APOGEE

User Manual V1.2

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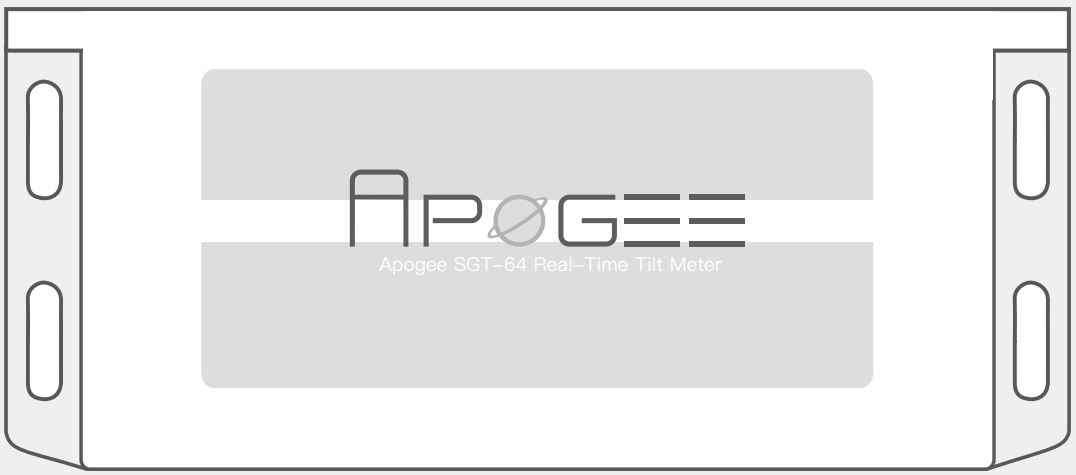

SGT-64 Real-Time Tilt Meter

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 SGT-64 Real-Time Tilt Meter is designed for measuring angle parameters of structures such as buildings, bridges, mountains, and slopes. Featuring an integrated design, the device includes a built-in battery and a wireless transmission module, enabling quick installation and usage in environments with limited power or network availability. Designed with field conditions in mind, it boasts simplicity, high integration, easy installation, low maintenance, and cost-effectiveness.

2. Technical Specifications

FEATURES	SPECIFICATION
Range	±90°
Measurement Axes	±X, ±Y
Accuracy	0.1°
Resoluation	0.01°
Communication	2G/3G/4G
Protocol	MQTT
Power Supply	16.8V, 5200mAh lithium battery
Power Consumption	30 μA
Temperature	-30°C to +65°C
Upload Interval	0-48 hours (Adjustable),1-hour interval theoretical runtime of 666 days
Protection Rating	IP67
Data Platform	Feature value data curves, report summary and printing
Data Access	Cloud-based
Dimensions	210mm x 90mm x 65mm

3. Product Accessories

ACCESSORIES	QUANTITY	REMARKS
SGT-64 Tilt Meter	1	
Installation Screws	1	
User Manual	1	
Factory Inspection Report	1	

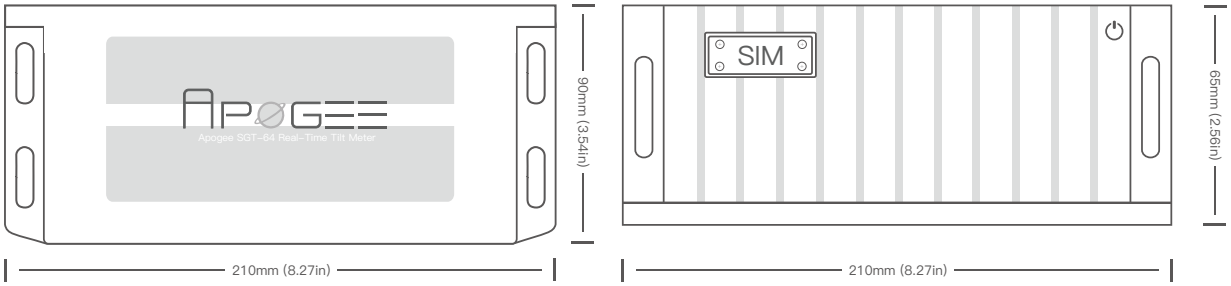
ACCESSORIES	QUANTITY	REMARKS
Product Certification	1	
Warranty Card	1	One year

4. Product Instructions

Appearance

The product illustrated in the diagram is the SGT-64 Tilt Meter.

Dimensions: 210*90*65mm (8.27* x 3.54* x 2.56in)



Installation Guide

Proper installation is critical to avoid measurement errors. Please follow these steps carefully:

*Secure SGT-64 to the surface being measured using screws. Ensure the mounting surface is flush with the measuring surface and as level as possible.

