AddSecure
Asset
Installation Guide

ADDSECURE

Version 2.3 2017-01-26 / PEP & FB

Asset Light

&

Asset Pro

Content:

1 Mounting the unit

The Asset Light and Asset Light Pro units can be mounted on various places on the vehicle, but to ensure best possible GPS and GSM signals, it must not be placed under metal. Plastic, fibreglass and fabric will not affect the signals. The antenna is located at the end opposite the connector. Use the supplied splash-proof mounting box.

Protect from sunlight and do not expose to temperatures under -20°C and above +45°C Celsius.

Important: Mount the supplied 1A splash-resistant auto fuse on the white wire to permanent supply. Place the fuse as close to the power source as possible to protect the vehicle.

To obtain a water-proof installation, mount the supplied four locking devices.

Mount the unit on a suitable place where it is protected from water. Never clean the unit with a high-pressure cleaner.

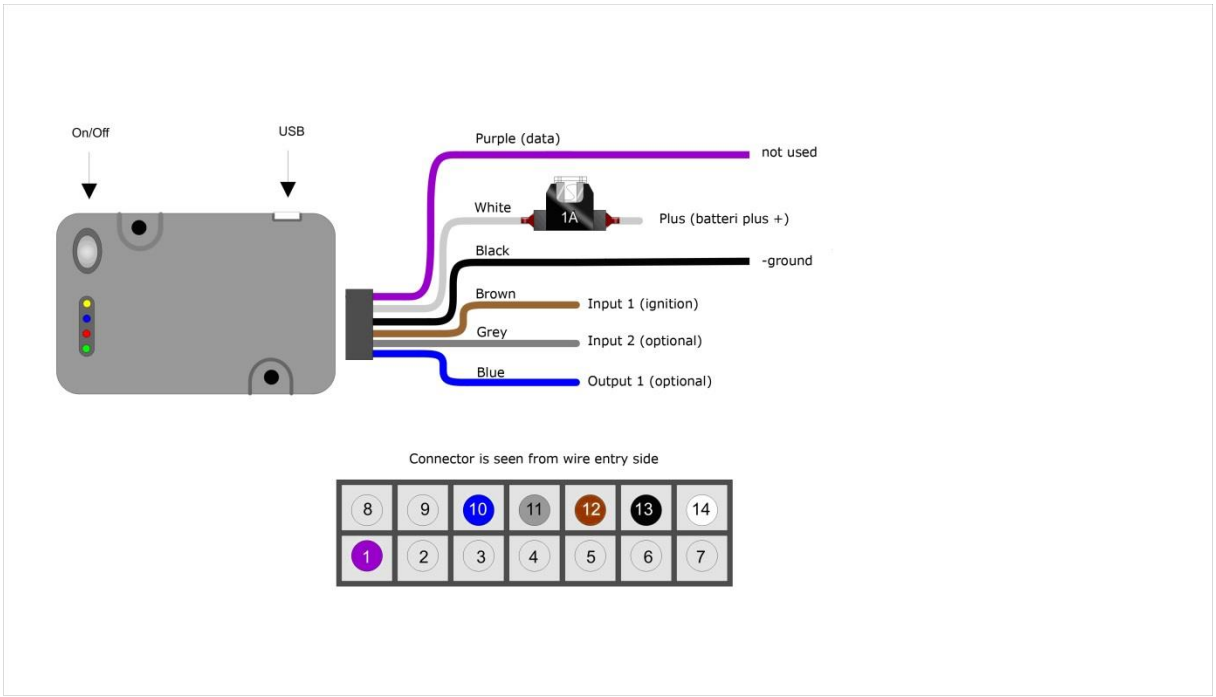
The wire output must face downwards.

When attaching the power-/multi connector to the unit, you have to hear a click sound to ensure, that the connector is attached properly. Possibly you have to press it gently further into the connector with a tool, until you can hear the click.

