

# E09.CAP Capacitive CAP Micrometer

## **User Manual**

Version: V1.0



This document describes the following products:

■ E09.CAP Capacitive CAP Micrometer Non-contact measurement

## Declaration

#### **Declaration!**

This user manual is a integrated user manual of the E09.CAP series capacitive CAP micrometer. Please read this user manual carefully befor operating. Follow the instructions in the manual during use. If there is any problem, please contact us for technical support. If you do not follow this manual or disassemble and modify the product yourself, the company will not be liable for any consequences arising therefrom.

Please read the following to avoid personal injury and to prevent damage to this product or any other product connected to it. In order to avoid possible hazards, this product can only be used within the specified range.

#### Notice!

- > Do not touch any exposed ends of the product and its accessories.
- > There is high voltage inside. Do not open the case without permission.
- > Do not connect or disconnect input, output, or sensor cables with power on.
- > Please keep surface clean and dry, don't operate in humid or static environment.



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E09.Cap capacitance non-contact micrometer can measure the small displacement in the range of  $0\sim500\mu m$  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.





- Modular design, free combine
- ▶ Single board module available
- High resolution

- ▶ 0~100/200/500µm optional
- Analog output
- Non-contact measurement



- Vibration, amplitude, gap, beating
- Deflection, deformation, waviness, inclination
- Distortion, deformation, axial vibration
- Displacement, distance, position, elongation
- Size, tolerance, identification
- Insulator thickness measurement
- Online inspection, size inspection
- Double-sided thickness detection





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.



Sensing module

Chassis and power supply module



Single channel micrometer







NO.	NO.	Definition	
1a	1c	GND	
2a	2c	GND	
6a	6c	+15VDC	
8a	8c	GND	
9a	9с	GND	
11a	11c	-15VDC	
12a	12c	Uout:0~10V	
26a	26c	Uout:0~10V	
Note: unlabeled pins are null signals.			







▶ The sensor probe is a cylindrical structure with integrated wire connectors. The capacitive sensor probe is shown in the following figure:



▶ The cylindrical probe applied to the capacitive sensor module can generally be fixed by means of a fixture, and the probe can be flush with the fixed surface or partially poked out. There are two ways to fix the sensor probe, as shown in the following figure:

#### 1. Fix with plastic top wire



2. Fix with bayonet(recommended)







### 9.1 Disposal

▶ When disposing of old equipment, please abide by the national regulations and local regulations.Please dispose of the old equipment properly. Please contact CoreMorrow for the upgrade and replacement of old equipment in order to meet the customer's handling of system products.

If you have an old device or an unusable device that cannot be handled, you can ship it to the following address:

Address: 1F, Building I2, No.191 Xuefu Road, Nangang District, Harbin, Heilongjiang

### 9.2 After-sales Service

- > Any part of E09.CAP is dismantled, there will be no warranty service.
- ▶ E09.CAP is a precision instrument which should be handled with care.

In case of any problem, please record the problem and contact CoreMorrow to be repaired by professional technicians.



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