

Inclination sensor Flameproof enclosure Ex d, 0 ... 360° Model N111C

WIKA-data sheet FO 59.05



Applications

- Offshore installations, offshore cranes
- Drilling rigs
- Mobile cranes
- Ship cranes
- Oil and gas industry

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 of model N111C for hazardous areas are designed with a flameproof enclosure and, for instance, intended for applications in offshore areas, for maritime applications and for the oil and gas industry.

The fields of application for these sensors are diverse. Due to the flameproof enclosure they fulfil the ignition protection type Ex d. Inclination sensors with flameproof enclosure are used in offshore plants for oil and gas extraction.



Inclination sensor, model N111C

The sensors have a measuring range of up to 360° and offer an extraordinarily high accuracy and precision over the entire measuring range. Other measuring ranges, customer-specific as well, are also possible. The measured value resolution is 0.01°.

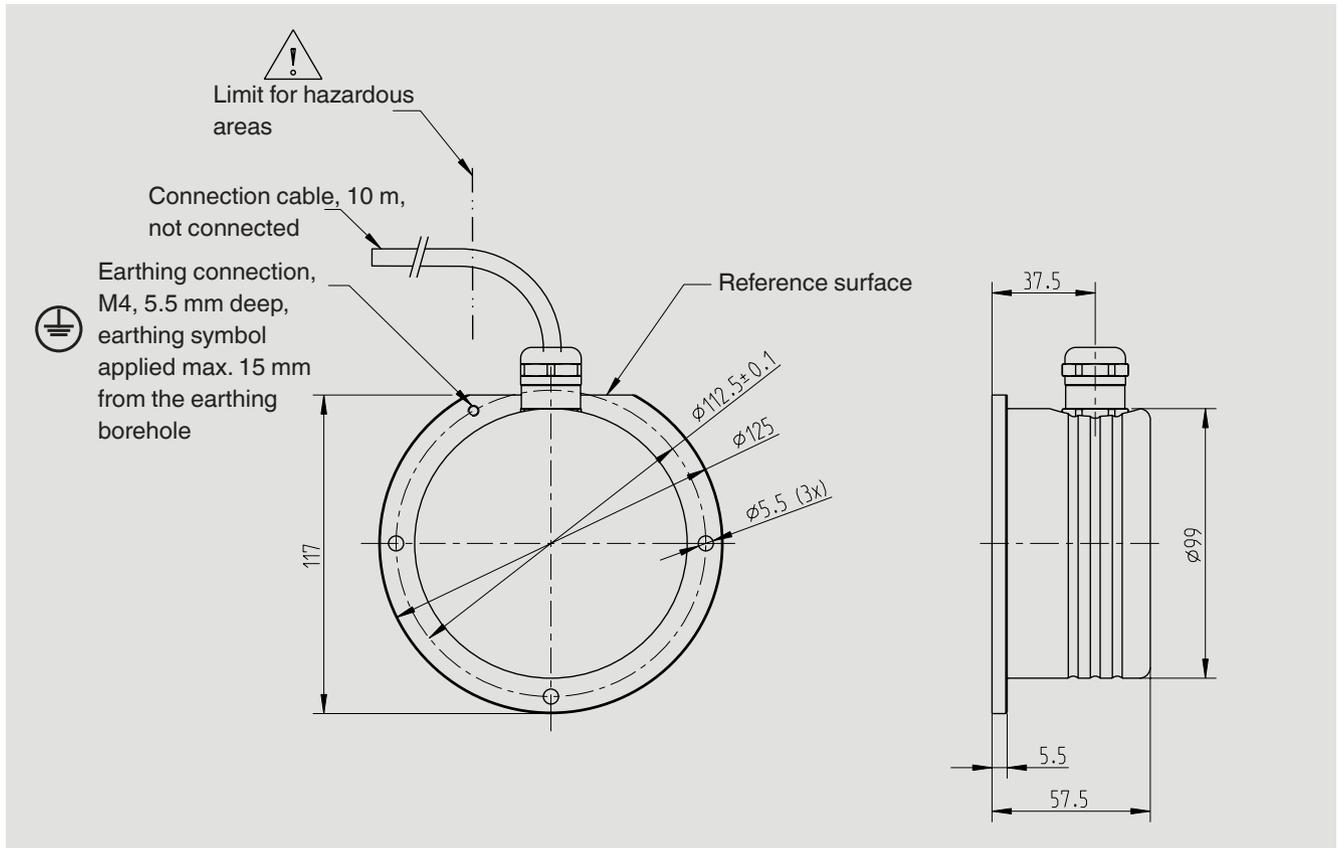
Specifications

Model N111C	
Measuring range <ul style="list-style-type: none"> ■ Standard ■ Optional 	0 ... 360° other measuring ranges possible
Relative linearity error d_{lin} <ul style="list-style-type: none"> ■ < 100° ■ > 100° 	< 0.1° < 0.1 % of FS
Relative reversibility error v_r	< 0.05 % of FS
Resolution	< 0.01°
Transverse inclination error <ul style="list-style-type: none"> ■ ≤ 10° ■ ≤ 45° 	< 0.05° < 0.2°
Service temperature $B_{T, G}$	-40 ... +80 °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	Connection cable, 10 m, not connected (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	Stainless steel
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
Certifications	ATEX and IECEx: acc. to EN 60079-0:2012 und EN 60079-1:2007 (Ex d)

Approvals

Logo	Description	Region
	EU declaration of conformity <ul style="list-style-type: none"> ■ EMV-directive ■ RoHS-directive 	European Union
	ATEX directive Hazardous areas Ex II 2G Ex d IIC T4 Gb (BVS 13 ATEX E 030 X) -40 °C < T_{amb} < +85 °C	European Union
	IECEx Hazardous areas Ex II 2G Ex d IIC T4 Gb (BVS 13.0065X) -40 °C < T_{amb} < +85 °C	International

Dimensions in mm



Pin assignment

Cable assignment	
Wire	Output
1	UB+ (+24 V)
2	-
3	0V/S- (electrical ground)
4	S+ signal (4 ... 20 mA)

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