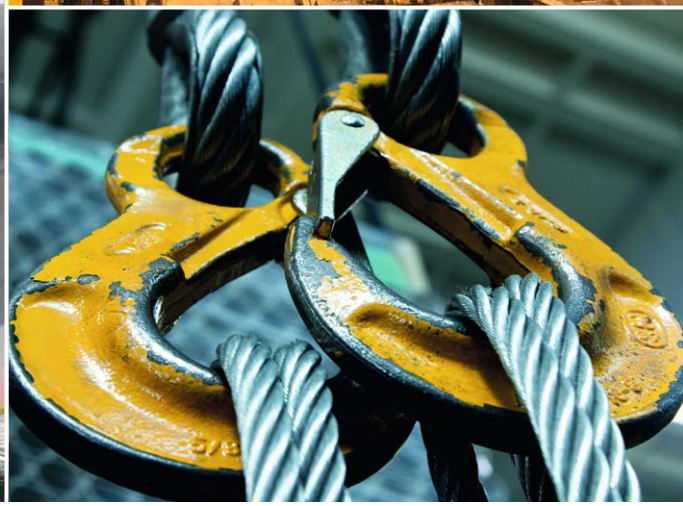
CAMILLE BAUER

Rely on us.



KINAX HW730

Programmable hollow-shaft transmitter for angular position

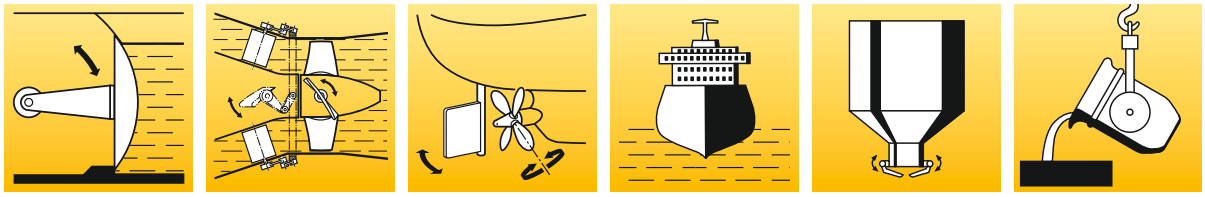
Application

The hollow-shaft transmitter for angular position KINAX HW730 is a precision instrument 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 converts the angular position of a shaft into a load-independent direct current signal, proportional to the angular position.

The robust design makes the hollow-shaft transmitter for angular position KINAX HW730 particularly suited to applications in rough environments. For mounting the device is simply slid onto the drive shaft and fixed with a torque support. The product is used in many areas, preferably in power generation, plant construction, handling and lifting technology, industrial ventilation and air conditioning, in fresh water and waste water technology.

Main features

- **Robust transmitter for angular position suitable for field applications**
- **Highest degree of mechanical and electrical safety**
- **Proven capacitive scanning system**
- **No wear, low annual maintenance and mountable anywhere**
- **Vibration- and shock-resistant**
- **Measuring range, sense of rotation, zero position and linear/V characteristic can be adjusted by a switch and two push-buttons**
- **Analog output signal 4…20 mA, 2-wire connection**
- **Zero position and end position are independently adjustable**
- **Capacitive scanning system provides absolute position immediately after activation**
- **Available with explosion protection**
- **Available in marine version**



Measuring principle

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. This is transformed into a DC current signal proportional to the measured value.

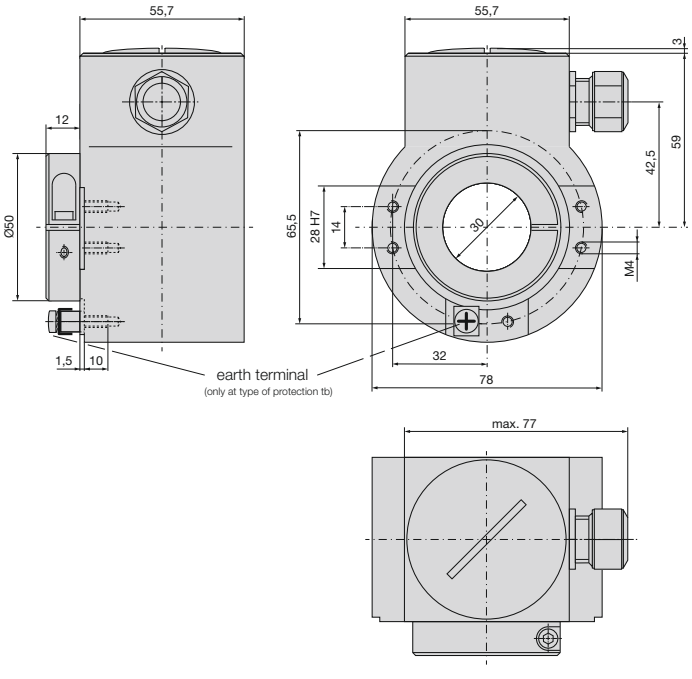
Pin configuration of the sensor connector M12 × 1

