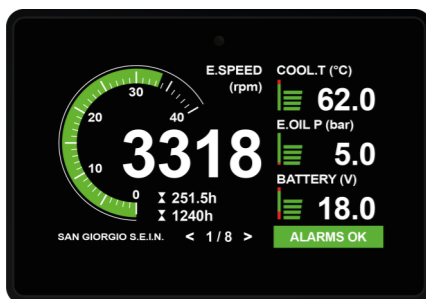




USER MANUAL

UNS10192 5" COMPACT DISPLAY

M180427 - Rev. 1.06 - 28/03/23



BEFORE BEGINNING INSTALLATION OF THIS PRODUCT:

- A visual inspection of this product for damage during shipping is recommended before mounting.
- It is your responsibility to have a qualified person install this unit.
 - Read and follow all installation instructions.
 - Disconnect all electrical power to the instruments.
- Make sure the instruments cannot operate during installation.
- Follow all safety warnings of the instruments manufacturer.
- Contact SAN GIORGIO S.E.I.N. if you have any questions.

Product description

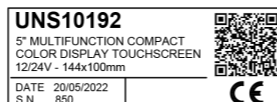
Multifunction display specifically designed for naval, professional and pleasure boats applications. It offers a 5" touch screen display with integrated ambient light sensor and special software designed for visibility in any light and operating condition. A selection of analog inputs and digital outputs allow direct acquisition of measure sensors without any additional signal converters. Two J1939 CAN Bus ports, one also compatible with NMEA2000 standard, can be used to interface multifunction navigation systems. It can be customized and programmed via USB interface.

The unit is supplied already programmed and ready to work according to the client application, but for experienced users it is also possible to easily customize the data acquisition and layout using a simple installation text file.

Identification label

The unit has an identification label located on the back where you can read

- Product description and code
- Date of manufacture in format DD/MM/YYYY
- Serial number
- QR Code product
- Type approved



Introduction

The unit must be installed inside a console that protects the rear of the unit and provides the desired IP protection. The back of the unit is not water resistant and serious damage to the unit and external connection may occur in case of contact with water, moisture or condensation.

The console must provide protection against direct sunlight and an appropriate cover when the unit is not in use, failing to do so will cause display wear/damage.

IMPORTANT: Exposure to extreme direct sunlight can cause a considerable increase unit temperature, and lead to over temperature and damage. This event should be avoided by correct bridge design (shade, distance from the windows, ventilation).

The console must have a correct inclination, generally 30 degrees, to allow water drainage and to reduce viewing angle.

IMPORTANT: the unit uses a capacitive touchscreen technology that is not designed to work if it is covered by water: moderate rain drops are tolerated but if outdoor operation under heavy rain is requested please use an auxiliary external keyboard/controller.

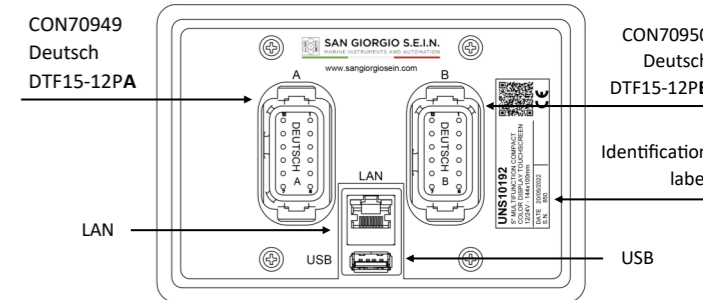
The console must provide enough space and ventilation, inside temperature must be kept as low as possible, always below 55°C.

The console must provide enough space for access and maintenance the rear connectors of the unit including an USB port that may be needed to update the firmware and download logger data.

The unit and its cables must be installed away from high electromagnetic noise generators apparatus like battery chargers, inverters, switch box, electric engines and so on.

ATTENTION: The installer is responsible for a correct waterproof installation and if necessary replace the gasket provided with another suitable sealant method. Failing to do so may cause leakage from the front of the unit and damage to the unit itself and connected electrical components.

Connection



ATTENTION! A-B connectors are not interchangeable.

