FL 360

Universal GPS Tracking Device
Installation Guide

KIT CONTENTS:

FL 360 Tracking Device
I/O Box Bundle (Optional)
OBD-II Y-Harness (Optional)
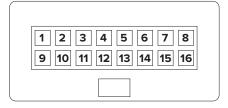Heavy Duty Harness (Optional)
Zip Ties

Important Note:

Please note that for some 2002-2008 Ford vehicle models an additional adapter accessory is required to ensure compatibility with the FL360 hardware (full vehicle model/year list in Appendix A). Please contact Spireon's Customer Service BEFORE installing the device in your vehicle to provide you with the additional accessory and instructions for installation.

FL 360

The FL 360 is an OBD-II plug-n-play GPS tracker that can be plugged in directly to light-duty vehicle at the OBD-II (J1962) port. FL 360 supports Heavy-Duty vehicles with the use of cable harness.

I/O Box

The I/O Box provides Digital Input, Output, 1-bit bus connections. The I/O Box is always plugged into the FL 360 via designated 6-pin Molex connecter. The I/O Box should not be connected to any other device than FL 360 for proper functionality. The I/O Box has a 16-pin Molex connector that contains all the interfaces.

I/O Box Pinout:

Wire termination view of I/O box 16-pin molex connector

Pin No.	Color	Function
1 - ADC	White/Red	External Voltage Measurement
2 – 1 Bit BUS	Blue/White	Driver ID
3 – Digital Input 1	Blue	PTO - Positive Input (Biased High)
4 – Digital Input 2	Orange	Positive Input (Biased High)
5 – Digital Input 3	Violet	Negative Input (Biased Low)
6 – Digital Input 4	Gray	Negative Input (Biased Low)
7 – Digital Output 1	Green	Starter Disable
8 – Digital Output 2	Brown	Door Lock
9 – Digital Output 3	Yellow	Door Unlock
14 – Ground	Black	Ground
15 – Ground	Black	Ground
16 – 3.3 Volt	Red/Blue	3.3 Volt current source (150 mA max output)

For questions about your device please contact customer service at:
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LED Verification

LED type	Description	Primary LED pattern & color
Power LED	System is in a sleep state	Off (no color)
	System is not in a sleep state	Solid on Red
	Active Bluetooth connection only	Solid on Dark Blue
	Active Vehicle comm only	Solid on Light Blue
	Active Bluetooth and Vehicle comm connection	Alternating Light Blue and Dark Blue at 50% duty cycle
Cellular LED	Cell module off	Off (no color)
	Cell module searching for network	Fast flashing Yellow
	Cell module registered on network	Solid on Yellow
GPS LED	GPS module off	Off (no color)
	GPS not locked	Slow flashing at 50% duty cycle Green
	GPS locked	Solid on Green

Device Mounting Options

OBD-II Connector for Light Duty Vehicles
OBD-II Covert Install
9 or 6 Pin Deutsch Connector for Heavy Duty Vehicles
Hard Wired – No Diagnostic Data

OBD-II Install

Locate the vehicle's OBD-II (diagnostic) port. Most vehicle's diagnostic ports are typically located near the base of the steering column.
With the Ignition off, align the FL 360 with the OBD-II port and simply push the device in place.
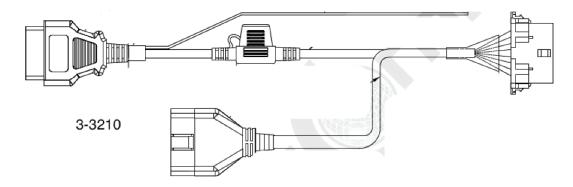Make sure the FL 360 is securely connected to the OBD-II port.
Use proper zip tie to fasten device to the vehicle.

OBD-II Covert Install

Locate the diagnostic port, remove the OBD port.
Connect the one end of the Y-Harness to the vehicle's OBD port.
Connect the other end (16-pin) of the Y-Harness to FL 360 device.
Secure the device and Y-Harness under dashboard.

