



## **Inclination Transmitter with oil-damped Pendulum System**

## Application

The inclination transmitter KINAX N702 serie converts the tilt angle into a direct current signal, proportional to the angle. The output signal is either available as an analog signal in form of a current change or digitally with a CANopen or SSI bus interface.

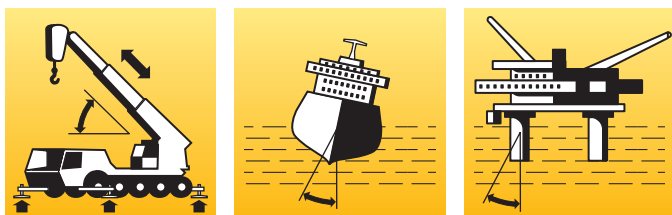
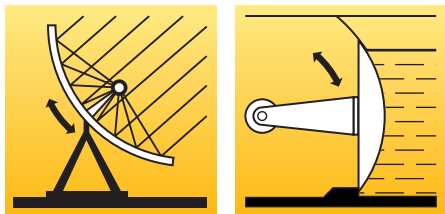
Tilt angle values of a platform e.g. on

- cranes, heavy-duty vehicles
- excavators and drilling machines
- ships and offshore facilities

stand for important measuring data as a part of the safety and control system of that type of machinery. Angular measurement, for instance for equipment levelling is performed in such cases.

For acquisition the

- angular position of a crane jib
  - lateral inclination of a vehicle
  - orientation of a lifting platform, weir trap or comparable facilities
  - alignment of solar panels or concave mirrors
- the KINAX N702 can also be used.

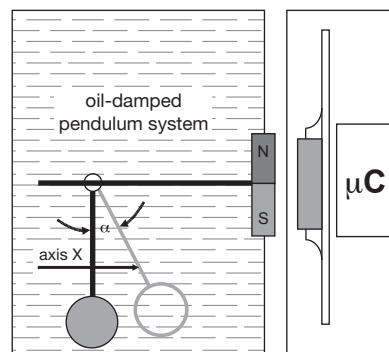


## Main features

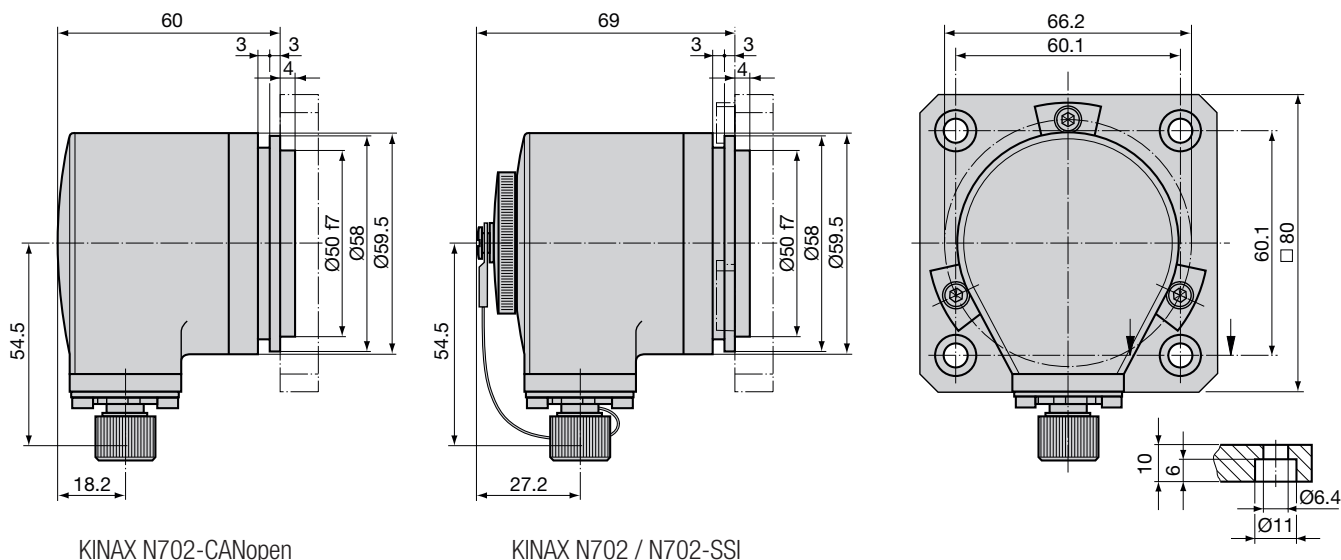
- **Magnetoresistive angular position transmitter**
- **Analog interface 4...20 mA**
- **Digital interfaces CANopen or SSI**
- **Robust aluminium housing**
- **Protection class IP66**
- **Oil damped pendulum**
- **Pendulum shaft has no mechanical stops**

## Measuring principle

Magnetoresistive angular position transmitters are extremely robust measuring systems without a shaft stop, fully hermetically encapsulated and capable of measuring contactless the angular position of a permanent magnet, which is attached to the pendulum system.



## Dimensions



	KINAX N702	KINAX N702-CANopen	KINAX N702-SSI
			
Type	unidimensional inclination transmitter		
Order No.	157 083	157 554	157 562

### General data

Measured quantity	tilt angle		
Measuring principle	magnetoresistiv		
Pendulum damping	silicon oil		
Basic accuracy	$\pm 0.2^\circ$		
Resolution	14 bit		
Transient response	by $25^\circ$ tilt < 1 sec.		
Housing protection	IP 66 (acc. to EN 60529)		
Housing	coated aluminium		
Electrical connection	connector M12 x 1		
Weight	approx. 0.3 kg		

### Measuring input

Measuring range	0 ... $360^\circ$		
Tilt angle preprogrammed	$\pm 135^\circ$	-180 ... +179,9°	
Signal adjustment	freely programmable by keys	Fixed adjustments	freely programmable by keys

### Measuring output

Output signal	4 ... 20 mA	CAN bus	SSI binary code
Communication protocols	—	CANopen	—
Load resistant	max. 600 $\Omega$	—	—
Baud rate/clock rate	—	1 MBit/s	1 MHz



### Power supply

Operating voltage	18 ... 33 V DC		9 ... 33 V DC
Power consumption	< 80 mA	< 80 mA	< 100 mA

### Environmental conditions and regulations

Temperature	-30°C ... +70°C		
Temperature influence	0.05% / 10 K		
Annual mean relative humidity	$\leq 95\%$		
Permissible vibration	4 g / 0 ... 100 Hz		
Test voltage	all connections against housing 500 Veff., 50 Hz, 1 min.		
Electromagnetic compatibility	The standards EN 61 000-6-4 and EN 61 000-6-2 are observed		

### Pin configuration of connector M12 x 1

 5 poles for N702 and N702-CANopen	Pin 1	0 V	CAN Shld	0 V
	Pin 2	+24 V DC	+ 24 V DC	+ Vs
	Pin 3	—	GND	Clock +
	Pin 4	+20 mA or +10 V	CAN High	Clock -
	Pin 5	—	CAN Low	Data +
 8 poles for N702-SSI	Pin 6	—	—	Data -
	Pin 7	—	—	—
	Pin 8	—	—	—

# Product ranges of Camille Bauer



**Heavy-current:** State, Allocation, Quality.



**Angular position:** Angle, Inclination, Position, Volume.



**Process control:** Temperature, Signal conversion, Process management.

 **CAMILLE BAUER**

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