ETS quick start manual

Kiwitron s.r.l.
Via Primo Maggio 5/9 Pontecchio Marconi
40037 Bologna, Italy
+39 051 678 1142 - info@kiwitron.it - www.kiwitron.it
P.IVA: IT02055970970 - SDI: M5UXCR1

Placement

The card reader (ETS-UP) device must be in an easy to reach location as the driver needs to use it to unlock the truck before use.

For the best shock detection, we advise to place the IO expansion (ETS-DN) firmly connected to the truck frame and perpendicular with the ground and the moving direction.

Avoid installing the ETS in environmentally hard location such as close to strong heat sources or exposed to the elements (although the ETS is IP65).
Also be aware not to place the card reader (ETS-UP) close to metallic objects which can prevent the wireless transmissions.

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Anti-collision Receiver

The antenna of anticollision must be installed in the center of forklift.This device measure the distance between his receiver and the operator tag (or another receiver)so it's most important which is mounted in the center of the forklift.

The ideal position is on the top of the front glass. If that position it's no good for the visual of operator it's possible to switch behind rearview mirror.

The safety and visibility of the driver must never be influenced

Do not place the antenna too near a metal parts because it could adversely affect the system.

When the antenna is installed it is necessary to remove the balancing resistance of the canbus from the wiring of the ETS system.

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Additional Sensor

To connect additional sensors how reversing radar, a radar of road or indication radar, remove the connector 4 poles coming with display and placed the wiring provided.

Is required to connect the cabling upon taking 4 poles coming up from display ETS, otherwise may occur malfunction or failure at the system.

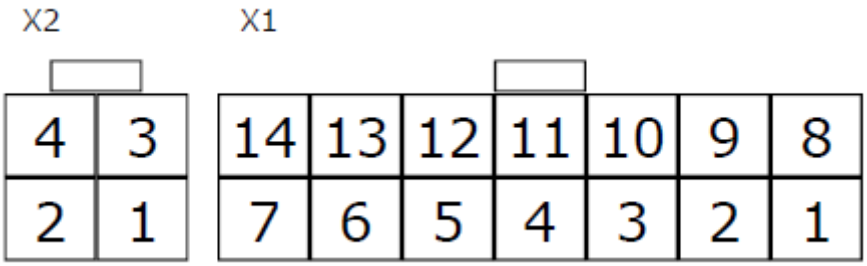
Connect the red wire to a 12/24V power source with the same negative reference used to power the ETS. Do not connect the 12/24V power supply if it is isolated from the negative reference used to power the ETS. Otherwise, malfunctions or failures may occur.

If you have installed the reverse sensor or lane sensor, use the grey connector.

The ETS can be equipped with one or more additional sensors connected to the same harness with chain connections.

For this, you must always place the closing connector (connettore maschio con due fili neri a ponticello) on the shortest female socket available.

Pinout



X1 connector pinout

Position	Function
1	Power input positive (10 - 120 Volts DC)
2	Power input negative
3	Digital input IP1 (positive activation threshold >1,7 Volts - 150 Volts max)
4	Digital input IP2 (positive activation threshold >1,7 Volts - 150 Volts max)
5	Analog input (0 - 10 Volts)
6	Digital input IN1 (negative activation threshold < 0,5 Volts - 150 Volts max)
7	Digital input IN2 (negative activation threshold < 0,5 Volts - 150 Volts max)
8	Relais 1 - common contact
9	Relais 1 - normally open contact (6Amp max)
10	Relais 2 - common contact
11	Relais 2 - normally open contact (6Amp max)
12	Relais 3 - common contact
13	Relais 3 - normally open contact (6Amp max)
14	Analog input AIN1 (0 - 5Volts) (used for current sensor)

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X2 connector pinout

Position	Function
1	Power output positive (5 Volts DC)
2	Power output negative
3	CAN +
4	CAN -

