

## Invicta Touch Interface SNLXMTSOC - Manual



## Overview

Invicta Interface is a specialised indicating instrument designed for use with Invicta Xero batteries. Based on RS485 communication, it provides detailed information on battery status, including voltage, current, remaining capacity, temperature, and configuration settings.

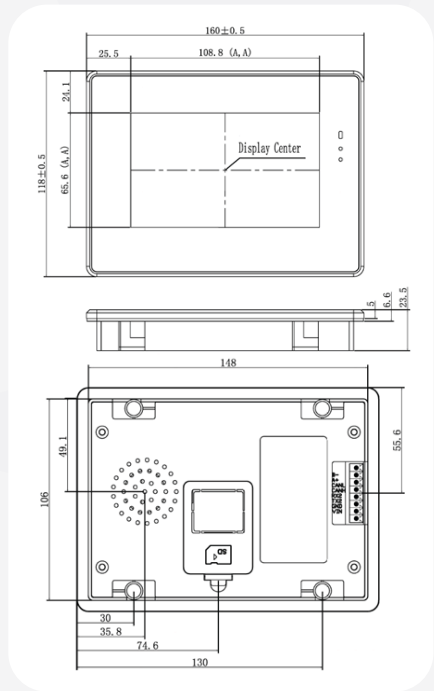
Unlike traditional setups that require a connection to the diverter, Invicta Interface can be directly linked to the battery using a simple wiring harness. This streamlined connection method not only reduces the cost of the wiring harness but also significantly speeds up the installation process.

## Attention

- Before using this product, please read this manual thoroughly.
- Retain this manual for future reference.
- Ensure correct usage by carefully following the instructions provided in this manual. The company is not liable for any direct, indirect, or consequential damages resulting from improper use or misuse of this product or related items.
- Information in this manual is subject to change without prior notice.
- Avoid using input voltages or currents that exceed the specified limits to prevent product damage or fire.
- Professional technicians should handle installation and wiring. If you encounter any issues, please contact the company's technical support promptly.

## Specifications

Rated Input Voltage	9-60V
Rated Power	<5W
Operating Current Maximum	170mA (VCC=12V)
Operating Current Minimum	55mA (VCC=12V)
Resolution	800x480
Operating Humidity	10%-90%RH
Protective Level	IP65 (Front)
Communication	RS485
Operating Temperature	-20-70°C
Storage Temperature	-30-80°C
Net Weight	340g
Type	LCD
Screen Size	5 Inch
External Dimension	118Lx160Wx6.6D
Internal Dimensions	106Lx148Wx16.9D
Compatible Batteries	SNLX (Invicta Xero)



## Features

- Wired touch screen interface for Invicta Xero batteries (SNLX)
- CAN/RS485/RS232 communication
- IP65 water and dust resistant front with rubber gasket separator
- Directly connectable to Invicta Xero batteries or via the Invicta I-Hub.
- Features a 5.0-inch IPS LCD screen with 800x480 pixel resolution and 262K true-color display.
- Equipped with a high-reliability capacitive touch panel.
- Includes a built-in speaker, LED lamp, and photosensitive sensor.
- Housed in a protective shell with anti-UV properties and conformal coating.
- Emits an audible alarm when specified alarm, protection, or low SOC conditions are detected.

## Battery Setup

### Step 1: Initial Setup

- **Connect Power Cable:** Ensure the Invicta Interface power cable is correctly connected to the Invicta Xero, observing polarity.
- **Connect Communication Cable:** Connect the communication cable to the LINK IN port of the Invicta Xero or the Invicta Interface port of the INVICTA I-HUB (if applicable). Verify that the INVICTA I-HUB power and communication cables are properly connected to the Invicta Xero.

### Step 2: Networking Multiple Batteries

- **Connect Communication Lines:** Connect the LINK OUT of the first battery to the LINK IN of the second, and so on for additional batteries.
- **Connected State:** Turn on all batteries then press and hold the RESET button on the first Invicta Xero display for over 3 seconds. All SOC indicator lights should flash simultaneously. If not, try again.
- **Communication State:** Press and hold the RESET button on the first battery for over 20 seconds. All SOC indicator lights will race alternately. This process may take 2-3 minutes. Once complete, the lights will stop flashing and display the battery SOC. If unsuccessful, try again.
- **Configure Bluetooth App:** Use the Invicta Legion Bluetooth app to set the system name, voltage platform, number of series and parallel connections. Select the first battery as the main battery.

### Step 3: Single Battery Setup

- **Connected State:** Follow the same procedure as in Step 2 to enter the connected state.
- **Communication State:** Follow the same procedure as in Step 2 to enter the communication network state.

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Legion APP For Free



## Installation



Waterproof rubber gasket (blue part in the schematic, actually in black): located between screen and shell to prevent water ingress. Additional glass glue is available for outdoor use to strengthen the waterproof performance

1



The opening requirements are shown in the figure.  
Depth >18.5mm  
Device front housing thickness <3.0mm



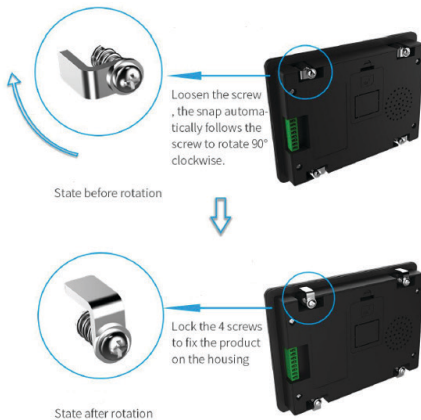
Install the screen from the front into the housing openings.

