

# KINAX N702

## Absolute inclination transmitter

### For robust industrial applications

The KINAX N702 is a very robust absolute inclination transmitter. Thanks to its high mechanical strength and the compact design it is particularly suitable for use in industrial applications. It serves the acquisition of inclination and angular position, processing and the provision of measured values for the downstream device.

The very simple assembly by the synchro flange or mounting plate, the sensor connection via M12x1 / 4 poles the free on-site parameterization offers maximum installation flexibility.



### Your benefits

#### TOP QUALITY TESTED

- Compact industrial housing
- Splash and dust proof housing IP66
- Contact arm measuring principle

#### ACCURATE, SAFE, MAINTENANCE FREE

- High degree of absolute measuring accuracy ( $\pm 0.2^\circ$ )
- Resistant against high mechanical strains thanks to robust design and high quality materials
- Secure electrical connection through sensor connector M12x1

#### SIMPLE AND QUICK COMMISSIONING

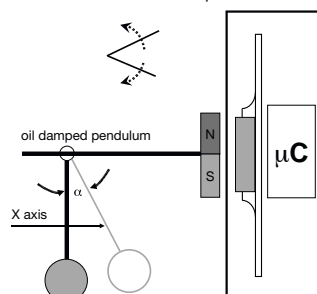
- Standard synchro flange or mounting plate
- No shaft adaptation necessary
- 3-wire connection with sensor connector M12x1 / 4 poles
- Free on-site parameterization

### Technical data

#### General

Measured quantity:  
Measuring principle:

Tilt angle  
Magnetic, one-dimensional inclination transmitter with hall sensor and oil-damped pendulum system, hermetically sealed, contact free, freely rotatable without stops



Pendulum damping: by oil filling

#### Measuring input

Measuring range: -180°...179.9° free programmable  
Inclination angle: Set to  $\pm 135^\circ$   
Sense of rotation: Adjustable for rotation clockwise or counter-clockwise

#### Measuring output

Power supply: 18 ... 36 VDC (burden 600  $\Omega$ )  
9 ... 36 VDC (burden 200  $\Omega$ )  
Output signal IA: Load-independent DC current, proportional to the inclination  
Current consumption: < 80 mA  
Standard range: 4...20 mA, 3-wire connection  
protection against wrong polarity

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### Accuracy

Basic accuracy:	$\pm 0.2^\circ$ (at $+25^\circ\text{C}$ )
Resolution:	12 bit
Transient response:	by $25^\circ$ tils $< 1$ sec.
Influence of temperature output current ( $-30^\circ\text{...}+70^\circ\text{C}$ ):	$\pm 0.1^\circ / 10\text{K}$ ( $>100^\circ$ )
	$[-22 \dots +158^\circ\text{F}]$

### Installation data

Material:	Housing cap: (3.2382) Aluminium GD-AlSi10Mg coated
	Housing flange: (3.2315) Aluminium AlMgSiF30
Mounting position:	Perpendicular to the measurement object
Electrical connection:	Connector M12x1, 4 poles
Weight:	0.3 kg [9.645 oz]

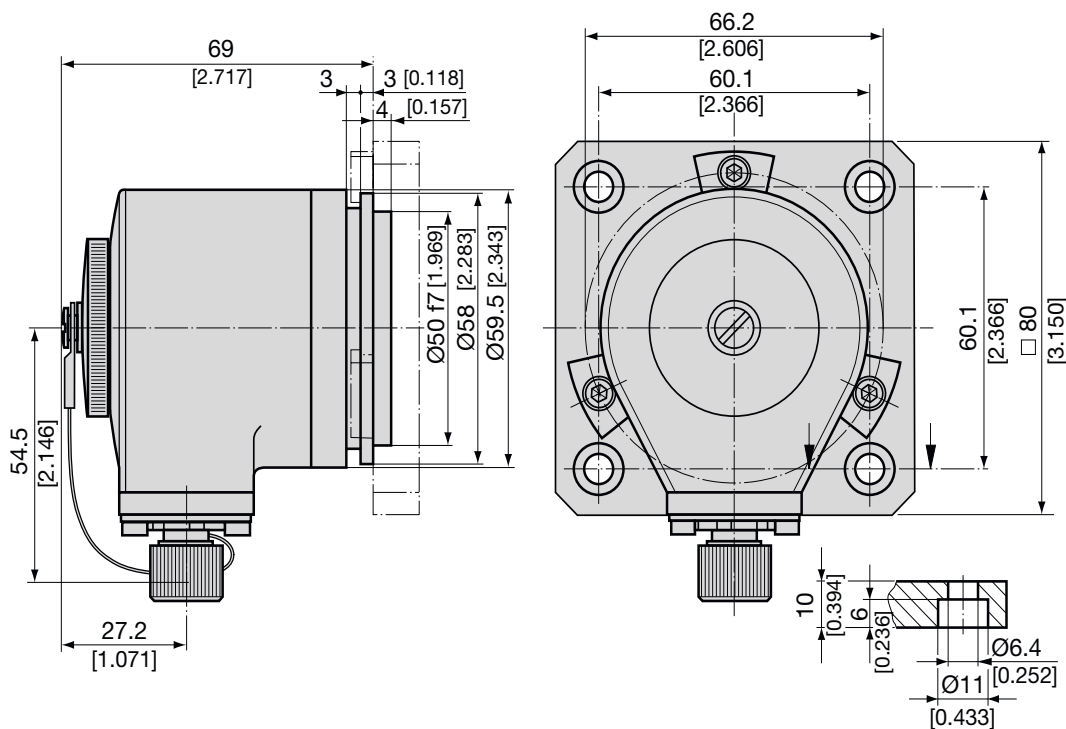
### Regulations

Spurious radiation:	EN 61 000-6-3
Immunity:	EN 61 000-6-2
Test voltage:	500 Veff, 50 Hz, 1 min.
Housing protection:	IP 66 acc. to EN 60 529

