

Meteo M&R

wind measurement



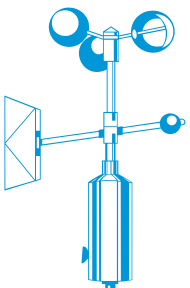
DD & DS digital wind sensors

DIGITAL ELECTRONICS

CONTACT FREE

FREE PROGRAMMABLE OUTPUTS

The DD windvane and DS cup anemometer from Wittich & Visser are light weight instruments for measuring wind speed and wind direction contact free. The sensors use a well accepted measuring principle and profit from digital techniques: a perfect combination of traditional and modern concepts.



ingenieursbureau **wittich & visser**

scientific and meteorological instruments

DD & DS digital wind sensors

The DD windvane and DS cup anemometer are light weight instruments for measuring wind speed and wind direction contact free. The sensors use a well accepted measuring principle and profit from digital techniques.

The DD en DS have a number of different outputs: digital RS232/RS485 (ASCII protocol) and/or analogue Volt or mA. The analogue outputs are programmable by PC.

Digital techniques

Digital techniques:

- no potentiometer or analogue hall sensor
- digital data output (RS232 or RS485)
- programmable analogue outputs (current or Voltage), North calibration & speed scaling with the PC
- wind direction without death angle and a resolution better than 1°
- wind speed: resolution better than 0.1 m/s (pulse train 1024 Hz)
- wind speed: range up to 60 m/s
- excitation delay time 3 sec.
- open collector outputs

Wind direction: DD series

The standard ranges are 0..360°, 0..20 mA, 0..10 V. Every other range on request.

Wind speed: DS series

The standard ranges are 0..30 m/s, 0..20 mA, 0..10 V. Every other range on request.



ORDER CODES

		1	2	3	4	5	6
Sensor	wind speed	D	S				
	wind direction	D	D				
Output signal	0..20 mA			1			
	4..20 mA			2			
	0..1 V			3			
	0..10 V			4			
	special			S			
	none			X			
Analogue output range	0..30 m/s or 360°				1		
	0..60 m/s				2		
	special				S		
	none				X		
Digital communications	RS232					1	
	RS485					2	
	none					X	
Options	open collectors						0
	no open collectors						X
Standard sensors	wind speed, 0..30m/s, 4..20 mA	D	S	2	1	X	X
	wind speed, 0..30m/s, 0..10 V	D	S	4	1	X	X
	wind direction, 360°, 4..20 mA	D	D	2	1	X	X
	wind direction, 360°, 0..10 V	D	D	4	1	X	X
	wind speed, RS232	D	S	X	X	1	X

measurement

cup anemometer DS

With this three cup anemometer wind speed can be measured up to 30 m/s and higher. The speed is processed contact free using the Hall effect. The threshold speed is 0,5 m/s.



Using RS232 or RS485 communication the analogue (mA or V) outputs can be programmed. The analogue signals can be scaled to cover any measuring range between 0 and 60 m/s. Also two programmable open collector outputs are available for control purposes. An affordable, high quality cup anemometer with stainless steel bearings and mounting hardware.

TECHNICAL SPECIFICATION

ANEMOMETER

measuring principle	Hall effect with magnets
air velocity range	0..60 m/s
threshold	0,5 m/s
response length	2,2 m
operating temperature	-30..+70°C

ELECTRICAL

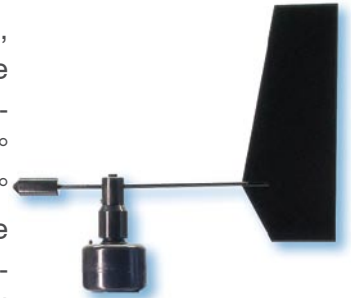
analogue outputs	mA or V
digital communications	RS232 or RS485
power supply	11..30 Volt
power consumption	30..40 mA

MATERIAL

housing	POM, black
ball bearings	stainless steel
mounting hardware	stainless steel
magnets	ceramic
cups	polycarbonate

wind vane DD

With this light weight, long life wind vane the wind direction is measured over the full 360° with a resolution of 0.3° without dead angle! The angle is measured contact free using the Hall effect.



Using RS232 or RS485 communication the analogue (mA or Volt) outputs are configurable. Also two programmable open collector output are available for control purposes. A mechanically very robust sensor with a glass fibre epoxy vane blade, a brass painted balance weight, oil bronze bearings and stainless steel mounting hardware.

TECHNICAL SPECIFICATIONS

POTENTIOMETER

life expectatio	> 20 x 10 ⁶ rotations
electrical angle	350 ± 3°
mechanical angle	360° without stop
damping ratio	0,35
threshold	1,2..1,5 m/s
linearity	1 %
operating temperature	-30..+80°C
temperature coefficient	± 200 ppm/°C

ELECTRICAL

analogue outputs	mA or V
digital communications	RS232 or RS485
power supply	11..30 Volt DC
power consumption	30..40 mA

MATERIAL

housing	POM, black
vane blade	painted glass fibre epoxy
vane stem and balance weight	painted brass
bearings	oil bronze
mounting hardware	stainless steel



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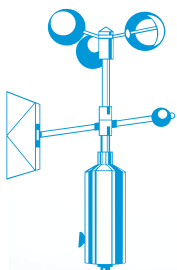
Ingenieursbureau Wittich & Visser was founded in 1924 and since then specialized in scientific and meteorological instruments. Worldwide leading companies and public institutes rely on the knowledge of Wittich & Visser about setting up and installing meteorological Instruments. We are **made to measure**.

It is the complete measurement set up that counts, not the individual Instruments. We at Wittich & Visser want the best solution for your answer. With our partners and our wide expertise of set up and installation of meteorological measurements, we can give you the best solution, service and instruments.

For more information, visit our website:
www.wittich.nl



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