

### Ultrasonic anemometers



- ▶ Wide range of signal outputs 4...20 mA, RS232/485 Modbus
- ▶ No moving parts
- ▶ Fast response time and low measurement threshold
- ▶ Very-high speed wind measurement (0...85 m/s) using DNB105.2 model
- ▶ Low cost compact versions option (DNB205-205.2)
- ▶ 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. DNB105.2 model is made for high speed range up to 85 m/s, it comes with 4...20 mA and RS485-RS232 output.

#### Technical Specifications

| PN                    | DNB205<br>DNB205.2                                                                  | DNB205.1         | DNB305<br>DNB305.2                                                                  | DNB305.1         | DNB306                                                                                | DNB306.1         | DNB105.2                                                                              |
|-----------------------|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------|
|                       |  |                  |  |                  |  |                  |  |
| Output                | DNB205-205.1-305-305.1: RS485<br>DNB205.2-305.2: RS232                              |                  |                                                                                     |                  | 2x4...20 mA                                                                           |                  | 2x4...20 mA<br>2xRS485-RS232                                                          |
| Tiype                 | Sonic 2-Axis (U-V)                                                                  |                  |                                                                                     |                  |                                                                                       |                  |                                                                                       |
| Measurements          | Wind speed and Wind direction                                                       |                  |                                                                                     |                  |                                                                                       |                  |                                                                                       |
| Compass               | NO                                                                                  |                  | NO                                                                                  |                  | NO                                                                                    |                  | YES                                                                                   |
| Material              | Luran                                                                               |                  | Aluminium                                                                           |                  | Aluminium                                                                             |                  | Aluminium                                                                             |
| Heater                | NO                                                                                  | YES              | NO                                                                                  | YES              | NO                                                                                    | YES              | NO                                                                                    |
| Protocol              | Modbus-RTU                                                                          |                  | Modbus-RTU                                                                          |                  | -                                                                                     | -                | Modbus-RTU                                                                            |
| Power supply          | 12...30 V DC                                                                        |                  |                                                                                     |                  |                                                                                       |                  |                                                                                       |
| Power supply (heater) | -                                                                                   | 24V DC<br>@ 10 A | -                                                                                   | 24V DC<br>@ 10 A | -                                                                                     | 24V DC<br>@ 10 A | -                                                                                     |
| Consumption @12V DC   | 11 mA                                                                               |                  | 11 mA                                                                               | 25 mA            | 12 mA                                                                                 |                  | 25 mA                                                                                 |

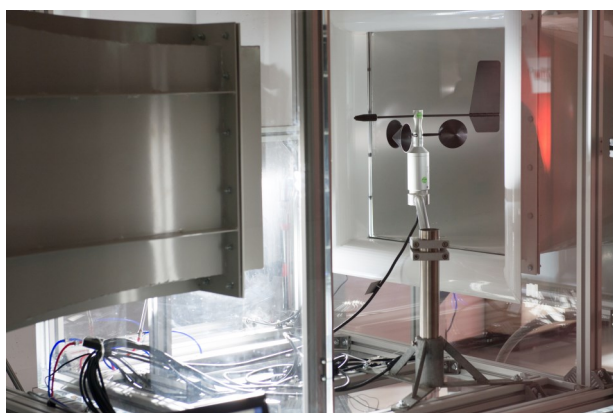
| PN                               | <b>DNB205<br/>DNB205.1<br/>DNB205.2</b>                                                                             | <b>DNB305<br/>DNB305.1<br/>DNB305.2</b> | <b>DNB306<br/>DNB306.1</b> | <b>DNB105.2</b>                                                     |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------|---------------------------------------------------------------------|
| <b>Dimensions</b>                | 110x126 mm                                                                                                          | 180x160 mm                              | 180x160 mm                 | 179x150 mm                                                          |
| <b>Weight</b>                    | 0,5 kg                                                                                                              | 1 kg                                    | 1 kg                       | 640 gr                                                              |
| <b>Mounting</b>                  | On Ø 35...50 mm pole (support include)                                                                              |                                         |                            | On pole Ø 40 mm<br>On pole Ø 50 mm<br>(DNB191 adapter not-included) |
| <b>Cable</b>                     | Not included DWA8xx                                                                                                 |                                         |                            | Not included DWA8xx.1                                               |
| <b>Operative Temperature</b>     | -40...60 °C (in the event of ice formation, snow/snowfall use the heated versions)                                  |                                         |                            |                                                                     |
| <b>Protection</b>                | IP66                                                                                                                |                                         |                            |                                                                     |
| <b>Connector</b>                 | 10-pins (MG2267)                                                                                                    |                                         |                            | 12-pins (MG2272)                                                    |
| <b>Data logger compatibility</b> | Versions with RS232, 4...20 mA outputs: E-Log, Alpha-Log with ALIEM module<br>Versions with RS485 output: Alpha-Log |                                         |                            |                                                                     |

