

# 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°.

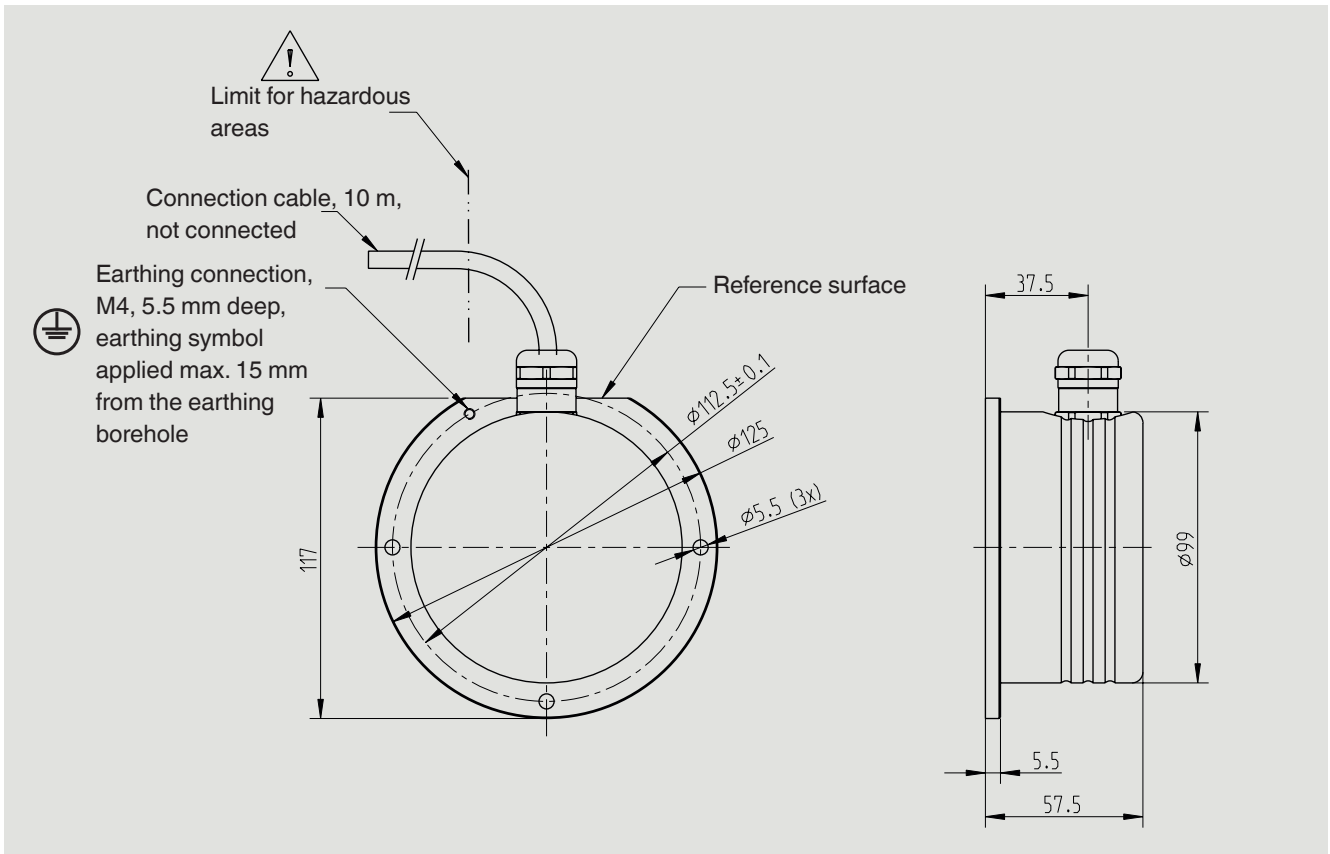
## Specifications

Model N111C	
<b>Measuring range</b> ■ Standard ■ Optional	0 ... 360° other measuring ranges possible
<b>Relative linearity error <math>d_{lin}</math></b> ■ < 100° ■ > 100°	< 0.1° < 0.1 % of FS
<b>Relative reversibility error <math>v_r</math></b>	< 0.05 % of FS
<b>Resolution</b>	< 0.01°
<b>Transverse inclination error</b> ■ ≤ 10° ■ ≤ 45°	< 0.05° < 0.2°
<b>Service temperature <math>B_{T, G}</math></b>	-40 ... +80 °C
<b>Temperature effect on</b> ■ the characteristic value $TK_c$ ■ the zero signal $TK_0$	0.0016 % of FS/K 0.0016 % of FS/K
<b>Electrical connection</b>	Connection cable, 10 m, not connected (others on request)
<b>Output signal</b> (rated characteristic value) $C_{nom}$	4 ... 20 mA (3-wire)
<b>Voltage supply</b>	DC 9 ... 36 V
<b>Material of the measuring body</b>	Stainless steel
<b>Salt spray testing</b>	DIN EN 60068-2-52
<b>Ingress protection (per IEC/EN 60529)</b>	IP67
<b>EMC</b>	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
<b>Certifications</b>	<b>ATEX and IECEx:</b> acc. to EN 60079-0:2012 und EN 60079-1:2007 (Ex d)

## Approvals

Logo	Description	Region
	<b>EU declaration of conformity</b> ■ EMV-directive ■ RoHS-directive	European Union
	<b>ATEX directive</b> Hazardous areas Ex II 2G Ex d IIC T4 Gb (BVS 13 ATEX E 030 X)      -40 °C < T <sub>amb</sub> < +85 °C	European Union
	<b>IECEx</b> Hazardous areas Ex II 2G Ex d IIC T4 Gb (BVS 13.0065X)      -40 °C < T <sub>amb</sub> < +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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