

Inclinometers

With high accuracy for measuring in the ranges of ± 10 , ± 30 and ± 80 degrees with non-amplified output / or digital pulse width modulated output.

Features

- Linear output characteristics
- Minimal zero offset drift
- Hysteresis free measuring signal
- High measurement accuracy
- Very low relative linearity errors
- High long-term stability
- Analogue or PWM output signals
- Vibration and shock insensitive due to non mechanical internal parts
- Hermetically sealed housing to IP65
- Sensor galvanic isolated from housing
- Sensor zero mechanically adjusted with mounting ring

Description

The inclination sensors **NG2**, **NG3** and **NG4** are capacitive liquid based sensors with integrated sensor electronics. These sensors can be supplied with an analog DC output or with a digital pulse-width modulated output signal, which is linear to the degree of angle. The power consumption of these sensors is very low (approx. 1mA).

The measuring principle assures a linear angle output equal to the measuring range of the sensor with a maximum range of ± 80 degrees on NG4! This is independent of the size of gravity at the measuring point, so it doesn't matter if you are in Europe, Australia, or even on the moon, the angle of inclination is measured correctly everywhere.

Applications

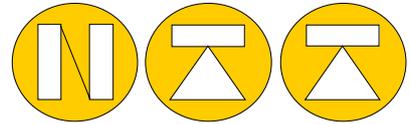
The **NG** series is well suited for industrial use where the demands for high accuracy, long-term stability, and relatively large tilt angle measuring ranges are wanted.

These **NG** series inclinometers have been used with very good results in the mining industry, food industry, bridges, cranes, agriculture machinery, process machines, transport systems and vehicles, plus many other applications as well as OEM systems.



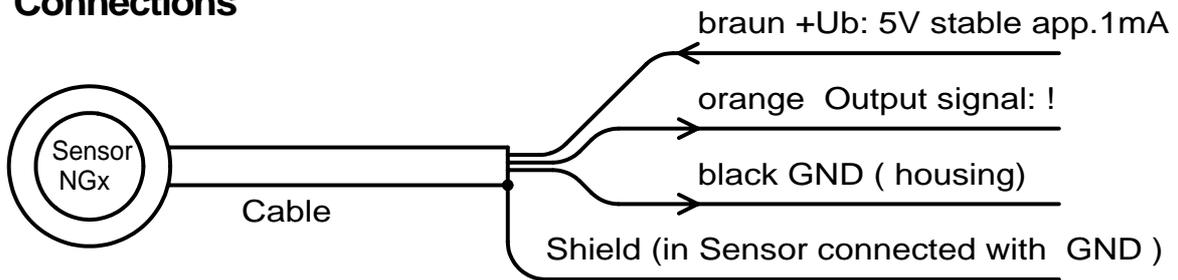
Technical Data

Type	NG2	NG3	NG4
Measuring range	±10 degrees	±30 degrees	±80 degrees
Typical instrument resolution (noise-signal)	<± 0,003degrees	<± 0,008 degrees	<±0,018 degrees
Dimensions	See drawing		
Max. Non-linearity	<0,1% F.S.		
Transverse Sensitivity	1% at 45° tilt		
Rise-time constant	app.0,3 Sec.		
Power Supply U_{bN}	5 Volt		
Min. .. Max. Supply U_{bz}	3 ... 6 Volt		
Current consumption $U_b=5V$ olt	app.1mA		
Protection degree	IP65		
Working Temperature	-40 to +85°C		
Storage Temperature	-45 to +90°C		
Weight (without cable and mounting ring)	App.. 110 Grams		
Standard cabling	0,5m shielded Cable Ø 4,6mm		
Values for analogous DC output model at $U_{bN}=5V$olt			
Sensitivity	app.9,5mV/ degrees	app.6,5 mV/degrees	app.4,2 mV/degrees
Temperature drift on sensitivity	<-0,12% /°C		
Temperature drift on zero	<0,01mV/°C		
Zero offset at $U_b=5V$	2,5±0,1Volt - -general: 0,5 U_b ±4%		
Output Impedance	10 kΩ		

