lifetime display, 0.0 to 999.9KHz shift
Parameter setting	Non-volatile parameter memory with automatic acceleration of scrolling rate
Supply	100 - 120 or 200 - 240 VAC @ 4 VA, 50/60Hz
Dimensions	Width 208mm (8.2"), Height 76mm (3.0"), Depth 160mm (6.3"), Weight 1.7Kg (3.75 lbs)

MTM-10

Number of materials	2
Terminate facility	Not fitted

MTM-20

Number of materials	1
Terminate facility	Push button enable/disable
Termination range	0 - 999.9nm
Termination output	SPCO relay contact, voltage free rated 0.5A @110 VAC, 1A @ 24 VDC