

KINAX HW730

Programmable hollow-shaft transmitter for angular position

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

Intended use

The KINAX HW730 converts the angular position of a shaft into a load independent direct current signal, proportional to the angular position. The unit is contact free. It technically extends the delivery program of angular transmitters with a programmable version and thus creates a number of new technical application possibilities. The robust housing makes this unit ideal for applications in rough environments.

Technical data

General

Measured quantity:	Angle of rotation
Measuring principle:	Capacitive method Differential screen capacitor with contact-free, non-wearing positional pick-up. Drive shaft fully rotatable without stops

Measuring input

Angle measuring range:	Programmable between 0 ... 360°
Hollow-shaft diameter:	30 mm, by reduction 10, 12, 16 or 20 mm
Starting torque:	max. 0.7 Nm
Sense of rotation:	Adjustable for sense of rotation clockwise or counterclockwise



Measuring output

Power supply:	12 ... 30 V DC Protected against wrong polarity (shall not be less than 12 V)
Output variable IA:	Load-independent DC current, proportional to the input angle
Max. residual ripple:	< 0.3% p.p.
Standard range:	4 ... 20 mA, 2-wire
Response time:	< 3.5 ms

Accuracy data

Error limit:	< ± 0.35°
Reproducibility:	< 0.1°
Angle step (hysteresis):	linear: measuring range < 180°: 0.025° measuring range ≥ 180°: $\frac{0.05^\circ \cdot \text{measuring range}}{360}$ V-characteristic: 0.025°
Influence of temperature output current (-40°...+85°C):	± 0,2 ‰/10K

Installation data

Material:	Housing: anodized aluminium
Mounting position:	Any
Connections:	Spring-type terminal block or sensor plug connector metal (M12 x 1 / 4 poles)
Weight:	Approx. 820 g