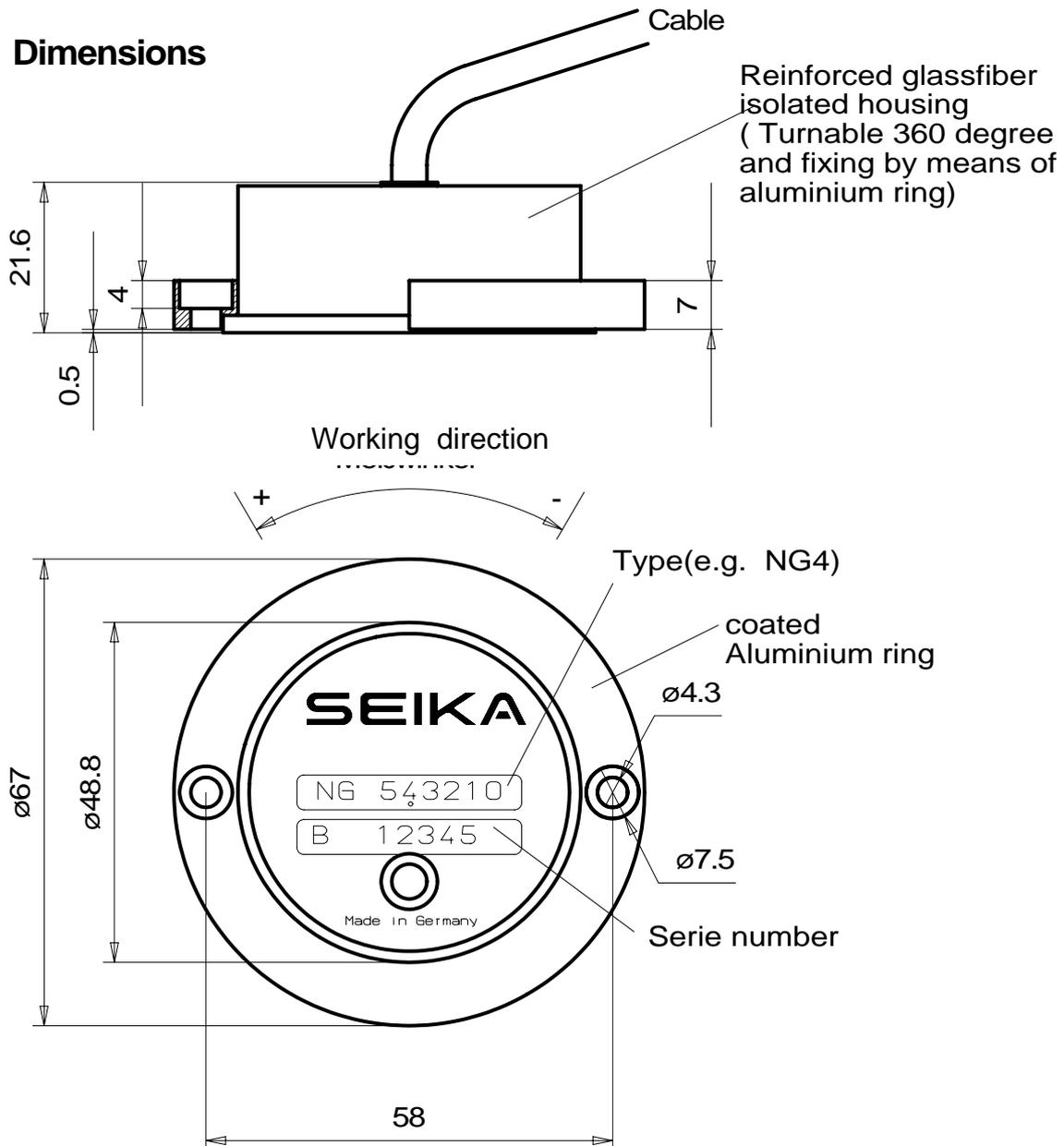


Dimensions and connections

Connections



Dimensions



Caution! Do not reverse operating voltage polarity!

6 Volts is the maximum supply voltage