Up to 5 minutes may pass from power on till the unit is charged and ready for use.

2 Wiring for Asset Light

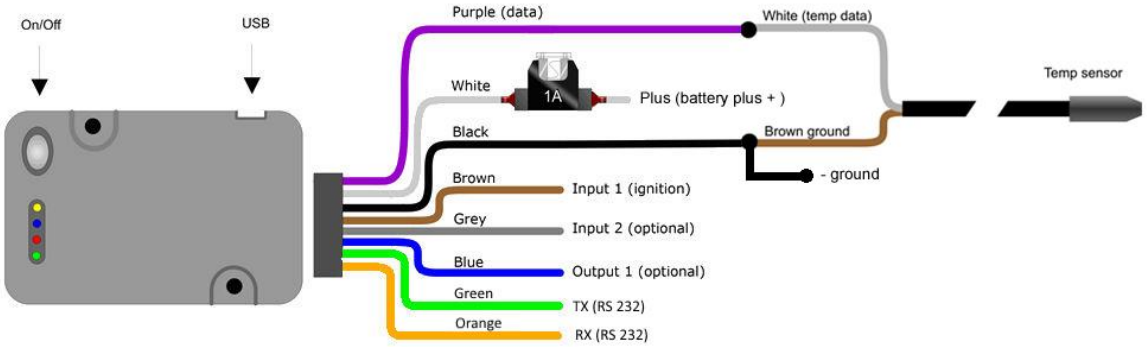
Asset Light is supplied with the following wires:



Wire chart			
Pin	**Colour**	**Function**	**Note**
1	Purple	Not used	Dallas 1-wire – for temperature sensor
10	Blue	Not used	Digital Output
11	Grey	Not used	Digital Input
12	Brown	Terminal 15 ignition	Ignition (has to be connected – if there is no ignition signal in the vehicle connect the cable to terminal 30 +24 Volt)
13	Black	Terminal 31 ground	Battery minus terminal
14	White	Terminal 30 +24 Volt	Constant supply between +10 Volt to +60 Volt

3 Wiring for Asset PRO with one-wire temperature sensor

Asset Pro with temperature sensor(s) is supplied with the following wires:



Wire chart			
Pin	**Colour**	**Function**	**Note**
1	Purple	Temperature	Dallas 1-wire – for temperature sensor
2	Orange	TX (RS 232)	Used for ThermoKing / Carrier
3	Green	RX (RS 232)	Used for ThermoKing / Carrier
4	Black/White	CAN	Not used
5	Red/White	CAN	Not used
10	Blue	Outout	Not used
11	Grey	Input 2	Not used
12	Brown	Terminal 15 ignition	Ignition (has to be connected – if there is no ignition signal in the vehicle connect the cable to terminal 30 +24 Volt)
13	Black	Terminal 31 ground	Battery minus terminal
14	White	Terminal 30 +24 Volt	Constant supply between +10 Volt for +60 Volt

To test that the temperature sensors are detected and what temperatures are being measured, send a SMS with the text **OWTEMP-SHOW** to the data number of the SIM-card mounted in the unit. The unit will return a SMS with a list of the detected temperature sensors and the measured temperature. If the returned value is "No sensors defined", the sensor is not responding – check the installation! The answer can be divided into several SMS if the content of the response contains too many characters.

The responds SMS can look as follows:

283326B30100007C = 27.3
2974E541564B1575 = 7.3
(Serial number) (measured temperature)

3.1 Cable for one-wire sensor

It is very important to use a **twisted pair** cable when an extension is needed. The cable should preferably be the same type as the original sensor cable. The cable is with silicone outer jacket and Teflon inner jackets so it is durable in high and low temperatures. The capacity between wires must not be higher than 10 – 15 pF per meter. Total length (added) for all sensors is maximum 20 meters.

