

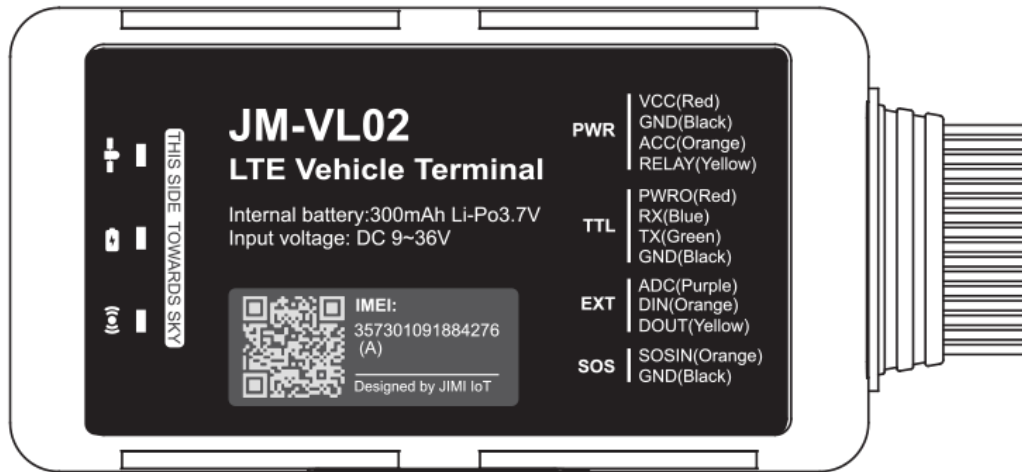


Fueling your fleet
with intelligence.

VLO2

LTE Wired
Asset Tracker
INSTALL GUIDE

Product overview



Position tracking

GPS & LBS positioning
Real-time location query

Anti-theft

Ignition detection
Power/Fuel cut-off
SOS emergency call
Power supply disconnection alert
Geo-fence alert
Towing alert
Vibration alert

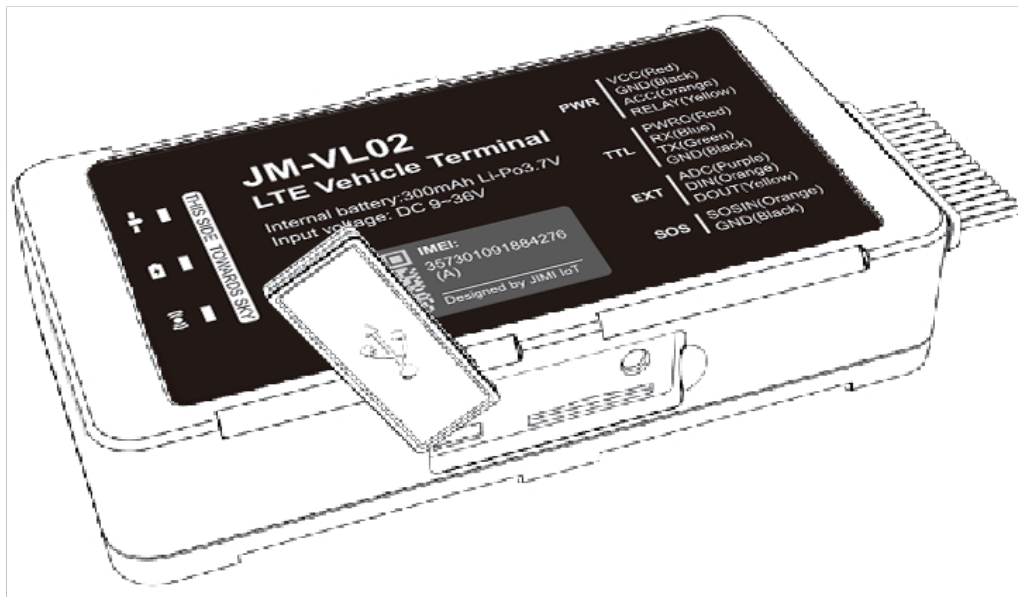
Configurable peripherals

Vehicle door status alert
Turn light/buzzer triggering
Fuel level monitoring
Temperature monitoring
Driver behavior monitoring

