SAN GIORGIO S.E.I.N.

MARINE INSTRUMENTS AND SENSORS SINCE 1960
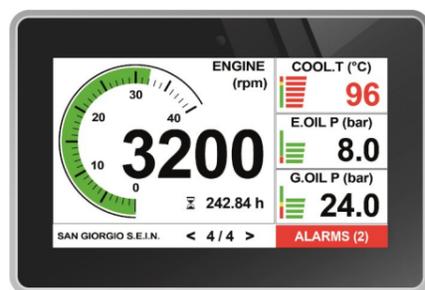
www.sangiorgiosein.com - info@sangiorgiosein.com

USER MANUAL

UNS10192 - 5" Touch screen monitoring and control system

Vision Line

M180427 - Rev. 1.02 - 28/08/18

Via Pedullà 59 - 16165 Genova - Ph. +39 010 8301222

ATTENTION !

BEFORE BEGINNING INSTALLATION AND OPERATION OF THIS PRODUCT :

- Read carefully this manual.

- First installation and setup must be done by qualified electrician.

- Please contact your dealer or SAN GIORGIO S.E.I.N if you have any questions.

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Please be aware and respect the Waste Electrical and Electronic Equipment (WEEE) directive for recycling of waste electrical and electronic equipment. Inform and contact the competent dealer for disposal.


Package content

Harness for UNS10192

Harness for UNS10192
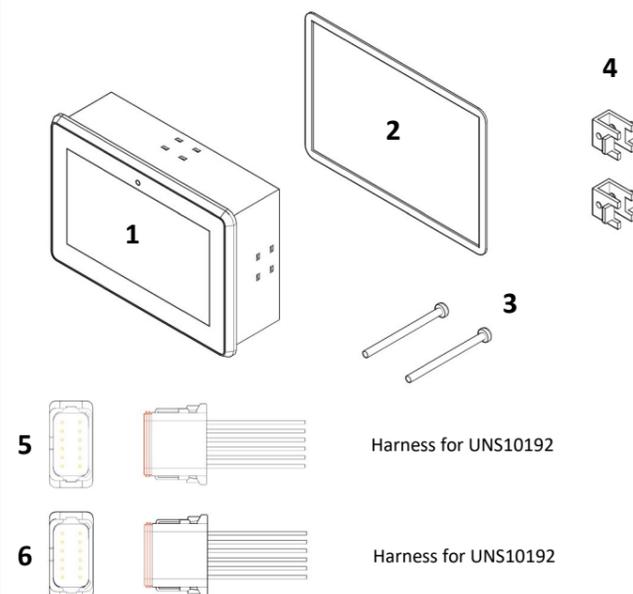
The **basic package** includes :
1) UNS10192 panel
2) Rubber gasket for panel installation (GUA80242)
3) N.2 Mounting screws 4 x 50mm (VIT80323/1)
4) N.2 Mounting brackets (STA80195)

Optional :
5) Connector A - DEUTSCH - DT06-12SA (CON70214/4) + W12S (CON70214/6)
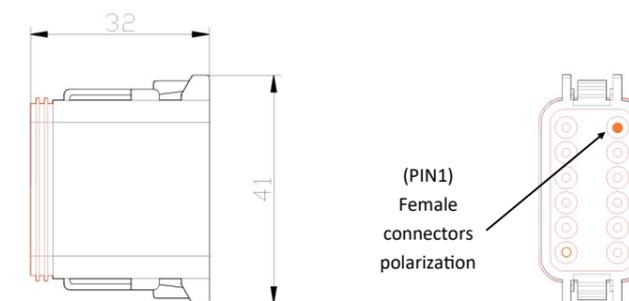6) Connector B - DEUTSCH - DT06-12SB (CON70905) + W12S (CON70214/6)

Connection

The FULL version offers the complete set of input/output available and uses 2 male connectors. A harness with female connectors is also available . OEM applications may have special harness that fits engine connectors.

CON70949
Deutsch connector
DTF15-12P**A**

CON70950
Deutsch connector
DTF15-12P**B**

LAN

USB
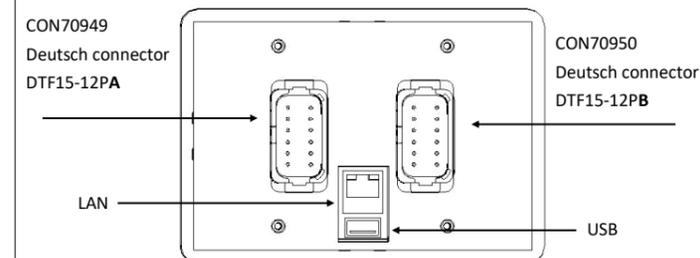
ATTENTION! A-B connectors are not interchangeable. Each connector (male and female counterpart in optional harness) is marked with a letter from A to B and is polarized using a special slot to prevent an wrong connection.

