Environmental Monitoring Solutions

WIND SPEED & DIRECTION
(Wind cup and vane)
Combined wind speed and direction sensors

- Alternative signal outputs: (Hz+0...1 V), 0...5 V, 4...20 mA, RS485 Modbus
- Wide power supply: 9...30 Vac/dc
- Simple to install on pole of 5 cm diameter
- High demage threshold up to 75 m/s
- Optional cable up to L.100 m
- In house ISO17025 accreditate calibration laboratory

Combined wind speed and wind direction sensor. 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-sensors kit. Accuracy and thresholds are anyway near to be comparable with 2-sensors cup and vane kit alternatives. Different data output signals are available.

Technical Specifications

Order numb.	DNA121	DNA821 DNA821.1 DNA821.2	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)	DNA821: 0...60 m/s DNA821.1: 0...50 m/s DNA821.2: 0...75 m/s	0...60 m/s	0...60 m/s
Wind Direction output	0...1 Vdc	4...20 mA	0...5 Vdc	RS485
Protocol	-	-	-	Modbus RTU®, TTY-ASCII
Configuration	-	-	-	Hyperterminal
EMC	EN61326-1 2013	EN61326-1 2013	EN61326-1 2013	EN61326-1 2013
RS485 protection	-	-	-	Galvanic insulation (3 kV, UL1577)
RS485 speed	-	-	-	1200...115 kbps
Power supply	10...30 Vac/dc	10...30 Vac/dc	10...30 Vac/dc	10...30 Vac/dc
Power consumption	0.5 W	0.5 W	0.5 W	0.5 W
Data logger compatibility	E-Log, Alpha-Log using ALIEM module	E-Log, Alpha-Log using ALIEM module	-	E-Log using RS485->232 converter, Alpha-Log

Common Technical Specifications

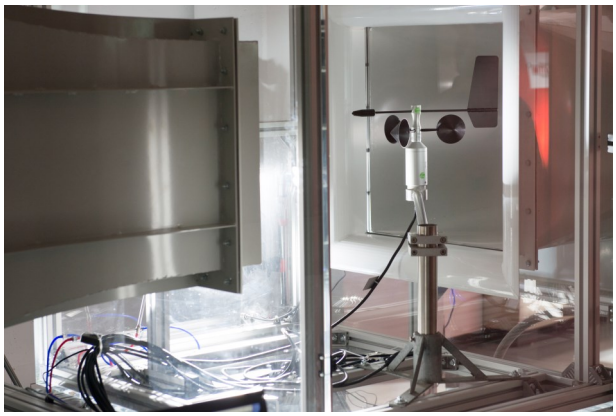
Wind speed	Principle	N.32 step optoelectronic disk
	Accuracy	0...25 m/s: ± 0.25 m/s or 3% >25 m/s: 2% ± 0.1 m/s or ±1% (using transfer formula)
	Threshold	0.25 m/s
	Delay distance	4.8 m (@ 10 m/s). According to VDI3786 and ASTM 5096-96
	Resolution	0.05 m/s
Wind direction	Principle	Hall effect system
	Measuring range	0...360°
	Accuracy	1%
	Threshold	0.15 m/s
	Resolution	0.3°
	Delay distance	1.2 m (@ 10 m/s). According to VDI3786 and ASTM 5366-96
	Damping coeff.	0.21 (@ 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,
	Cup	PA6 plastic and fiberglass
	Vane	Aluminum
	Protection type	IP66
	Weight	1.4 kg
	Operative temperature	>-30°C (without ice) ... 80°C
	Mounting	Mast Ø 48...50 mm

DNAnnn sensors serie has a very low measurement threshold (0,26 m/s) and at the same time, a very high demage limit (75 m/s). All specification are tested in LSI-LASTEM's wind tunnel under ISO17025 requirements.

Sensor's design has been made to prevent water and dirtiness to enter inside the sensor's bearings area. This permits to avoid the bearing replacement for the entire sensor life.

Accessories

	SVICA2203	ISO9001 type calibration certificate (Wind Speed)
	SVICA2304	ISO9001 type calibration certificate (Wind Direction)
	SVACA2216	ISO17025-ACCREDIA type calibration certificate (Wind Speed)
	**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**	7 pin free female connector
	**DNA124.R**	Spare part: rotor
	**DNA127.R**	Spare part: vane
	MM2011	Spare part: bearing for Wind direction (QT.2 required)
	MM2020	Spare part: bearing for Wind speed (QT.2 required)



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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