

# Inclination sensor

## Flameproof enclosure Ex d, redundant, 0 ... 360°

### Model N131C

WIKA data sheet FO 59.02



#### 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 with flameproof enclosure for hazardous areas are designed for especially demanding tasks. The fields of application of these sensors are diverse. Inclination sensors for hazardous areas provide higher safety in cranes and excavators and in hazardous applications such as the oil and gas industry.



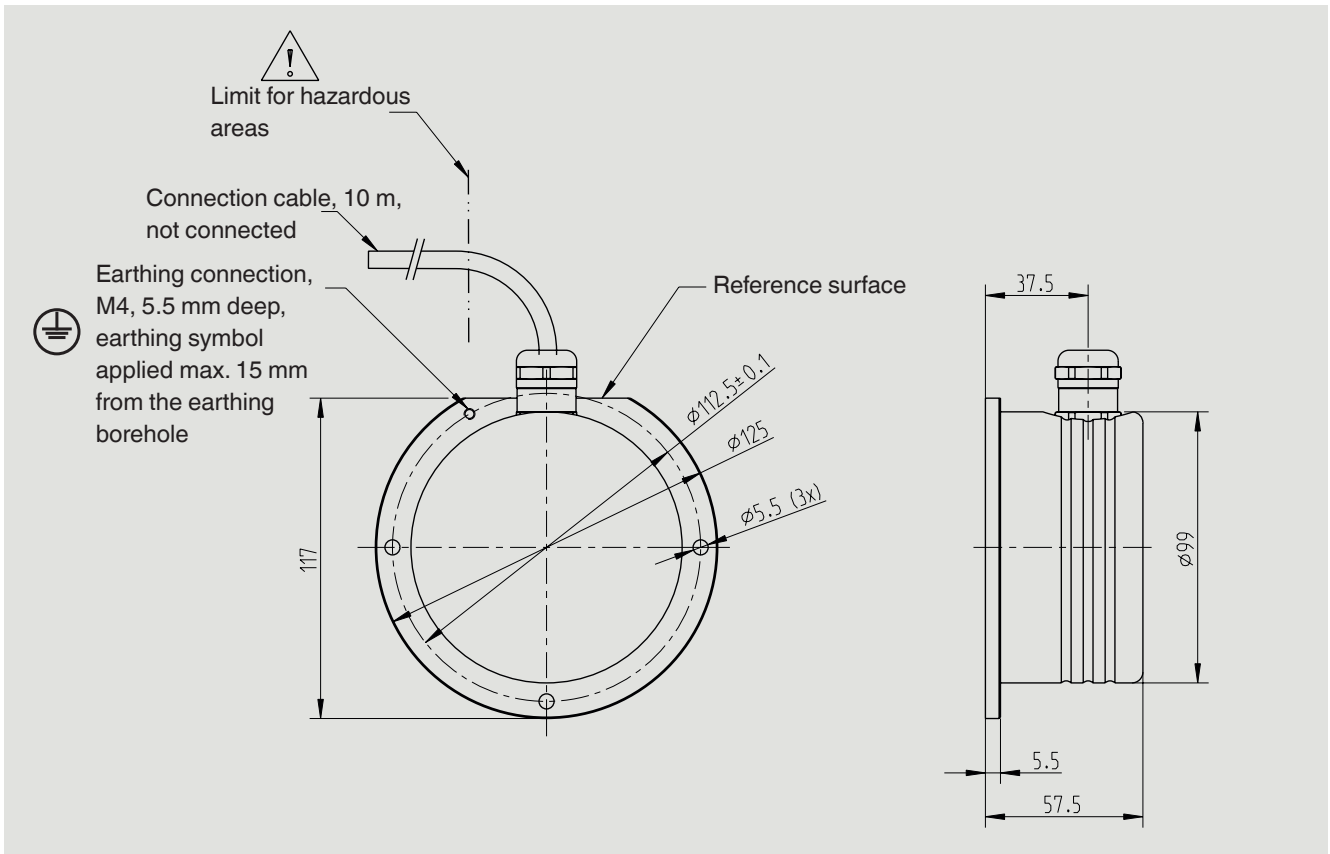
Inclination sensor, model N131C

They offer a precise orientation angle in relation to the gravitational field of the earth. The sensor is designed for redundant measurements of 360° and shows extraordinarily high accuracy and precision at a reading resolution of 0.01° over the entire measuring range.

## Specifications

| Model N131C   |   |
|---|---|
| <b>Measuring range</b><br>■ Standard<br>■ Optional  | 0 ... 360°<br>other measuring ranges possible   |
| <b>Relative linearity error <math>d_{lin}</math></b><br>■ < 100°<br>■ > 100°                  | < 0.1°<br>< 0.1 % of FS   |
| <b>Relative reversibility error <math>v</math></b>  | < 0.05 % of FS  |
| <b>Resolution</b>   | < 0.01°   |
| <b>Transverse inclination error</b><br>■ ≤ 10°<br>■ ≤ 45°                                     | < 0.05°<br>< 0.2°   |
| <b>Service temperature <math>B_{T, G}</math></b>  | -40 ... +80 °C  |
| <b>Temperature effect on</b><br>■ the characteristic value $TK_c$<br>■ the zero signal $TK_0$ | 0.0016 % of FS/K<br>0.0016 % of FS/K  |
| <b>Electrical connection</b>  | Connection cable, 10 m, flying leads (others on request)  |
| <b>Output signal</b><br><b>(rated characteristic value) <math>C_{nom}</math></b>              | 2 x 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;<br>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><br>■ ATEX<br>■ IECEx  | Ex II 2G Ex d IIC T4 Gb Zone 1 (BVS 13 ATEX E 030 X)<br>Ex d IIC T4 Gb (IECEx BVS 13.0065X)   |

## Dimensions in mm



## Pin assignment

| Cable assignment ATEX 2 x 4 ... 20 mA, 3-wire |          |
|---|----------|
| Cable colour                                  | Output   |
| Brown   | UB1+/S1+ |
| Blue  | 0V/S1-   |
| White   | UB2+/S2+ |
| Black   | 0V/S2-   |

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