3.2 Temperature sensor – PRO version only

Where to mount the temperature sensor

Possible places to mount the temperature sensor:

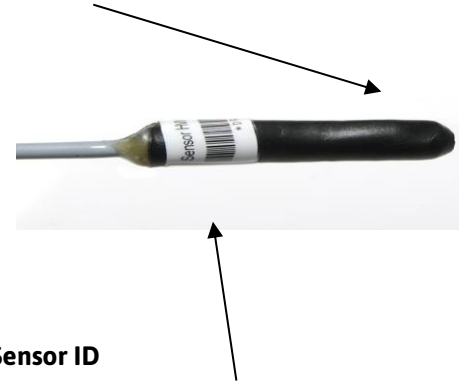
- At the air intake of the cooling system
- At the air out of the cooling system
- On a central place in the compartment

AddSecure recommends that you agree on a mounting place with the customer.

Mounting/fixing the temperature sensor

Take care not to damage the temperature sensor when mounting/fixing it and make sure it is placed well protected.

The sensor head must be free, i.e. it must not be covered by a bracket, glue, etc.



Sensor ID

Each sensor is labelled with a unique ID No. Enter this ID number and state the mounting place on the data sheet.
The data sheet must be given to the AddSecure support.

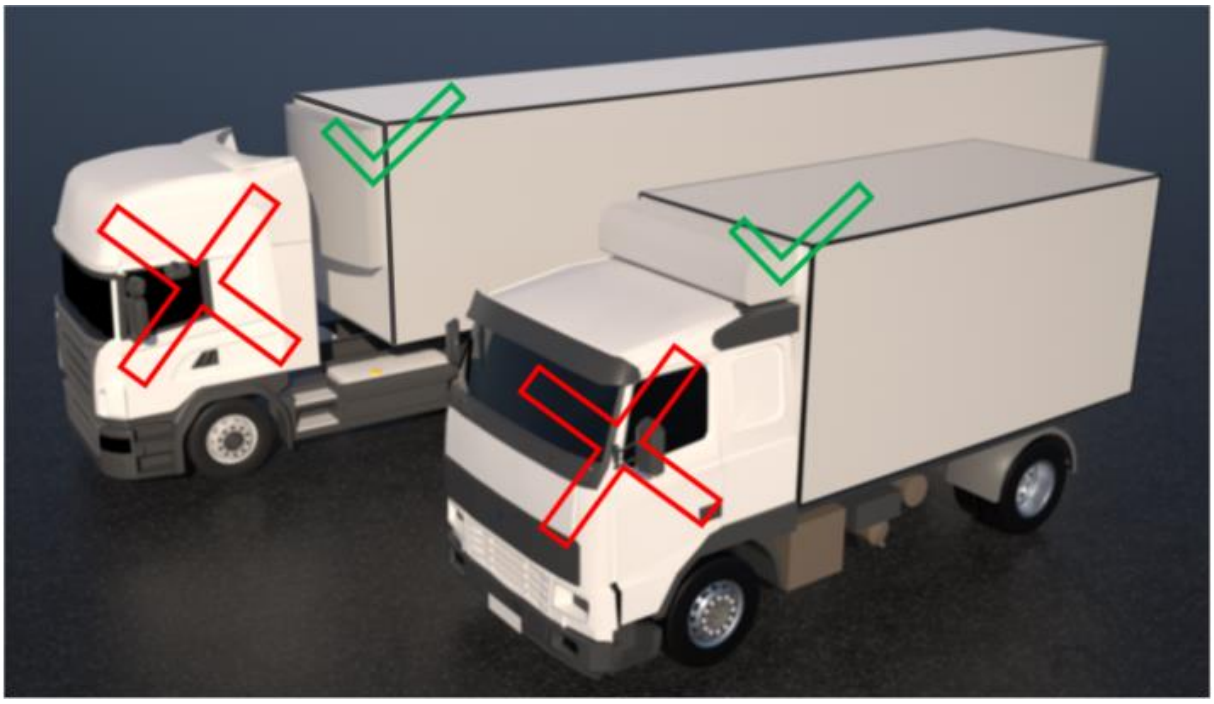
More temperature sensors

Up to 8 external temperature sensors can be connected to an Asset Pro. If more temperature sensors are connected they must be parallel mounted. White core to white core, and brown core to brown core. Wires may be extended. All soldering must be isolated.