Canbus line on X2 connector has line closure resistor (120 ohm)

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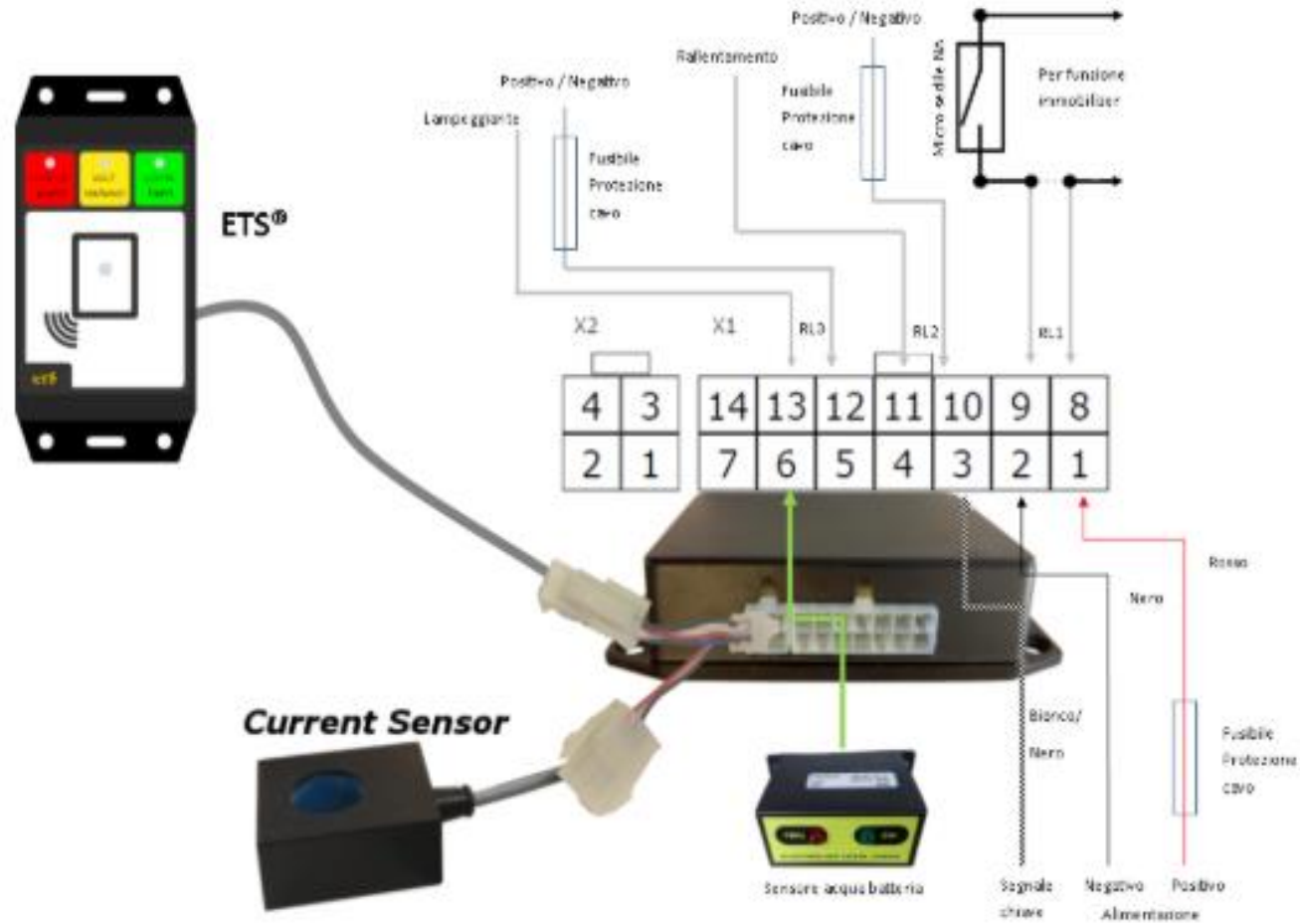
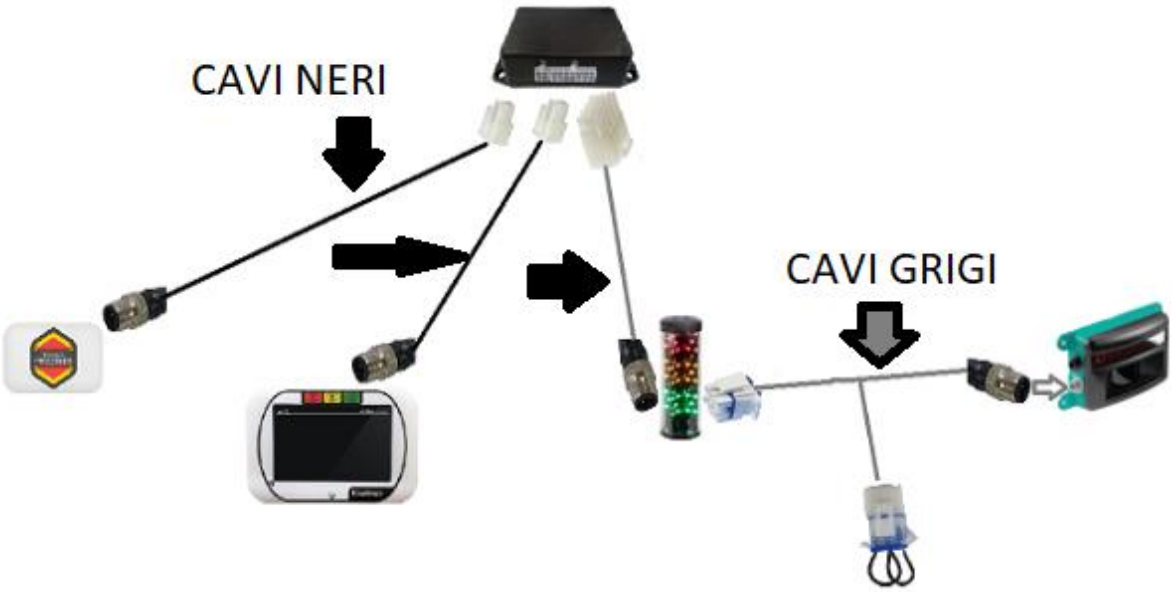
Connection diagram example





