

INCLINATION TRANSMITTERS HEAVY DUTY

ACQUIRE, PROCESS AND PROVIDE
OF MEASURED VALUES AS ELECTRIC
OUTPUT SIGNALS



THE CORRECT POSITION

ALWAYS UNDER CONTROL

In instrumentation, inclination transmitters are considered to be all-rounders. There is hardly any moveable object the position of which cannot be monitored by an inclination transmitter. The range of applications covers monitoring weirs, throttle flaps and locks through to the control of machines, automats, robots and solar plants including monitoring of ships, vehicles and aircraft.

Inclination transmitters acquire – similarly to a plumb line – the deviation from the horizontal or vertical within the reference point provided by the direction of the gravitational pull.

The robust, absolute inclination transmitters of Camille Bauer are precision instruments and suitable to the acquisition of almost any inclination. They serve the acquisition, processing and provision of measured values as electric output signals for a downstream device. The output signal is available either in the analogue form of 4 ... 20 mA or digitally with bus interfaces.



KINAX N702



KINAX N702-CANopen



KINAX N702-INOX

NUMEROUS FEATURES

ROBUST, COMPACT DESIGN

The robust and compact design and the use of high-quality materials make the inclination transmitters resistant to high mechanical loads.

HIGH PRECISION

Featuring a basic accuracy of $\pm 0.2^\circ$ and a 14 bit resolution, the inclination transmitters convince customers wherever precision is required.

HIGH DEGREE OF HOUSING PROTECTION

The water and dustproof aluminium or stainless steel housings with a degree protection of up to IP68/IP69K permit the use in extremely aggressive media and environments like seawater and detergent.

DIFFERENT OUTPUT OPTIONS

The analogue and digital output options permit the highest possible degree of flexibility in application connection. 4 ... 20 mA, SSI interface, CANopen interface and HART interface are available.

EASY AND FAST ASSEMBLY

Very easy assembly by synchro flange or assembly plate and the variety of variants of connection options offer the highest degree of flexibility in installation.

EASY PARAMETERISATION

Depending on the design, the instruments may be parameterised via a membrane keyboard, directly via the control line or via a bus defining zero point, maximum value and rotational direction. Zero point, minimum value (0%), maximum value (100%) and the direction of rotation may be defined.

TECHNICAL DATA AND APPLICATION INFORMATION

GENERAL

Measured quantity	Tilt angle, one-dimensional
Measuring principle	Oil-damped pendulum system with magnetic hall sensor
Pendulum damping	by 25° tils <1 sec.
Measuring range	Programmable between 0 ... 360°
Sense of rotation	Adjustable for rotation clockwise or counter-clockwise
Basic accuracy	±0.2°
Resolution	14 bit
Power supply	8 ... 33VDC, reverse polarity protection
Normal position of use	Vertical to the measured object

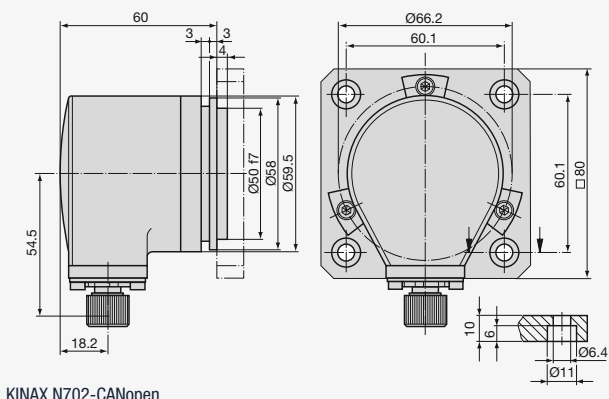
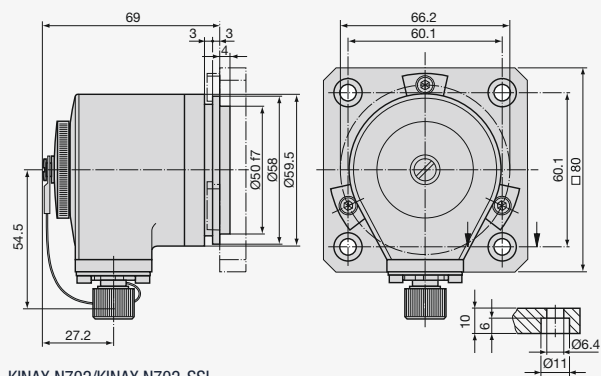
ENVIRONMENTAL CONDITIONS AND DIRECTIONS

Operating temperature	-30 to +70 °C
Storage temperature	-30 to +70 °C
Influence of temperature	0.1°/10 K (<100°) up to 0.2°/10 K (>100°)
Spurious radiation	according EN 61 000-6-4
Immunity	according EN 61 000-6-2
Test voltage	500V _{eff} , 50 Hz, 1 Min.
Vibration resistance	40 m/s ² , 10 ... 500 Hz acc. EN 60 068-2-6
Shock resistance	300 m/s ² , 18 ms acc. EN 60 068-2-27

PROGRAMMING

Depending on their design, the inclination transmitters may be parameterised via a membrane keyboard, directly via the signal line or via the bus interface. Zero point, minimum value (0%), maximum value (100%) and the direction of rotation may be separately defined.

