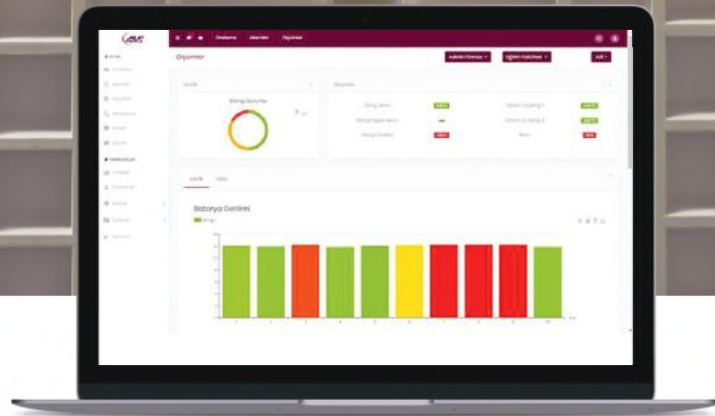# Protect your business from costly downtime!

ALPAIS battery management system provides real time 7/24 & 365 days a year monitoring.

alpais
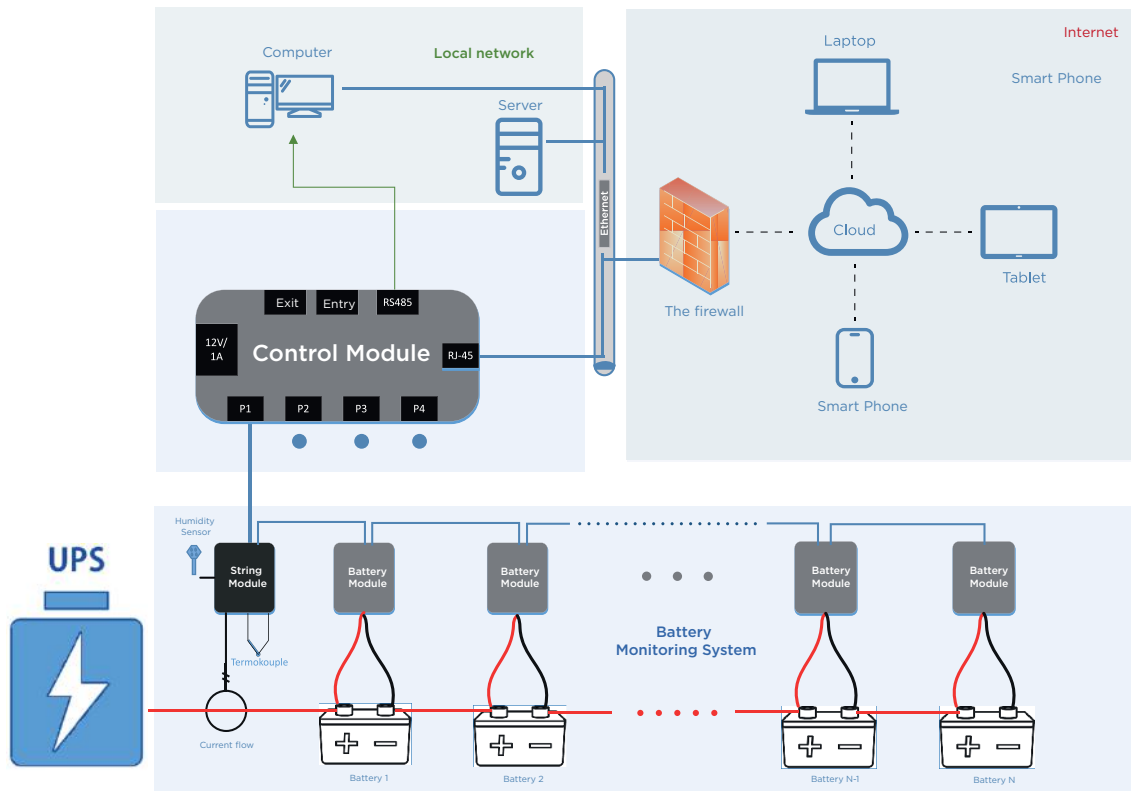battery monitoring system

Protect Your
Investment

Alpais Battery Monitoring System protect your business
from costly downtime.

alpais
battery monitoring system

alpais
battery monitoring system

Alpais:
Modular Battery Monitoring System

Located at the center of the Alpais system, the Control Unit offers a complete solution for monitoring unlimited number of batteries with its integrated hardware and software. While Alpais provides maximum usage of backup power infrastructure generated by batteries, ensures businesses make the most of the investment made for the batteries.