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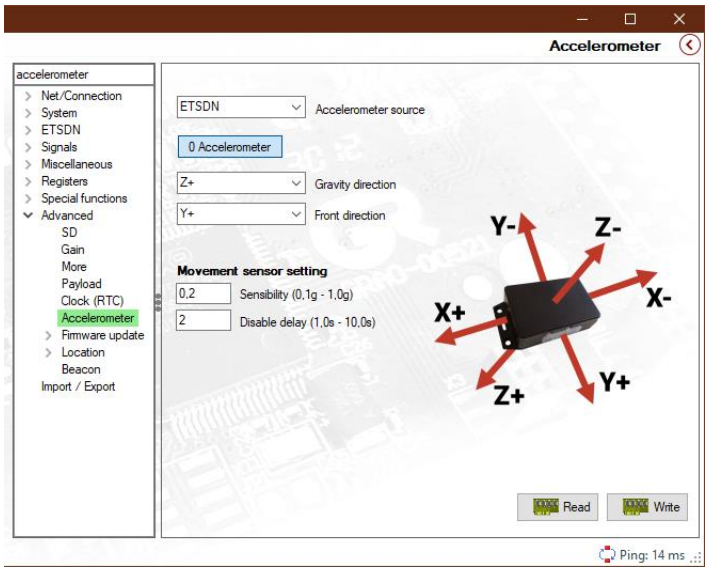
Software setup

Only few steps are needed to configure the device. Download and install the PC software from www.kiwitron.it/ets

Connect the USB cable and start the ETS software.