## Technical Specifications

| PN                    |                                 | <b>DNB205<br/>DNB205.1<br/>DNB205.2</b>             | <b>DNB305<br/>DNB305.2<br/>DNB305.1<br/>DNB306<br/>DNB306.1</b> | <b>DNB105.2</b>                                        |
|-----------------------|---------------------------------|-----------------------------------------------------|-----------------------------------------------------------------|--------------------------------------------------------|
| <b>Wind speed</b>     | Range                           | 0...60 m/s                                          | 0...60 m/s                                                      | 0...85 m/s                                             |
|                       | Accuracy                        | ± 0.3 m/s<br>or 5% (0.02...35 m/s)<br>10% (>35 m/s) | ± 0.2 m/s<br>or 3% (0.02...35 m/s)<br>5% (>35 m/s)              | ± 0.2 m/s<br>or 2% (0.01...60 m/s)<br>3% (>60 m/s)     |
|                       | Threshold                       | 0.1 m/s                                             | 0.1 m/s                                                         | 0.01 m/s                                               |
|                       | Resolution                      | 0.1 m/s                                             | 0.1 m/s                                                         | 0.01 m/s                                               |
|                       | Response time                   | 250 ms                                              |                                                                 |                                                        |
| <b>Wind direction</b> | Range                           | 0...360°                                            | 0...360°                                                        | 0...360°                                               |
|                       | Accuracy                        | ±3° (>1 m/s)                                        | ±2° (>1 m/s)                                                    | ±2° (>1 m/s)                                           |
|                       | Threshold                       | -                                                   | -                                                               | 0.1 m/s                                                |
|                       | Resolution                      | 1°                                                  | 0.1°                                                            | 1°                                                     |
|                       | WS threshold for WD calculation | 0.2 m/s                                             | 0.2 m/s                                                         | Programmable<br>0.01...1.00 m/s<br>(default: 0.02 m/s) |
|                       | Response time                   | 250 ms                                              |                                                                 |                                                        |
| <b>Compass</b>        | Principle                       | -                                                   | -                                                               | Magnetic                                               |
|                       | Range                           | -                                                   | -                                                               | 0...360°                                               |
|                       | Resolution                      | -                                                   | -                                                               | 0,1°                                                   |
|                       | Accuracy                        | -                                                   | -                                                               | ±1°                                                    |

### Accessories

|                  |                                                                                    |
|------------------|------------------------------------------------------------------------------------|
| <b>DWA054</b>    | Cable L=5 m for DNB205-205.2-305-305.2                                             |
| <b>DWA104</b>    | Cable L=10 m for DNB205-205.2-305-305.2                                            |
| <b>DWA254</b>    | Cable L=25 m for DNB205-205.2-305-305.2                                            |
| <b>DWA056</b>    | Cable L=5 m for DNB205.1-305.1                                                     |
| <b>DWA106</b>    | Cable L=10 m for DNB205.1-305.1                                                    |
| <b>DWA256</b>    | Cable L=25 m for DNB205.1-305.1                                                    |
| <b>DWA058</b>    | Cable L=5 m for DNB306-306.1                                                       |
| <b>DWA108</b>    | Cable L=10 m for DNB306-306.1                                                      |
| <b>DWA258</b>    | Cable L=25 m for DNB306-306.1                                                      |
| <b>DWA810.1</b>  | Cable L=10 m for DNB105.2 anemometer                                               |
| <b>DWA825.1</b>  | Cable L=25 m for DNB105.2 anemometer                                               |
| <b>DWA826.1</b>  | Cable L=50 m for DNB105.2 anemometer                                               |
| <b>DEA602</b>    | RS232 DB-9 male connector for connecting DNB2XX-DNB3XX cables to RS232 female port |
| <b>MG2272.R</b>  | Watertight connector for making DNB105.2 sensor cable                              |
| <b>MG2267.R</b>  | Watertight connector for making DNB2XX-DNB3XX sensors cable                        |
| <b>DNB191</b>    | Adapter for DNB105.2 sensor to pole Ø 50 mm                                        |
| <b>SVICA2203</b> | ISO9001 type calibration certificate (Wind speed)                                  |
| <b>SVICA2304</b> | ISO9001 type calibration certificate (Wind direction)                              |
| <b>SVACA2216</b> | ISO17025-ACCREDIA type calibration certificate (Wind speed)                        |



🔴 *LSI LASTEM is an ISO17025 accredited 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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