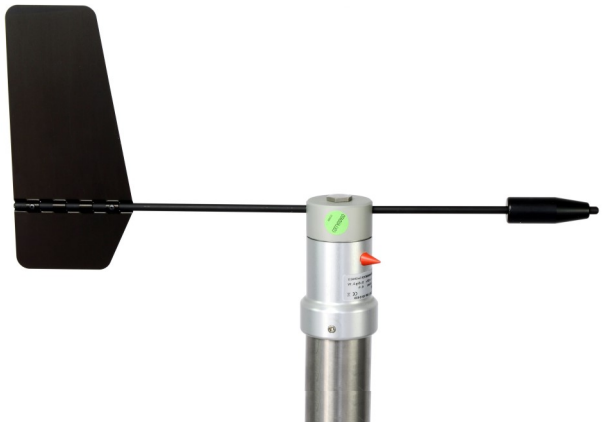
Environmental Monitoring Solutions

WIND DIRECTION (Wind vane)

Compact wind vane



- Completly made in anodized aluminium assuring long life time with high protection grade to severe weather conditions and strong winds
- 0÷1V output. 10÷30 Vdc power supply
- High precision magnetic encoder for true full 0-360° measurement range.
- Supplied with water-proof free connector (3-wires+ground) for easy connection to cable

With compact size and high mechanical strength, DDNA212 sensor is particularly suiited for use in strong wind applications, where long term reliability without maintenance is required, as in wind farms and wind turbine surveys. Ideal also for portable and light AWS and for wind-alarm applications where wind speed and direction are both important issues. On this regard, LSI LASTEM data loggers can detect specific alarm conditions and open digital outputs when wind speed is over a programmable value and wind direction is coming from a defined angle.

Technical Specifications

PN	DNA212	
Wind speed	Principle	Encoder magnetico
	Measuring range	0÷360°
	Threshold	0,4 m/s
	Accuracy	3°
General Information	Output	0÷1 V
	Connector	4 pin IP65 watertight connector
	Housing	Anodized aluminum
	Power supply	10÷30 Vdc
	Power consumption	0,4 W
	EMC	EN 6132-1 2013
	Protection grade	IP66
	Mounting	Mast Ø 48÷50 mm.
	Operative temperature	-48÷60°C (without ice)
	Data logger compatibility	M-Log (ELO008) R-Log (ELR515.1) E-Log, A-Log

Accessories

	MN1071	Cable (each per m)
	DYA046	Coupling bar For WS+WD sensors on Ø 45 ÷ 65 mm. pole
	DNA218	Spare part: vane
	MM2001	Spare part: bearing
	SVICA2304	ISO9001 type calibration certificate

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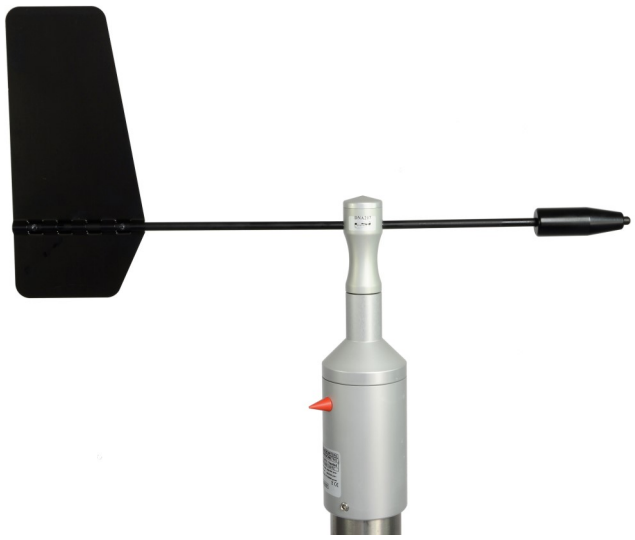
Standard wind vane
(direct output)



- Analogue outputs: 0÷1/5 V, 0/4÷20 mA.
- Very good values of Delay Distance and Damping ratio, according to VDI3786 and ASTM 5096-96 standards
- Heated versione for cold weathers
- Completly made in anodized aluminium assuring long life time with high protection grade to severe weather
- Protected bearings to avoid water and dirtness to access inside the their camera. This avoid to replace the bearings along the whole sensor life.

Wind direction sensor with analogue outputs. These wind vanes are ideal when requirements calls for simple integration with third-parties systems. DNA301.1-311.1 thanks to the 0-1 V output are ideal to be connected also to LSI-LASTEM's acquisition systems. Low Delay Distance values and high precisiong magnetic encoder allow to obtain good accuracy even at very low wind speed conditions. DNA311.1-DNA811-815 version are equipped with heaters to avoid ice formation on their body in very cold environments.

Technical Specifications

Codice	DNA301.1	DNA311.1	DNA810	DNA811	DNA814	DNA815	DNA816
Principle	Magnetic encoder						
Output	0÷1 Vdc		4÷20 mA		0÷20 mA		0÷5 Vdc
Power supply	10÷30 Vac/dc	24 Vac	10÷30 Vac/dc	24 Vac	10÷30 Vac/dc	24 Vac	10÷30 Vac/dc
Max. load	-	-	300 Ohm				-
Heater	-	SI	-	SI	-	SI	-
Heateroperative temperature	-	>-20÷4°C	-	>-20÷4°C	-	>-20÷4°C	-
Power Consumption	>-20÷4°C	0,4 W + 20 W (heater)	0,5 W	0,5 W + 20 W (heater)	0,5 W	0,5 W + 20 W (heater)	0,5 W
EMC	EN 6132-1 2013						
Data logger compatibility	M-Log (ELO008), R-Log (ELR515) E-Log, A-Log						

Common Technical Specifications

Wind direction	Measuring range	0÷360°
	Accuracy	3°
	Threshold	0,15 m/s
	Delay distance	1,2 m (at 10 m/s). According to VDI3786 and ASTM 5366-96
	Damping coeff.	0,21 (at 10 m/s). According to VDI3786 and ASTM 5096-96
General Information	Connector	7 pin IP65 watertight connector
	Housing	Anodized aluminum,
	EMC	EN 61326-1: 2013
	Protection grade	IP66
	Operative temperature	-40÷80°C (without ice)
	Mounting	Mast Ø 48 ÷ 50 mm.

Accessories

	**DYA046**	Coupling bar For WS+WD sensors on Ø 45 ÷ 65 mm. pole
	**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
	DNA217	Spare part: rotor
	MM2025	Spare part: bearings
	SVICA2304	ISO9000 type calibration certificate (Wind Direction)

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