

INT30® Wind direction sensors

INT30®


INT30 with mast mounting



INT30 with central mounting

Application

KRIWAN wind direction sensors are used for the demanding recording of the wind direction, e.g.

- For monitoring crane installations, ski lifts and cable railways
- Wind power generators for energy-optimisation
- In building technology for building protection
- In hydrology and meteorology
- As a weather station component for the building and greenhouse control

Functional description

The INT30 Wind direction sensor by KRIWAN records the current wind direction and converts it into a linear output signal without contact. The sensor is storm-proof and weather-proof. The autonomously controlled heater (refer to order data) enables application at temperatures down to -40 °C. The evaluation is carried out separately with a measuring device, a display instrument or in the connected control and monitoring system. Different construction types make a quite universal implementation in existing applications possible.

The following features characterise this KRIWAN wind direction sensor:

- Robust and reliable industrial design
- Low starting torques at high load capacity
- Outstanding precision
- Wear-free recording of measurement data
- Optimised power requirement through electronic heater control
- Simple installation
- Extended temperature range
- Integrated overvoltage protection
- Impact and vibration-resistant
- UL / CSA - approval (types on request)
- Maintenance free



The unit must be connected by trained electrical personnel. All valid european and national standards for connecting electrical equipment must be observed. To avoid any consequential damage or operational failure, through direct or indirect excitation in the event of lightning strikes, we recommend that a separate lightning protection device be fitted by the customer.

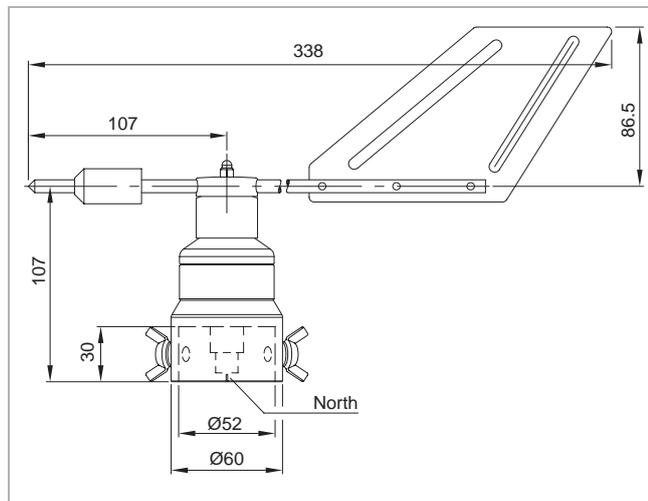
Construction types

KRIWAN wind direction sensors are available in different construction types:

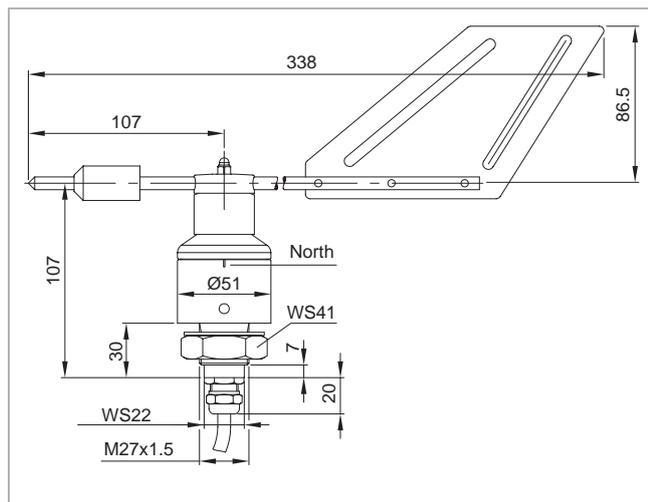
- Mast mounting, for masts up to Ø 50mm
- Central mounting
- Further customised construction types available upon request

INT30® Wind direction sensors

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INT30 with mast mounting
Dimensions in mm



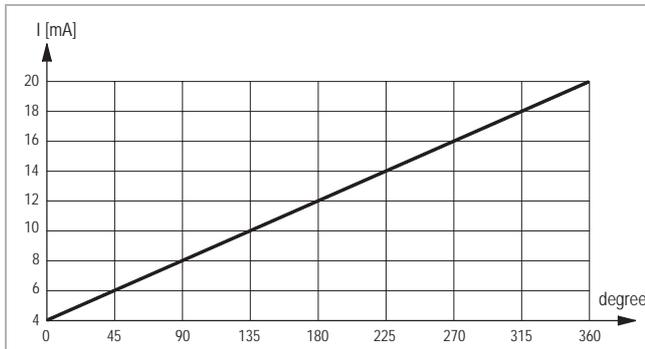
INT30 with central mounting
Dimensions in mm

