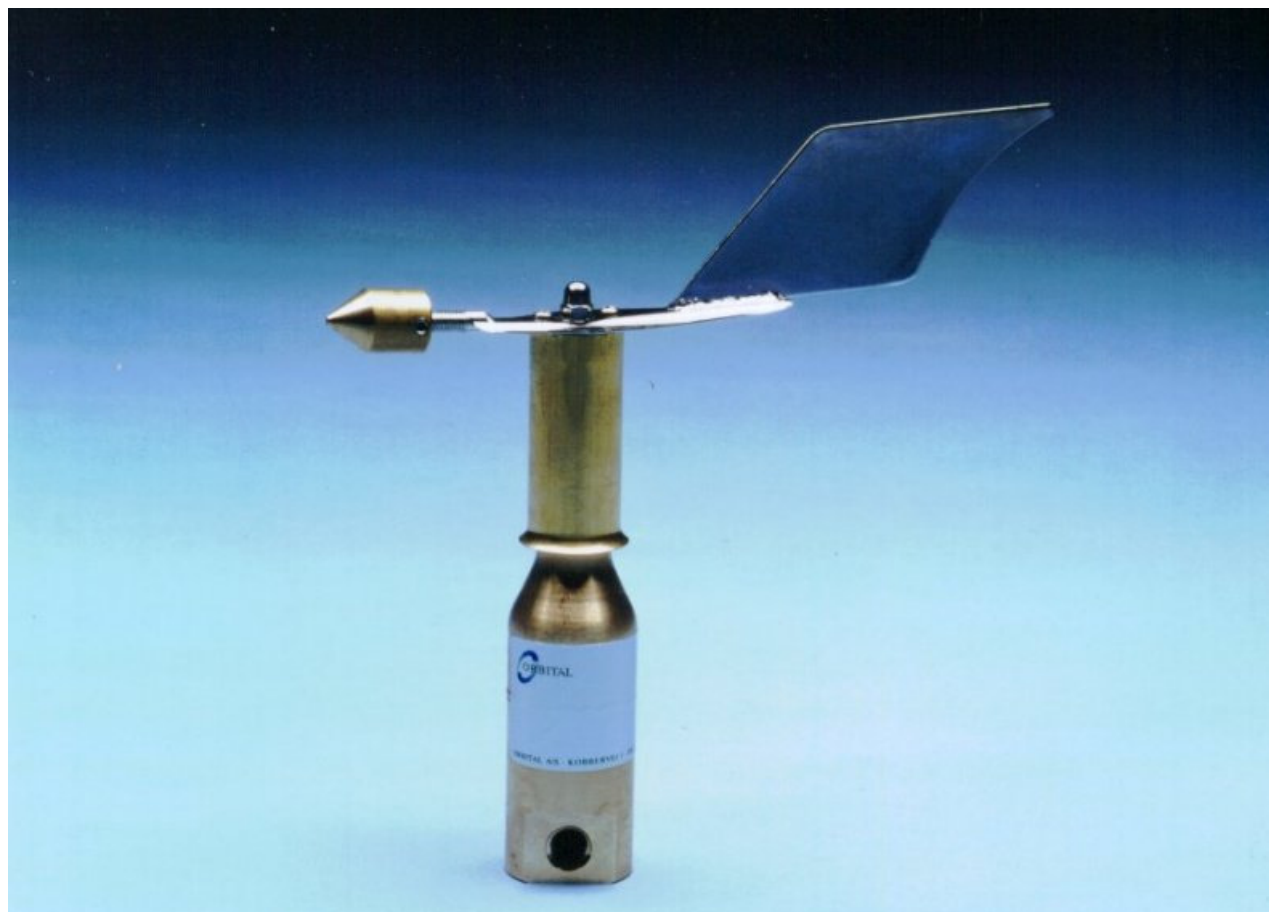


Datasheet

Orbital Wind Vane

Module type Wind vane.
Type nr. 425
Description..... Wind vane used in wind turbines for yaw control and 90° detection
HW-version 1.00
Documentation..... 98_WindVane425_dual.doc



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Exclusion of liability

We have checked the contents of this manual. Since deviations cannot be precluded entirely, we cannot guarantee for full agreement. The data in this manual are reviewed regularly and any necessary corrections included in subsequent editions. Suggestions for improvement are welcomed.

