

A person with long, flowing red hair is shown in profile, looking out over a beach and ocean. The hair is blowing in the wind, and the person is wearing a brown jacket. The background is a bright, slightly blurred view of the sea and sky.

A new way *to read the wind*

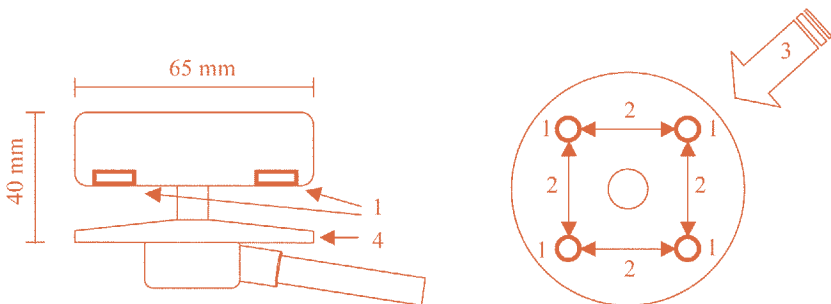
ULTRASONIC
WIND SENSOR

LCJ CAPTEURS

When precision *is highly required*

PRINCIPLE OF OPERATION:

The sound, the ultrasound is conveyed by the movement of the fluid in which it crosses. The electroacoustic transducers (1) communicate between themselves two by two by ultrasonic signals (2) to determine, following the orthogonal axes, the wave transit time differences induced by the air flow (3). 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 (4).



CV7 Transducers communicate between themselves delivering four independent measures. The validity checks are some reinforced while head wind measured vectors are preferably used for calculations. This method gives a sensibility of 0,25 knot, a dynamic of 80 knots and an excellent linearity.

In the CV3F, the signals ultrasounds forward in a space open to the wind of approximately one centimeter height separating transducers and reflectors from waves while following two vectors.

This method gives a sensibility of 0,5 knot, a dynamic of 99 knots and a good linearity.





A FULL RANGE OF ULTRASONIC WIND SENSORS FOR EACH APPLICATION

Compatible with all modern navigation instruments.



CV3F

For “**all-weather**” boats: patrols boats, coast-guards, customs, supply, rescue, fishing boats. (not available in North America)



CV7

New design allowing perfect response with a 30° heel angle.
For yachts, sailing boats.



NEW!!!

CV7-C-Canbus

The CV7-C can be delivered now with a CanBus junction box for interfacing with instruments compatible NMEA 2000. The CanBus junction box includes an atmospheric pressure sensor.

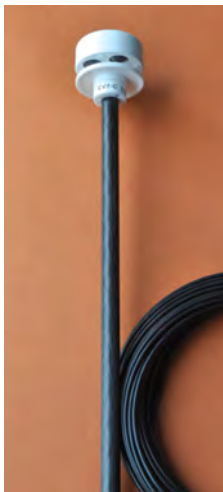
CV7-C-RM

The CV7-C can be delivered now with a CanBus junction box for interfacing with instruments compatible NMEA 2000. In this option the CanBus junction box includes an atmospheric pressure and an optional rotating mast sensor input sensor.



CV7-V

Technically identical to the CV7, it features a vertical arm more suitable for mounting on a **motor-boat**.



CV7-C

Upgraded wind sensor based on the CV7 series with high speed data output and a long carbon arm.

For **performance sailing boats or workboats** using **dynamic positioning**.



CV7SF

WIRELESS ULTRASONIC WIND SENSOR

For **Day-boats**, Light yachts, Dinghies, Club house weather stations, Home weather station.

CV7SF is a new wind sensor which completes the LCJ Capteurs series of ultrasonic products. It is wireless, stationary, and without power supply. One of its advantages is to simplify installation on elevated sites for measurements where the wind is free and unobstructed. On ships, another benefit is the elimination of cable weight in the mast. CV7SF combines advanced technologies: ultrasonic measurements, solar power supply, wireless digital transmissions, super-capacitor for electrical energy storage.

The CV7SF wind sensor integrates a radio transmitter, a photovoltaic cell and an energy accumulator. The measurement of wind speed/direction and temperature is transmitted at a short time interval of 25 ms at an average rate of 1 second during the day and 15 seconds during the night to cover a 15-hour night.

The radio signal is remotely received by a receiver/decoder box and formatted, providing standardized messages directly usable by computer USB or COM ports or by specialized navigation displays. The receiver is a low consumption unit and may also be supplied from the 12 V, from COM port or USB port. The link range is more than 50 m in free space.



StatMETEO

WEATHER STATION

This software for PC allows recording the wind data which are displayed on graphs. Multi-language setup.

LCJ CAPTEURS

ULTRASONIC WIND SENSOR

Because the wind never stops blowing...

