

Remote Monitoring Solutions



While Indian economy is having historical GDP growth in various sectors, the corresponding electricity consumption has also increased in abundance. In some areas demand and supply difference of electricity is highly mismatching. Thus arise the necessity of Generator. These Diesel Generator or Genets are becoming the key factor for agriculture, construction, industries, hospitals, etc.

- Pritha Nasery

With the use of Generator the conservation of energy has also become important due to fuel requirement. And, as the Generator become the vital part in providing electricity, its monitoring and maintenance becomes more essential than ever before.

But there are situations that the generator is not running because of the simple reason such as-

- Fuel is Not Available.
- Generator is Not running because of the DG battery in not properly charged.
- Generator is not working due to Some Major alarm is generated on the Generator and we were not able to monitor it.
- Maintenance Required in the generator.
- Some kind of fuel theft is happening in the Generator Room due to which in efficient Return on Investments.

To avoid these kind of Setbacks, Genset required fault prevention, better maintenance and controlling. This can be done by a system which will keep watch on Genset/Generator for any possible problem and indicate it before this small problem turn into crisis and if these indications can be provided without being physical present on that location, it could be best solution possible.

Solution of all these problems is Generator Monitoring System.

But how does Generator Monitoring System works!

Generator Monitoring System can

monitor all the parameters of the generator remotely, so that in case of any emergency alerts can be generated by the same system, so that we can a keep a track of them Immediately and also can check the DG Battery voltage, fuel level, transducer voltage, temperature of canopy, Digital alarms generated by Genset, Run hours of DG etc.

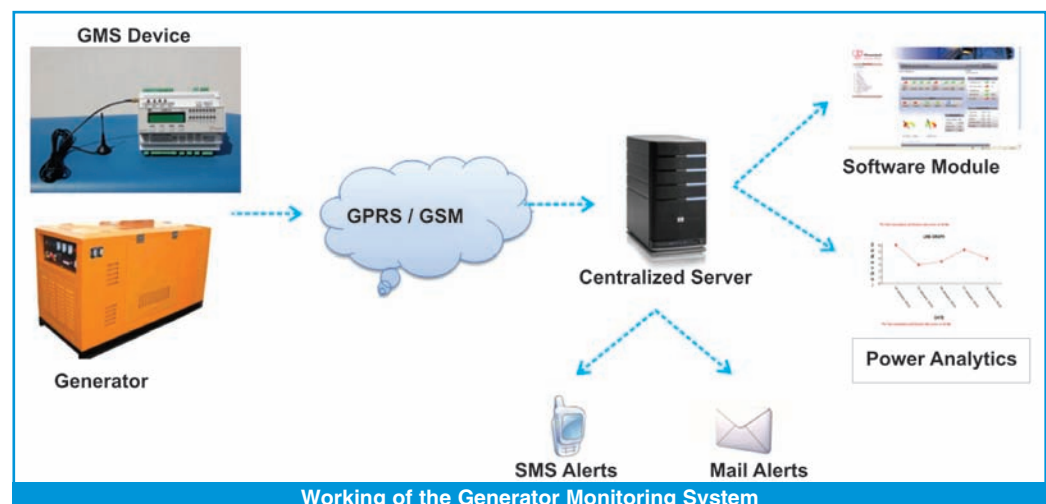
The figure shows the general working of the Generator Monitoring System. As shown in figure, the Generator Monitoring System (Hardware) is placed on the generators and the device sends data to the server, which domain name is fed into it, via. GSM/ GPRS technologies. Now the device sends the data on the Powertech Server, which can be monitored by client on the web based applications.

The web base application; facilitates client to monitor the data of Generator independently from the location of Genset. The analytical report can also be generated from the data that is stored on the Server database.

This way we can not only keep the track of the DG sets, but can get extra benefits out of Generator monitoring system:

- The Operational and maintenance cost of the generator can be estimated. This way the overall effectivity of the generator can be estimated and the Return on Investment can also be calculated.
- Billing and financial issues can be made easy for client using data in server database.

