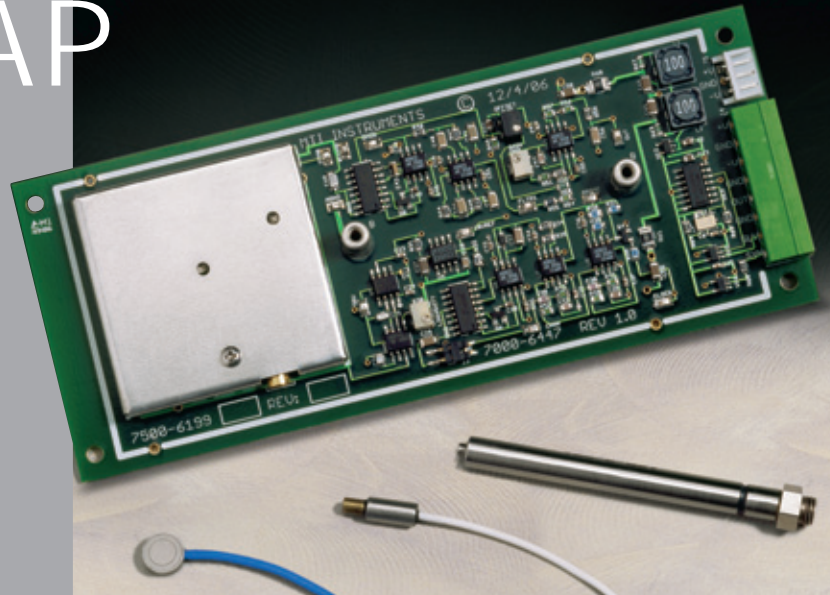




# ACCUMEASURE™ MICROCAP

Rapid Deployment OEM  
Measurement Solution  
by MTI Instruments



The Accumeasure MicroCap is a compact, custom designed, OEM capacitance system for high-precision non-contact measurement. It provides exceptional value and offers sub-nanometer resolution, extremely high stability and fast response time, making it ideal for micro-positioning, thermal correction, focusing and closed loop control applications. The MicroCap utilizes MTI's latest capacitance amplifier design, backed by nearly 50 years of product line history and thousands of installations worldwide.

## The Features

- Custom OEM configurations for seamless integration into your existing or future products
- Wide variety of precision capacitance sensors for difficult size and shape targets
- Large standoff, non-contact sensors for safe gauging of delicate parts
- Highly stable design for long-term monitoring, analysis and control
- Passive probes for operation in high-temperature, high-vacuum and harsh environments
- Extended system ranges for added measurement flexibility

**mti instruments**

A worldwide leader in precision measurement solutions

## The Applications

- Servo-loop positioning control
- Precision dimensional gauging
- Lens adjustment/focusing
- Flatness and profile measurements
- Vibration monitoring
- Shaft run-out and analysis
- Thermal expansion monitoring

The Accumeasure MicroCap sets new standards for capacitive sensing and is designed to meet a wide range of high-accuracy applications in the semiconductor, disk drive, machine tool, automotive, aerospace and electronics industries. Contact MII's experienced Application Engineers, who will demonstrate how quickly and easily you can test and incorporate this precision measurement technology for far less than you thought possible.

## Specifications

### Standard Accumeasure Probes

Range mils (microns)	Sensing Electrode Diameter (in.)	Model Number	Length ±0.030 (in.)	Diameter ±0.001 (in.)	Model Number	Length ±0.030 (in.)	Diameter ±0.001 (in.)
1 (25)	0.0421	ASP-1-CTA	2.50	0.250	ASP-1-ILA	0.375	0.093
2 (50)	0.0606	ASP-2-CTA	2.50	0.250	ASP-2-ILA	0.375	0.112
5 (125)	0.0972	ASP-5-CTA	2.50	0.250	ASP-5-ILA	0.375	0.156
10 (250)	0.1386	ASP-10-CTA	2.50	0.250	ASP-10-ILA	0.375	0.219
20 (500)	0.1970	ASP-20-CTA	2.50	0.437	ASP-20-ILA	0.375	0.312
50 (1250)	0.3132	ASP-50-CTA	2.50	0.625	ASP-50-ILA	0.375	0.546

Range mils (microns)	Sensing Electrode Diameter (in.)	Model Number	Length ±0.030 (in.)	Diameter ±0.001 (in.)	Model Number	Length ±0.030 (in.)	Diameter ±0.001 (in.)
1 (25)	0.0421	ASP-1-ILR	0.375	0.093	ASP-1-PCR	0.100	0.093
2 (50)	0.0606	ASP-2-ILR	0.375	0.112	ASP-2-PCR	0.100	0.112
5 (125)	0.0972	ASP-5-ILR	0.375	0.156	ASP-5-PCR	0.100	0.156
10 (250)	0.1386	ASP-10-ILR	0.375	0.219	ASP-10-PCR	0.100	0.219
20 (500)	0.1970	ASP-20-ILR	0.375	0.312	ASP-20-PCR	0.100	0.312
50 (1250)	0.3132	ASP-50-ILR	0.375	0.546	ASP-50-PCR	0.100	0.546

Contact MII for other standard or custom-designed probes.

### Amplifier Specifications

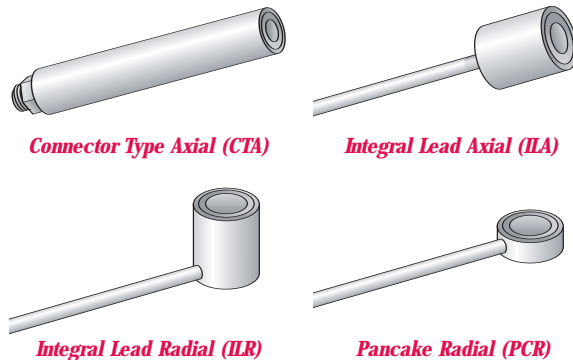
	MicroCap
<sup>1</sup> Measurement Range inches (mm)	0-0.500 (0-12.5)
<sup>2</sup> Resolution (% of Full Scale rms)	0.001%
<sup>3</sup> Accuracy (% of Full Scale)	±0.02%
Frequency Response (Factory Selectable)	DC-5 kHz
Temperature Stability (% of Full Scale)	0.006%
<sup>4</sup> Analog Output Terminals	0-10 Vdc
Output Impedance	50 Ω
Power Requirements	±15 Vdc 100 ma
Operating Temperature	40-100°F (4-40°C)
Dimensions in. (mm)	5.9 x 2.4 x 0.5 (150 x 60 x 13)
Weight lbs. (kg)	0.25 (0.10)

<sup>1</sup> Measurement range is determined by probe selected and amplifier gain (Range Extension).

<sup>2</sup> Resolution with 500 Hz frequency response filter and 1x amplifier range extension.

<sup>3</sup> Accuracy depends on probe range and guard thickness.

<sup>4</sup> The analog output can be configured for ±5 Vdc with offset adjustment. Noise fluctuates based on response and range extension selected.



*For information on other non-contact products or custom solutions from MII Instruments, contact us at 1-800-342-2203 or +1-518-218-2550.*

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