WIND SPEED AND DIRECTION (Ultra-sonic)

Ultrasonic anemometers

- Wide range of signal outputs 4÷20 mA, RS232/485 Modbus
- No moving parts
- Very-High speed wind measurement (0÷85 m/s) using DNB105.1 model
- Fast response time and low measurement threshold
- Low cost compact versions option (DNB205-205.2)
- 3-Axis ultrasonic models (DNB146-146.1)
- In-house ISO17025 calibration laboratory

Ideal sensors for general meteorological applications requiring no moving parts for low-maintenance or measurements with fast response even in very low-range wind speed conditions. Model DNB205 (serial output) is a compact size sensor very suitable in lite weather stations. DNB305-305.1 (serial output) are made in Aluminum and have very good performances. DNB306-306.1 models have 4÷20 mA outputs. DNB105.1 model is made for high speed range up to 85 m/s, it comes with 4÷20 mA output. DNB146-146.1 are 3-axis models and measure 3 components of wind speed.

Technical Specifications

PN	DNB205 DNB205.2	DNB305 DNB305.2	DNB305.1	DNB306	DNB306.1	DNB105.1	DNB146 DNB146.1
							
Output	DNB205-305-305.1: RS485 DNB205.2-305.2: RS232			2x4÷20 mA			DNB146: RS485 DNB146.1: 5x4÷20 mA
Tiype	Sonic 2-Axis (U-V)						Sonic 3-Axis
Measure-ments	Wind Speed and Wind Direction						• Wind S&D • Sound speed • Sonic temperature
Compass	NO	NO	NO	NO	NO	YES	YES
Material	Luran	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium	Luran Aluminium
Heater	NO	NO	YES	NO	YES	NO	NO
Protocol	Modbus-RTU	Modbus-RTU	Modbus-RTU	-	-	-	Modbus-RTU
Power supply (sensor)	12÷30 Vdc	12÷30 Vdc	12÷30 Vdc	12÷30 Vdc	12÷30 Vdc	12÷30 Vdc	12÷30 Vdc
Power supply (heater)	-	-	24 Vdc@10A	-	24 Vdc@10A	-	-
Consumption (@12Vdc)	11 mA	11 mA	25 mA	12 mA	12 mA	25 mA	110 mA@15Vdc

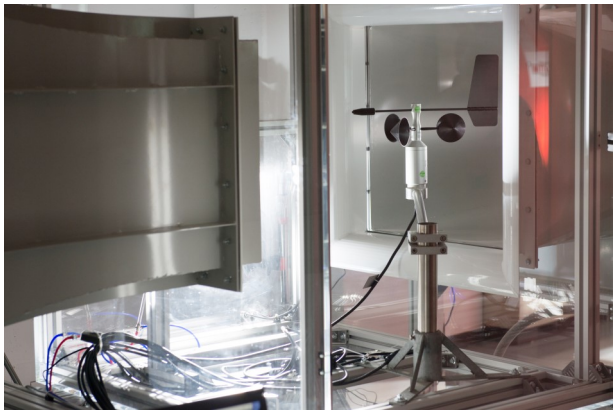
PN	DNB205 DNB205.2	DNB305 DNB305.2	DNB305.1	DNB306	DNB306.1	DNB105.1	DNB146 DNB146.1
Dimensions	110x126 mm	180x160 mm	180x160 mm	180x160 mm	180x160 mm	179x150 mm	537x214 mm
Weight	0,5 Kg	1 Kg	1 Kg	1 Kg	1 Kg	640 gr	1,5 Kg
Mounting	On Ø 35÷50 mm pole (support include)					On pole Ø 40 mm. On pole Ø 50 mm (using DNB191 adapter non-included)	On pole Ø 33 mm On pole Ø 50 mm (using DNB192 adapter non-included)
Cable	Not included DWA8xx					Not included DWA1xx	Included 10 m
Operative Temperature	-40÷60°C						
Protection	IP66						
Connector	10-pins (MG2267)					12-pins (MG2272)	
Data logger compatibility	Versions with RS232, 4÷20 mA outputs: M-Log (ELO008) E-Log, Alpha-Log with ALIEM module Versions with RS485 output: Alpha-Log						

Technical Specifications

PN		DNB205 DNB205.2	DNB305 DNB305.2 DNB305.1 DNB306	DNB105.1	DNB146 DNB146.1
Wind speed	Range	0÷60 m/s	0÷60 m/s	0÷85 m/s	0÷70 m/s
	Accuracy	± 0,3 m/s or 5% (0,02÷35 m/s)	± 0,2 m/s or 3% (0,02÷35 m/s)	± 0,2 m/s or 2% (0,01÷60 m/s)	± 1%
	Threshold	0,02 m/s	0,01 m/s	0,01 m/s	0,01 m/s
	Resolution	0,01 m/s	0,01 m/s	0,01 m/s	0,01 m/s
Wind direction	Range	0÷360°	0÷360°	0÷360°	0÷360°
	Accuracy	±3° (>1 m/s)	±2° (>1 m/s)	±2° (>1 m/s)	±1° (>1 m/s)
	Threshold	0,2 m/s	0,2 m/s	0,1 m/s	0,1 m/s
	Resolution	1°	1°	1°	0,1°
	WS threshold for WD calculation	0,2 m/s	0,2 m/s	Programmable 0,01÷1,00 m/s (default: 0,02 m/s)	Programmable 0,01÷1,00 m/s (default: 0,02 m/s)
Compass	Principle	-	-	Magnetic	Magnetic
	Range	-	-	0÷360°	0÷360°
	Resolution	-	-	0,1°	0,1°
	Accuracy	-	-	±1°	±1°

Accessories

	DWA831	Cable L=5 m for DNB205-205.2-305-305.1-305.2-306-306.1
	DWA832	Cable L=10 m for DNB205-205.2-305-305.1-305.2-306-306.1
	DWA833	Cable L=25 m for DNB205-205.2-305-305.1-305.2-306-306.1
	DWA810	Cable L=10 m for DNB105.1 anemometer
	DWA825	Cable L=25 m for DNB105.1 anemometer
	DEA608	RS232 DB-9 male connector for connecting DWA8xx cable to RS232 female port
	MG2272	Watertight connector for making DNB105.1 sensor cable
	MG2267	Watertight connector for making DNB205-205.2-305-305.1-305.2-306-306.1 sensors cable
	DNB191	Adapter for DNB105.1 sensor to pole Ø 50 mm
	DNB192	Adapter for DNB146-16.1 sensor to pole Ø 50 mm
	SVICA2203	ISO9001 type calibration certificate (Wind Speed)
	SVICA2304	ISO9001 type calibration certificate (Wind Direction)
	SVACA2216	ISO17025-ACCREDIA type calibration certificate (Wind Speed)



LSI LASTEM is an ISO17025 accreditated laboratory for air speed measurements. All sensors manufactured are tested inside this laboratory. LSI LASTEM provides Test report for any sensor supplied and on request, ISO17025 or ISO9001 calibration certificates (see Accessories list).

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