GV5X Series (GV50 & GV53)
Installation Guide

Getting Started
Congratulations on your purchase of the GV5X. This is a micro GPS tracker designed for a wide variety of vehicle tracking applications. The GV5X series can be used for monitoring or controlling external devices with its multiple I/.O features. The Multiband CAT-M1 modem allows the location to be tracked in real time by the GPST cloud service. The GV5x series may be mounted anywhere that the device can still receive both GPS and cellular signals.

LED Description

Light	Condition	Cause
Cell (Green)	Fast Flashing	Device is searching for CELL network.
	On	SIM card needs PIN code to be unlocked
	Slow Flashing	Device has registered to CELL network.
GPS (Red)	OFF	GPS is asleep
	ON	GPS is fixed
	Fast Flashing	Device is searching for GPS

Note:
Fast Flashing intervals are about 100ms ON / 200ms OFF
Slow Flashing intervals are about 200ms ON / 1000ms OFF

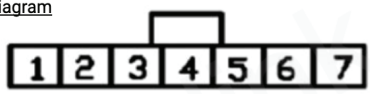
There are 2 LED's on the bottom face of the GV5x These indicate the Cellular Status and the GPS status.

Installation

Power and I/O Harness

Color	Definition	Description	Pin #	Required for Installation	Cable
Orange	RXD	Receive Data	1		
Gray	TXD	Transmit Data	2		
Red	VIN/PWR	DC Power Input	3	Required	
White	IGN	Ignition	4	Required	
Yellow	OUT1/IN1 Default	Digital Output1 Digital Input 1	5		
Green	OUT 2	Digital Output 2	6		
Black	GND	Ground	7	Required	

Pin Connector Diagram



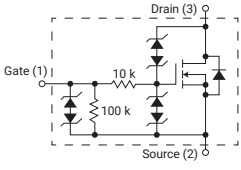
Ignition Detection (Pin 4)

IGN (pin 4) is used for ignition detection. IT is recommended to connect this pin to the "RUN" position of the vehicle's ignition switch. Alternately this wire can be connected to a non-permanent power source that is only available when the vehicle is running. For example, the power source for the FM radio. IGN signal can be configured to transmit the ignition status of the vehicle and helps the device enter power saving mode when the ignition is off.

Logical State	Electrical Characteristics
Active	5.0 V to 32V
Inactive	0V to 3V or Open Loop

Digital Output (DEFAULT) / Input (Pin 5)

OUT1/IN1 (pin 5) is a digital Output/Input on GV50M. It is of open drain type and the maximum drain current is 150mA. The OUT1/IN1 (pin 5) can be used either as a digital output or a (positive and negative trigger) Digital Input.



Digital Output Internal Drive Circut

Electrical Characteristics of Digital Output

Logical State	Electrical Characteristics
Enable	<1.5v @150mA
Disable	Open Drain

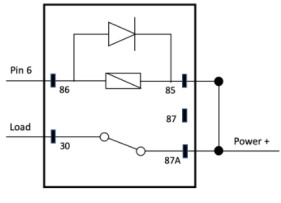
Digital Output (Pin 6)

There is a digital output (Pin 6) on GV5X. It is open drain type and the maximum drain is 150mA.

Logical State	Electrical Characteristics
Enable	<1.5V @150mA
Disable	Open drain

Example connection with a Relay.

PIN 6 Connector →	Relay →	Power +



Warning: Most relays have an integrated flyback diode for circuit protection against spurs. If there is a diode integrated within the relay, then make sure the relay polarity is correct when installed. If the relay does not have a flyback diode, it should be installed externally to avoid flyback. A common diode such as a 1N4040 will work in most circumstances.

Picking an Installation Location

- Firmly install the device to a reliable surface to prevent falling off.
- Make the side with the antenna face the sky to have the best signal reception.
- Do not install the device under metal surfaces or in an enclosed environment having difficulty in getting GPS and network signals.

Troubleshooting

Observation	Possible Cause	Resolution
After the device is turned on, the CEL LED flashes quickly	The device signal is too weak. The device isn't registering on the network.	Move the device to a place with improved network coverage.
The device can't get a GPS fix	GPS Signal is weak.	Move the device to a place with a clear open sky.
		Review installation orientation to ensure the side marked Bottom is facing towards the earth or the mounting surface. The Top side should always be facing up.
No lights are showing when the vehicle is turned on.	Faulty installation wiring.	Check the installation. Device must have Power, Ground and IGN lines correctly connected to the vehicle.

SAFETY WARNINGS

- Do not disassemble the device.
- Do not put the device with exposure to water or direct sunlight.
- Avoid contact with excessive heat outside of temperature range. Internal battery could cause an explosion.

If you are new to Zonar, make sure to check your email inbox for an email from emailverification@fleetsimplified.com confirming your login credentials.

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