Technical specifications (General)

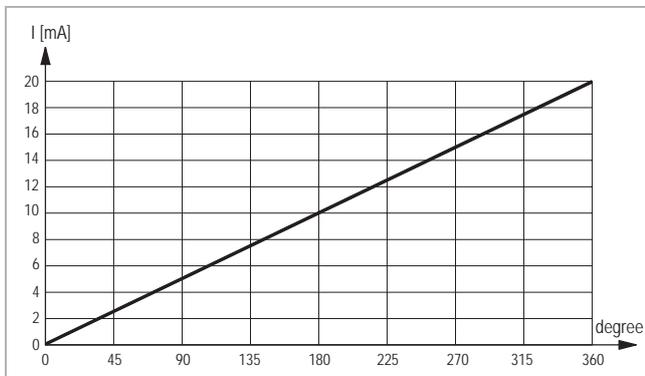
| | |
|--|---|
| Measuring principle | Noncontact, magnetic scanner |
| Measuring range | 0...360° |
| Accuracy | ± 2.5° |
| Resolution | 64, 144 steps or <1° see order data |
| Start-up speed | <0,4m/s ($\theta_u = 20^\circ\text{C}$) |
| Signal availability | max. 2.5s (from voltage-free state) |
| Permitted ambient temperature | -40...+70°C Heating not connected: snow and ice free sensor required. |
| Permitted rel. humidity | 0...100% r.h. |
| Strength | For wind speed of 80m/s (max. 30min) |
| For types with cable: Cable material | Polyurethane sleeve insulation Thermoplastic elastomer lead insulation |
| For types with built in heater: Heating Supply | Automatic heating controller AC/DC 24...30V ±20%, max. 20VA SELV |
| Protection class acc. to EN 60529 | IP64 for intended use sensor mounting |
| Mounting - Mast mounting | Steel tube mast max. $\varnothing_{\text{exterior}}$ 50mm min. $\varnothing_{\text{interior}}$ 37mm |
| - Central mounting | M27 |
| Dimensions | Refer to dimensions in mm |
| Housing material | Aluminium |
| Wind vane | Aluminium, brass nickel plated |
| Corrosion resistance | Seawater-resistant alloy |
| Check base | EN 61000-6-2 EN 61000-6-3 EN 61010-1 |
| Approval | UL File No. N.N. |

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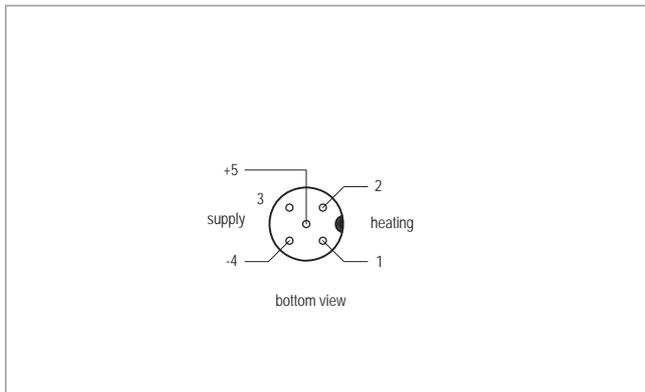
INT30®



Characteristic line current output
4...20mA



Characteristic line current output
0...20mA



Pin allotment (mast version)

Technical specifications (details)

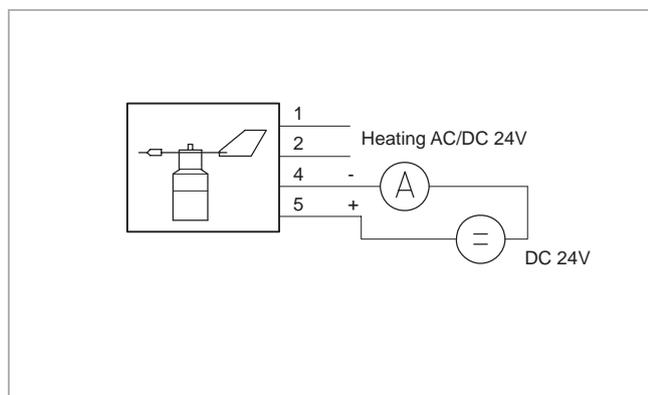
4...20mA standard signal output

| | |
|--|--|
| Supply | DC 24V ±25%, max. 21mA reverse-polarity protection |
| Signal output | DC 4...20mA |
| Load resistor = cable + load resistor | $R_{Load} \leq (U_{min.} - 9)/0.02 (\Omega)$ $U_{min.} = \text{min. supply voltage}$ |
| Connection type | 5-pin plug (M12) or cable 5x0.75mm ² Length refer to dimensions or on request |

