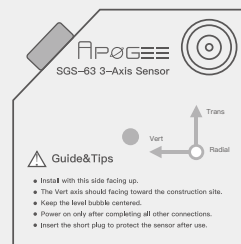




User Manual V1.2

Smart Engineering Smarter Future

SGV-63 Real-Time Vibration Meter



**High Precision, Multi-Parameter
Industrial Applications, Vibration
Analysis, Low Power Consumption**

Designed in Singapore

Disclaimer

Read this user manual carefully before using the product to ensure that you completely understand the product and can correctly use it. After reading this user manual, keep it properly for future reference. Improper use of this product may cause serious injury to yourself or others, or cause product damage and property loss. Once you use this product, it is deemed that you understand, approve and accept all the terms and content in this document. Apogee is not liable for any loss caused by the user's failure to use the product in compliance with this user manual.

In compliance with laws and regulations, Apogee reserves the right to final interpretation of this document and all documents related to the product. This document is subject to changes (updates, revisions, or termination) without prior notice. Please visit Apogee's official website to obtain the latest product information

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1. Overview

The SGV-63 Real-time Vibration Meter is an advanced product developed by our company to measure velocity with precision and efficiency. This cutting-edge solution incorporates edge computing technology and a compact System-on-Chip design, the device can compute the vibration amplitude and main frequency in real time, effectively saving cloud platform storage and reducing the data analysis work.

2. Operating Modes

SGV-63 has two operating modes: Inspection Mode and Alarm Mode.

Inspection Mode:** When the vibration does not reach the trigger value, the device will automatically upload feature values to the cloud platform at equal time intervals while in inspection mode (the upload interval can be adjusted)

Alarm Mode:** If vibration amplitude in the X, Y, or Z directions exceeds the trigger value, the device enters Alarm Mode, quickly saving the alarm data and uploading the current feature values to the cloud platform.

3. Technical Specifications

FEATURES	SPECIFICATION
Range	350 mm/s
Accuracy	0.01 mm/s
Frequency Range	2 Hz – 200 Hz
Sampling Rate	500 Hz
Data Collection Mode	Continuous
Operating Duration	15 days with standard battery; supports external power supply
Trigger Range	0.01 – 350 mm/s
Data Platform	Feature value data curves, report summary and printing
Technical Mode	Edge computing, local calculation of vibration amplitude and main frequency
Data Upload Type	Simultaneous upload of amplitude and frequency
Upload Interval	Every 10 minutes (Adjustable)
Clock Mode	Cloud time synchronization accurately records the test time (to the second)
Storage Mode	Local data automatically delete after successful upload (local storage 16MB)
Data Access	Cloud-based
Dimensions	210mm x 75mm x 32mm

4. Product Accessories

ACCESSORIES	QUANTITY	REMARKS
SGV-63 Vibration Meter	1	
SGS-63 3-Axis Sensor	1	
Sensor Cable	1	
Sensor Fixing Short Plug	1	
4G Antenna	1	
Power Cable	1	
User Manual	1	
Factory Inspection Report	1	
Calibration Certificate	1	
Warranty Card	1	One year
Gel Cel Battery	Optional	12V 20AH
Solar Controller	Optional	
Solar Panel	Optional	670mm x 530mm, 60W
Solar Panel Stand	Optional	15°angle, galvanized coating for rust resistance
Carrying Case	Optional	One case for two sets of Vibration Meter
Enclosure Box	Optional	

