Compact Wind Direction Sensor Unheated
Compact Wind Direction Sensor Heated

Pic. 1: Compact Wind Direction Sensor

Product Certificate
Compact Wind Direction Sensor

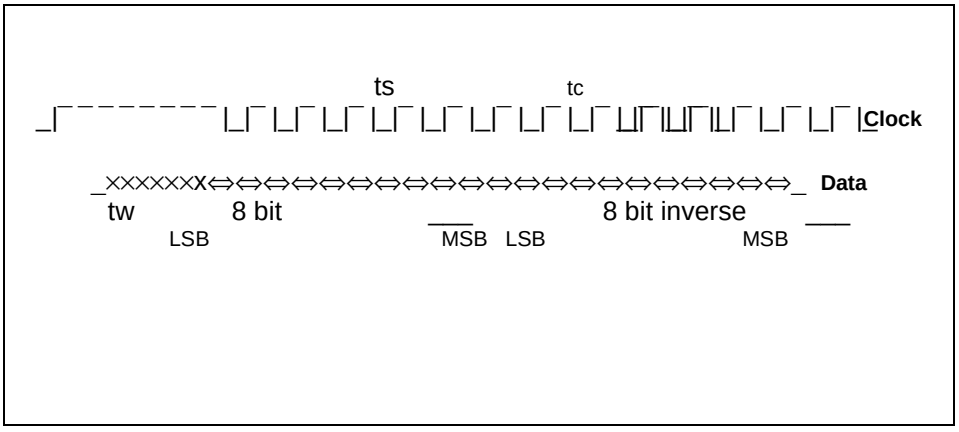
Wind transmitters are employed to determine the wind direction and to convert this into an electrical digital signal. These signal can be transmitted to display instruments or - with the aid of suitable transducer - to recording instruments.
The instruments are equipped with an electronically regulated heating system for winter use. This heating system prevents the ball-bearing and the external rotating parts from freezing.
The wind direction is recorded by means of a low-inertia light metallic wind vane the ball-bearing axis of which is connected to a slotted disk. This code disc is scanned opto-electronically and has been provided with a 5 bit Gray-Code (resolution 11,25 ° - see technical data).
The electrical signals are supplied according to the actual position of the wind vane. The instrument is made of corrosion-resistant material (plastic) and the aluminium parts are additionally protected or varnished res. by means of an anodic coat. Labyrinth sealing protect sensitive parts inside the instrument against humidity.

Measuring parameter/precision

- Wind direction: measurement by wind vane
- Measuring range: 0 ... 360°
- Uncertainty: 5°
- Resolution: 11.25°

Interface/outputs

- Electrical output: serial synchronous, Gray code, 5 Bit



Pic. 2: Gray code format

- Scanning: Light barrier - code disc
- Cable output via cable gland

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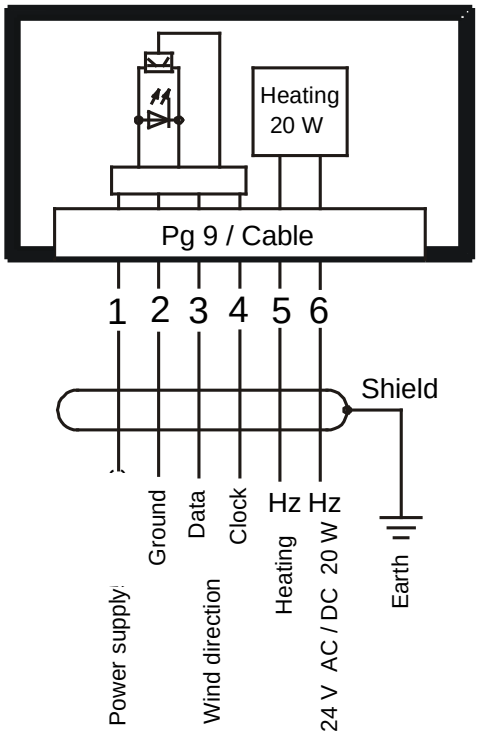
Power supply

- Operating voltage: 5 V to 14 V DC
- Power consumption at U_B=5 V:
  - Standby operation: 15 µA
  - Active operation: 500 µA
- Optional heater: 24 V AC DC, 20 W, electronically controlled

Wiring

- The sensor cable is fixed onto the sensor. Therefore it is necessary to specify the required sensor cable length on order. In the standard delivery there is a sensor cable with 15 m included.



