Prerequisites

Required Information

- Name of asset *(ex: Hot Oil Tank #26)*
- State, area, organization, or group the asset belongs to *(ex: North Region, MN tankers, etc.)*
- ESN of each device to be installed *(ESN is found on the back of each unit with a barcode)*
- Current hour-meter reading on the equipment

Required Parts

SmartOne C

Double-sided Adhesive Tape

Inline Fuse Holder (2)

Input Cable

Relay & Socket

Required Tools

Drill and assorted drill bits *to secure telematics device*
Philips screwdrivers in #1 and #2 sizes *to activate and secure telematics device*
Cable Ties
Shrink Tubing & Heat Gun *to secure wire connections*

Before You Begin

TURN TO THE LAST PAGE - WRITE DOWN THE REQUIRED INFORMATION!!!

- Decide where the SmartOne C will be located. It needs the ability to face the sky.
- Determine if mounting by adhesive tape or secured with screws.
- When routing the input cable to the control panel or desired circuit, make sure to secure the cable so it may not interfere with equipment operation or create a safety hazard.
- Do not paint, pressure wash, or otherwise obstruct the surface of the device.

Installation

STEP ONE

Mount the bracket with included adhesive tape *(see document on surface preparation)* and/or secure the bracket with screws.

The bracket can be removed (outside screws) and device flipped if installing inside of a window to ensure the the proper side is facing the sky.

STEP TWO

Remove the two screws from the terminal cover to reveal the on/off switch.

STEP THREE

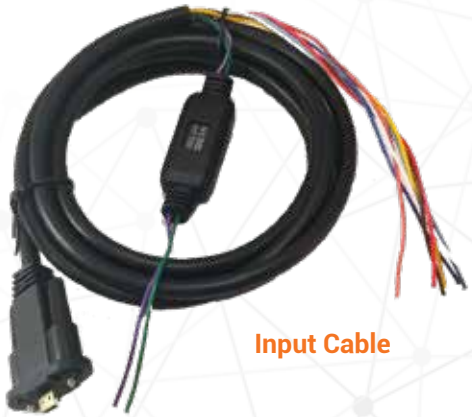
Toggle the small black switch to the on position.

Off

On

STEP FOUR

Attach the input cable to the exposed port and hand tighten the screws making sure not to over-tighten as this may cause damage.



Input Cable

Wiring Guide

STEP ONE

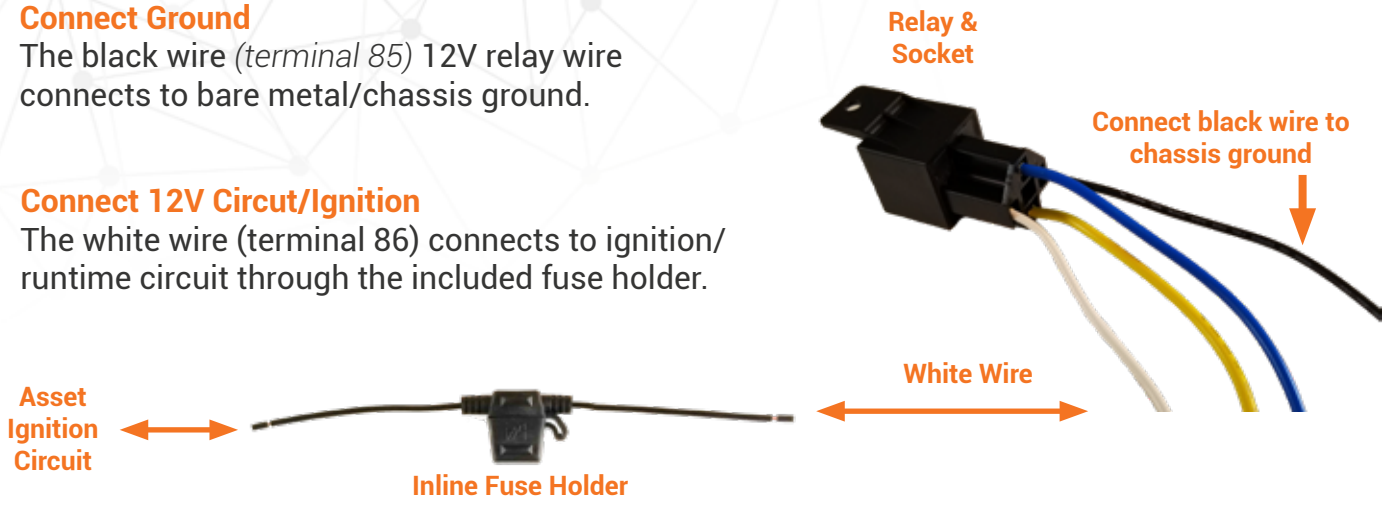
Use the included relay and socket to make the following connections between the asset and the telematics device:

Connect Ground

The black wire *(terminal 85)* 12V relay wire connects to bare metal/chassis ground.