4 Wireless Sensors

When mounting wireless sensors the Asset unit is **not** allowed to be placed in the trucks cabin.

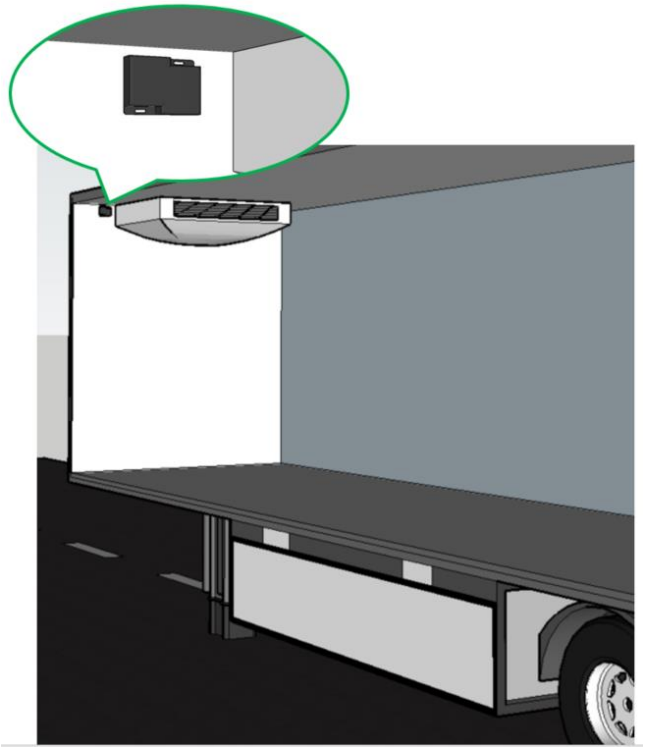
The Asset unit should be mounted on the trailer or cargo unit.



4.1.1 Wireless temperature sensor

A wireless temperature sensor consists of only one part, the **Sensor**. Depending on materials between and around the sensor and Asset unit, the range will vary. e.g. the Asset unit can**not** be mounted in the trucks cabin and communicate with the sensor.

Note!
Write down the serial number of the sensor located on the back of the sensor.

