

Special features

- Contactless measuring principle
- Separate magnet carrier unit for integrated installation into axle-bearings or revolute joints
- Compact housing
- Redundant design for safety relevant applications available
- Extremely rugged construction housing out of sea-water-proof aluminum.
- High resolution
- Available in various versions (see ordering specifications). Customized versions on request



Electrical data

Measuring range	$\pm 35^\circ$, $\pm 45^\circ$, $\pm 60^\circ$, $\pm 90^\circ$, $\pm 135^\circ$, $\pm 175^\circ$ other measuring ranges on request
Signal output range	0.25 V ... 4.75 V (2.5 V in center position)
Supply voltage	+9 VDC +34 VDC (nominal +24 VDC)
Current consumption	25 mA max
Output current	≤ 1 mA (≤ 0.05 mA for specified accuracy)
Output resistance	$\leq 100 \Omega$
External voltage on signal output	≤ 34 V
Resolution	12 Bit
Repeat accuracy	$\leq 0.1^\circ$
Linearity (für $\pm 35^\circ$, $\pm 45^\circ$, $\pm 60^\circ$, assigned magnet carrier)	$\leq \pm 0.75$ % of measuring range
Linearity (all measuring range, without magnet carrier assignment)	$\leq \pm 1.2$ % of measuring range
Linearity at 1 mm installation displacement	$\leq \pm 1$ % of measuring range

Environmental properties

Protection class (ISO 20653) housing/cable inlet	IP6K6K / IP6K8 (1m;12h) / IP6K9K
Protection class (ISO 20653) connector	dependent from connector type (Standard IP6K7)
Operating temperature range	-30 °C to +80 °C
Storage temperature range	-50 °C to +80 °C
Oscillation resistance	10 ... 500 Hz, $A_{MAX} = 15$ mm, $a_{MAX} = 10$ g
Bump resistance	50 g / 11 ms
Influence of external magnetic fields	Deviation 2 % FS with a static magnetic field intensity of 3 mT

Mechanical data

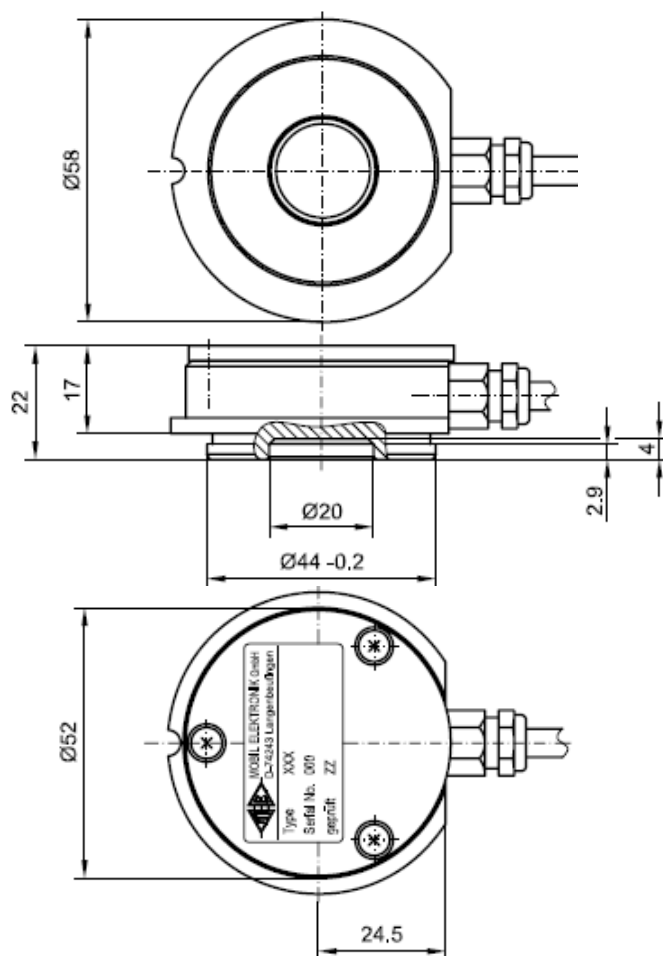
Lifetime	wear-free	
Mechanical function angle	360° continuous	
Corrosion protection	Magnet carrier unit:	Plastics
	Housing:	Blue anodized sea-water proof aluminum alloy
Electrical connection	PUR cable	4 x 0.34 mm ² , not shielded, for moving application
	Minimum bending radius	60 mm
	Temperature range	-30 °C ... +80 °C
	Cable length	0.5 m
	Connector	M12x1, 4-pole, male

