COREMORROW
Piezo Nano Motion

Make Your Motion and Control More Accurate!

# Capacitive | E09.CAP

## Capacitive CAP Micrometer

## Introduction

E09.Cap capacitance non-contact micrometer can measure the small displacement in the range of 0~500μm through the capacitance probe, the measurement accuracy is nanometer level. The micrometer is composed of a chassis and a sensing module, which can form a multi-channel measurement.

## Characteristics »

- Modular design, free combine
- Single board module available
- High resolution
- Analog output
- Non-contact measurement

## Applications »

- Vibration measurement
- Precision positioning system
- Micro-displacement detection
- Position detection
- Optical fiber alignment and etc that require micro-displacement detection
- Length(depth, height, thickness, diameter, taper, etc.) measurement


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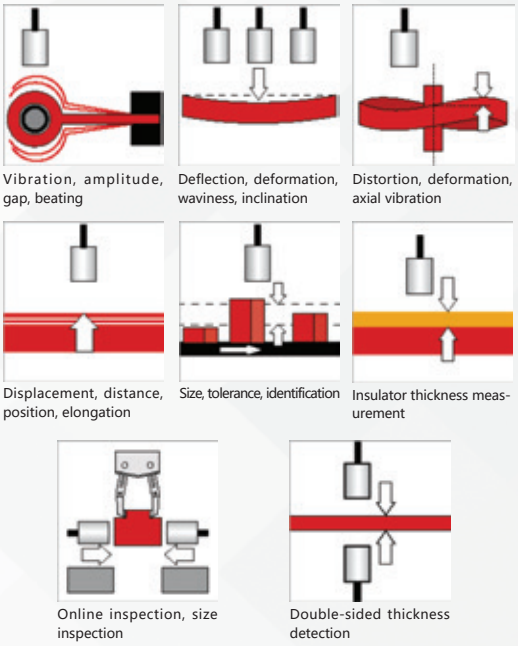
## Technical Data »

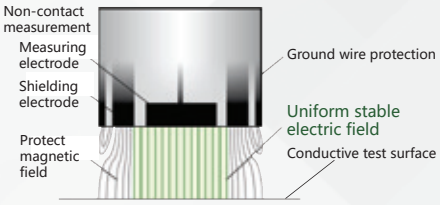
| Type | E09.CAP100 | E09.CAP200 | E09.CAP500 | Units |
|---|---|---|---|---|
| Measuring range | 0~100 | 0~200 | 0~500 | μm |
| Static resolution | 1.25 | 2.5 | 5 | nm |
| Dynamic resolution(1kHz) | 100 | | | nm |
| Linearity | 0.05 | | | %F.S. |
| Repeatability | 0.0025 | | | %F.S. |
| Sensor diameter | 10 | | | mm |
| Minimum target diameter | 10 | | | mm |
| Signal temperature stability | < 0.005 | | | %FSO/℃ |
| Long-term stability | < 0.04 | | | %FSO/month |
| Bandwidth | 2 | | | kHz(-3dB) |
| Operating temperature | +10~+50 | | | ℃ |
| Humidity | <85 | | | % |
| Voltage output | 0~+10 | | | V |
| Power supply | 220VAC 50Hz±10% | | | |
| Sensor cable length | 1.6 | | | m |
| Board size: L×H×D | 35×130×180 | | | mm |
| Chassis size: L×H×D | 280×170×360 | | | mm |

## Typical Application »

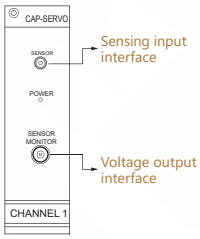



## Principle »

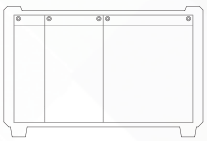
It is based on the principle of an ideal parallel plate capacitor. The sensor and the measured target on the opposite side form two electrodes. The principle of guard ring capacitor is used to ensure that the sensor is still linear when measuring any metal.




## Module Combination »




Sensing module



Chassis and power supply module

Single channel micrometer

## Capacitance Probe »

Appearance


Probe size

6-channel micrometer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