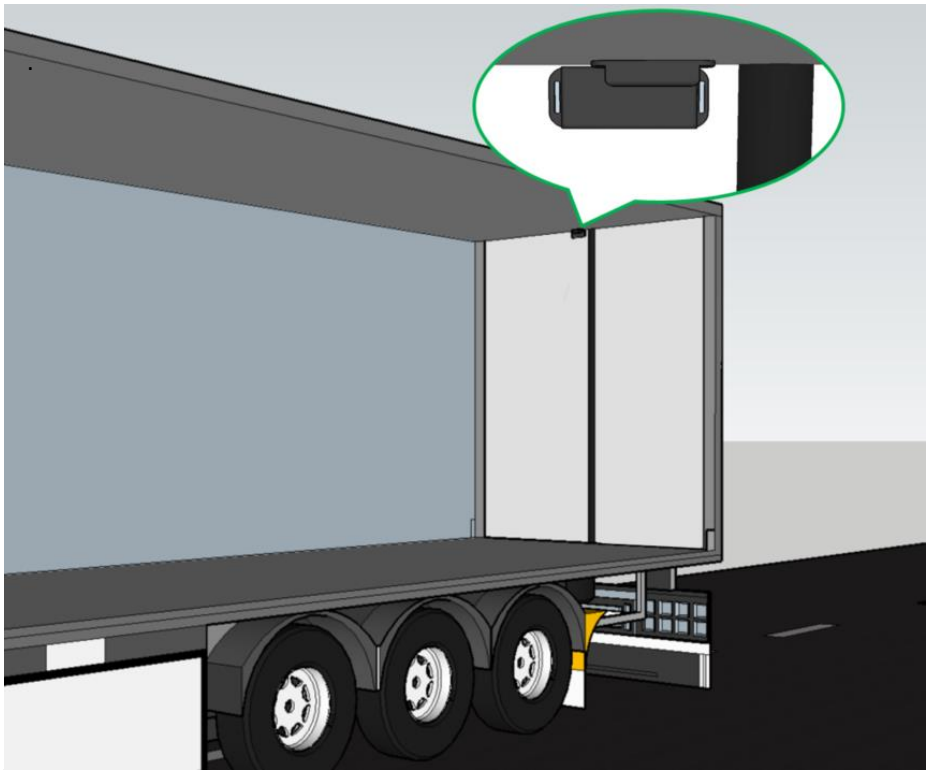


4.1.2 Wireless Door sensor

A wireless door sensor consists of two parts, the **Sensor** (the larger of the two) and a **Magnet** (the smaller one).
It's important that the sensor is fitted to the door and that the magnet is mounted to the ceiling.

Depending on materials between and around the sensor and Asset unit, the range will vary. e.g. the Asset unit can**not** be mounted in the trucks cabin and communicate with the sensor.

Note!
Write down the serial number of the sensor located on the back of the sensor.

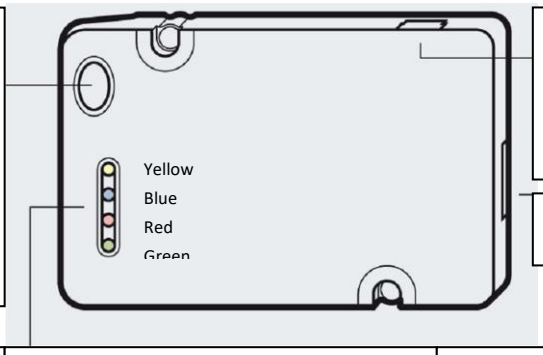


5 Unit on/off and LED

ON/OFF button

When the unit is off it must **not** be connected to a power source.

- Press button for 5 seconds till yellow lamp starts to flash differently.
- Release the button and press it briefly again. Turn off the unit.



USB-input for charger

230 V charger and
12/24 V cigarette charger
available as option.

Installation inputs

Yellow. System service

- Constant light: System starts.
- 1 flash: System is on, but not connected to GSM data.
- 2 fast flashes: System is on server.

Blue. GPS receiver

- 1 quick flash: No GPS satellites received
- 1 long flash followed by a number of quick flashes: Receiving GPS. The number of short flashes states the number of satellites being received.

Red. Power/Charging status Constant light: Fully uploaded

- 1 flash: battery low level
- 2 flashes: Charging

Green. GSM service

- Flashing sporadic: OK
- Flashing constant: SIM card error

6 Final test

Send a SMS with the text: STAT to the GSM number of the unit. The following reply must be received

Reply	**Meaning**
Version=*Blackbird 0.11*	Software version
OPT2	Firmware Version in OPT2 board (PRO version only)
FW=*0.35*	Firmware program version
NodeID=*3090818019*	The serial number (S/N) of the unit
BattV=*3987*	Current battery voltage in mV – typically between 3650mV and 4200mV
Runtime= *3239*	Number of seconds that the unit has been on
MCC=23802	Provider network code
Signal= *81*	GSM signal strength – must be between 100 and 50. Low is best
Sat=*11*	No of satellites
HDOP=*10*	GPS HDOP value GPS quality
Ichg=*127.6*	Charging power
Bt=35.60	Battery temperature
Odo	Current Odometer value
Vt	0/1 valid time or not on unit