*Avoid creating an angle between the mounting surface and the measured surface, as this will affect accuracy.

*Ensure a rigid connection during installation. This device only supports vertical installation.

Note:

*A rigid connection means when one component moves or is stressed, the connected component does not move or deform relative to it. Essentially, the connection behaves as a single unit.

Activate SGT-64 Tilt Meter

To activate SGT-64 Tilt Meter. Unscrew the card slot and insert the SIM card. Bring the magnet close to the power icon area, and you will hear a beep sound, indicating that the SGT-64 Tilt Meter has been well activated. After waiting for half an hour, it will automatically start collecting data.

Send a Command

After the SGT-64 has been successfully installed, please leave it to stand for 24 hours to ensure it fully adapts to the stress deformation caused by the screws. After 24 hours, login to the cloud platform and send the commad **Zero the Device**. Once SGT-64 has received this command,it will be able to take accurate readings.

Also, send the commad **Power Off** before dismantling SGT-64.

We recommend setting the data transmission interval to 6—12 hours.This will allow the built-in lithium battery of the device to perform more effectively.

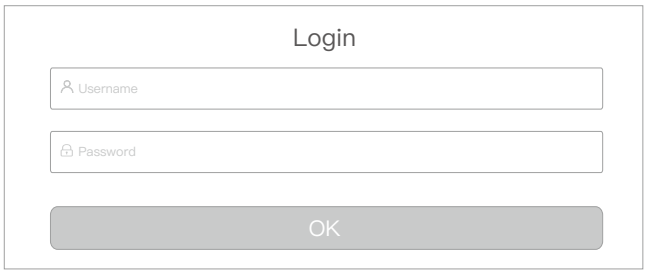
5. Cloud Platform Instructions

Logging into the Cloud Platform

Access Apogee Cloud Platform

[http://8.219.208.124]

Use your account and password to login.

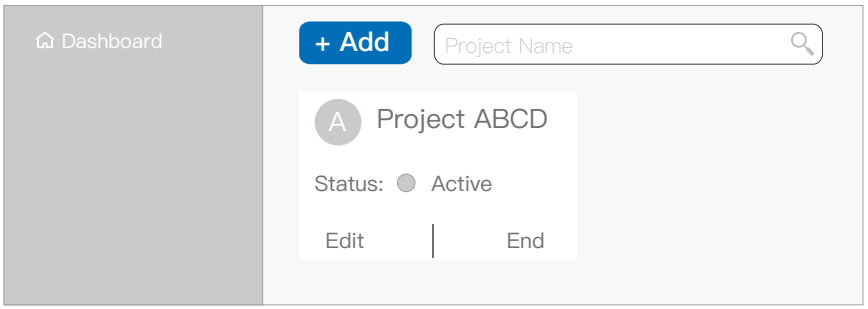


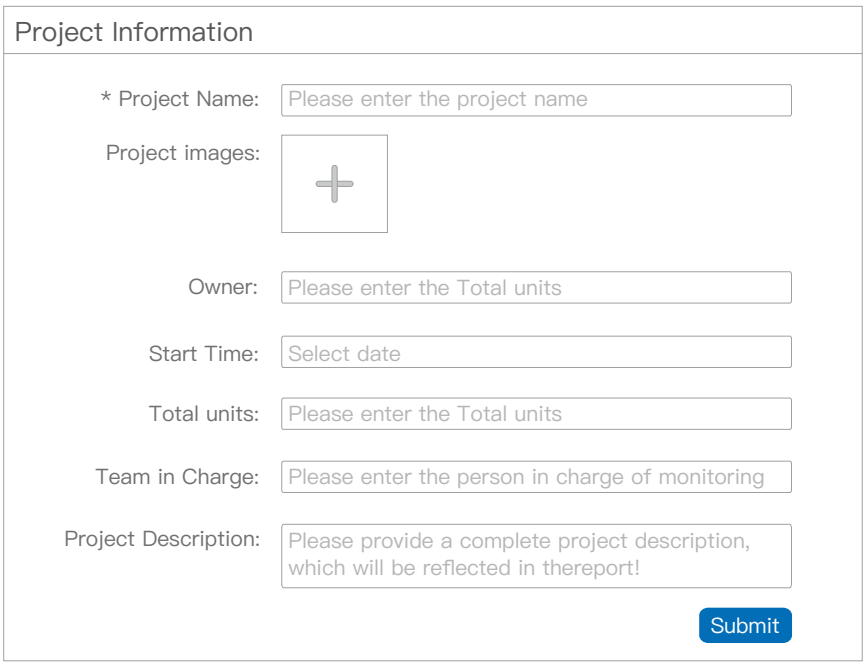
Click on the avatar/username in the top right corner to display the options menu. to modify your account password and clear the cystem cache here.

