

Cup Anemometer

PVC Housing, Rotor of black painted Stainless Steel

Type DWS-V-DBC05

CARLO GAVAZZI



- Anemometer with opto-electronic detection
- Measuring range: 2 to 30 m/s
- PNP and NPN open collector outputs in the same unit
- Current source outputs
- 10 to 28 VDC supply voltage
- All inputs and outputs are protected against reverse polarity and transients
- Dust sealing

Product Description

DWS-V-DBC05 is a cup anemometer designed for measuring air speed in a wide variety of applications, including wind turbines, buildings, cranes, weather stations, green-houses, etc. The product contains both PNP- and NPN open collector outputs, in which a fixed current is switched proportionally to the air speed at the rate of 10 pulses per m/s.

The DWS-V-DBC05 is equipped with a specially designed protection mechanism, which protects the bearings and the electronic parts against dirt and humidity. The body of the sensor is made of black PVC, and the rotor is produced in stainless steel.

Ordering Key

DWS-V-DBC05

Type _____
 Air velocity _____
 Digital output _____
 (Future subtypes) _____
 Cable Version _____
 Standard cable length in full metres¹⁾ _____

¹⁾ can be specified by customer

Specifications

Rated operational voltage	U _B	12 to 24 VDC
	U _C	10 to 28 VDC
Supply current	off)	Approx. 20 mA (all outputs)
Measuring range		1.5 to 30 m/s
Accuracy		≤ 3 m/s: ±0.5 m/s ≥ 3 m/s: ±10%

Output Specifications

Signal output	NPN Open Collector constant current sink	Square wave 12.5 mA ± 2mA
	PNP Open Collector constant current source	Square wave 12.5 mA ± 2mA
Output frequency		10 Hz per m/s
Output power		≤ 250 mW
Load supply voltage		Min. 10 VDC Max. 28 VDC
Voltage drop		Typ. 4.9 VDC

General Specifications

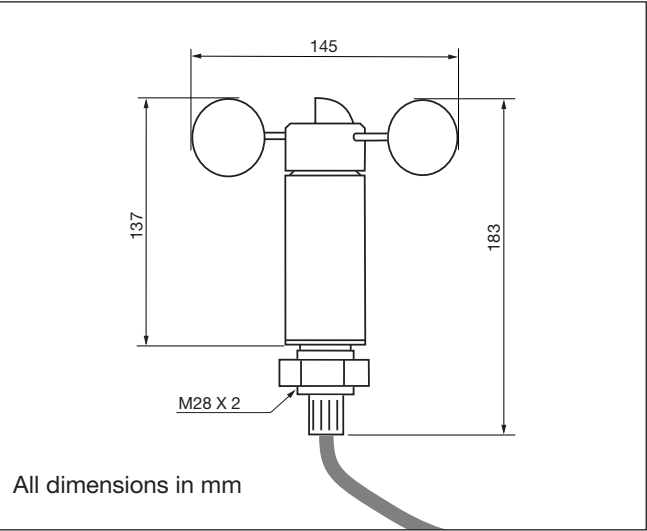
Dimensions	Rotor diameter	145 mm
	Thread	External thread: M28 x 2 with one nut
Materials	Body	Black PVC
	Rotor	Stainless steel (AISI 303), black painted
Bearing		Instrument ball bearings,
		stainless steel
Cable		5 m unshielded grey PVC, 4 x 0.25 mm ²
Rotor/housing tightening		Dust labyrinth
Environment	Degree of protection	IP54
	Ambient humidity	0 to 100% RH
Ambient temperature	Climatic protection	Against high humidity, salt and dust
Operating temperature		0 to 60°C (+32 to +140°F)
	Storage temperature	-20 to 60°C (-4 to +140°F)
EMC	IEC 61000-4-2	
	Contact discharge	± 4 kV
Air discharge		± 8 kV
	IEC 61000-4-3	
Radiated radio-frequency		15 V/m
	Electromagnetic fields	



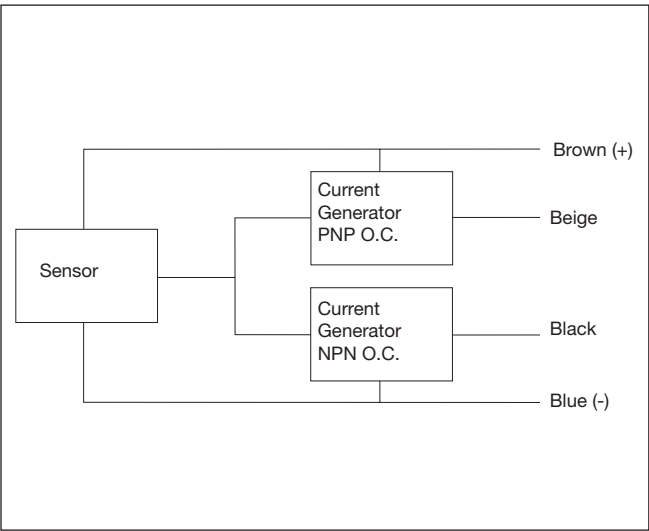
General Specifications (cont.)

IEC 61000-4-4 Fast transients/burst Power port, performance B± 2 kV Signal port, performance B ± 1 kV		IEC 61000-4-6 Conducted disturbances induced by radio-frequency fields	12 V _{rms}
IEC 61000-4-5 Surge 1.2/50 µs Power port, Ri = 2 Ω Signal port, Ri = 47 Ω	500 V 2000 V	Mounting position	Vertical with M28 thread
		Weight packaging	0,65 kg incl. 5 m cable and

Dimensions



Wiring Diagram



PV output versus wind speed