A HUMAN AND TECHNOLOGICAL ADVENTURE

Christian Lamiroux (creator of MLR Electronique) is a famous expert well-known in the world of European marine electronics. He dashes into the adventure of LCJ Capteurs in 1999. With its 5th generation of sonic wind sensors, LCJ Capteurs has manufactured and sold more than 7 000 sensors which operate all over the world. Our commitment is simply to design and to provide ultrasonic wind vanes/ane-mometers for marine use, with the following specifications: compact, light and energy efficient while taking into account conditions of quality, price and respect for humans and the environment... We can all be proud together!

COMPATIBLE AND STANDARDIZED SENSORS

All sonic wind sensors in our range can be directly run from either a P.C. or with any other equipment using normalized NMEA® input as well as any specialized equipment equipped with common interface.

SENSORS FOR MARINE USE DISTRIBUTED WORLDWIDE

No moving parts - Robust design - Resistant to shock, wind gust, birds - No ageing - Maintenance free - Repeatability of the measures - Insensibility to the gyroscopic effect - Stability of sensibility to light winds - Small wind drag - Efficient with heel angle up to 30° - Light - Compact - Low electrical consumption - Competitive price.



OPTIONAL ACCESSORIES

Sensor	CV3F	CV7	CV7-V	CV7-C	CV7SF
OPTIONS					
AL 24DC	•	•	•		
BARO 12DC	•	•	•		•
BARO-AL 24DC	•	•	•		
BARO-S 24VDC	•	•	•		
ST for RAYMARINE°	•	•	•	•	•
BG for B&G°	•	•	•	•	•
SIL for NEXUS°	•	included	included	included	
CANBUS + BARO	•	•	•	•	•
RM		•	•	•	
USB		•	•	•	•
STATMETEO	•	•	•	•	•
ADAPT 1'	•		•		•

CHARACTERISTICS

Sensor	CV3F	CV7	CV7-V	CV7-C	CV7SF
CHARACTERISTICS					
OUTPUT DATA FORMAT	NMEA°	NMEA° or NEXUS°	NMEA° or NEXUS°	NMEA° or NEXUS°	NMEA°
UPDATE OUTPUT	2 per second	2 per second	2 per second	4 per second	1 per second day-light, 1 every 3 seconds Sunrise & sunset, 1 every 13 second night
WIND MODULE SENSITIVITY	0,5 Kt	0,25 Kt	0,25 Kt	0,25 Kt	0,25 Kt
WIND MODULE RESOLUTION	0,1 Kt	0,1 Kt	0,1 Kt	0,1 Kt	0,1 Kt
WIND MODULE DYNAMIC	0,5 to 99 Kts	0,25 to 80 Kts	0,25 to 80 Kts	0,25 to 80 Kts	0,25 to 80 Kts
DIRECTION SENSITIVITY	+/- 2°	+/- 1°	+/- 1°	+/- 1°	+/- 1°
DIRECTION RESOLUTION	1°	1°	1°	1°	1°
POWER SUPPLY	10 to 14 VDC	8 to 33 VDC	8 to 33 VDC	8 to 33 VDC	photovoltaic cells for transmitter 6.5 to 27 VDC for receiver
ELECTRICAL CONSUMPTION	25 mA	9.5 mA	9.5 mA	9.5 mA	autonomous for transmitter 5.8 mA for receiver
OPERATING TEMPERATURE RANGE WITHOUT ICEEING	-10°C/50°C	-15°C/55°C	-15°C/55°C	-15°C/55°C	-10°C/55°C
CONNECTION LINES	25 meters coaxial cable RG58	25 meters cable 4 x 0.22mm²	25 meters cable 4 x 0.22mm²	25 meters cable 4 x 0.22mm²	Radio transmitter 433 mHz Tx power : 10 dbm Message time : 25 ms
INTERCONNECTIONS	Junction box with screw terminal	Direct +12 V 0 V NMEA°+ NMEA°-	Direct +12 V 0 V NMEA°+ NMEA°-	Direct +12 V 0 V NMEA°+ NMEA°-	Receiver Superheterodyne ASK 433 MHz Sensitivity: -110 dbm Outputs via screw terminal
WEIGHT OF THE HEAD	190 g	100 g	100 g	100 g	100 g
MOUNTING	Vertical arm Lengh: 30 cm Alu Ø 20 mm	Oblique arm Lengh: 30 cm Alu Ø 12 mm	Vertical arm Lengh: 30 cm Alu Ø 16 mm	Vertical arm lengh: 700 mm Carbon Ø 16 mm	Vertical arm Lengh: 30 cm Alu Ø16 mm
MOUNTING TYPE	2 inox clamp	bracket	bracket	bracket	bracket
WEIGHT OF THE HEAD INCLUDING THE SUPPORT AND CLAMP	275 g	200 g	200 g	200 g	200 g

CE compliant - warranty: 2 years in our factory. Specifications subjects to modification without notice

LCJ CAPTEURS

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