Pic. 3: Wiring diagram

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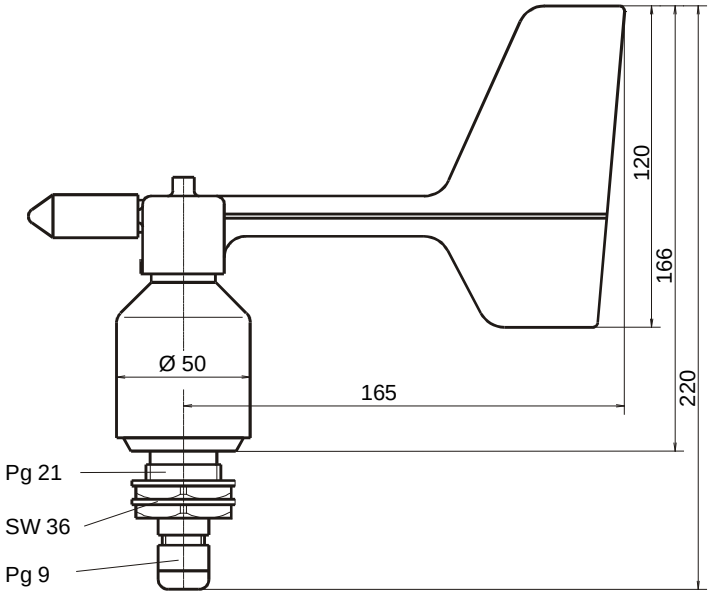
Wire No.	Function	Remark	Recommended Wire Colors
1	Power supply 5 V to 14 V DC		white
2	GND - Power supply ground		brown
3	Data - gray code signal	Used by Gealog measuring interface	green
4	Clock - serial synchron clock	Used by Gealog measuring interface	yellow
5	Heater power supply 24V AC/DC	20 VA	gray
6	Heater power supply 24V AC/DC	20 VA	pink
	Shield		green/yellow

Environmental/mechanical data

- Operating temperature -40℃ up to 70℃
- Protection mode according to IP55
- Maximum wind load: 80 m/s for 30 minutes
- Weight: 1,1 kg
- Dimensions:



Pic. 4: Dimensional drawing

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Mounting

The mounting of the transmitter could be done for example at a traverse with a boring of PG 21 or on hangers with a boring of 29 mm ∅. When using fastening adapters (angle, traverses etc.) please notice that turbulence could possibly influence the characteristic curve.
After flexible connection cable is passes through the boring, wind direction transmitter could be fixed with hexagonal nut (SW36) after being in its right position. For electrical connection please refer to the connection diagram.
Attention: Storing, mounting and operation under weather conditions is permissible only in vertical position, as otherwise water can get into the instrument

North alignment

Rotate the case markings on the shaft and on the protective cap until they are aligned. Then select an obvious point in a northerly direction in the surroundings (a tree, a building etc.) with the aid of a compass. Take a bearing on this point over the metal deflector and rod of the wind vane and when these coincide screw the transmitter into place.

Maintenance

If properly installed, the instrument requires no maintenance. Heavy pollution can lead to blockage of the slots between the rotating and the stable parts of the transmitter. Thus it is advisable to remove the accumulated dirt from the instrument periodically.
Certain symptoms of wear and tear can appear on the ball bearings after years of use. These symptoms are expressed in a lowered sensitivity of response on the part of the wind vane. Should such a defect occur, we recommend that you return the instrument to the factory for repair.

Origin

- Country of origin: European Community

Production quality standard

- Production according to ISO9001

Product Certificate
Compact Wind Direction Sensor

Ordering Information

- **Compact Wind Direction Sensor Unheated**
  o Compact, affordable wind direction sensor
  o Uncertainty: 5%
  o Resolution: 11.25°
  o The supply includes 12 m sensor cable
  o Please specify other length of sensor cable on order

- **Compact Wind Direction Sensor Heated**
  o Compact, affordable wind direction sensor
  o Uncertainty: 5%
  o Resolution: 11.25°
  o Integrated shaft heater 20 W
  o The supply includes 12 m sensor cable
  o Please specify other length of sensor cable on order

Accessories

- **Gealog Heater Transformer 24 V / 80 VA**
  o For sensors mit heater-voltage 24 V AC

Revision List

No.	Revision	Date	Name	Description of Changes
1	1	31.10.06	Pe	New release
2	2	27.8.08	Pe	Update of some minor technical details

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