

WIND MEASURING TECHNOLOGY

Ultrasonic Anemometer 3D for Cold Climate

Part number: 4.383x.4x.xxx

More than 70 different measurement values are available, for ex.:

- Wind velocity in X/Y/Z-direction
- Total wind velocity
- Wind velocity azimuth
- Wind direction azimuth
- Wind velocity elevation
- Wind direction elevation
- Acoustic-virtual temperature
- Standard deviation of the wind velocity in X/Y/Z-direction
- Standard deviation of the total wind velocity
- Standard deviation of the wind velocity azimuth
- Standard deviation of the wind direction azimuth
- Standard deviation of the wind direction elevation
- Standard deviation of the acoustic-virtual temperature
- Statistic functions such as variance, co-variance, turbulence intensity
- Wind velocity X/Y/Z of the gust acc. to WMO
- Wind direction of the gust (elevation) acc. to WMO



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

- Meteorology
- Climatology
- Traffic engineering, aviation and navigation
- Indoor flow measurement
- And in alpine field of application

The ultrasonic measurement principle allows, compared to the classic anemometers, an inertia-free measurement of running variable dimensions with highest precision and accuracy. It is especially suitable for the measurement of gust- and peak values.

Specification

Part number: 4.383x.4x.xxx

Wind speed

Measuring range	0 ... 85 m/s
Resolution	0.1 m/s (standard) 0.01 m/s (user defined)
Accuracy	±(0.1 m/s + 1 %) rms (0 ... 35 m/s) ±2 % rms (35 ... 65 m/s) ±3 % rms (65 ... 85 m/s)

Wind direction

Measuring range	0 ... 360 ° / 540 ° / 720 °
-----------------	-----------------------------

Resolution	1 ° (standard) 1 ° (user defined)
Accuracy	±1 ° (1 ... 35 m/s) ±2 ° (35 ... 65 m/s) ±4 ° (65 ... 85 m/s)
Virtual temp.	
Measuring range	-50 ... +80 °C
Resolution	0.1 K
Accuracy	±0.5 K
Data output digital	
Interface	RS485 / RS422
Baudrate	1200 ... 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, Meas section error, Temperature of meas section
Data output analog	
Measured values	WS - Vectors VxVyVz WS - Azimut, WD - Azimut, WS Elevation
Wind speed	0 ... 20 mA 4 ... 20 mA 0 ... 10 V 2 ... 10 V
Stromausgang	max. 400 ê
Wind direction	0 ... 20 mA 4 ... 20 mA 0 ... 10 V 2 ... 10 V
Voltage output	min. 4000 ê
Resolution	16 bit
Data input analog (alternative)	
Chanel	3 x 0 ... 10 V
Resolution	16bit
Operating voltage	
Electronic	8 ... 78 V DC or 12 ... 55 V AC / 2.5 W
Heating	48 V AC/DC, typ 360 W

Heating

Heated components	sensor arms ultrasonic transducers housing
-------------------	--

General

Bus operation	up to 98 sensors
Electr. connection	8 pol. connector
Mounting	on mast tube 1,5''
Housing	stainless steel (V4A) AISI316Ti
Protection	IP 67
Dimension	600 mm x 300 mm
Weight	3.4 kg

Versions

As per 4.383x.4x.xxx, but:

Product number 4.3830.40.340

Data output digital

Baudrate	9600 Baud
Duplex mode	Full duplex
Data telegram	VDT-Telegram (Telegram2)
Output range	10 per 1 sec

Product number 4.3830.41.300

Data output digital

Baudrate	9600 Baud
Duplex mode	Half duplex
Data telegram	no independent data output

Data output analog

Type	3 x 0 ... 20 mA
------	-----------------

Accessories

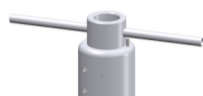
Product	Product name	Brief description
---------	--------------	-------------------

Connecting cable
50775x

Suitable cable for 4.3820/30/75/80/81
• length: see versions

General

Cable length	see versions
Cable	PUR 4 x 0,75 +2x2x0,14 mm ²



Northring for
Ultrasonic
anemometer
508696

The adapter is used for the north alignment of a Ultrasonic anemometer.

General

Length	90 mm
Material	Alluminum anodized (AlMgSi1)
Weight	0.4 kg
Mounting	for mast Ø 50 mm for sensor Ø 50 mm



Meteo-Online
9.1700.98.x01

Meteo-Online is a software for detecting, filing, and displaying data of meteorological measuring instruments. The display of the data is carried out graphically as diagram and/or as text. The user has the possibility to place the display-elements free on the screen, and to save them.

Data display

Monitor - display	<ul style="list-style-type: none"> - Values - Diagrams - Tables - Windrose - Time - Date
-------------------	--

Compatibility

Connectable instruments	<ul style="list-style-type: none"> - US-Anemometer - Datalogger - Clima Sensor - Weather station WSC11 - Wind display - etc.
System requirements	PC mit <ul style="list-style-type: none"> - Prozessor > 1 GHz - RAM > 1 GB
Operating system	<ul style="list-style-type: none"> - Windows 2003 SP2 - Windows Server 2008 - Windows 7 - Windows Server 2008 R2 - Windows 7 SP1 - Windows Server 2008 R2 SP1 - Windows 8 - Windows 10