Shock sensor calibration

Go to *"Settings → Advanced → Accelerometer"* and configure the mounting position according to the drawings.
Click *"Save"* and then *"0 Accelerometer"*.



Battery percent sensor calibration

Go to *"Settings → System → Battery"* and change the *"Elements"* field according to the number of elements present in the truck battery (e.g.: a 48 Volts battery has 24 battery elements).
Click *"Save"*.

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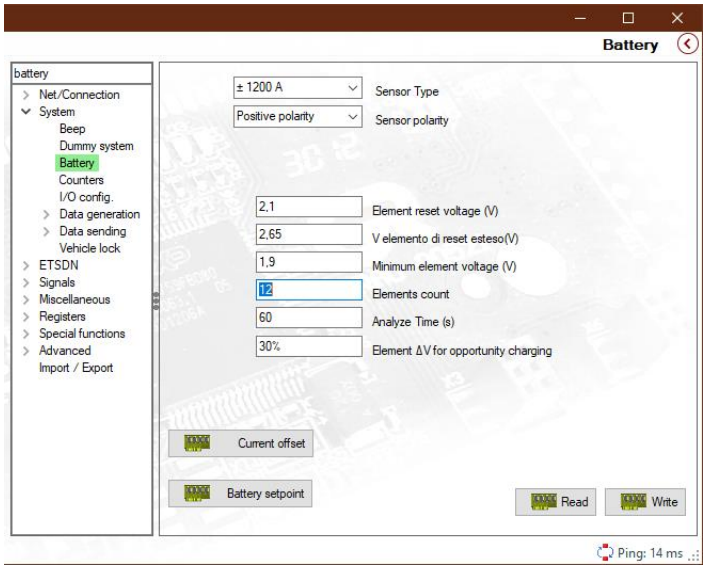
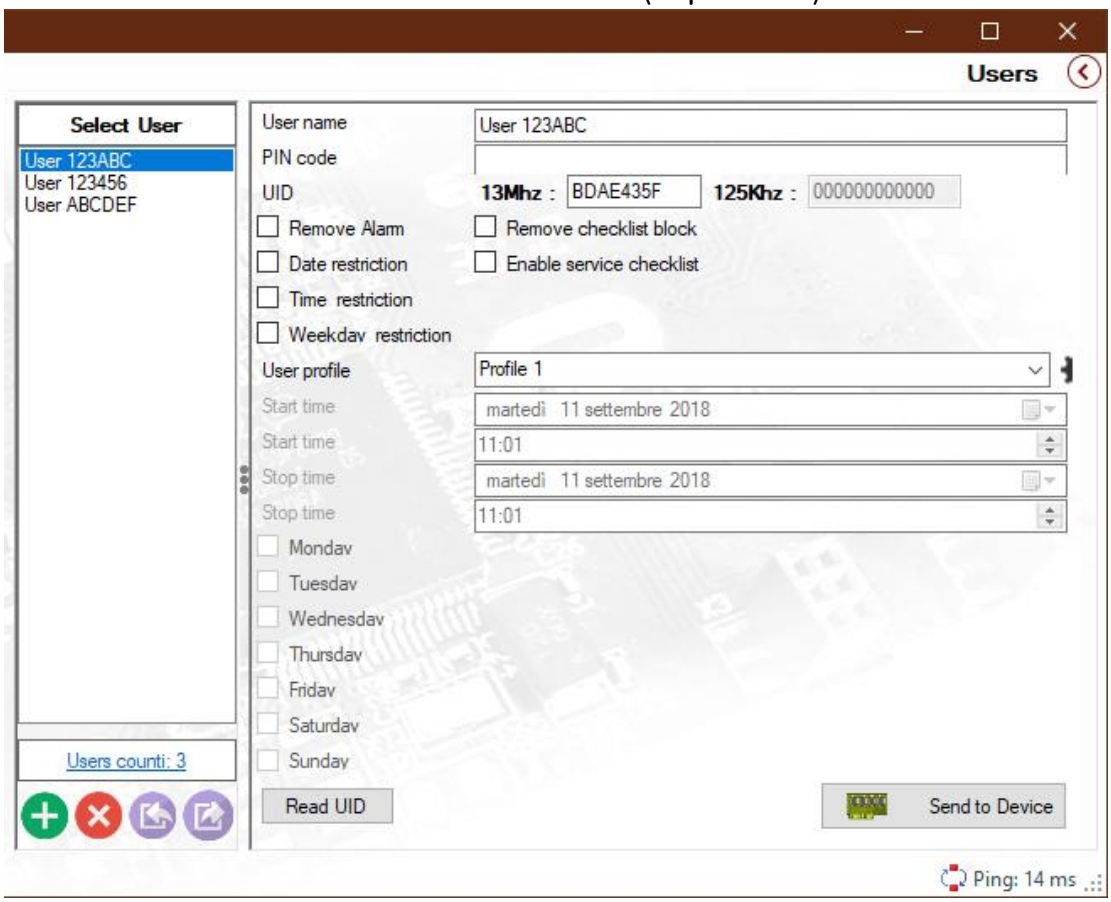
Battery current sensor calibration