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- Fuel theft can also be monitored and stopped. i.e. with the constant measurement of the fuel in the generator, and providing alert if there is any immediate decrement in the level of the fuel.
- All the major alarms of the Generator will get noted, and will have the record of any emergency condition.
- For any critical alarm an SMS will be sent from server to technical to avoid any malfunctioning in Generator system and the Mis-

Web using software module, it can also be done by sending SMS to Generator Monitoring System.

- Inventory module: can keep track of the information regarding the Make, specification and spares parts related to the generators.
- Access control System: to monitor the Fuel Drain.
- SMS alerts can also be given at the time of emergency on the number saved in software module.
- The interactive reports will be giving

- Theaters
- Etc.

The generators are of different companies and of different make and design. The generator Monitoring



system can be mounted on the generator despite of there make and design, hence a consolidated Report can be made.

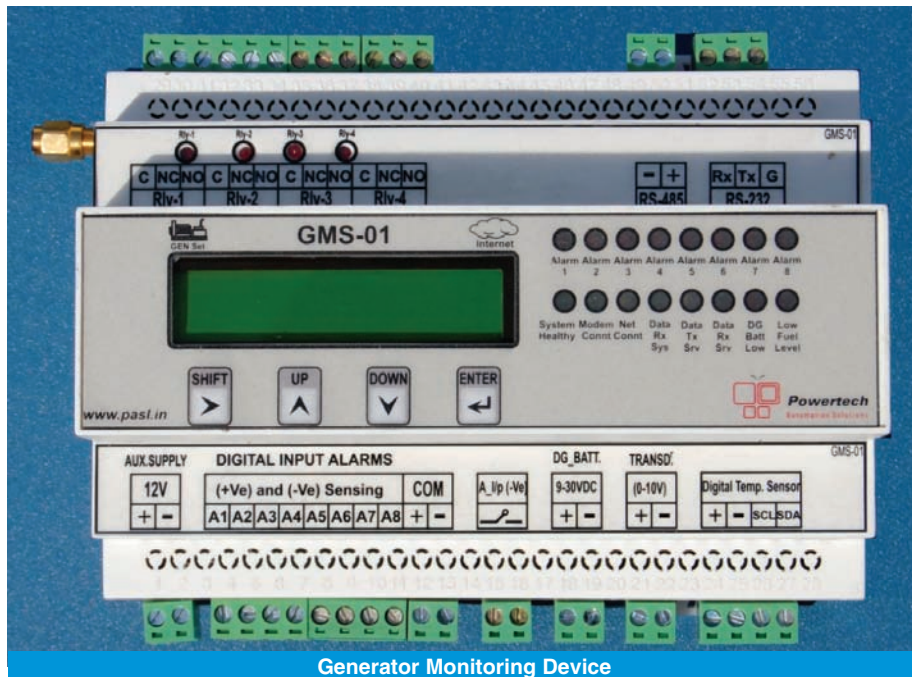
Asset Monitoring Solutions

Generator is only one parameter of the assets but there are various kinds of asset which can be monitored remotely and intelligent reports can be generated and monitored. This way we can keep a performance track of our assets and prevent them from Theft. The various Kinds of assets include-

- Vehicles
- Machinery
- Industries
- Lift.

Conclusion

Generator monitoring system is one of the effective solutions and a complete solution for monitoring the performance of the generators. The collected data and intelligent report will help in monitoring the performance of the generator as well as the associated ROI. ■



Generator Monitoring Device

happening can be stopped, without further delay.

a complete analysis of the information related to the generators.

Software Module

The software module associated with the Generator Monitoring System; is tool where the generator can be monitored and all the data can be seen online. The software module has the list of following features -

- The software module provide the visual information Generator's current status, it can be alarm, level of fuel, temperature, battery voltage or any other parameter.
- Controlling of Genset: two potential free contact can be operated by

Application Areas

Generator Monitoring has variety of the application areas which include-

- Hotels
- Offices where there is a need of constant Power supply
- DG Rental Companies
- Hospitals
- Manufacturing Units
- Schools
- Institutions
- Housing Society
- Shopping Malls



Pritha Nasery

Pritha Nasery is BE In Information Technology, Indore and MBA in Marketing from Amity Business School, Noida. Currently she is working with Powertech Automation Solutions Pvt. Ltd. as Assistant Manager Marcomm in Indore which is a company specialized in the Remote Monitoring solutions.