

# INT30 IF<sup>®</sup> Wind direction

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### Application

KRIWAN ICEfight series wind direction sensors are used in any situation where besides high quality wind direction measurement, error-free operation under the most challenging environmental conditions also needs to be safe-guarded. This is especially true in cases where there is a serious risk of icing at very low temperatures.

This requirement applies in particular to:

- Monitoring ski lifts and cable cars
- For energy optimisation in wind farms

### Functional description

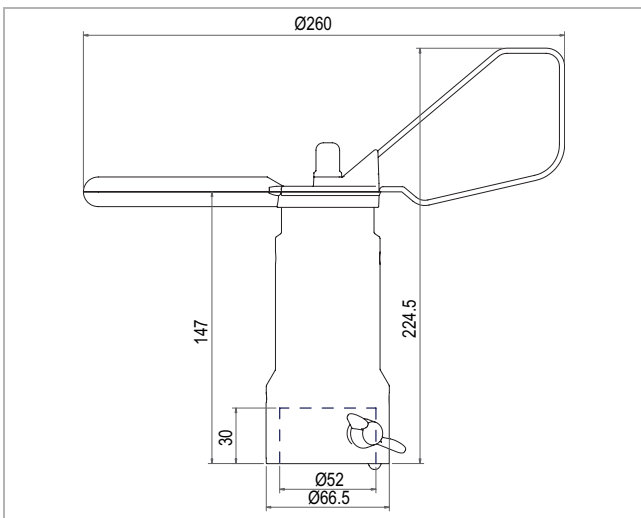
The KRIWAN wind direction sensor measures the current wind direction and converts it into a linear output signal without contact. The sensor is storm-proof and weather-proof.

The evaluation is then conducted separately using a measuring device, a display instrument, or the connected control and monitoring system.

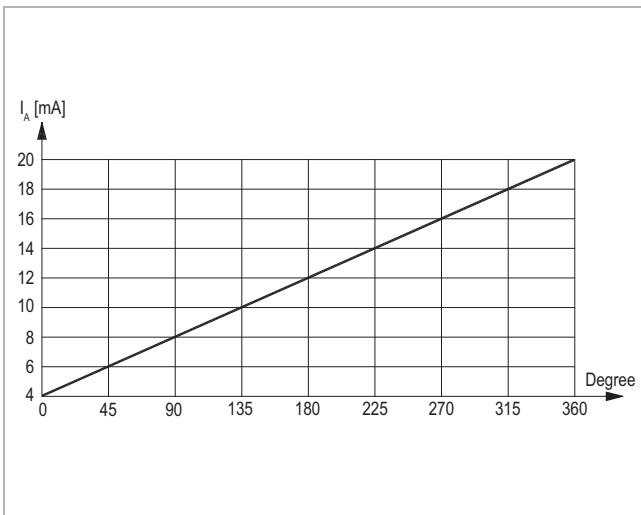
Generously dimensioned heating is located inside the wind vane. This is supplied with electrical energy from the fixed sensor part without contact or mechanical loss. Because the heating reaches to the end of the wind vane, all its parts are heated very effectively. During ambient temperatures that can cause ice, the heating switches on. When the heating is connected, the possibility of icing is mostly eliminated. The heating has temperature monitoring and switches off automatically when the surface temperatures are too high.

The following features characterise this KRIWAN-wind direction sensor:

- Sturdy and reliable industrial design
- Low starting torque, high strength
- High accuracy
- Wear-free measurement
- Optimised power requirement through electronically regulated and temperature-monitored heating
- Contact-free transmission of heat in movable part of sensor
- Easy installation
- Extended temperature range for ice-free conditions
- Integrated overvoltage protection
- Impact and shake resistant
- <sup>c</sup>UL<sub>US</sub> - certified
- Maintenance-free



Dimensions in mm



Characteristic line



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.