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.

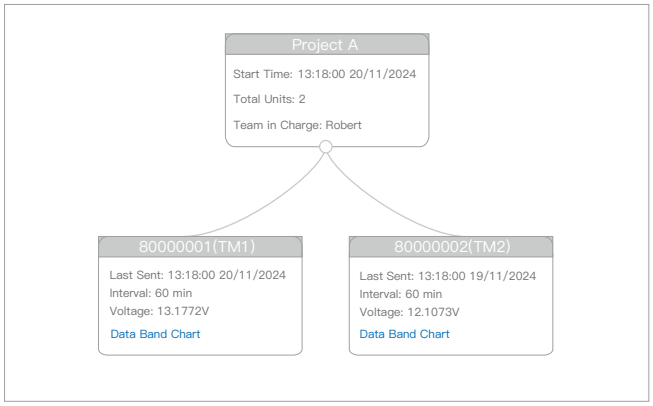




Device Review

Topology Display: 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.

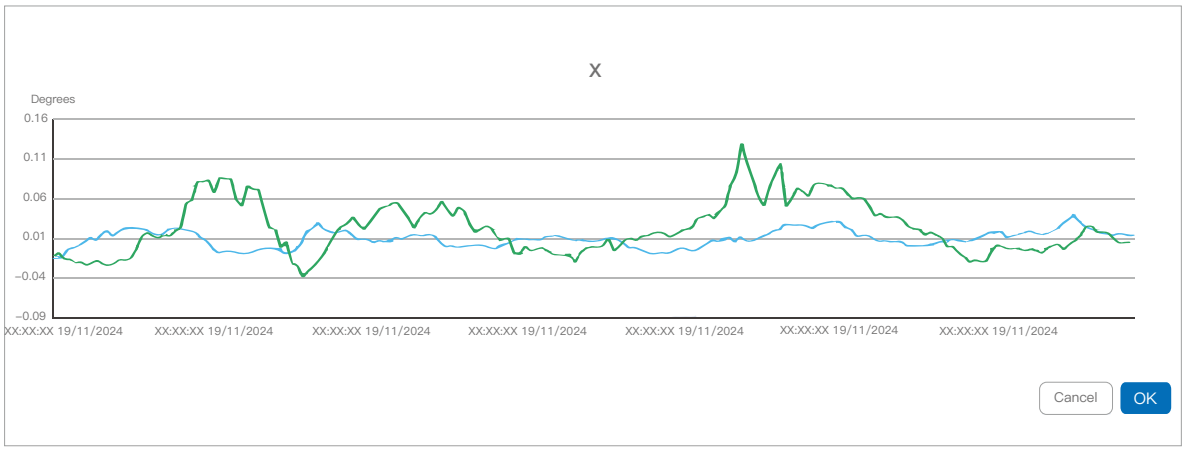
Click **Data Band Chart** to see historical data curves



Data Review

Categorical Display: Shows complete data for each sensor or monitored parameter within the project. This includes:

*List View: Displays raw data, which is exportable.
*Chart View: Presents data as curves



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.

6. 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 SGT−64 Tilt 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 is well installed.
*If the platform continually alerts, 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 SGt−64 Tilt 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 SGT−64 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.

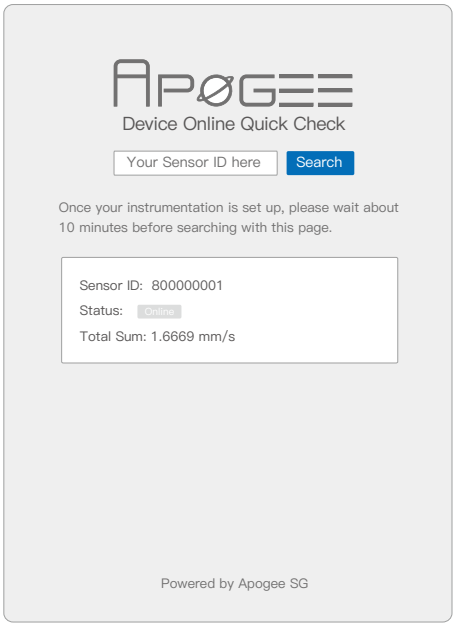
7. Mobile DOQC Support

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.



8. 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.

9. Contact Information

Apogee Mgmt Private Ltd

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Email : apogeesg24@gmail.com