



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 WS122#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 WS921 model is RS485 using Modbus RTU® or TTY-ASCII protocols.

Order numb.	WS833.01	WS833.2000	WS420	WS05	WS485
Wind speed output	0÷833 Hz		4÷20 mA	0÷5 Vdc	RS485
Wind speed measuring range	0÷75 m/s (damage 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 k Ω potentiom.	Hall effect system		
Data logger compatibility	M-Log (ELO007-008) R-Log (ELR515) E/X-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

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) 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
	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 Includes in DNA121#C and DNA122#C
	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
	WS124	Spare part: rotor
	WS127	Spare part: vane
	MM2011	Spare part: bearings for Wind direction (QT.2 required)
	MM2020	Spare part: bearing for Wind speed (QT.2 required)
		