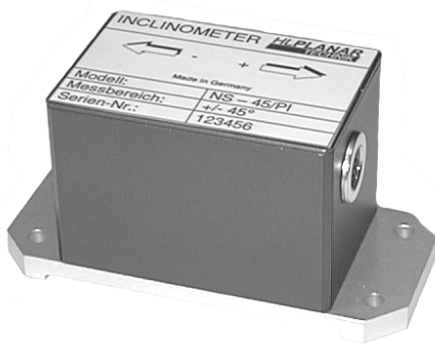
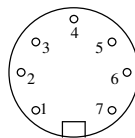


NS-45/PI Inclinometer

Applications

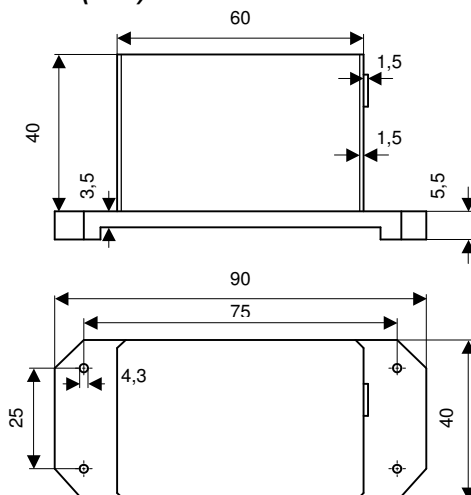
- Zero point detection
- Machine Tool Alignment
- Level Control

Advantages

- IP 65 Housing
- Low vibration sensitivity
- High Precision

Pinout


1	+Ub	Supply Voltage
2	GND	Ground
3	Earth	Earth
4	GNDx	Ground for analogue current output signal Ix
5	Output Analogue Ix	$\approx 20 \text{ mA} (-45^\circ)$ to $\approx 4 \text{ mA} (+45^\circ)$
6	Input digital RS232	RxD
7	Output digital RS232	TxD

Dimensions (mm)

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.

Specifications

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

(*) Impedance:

Type NS-45/PI
Standard version $Z_A < 150 \text{ Ohm}$, Order-no. 200454102100

Type NS-45/PI-260
Special version $Z_A < 260 \text{ Ohm}$, Order-no. 200454108100