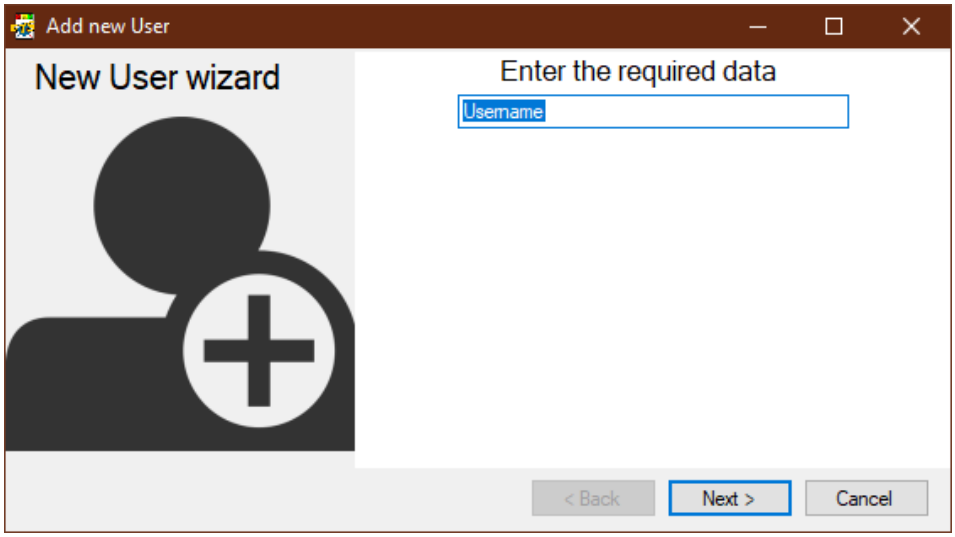
Go to *"Settings → System → Battery"*. Ensure the truck is ON and that no actuation is in progress then click *"0 Current sensor"*.



Badge configuration

Go to *"Users"*. Click the green button to configure a new driver. When prompted, choose *"Wizard"* to start the guided badge configuration.
Insert a driver name and click *"Next"*. Put the badge on the reader (in front for ETS device; on the left side for ETS Touch device). The badge code shall appear on the PC screen. Click *"Next"* until the wizard ends.
Insert any other driver desired using the same procedure.
Click *"Send to device"* to save the user list (**important!**).





Close a relay contact on shock detection
Go to *"Settings → Signals→ ETS"*.

