

Wind Gauges WNZ37, WN37, WMSC37 with Serial Interface



Triple component wind gauge WNZ37



Dual component wind gauge WN37



Cup anemometer WMSC37

Our wind gauges WN37 and WNZ37 measure the east/west and north/south wind components which allows calculation of horizontal wind velocity. The WNZ37 model measures the vertical component as well. WMSC37 is a high-quality cup anemometer suitable for applications where the wind speed, but not its direction, is of interest. As the propellers or cups revolve, the rate of rotation is measured using magnetic sensors without direct contact, free from feedback effects. As a result, the sensors react very well to the slightest air movements.

The bearings and sensor electronics are heated to prevent condensation and freezing of the mechanism.

All the components are made from stainless steel or plastic.

Both sensors are mounted on a small tubular mast. The connection box is mounted at the base of the mast. This box contains data recorder, the thermostat and lightning protection circuits.

The wind gauges are protected against the effects of lightning and power surges.

The output signal is connected with a watertight plug, the cabling is lead through the inside of the mast.

Data Processing and Interface to Data Collecting Unit (PC)

This series of wind gauges includes a microprocessor, which processes the sensor's pulses and calculates wind speed and direction.

Depending on the type of calculation, the wind gauges can store up to 4000 data sets.

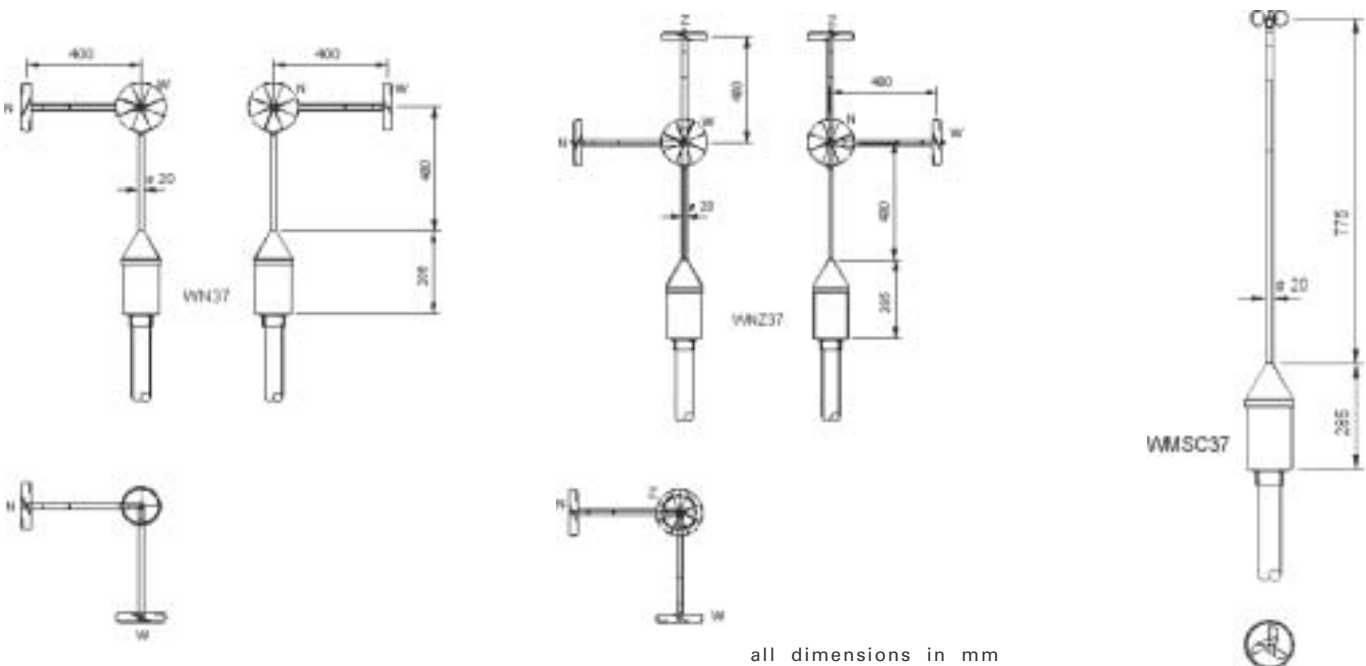
The wind gauges can be controlled and configured through the serial interface (RS232 or RS485). It is possible to build a multipoint connection between several wind gauges, other Meteolabor instruments and one data collecting unit (PC).

Technical Data

	WNZ37	WN37	WMSC37
Resolution	0.01 m/s	0.01 m/s	0.01 m/s
Response distance (0 -> 5m/s)	2.0 m	2.0 m	18 /22 m*
Threshold	0.1 m/s	0.1 m/s	0.1 m/s
Accuracy	3%	3%	5 %
Variable			
Average horizontal scalar wind speed	Yes	Yes	Yes
Average horizontal vector wind velocity	Yes	Yes	No
Average horizontal wind direction	Yes	Yes	No
Horizontal wind peak	Yes	Yes	No
Average vertical wind velocity	Yes	No	No
Vertical wind peak	Yes	No	No
Components (north, east, zenith)	All	North, east	No
Power supply			
DC voltage for electronics	12 V (+4 / -1 V)	12 V (+4 / -1 V)	12 V (+4 / -1 V)
DC current for electronics	approx. 150 mA	approx. 150 mA	approx. 150 mA
Heater voltage	48 V AC	48 V AC	48 V AC
Heater current	0.2 A	0.2 A	0.2 A
Weight	7 kg	5 kg	5 kg
Temperature range	-40 ... +50 °C		
Connecting cable	8 poles AWG22 (shielded)		
Interface to data collecting unit	RS232 or RS485 (2400 bps fix)		
Memory	Approx. 4000 depends on calculation		
Intervalls	1, 2, 5, 10, 15, 20, 30, 60 minutes		
Miscellaneous	- Internal real time clock - Status information - Programmable sensor address - Configuration in EEPROM		

* 18 m for an increase in wind speed, 22 m for a decrease

Dimensions



Ordering information

Wind gauge WNZ37-RS232 Wind gauge WNZ37-RS485
 Wind gauge WN37-RS232 Wind gauge WN37-RS485
 Wind gauge WMSC37-RS232 Wind gauge WMSC37-RS485

Spareparts

Propeller (WNZ37, WN37)
 Anemometer head (WMSC37)
 Head bearing (1 per component)
 Replacement electronics (1 per component)

meteolabor reserves the right to make changes without further notice

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