

NOWA wind gauge



High performance wind gauge NOWA for extreme applications, e.g. under alpine conditions

NOWA is a wind gauge which remains operational under icy conditions, and is so sensitive that it can measure the whole range of wind velocities. It is therefore suitable for locations where conventional wind gauges stop working. NOWA uses the heat transmission principle at a thin, hot platinum resistor which is installed in a heated protective tube. This tube protects the delicate sensor element from water, ice and physical impact.

The complete measurement technology, sensor control and preliminary data processing is handled by NOWA's electronics. For this, NOWA is fitted with a microcomputer which permits a high measurement performance.

The sensor head is optimized in that a heating energy of only 18W will keep the sensor free from ice. This avoids unnecessary waste of heat energy. The sensor electronics are powered by 12 VDC and the sensor heating element by 48 VAC. In the event of a mains voltage failure, the NOWA can consequently be operated with a 12 V battery, but heating is then reduced to about 4W.

Reliable and accurate wind measurements throughout the entire range of interest from 0.2 m/s to 100 m/s cannot be performed by classic anemometers under difficult environmental conditions as found on mountain peaks, for example. Up to now, robust instruments, able to withstand environmental rigours, could not measure low wind velocities. However, instruments with this capability failed when exposed to icing.



The small sensor head is kept free from ice by only 18 Watt of heating power.

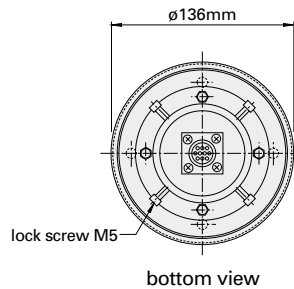
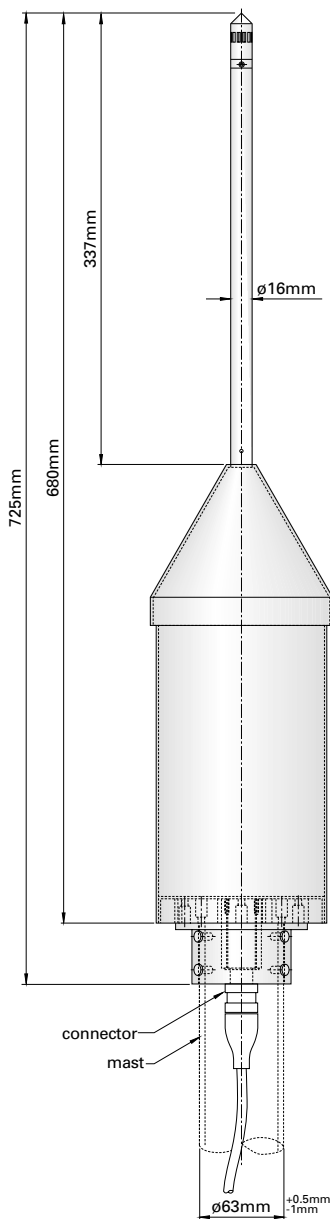
NOWA has RS232 and RS485 interfaces for computer connection. The user can thus program the mode of operation of the sensor with a data acquisition and call the NOWA data sets. The NOWA computer can store about 1440 data sets, so that a ten-minute configuration stores the measurement data of ten days (the NOWA would only have to be scanned every ten days to avoid loss of data).

The NOWA is equipped with a set of standard configuration facilities.

NOWA is made entirely from corrosion-resistant materials which makes long intervals between services.

Meteolabor AG can take account of a customer's requirements and adapt the software of NOWA accordingly.

Dimensions



Technical Data

Wind velocity range	0.1 m/s ... 80 m/s
Response wind velocity	0.1 m/s
Min. measurement interval	1 min (normal version)
Measuring accuracy under 0.5 m/s*	5% (+/-0.1 m/s)
Measuring accuracy over 0.5 m/s*	3% (+/-0.1 m/s)
Wind direction accuracy	< 5°
Temperature range	-40°...+50°C
Supply voltage, electronics	11...14V DC
Supply current, electronics	160 mA (460 mA if 48 V supply fails)
Supply voltage, heating	48 V 50/60 Hz +/-15%
Max. supply current, heating	350 mA

*The measurement error for the two components is related to the larger component.

Ordering information

Wind gauge NOWA-RS232
Wind gauge NOWA-RS485

meteolabor reserves the right to make changes without further notice

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