> System Components

> Measurement of Battery parameters using Battery Monitoring Module

Voltage, internal resistance and temperature parameters of VRLA, VLA, or Ni-Cd type batteries are measured and measured parameters are transmitted to the Control Unit via Modbus protocol.

> Measurement of current and environment parameters using String Module

String current and ambient temperature and humidity ratio are measured, and measured parameters are transmitted to the Control Unit via Modbus protocol.

> Control Module

Control unit is located at the centre of the system and responsible for saving and processing the parameters transmitted from batteries and string units.

> Battery monitoring system software

Unlimited number of batteries installed either in a single room or different facilities or countries are monitored extensively from a single control center.

alpais
battery monitoring system

End of
Costly Downtime

If you are talking about the battery infrastructure installed somewhere, it can be predicted easily that a critical task has been carried out there. When the battery infrastructure is required and if this need cannot be met at that time, the increase in costs will be inevitable.

Power blackouts is a common situation in the world. If power blackouts is took into account, the investments made for UPS and Battery Monitoring Systems are vital for your business.

You can be ready for any negative situation by monitoring the installed battery infrastructure for backup power.

The Alpais Battery Monitoring System, always refreshes your sense of trust by providing daily feedback and information from battery infrastructure.

> Alpais, Adds Value to Your Business, Protects Your Investment!

- Extends the lifetime of the batteries in the infrastructure.
- Reduce Maintenance and replacement costs through effective Protective and Preventive Maintenance.
- Provides maximum benefit with minimum workforce.
- Provides remote access, giving you the opportunity to manage your business anytime, anywhere.
- Provides planned battery procurement by avoiding emergency situations.
- Enables the identification and verification of the warranty status with recorded data and reporting.
- Provides improvements in business insurance premiums as risks are reduced to minimum.
- Keeping your staff away from battery racks / chambers and vulnerable areas makes sure their safety and activities continue without interruption. This allows you to focus on your core activities by simplifying your work safety and health planning.
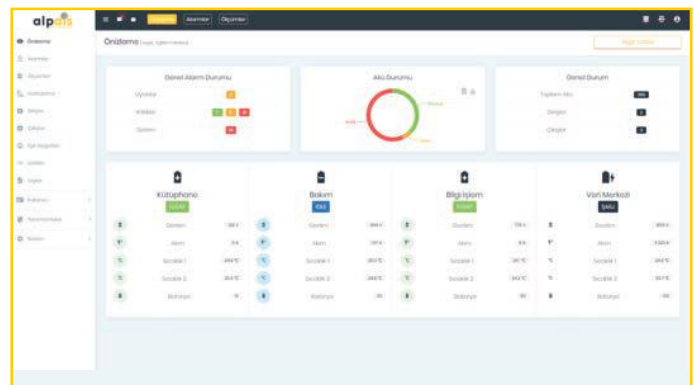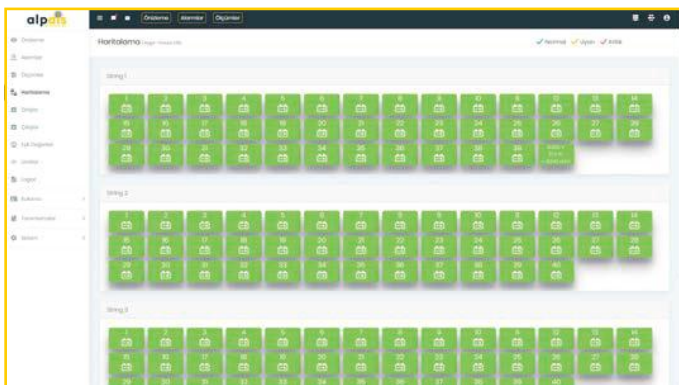
> What does ALPAIS measure ?