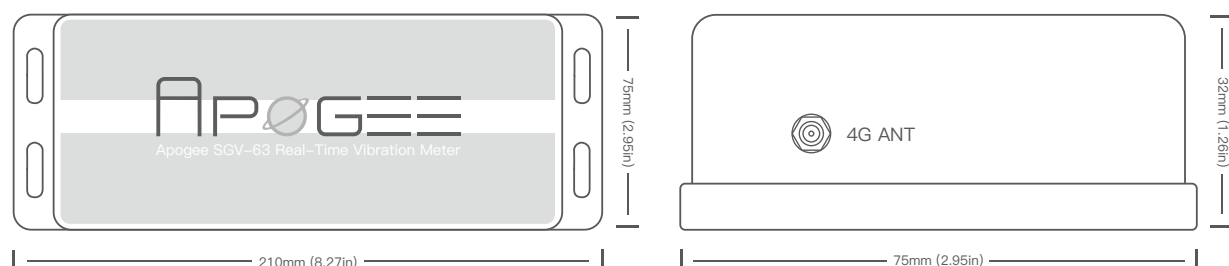
5. Product Instructions

Appearance

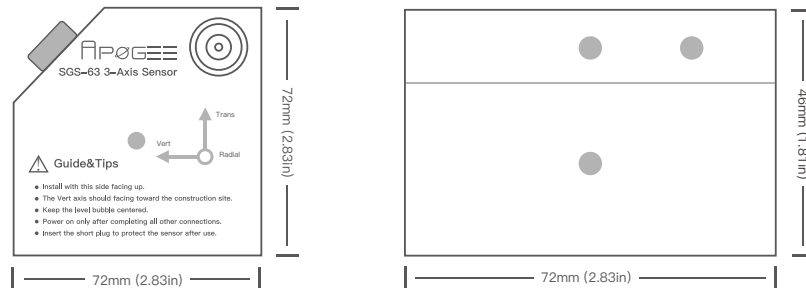
The product shown in the image below is SGV-63 Vibration Meter and SGS-63 3-Axis Sensor

Dimensions:

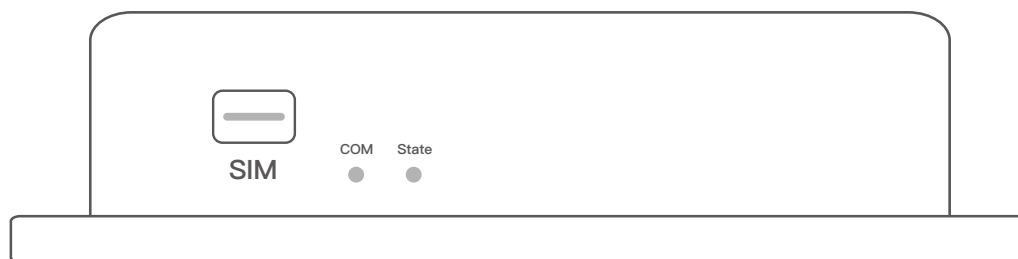
SGV-63 Vibration Meter: 210*75*32mm (8.27*2.95*1.26in)



SGS-63 3-Axis Sensor: 72*72*46mm (2.83*2.83*1.81in)



Communication and Light Indicators



SGV-63 Vibration Meter

Communication:

Insert SIM card into the slot to enable network communication functionality. (After inserting the SIM card, please seal the slot with waterproof tape to prevent water leaking.)

Light Indicators:

There are two Light Indicators. The **COM** on the left is the communication light, and the **State** on the right is the operating status light. Users may detect the device's status by observing the flashing mode as follows:

COM Light:

The rapid flashing light indicates that the device is engaged in network communication.

The long off and short on light indicates that the device has not yet registered online.

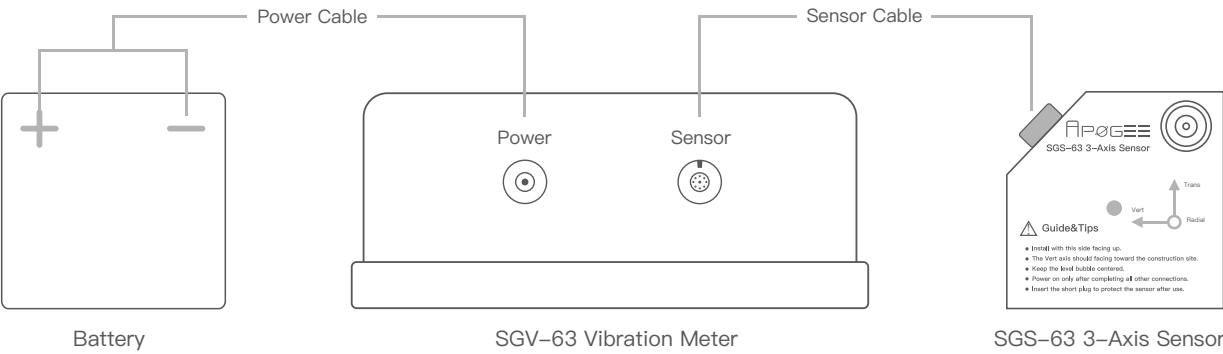
The long on and short off light indicates that the device has registered online.

State Light:

The slow-flashing light indicates that the device is powered on and undergoing automatic configuration.