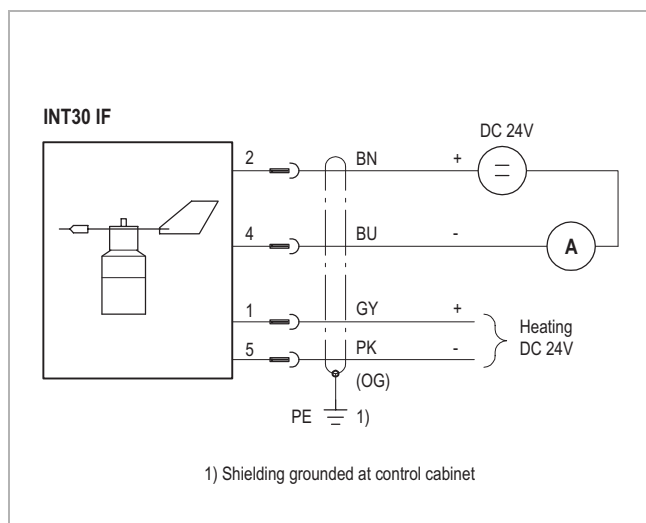
The surface of the wind vane can exceed 55°C during heating operation.

See back side for further specifications

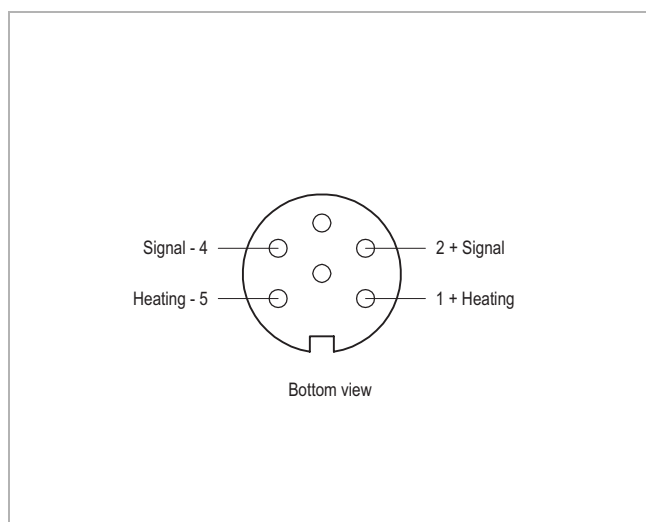
Technical changes reserved

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Wiring diagram



Pin assignment

### Order data

INT30 IF Wind direction	<b>13 N 330 S33</b>
Accessories and application information	see <a href="http://www.kriwan.com">www.kriwan.com</a>

### Spare parts

VA-wing screws, M8x16mm	<b>HS08016600</b>
Connection cable (M16) 6-pin	<b>FK14000004</b>

### Technical specifications

Measuring principle	Contact-free magnetic scanning system
Measuring range	0-360°
Accuracy	±2.5°
Resolution	144 stages (2.5°)
Start-up speed	<1.0m/s (θ <sub>v</sub> =20°C)
Supply	DC 24V ±25% Max. 21mA Reverse polarity protection
Signal output	DC 4-20mA
Signal availability	Max. 2.5s (from voltage-free state)
Load resistance = line + load resistor	$R_{Load} \leq (U_{min} - 9)/0.02 [\Omega]$ $U_{min} = \text{min. supply voltage}$
Connection type	
- Sensor	6-pin plug (M16)
- Separate connecting cable	(4x0.25mm <sup>2</sup> + 2x1.5mm <sup>2</sup> ) shielded, 12m, with cable socket
Permissible ambient temperature T <sub>A</sub>	-40...+70°C When heating is not connected: Snow and ice-free sensor is prerequisite.
Permissible relative humidity	0-100% RH
Stability	For wind speed of 80m/s (max. 30min)
Heating	
- Type	Autonomously controlled heating
- Connection	DC 24V ±10% 120W SELV
Protection class according to EN 60529	IP66 if sensor is assembled in the specified manner
Mounting	Steel mast Max. Ø <sub>outer</sub> 50mm Min. Ø <sub>inner</sub> 37mm
Dimensions	See dimensions in mm
Housing	
- Material	Aluminium
- Corrosion resistance	Anodised
Wind vane	
- Material	Aluminium
- Corrosion resistance	Powder-coated
Weight	Approx. 800g
Check base	EN 61000-6-2, EN 61000-6-3, EN 61010-1
Approval	UL file no. E240032

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