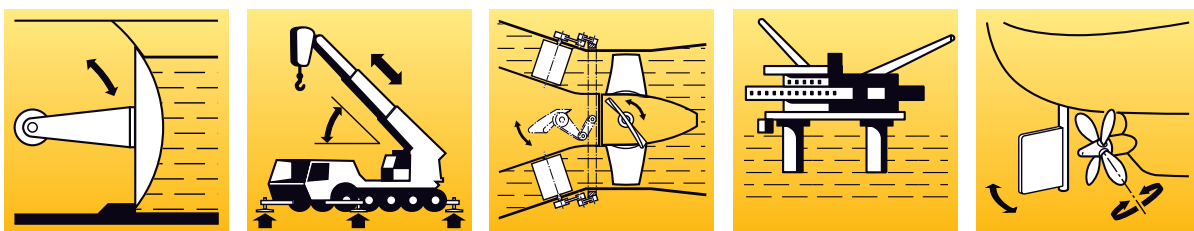


**Angular Position Transmitter
for heavy duty Applications**

Application

The angular position transmitters KINAX WT7xx serie are precision instruments and serves the acquisition of angular position and rotation, processing and the provision of measured values as electric output signals for the downstream device. They convert the angular position of a shaft into a load-independent direct current signal, proportional to the angular position.

The robust design makes the angular position transmitters of the KINAX WT7xx series particularly suited to applications in rough environments. The products are used in many areas, preferably in large machine construction, industrial plants, power plant construction, ship and offshore facilities, crane vehicles, large transport vehicles, dredger and drilling equipment.



Main features

- Robust angular position transmitters in single- and multi-turn version
- Capacitive or magnetically scanning system
- Analog output signal 4...20 mA with 2, 3 or 4-wire connection
- Digital output signals in CANopen and SSI with M12-plug connector
- No wear and low annual maintenance
- Versions non programmable and programmable
- Vibration and shock-resistant
- Available in type of protection "Intrinsic safety" EEx ia IIC T6
- Available in GL-version

Measuring principle

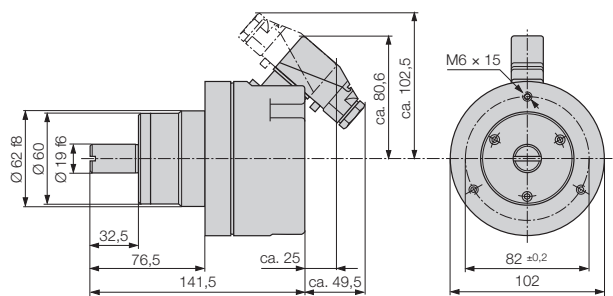
Capacitive

The capacitive scanning system consist of 2 main parts: the differential screen capacitor and the electronic circuitry. The angular deflection of the device to be measured is transferred to the rotor of the differential screen capacitor with the aid of a mechanical coupling. It is then converted into a change of capacitance proportional to the angle. All changes to the position of the rotor result in a change in the capacitance at the input to the microprocessor. This is transformed into a DC current signal proportional to the measured value..

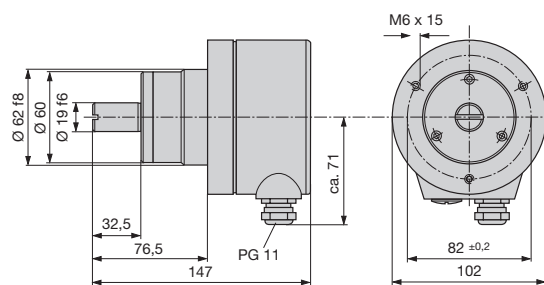
Magnetic measuring principle

Angular position encoders using a magnetic measuring principle consist of a rotatable shaft with a fixed permanent magnet and a sensor. The magnetic field generated by the permanent magnet is scanned by the sensor and the measured value is allocated to an unambiguous, absolute angle position.