## Housing Requirements

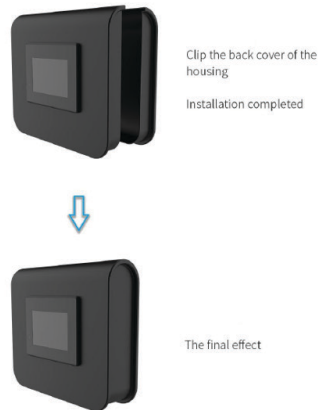
- Rubber gasket will be black. Ensure nothing is obstructing the seal as this is a protection for internals of the device.
- Minimum opening requirement (mm) 107H x 149W x 18.5D
- Maximum requirement should not exceed external dimensions of unit
- Install the unit from the front of the housing opening

## Installation

2



3



## Screw Adjustment

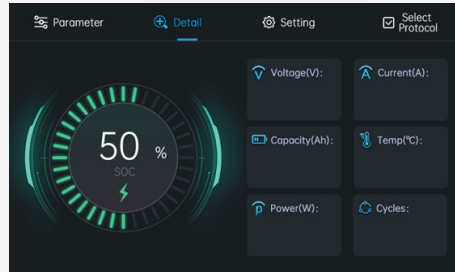
- Loosen the screw 90° in anti-clockwise direction, the clip will be in horizontal position
- Rotate clip 90° in clockwise direction until in vertical position
- Lock the 4 screws to fix the product on the housing

## Screen Display

### Parameter Page



### Detail Page



- SOC: The state of charge, displayed as a percentage. When the SOC is not greater than 10%, the interface will change from green to yellow.
- Voltage (V): The overall voltage of the battery system.
- Current (A): The current being passed through the battery system.
- Remaining Capacity (Ah): The overall remaining capacity of the battery system.
- Max Temp (°C): The maximum temperature of the battery system.
- Min Temp (°C): The minimum temperature of the battery system.
- It is possible to select temperature unit, including Celsius and Fahrenheit in setting interface.
- Configuration: The number of series and parallel connections in battery systems.

- Voltage (V): The voltage of the chosen pack.
- Current (A): The current being passed through the chosen pack.
- Capacity (Ah): The remaining capacity of the chosen pack.
- Temp (°C): The temperature of the chosen pack. It is possible to select temperature unit, including Celsius and Fahrenheit.
- Power (W): The power being transferred through the chosen pack.
- Cycles: The number of cycles.

## Screen Display

### Setting Page

Parameter Detail **Setting** Select Protocol

Time Setting:  Year  Month  Day  
 Hour  Minute  Second

Language Selection:

Temperature Unit:

- Time Setting: Invicta Touch Interface has RTC, including year, month, day, hour, minute, and second. It is possible to modify the time through the setting interface. It must click confirm after completing the time setting.
- Language Selection: Invicta Interface can select language, including English and Chinese.
- Temperature Unit: Invicta Interface can select temperature unit, including Celsius and Fahrenheit.



## Warning/Protection Alarms

### Warning Alarms

Cell under voltage warning	Cell over voltage warning	Battery under voltage warning
Battery over voltage warning	Charge over current warning	Discharge over current warning
Low ambient temperature warning	High ambient temperature warning	Mos low temperature warning
Mos high temperature warning	Cell charge low temperature warning	Cell charge high temperature warning
Cell discharge low temperature warning	Cell discharge high temperature warning	Low capacity warning
Low insulating resistance warning	Cell disconnected warning	Cell failure warning
Cell heating abnormal warning	Cell/system over voltage warning	Cell/system under voltage warning
Discharge high temperature warning	Discharge low temperature warning	Charge high temperature warning
Charge low temperature warning	Discharge over current warning	Charge over current warning
Internal-net communication failure warning	Cells unbalance warning	

### Protection Alarms

Cell under voltage protection	Cell over voltage protection	Battery under voltage protection
Battery over voltage protection	Secondary charge over current protection	Secondary discharge over current protection
Short circuit protection	Cell failure protection	Charge over current protection
Discharge over current protection	Low ambient temperature protection	High ambient temperature protection
Mos low temperature protection	Mos high temperature protection	Cell charge low temperature protection
Cell charge high temperature protection	Cell discharge low temperature protection	Cell discharge high temperature protection
Low capacity protection	Low insulating resistance protection	Cell disconnected protection
Mos failure protection	AFE failure protection	Cells voltage difference protection
Cell/system over voltage protection	Cell/system under voltage protection	Discharge high temperature protection
Discharge low temperature protection	Charge high temperature protection	Charge low temperature protection
Discharge over current protection	Charge over current protection	Mos failure protection
System failure protection	Cells unbalance protection	