MicroStep - MIS

Ultrasonic Anemometer Compact

The Ultrasonic Anemometer compact serves for the 2-dimensional acquisition of the horizontal components of the wind velocity, the wind direction and of the acoustic-virtual temperature.





The instrument is especially suitable for the use in the fields of:

- · Regenerative power generation, wind power plants
- Industry automation
- Wind warning devices, building construction and building security
- Traffic engineering, aviation and navigation
- Meteorology
- Climatology

The measurement principle allows, compared to the classic anemometers, an inertia-free measurement of

running variable dimensions with highest precision and accuracy.

The data can be served:

- analogically*, as standard signal or / and digitally in
- ASCII THIES- Format or
- binary as MODBUS RTU protocol

If necessary, the instrument is automatically heated in case of critical ambient temperatures. The possibility of malfunction, caused by icing, is minimized. The sensor arms and the ultrasonic sensors are heated.

Wind speed

Measuring range	0 to 75 m/s	
Resolution	0.1 m/s (standard) 0.01 m/s (special telegrams)	
Accuracy	±0.2 m/s rms (< 5 m/s) ±2 % rms (5 m/s to 60 m/s)	

Wind direction

Measuring range	0 to 360°
Resolution	1° 1° (standard)
Accuracy	$\pm 2^{\circ}$ WS > 1 m/s



Virtual temperature

Measuring range	-50 to +70 °C
Resolution	0.1 K
Accuracy	±2 K

Data output digital

Interface	RS-485 / RS-422
Baudrate	1200 to 921600 Baud
Data values	instant. values, average values, standard deviation
Output range	1 per 10 msec up to 1 per 60 sec
Status signals	heating, distance error, Temperature of meas section
Protocol	ASCII / MODBUS RTU

Data output analog

Wind grood	0 to 20 mA 4 to 20 mA	
wind speed	0 to 10 V	
	2 to 10 V	
Stromausgang	max. 300 Ω	
	0 to 20 mA	
Wind direction	4 to 20 mA	
	0 to 10 V	
	2 to 10 V	
Voltage output	min. 3000 Ω	
Resolution	16 bit	

Data input analog (alternative)

Chanels	3
Resolution	16 bit

Operating voltage

Electronic	8 to 60V DC or 12 to 42 V AC / 1.2 W
Heating	24 V AC / DC, max. 250 W

Heating

leated compontents	bottom plate, cover plate, ultrasonic transducers

General

Bus operation	up to 98 sensors
Electr. connection	8 pol. connector
Mounting	on a mast tube 1,5"
Housing	AL, hard-snodized
Protection	IP 67
Dimension	diameter 200 mm x 144 mm
Weight	approx. 2 kg



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