

SEIKA / NTT NG2u - NG3u - NG4u **NORDIC TRANSDUCER**

High Performance Inclinerometer
With very high accuracy and integrated
0.5V - 4.5Volt excitation electronics.



3 NGU sensor models with working
ranges of: ± 10 , ± 30 and ± 80 degrees
New ranges as $\pm 45^\circ$ & $\pm 60^\circ$

1:1

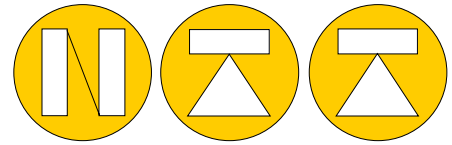
Features

- Temperature compensated voltage output
- Non regulated +8... +30 V power supply
- Integrated sensor electronic with 5VDC excitation
- Linear output characteristics
- High measurement accuracy
- Very low relative linearity errors
- High long-term stability
- Hysteresis free measuring signal
- EMC protected
- Vibration and chock insensitive due to non mechanical parts inside
- Hermetically closed housing to IP65
- Sensor galvanic isolated from housing
- Sensor 360° mechanically adjustable due to mounting ring

Description

The inclination sensors **NG2U**, **NG3U** and **NG4U** are capacitive liquid based sensors with integrated sensor and excitation electronics. The thermal drift of the primary sensor is further compensated by an electronic equalisation of the temperature. An integrated highly stable voltage regulator makes it possible to supply the inclinometer from any unregulated supply or battery as low as +8V and up to +30VDC. The measuring principle assures a linear angle output with 0.5...4.5VDC calibrated to equal the measuring range of the sensor. (Maximum range is ± 80 degree with NG4U)! The measuring time constant can be ordered with longer response times as an option!

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Applications

The **NGU** series is well suited for industrial use where high accuracy, long term stability, and high voltage outputs are desired in environments that experience large temperature changes and where non stable supply voltages are present.

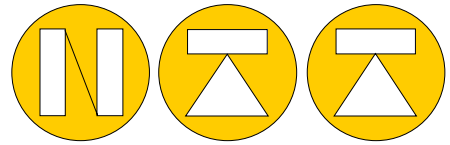
These **NGU** series inclinometers have been used with very good results in the mining industry, food industry, bridges, agriculture machinery, process machines, transport systems and vehicle tilt for weighing systems, plus many other applications as well as OEM systems.

Technical Data

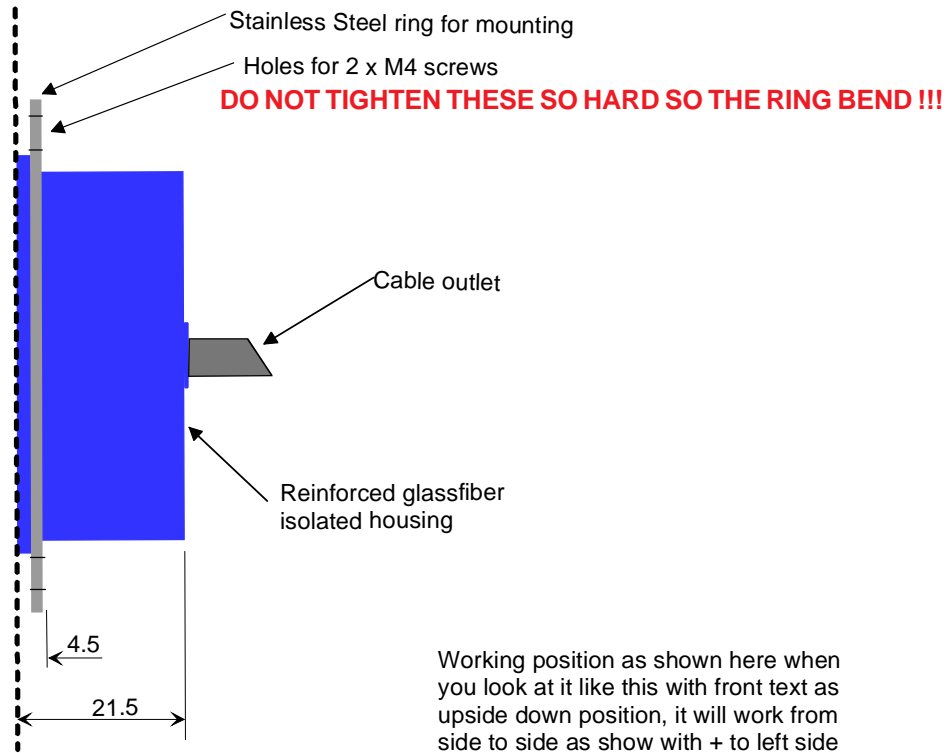
Type:	NG2u	NG3u	NG4u
Measuring ranges	±10 degrees	±30 degrees	±80 degrees *
Typical instrument resolution (noise-signal relationship)	±0,003 degrees	±0,008 degrees	±0,016 degrees
Sensitivity	200mV /degrees	66.67mV /degrees	25mV /degrees
Dimensions	See drawing		
Non linearity	<± 0.1% F.S.		
Transverse Sensitivity	<1% at 45° tilt		
Rise-time Constant	Approx.0,3 sec. (Optional 1sec., 2sec. or 3sec.)		
Temperature drift of span	<-0,01% / °C		
Temperature drift of zero	<±10 ⁻³ Angle degree / °C		
Power Supply	8...30 Volt		
Zero degree output signal	2.5 Volt		
Current consumption	App.10mA		
Protection degree	IP65		
Temperature Range	-40 to +85°C		
Storage Temperature	-45 to +90°C		
Weight	App.155 Grams		
Standard Cabling	0,5m shielded cable Ø4.6mm 4-wire, as optional other lengths !.		

* +/- 45° & +/-60 ° with same data as +/- 80° model. output signal 0.5V - 4.5V cover total working range.

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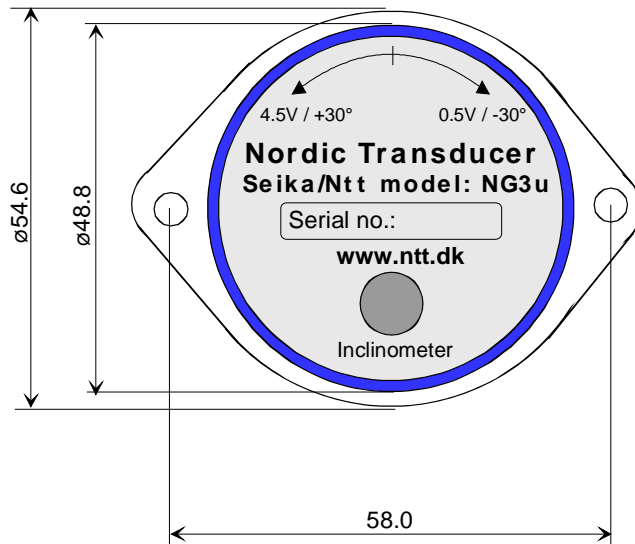
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The Inclinometer housing can be turned mechanically inside the ring, when the wanted position is reached the 2 x M4 is tightened, and so the outside ring press on the housing so it is fixed in position.

Wiring:

- Red: + supply 8..30V (approx. 10mA)
- Black: GND (case)
- Orange: + output signal +0.5 - +4.5V
- Brown: + U ref.: 5V (max.10mA)
- Shield: (connected with GND inside sensor)



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