Battery Voltage

The float charge voltage has critical significance for battery life. Charge voltages that are not applied correctly cause loss of capacity, accelerated corrosion in the
network, excessive gas release, and eventually reduces the battery life. Battery voltage monitoring provides detection of short circuits, discharge performance and
fatal failures in the UPS battery backup systems in advance.

Battery Internal Resistance

Internal resistance is an increasing factor with battery age. Due to the rise in internal resistance, the battery is unable to deliver the desired current. Thus, the service life of the batteries can be determined exactly by
monitoring the internal resistance value. Internal resistance measurements also provide detection of weak connections and open circuit batteries before fault
occurs. In some cases battery failures take place in a very short period of time such as a week. For this reason daily internal resistance measurements allows you to detect faulty batteries before a problem occurs without the need for a discharge test

Battery Temperature

The most important advantage of measuring the temperature of each battery is identifying thermal runaway before occuring, and taking necessary intervention. Moreover, data about weak HVAC originated environment problems, weak connections and excessive ripple voltages can be collected,indirectly.

String Voltage

The String voltage is monitored to verify that the charging system is active and charging as required.

String Current

By monitoring the string current, the amount of energy received or given for each string can be measured.
An ordinary UPS only measures string current and does not detect imbalances between the strings.
The imbalances between the strings are the warnings about the voltage problems in the system. String current monitoring also allows detection of the incorrect charging method
and the ground fault that will adversely affect the system.

Ambient Temperature

The recommended usage temperature of batteries
varies between 20-25 °C. Temperatures outside this range can significantly aect the battery
corrosion rate and shorten battery life. Approximately 8-10 °C increase in ambient temperature can cause the battery life to decrease by 40-50%. Therefore, it is
monitored whether the ambient temperature in the battery rooms is within the recommended range and the useful feedback is provided to the user.

alpais
battery monitoring system

Alpais Battery Monitoring Software

Located at the center of the Alpais system, the Control Unit offers a complete solution for monitoring unlimited number of batteries with its integrated hardware and software. Alpais provides you with the maximum availability of your backup power infrastructure generated by the batteries, allowing you to have the best benefit, you have made investment for the battery

> Alpais offers proactive protection by making the right decisions on the data it provides.

- Local Area Network or Cloud Monitoring
- Multiple Location control from single control center
- Modbus RTU Support
- String Based Battery Positioning
- Real-Time Battery Status and Color Notification
- Detailed Charge / Discharge Record
- Alarm and Event Activities

- E-mail and SMS Notifications
- Management and service based reporting
- Automatic Data Management
- PDF or Excel Reporting
- Graphics and Analysis Tools
- Facility and Project Customization
- Alarm history and service logs

alpais
battery monitoring system

> Technical Specifications

Control Module

Control Module	
Operating Conditions	
Operating Temperature	0–50°C (32–122°F)
Storage Temperature	-10–80°C (15–175°F)
Relative Humidity Ratio	%5-%90 RH
Atmospheric Pressure	80-110kPa
Power Input	12Vdc @2A
Max. Power Consumption	20 Watt
Communication Interface	
RS-485	Modbus RTU
Ethernet	SNMP
Features	
Number of String	4 Strings can be monitored
Number of String Unit	1 String Unit at each String
Number of Battery Monitoring Unit	120 Battery Monitoring Unit at each
Supported Batteries	Between 2V and 12V
String Voltage	2V-800Vdc
I/O	
Relay Output	2x Dry Contact Output, 30 VDC @ 5A
Digital Input	2
Isolated Output	2
Electrical Isolation	2000V
Physical Characteristics	
Dimensions (H x W x D)	(190 x 149 x 36mm)
Enclosure	Plastic and metal option available
Color	Black

