

Inclination sensor

0 ... 360°

Model N1101

WIKA data sheet FO 59.01

Applications

- Crane systems
- Mobile machines
- Aerial platforms
- Solar collectors

Special features

- Measuring range 0 ... 360°
- Relative linearity error < 0.1 % of FS over the entire measuring range
- Good damping behaviour, no influence due to gravity
- Resistant to seawater, IP67
- Easy retrofitting

Description

Inclination sensors detect the orientation angle of an object in relation to the gravitational field of the earth. The fields of application for these sensors are diverse. In cranes or excavators, the inclination angle of the booms is measured to calculate whether the machine stays within the safety regulations specified by the manufacturer.

Inclination sensor, model N1101

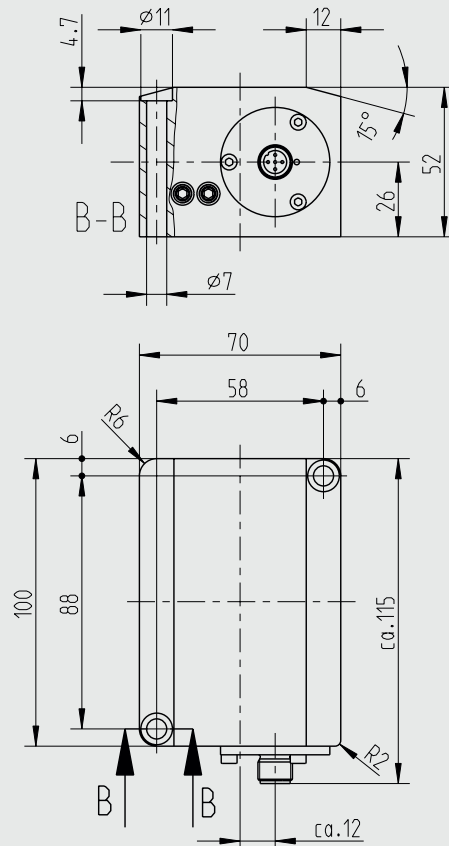


The sensor has a measuring range of up to 360° and offers an extraordinarily high accuracy and precision over the entire measuring range. The measured value resolution is 0.01°.

Specifications

Model N1101	
Measuring range <ul style="list-style-type: none"> ■ Standard ■ Optional 	0 ... 360° Other measuring ranges possible 0 ... 90°, -10° ... +115°
Relative linearity error d_{lin} <ul style="list-style-type: none"> ■ < 100° ■ > 100° 	< 0.1° < 0.1 % of FS
Relative reversibility error v	< 0.05 % of FS
Resolution	< 0.01°
Cross slope error <ul style="list-style-type: none"> ■ ≤ 10 ° ■ ≤ 45 ° 	< 0.05° < 0.20°
Service temperature $B_{T, G}$	-40 ... +85 °C
Temperature effect on <ul style="list-style-type: none"> ■ the characteristic value TK_c ■ the zero signal TK_0 	0.0016 % of FS/K 0.0016 % of FS/K
Electrical connection	M12 x 1, cable (others on request)
Output signal (rated characteristic value) C_{nom}	4 ... 20 mA, 3-wire
Voltage supply	DC 9 ... 36 V
Material of the measuring body	Aluminium (resistant to seawater)
Salt spray testing	DIN EN 60068-2-52
Ingress protection (per IEC/EN 60529)	IP67
EMC	61326-1 IEC:2012, DIN EN 61000-4 Part 2, Part 3, Part 4, Part 6, Part 8, Part 9, Part 10; DIN ISO 7637 Part 2, DIN ISO 11452 Part 2, Part 4, Part 5; DIN EN 55025 Part 6.3, Part 6.4

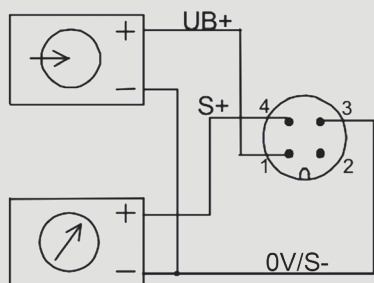
Dimensions in mm



Pin assignment, analogue output

Output 4 ... 20 mA, 3-wire

Circular connector M12 x 1, 4-pin



Circular connector M12 x 1, 4-pin

Pin	4 ... 20 mA 3-wire
Supply UB+	1
Supply 0V/UB-	3
Signal S+	4
Signal S-	3
Shield ⊕	Case

Cable assignment

Cable colour	3-wire
Brown	UB+
White	UR+
Blue	0V/S-/UR-
Black	S+

© 2019 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.