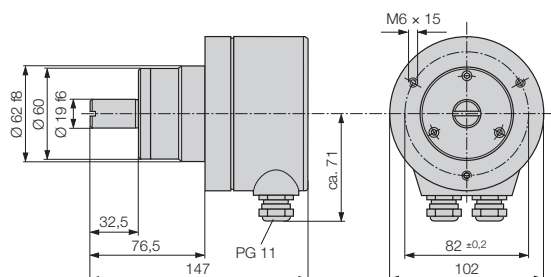
Dimensions



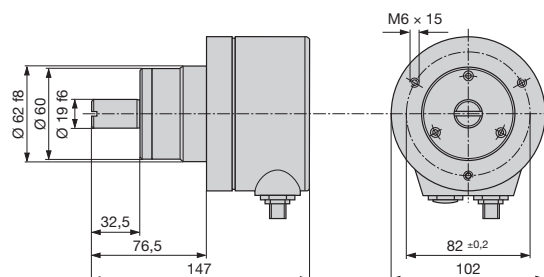
KINAX WT707 with connector




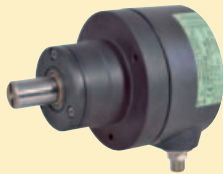
KINAX WT717



KINAX WT707 with cable gland



KINAX WT707-SSI /-CANopen

	KINAX WT707	KINAX WT717	KINAX WT707-CANopen	KINAX WT707-SSI
				
Version	Singleturn	Singleturn	Single- and multiturn	Single- and multiturn
Version EEx ia IIC T6	yes		no	
Version GL	yes		no	

General data

Measured quantity	angular position			
Measuring principle	capacitive		magnetically	
Basic accuracy / Error limit	0.5 % 1.5 % (> 150°)	0.5 %	± 1°	± 1°
Resolution	—		ST 12 bit / MT 13 bit	
Reproducibility	< 0.2 %		0.3°	
Housing protection	IP 66 (acc. to EN 60529)			
Housing	Plastic or steel / aluminium		Steel / aluminium	
Electrical connection	Cable gland or connector	Cable gland	Connector M12 x 1	
Weight	approx. 2.9 kg			

Measuring input

Measuring range	0 ... 270°	0 ... 350°	0 ... 360°/8192 turns	
Programmable	no		yes	no

Measuring output

Output signal	0 ... 1 to 0/4 ... 20 mA	4 ... 20 mA	CAN bus	SSI
Communication protocols / Signal coding	—		CANopen	Binary or Gray code
Max. baud rate/clock rate	—		1 MBit/s	1 MHz

Power supply

Operating voltage	12 ... 33 V DC 12 ... 30 V DC (Ex) 24 ... 60 / 85 ... 60 V DC/AC	12 ... 33 V DC 12 ... 30 V DC (Ex)	10 ... 30 VDC	
Power consumption	45 mA		50 mA	

Environmental conditions and regulations

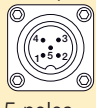
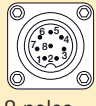
Temperature / Relative humidity	-20°C ... +70°C / ≤90% -40°C ... +70°C / ≤95%		-20°C ... +85°C / ≤95%	
Permissible vibration	≤100 m/s ² continuous, ≤150 m/s ² 2h / 0 ... 200 Hz		≤300 m/s ² / 10 ... 2000 Hz	
Test voltage	all connections against housing 500 Veff., 50 Hz, 1 min.		—	
Electromagnetic compatibility	The standards EN 61 000-6-4 and EN 61 000-6-2 are observed			

Pin configuration of connector for KINAX WT707

Pin	2-wire ogT	3-wire ogT	4-wire ogT	4- mgT
1	—	—	—	—
2	Connect pin 2 and 3	A +	A +	A +
3		—	A -	A -
4	A, H -	A, H -	H -	—
5	A, H +	H +	H +	H
6	—	—	—	H
⊖	GND	GND	GND	GND

A = Output signal, H = Power supply,
ogT = without electric isolation, mgT = with electric isolation

Pin configuration of connector M12 x 1

WT707- CANopen	Pin	WT707-CANopen	WT707-SSI
 5 poles	1	not connected	0 V
	2	+Vs	+ Vs
	3	CAN GND	Clock +
	4	CAN H	Clock -
	5	CAN L	Data +
 8 poles	6	—	Data -
	7	—	Zero
	8	—	n.c.

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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