DIMENSIONAL DRAWINGS



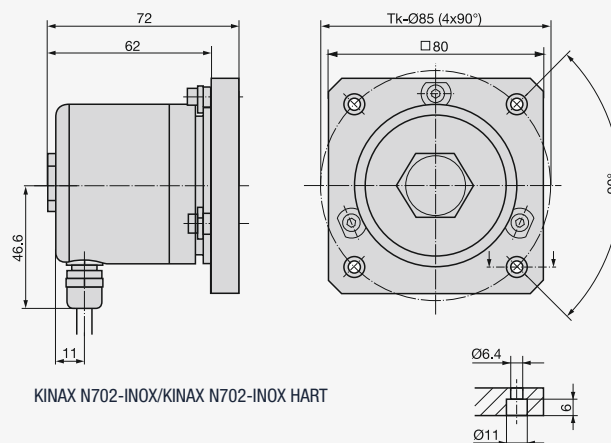
VERSION

KINAX N702/N702-SSI/N702-CANopen

Housing material	Aluminium coated
Housing protection	IP66 according EN 60 529
Electrical connections	Sensor plug M12x1
Connection version	SSI: 6-wire system CANopen: 5-wire system 4 ... 20 mA: 3-wire system
Weight	approx 0.5 kg

KINAX N702-INOX/ KINAX N702-INOX HART

Housing material	Stainless steel INOX AiSi 316Ti (1.4571)
Housing protection	IP68 according EN 60 529 IP69K according EN 40 050-9
Electrical connections	preassembled, highly flexible signal line in different lengths
Interface	4 ... 20 mA, 2-wire system HART (optional)
Weight	approx 1.1 kg



ORDER DETAILS AND ACCESSORIES

VERSION

Description	Article no
KINAX N702 Preset to $\pm 135^\circ$	157083
KINAX N702-SSI Preset to $-180 \dots +179.9^\circ$	157562
KINAX N702-CANopen Preset to $-180 \dots +179.9^\circ$	157554
KINAX N702-INOX Preset to $-180 \dots +179.9^\circ$ Cable length 1.5 m Cable length 3.0 m Cable length 5.0 m Cable length 10.0 m Cable length 20.0 m Cable length 30.0 m Further cable lengths upon request	172479 172487 172495 172502 173097 172528
KINAX N702-INOX HART Preset to $-180 \dots +179.9^\circ$ Cable length 5.0 m Cable length 10.0 m Cable length 30.0 m Further cable lengths upon request	172536 172544 173922

ACCESSORIES

Description	Article no
Plug connector M12x1/5-pole For easy cable assembly on site	168105
Plug connector M12x1/8-pole For easy cable assembly on site	168113
Kit mounting clamp For direct assembly on the object to be measured	168353
Kit mounting clamp INOX For direct assembly on the object to be measured	172619
Mounting plate For fastening on the object to be measured, three additional clamps are required	168379
Mounting plate INOX For fastening on the object to be measured, three additional clamps are required	172627
Connecting cable for KINAX N702 Plug connector M12x1/5-pole, cable length 3 m	169757



TYPICAL INDUSTRIES

VERSATILITY EXCELS



INDUSTRIES

- Steel and aluminium
- Machine and plant construction
- Chemical and petrochemical industry
- Wood, paper, glass and cement
- Food and beverages
- Energy supply/distribution



MARINE AND OFFSHORE

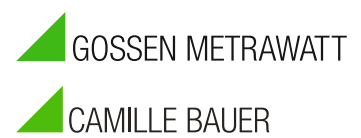
- Marine and shipping
- Oil and gas production
- Offshore plants



WATER MANAGEMENT

- Fresh and waste water engineering
- Piping
- Inlet and outlet regulation
- Waterways

GMC INSTRUMENTS



CAMILLE BAUER METRAWATT AG
Aargauerstrasse 7 • 5610 Wohlen • Switzerland
TEL +41 56 618 21-11 • FAX +41 56 618 21-21

www.camillebauer.com • info@cbmag.com