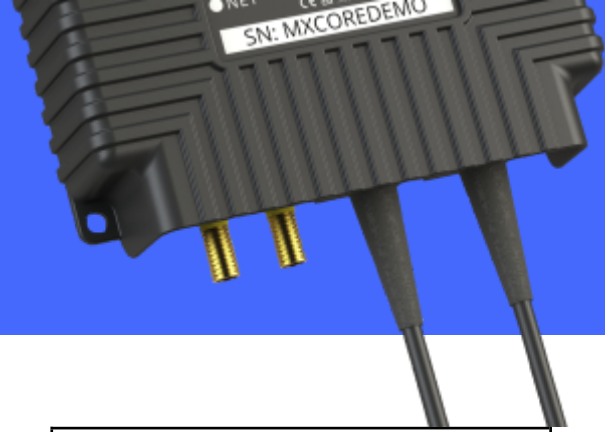


VC-LITE Instruction Manual

GLOBAL Cellular Remote Monitoring System
12V-48V DC SKU: VC-LITE-G



Thank you for choosing our remote monitoring device.
Here is some useful information you need to know.

1a. Box Contents

- 1 x VC-LITE Unit
- 1 x Fused Power Loom
- 3x Sensor Tails
- 1 x Instruction Manual
- 1 x Safety and User Guide
- 1 x GPS Antenna - 2m
- 1 x 4G / 2G Blade Antenna

For Use on:



1b. Document Contents

1. Specifications

- 1a. Box Contents
- 1b. Document Contents
- 1c. Technical Specifications

2. Regulatory

- 2a. Regulatory/Certificate of Conformity
- Installation Instructions
- 2b. Health and Safety

3. Installation Guide

- 3c. Installing your Device

4. Wiring Diagram

- 4a. Wiring Diagram
- Data from VC-LITE Device

5. VC-LITE DATA

- Data from VC-LITE Device
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6b. Adding Your Device

- 6c. Device Tariff and Billing
- 6d. Cloud Based configurations

7. Troubleshooting

- 7a. Device Status Codes
- 7b. Troubleshooting
- 7c. Safety Considerations
- *7d. Warranty*

8. Warranty

- 8d. *Warranty* continued

1c. Technical Specifications

Technical Specifications	
Materials & IP Rating:	PC/ABS, A2 stainless fittings, TPU rubber, IP64
Size & Mounting	110mm x 95mm x 35mm, 4x M4 bolt
Connectivity:	2G, 4G CAT1 LTE GLOBAL bands
Operating Power & Fuse:	7 - 70 VDC, 1A
Input Channels:	Battery supply voltage, 2 analogue 0 - 70 VDC, boot pin
Power Draw @ 12VDC	15 minute updates = 4mAh

The VC-LITE product is a non configurable product. The product will work once fitted but data will not be stored until you add it to your account on the Vesscomm Cloud Application. See 5a.

2a. Regulatory/Certificate of Conformity

Metrix Advanced Technologies Ltd , trading as Vesscomm hereby declares that the product marketed as VC-LITE is in compliance with the following:

1. General Product Safety Directive 2001/95/EC
2. EU Radio Equipment Directive (2014/53/EU) Declaration of Conformity (DoC)
3. UKCA Electromagnetic Compatibility Regulations 2016
4. Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) — Directive 2002/95/EC
5. UKCA The Restriction of the Use of Certain Hazardous Substances in Electrical And Electronic Equipment Regulations 2012

Signed: *R. Kettlety*

Robert Kettlety
Managing Director- Metrix Advanced Technologies Ltd
Date: 12th September 2023



Installation Instructions

WARNING - If You are not sufficiently skilled to undertake any part of this installation safely, you must seek the assistance of a suitably qualified person. Your warranty* is voided through incorrect installation faults.

This product is designed for 12V-48V DC Systems and takes power from the Main Battery onboard. Ensure the device is connected on the battery side of your main isolator or the device will power off and you will lose all tracking and monitoring abilities when you isolate the device batteries.

A common ground is required to monitor and use the Green, Yellow and White input channels.

2b. Health & Safety

Working in the vicinity of batteries, engines, engine room equipment and on vehicles, boats and other installations is potentially hazardous. Please ensure that all local and national government guidelines pertaining to Health & Safety Requirements are adhered to. The following identified hazards are not exhaustive:

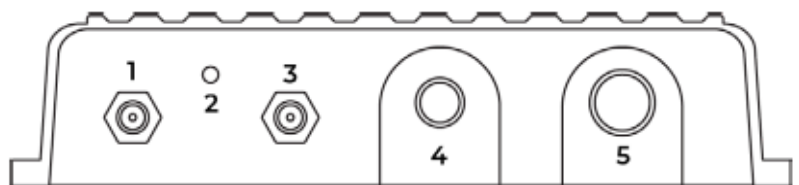
- Wear appropriate Personal Protective Equipment. Including gloves & eye protection.
- Ensure that the appropriate tools are available and that they are well maintained. Ensure that the working area is safe and that potential hazards are identified and mitigated (e.g. working at height, safe lifting practices, availability of a fire extinguisher etc).
- Remove positive battery terminals from all batteries within the installation. Ensure that the equipment cannot be started and/or moved.