### Environmental condition

Climatic rating:	Temperature $-30^\circ$ to $+70^\circ\text{C}$ $[-22 \dots +158^\circ\text{F}]$ Relative humidity $< 95\%$
Vibration resistance:	$\leq 40\text{ m/s}^2 / 5 \dots 100\text{ Hz}$ acc. EN 60068-2-6
Shock resistance:	$300\text{ m/s}^2 / 18\text{ ms}$ acc. EN 60068-2-27
Transportation and storage temperature:	$-30^\circ$ to $+70^\circ\text{C}$ $[-22 \dots +158^\circ\text{F}]$

### Abmessungen

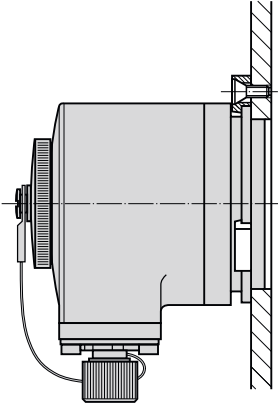
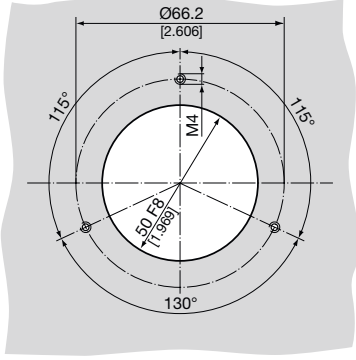
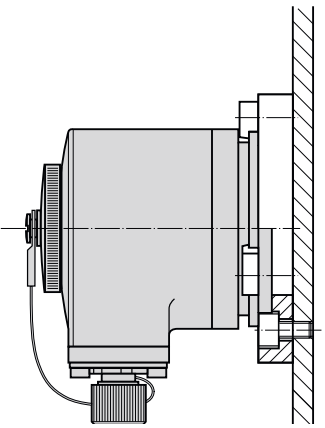
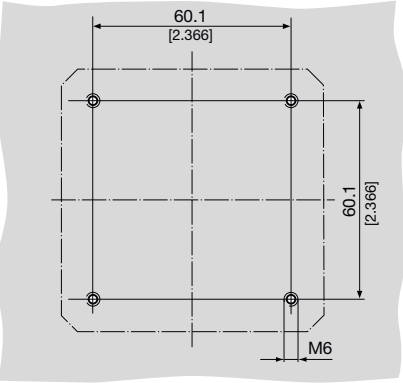


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### Mounting

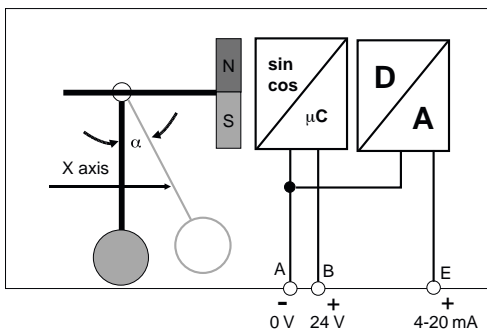
All inclination transmitter can be mounted either directly with 3 clamping brackets to the item being measured or with a mounting plate with 4 cheese head screws M6. Please take care that the installation position of the inclination transmitter is perpendicular to the gravity of the earth. The inclination transmitter are supplied standard with mounting plate but without cheese head screws M6.

Mounting versions		Drilling and cut-out diagrams (for mounting transmitters)
directly with clamps		
with mounting plate		

### Electric connections

To connect the electrical lines, the inclination transmitter has a sensor connector M12x1 / 4 poles.

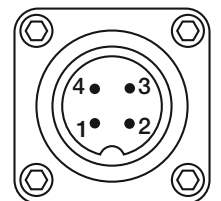
#### Wiring connection



#### PIN configuration

##### Pin assignments:

- 1 = 0 V
- 2 = + 24 V DC
- 4 = 4 ... 20 mA



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### Programming

The parameters can be made using the keypad on the device itself. Touch a button to make initial and final values or parameters for the zero position for a symmetrical arrangement.

In case of incorrect operation the factory settings can always be restored.



### Ordering information of variants

Description	Article No.
KINAX N702	157 083

### Scope of delivery

- 1 Inclination transmitter KINAX N702 (157 083)
- 1 Mounting plate with 3 clamps (168 379, 168 353)
- 1 Connector M12 x 1, 5 poles (168 105)
- 1 Operating instructions German, English, French (157 265)

### Accessories

Description	Article No.
Connector M12x1 / 5 poles	168 105
Kit mounting clamp N7xx	168 353
Mounting plate N7xx	168 379
Connecting cable to N702 / Length 3m	169 757

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