

Inclination sensor

Redundant, 0 ... 360°

Model N1301



WIKA data sheet FO 59.03

Applications

- Crane systems
- Mobile cranes
- Ship cranes
- 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

The inclination sensor has a measuring range of 0 ... 360°. Other measuring ranges can be implemented on request. This sensor is especially well suited to applications in machine building, medical engineering, on mobile and ship cranes or aerial platforms. In addition, it is characterised by a low sensitivity to humidity



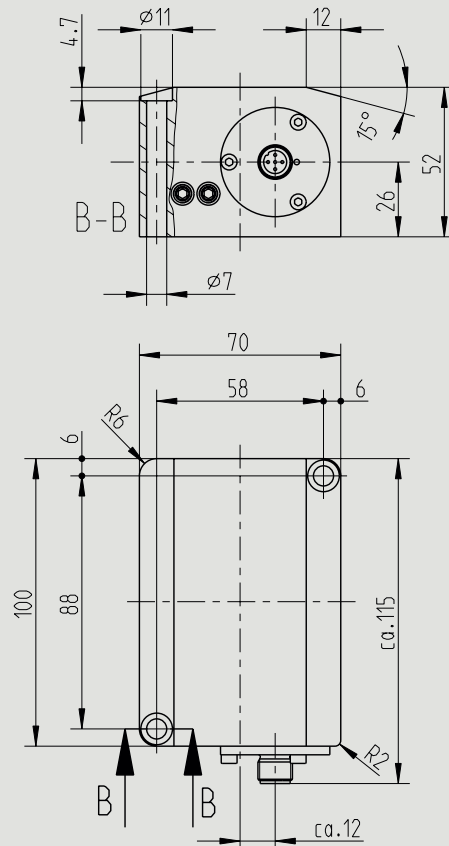
Inclination sensor, model N1301

and easy to retrofit. The sensor offers an extraordinarily high accuracy and precision over the entire measuring range. The reading resolution is 0.01°.

Specifications

Model N1301	
Measuring range ■ Standard ■ Optional	0 ... 360° other measuring ranges possible
Relative linearity error d_{lin} ■ < 100° ■ > 100°	< 0.1° < 0.1 % of FS
Relative reversibility error v	< 0.05 % of FS
Resolution	< 0.01°
Transverse inclination error ■ ≤ 10° ■ ≤ 45°	< 0.05° < 0.2°
Service temperature $B_{T, G}$	-40 ... +80 °C
Temperature effect on ■ the characteristic value TK_c ■ the zero signal TK_0	0.0016 % of FS/K 0.0016 % of FS/K
Electrical connection	Cable, MIL, M12 x 1 (others on request)
Output signal (rated characteristic value) C_{nom}	2 x 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

Cable assignment 2 x 4 ... 20 mA, 3-wire	
Cable colour	Signal
Red	UB+
Black	0V/S-
White	S+ (signal 1)
Blue	S+ (signal 2)

Circular connector M12 x 1, 2 x 4 ... 20 mA, 3-wire, 4-pin		
Pin	Colour	Signal
1	Brown	UB+
3	Blue	0V/S-
4	Black	S+ (signal 1)
2	White	S+ (signal 2)
M12 x 1	Shield ⊕	Shield ⊕

MIL, pinout CA3102E14S-2P-B-A232	
Pin	Signal
A	UB+
B	S+ (channel x)
C	0V/S-
D	S+ (channel Y)

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