KINAX HW730

Programmable hollow-shaft transmitter for angular position

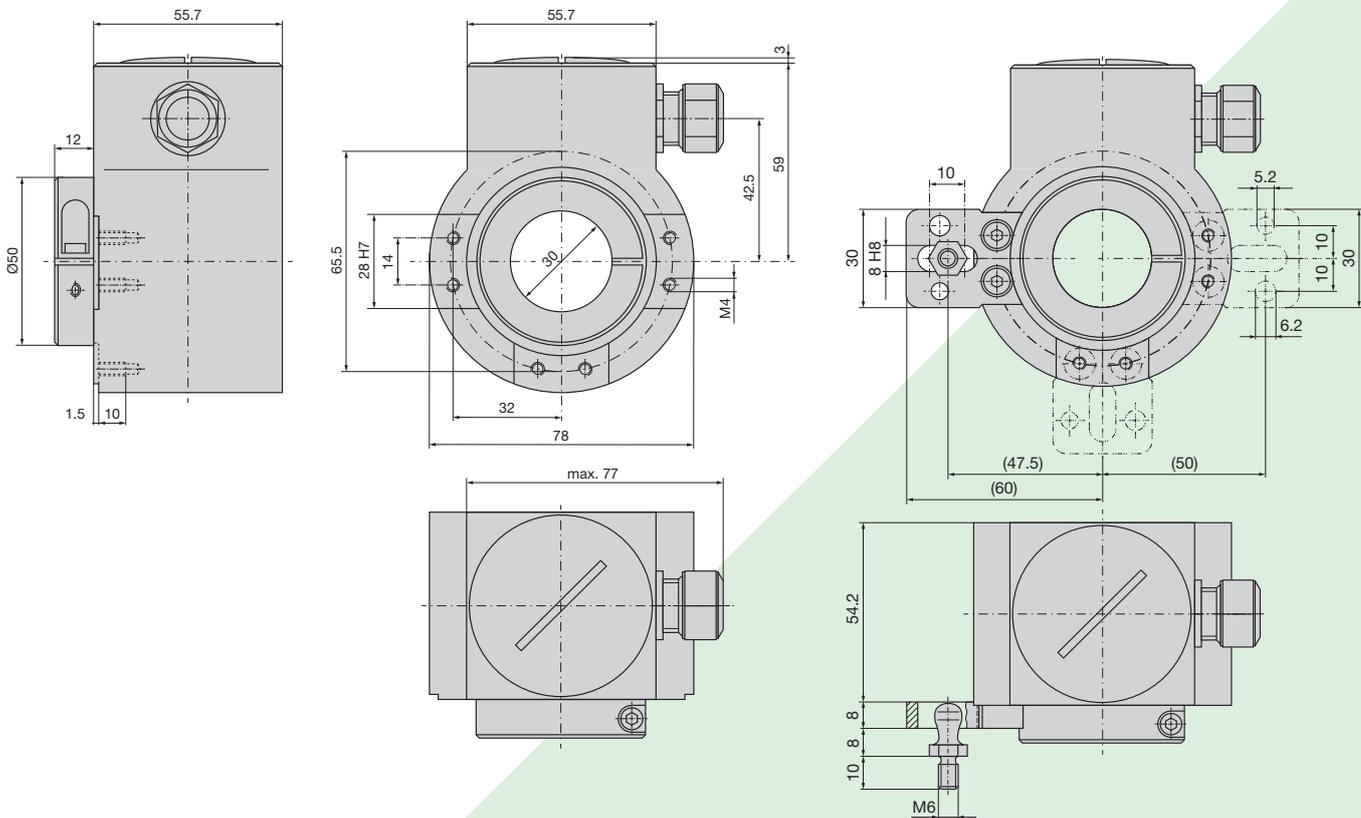
Environmental conditions

Climatic rating:	Temperature – 40 to + 85 °C Rel. humidity ≤ 95% non-condensing
Transportation and storage temperature:	– 40 to + 85 °C
Vibration resistance:	≤ 100 m/s ² / 10 – 500 Hz acc. IEC 60068-2-6
Shock resistance:	1000 m/s ² / 11 ms acc. IEC 60068-2-27

Regulations

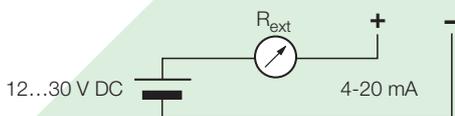
Immunity:	The EN 61000-6-2 is observed Surge capacity acc. EN 61000-4-5: 1 kV, 1.2/50 µs (line-earth)
Spurious radiation:	EN 61000-6-3 and EN 61000-6-4
Test voltage:	750 V DC, 1 min. All connections against housing
Admissible common-mode voltage:	100 V, 50 Hz
Housing protection:	IP 67 acc. to EN 60 529 IP 69k acc. to EN 40 050-9

Dimensional drawing



Electrical connections

For connecting the external wires, the transmitter has a plug connector M12 x 1 / 4 poles or a gland. During the version with a gland the connection via a spring-type terminal block made in accordance with diagram of connections.



