INT30® Wind direction sensors

KRIWAN

INT30®

INT30 with mast mounting

INT30 with central mounting

Application

KRIWAN wind direction sensors INT30 are employed for challenging wind direction measurement applications, e.g. for monitoring cranes, ski lifts, cable railways, and for blinds monitoring in building management, in hydrology and in meteorology as well as components of weather stations for building and greenhouse automation.

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 then carried out separately with a measuring device, a display instrument or in the connected control and monitoring system, e.g. in building management. 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
- Customary output signals available
- 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

Product Group N
Edition: 710.0[illegible]317.0

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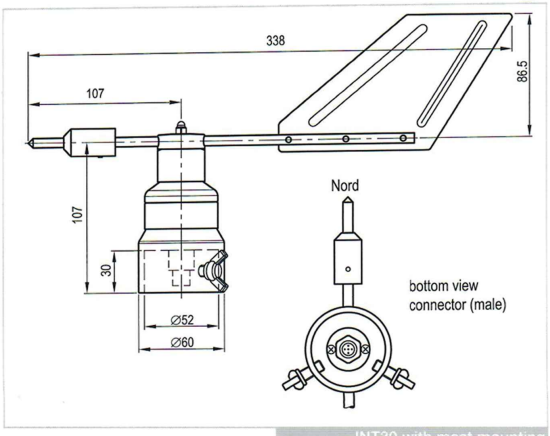
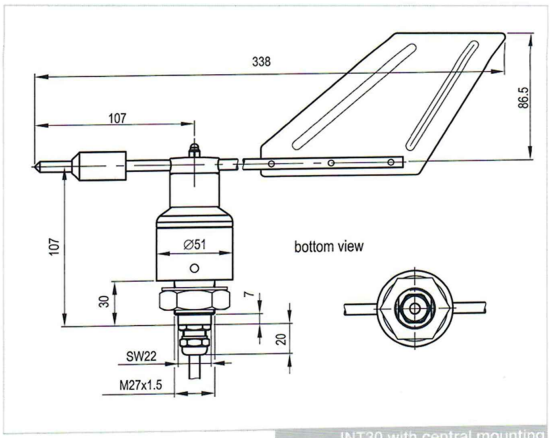
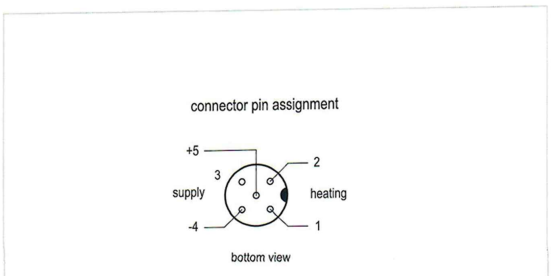


INT30 with mast mounting
Dimensions in mm



INT30 with central mounting
Dimensions in mm



Pin allotment (mast version)

Technical specifications (General)

Measuring principle	Noncontact, magnetic scanner
Measuring range	0...360°
Resolution	64, 144 steps or <1° see order data
Accuracy	± 2.5°
Start-up speed	< 0.4m/s
Signal availability	max. 2.5s (from voltage-free state)
Permitted ambient temperature	-40...+70°C Heating not connected: snow and ice free sensor required.
Permissible 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 heater control AC/DC 24...30V ±20%, max. 18VA
Protection class acc. to EN 60529	IP64 for conventional sensor mounting
Mounting - Mast mounting - Central mounting	Steel tube mast max. $\varnothing_{exterior}$ 50mm min. $\varnothing_{interior}$ 37mm M27
Dimensions	Refer to dimensions
Housing material	Aluminium
Wind vane	Aluminium
Corrosion resistance	Seawater-resistant composition
Approval	UL File No. N.N.