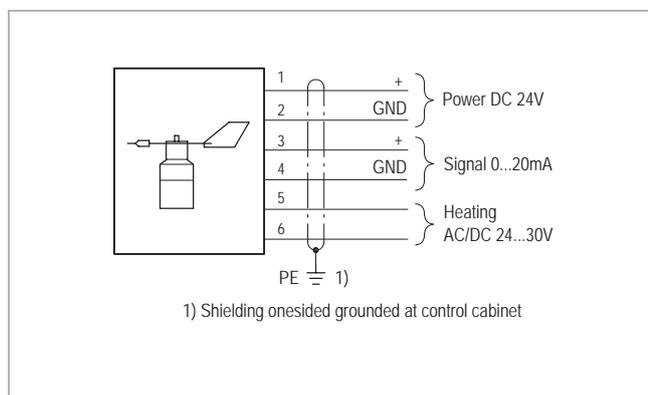
0...20mA standard signal output

| | |
|--|---|
| Supply | DC 24V ±25%, max. 30mA reverse-polarity protection |
| Signal output | DC 0...20mA |
| Load resistor = cable + load resistor | $R_{load} \leq 600\Omega$ |
| Connection type | Cable 6x0.5mm ² , screened Length refer to dimensions or on request |

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Wiring diagram for 2-line current output



Wiring diagram for multiple-line current output

Order data

Mast mounting

| | |
|---|---------------------|
| INT30 Wind direction 64WR; 4...20mA; plug; heating; UL weight about 500g | 13 N 234 S30 |
| INT30 M Wind direction 144WR; 4...20mA; plug; heating; UL weight about 500g | 13 N 291 |
| INT30 M Wind direction <1°; 4...20mA; plug; heating; UL weight about 500g | 13 N 291 S31 |

Central mounting

| | |
|--|---------------------|
| INT30 M Wind direction <1°; 4...20mA; 3m connection cable; heating; UL weight about 620g | 13 N 291 S21 |
| INT30 M Wind direction 144WR; 4...20mA; 3m connection cable; heating; UL weight about 620g | 13 N 291 S22 |
| INT30 M Wind direction <1°; 0...20mA; 5m connection cable; heating; UL weight about 840g | 13 N 291 S23 |
| INT30 M Wind direction <1°; 0...20mA; 12m connection cable; heating; UL weight about 1.5kg | 13 N 291 S24 |
| INT30 M Wind direction <1°; 4...20mA; 15m connection cable; heating; UL weight about 1.5kg | 13 N 291 S27 |

Spare parts

| | |
|------------------------------------|---------------------|
| Wind vane | 02 Z 123 S21 |
| Self-locking cap nut M4 | HM04009400 |
| Serrated washer J4.3 | HX04305600 |
| Hexagon nut M27x1.5 | HM27002400 |
| Serrated washer | HX28014600 |
| VA-wing screws, M8x16mm | HS08016600 |
| Clamp connector female (M12) 5-pin | FA04106 |

Accessories

Power supply

| | |
|-----------------------------------|--|
| Supply | AC 50/60Hz 230V ±10% 5VA |
| Output voltage | DC 24V ±20%, 1.2W |
| Protection class acc. to EN 60529 | With terminal cover: IP20 Without terminal cover: IP00 |
| Mounting | To snap open to 35mm standard rail as under EN 50022 or screw mounting |
| Dimensions [mm] | 87x40x110 |
| Weight | Approx. 400g |
| Part number | 52 S 144 |

Heating transformer (for 2 wind sensors)

| | |
|-----------------------------------|------------------------|
| Supply | AC 50Hz 230V ±10% 50VA |
| Output voltage | AC 50Hz 30V, 40VA |
| Protection class acc. to EN 60529 | IP54 |
| Mounting | Screw mounted |
| Dimensions [mm] | 125x125x75 |
| Weight | About 1.3kg |
| Part number | 52 N 120 |

Mast crossbeam

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|--|---------------------|
| Mast crossbeam for weather station incl. lightning rod | 02 N 280 S21 |
|--|---------------------|

Technical changes reserved