- Please take care when working near a battery for shock and explosion through spark.
- Please connect 1 lead at a time, do not hold 2 terminals at the same time.
- The device must not be connected to a power source when connecting/removing 4G antenna, GPS antenna, sensor wires or relay expansion module.
- Ensure the device is fitted securely to a solid surface.
- Do not try to open the device, contact Support immediately.
- Warranty* will be voided if you open the device, an internal detector senses this.
- Higher battery voltages are potentially lethal. In all cases, Vesscomm products are designed for nominal 12-48V DC systems. Do not attempt modification or addition to systems where higher voltages may be present.
- **Do not not connect the power loom until all wiring is completed and antennas are connected.**

3c. Installing your Device

1. Find a mounting surface within 50 CM of a Positive and Negative connection.
2. Screw the 4G antenna Pigtail into the 4G LTE connector.
3. Screw the GPS antenna into the GPS SMA Connector.
4. Affix the device to a solid surface with 4 screws or bolts. M4 or smaller can be used.
5. Mount the GPS antenna without metal obstruction pointing to the sky as per a standard GPS antenna, the adhesive pad **MUST** be on the ground plane.
6. Fit the 4G LTE antenna as per the drawing, no closer than 50CM of other antennas.
7. Connecting sensor looms to their corresponding colours below:
8. **WARNING** - If you are using your own loom you must fuse each connection, Extensions wires purchased from us are always fused with 1A.
9. When connecting sensor wires, connect the 8.4mm ring crimp first
10. Connect the positive and negative crimps of the power loom to the correct terminals.
11. Connect the power loom to the main loom with the 2 pin connector.
12. Your device should now be powered - follow the next steps of setup.
13. If you need to change any connections, ensure the 2 pin power loom is removed prior to any other connectors/loom components.

1. 4G LTE Antenna
2. Status Indicator
3. GPS Connector
4. Blanked Port
5. Main Connection Loom

