

# **SERIES INAX1**

Inclinometer / position sensor for  
inclination angle measurement of 1 axis



- Measurement of unidimensional inclinations
- Measuring range from  $0^\circ$  to  $\pm 90^\circ$
- Analog output 0.5 ... 4.5 V
- Compact, rugged design
- High shock resistance
- High IP67 protection
- Easy installation

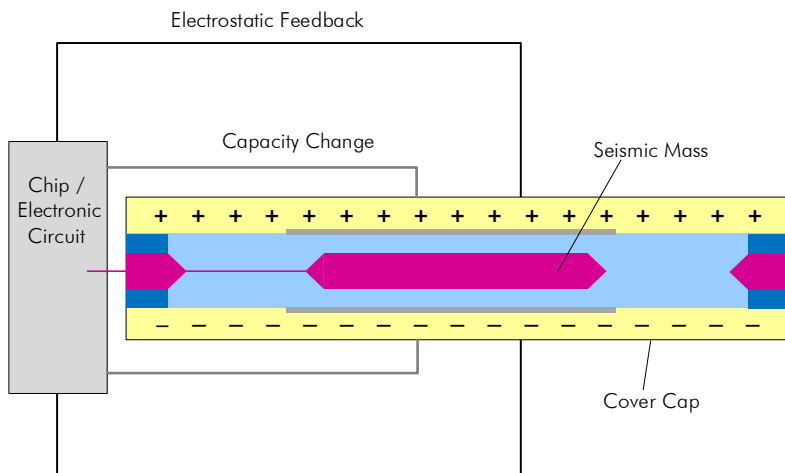
# INAX1 - Inclinometer for unidimensional single-axis inclination angle measurement

## General:

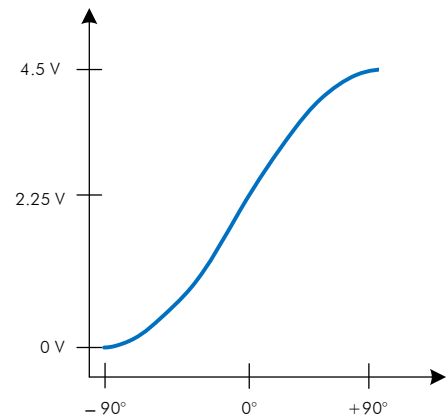
With the INAX1 single-axis inclination sensor, an absolute inclination angle measurement can be performed. The INAX1 inclinometer can measure inclinations in the range from  $0^\circ$  to  $\pm 90^\circ$ . Due to the high IP67 protection class, the sensor is ideally suited for measurements in harsh environments. INAX1 also impresses with its simple mounting and high shock resistance.

## Functional Principle:

The inclinometric measurement works by placing a seismic mass (see left figure) between two capacitor plates. The electrostatic feedback defines the change in inclination of the sensor. This electrostatic feedback is converted into the analog output signal (see right figure) by an integrated circuit.

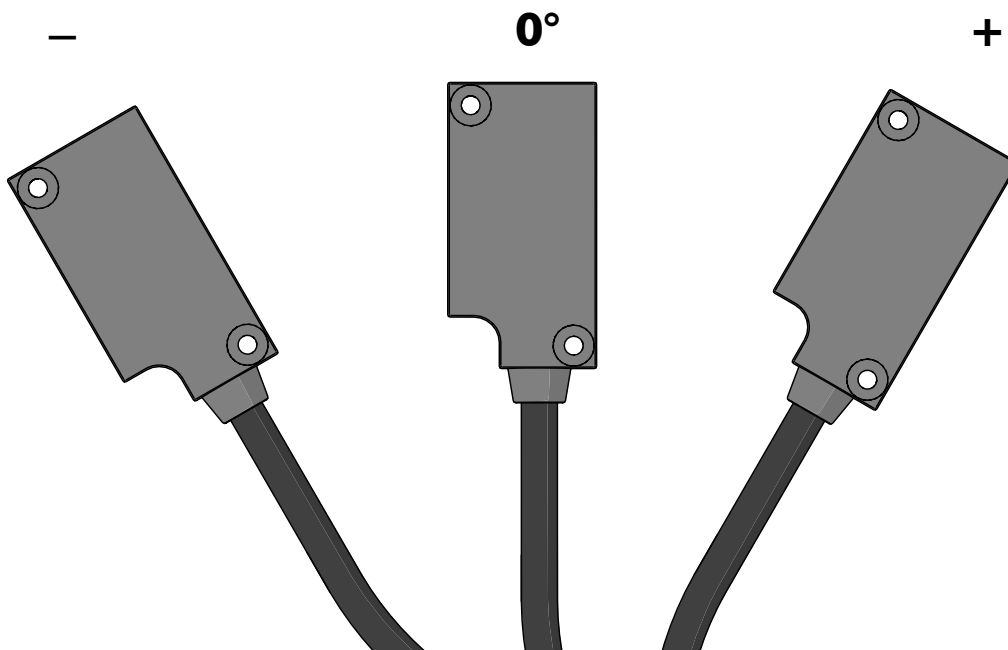


INAX1 - Functionbal Principle



INAX1 - Analog Output Signal

## Inclination angle:



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## Technical Specifications:

### Mechanical Data

Measurement principle	absolute-inclinometrical
Housing material	zinc die cast
Housing dimensions	L x W x H = 56 x 24 x 26 mm
System accuracy	± 7 % (in a range of ± 70 °)
Connection type	open cable ends
Sensor cable	2 m standard length (others on request), 3-pin shielded, drag chain suitable
Cable bending radius	min. 60 mm
Weight	INAX1: approx. 60 g without cable (cable: approx. 60 g / m)

### Electrical Data

Power supply voltage	10 ... 30 VDC or 5 VDC
Residual ripple	10 ... 30 VDC: < 10 % 5 VDC: ± 5 mV
Current consumption	max. 4 mA
Measuring range	max. ± 90 °
Interface	Analog output 0.5 ... 4.5 V
Load resistance	>= 10 kOhm

### Environmental Conditions

Storage temperature	-25... +85 °C
Operation temperature	-10... +70 °C (-25... +85 °C) on request
Protection class	IP67

## Type Designation:

INAX1 - AA - BBB - CCCC - DDDD - EE

### A Version

00 = ELGO standard version  
01 = first special version etc.

### B Signal Cable Length

020 = 2.0 m (standard), others on request

### C Axes

1500 = 1 axis

### D Interface

V045 = Analog out 0.5 ... 4.5 V

### E Power Supply Voltage

24 = 24 VDC (resp. 10 ... 30 VDC)  
05 = 5 VDC

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## Dimensions:

