

CV7

ULTRASONIC WIND SENSOR

CV7 is an updated wind sensor based on the CV3F series, already having a world wide distribution. It is light, compact and has a small consumption.

CV7 is designed to fit the specific needs of sailing boats through an easy to use programmable interface.

The sensor can be combined with a P.C., either with normalised NMEA[®] input equipment or with any specialised equipment having common interface.

In PC mode, this bi-directional sensor can be programmed and configured for: angle correction, smoothing time constants, measurements units and interface formats.



Principle of operation: how the equipment works

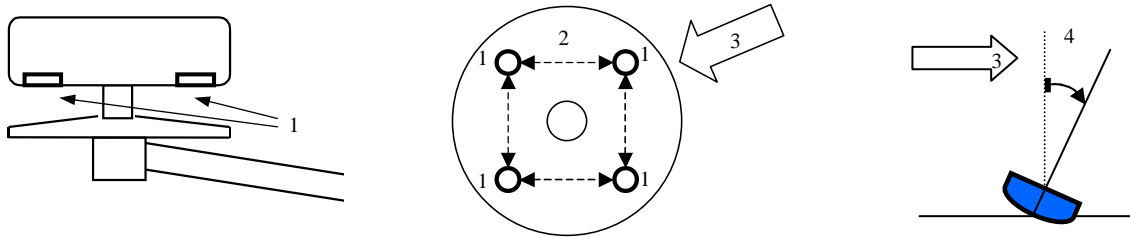
The sound, the ultrasonic sound is conveyed by the movement of the fluid in which it crosses. The electroacoustic transducers¹ communicate between themselves two by two by ultrasonic signals² to determine, following the orthogonal axes, the wave transit time differences induced by the air flow³.

The measurements are combined in an integrated calculator in order to establish the wind module and its direction in relation to a reference axis. The temperature measurements are used for calibration corrections.

CV7 Transducers communicate between themselves delivering four independent measures while head wind measured vectors are preferably used for calculations.

This method gives a sensibility of 0,25 knots, a dynamic of 80 knots and an excellent linearity.

The effect of an inclination⁴ of the wind sensor is partially corrected due to the shape given by the space.



Characteristics

Numerical output signals : NMEA0183[®], MWV, XDR or specialised program.
 Wind sensor sensibility : 0,25 knots
 Resolution : 0,1 knots
 Wind sensor range : 0,25 to 80 knots
 Directional sensibility : +/- 1 degree
 Resolution : 1 degree
 Power supply : 10 to 14 V DC 12 mA
 Temperature range : -10 to 55 ° C
 Weather proofing : IP67
 Weight of the head : 150 g (including the support and clamp : 230g)



Programmable parameters :

Angle correction in degrees
 Smoothing time constant of speed and direction: 1, 2, 4, 8, 16 s
 Speed units in knots, m/sec, km/h
 Temperature units Centigrade or Fahrenheit
 NMEA[®] interface formats or specialised programs.

Optional accessories :

ST option : compatible with ST40, ST60
 BG option : compatible with network, Hydra, Hercule
 SIL options: compatible with NEXUS
 BARO option : measurement of the atmospheric pressure
 StatFixBaro : CV7 software program
 Vertical fixation adaptor for CV7
 Numerical transmission speeds 4 800 or 38 400 baud / sec

Delivery contents :

CV7 sensor
 Support and clamp
 25 m cable, 4 conductors
 User's notice
 CV7 Software configuration