String Unit

String Unit	
Current Monitoring	
Current range	0-500A
Resolution	10 mA
Accuracy	1%
Current Sensor	Hall Effect
Ambient Temperature Monitoring	
Temperature Range	0–50°C (32–122°F)
Resolution	0.01°C
Accuracy	2°C
Protection	
Isolation	2000V Opto İzolasyon
Short Circuit Protection	Max. 3.5A (Internal Fuse)
Reverse Polarity Protection	Provides protection at rated voltage against reverse connection
Enviromental Conditions	
Operating Temperature	0–50°C (32–122°F)
Storage Temperature	-10–70°C (14–158°F)
Relative Humidity Ratio	%5-%90 RH
Atmospheric Pressure	80-110kPa
Power	
Power Consumption	1.25 Watt
Operating Current	
Quiescent current	150 mA
Communication	
Data Transmission Interface	Serial Modbus protocol
Features	
Auto Addressing	Automatically obtain address during installation or replacement
Physical Characteristics	
Dimensions (H x W x D)	(90.5 x 62.5 x 26.5 mm)
Enclosure	Flame retardant ABS
Color	Transparent or Black

Battery Module

Battery Module	
Battery Voltage Monitoring	
Voltage Range	0–16V
Resolution	2 mV
Accuracy	0.1% ±5 mV
Internal Resistance Monitoring	
Resistance Range	0.05-64m ohms
Resolution	1 µOhm
Accuracy	±2 %
Temperature Monitoring	
Temperature Range	0–50°C (32–122°F)
Resolution	0.01°C
Accuracy	2°C
Protection	
Isolation	2000V Opto Isolation
Short Circuit Protection	Max. 3.5A (Internal Fuse)
Reverse Polarity Protection	Provides protection at rated voltage against reverse connection
Operating Conditions	
Operating Temperature	0–50°C (32–122°F)
Storage Temperature	-10–70°C (14–158°F)
Relative Humidity Ratio	%5-%90 RH
Atmospheric Pressure	80-110kPa
Power	
Power Consumption	60mA @2V battery / 25mA @12V battery
Operating Current	
Nominal Operaiton	25 mA -60 mA
Internal Resistance Measurement during Test	0.066A/dk
Sleep mode	<2 mA
Communication	
Data Transmission Interface	Serial Modbus protocol
Features	
Auto Addressing	Automatically obtain address during installation or replacement
Physical Characteristics	
Dimensions (H x W x D)	(90.5 x 62.5 x 26.5 mm)
Enclosure	Flame retardant ABS
Color	Transparent or Black

alpais
battery monitoring system

BIG WORKS BIG BENEFITS

About Alp Energy;

"14 years of field experience, knowledge, experience and technical expertise."
We are creating global benefit by focusing redundancy, sustainability on critical energy infrastructure with our integrated solution production capacity and with our reliable and practical solution. Our brand provides superior technology to you and your business 24 hours 7 days with our expert team. We offer productivity, simplicity and sustainability with our industrial experience, expert and solution oriented team, high quality products, services and our ability to carry out global quality business.
We make a difference with our ability to intervene immediately and with the power to provide uninterrupted energy.

ALP ENERJİ SİSTEMLERİ LTD ŞTİ

İstanbul	Ankara
Yalı Mh. Topselvi Cd. Mai Residence No: 100-B	Ankara Teknopark TGB Yerleşgesi 2224. Cad
Kat:15 D:128 PK:34873 Kartal / İSTANBUL	No: 1/194 C Blok 6.Kat (C 621) Yenimahalle / ANKARA
Tel: +90 216 561 90 73-74 (pbx) 444 66 21	**Tel**: +90 312 222 04 01
F. +90 216 561 51 32	**F.** +90 216 561 51 32

www.alpenerji.com.tr
info@alpenerji.com.tr

f 🐦 📷 in /alpenerji

alpenerji.com.tr | alpais.com.tr