Ordering specifications

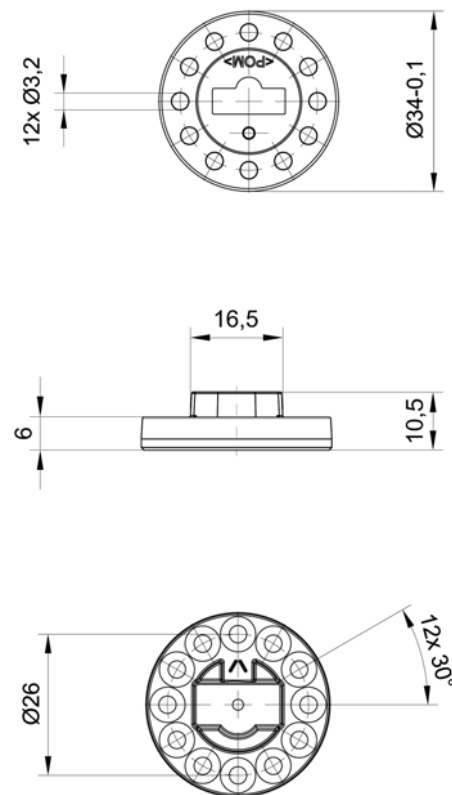
				533		A	W	-	1	XXX
Type	output signal	single	5							
	output signal	redundant	6							
Measuring range		Customized range			A					
Mechanical configuration of housing		Customized housing			W					
Mechanical construction		2-part (with separate magnet carrier unit)							1	
Consecutive number										

Dimensional drawing

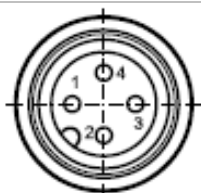
Sensor



Magnet carrier unit



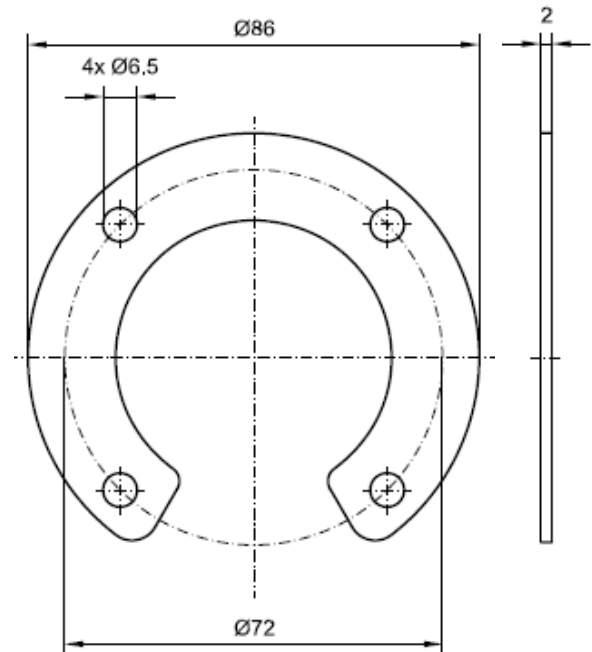
Assignment of connector M12x1



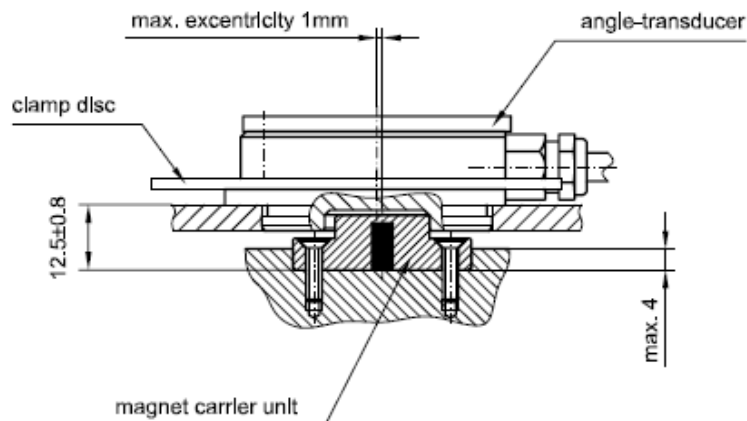
pin	signal
1	supply +U _B
2	signal output OUT B
3	supply 0V
4	signal output OUT A

Optional accessory

Stainless steel clamping disc for sensor fixing



Instruction for installation



Instruction on mounting position (electrical center) and sense of rotation

Viewing the back side of the sensor with fixed magnet carrier unit, a clockwise rotation of the sensor results in an increasing output voltage on OUT A and a decreasing voltage on OUT B.

