## Combined Wind speed and Direction sensors

Combined wind speed and wind direction sensor. Direct signal output for wind speed (Hz) and wind direction (0÷1 Vdc). This sensor range includes, in a single apparatus, transducers for both wind speed and wind direction measurement. Its use simplifies installation requirements, other than being smaller, lighter and cheaper than the general 2-sensor kit. Model DNA122#S is equipped with a potentiometer and its wind direction output is in Ω, with very low power consumption and it can be used in applications with limited energy availability. Data output of the DNA921 model is RS485 using Modbus RTU®or TTY-ASCII protocols.

| Order numb. | DNA121#C | DNA122#C | DNA821 | DNA827 | DNA921 |
|---|---|---|---|---|---|
| Wind speed output | 0÷833 Hz | | 4÷20 mA | 0÷5 Vdc | RS485 |
| Wind speed measuring range | 0÷75 m/s (demage limit) | | 0÷60 m/s | | |
| Wind Direction output | 0÷1 Vdc | 0÷2000 Ω | 4÷20 mA | 0÷5 Vdc | RS485 |
| Protocol | - | - | - | - | Modbus RTU® TTY-ASCII |
| WS Programmable output | - | - | - | - | Instant, max., min., ave. (1÷3600 sec) |
| WD programmable output | - | - | - | - | Instant, Prevalent sector (1÷3600 sec) |
| Configuration | - | - | - | - | Hyperterminal |
| Protection | Tranzorb | | Tranzorb e Emifilters | | |
| RS485 protection | - | - | - | - | Galvanic insulation (3 kV, UL1577) |
| RS485 speed | - | - | - | - | 1200÷115 kbps |
| Power supply | 12 Vdc | | 10÷30 Vac/dc | | |
| Power consumption | 30 mA | 2 mA | 0,5 W | | |
| Wind direction principle | Hall effect system | 2 kΩ potentiom. | Hall effect system | | |
| Data logger compatibility | M-Log (ELO007-008) R-Log (ELR515) X/E-Log (all models) | | - | - | - |

## Common features

| | | |
|---|---|---|
| Wind speed | *Principle* | N.32 step optoelectronic disk |
| | *Accuracy* | 0÷3 m/s=1,5%, >3 m/s= 1% |
| | *Threshold* | 0,26 m/s |
| | *Delay distance* | 4,8 m (@ 10 m/s) According to VDI3786 and ASTM 5096-96 |
| | *Resolution* | 0,07 m/s |

continued

| | | |
|---|---|---|
| Wind direction | *Principle* | See table above |
| | *Measuring range* | 0÷360° (0÷355° DNA122#C) |
| | *Accuracy* | 1% |
| | *Threshold* | 0,15 m/s |
| | *Resolution* | 0,3° |
| | *Delay distance* | 1,2 m (@ 10 m/s)<br>According to VDI3786 and ASTM 5366-96 |
| | *Damping coeff.* | 0,21 (@ 10 m/s)<br>According to VDI3786 and ASTM 5096-96 |
| General information | *Operative damage limit* | 75 m/s |
| | *Connector* | 7 pin IP65 watertight connector |
| | *Housing* | Anodized aluminum |
| | *Cup* | PA6 plastic and fiberglass |
| | *Vane* | Aluminum |
| | *Mounting* | Mast ø 48 ÷ 50 mm |
| | *Electric protections* | Tranzorb and Emifilters |
| | *Operative temperature* | >-30°C (without ice) |
| | *Mounting* | Mast ø 48÷50 mm |
| **Accessories** | **Order numb.** | |
| | **DZC405** | Calibration certificate<br>Includes in DNA121#C and DNA122#C |
| | **DWA505** | Cable L = 5 m |
| | **DWA510** | Cable L = 10 m |
| | **DWA525** | Cable L = 25 m |
| | **DWA526** | Cable L = 50 m |
| | **DWA527** | Cable L = 100 m |
| | **MG2251** | 7 pin free female connector |
| | **DNA124** | Spare part: rotor |
| | **DNA127** | Spare part: vane |
| | **MM2011** | Spare part: bearings for Wind direction<br>(QT.2 required) |
| | **MM2020** | Spare part: bearing for Wind speed<br>(QT.2 required) |