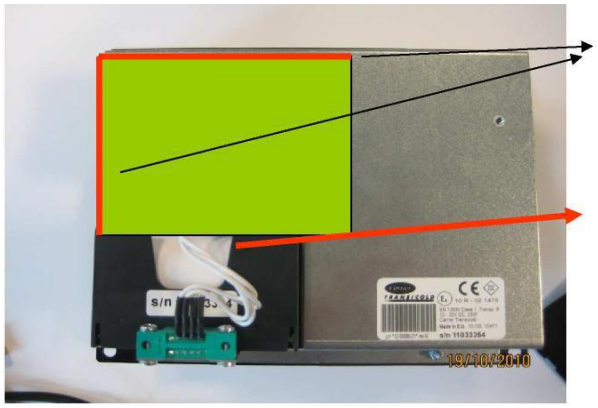
All values stated after = are examples.

7 Carrier Transicold

7.1 Datalogger, Datacold 500, 600 and EuroScan X2

7.1.1 Mounting

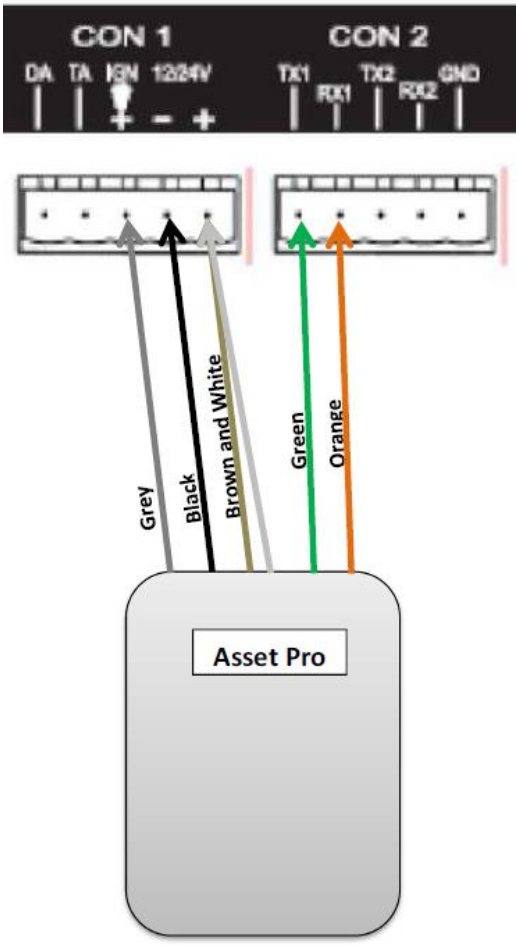
The Asset Pro can be mounted on the rear of the datalogger



It mush flush with the edges

Make sure that there is room for the printer cable

7.1.2 Connection



7.1.3 Ignition Connection

The ignition input (Brown – pin 12) can be connected to the trailer 24 volt (Light). It will then show if the trailer is connected to a truck with ignition on (Light turned on). Trailer and datalogger has separated ground. Remember to mount the 1 kohm resistor R2. On trucks the ground is normally common and the resistor is not needed.

Can also be connected to the ignition of the refrigeration unit and used to indicate is the cooler is running.

If this option is not used, the brown wire must be connected to the white wire (Datacold 12 volt).

7.1.4 Configuration of datacold 500, 600 and EuroScanX2

The configuration of the datacold must be done before the Lommy works.