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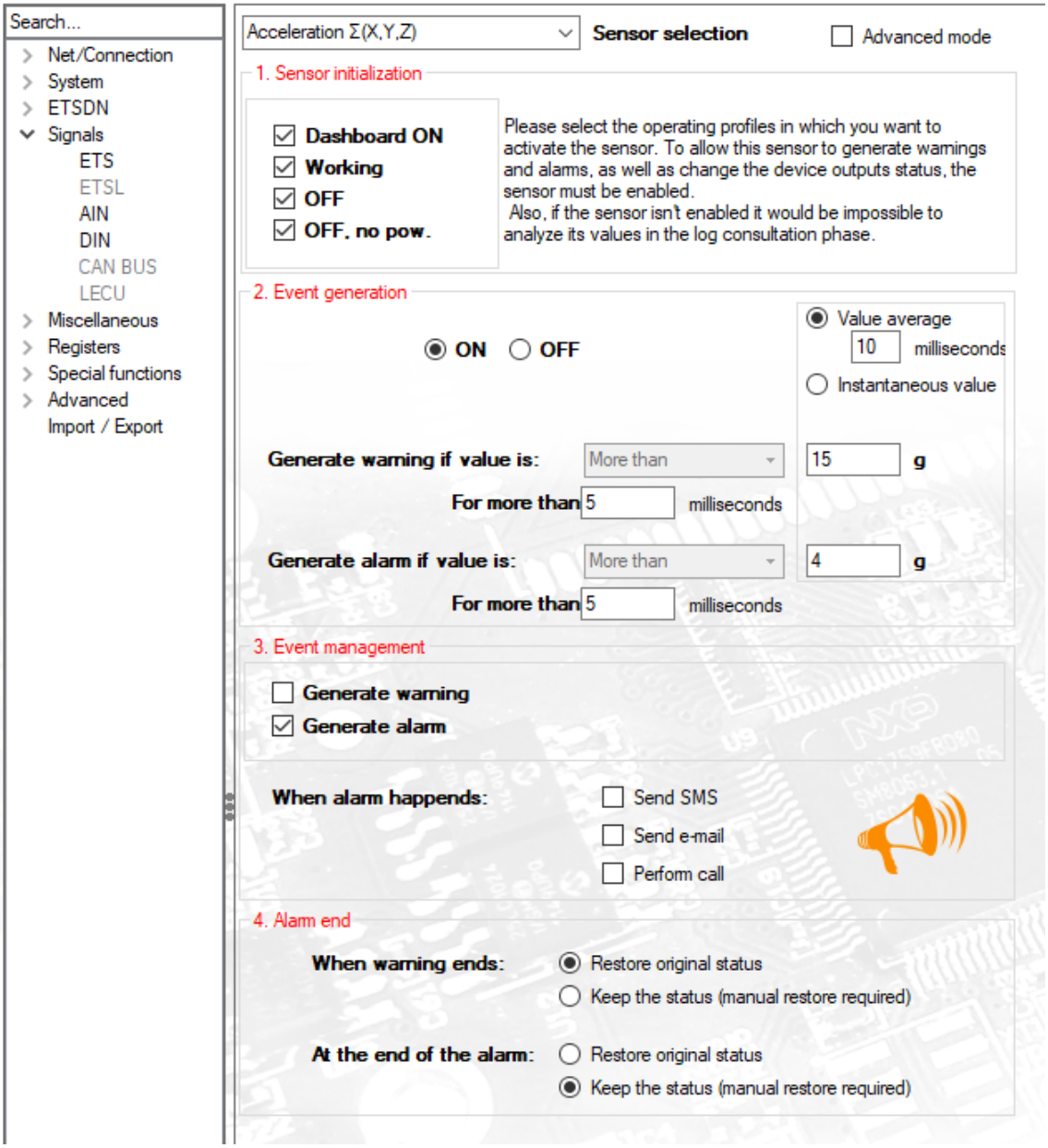

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