(PIN1)
Female connectors polarization

Technical features

Display	5" TFT LCD, high brightness
Resolution	480 x 272 pixel
Nits	900
Touch screen	Capacitive
Inputs / Outputs	No.4 Analog inputs 0-10V / 4..20mA (shunt)
	No.4 Analog inputs 0-300Ohm
	No.1 Frequency input alternator W / Pickup
	No.5 Digital inputs / outputs
Communication ports	No.2 CAN Bus 2.0B
	No.1 NMEA0183
	No.1 RS232/485
	No.1 USB OTG
Power supply	12/24 V - <500mA
	2A external fast fuse required
Dimension	144 x 100 x 68,6 mm
Mounting hole	135 x 91 mm
Operating temperature	-20 +70 °C
Protection grade	IP65
Weight	540g

Technical drawing available on website : *www.sangiorgiosein.com*

Introduction

UNS10192 is a compact high performance monitoring and control system designed for a wide range of systems and applications.

The unit has a high brightness 5 "TFT display, with touchscreen and a very simple and intuitive interface and offers the following features:

- Engine data acquisition with CANBUS J1939 interface.

- Data acquisition from traditional sensors for up to eight analog inputs, five digital inputs and one frequency input.

- Acquisition of navigation data with NMEA0183 interface.

- Up to five relay command outputs for signals and simple activations.

- Alarm monitoring according to approved safety standards.

- Automatic brightness adjustment and day / night mode.

- USB local connectivity for firmware update and configuration.

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.

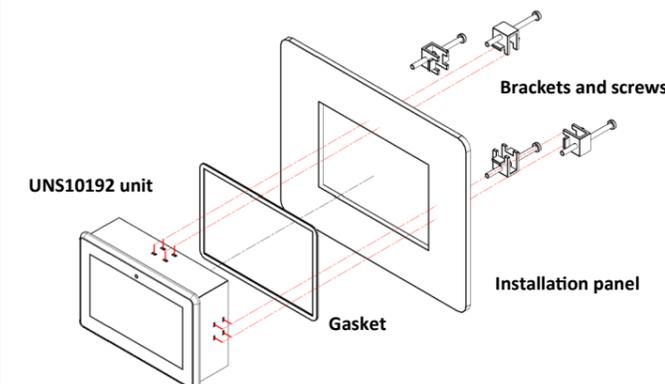Check our website for more drawings, brochures and information on new products.

Identifications

The unit has an identification label on the back panel where it is possible to read:

-Date of manufacture in YYMMDD format, for example 171205

Installation

Brackets and screws

UNS10192 unit

Installation panel

Gasket

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

The unit has to be installed in a consolle with "cutout" of 135 x 91mm , this measure has to be as accurate as possible due to the unit small border profile 144 x 100mm.

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

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.

The installer is responsible for a correct waterproof installation and if necessary to replace the gasket provided with another suitable sealant method.

Connection list

The Deutsch connectors version are designed for digital (CANBUS) application when only a small selection of analogue inputs. It has 2 x deutsch connectors as seen in the picture below :

12pin
Male connectors
A and B

LAN and USB connector
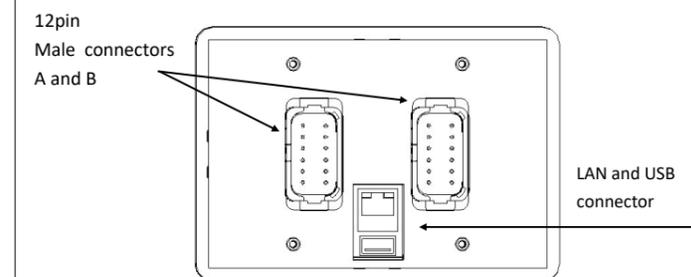
Connector A
(Deutsch DTF15-12PA - CON70949)

1) -Power Supply
2) +Power Supply
3) CAN-L 2
4) CAN-H 2
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
(Deutsch DTF15-12PB - CON70950)

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 input D5 / Output DO5 / Frequency input 2 (W)

Operation

The unit is powered on/off with an external key switch or automatically when powered from the measured device or engine main power supply.

After the startup sequence the unit show the main monitoring page as explained below.

The user interface is organized in "pages" designed to simulate a virtual cockpit. On a standard application there are generally from 2 to 10 monitoring pages. After power on the unit shows the first monitoring page , other pages are accessible with touch commands. The layout of each monitoring page varies according the application and may display different type of analogue or gauges .