Each connector (male counterpart) is marked with a letter from A to B and is polarized using a special slot to prevent a wrong connection.

The unit is designed for digital applications (CANBUS) and a small selection of analog inputs. It has 2 Deutsch connectors as shown in the image below:

Connector A

- 1 -Power Supply
- 2 +Power Supply
- 3 CAN-L 2 (NMEA 2000)
- 4 CAN-H 2 (NMEA 2000)
- 5 GND CAN
- 6 NMEA Input
- 7 CAN-L 1
- 8 CAN-H 1
- 9 RS485A / RS232 RX
- 10 RS485B / RS232 TX
- 11 Digital input D1 / Output DO1
- 12 Analog input 1 (Custom, 0..300Ω)

Connector B

- 1 Analog input 2 (Custom, 0..300Ω)
- 2 Analog input 3 (Custom, 0..300Ω)
- 3 Analog input 4 (Custom, 0..300Ω)
- 4 Analog input 5 (Custom, 0..32V)
- 5 Analog input 6 (Custom, 0..32V)
- 6 Analog input 7 (Custom, 0..32V)
- 7 Analog input 8 (Custom, 0..32V)
- 8 Frequency input 1 (W)
- 9 Digital input D2 / Output DO2
- 10 Digital input D3 / Output DO3
- 11 Digital input D4 / Output DO4
- 12 Digital in. D5 / Out. DO5 / Freq. In. 2 (W)

Contacts

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Visit our website

www.sangiorgiosein.com

You'll find more information about our products with additional technical features and download PDF documents



The instrument is a maintenance free product, no spare parts are available. At the end of its life cycle the tachometer must be disposed according the electronics disposal rules in force. For technical assistance please contact your dealer.

The products and the technical specifications are the latest available and they are subject to change without notice. The information in this catalogue is generally drawn up in good faith, therefore we decline any responsibility following the use of the data in it.

Technical features

Dimensions	144 x 100 x 69mm
Mounting hole	135 x 91mm
Display	5" TFT LCD, high brightness
Resolution	480 x 272 pixel - 900 nits
Touch screen	Capacitive
Frame	Grey or black satin anodized aluminum
Case	(ASA) Black plastic
Inputs / Outputs	4 x Analog inputs 0-10V / 4-20mA 4 x Analog inputs 0-300Ω 1 x Frequency input alternator W / pickup 5 x Digital inputs / outputs
Communication ports	2 x CAN Bus 2.0B - 1 x NMEA0183 1 x RS232/485 - 1 x USB OTG
Power supply	12/24V <500mA
Environment	-20 +70°C - IP65
Weight	450g

Documentation

The following documentation is provided attached together with the instruments for installation and using the product.

M180427 - User manual

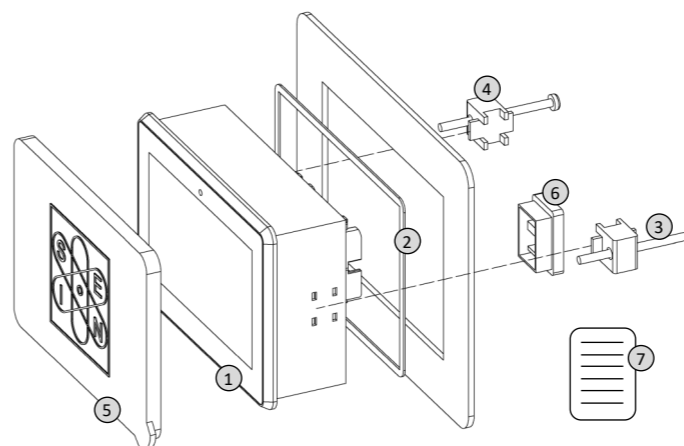
Other documentation is available on our website:

www.sangiorgiosein.com

D170522 - Wiring and mechanical drawing



Package content and installation



The package includes:

- 1) Panel (**UNS10192**)
- 2) Rubber gasket for panel installation (**GUA80242**)
- 3) 2 x Mounting screws 4x50mm (**VIT80323/1**)
- 4) 2 x Mounting brackets (**STA80195/PL**)
- 5) Display protection cover (**SCO10192**)
- 6) USB LAN protection plug (**DSC80195**)
- 7) Double language instructions and flush mount template

The unit has to be installed in a console with "cutout" of 135 x 91mm

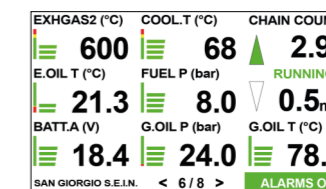
Reserve a depth below unit not smaller than 50 mm for connector and cable.