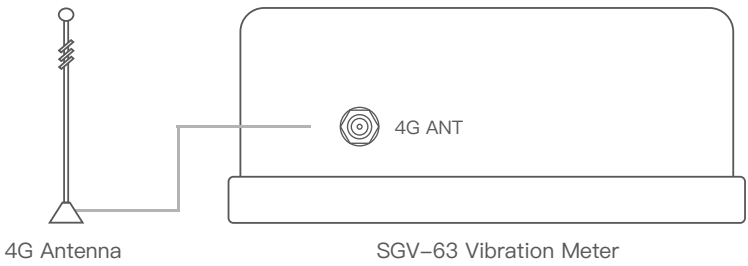
The fast-flashing light indicates that the device is automatically collecting data.

Interface and Connections



Power: Use Power Cable to connect SGV-63 Vibration Meter to the battery.

Sensor: Use Sensor Cable to Connect SGS-63 3-Axis Sensor to SGV-63 Vibration Meter.



4G ANT: Connect 4G Antenna.

Note:

- *The input power voltage range is 6–24V.
- *When inserting or removing the power and sensor cables, please mind the direction of the sockets and pins to avoid damage to the plugs.
- *Power on the device only after completing all other connections.
- *Insert Sensor Fixing Short Plug in to the sensor to protect it after use.

6. Cloud Platform Instructions

Logging into the Cloud Platform

Access Apogee Cloud Platform

[<http://8.219.208.124>]

Use your account and password to login.

Login

Username

Password

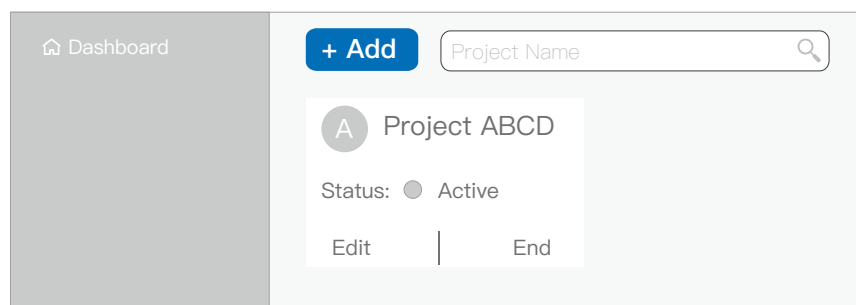
OK

Click on the avatar/username in the top right corner to display the options menu. to modify your account password and clear the system cache here.

Project Management

Add New Project: After login, go to the [Dashboard](#) page, where you may add, edit or end aongoing projects. Click [+ Add](#) icon to enter project setup page and setup details such as project name, Project images, Start time and Descriptions, click [Submit](#) to add this new project.

Complete Project: When a project is completed, you may click **End** on the Project Card to release linked devices and setup them in new projects. The pervious data remains available for viewing on completed projects.



Project Information

* Project Name:

Please enter the project name

Project images:

+

Owner:

Please enter the Total units

Start Time:

Select date

Total units:

Please enter the Total units

Team in Charge:

Please enter the person in charge of monitoring

Project Description:

Please provide a complete project description, which will be reflected in thereport!