In the images below You'll find two common pages for engine monitoring application.
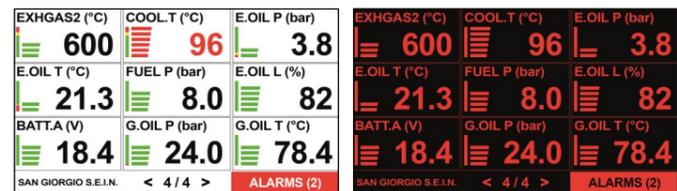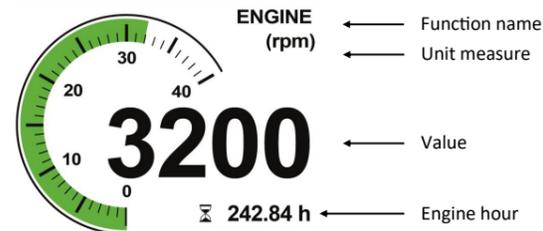

Page with bar indicators in day mode

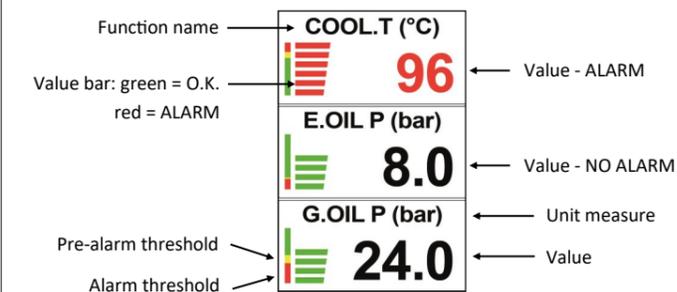Page with bar indicators in night mode

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 used :

- Circular o vertical bar gauge, used for analogue and frequency measures.

- Digital (LED) gauge, used for digital on/off measure or status condition

- Databox gauge, used to group multiple information in numeric format.
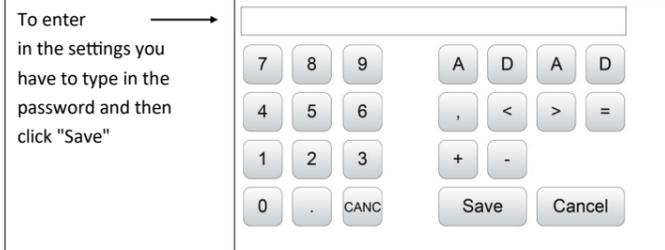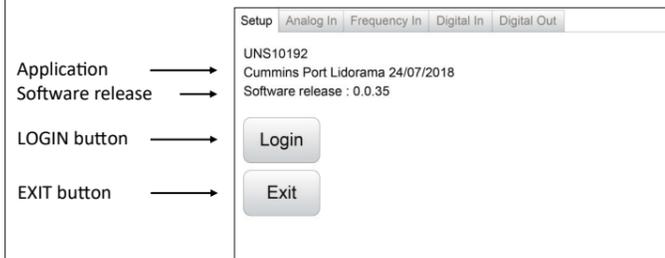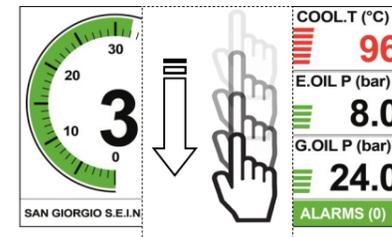
Circular bar gauge

ENGINE (rpm) ← Function name
← Unit measure

3200 ← Value

⧗ 242.84 h ← Engine hour

Vertical bar gauge

Function name → COOL.T (°C)
96 → Value - ALARM
Value bar: green = O.K.
red = ALARM
E.OIL P (bar)
8.0 → Value - NO ALARM
G.OIL P (bar) → Unit measure
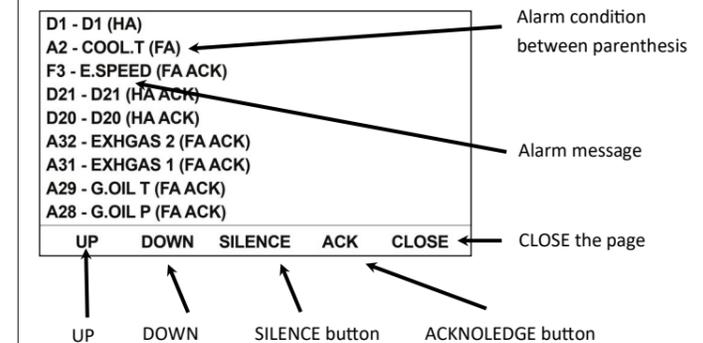Pre-alarm threshold → 24.0 → Value
Alarm threshold →

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.

Application Software release →

UNS10192
Cummins Port Lidorama 24/07/2018
Software release : 0.0.35

LOGIN button → Login

EXIT button → Exit

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

Alarms page

The management of alarm is accessible by the user in the **alarm 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.