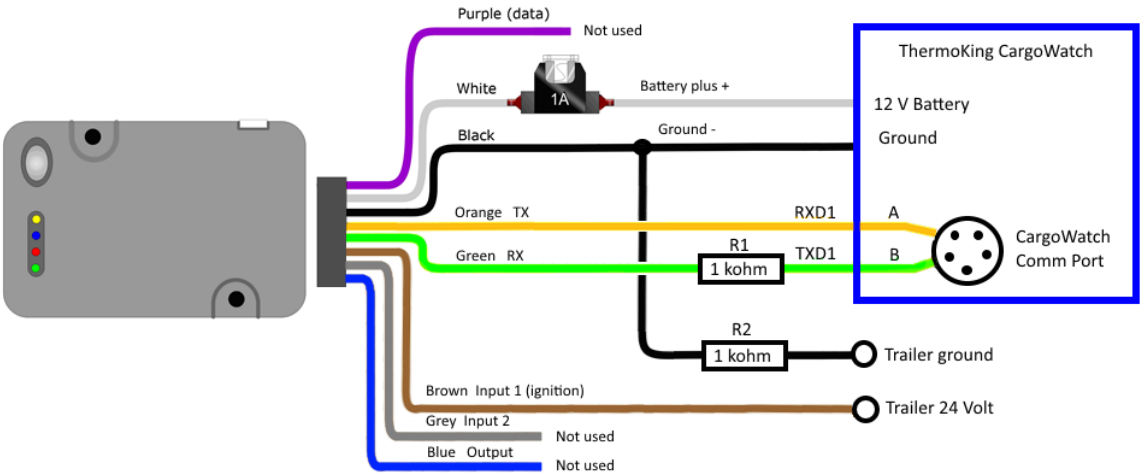
- Hold the green button for 2 seconds.
- The display shows "Enter PIN“
- Factory code is 1111 (press 4 times the blue)
- Select menu 11 with the arrow keys
- Datacold 500 - Com 1 should be “Thirdparty”
- Datacold 600 – Com 1 should be “Partner Protocol”
- EuroScan – Com 1 should be “Old ES Protocol”
- Com 2 should be Vector, TM or R / T depending on the unit which is mounted.

7.1.5 System configuration

Note the placement and names of the different temperature sensors and set-points. Needed for system configuration.

8 ThermoKing

8.1 Datalogger DAS / SR2 / CargoWatch



8.1.1 Serial RS 232 connection to CargoWatch.

Solder the TX and RX connections on the connector on the controller board or use a connector.

The 1 kohm resistor R1 secures that the CargoWatch Port is not blocked when connection in parallel with the connector. When a connector is used R1 is not necessary.

8.1.2 Ignition Connection

The ignition input (Brown – pin 12) can be connected to the trailer 24 volt (Light). It will then show if the trailer is connected to a truck with ignition on (Light turned on). Trailer and datalogger has separated ground. Remember to mount the 1 kohm resistor R2. On trucks the ground is normally common and the resistor is not needed.

Can also be connected to the ignition of the refrigeration unit and used to indicate is the cooler is running.

If this option is not used, the brown wire must be connected to the white wire (CargoWatch 12 volt).