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3-3210

Note: The white wire coming out of the OBD connecter on the Y-Harness is an optional Ignition sensing wire that can be connected directly to the vehicle ignition switch.
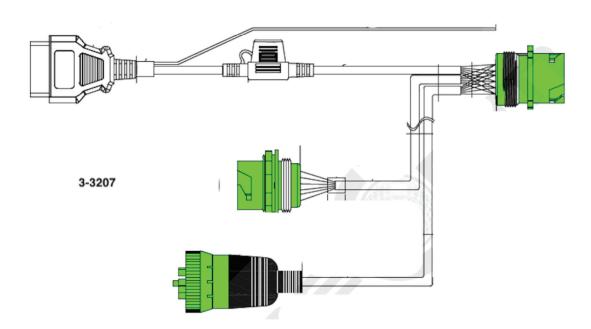
9 or 6 Pin Deutsch Install

Locate the truck's diagnostic port.
Remove the 9 or 6 Pin connector.
Connect one end of the 9 or 6 Pin Y-Harness to the diagnostic connector
Connect the other end (16-pin) of the Y-Harness to FL 360 device.
Secure the device and Y-Harness under dashboard.

3-3207

Note: The white wire coming out of the OBD connecter on the Y-Harness is an optional Ignition sensing wire that can be connected directly to the vehicle ignition switch.

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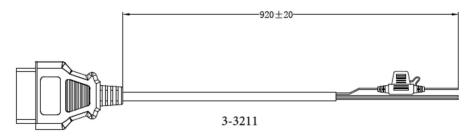©2021 Spireon, Inc. All rights reserved.

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Hard Wired – No Diagnostic Data

Use the OBD-II to 3-Wire cable (Product code: 3-3211)
The ground line (black wire) must be connected to chassis ground
The power input (red wire) must be connected to a constant +12VDC supply
The ignition input (white wire) must be connected to the ignition switch
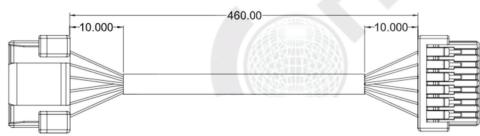

I/O Box Installation

If the installation requires the use of the I/O box in addition to the FL 360, then the I/O Box and FL 360 can be stacked on top of each other with their respective device labels facing outwards. The I/O Box and the FL 360 connect through the 6-pin connector on the side of each device. The I/O Box must be connected to FL 360 by 6-pin Molex connector. The ridges of the I/O box and FL 360 can be aligned to allow for proper installation. Ridges along the edges of the FL 360 provide space for zip-tie to be used.

Note:
The IO Box needs to be connected to the device before powering up.
The Digital Input 1 & 2 are biased High
The Digital Input 3 & 4 are biased Low

I/O Box Power up Process

• Connect the I/O Box to FL 360
• Install the FL 360 device, make sure the vehicle ignition is Off
• Turn the ignition On, wait for 2~3 minutes
• Turn the ignition Off, wait for 1~2 minutes
• Turn the ignition On again, the Green LED on the I/O Box should be On

Mounting The Driver ID Reader (When Applicable):

• Drill a 3/8" hole in the location on the dash where the driver ID reader will be mounted
• Feed the wires from the driver ID reader through the 3/8" hole and push the reader in
• Secure the reader from the back side using the supplied push-washer
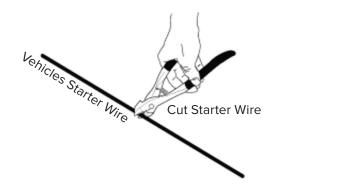• Connect the driver ID reader to the I/O Box using the Blue/White Wire (Pin 2)

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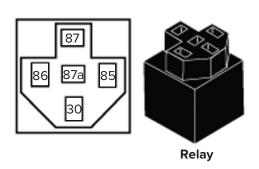Phone: **1-877-819-0015 (option #2)** Email: **fleet_support@spireon.com**

Starter Disable feature

• Using a digital voltmeter, locate the wire connecting the vehicle's ignition switch to its starter and cut it.

Cut Starter Wire

Relay

Relay part number: 3-1020 (Starter Disable Kit)

• Connect the green wire (pin 7) from the I/O Box to green wire on the relay (86)
• Cut the short red wire that is connected to the long red wire (the 30 end)
• Connect the short red wire to vehicle's ignition wire (85)
• Connect the white wire to one side of the vehicle's starter wire (87a)
• Connect the long red wire to the other side of the vehicle's starter wire (30)
• Make sure to cut/disconnect the diode between 86 and 85 connectors