Specification

GSM	B5(850MHz)/B2(1900 MHz) B8(900MHz)/B3(1800MHz)
LTE	B1/B2/B3/B4/B5/B12/B13/B28/B66 (JM-VL02A) B1/B3/B5/B8/B18/B19/B20/B26 (JM-VL02E)
GNSS Type	MTK all-In-one multi-GNSS SOC
Sensitivity	Cold start: <32s Hot start: <1s
Position Accuracy (CEP50)	Autonomous: <10m
Dimensions	106mm x 56.8mm x 22mm
Weight	104g
Backup Battery	Li-Polymer, 300 mAh
Operating Voltage	9V to 36V DC
Operating Temperature	-30°C to +70°C -30°C to +85°C for storage
Transmit Protocol	TCP

Product setup



Insert SIM

Remove the soft plug on one side of the device and insert the SIM card into the card slot.

Power on & off

Toggle the power switch besides the SIM slot to power on or off the device.

LED indications

Power Status (Red)

Behavior	Meaning
On for 0.1s and off for 1s	0%~20% remaining battery
On for 0.1s and off for 4s	20%~100% remaining battery
Solid on	Power supply connected

GNSS Status (Blue)

Behavior	Meaning
On for 0.5s and off for 0.5s	GNSS synchronizing
On for 2s and off for 4s	Positioning
On for 0.1s and off for 4s	Positioned
Off	GNSS module is in sleep mode or not working

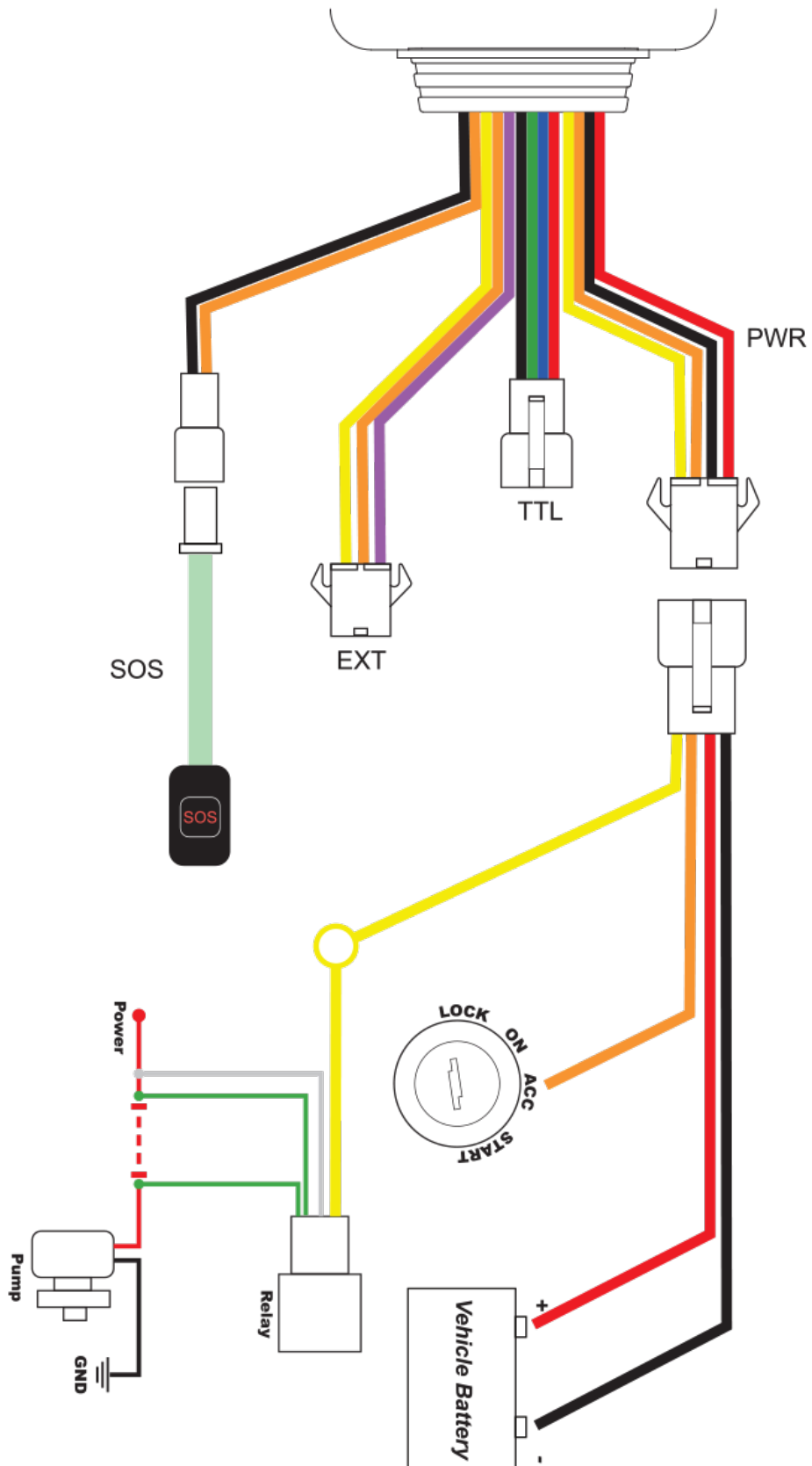
Wireless Network & SIM Card Status (Green)