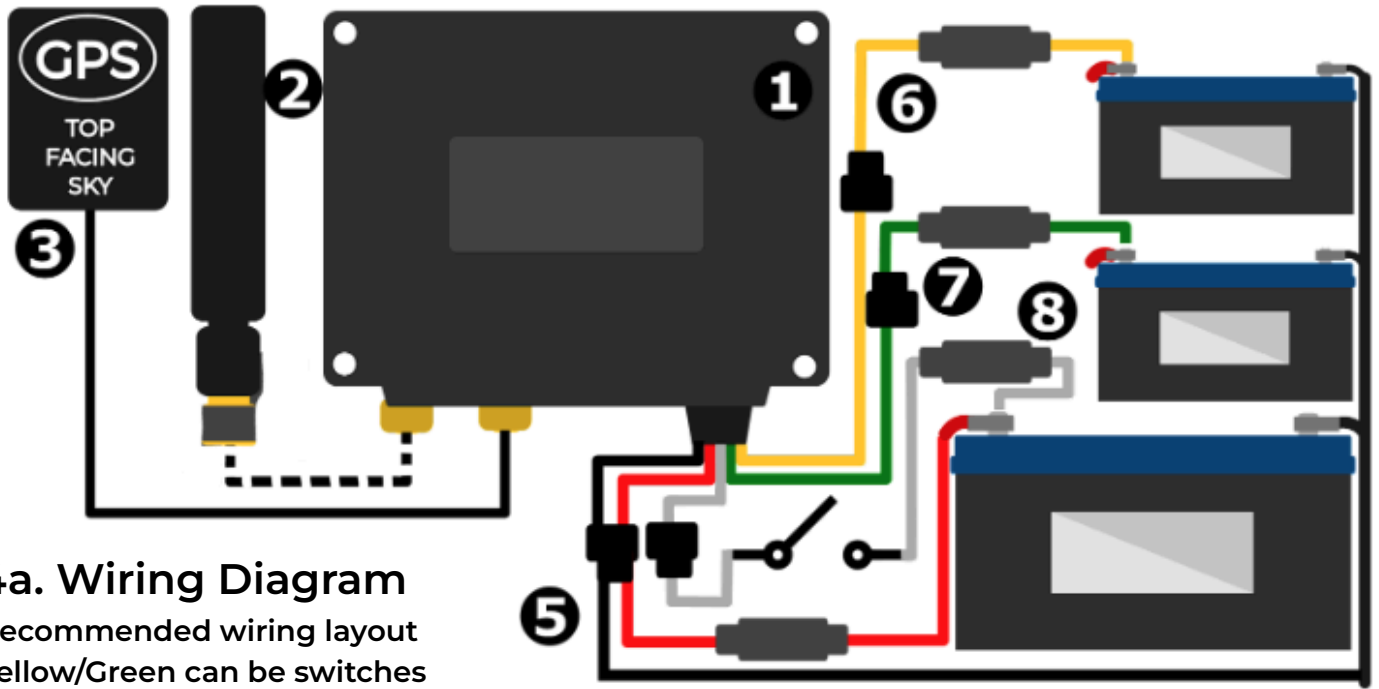


The main unit device, 4G antenna and GPS antenna are water resistant, however the loom connectors are not sealed. We advise adhesive heat shrinking (4:1 shrink) the finished connectors or fitted into a glanded box.

******* All installation points are for guidance only. *******

CAUTION! Do not use welding equipment without first disconnecting AND COMPLETELY REMOVING the VC-LITE. Damage caused by electrical welding is not covered by warranty.

PLEASE NOTE THAT DATE & TIME ARE SET TO GMT+0 LONDON.



4a. Wiring Diagram

Recommended wiring layout
Yellow/Green can be switches

1. VC-LITE	2. 4G Antenna	3. GPS Antenna	
5. Fused Power Loom INCLUDED	6. Yellow Wire 1M Tail NO FUSE	7. Green Wire 1M Tail NO FUSE	8. White Wire 1M Tail NO FUSE

Fused looms can be purchased in the correct colour & lengths 2.5m, 5m, 10m, 20m, 20AWG stranded tinned copper silicone jacket.

NOTE: The colour wires in your kit may vary from those labelled above. While we ensure the correct quantity of wires, our efforts to reduce waste and our current supply may result in multiple wires of the same colour (e.g., three green wires instead of green, yellow, and white). All wires serve the same function; the colours labelled above aid in differentiating them for the wire diagram.

Data from the VC-LITE Device

Battery Supply Voltage

Voltage (V)	Average Voltage (V)	Max Voltage (V)	Minimum Voltage (V)
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Green/Yellow Sensor Wire - Designated in platform by colour

Voltage (V)	Average Voltage (V)	Max Voltage (V)	Minimum Voltage (V)
Period Runtime (s) Above 7V DC		Runtime Percent (%) Of 15 minute Cycle	

White Sensor Wire - Trigger

Voltage Trigger Send (1/0)	Period Runtime (s) Above 7V DC
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Onboard Temperature

Temp (°C)	Min Temp(°C)	Max Temp(°C)	Average Temp (°C)
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Location & Cell

Latitude (°)	Longitude (°)	Altitude (m)
Signal Strength (RSSI)	Operator Code	Speed Over Ground (Kn)

Tilt, Impact/movement (3G trigger), Vibration Run Time

Impact Wake (1/0)	XY TILT (°)	XZ TILT (°)	ZY TILT (°)	Vibration Runtime (%)	Vib Period Length (s)
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System Data

Version	Sendtime (minutes)	Ram Free (b)	Minimum Ram Free (b)
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5a. Setup Disclaimer & Support

The VC-LITE is a basic non configurable monitoring only device, all aspects are preset. For a configurable installation, please use the VC-HUB Product.

Our software is updated continually to give you the best new features. Up to date help can be found in the support area of the cloud application. If you think something is missing or not working correctly, please email us.

The VC-LITE is a self install product, for assistance please contact support and we can put you in touch with a local installer.



Contacting Support:

Phone: +44 (0)1983 897179

Email: support@Vesscomm.com

Support Tickets: Via Portal

This hardware is designed for our web application and mobile applications "Vesscomm" available for all browsers and Android/iOS devices.

Vesscomm provides a full suite of products for the marine industry and boat owners for tracking, monitoring and controlling all types of boats from RIBs to yachts. As well as a range of integration modules for onboard use. To view our full range of products and to download digital version of literature and guides, visit <https://Vesscomm.com>

For spare parts, please contact support@Vesscomm.com or raise a support ticket from your portal. For information on a local dealer or installer, please contact sales@Vesscomm.com

5b. Installing the App

PLEASE NOTE: Our Mobile application is primarily designed for monitoring and receiving notifications. For initial account creation and setup, we recommend using a laptop, desktop, or large tablet device.

To install our application on your mobile device, proceed to the app store that corresponds with your device and search “Vesscomm”

Our App is available to download for free for Apple® and Android™ devices.



Google Play and the Google Play logo are trademarks of Google LLC. App Store and the App Store logo are trademarks of Apple Inc.