Please use the two bracket and screws as shown in the picture above to secure the unit to the panel leaving the gasket correctly compressed: with the standard screws the panel maximum thickness is 25mm.

The unit is equipped with an gasket, if the material of the panel or the application require a more appropriate sealing method please do apply.

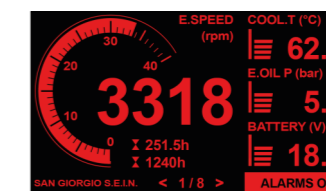
Interface custom

The device can be customized with different page layouts, colors and dials according to the customer's request.



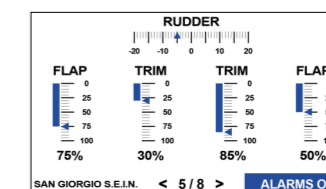
CHAIN COUNTER

Display of chain position and ascent / descent speed.



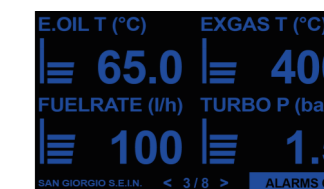
SINGLE ENGINE MONITORING

Single engine main page in night mode.



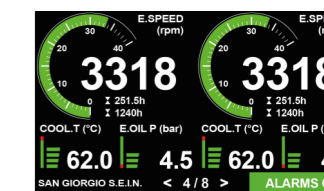
MONITORING

Interface with rudder angle, flap and trim indicators.



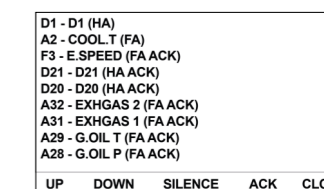
CUSTOMIZABLE PAGES

Example of page with large bar indicators.



DOUBLE ENGINE MONITORING

Page with dual engine display in day mode.

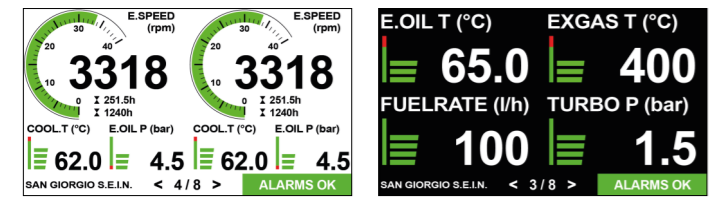


ALARM MONITORING

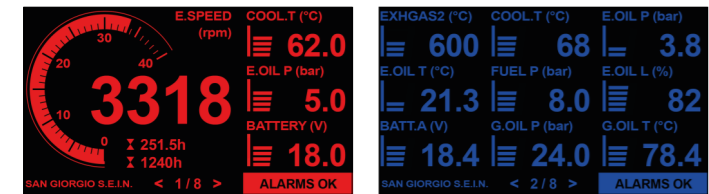
Alarm list display.

Operation

The unit is turned on/off with an external key switch or from the main engine power supply. After the startup sequence, the unit displays the main monitoring page as explained below. The user interface is organized into "pages" designed to simulate a "virtual cockpit." On a standard application there are generally 2 to 6 monitoring pages. After power on, the unit displays the first monitoring page; the other pages can be accessed with touch controls. The layout of each monitoring page varies depending on the application and can display different types of indicators. The monitoring page is optimized for daytime and nighttime operation. The panel automatically adjusts brightness and visual presentation.



