Sailsense Analytics

INSTALLATION PROCEDURE

POD for Volvo engine with ECU

Revision history

Revision	Date	Description	Author	Checked by
1.0	21/06/2018	Initial release	Nicolas Z.	Jeremie S.
1.1	01/04/2019	Small corrections	Nicolas Z.	Yannick V.
1.2	25/06/2019	Minor changes	Yannick V.	Nicolas Z.
1.3	11/06/2020	Add user manual and safety information	Nicolas Z.	Yannick V.
1.4	01/06/2022	Update schematics with new cabling kit	Yannick V.	-

BEFORE YOUR START

First of all, we would like to thank you for purchasing this product and we hope that it will bring you entire satisfaction. Before you proceed with the installation, please check for the latest version of the Installation Procedure at www.sailsense.io/first-use.

In case of question during or after installation, please reach out to our **Support teams**:

support@sailsense.io
+32 460 22 00 00
Sailsense Analytics

IMPORTANT SAFETY AND WARRANTY NOTICE:

- READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING OR OPERATING THE PRODUCT. FAILURE TO DO SO MAY CAUSE PERSONAL INJURY OR DAMAGE TO PRODUCT AND/OR PROPERTY.
- DO NOT ATTEMPT TO INSTALL THE PRODUCT IF YOU DO NOT HAVE SUFFICIENT KNOWLEDGE OR EXPERIENCE RELATED TO INSTALLING ELECTRICAL SYSTEMS ON BOATS. MAKE SURE TO TAKE ALL THE REQUIRED SECURITY PRECAUTIONS. SWITCH-OFF THE POWER SUPPLY OF THE BOAT TO SAFELY OPERATE THE CONNECTION OR PLACEMENT OF THE DEVICE.
- Review the product package and contents prior to beginning the installation. Take care when opening the packaging and removing items. Do not operate the product if the packaging or its content are damaged or if one or more parts are missing. In case of doubt, contact Sailsense support team immediately for further assistance.
- Sailsense products can only be serviced by Sailsense or their official trained representatives. Do not attempt to open or repair the product by yourself. Failure to do so will immediately void the warranty.
- Please leave no part of the package within reach of children or irresponsible adults.
- The manufacturer and distributors of this product cannot be held liable and declines responsibility for damage or personal injury resulting from improper use or failure to observe the instructions of the Installation Procedure.

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REQUIRED MATERIAL

Supplied by Sailsense

FOR THE POD

Part number	Description	Quantity	Picture
101-0002	Sailsense POD	x1	
102-9999	Sailsense POD cable	x1	
920-0004	Sailsense “Y” Engine cable	x1	
840-0001	Waterproof cap	x1	
828-0004	Mounting screws	x6	

Not supplied by Sailsense

- Silicone to glue the antenna
- Cleaning tissues
- Cable ties & cable ties mounts
- NMEA2000 cable adapter for Raymarine or Simrad NMEA backbones
- Wire
- Crimps and vamp clamps
- Installation tools (screwdrivers, voltmeters, crimping tools…)

INSTALLATION OF THE POD

STEP 1: IDENTIFY THE BEST PLACE TO INSTALL THE POD

The POD should be installed **inside** the boat.

The best place to install the POD is in the engine compartment or under the bed in the aft cabin.

STEP 2: CONNECT SAILSENSE "Y" ENGINE CABLE TO THE ENGINE

In the engine compartment, locate the engine ECU on the side of the engine.

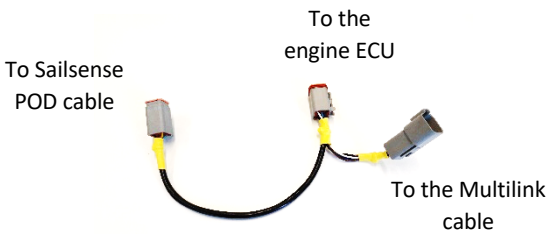
Note: if the engine ECU is not easily accessible, the following operation can also be performed at the back of the engine control panel (usually located in the cockpit).

Unplug the 6 pin cable from the ECU. The cable is circle on the picture close by.

Plug the Sailsense Y Engine Cable to the ECU, where the cable was previously connected.

Plug the Multulink cable to the other end of the Sailsense Y Engine Cable.

Plug the Sailsense POD Cable to the loose end of the Sailsense Y Engine Cable.



STEP 3: CONNECT THE CABLE TO ANALOG SOURCES (OPTIONAL)

You can skip this step if you do not want to monitor analog data such as bilge pump status or gauges or engine battery.

With a voltmeter, identify the wire of your analog data source that sends the data you would like to monitor.

Write down the value measured with your voltmeter. You will need to send it to Sailsense support team to calibrate your analog data source.

Warning: The voltage on the analog data source wire should never exceed 32V. Voltages above 32V will irreversibly damage the HUB.

Connect the data source wire to one of the available wires of the Sailsense cables, for example with a vamp clamp (not provided by Sailsense).

Analog input	SAILSENSE CABLE
Analog input 1	Green wire
Analog input 2	Blue wire
Analog input 3	White wire

STEP 4: SCREW THE POD TO THE BOAT

Place the waterproof cap on the ethernet connector.

Screw the POD to the boat, with its **connectors facing down**.

We recommend installing the POD

- at least 0.5m away from other metallic objects or from the water or fuel tanks

STEP 5: PLUG THE CABLE TO THE POD

Plug the cable to the POD.	
Turn on the engine. After about 15 seconds, the logo of the POD will become white. After about 2 minutes, the logo will become blue. Your device should be visible in the Sailsense Fleet Management Platform within 5 minutes.	