Connect 12V Circut/Ignition

The white wire (terminal 86) connects to ignition/ runtime circuit through the included fuse holder.



Circuit Criteria:

12V Relay	24V Relay
Provide 12VDC when the engine or equipment is running (recommended) OR when the ignition key is in the ON position	Provide 24VDC when the engine or equipment is running (recommended) OR when the ignition key is in the ON position

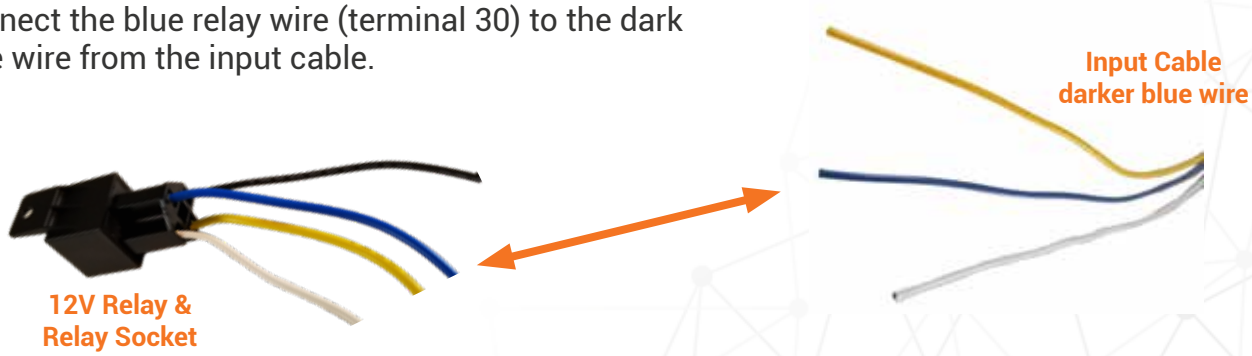
ALL

Provide zero volts or open circuit when the engine or equipment is OFF OR the ignition key is in the OFF position

Ideal connection point would be the positive side of the factory hour-meter (+), alternative connection points may be the positive side of the fuel solenoid, ignition switch or other accessoryassuming it meets the above criteria

Connect Blue to Blue

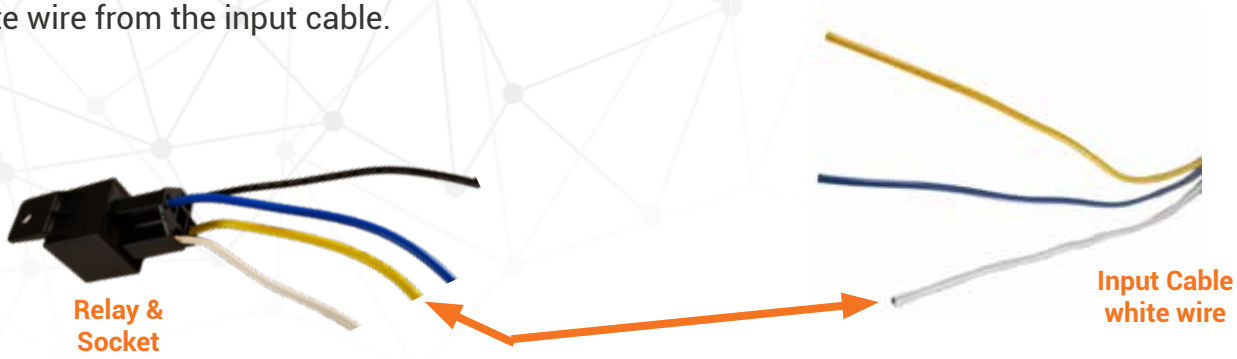
Connect the blue relay wire (terminal 30) to the dark blue wire from the input cable.



Wiring Guide

Connect Terminal 87

Connect the Yellow relay wire (terminal 87) to the white wire from the input cable.