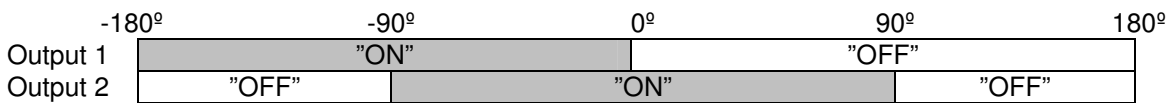
Technical data is subject to change without notice.

2 Features

- Opto-electrical sensors
- PNP outputs for “In Wind” and “90° Out of Wind” detection
- Robust and Long-term durability performance (brass/stainless steel)
- Prepared for heating unit

2.1 Direction indications

Relative “Black/White” detection *)



Output 1 “In Wind”

Right +3° : “OFF” (Low signal)

Left-3° : “ON” (High signal)

Output 2 “90° Out of Wind”

Right +93° : “OFF” (Low signal)

Left+87° : “ON” (High signal)

*) With the socket recess/mounting bolt against the wind.

3 Mounting the wind vane

3.1 Mechanically mounting

Mounting vertically and with the socket recess/mounting bolt against the wind. (With enclosed M12 mounting bolt (Stainless steel))

Attention: Please follow the instructions above. Do NOT remove the wind vane from the shaft. Reduced lifetime and bad calibration will be the result.

4 Environmental data

4.1 Temperature

Operating temperature range : -20...+50 °C

Storage temperature range : -40...+70 °C

4.2 Wind speed

Min. wind speed..... : 1,5 m/s

5 Mechanical data

5.1 Materials

Housing..... : Brass (Cu Zn39Pb3)

Top..... : Stainless 18/8 Steel (Aisi 304)

Bearings..... : Low friction precision steel bearings, on top semi-closed with special seal.

5.2 Cable

Cable type..... : Shielded PVC LIYCH, 4 x 0,25 mm²

Cable diameter : 5,0 mm

5.3 Screwed connection

Material : Stainless 18/8 Steel

Type : M12, 50.616M/EMV, (EMC)

5.4 Weight

Weight..... : 0,7 kg

5.5 Transport container

Dimensions (l x h x w)..... : 278 x 185 x 217 mm

Material : Expanded polystyrene

Total weight : 1,15 kg

6 Power supply

6.1 Power supply

Parameter	Conditions	Min.	Typ.	Max.	Units
Supply voltage		16,0	24,0	32,0	VDC
Consumption	@ no output load		5	8	mA

7 Interface

7.1 Cabling

Interface standard..... : 4-wire shielded cable

Cable	Wire colour	Function
	White	+24 VDC (+)
	Brown	Output-signal 1 "In Wind"
	Yellow	Output-signal 2 "90° Out of Wind"
	Green	0 VDC (-)
	Black	Shield

8 Outputs

8.1 Output-signals

Output type : PNP

Number of outputs : 2

Output load : Short Circuit Protected

Parameter	Conditions	Min.	Typ.	Max.	Units
Output range		0		250	Hz
Current limit		20,0	25,0	30,0	mA
Voltage drop	@ 10mA load		2,3	2,8	VDC

9 Standards

9.1 EMC standards

DS/EN 50081-2:1994..... : Electromagnetic compatibility - Generic emission standard - Part 2:
Industrial environment

DS/EN 61000-6-2:1999 : Electromagnetic compatibility (EMC) - Part 6-2: Generic standards –
Immunity for industrial environment

10 Mechanical dimensions (principle drawing)