Connection allocation plug

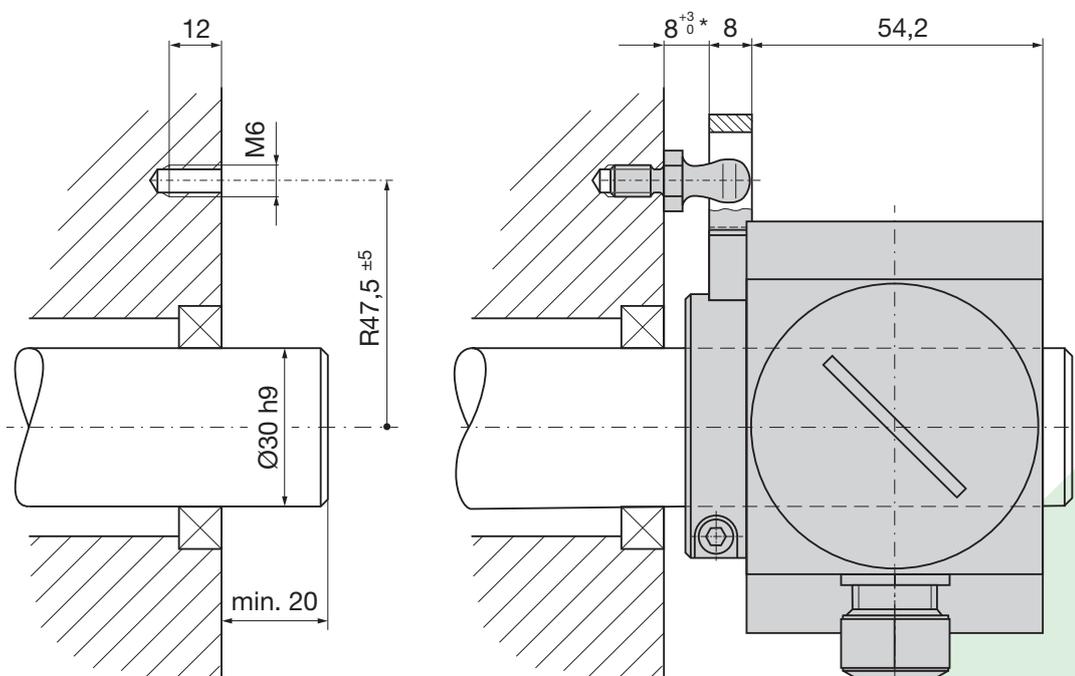
Pin	Plug
1	+
2	-
3	not connected
4	

KINAX HW730

Programmable hollow-shaft transmitter for angular position

Montage

Installation example



* With spacers, this measure will be increased.

Specification and ordering information

Description	Blocking code	no-go with blocking code	Article No./ Feature
KINAX HW730	Order code 720 - xxxx xxx		730 -
1. Version Standard			1
2. Angle area mechanically Single-Turn (360°)			1
3. Hollow-shaft diameter Hollow-shaft 10 mm, electrically insulating			1
Hollow-shaft 12 mm, electrically insulating			2
Hollow-shaft 16 mm, electrically insulating			3
Hollow-shaft 20 mm, electrically insulating			4
Hollow-shaft 30 mm, non-insulating, standard			5
4. Torque support Standard			1
5. Output variable Current, 4...20 mA, two-wire			1
6. Electrical connections Gland standard			1
Gland with increased strain relief			2
Sensor plug M12			3

KINAX HW730

Programmable hollow-shaft transmitter for angular position

Description	Blocking code	no-go with blocking code	Article No./ Feature
KINAX HW730	Order code 720 - xxxx xxx		730 -
7. Test protocole			
Without protocole			0
Protocole German			1
Protocole English			2
8. Direction of rotation			
Direction of rotation clockwise	J		0
Direction of rotation counter-clockwise	J, G		1
V-characteristic	K, G		2
9. Measuring range			
Basic configuration (linear, 0 ... 360°)		K, G	0
[°angle], 0...end value:		K	9
V-characteristic [± ° angle]	vmax1: vmin1:	vmin1: vmax2:	J Z
10. Climatic rating			
Standard climatic rating (rel. humidity annual mean ≤ 90%)			0
Increased climatic rating (rel. humidity annual mean ≤ 95%)			1

Accessories

Article	Article no.
Plug connector for M12 sensor plug, 5 poles	168 105
Adapter sleeve Ø10 mm	168 874
Adapter sleeve Ø12 mm	168 882
Adapter sleeve Ø16 mm	168 907
Adapter sleeve Ø20 mm	168 915
Kit of torque support	169 749

 **CAMILLE BAUER**

Rely on us.

Camille Bauer AG
Aargauerstrasse 7
CH-5610 Wohlen / Switzerland

Phone: +41 56 618 21 11

Fax: +41 56 618 35 35

info@camillebauer.com

www.camillebauer.com