STEP 6: SEND YOUR CONFIGURATION TO SAILSENSE

After installation, send the following information **via whatsapp to +32 460 22 00 00** or **via email to** support@sailsense.io. This is mandatory for Sailsense to calibrate your devices.

Boat Owner Name	
Boat Name	
Device ID	
Red Wire	
Black Wire	
Orange Wire	
Grey Wire	
Green Wire (analog 1)	
Blue Wire (analog 2)	
White Wire (analog 3)	
NMEA 2000 connected ?	
ID of other Sailsense devices installed on board (e.g. POD)	

MISCALLENEOUS

LED behavior	
Color	**Description**
Blinking white	Device is booting
White steady (or with green blinks every 5 seconds)	Device is starting to operate
Blue steady (or with green blinks every 5 seconds)	Device is connected on the network
Blinking red	Error mode. Unplug the cable. After 2 minutes, plug it back. The device should boot normally. If the problem persists, contact Sailsense Support.
No light	The device is powered off. ***Check that the device is properly powered.*** *Note: the device automatically enters sleep mode after 1 hour of inactivity. It will automatically wake-up at least every hour or in case of noticeable event (boat moving, voltage change, NMEA2000 signal, …).*

INTENDED USE OF THE PRODUCT (USER MANUAL)

HUB

The HUB is used to monitor and gather data from the main electronical systems aboard of leisure crafts. It can be interfaced with any NMEA2000® equipment, NMEA0183® equipment, J1939® engines, as well as analog systems such as batteries, gauges, switches, … It can also record the GPS position of the boat.

The HUB serves as gateway between the boat systems and Sailsense' servers hosted in the cloud (through GSM network) as well as between Sailsense PODs (optional) and Sailsense' servers.

Technical specifications [1]

Model	HUB01
Use	Inside leisure boat
Altitude	up to 2000 m
Temperature range & Humidity	+5 °C to +40 °C 5-80 %RH related to voltage range with no condensation.
Storage temperature & storage relative humidity	-40 °C to +70 °C 5 to 80 % (no condensation)
Dimensions	149 / 129 / 44 mm
Input voltage & consumption	12V – 28V ⎓ (DC) 4,6 Wmax
Number of Analog inputs	3
Analog inputs measures	0-30V ⎓ (DC)
Number of CAN inputs	1
Box material	PC ABS V0
PCB material	FR4 UL94
Inner fuse protection	32V ⎓ (DC) 3A Fast blow
SuperCap	5VDC ⎓ - 40 °C - + 65 °C

[1] Sailsense Analytics SA/NV reserves the right to alter the characteristics of the products anytime.

POD

The POD is used to monitor and gather data from the main electronical systems aboard of leisure crafts. It can be interfaced with any NMEA2000® equipment, NMEA0183® equipment, J1939® engines, as well as analog systems such as batteries, gauges, switches, …

The POD connects to Sailsense' servers hosted in the cloud (through WIFI network) through a Sailsense HUB.

Technical specifications [2]

Model	POD01
Use	Inside leisure boat
Altitude	up to 2000 m
Temperature range & Humidity	+5 °C to +40 °C 5-80 %RH related to voltage range with no condensation.
Storage temperature & storage relative humidity	-40 °C to +70 °C 5 to 80 % (no condensation)
Dimensions	130 / 100 / 44 mm
Input voltage & consumption	12V – 28V ⎓ (DC) 2,1 Wmax
Number of Analog inputs	3
Analog inputs measures	0-30V ⎓ (DC)
Number of CAN inputs	1
Box material	PC ABS V0
PCB material	FR4 UL94
Inner fuse protection	32V ⎓ (DC) 3A Fast blow
SuperCap	5VDC ⎓ - 40 °C - + 65 °C

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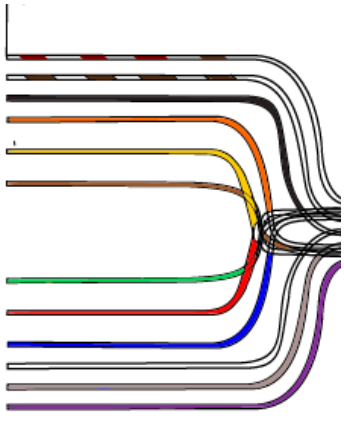
ACCESSORIES [3]

Cable

Specifications: UL 2904 with colors and tinned wires. Cable sheath resistant to oil and chemicals. Reference of the main circular connector: DD-18BFFA-LL7001

Color and pinout table:

Connector	PIN
DD-18BFFA-LL7001	2
DD-18BFFA-LL7001	4
DD-18BFFA-LL7001	3
DD-18BFFA-LL7001	5
DD-18BFFA-LL7001	10
DD-18BFFA-LL7001	12
DD-18BFFA-LL7001	9
DD-18BFFA-LL7001	1
DD-18BFFA-LL7001	11
DD-18BFFA-LL7001	13
DD-18BFFA-LL7001	7
DD-18BFFA-LL7001	N/A



[3] Sailsense Analytics SA/NV reserves the right to alter the characteristics of the products anytime.

NAME AND ADDRESS OF MANUFACTURER

Sailsense Analytics SA

Cantersteen 47

1000 Brussels

Belgium.

Email : support@sailsense.io