

# PISeca Signal Conditioner / Piezo Servo Module

## 3- CHANNEL SERVO CONTROLLER MODULE, FOR E-500 SYSTEM



### E-509.E

- + E-509.E03: 3- channel signal conditioner module for capacitive sensors
- + E-509.E3: 3- channel sensor module with additional servo controllers for piezo positioning systems
- + ILS circuitry maximizes capacitive sensor linearity
- + Optional measurement ranges
- + Variable bandwidth (optional)
- + Plug- in modules for E-500 / E-501 chassis

## Specifications

	E-509.E03	E-509.E3
Function	Signal conditioner electronics for PISeca	Sensor / servo- controller module for PISeca
Channels	3	3
<b>Sensor</b>		
Servo characteristics	–	Analog proportional- integral (P- I) algorithm with notch filter
Sensor type	PISeca single- electrode, capacitive	PISeca single- electrode, capacitive
Sensor bandwidth	3 kHz (preset) 0.3 / 10 kHz (selectable)	3 kHz (preset) 0.3 / 10 kHz (selectable)
Measurement range extension factors*	2 / 2.5 / 5 (option)	2 / 2.5 / 5 (option)
Synchronization	3 synchronized channels	3 synchronized channels
<b>Electrical properties</b>		
Output voltage	0 to 10 V -5 to 5 V, -10 to 0 V (selectable)	0 to 10 V
Thermal drift	<1 mV/ °C	<1 mV/ °C
Resolution (at 300 Hz bandwidth)	<0.001 % of measurement range (RMS)	<0.001 % of measurement range (RMS)
Resolution (at 3 Hz bandwidth)	<0.002 % of measurement range (RMS)	<0.002 % of measurement range (RMS)
Linearity error at nominal range	<0.1 % (<0.2 % for D-510.020)	<0.1 % (<0.2 % for D-510.020)
<b>Interface and operation</b>		
Sensor connection	3 x LEMO ECP.000.650.NLL.543 socket, triaxial	3 x LEMO ECP.000.650.NLL.543 socket, triaxial
Signal output	LEMO 6- pin FGG.0B.306.CLAD56	LEMO 6- pin FGG.0B.306.CLAD56
Display	–	3 x Overflow LED
Supported functionality	ILS	ILS
<b>Miscellaneous</b>		
Operating temperature range	5 to 40 °C	5 to 40 °C
Dimensions	7HP/3U	7HP/3U
Target ground connector	3 x banana jack, 4 mm	3 x banana jack, 4 mm
Supply voltage	E-500 System	E-500 System

Ask about custom designs!

\*Extension factors to multiply by the nominal measurement range of the selected sensor head D-510, to be specified with order.

## Order Information

### **E-509.E3**

PISeca Sensor / Piezo Servo- Control Module for Single- Electrode Capacitive Sensor Probes, 3 Channels

### **E-509.E03**

PISeca Modular Signal Conditioner Electronics for Single Electrode Capacitive Sensors, 3 Channels

Ask about custom designs!

## Related Products

[D-510 PISeca Capacitive Sensors](#)

[E-852 PISeca Signal Conditioner](#)

[E-500 • E-501 Modular Piezo Controller](#)

[E-503 Piezo Amplifier Module](#)

[E-505 Piezo Amplifier Module](#)