D1 - D1 (HA)
A2 - COOL.T (FA) ← Alarm condition between parenthesis
F3 - E.SPEED (FA ACK)
D21 - D21 (HA ACK)
D20 - D20 (HA ACK)
A32 - EXHGAS 2 (FA ACK) ← Alarm message
A31 - EXHGAS 1 (FA ACK)
A29 - G.OIL T (FA ACK)
A28 - G.OIL P (FA ACK)
UP   DOWN   SILENCE   ACK   CLOSE ← CLOSE the page

UP   DOWN   SILENCE button   ACKNOLEDGE button

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 source of alarm (for example analogue input "A49"), the alarm message (for example "COOLANT T.") and the status of the alarm itself (for example HPA = high pre alarm).

Operation

Scroll from right to left to increase page number
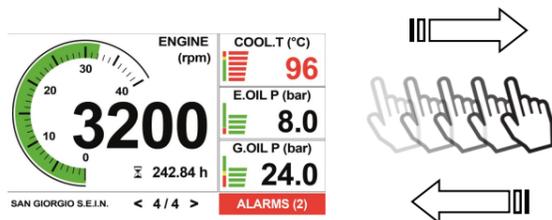
Scroll from right to left to decrease page number

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.

Page without alarms

SAN GIORGIO S.E.I.N.   < 1/4 >   ALARMS (0)

Page with alarms

SAN GIORGIO S.E.I.N.   < 1/4 >   ALARMS (2)

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

Day / night mode

The monitoring page is optimized for both day and night operation. The panel automatically adjust brightness and visual presentation.
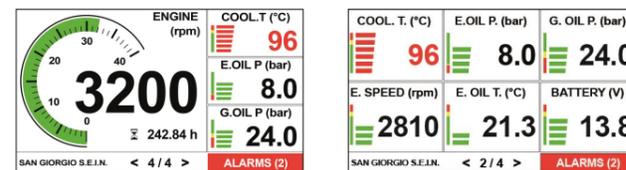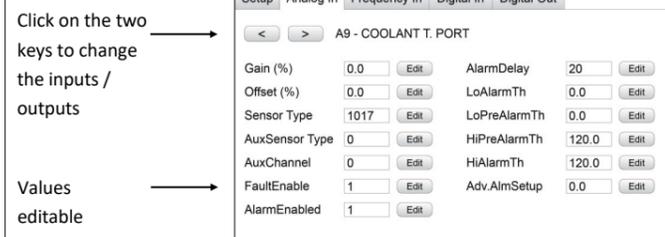

Day mode has maximum backlight brightness and draws gauges with white background and black fonts n order to enhance contrast and visibility in direct sunlight.
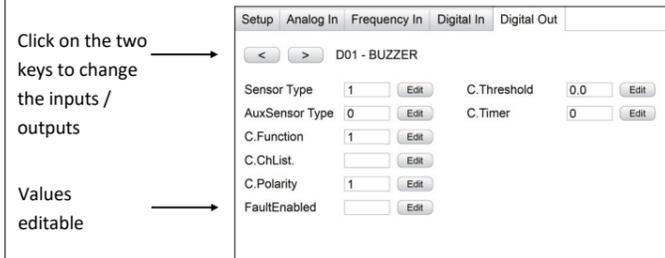

Night mode reduces display backlight brightness and draws gauges with black background and red font in order to avoid dazzling and help night vision adaptation.

Setup

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

Click on the different windows to enter the space dedicated to customization the parameters ↓

Click on the two keys to change the inputs / outputs →

Setup | Analog In | Frequency In | Digital In | Digital Out

< > A9 - COOLANT T. PORT

Gain (%)	0.0	Edit	AlarmDelay	20	Edit
Offset (%)	0.0	Edit	LoAlarmTh	0.0	Edit
Sensor Type	1017	Edit	LoPreAlarmTh	0.0	Edit
AuxSensor Type	0	Edit	HiPreAlarmTh	120.0	Edit
AuxChannel	0	Edit	HiAlarmTh	120.0	Edit
FaultEnable	1	Edit	Adv.AlmSetup	0	Edit
AlarmEnabled	1	Edit			

Values editable →

Click on the different windows to enter the space dedicated to customization the parameters ↓

Click on the two keys to change the inputs / outputs →

Setup | Analog In | Frequency In | Digital In | Digital Out

< > D01 - BUZZER

Sensor Type	1	Edit	C.Threshold	0.0	Edit
AuxSensor Type	0	Edit	C.Timer	0	Edit
C.Function		Edit			
C.ChList.		Edit			
C.Polarity	1	Edit			
FaultEnabled	1	Edit			

Values editable →

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.

Notes to update firmware and configuration

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.

Contacts

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