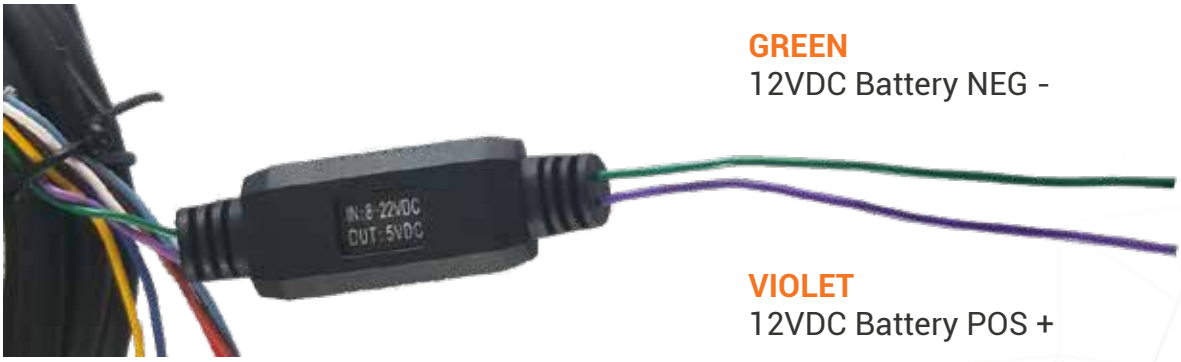


NOTE

At no time should you connect any voltage directly to the blue/white wires on the Smartone device! These are dry contact inputs and voltages must not be input directly without a relay supplied with your installation kit

OPTIONAL POWER CONNECTION

If you want the MEM to obtain power from your assets local power source instead of the internal AAA batteries of the MEM, use the following connections:



GREEN
12VDC Battery NEG -

VIOLET
12VDC Battery POS +

Mount or enclose the relay and terminations in a weather-sealed housing. In cases where the connections are inside a housing such as a dash or control box, ensure moisture does not penetrate that area to prevent damage to the relay or degrade wiring connections. Insulate all other bare wires from the MEM input cable from each other and any other electrical connections.

Battery Installation

IT IS IMPORTANT TO REPLACE THE BATTERIES IN THIS DEVICE ANNUALLY.

REPLACE WITH AAA LITHIUM BATTERIES ONLY

STEP ONE Unscrew the four #1 Phillips-Head screws located on the back of the unit.

Note: New units are shipped with the mounting bracket attached. Please remove the mounting bracket in order to uncover the case screws.

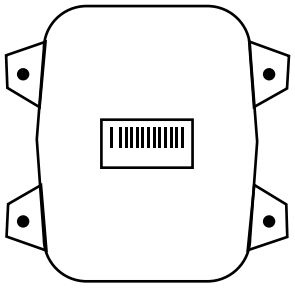


Figure 4.1

STEP TWO Separate the unit halves and replace batteries. Pay attention to battery orientation.

Make sure the black gasket surrounding the battery compartment lays flat on the groove before reconnecting the two unit halves.

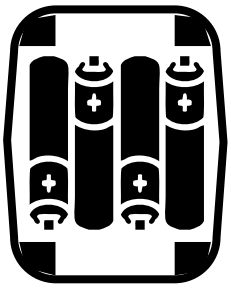


Figure 4.2

STEP THREE Replace the battery compartment, making sure the contact springs are the correct orientation. Screw down all four Phillips-Head screws in a crisscross pattern.

Do not overtighten the screws.
Tighten to 36 In-Oz (Torque Setting).

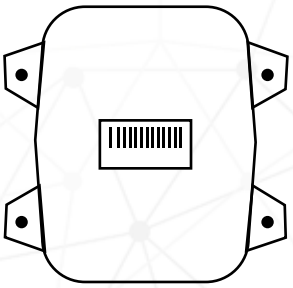


Figure 4.3

Testing

STEP ONE To test that everything is wired correctly, use a digital multi-meter set to volts DC and place the black probe on terminal 85, the red probe on terminal 86. You should see 0 volts while the equipment is OFF (FIG 1) and 12-15 (24-27 for 24Vdc systems) volts while the equipment is ON (FIG 2) you should also hear a “click” as the relay turns on or off.

Figure 1

Figure 2

STEP TWO The next step is to change your multi-meter to continuity or resistance (horseshoe icon). Place the black probe on terminal 30 and the red probe on terminal 87. You should see a very high reading (50M ohms for example or possibly “OL” on the display) (FIG 3) If you turn the equipment on you should now see a very low reading (0-10 ohms for example) (FIG 4) or beeping if you have your meter set to “continuity”.

Figure 3

Figure 4

OneView
Pedigree Technologies

Testing / Confirmation Steps

STEP THREE If you have successfully made the previous two tests with similar results than your equipment should be installed correctly and you can move onto the next install.

STEP FOUR Put together a list of ESNs, asset names and current hour-meter readings. 30 minutes after the device was turned on, call tech support and confirm all of them have reported correctly.

701-499-0022

You will be prompted for the following information during the set up process

- Device ESN
- Name of Asset (ex. Goosneck 51)
- Trailer make and model
- VIN #
- License plate #
- Mileage Hours