Submit

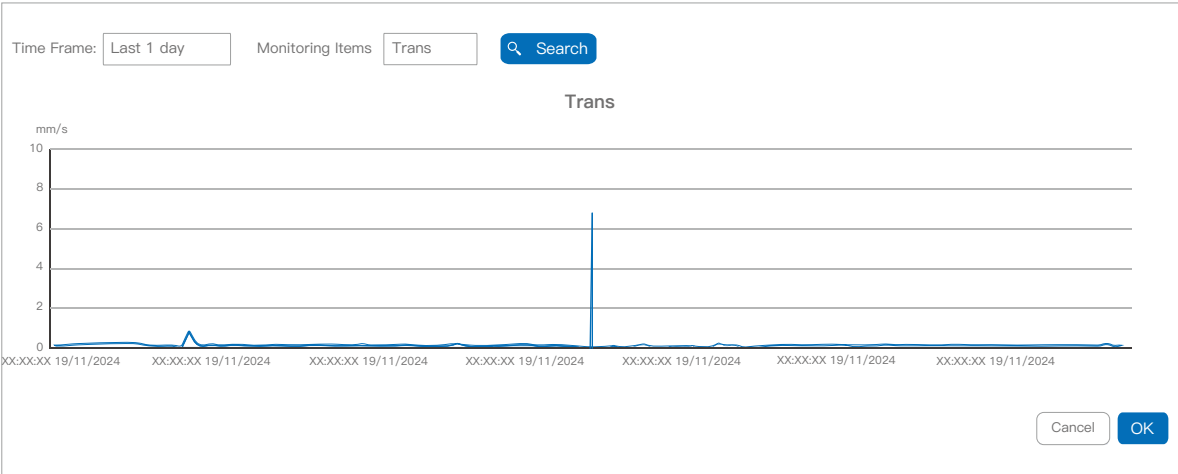
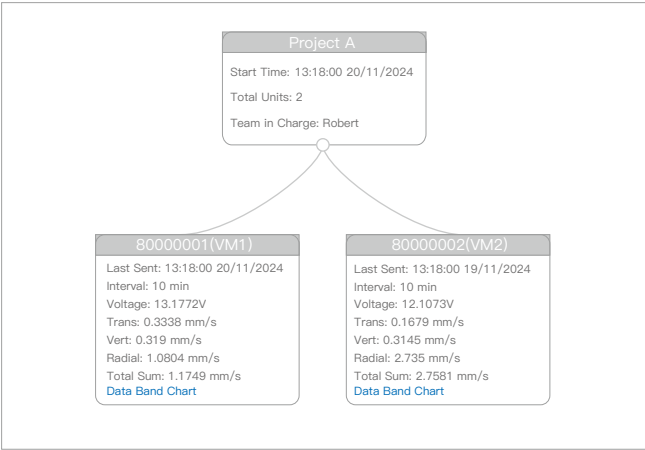
Device Review

Click a project card to access the [Project Info](#) page. A diagram shows the total number of devices under the current project, device working status, voltage and latest data sending time.

Click [Data Band Chart](#) to see historical data curves for **Trans**, **Vert**, **Radial**, and **Total Sum** over the past 1, 7, 30 days and other long periods.

Note:

- *The Device under the project shows Green means it is working, and shows Red means it is offline.
- *Even when offline, the SGV-63 may be running at a Low-Power Mode and is continuously collecting data from the construction site



Data Viewing

Click [Query Data](#), then click [Sensor ID](#) to select a SGV-63 under this project. , Choose [Monitoring Type and Time](#) to view data. Click [Save Excel](#) to download data within the selected time range.

Query Data

Sensor ID

Monitoring Type

Time

Y-Axis Scale Max

Y-Axis Scale Min

Show Work Suspension Level ☐

Show Predetermination Level ☐

Show Alert Level ☐

[Save Excel](#) [Confirm](#)

Configuration

Click **Setting** on the top, you may add a new SGV-63 Vibration Meter under this project, or select a SGV-63 and edit the settings.

Setting

General

*Sensor ID:

* Device ID:

* Interval:

10

min

* Factor:

35

* Restart Voltage:

12

V

* Low-Power Mode Voltage:

10.5

V

Inspection Time:

Select date

Alert

* Email:

* Phone:

* Sending Options:

Interval

* Alert Interval:

30

min

Work Suspension Level:

5

Predetermination Level:

Alert Level:

3

Trigger Level:

Alert On/Off:

☒

Submit

Cancel

General Setting

Sensor ID: Select a SGV-63 and edit the other settings.

Device ID: Set a name for this device according to the project.

Interval: The data upload interval is set to default at 10 minutes/time.

Factor: Set the factor for converting sensor voltage to speed at a default value of 35.

Restart Voltage: When the voltage of vibration meter reaches the set value (default at 12V) from Low-Power Mode, it will automatically restart and maintain an online state.

Low-Power Mode: When the voltage of vibration meter reaches the set value (default at 10.2V), it will switch to an offline state, gathering data without uploading.

Alert Setting

Email: Add the Email address of the Email alert recipient.

Phone: Add the phone number of the SMS alert recipient.

Sending Options: Select from **Interval** mode or **Only at the first time** mode.

Alert Interval: Set alert sending interval default at 30 minutes/time.

Alert On/Off: Turn on/turn off the alert of this vibration meter.

Export Report

Click [Export Report](#), then choose a project, the time range, and other options such as summary and graph. Click [Search](#) to automatically generate a report survey. Click [Export](#) to download a PDF format report.