Behavior	Meaning
On for 0.5s and off for 0.5s	SIM card not recognized
On for 2s and off for 4s	Registered but no inbound acknowledgement
On for 0.1s and off for 4s	Network connected
Off	No signal received or no SIM card detected

Interfaces

PWR	Red	DC 9 to 36v input
	Black	GND
	Yellow	Relay control to cut vehicle fuel support
	Orange	Vehicle ignite 12v/24v detection
TTL	Blue	TTL TX
	Green	TTL RX
	Red	DV 5v output max.500mah
	Black	GND
EXT	Purple	Analog detect 0v to 30v
	Orange	GND trigger digital input
	Yellow	Extend relay control
SOS	Orange	GND trigger digital input for SOS function
	Black	GND

Wiring indication



Power connection

The standard power supply ranges from 9V to 36VDC.
During installation, negative side should connect to the ground.
Do not connect with other ground wires simultaneously.

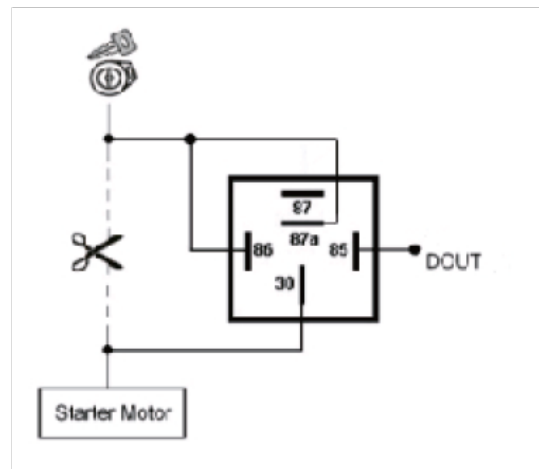
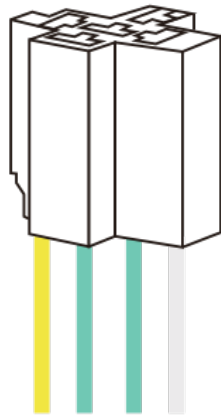
Ignition wire

ACC line (orange) connects to vehicle's ACC, detecting ignition.
Be sure to check if it's a real ignition wire i.e. power does not disappear after starting the engine.

Relay wiring

Relay's white line (85) connects to the positive side of battery (12V) while the yellow line (86) connects to the device relay control (yellow line on the power cord).

Find the fuel pump in the vehicle and cut off its positive power line.
The positive side of fuel pump connects to the green line (87a) while the side closing to starter motor connects to green line (30), as the below chart. Switch of the two green lines have the same effect.



12V relay is standard. The device is suitable for vehicles with 12V supply. If the vehicle power supply is 24V, use 24V relay.

Troubleshooting

Type	Use
Unable to connect to tracking platform	Check the APN and IP settings. Check whether the data service of SIM card is enabled. Check the balance of SIM card.
Tracker shows offline	Check whether external power is still connected. Check if the vehicle entered network blind area. Check the balance of SIM card.
Unable to locate	Make sure the top side facing upward without metallic things shielded. Make sure it's not in area with no satellite coverage.
Location drift	In area with poor GNSS signal (tall building around or basement) , drifting may happen. Check whether vibration happens around to trigger the accelerator.
No command reply	Make sure command format is correct. Vehicle may be in network blind area. Make sure SIM card is well inserted and has SMS service.