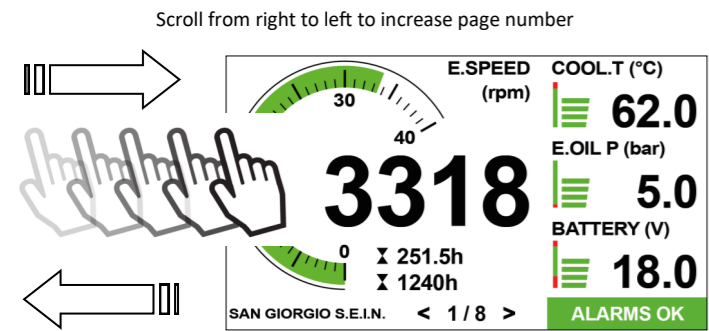
Day mode has maximum backlight brightness and draws indicators with white background and black characters or black background with white characters to improve contrast and visibility in direct sunlight.



Night mode reduces the brightness of the display backlight and draws indicators with a black background and red or blue characters to avoid glare and make it easier to adapt to night vision.

Operation

To change the page number you can slide your finger left and right or alternatively you can press the two arrows <> at the bottom.



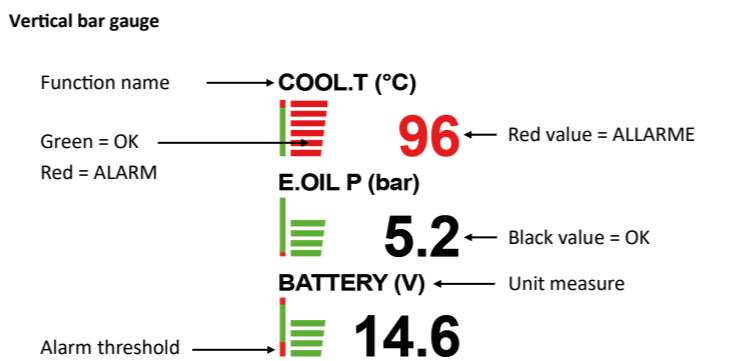
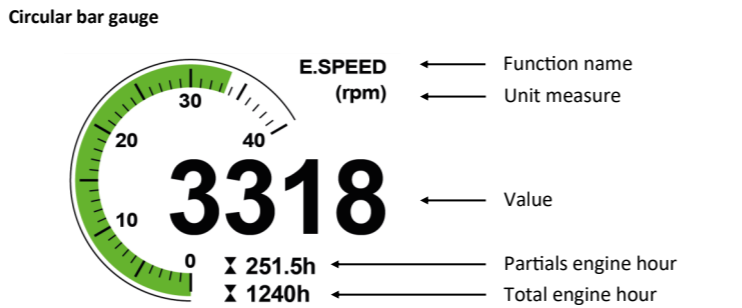
The page number can be changed also using the two buttons in the control panel.



The alarm status panel shows the current number of alarms : the colour test is **white** on a green background in case of no alarms and **white** on a red background in case of one or more active alarms.

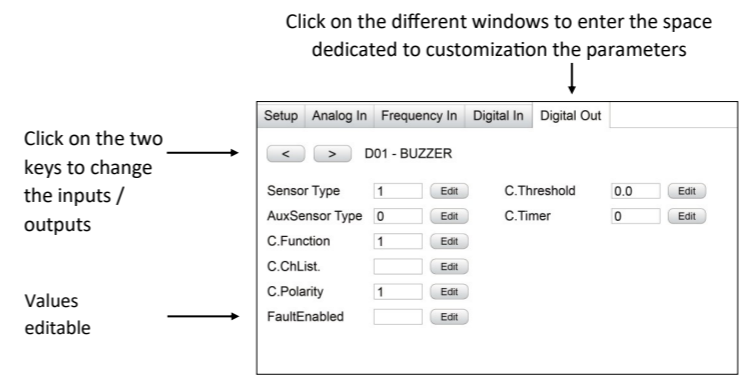
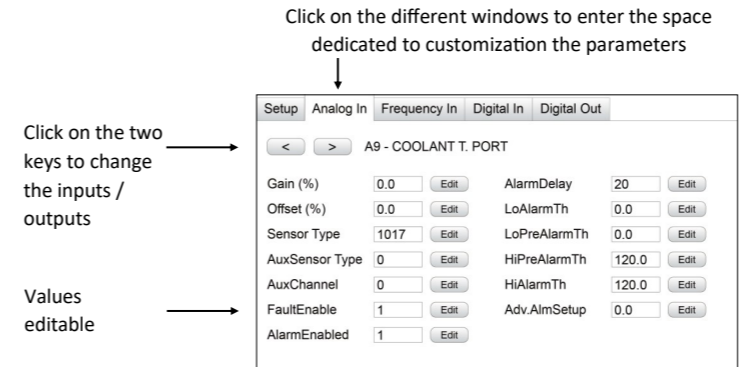
Gauges layout

