WIND SPEED (Wind cup)

Compact anemometer



- Made in anodized aluminum body and Luran cups, for long time life in severe environmental conditions and strong winds
- Without power consumption is an ideal solution in applications with very low energy availability
- Frequency output (reed relay) for easy connection to LSI LASTEM's equipment and third-part systems
- Internal ISO17025 accredited calibration laboratory
- STB and MSB accessories to convert the frequency signal output in 4...20 mA or RS485 signals

With compact size and high mechanical strength, these sensors are particularly suited for use in strong wind applications, where long term reliability without maintenance is required, as in wind farms and wind turbine surveys. These sensors are compatible with many LSI LASTEM data loggers, but they can be also easily integrated with third party systems, thanks to a high-quality relay-reed-generated linear pulse output.

Technical Specifications

PN	DNA202.1	
Wind speed	Principle	3 cups anemometer with Relay Reed
	Measuring range	0...75 m/s (damage limit)
	Accuracy	± 0.5 m/s (0...10 m/s), 2.5% (>10 m/s) ± 0.1 m/s or ±1% (using transfer formula)
	Threshold	0.5 m/s
General Information	Output	N.6 pulse/round 2.6. 2.8 Hz x m/s
	Max. load	12 V DC @ 5 mA
	Connector	7 pin male IP65 watertight connector
	Cable	Compatibility with DWA5xxA cable (not included, see Accessories)
	Housing	Anodized aluminum,
	Operative temperature	-35...70 °C (without ice)
	Protection degree	IP66
	Mounting	Mast Ø 48...50 mm
	Data logger compatibility	E-Log Alpha-Log

Accessories

	**DYA046**	Coupling bar for WS+WD sensors on Ø 45...65 mm pole
	**DWA505A**	Cable L=5 m
	DWA510A	Cable L=10 m
	DWA525A	Cable L=25 m
	DWA526A	Cable L=50 m
	**MG2251.R**	7 pin free female connector
	DNA208.R	Spare part: rotor
	MM2001	Spare part: Bearing
	SVICA2203	ISO9001 type calibration certificate (Wind Speed)
	SVACA2216	ISO17025-ACCREDIA type calibration certificate (Wind Speed)
	**DEA420.1**	STB - Signal transducer Box for DNA202.1 wind speed sensor. Output: 4...20 mA Power supply 10...30 V AC/DC For more technical information, see MW9008 catalogue
	MDMMA1010.1	MSB—Modbus Sensor Box Same features as DEA420.1, but: Output: RS-485 Modbus-RTU



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).



DNA202.1 wind speed sensor can be mounted together with the DNA212.1 wind direction sensor using the DYA046 coupling bar. On the same coupling bar room for additional sensors like Temperature & RH% and Radiation sensors are available.

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Standard anemometer



- Accurate wind speed sensors with low threshold
- Frequency output and analogue output versions availability
- Wide power supply: 10...30 V AC/DC (analogue output versions)
- Up to 100 m cable lengths available
- Heated versions availability for operation even in presence of ice
- Internal ISO17025 accredited calibration laboratory

Wind speed sensor versions with frequency signal output (Hz/m/s) and versions with analogue signal outputs. These anemometers are ideal when requirements call for low thresholds and good accuracy even at very low wind speed. The wind speed element is a tachometer with 32 steps ensuring very high resolution.
DNA302.1 is equipped with heater. DNA301.1, with its extreme-low power consumption, can be used in applications with very low energy availability.
Analogue signal output models are based on microprocessor technology: every sensor has, based on its particular geometry, different response on each point of his measuring range; the microprocessor adjusts the signal linearity at any wind speed value, obtaining a precise and stable output. DNA802 and DNA806 models are equipped with heaters.

Technical Specifications

PN	DNA301.1	DNA302.1
Measuring range (damage limit)	0...75 m/s	
Output	0...883 Hz (13 Hz/m/s)	
Power supply	10...30 V AC/DC	24 V DC/AC @ 20 W
Heater	-	YES (-20 °C) switch-on temperature: 4 °C
Power consumption	Max 0.4 W	0.4 W + 20 W (heater)
Data logger compatibility	E-Log Alpha-Log using ALIEM module	

Standard anemometer

Technical Specifications

PN	DNA801 DNA801.1	DNA802	DNA805	DNA806	DNA807
Output	4...20 mA	4...20 mA	0...20 mA	0...20 mA	0...5 V
Measuring range	0...50 m/s, DNA801.1 only: 0...60 m/s				
Power supply	10...30 V AC/DC	24 V DC/AC	10...30 V AC/DC	24 V DC/AC	10...30 V AC/DC
Max. Load	300 Ohm	300 Ohm	300 Ohm	300 Ohm	-
Heater	-	YES (-20 °C)	-	YES (-20 °C)	-
Heater operative temperature	-	>-20...4 °C	-	>-20...4 °C	-
Power consumption	0.5 W	0.5 W + 20 W (heater)	0.5 W	0.5 W + 20 W (heater)	0.5 W
Data logger compatibility	E-Log, Alpha-Log				-

Common Technical Specifications

Wind speed	Principle	3 cups anemometer with N.32 step optoelectronic disk
	Accuracy	± 0.25 m/s or 3% (0...25 m/s) 2% (>25 m/s) ± 0.1 m/s or ±1% (using transfer formula)
	Threshold	0.26 m/s
	Resolution	0.06 m/s
	Delay distance	4.8 m (@ 10 m/s). According to VDI3786 and ASTM 5096-96
General Information	Operative damage limit	75 m/s
	Connector	7 pin IP65 watertight connector
	Housing	Anodized aluminum
	EMC	EN 6132-1 2013
	Protection degree	IP66
	Weight	1.3 kg
	Operative temperature	-40...70 °C (without ice)
	Mounting	On mast Ø 48...50 mm

Accessories

	**DYA046**	Coupling bar for WS+WD sensors on Ø 45...65 mm pole
	**DWA505A**	Cable L=5 m
	DWA510A	Cable L=10 m
	DWA525A	Cable L= 25 m
	DWA526A	Cable L=50 m
	DWA527A	Cable L=100 m
	**MG2251.R**	7 pin free female connector
	DNA204.R	Spare part: rotor
	MM2025	Spare part: bearings
	SVICA2203	ISO9001 type calibration certificate (Wind Speed)
	SVACA2216	ISO17025-ACCREDIA type calibration certificate (Wind Speed)



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