Short red wire to vehicle's ignition wire

White wire to one side of the vehicle's starter wire

Green wire to Green Disable coming from device

Long Red to other side of vehicle's starter wire

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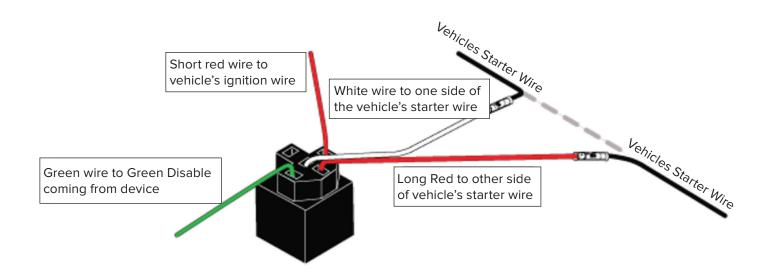Phone: **1-877-819-0015 (option #2)** Email: **fleet_support@spireon.com**

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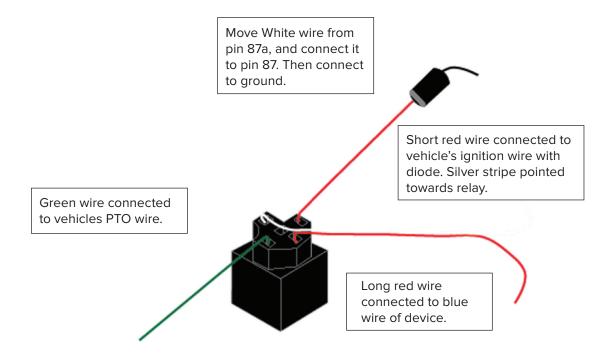©2021 Spireon, Inc. All rights reserved.

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PTO feature

1. Negative PTO Input to IO BOX Blue Wire, with negative PTO trigger from vehicle Install Method:

- Move the relay's white wire from pin "87a" and connect it to "87"
- Connect the relay's white wire to ground (87)
- Cut the short red wire that is connected to the long red wire (the 30 end)
- Connect the relay's short red wire to vehicle's ignition wire with diode (85). The silver stripe on the diode should be pointed towards the relay
- Connect the relay's long red wire to blue wire of the I/O Box (pin 3) (30)
- Connect the relay's green wire to vehicle's PTO wire (86)

Move White wire from pin 87a, and connect it to pin 87. Then connect to ground.

Short red wire connected to vehicle's ignition wire with diode. Silver stripe pointed towards relay.

Green wire connected to vehicles PTO wire.

Long red wire connected to blue wire of device.

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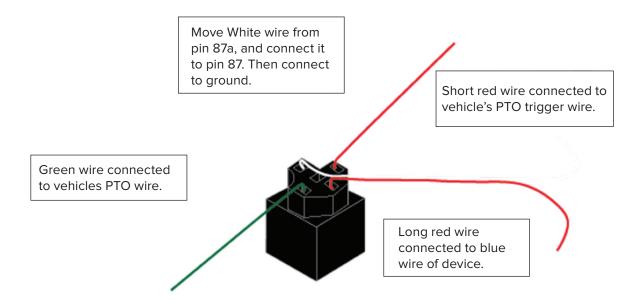©2021 Spireon, Inc. All rights reserved.

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2. Negative PTO Input to IO Box Blue Wire, with positive PTO trigger from vehicle Install Method:

- Move the relay's white wire from pin "87a" and connect it to "87"
- Connect the relay's white wire to ground (87)
- Cut the relay's short red wire that is connected to the long red wire (the 30 end)
- Connect the relay's short red wire to vehicle's PTO wire (85)
- Connect the relay's long red wire to I/O Box's blue wire (30)
- Connect the relay's green wire to ground (86)

Move White wire from pin 87a, and connect it to pin 87. Then connect to ground.

Short red wire connected to vehicle's PTO trigger wire.

Green wire connected to vehicles PTO wire.

Long red wire connected to blue wire of device.

Door Unlock feature

I/O Box Yellow Wire is the Unlock Triger
I/O Box Brown Wire is the Lock Triger

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Appendix A

Impacted Vehicles List:

Model	Year							
	2002	2002	2003	2004	2005	2006	2007	2008
Aviator			•	•	•			
Excursion	•		•	•	•			
Expedition			•	•				
Explorer	•	•	•	•	•			
F-150				•	•	•	•	•
Freestar / Monterey				•	•	•	•	
F-Series Super Duty	•		•	•	•	•	•	
LS			•	•	•	•		
Mark LT						•	•	•
Mountaineer	•	•	•	•	•			
Navigator			•	•				
Town Car				•	•	•		

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