4 poles

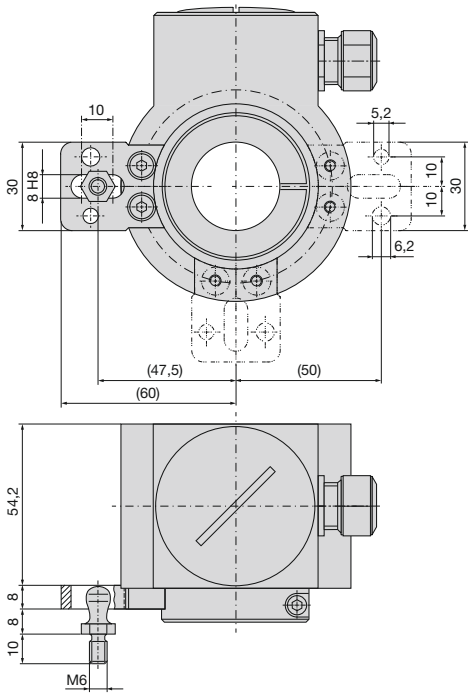
Pin	HW730
1	+
2	–
3, 4	not connected

Dimensions and torque support

Dimensions



Torque support



	KINAX HW730	
		
General data		
Measured quantity	Angular position	
Measuring principle	Capacitive	
Error limit	< ± 0.35°	
Reproducibility	< 0.1°	
Housing protection	IP67 acc. EN 60 529, IP 69k acc. EN 40 050-9	
Housing	Anodized aluminum	
Hollow-shaft diameter	Standard 30 mm, by reduction 10, 12, 16 or 20 mm	
Hollow-shaft bearing	Ball bearing	
Electrical connection	Spring-type terminal block or sensor plug connector metal (M12 × 1, 4 poles)	
Weight	Approx. 820 g	
Measuring input		
Measuring range	0…360°	
Configurable	By push-buttons and switch: measuring range, zero position, sense of rotation and linear/V characteristic	
Measuring output		
Output signal	4…20 mA, 2-wire connection	
Power supply		
Operation voltage	12…30 V DC	
Environmental conditions and regulations		
Temperature / relative humidity	NEx –40 °C ... +85 °C / ≤95%	Ex –40 °C ... +75 °C / ≤95%
Vibration resistance	≤100 m/s² / 10…500 Hz	
Shock resistance	1000 m/s², 11 ms, acc. EN 60 068-2-27	
Immunity	EN 61 000-6-2, Surge capacity acc. EN 61 000-4-5: 1 kV, 1.2/50 µs (line-earth)	
Spurious radiation	EN 61 000-6-3 and EN 61 000-6-4	
Versions		
Explosion protection ATEX	II 2G Ex ia IIC T4 II 2D Ex ia IIIC T80°C	II 2D Ex tb IIIC T80°C
Explosion protection IECEX	Ex ia IIC T4 Ex ia IIIC T80°C	Ex tb IIIC T80°C
Marine version	(Germanischer Lloyd) (currently under way)	

Programming

	OFF		ON			
DIP1	↺			↻		
DIP2	Linear			V-Curve		
0%	▪			▪	▬	
100%		▪	▪			▬
	⟋	⟋	⋀	⋀	⋀	⋀

prg-mode
0%: ▪▪▪

▪ 0.1s
▬ 1s

The transmitter is programmable via switch and push-buttons. These will be visible after removing the top cover.

Zero- and end-position can be independently programmed via push-buttons. The direction of rotation and the shape of the output curve (linear or V characteristic) are freely adjustable via DIP switch.

Product ranges of Camille Bauer

Heavy-current: State, Allocation, Quality.

Angular position: Angle, Inclination, Position, Volume.

Process control: Temperature, Signal conversion, Process management.

Printed in Switzerland • Subject to change without notice • DM-1025-000-01-EN-03.12

CAMILLE BAUER

Rely on us.

Camille Bauer AG
Aargauerstrasse 7
CH-5610 Wohlen / Switzerland
Phone: +41 56 618 21 11
Fax: +41 56 618 21 21
info@camillebauer.com
www.camillebauer.com