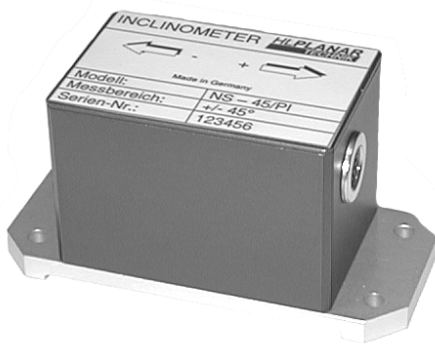


NS-45/PI Inclinometer**Applications**

- Zero point detection
- Machine Tool Alignment
- Level Control

Advantages

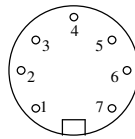
- IP 65 Housing
- Low vibration sensitivity
- High Precision

Theory of Operation

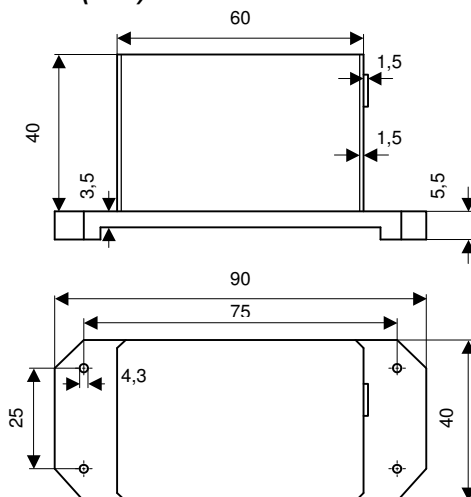
The NS-45/PI single-axis inclinometer is a member of a family of high performance, competitively priced, single and dual-axis inclinometers. The heart of every HL Planartechnik inclinometer is a small, state-of-the-art, inclination sensor. The sensor, which is comprised of a molded, ceramic case bonded, via a glass sealing process, to a ceramic substrate with deposited thin film, platinum electrodes. The chamber is partially filled with electrolytic fluid and then hermetically sealed.

The molded, ceramic, sensor housing combined with a precise, planar electrode geometry yields excellent performance and consistent part-to-part uniformity.

All PI-type inclinometers are microprocessor controlled transducers capable of producing a linearized RS-232 digital and analog current output. With their machined, aluminum base plate and IP 65 housing, they are an ideal choice for a variety of industrial, automotive and aerospace applications.

Pinout

1	+Ub	Supply Voltage
2	GND	Ground
3	Earth	Earth
4	GNDx	Ground for analogue current output signal Ix
5	Output Analogue Ix	≈ 20 mA (-45°) to ≈ 4 mA (+45°)
6	Input digital RS232	RxD
7	Output digital RS232	TxD

Dimensions (mm)**Specifications**

Range:	± 45°
Precision (up to ± 30°):	
analogue:	± 0.05°
digital:	± 0.05°
Resolution:	0.003°
Temperature stability:	
Zero point:	< 2*10 ⁻³ %K
Sensitivity (up to ± 30°):	< 5*10 ⁻³ %K
Analog Output:	
Analog current:	≈ 20mA(-45°) to ≈ 4mA(+45°)
(*)	
Digital Output:	RS-232 in degrees
Transmission rate:	2400 or 9600 Baud
Format:	ASCII
Operating temp. Range:	-25°C ... +85°C
Storage temp. Range:	-40°C ... +85°C
Supply voltage:	+ 7 ... + 24VDC
Current consumption:	ca. 35 mA
Protection class:	IP 65
Connection:	Connector or Pigtail

(*) Impedance:

Type NS-45/PI
Standard version Z_A<150 Ohm, Order-no. 200454102100

Type NS-45/PI-260
Special version Z_A< 260 Ohm, Order-no. 200454108100

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