Monitoring pages contain virtual gauges designed to "mimic" original physical gauges in a cockpit. Depending on the application the following standard gauge types can be used :
 - Circular or vertical bar gauge, used for analogue and frequency measures.
 - Digital (LED) gauge, used for digital on/off measure or status condition



Setup

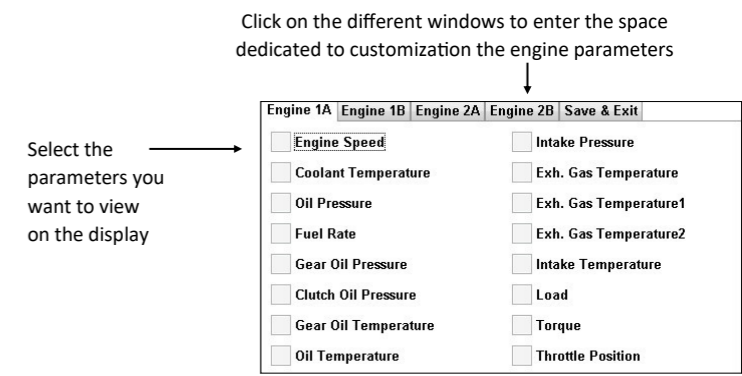
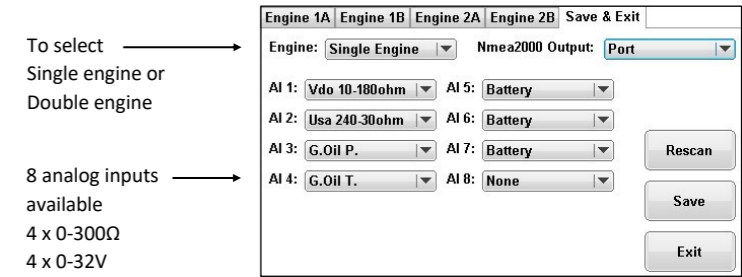
As soon as you enter the settings you can customize the parameters of the following inputs / outputs:



To save press the "Edit" button, enter the value and then press "Save". To exit the "Setup" page you have to point your finger at the top or bottom of the screen and drag it down or up, this will close the settings page.

Automatic setup

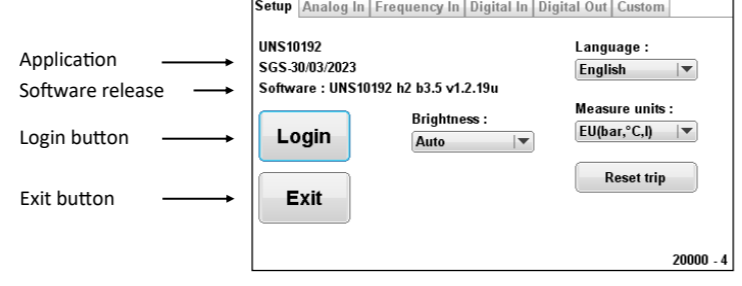
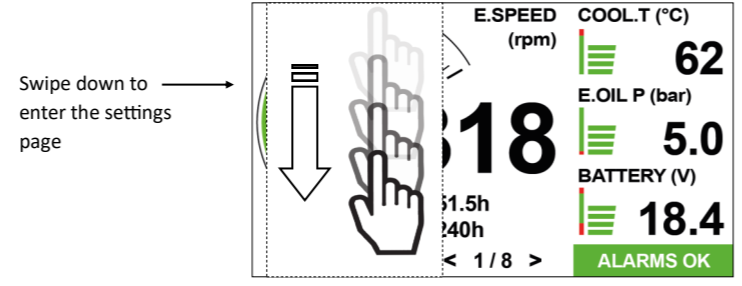
Some software versions allow the advanced user to run an automatic setup of the panel based on engine measurements over CANBUS J1939 and NMEA2000 lines. After the scan the user can select which detected measures to display and select a few additional analog measures to be added in the setup.



