Energy storage charging pile detection shows abnormality

Can Ana-LSTM neural network predict charging pile battery life?
In this study,the improved anti-noise adaptive Long Short-term memory (ANA-LSTM) neural network was used to extract fault characteristics,thus achieving the life predictionof charging pile batteries and providing reference for the status detection of charging piles. However,the signal data was not effectively processed by this method.

What is fault state detection method of DC charging pile?
However,the fault signal processing of the fault detection method is poor,resulting in low fault detection accuracy. Therefore,a fault state detection method of DC charging pile based on the least fourth moment adaptive filtering algorithmis proposed. This method is based on the electrical structure of DC charging pile.

Why is charging module important in DC charging pile?
Conclusion Charging module is the key to the safe and reliable operationof DC charging pile. The DC charging pile to maintain stable operation state for the charging module fault state identification results,timely development of solution strategies.

Can multiple concurrent faults be detected in DC charging pile charging module?
There may be multiple concurrent faultsin the actual DC charging pile charging module fault state. Therefore,the fault detection performance of different methods is analyzed to verify whether the proposed method can accurately detect faults in the case of multiple concurrent faults in the context of this actual problem.

What are the possible faults of DC charging pile?
During the operation of DC charging pile,faults are easy to occur,mainly including communication faults,charging gun faults,charging module faults,etc. Among the possible faults of the DC charging post,the charging module failure rate is extremely high.

Can NMMP-Nev detect abnormal charging capacities?
Based on the EV data collected by NMMP-NEV, reference proposes an improved GPR-based method for recognizing abnormal charging capacities and uses a Box-Cox transform with the value of 3s to determine the threshold. However, some data-driven approaches compare detected parameters with preset thresholds, which may lead to errors or misjudgments.

An abnormal detection system for charging piles is designed based on the power consumption side channel and machine learning, proving that the anomaly detection system can effectively detect attacks and protect the security and stable operation of charging piles. With the exhaustion of fossil energy and people""s increasing attention to ...

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The Design of Electric Vehicle Charging Pile Energy Reversible. The structure diagram and control principle of the sys-tem are given. The electric vehicle charging pile can realize the fast charging of electric vehicles, and the battery of the electric vehicle can be used as the energy storage element, and the electric energy can be fed back to the power grid to realize the ...

To address the issue that the current abnormal data detection model for charging piles depends on the quality of abnormal data samples in the training set, this paper ...

The simulation results of this paper show that: (1) Enough output power can be provided to meet the design ... energy storage Charging piles, as well as the dynamic characteristics of electric vehicles, we have developed ... By collecting power consumption information of the charging control unit of charging piles, the abnormal detection system ...

Aim for this, a diagnosis scheme is proposed to detect E-bikes" abnormal charging from the alternating current (AC) side of the charging pile. Initially, 91,282 charging records are collected from charging piles to analyze the correlations between the current features and the battery working principle, charging mode, and user behavior in depth.

TL;DR: In this paper, a mobile energy storage charging pile and a control method consisting of the steps that when the mobile ESS charging pile charges a vehicle through an energy storage battery pack, whether the current state of charge of the ESS battery pack is smaller than a preset electric quantity threshold value or not is detected in real time; if the current status of the ...

By collecting power consumption information of the charging control unit of charging piles, the abnormal detection system determines whether charging piles are facing ...

In order to solve the security problem of charging piles, we designed an abnormal detection system for charging piles based on the power consumption side channel and machine learning.

This application discloses a detection circuit, an anti-backflow system, and a charging pile. The detection circuit mainly includes a detection power supply and a digital unit that are connected in series. A first end and a second end of the detection circuit are respectively connected to an input end and an output end of an anti-backflow circuit.

In response to the issues arising from the disordered charging and discharging behavior of electric vehicle energy storage Charging piles, as well as the dynamic characteristics of electric vehicles, we have developed an ordered charging and discharging optimization scheduling strategy for energy storage Charging piles considering time-of-use electricity ...

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The number of new charging piles has increased significantly. In 2021, the number of new charging piles was 936,000, with the increment ratio of vehicle to pile being 3.7:1. The number of charging infrastructures and the sales of NEVs showed explosive growth in 2021. The sales of NEVs reached 3.521 million units, with a YoY increase of 157.5%.

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