Product Group N

Edition: 710.00317.0

Technical changes reserved

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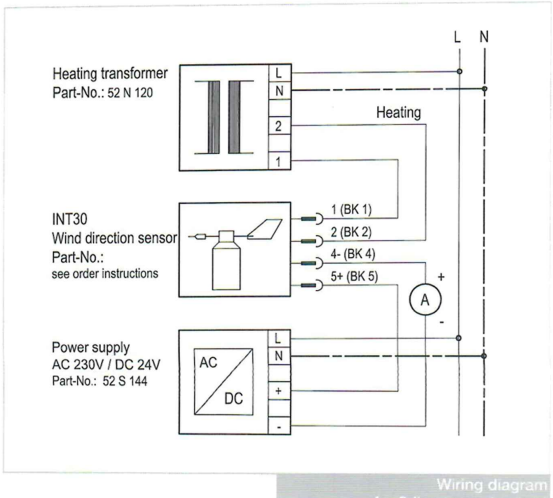
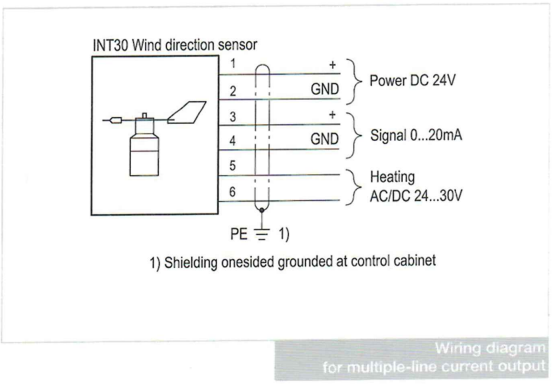


Wiring diagram
for 2-line current output



Wiring diagram
for multiple-line current output

Technical specifications (details)

4...20mA standard signal output

Supply	DC 24V ±25%, reverse-polarity protection
Signal output	DC 4...20mA
Load resistor = Cable + load resistor	$R_{Load} \leq (U_{min.}-9)/0.02$ (Ω) $U_{min.}$ = min. supply voltage
Connection type	5-pin plug (M12) or cable 5x0.75mm² Length refer to dimensions or on request

0...20mA standard signal output

Supply	DC 24V ±25%, reverse-polarity protection
Signal output	DC 0...20mA
Load resistor = Cable + load resistor	$R_{load} \leq 600\Omega$
Connection type	Cable 6x0.5mm², screened Length refer to dimensions or on request

Edition: 710.00.317.0

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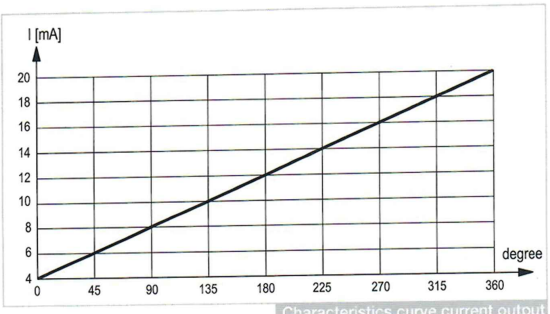
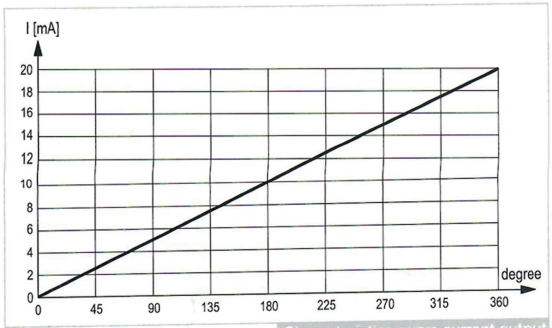


Characteristics curve current output 4...20mA



Characteristics curve current output 0...20mA

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 S25**

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 weight about 840g	**13 N 291 S23**
INT30 M Wind direction <1°; 0...20mA; 12m connection cable; heating 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**

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 high
Weight	About 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

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

Spare parts

Wind vane	**02 Z 123 S21**
Hexagon nut M27x1.5	**HM27002400**
Serrated washer	**HX28014600**
VA-wing screws, M8x16mm	**HS08016600**
Cable socket (M12) 5-pin	**FA04106**