The following setup requires a standard web browser login to app.Vesscomm.com - We advise the latest Chrome or Safari browser.

The following instruction below may differ from the date of printing.

6a. Logging into your Cloud Account

To access your device, please create an account at app.Vesscomm.com if this is your first device or log in to your existing account. Follow the on screen instruction when signing up. You will need to receive a confirmation email, if this is not delivered due to blocking filters please contact us to manually verify.

6b. Adding Your Device

To add a new device to your account, go to your account settings page and find the tab/button “Add New Device” You will be required to add a valid credit/debit card prior to adding a device. While adding your device you will need the unique code on the device label. You will be able to set the asset name and icon at this point. All other changes can be made once it is added.

6c. Device Tariff and Billing

Your Vesscomm Device includes 5 Years of basic data and platform access as standard. There may be optional additions in the Web Portal.

6d. Cloud Based configurations - See Self Support Center

- Device details, manufacturer information, Owner, Registration, Icon, Static GPS, etc.
- Adding sensors, setting colour and notification thresholds, visual bars, access rules.
- User access to the device, email notifications, push notification.
- Setting Geofences, viewing trip history

Your Account:

- User account details, billing details, password, marketing choices
- List of all devices on your account, add new device, delete a device
- Terms and Conditions.

Please use the support button in the bottom right of the cloud application for self service help or to raise a support ticket for the above items.

High Cost Network Charges Disclaimer

Whilst we at Vesscomm and Metrix endeavour to get the best network rates possible for your devices included, this can change without notice or in some cases there are networks

across the caribbean with very high per Mb charges, in cases where long term access to these networks is used, a member of our team will be in touch to discuss the slight price increase that will need to be paid for the period of use. We will only charge the difference in rate charge for the data used each month. For example, Turks and Caicos would have a £3 Monthly overage charge whilst in use.

You are now ready to start using your device.

7a. Device Status Codes - **These only show at start up and during the 15 minute period**

Light Action	Meaning
No Lights	Device starting or powered off or asleep.
Orange	Device started, looking for OTA updates/attempting OTA update.
Red	Device attempting connection.
Green	Device is connected to the cloud

7b. Troubleshooting

Issue	Solution
My device isn't showing any data in the cloud or app	Check the LED on the unit to make sure it is connected.
Device data in the cloud or app is not accurate	Check the connections to the battery and make sure they are secured.
My device isn't powered on	Make sure your power source has sufficient power to run the device and the fuse has not blown.
My device isn't sending data	Check the flash code of the device. Try power cycling the device. Ensure you have a signal where the device is fitted with your phone or 4G device.
Something about my hardware does not look right or not fitted correctly	Contact us immediately and DO NOT open the product as this will void your warranty* and we cannot offer a replacement.

7c. Safety Considerations

There are no special specific safety considerations (except for observing good installation practices covered elsewhere in this manual) for the VC-LITE product.

7d. Warranty

Your product comes with a lifetime warranty against the main hardware units function for connecting with our cloud services as long as an active subscription is paid for with no due payments outstanding, the device has not been tampered with or damaged in any way including water damage and the subscription has not been paused for any period during this time. Once a device subscription

is cancelled it cannot be restarted without being returned to our main office for fitment of a new SIM, a charge applies.

Metrix Advanced Technologies Ltd will repair or replace faulty product during this period at its sole discretion subject to the failure not being a result or caused by any of the following conditions:

1. Reverse polarity, connection to the incorrect voltage or reverse switch/contactors polarity.
2. Damage caused by incorrect installation that may include (but is not limited to): Incorrect wiring, Ingress of water, salt, vapour, corrosive gases, diesel, petrol or other distillates of oil.
3. Physical damage/abuse.
4. Damage caused by third party systems, fire, flood, lightning and other atmospheric phenomena.

This warranty expressly excludes all consequential costs including (but not limited to): Loss of use, loss of reputation, cost of installation/engineers time, cost of return freight, any banking charge etc.

To Claim Warranty please contact your Dealer. To return goods directly to Metrix Advanced Technologies Ltd, please contact our support. Metrix Advanced Technologies Ltd accepts no liability for goods returned without Returns Authorisation.

Metrix Advanced Technologies Ltd & Vesscomm accepts no liability for loss, injury or damage caused by installing or fitting this equipment. If you do not accept this no liability clause, do not install the equipment. Please return the goods (carriage paid) in original packaging for a full refund. Installing it constitutes acceptance of these terms. Please ensure that the goods are suitable and appropriate for the installation. Full technical details, manuals and expert help is available from Metrix Advanced Technologies Ltd and online at Vesscomm.com

Please note that this warranty, exceptions and terms do not infringe your statutory rights that may vary from country to country and state to state.

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METRIX
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<https://metrixadvancedtechnologies.com>

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