Canbus automatic setup is accessible with password in the setup page pressing the "AutoSetup" button.

Login

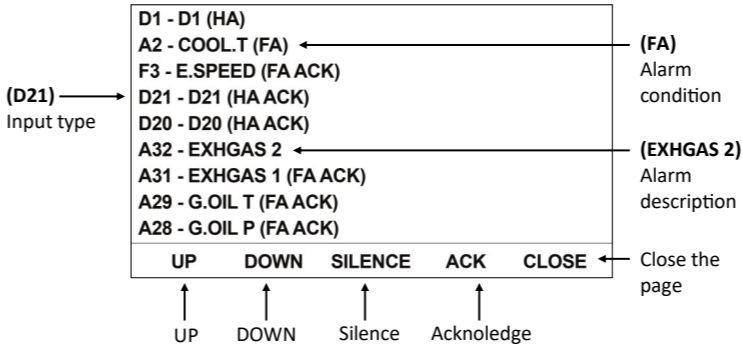
To enter the "Setup" page you have to point your finger at the top of the screen and drag it down, this will open the settings page.



To enter in the settings you have to type in the password and then click "Save"

Alarms page

The active alarm window is presented to the user immediately after any new alarm is detected and can be shown again by pressing the "Alarms" button in each monitoring page.



Each alarm is presented in a single line with the following format: "Alarm description" ("Alarm Status"), for example: **A29 - G.OIL T (FA ACK)**

The alarm description generally contains the alarm source (for example analog input "A29"), the alarm message (for example "G.OIL T"), and the alarm status itself (for example FA ACK= Fault Alarm Acknowledge).

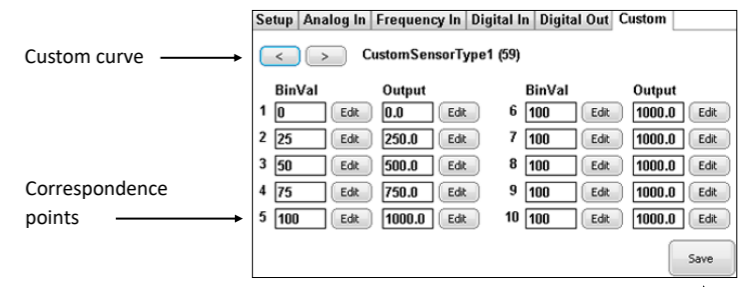
- LA = Low Alarm
- HA = High Alarm
- FA = Fault Alarm
- LA ACK = Low Alarm Acknowledge
- HA ACK = High Alarm Acknowledge
- FA ACK = Fault Alarm Acknowledge

ATTENTION: If one or more parameters have been modified within the "Setup" page, the device must be turned off and on again to confirm the changes made.

Custom input calibration

Some software versions allow the expert user to create up to ten customized "CustomSensorType" input/output linearization curves to be combined with one or more analog inputs.

With this function, for example, it is possible to display the level in liters following the non-linear shape of the tank or to manage non-standard sensors. For each custom curve it is possible to define ten correspondence points between the decimal input value (BinVal) and the relative output indication (Output). To use this feature, we recommend contacting our technical support.



After modifying the fields, click on "Save". Then go to the "Setup" page and click on "Exit".

Notes to update firmware and configuration

To update the UNS10192 system you need to:

- 1) Make sure that the files "UNS10192.s19" and/or "UNS10192.ini" are present on the USB drive respectively firmware and module configuration.
- 2) When the module is turned off insert the key into the USB port on the back.
- 3) Power up the module and wait until it restarts.
- 4) Disconnect the USB flash drive from the back.