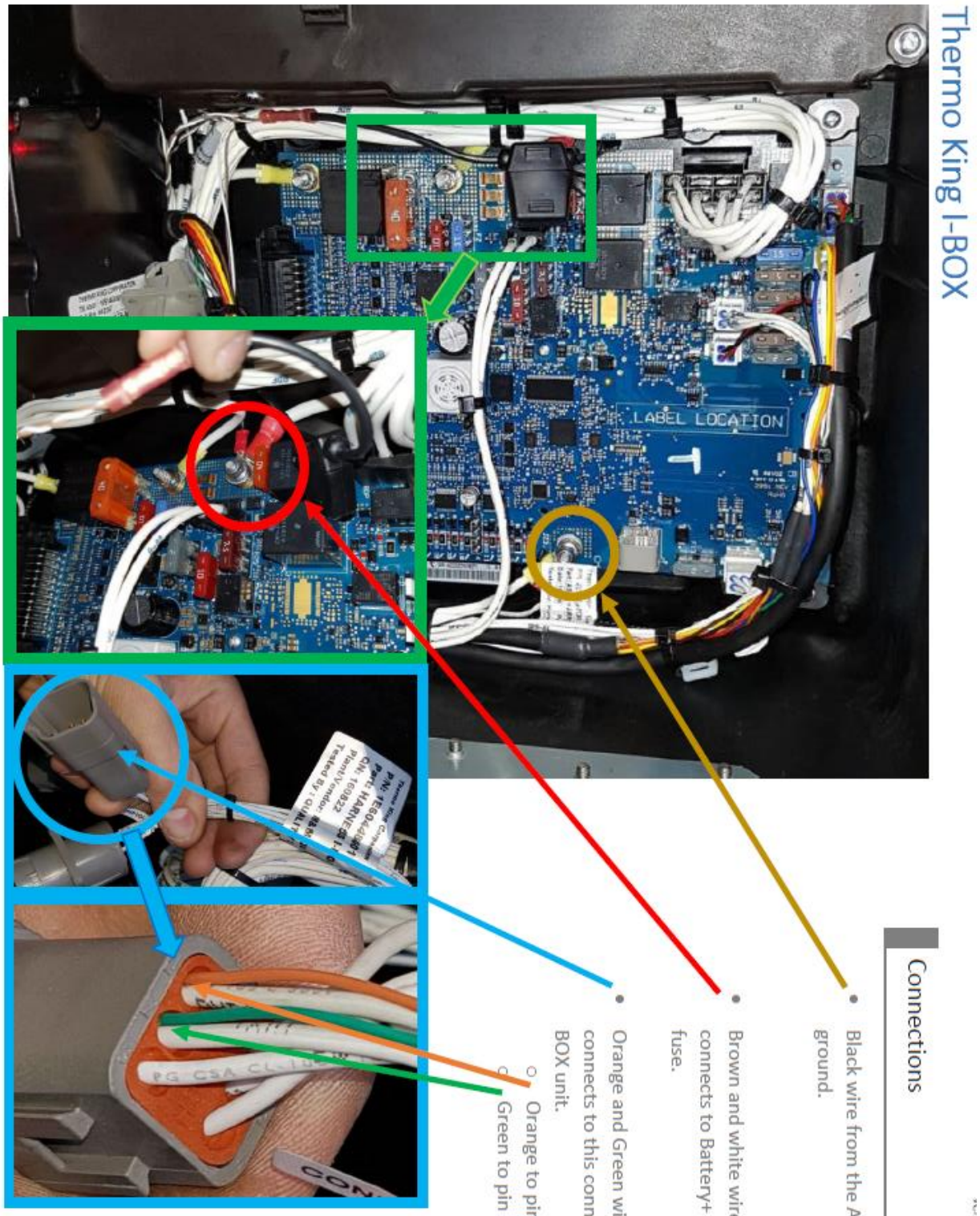
8.1.3 Configuration of datalogger

(Will be described later)

8.1.4 System configuration

Note the placement and names of the different temperature sensors and set-points. Needed for system configuration.

8.2 i-Box


Thermo King I-BOX
LABEL LOCATION
Connections
Black wire from the Asset connects to ground.
Brown and white wire from the Asset connects to Battery+ through the included fuse.
Orange and Green wires from the Asset connects to this connector going to the I-BOX unit.
Orange to pin 1
Green to pin 2

9 Hultstein

9.1 HUK Datalogger

To connect to a HUK, you will need a male

DB9 connector.

Power is connected as usual.

PINOUT	
Asset	DB9
Green	2
Orange	3
Black	5
	Jumper between 7 & 8

HUK Status		
LED	**When working correctly**	**HUK Description**
Green	ON	Receiving power and HUK is turned ON
Blue	ON	HUK software has connection to Asset
Orange	ON	HUK software has connection to HUA
Yellow	Blinking every 10 seconds	Communication ongoing
Red	OFF	Something wrong

10 System configuration

See the document: Asset configuration AddSecure.