Export Report

Project:

Time ~

☐ ppv ☐ avg

☐ Summary ☐ Raw Data

☐ Din 4150-3

☐ Graph ☐ Show Predetermination Level ☐ Show Work Suspension Level ☐ Trans ☐ Vert ☐ Radial ☐ Total Sum

Note:

*You may contact our customer service to customize the report's content and format to meet your country's standard.

Warning Alert and Offline Record

Click [Alert List](#) to access the alert records for both the current and past Alerts. Click [Offline Record](#) to check the offline record of the devices.

7. Troubleshooting

Please follow the FAQs to solve the issues. If the problem persists, feel free to contact us, and we will provide you with detailed assistance.

Hardware Issues

- *If SGV-63 Vibration Meter does not start after powering on, check if the battery is working correctly.
- *If no data shows on the platform after connecting the battery, check the SIM card and antenna are well installed.
- *If SGV-63 fails to collect data after connecting a sensor, verify the connection between the sensor and meter.
- *If the platform continually alerts after connecting SGS-63 sensor, please adjust the alert trigger value on the [Setting](#) page.
- *For unknown errors, reconnect the power to restart the meter.
- *If your troubleshooting is not listed, please contact us.

To prevent early aging or damage from improper maintenance, please review the following instructions.

Hardware Maintenance

- *Proper Use: Operators should carefully read the manual, understand the device features, and follow the standard to install and use the SGV-63 Vibration Meter. Strictly follow the operating procedures when turning the device on and off to ensure it remains in good working condition. Pay attention to the use, maintenance, and inspection of the supporting accessories and facilities.
- *Harss Environments: Temperature and humidity in harsh environments can impact the work of the device. To maintain accuracy and extend service life, keep SGV-63 within the specified temperature

range. See specifications for details.

*Protection: As a precision instrument, avoid exposure to impact, humidity, strong electricity, magnetic fields, oil, and dust.

*Surface Cleaning: Avoid using alcohol or thinner, which may corrode the Surface. Use soft cloth with a small amount of water for cleaning.

*Connector: Do not connect or disconnect the sensor while the device is powered on.

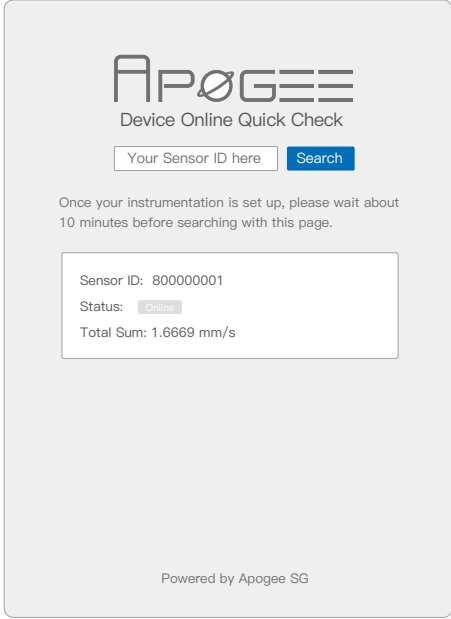
8. Mobile DOQC Support

Access Apogee Mobile DOQC Page

[<http://8.219.208.124>]

Input device sensor ID here and click [Search](#)

This simple page may help you to easily check on your mobile device whether the device is functioning normally after installation. You can also check the status of the meter anytime through your mobile device.



Apogee
Device Online Quick Check

Your Sensor ID here [Search](#)

Once your instrumentation is set up, please wait about 10 minutes before searching with this page.

Sensor ID: 800000001
Status: Online
Total Sum: 1.6669 mm/s

Powered by Apogee SG

9. After-Sales Service

Warranty Terms

For products manufactured by our company, we offer the following warranty policies:

*During the warranty period, any quality issues under normal use are repaired for free. After the warranty period, we offer long-term maintenance with a minimal service charge.

*If damage results from improper use, regardless of warranty status, repair services are available with a service fee.

*For assistance, contact after-sales support.

*We are not liable for data loss or damage to programs or storage media. Please take care and be responsible for your data security.

10. Contact Information

Apogee Mgmt Private Ltd

Address: 53 Tuas South Link 1, Tuas South Connection, Singapore. S636797

Service Call : +65 96529565

Email : apogeesg24@gmail.com

