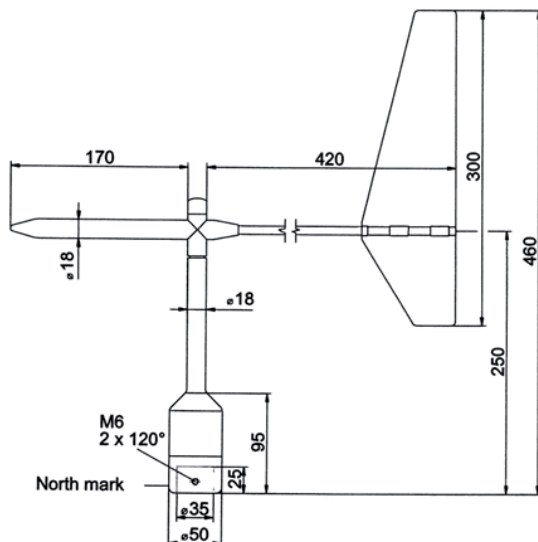


# Thies Wind Vane First Class

Order-No: P 6200H - heatable

- Robust wind vane for highest demands
- Potentiometric wind direction transmitter
- High quality potentiometer 0...2 k Ohm
- Full Range 0 ... 360°, no North gap



## Measurement principle

With the help of a potentiometer the physical property is converted into an analogue resistor output signal.

At zero the transducer has to pass the „north transition“ between the margins of zero and 2 kΩ. Wind direction signal conditioning and data processing in all Ammonit data acquisition systems carefully pays attention to this speciality.

The wind vane is equipped with an electronically regulated heating system in order to prevent ice from the bearings. To use this heating the connection cable must have additional cores and you should provide a sufficient power supply (mains connection).

## Mounting

Mount the transmitter onto a pipe socket of R1“ (Ø 33,5 mm) and a length of at least 25 mm. The pipe socket must have an internal diameter of at least 25 mm. The wind transmitter will be connected electrically with a plug from below. After connection the wind transmitter is put onto the pipe socket, and is fixed at the mast or hanger by means of 2 threaded pins (female hexagon 3 mm).

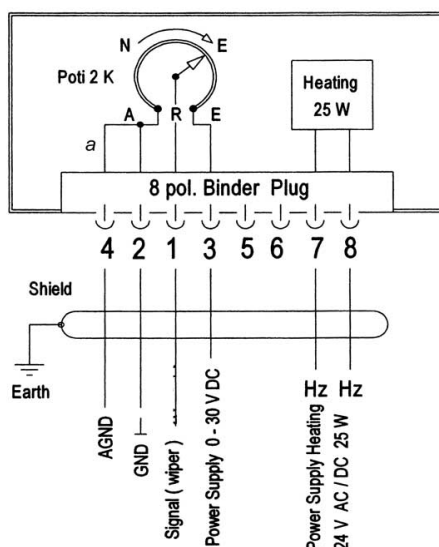
To avoid damage due to lightning, a protection rod and proper grounding of all metal parts is to be recommended.

## Maintenance

When mounted properly, the wind vane operates almost maintenance-free. Dust or dirt may clog the space between the rotating parts and the shaft. Therefore you should check for plausibility of measurement results at regular terms and clean the device if necessary. In true long-term operation (years) the bearings may be subject to wear and tear showing delayed start-up behaviour or even stand-still of the vane. Should such a defect occur we would recommend that you return the instrument for repairs.

## Technical Data

Measuring range:	0 ... 360 ° without north gap
Measuring accuracy:	0.25% (1°)
Survival speed	90 m/s to 0.5 h (without damages)
Ambient temperature:	-50 to +80°C All occurring conditions of relative humidity including dew moistening
Measuring principle:	Potentiometer 2 kOhm
Electr. output:	Voltage $U_s$ : 0 ...30 V DC, max. 20 mA Current: < Supply current divided with potentiometric resistance
Linearity:	0.25% (1°)
Starting threshold:	< 0,5 m/s at 10° amplitude
Delay distance:	< 1 m (acc. to ASTM D 53666 – 96)
Damping ratio:	$D > 0,25$ (acc. to ASTM D 53666 – 96)
Quality factor:	$K > 1$
Heating:	Surface temperature of housing neck > 0 °C at 20 m/s up to -10 °C air temperature, at 10 m/s up to -20 °C applying Thies icing standard 012002 on the housing neck. Heating regulated with temperature sensor.
Electr. output Potentiometer:	Voltage: 0 - 24 V DC (galvanic separation from casing) Current: < 2,5 mA, transfer from 0 - 360° and 360 - 0°
Electr. output Heating:	Voltage: 24 V AC/DC (galvanic separation from casing) Capacity: 25 W
Connection:	8-pole plug
Mast fixture:	Mounting onto mast 1", e. g. DIN 2441 1½ " with separate adapter (optional)
Weight:	approx. 1.3 kg
Protection:	IP 55 (DIN 40050) EMV EN 61000-6-2:2001 EN 55022:2001, Class B
Exchange of bearings	Recommended approx. every 24 months
Manufacturer:	Thies



Connection	Color of cores	Connector data logger <plug> 12-pol.		
		Wind vane 1	Wind vane 2	
4	a	white	G	M
2	A	brown	E	M
1	R	green	F	J
3	E	yellow	D	K
5		n.c.		
6		n.c.		
7	Heating 1	grey, rosa		
8	Heating 2	blue, red		

Cable type without heating cores: LiYCY 4 x 0,25 mm<sup>2</sup>

Cable type with heating cores: LiYCY 8 x 0,25 mm<sup>2</sup>