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A solution for the continuous power supply of the AS043 station

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The CTBTO site station in Parapat (AS043), North Sumatra has been losing data since 2020. This has resulted in the loss of important data for analysis. Data analysis from SQLX shows the seismometer in good condition and noise spectrum still within HNM / LNM limits. The site station has used solar panels but this is not enough. Solar panel energy cannot supply battery power effectively. The solar panels work for about 4 hours. Due to the Parapat climate it is almost cloudy every day. The LDR (lightning detector relay) is designed to regulate the supply of power sources from the consumption of solar power and the main generator. This way, the battery can always be fully charged. Therefore, data can be sent continuously. The LDR is intended for automatic switching between the generator and solar panels coupled with a contactor type relay. This is not a new technology, just a simple solution to ensure continuous data availability without interruption. Noise studies have not been carried out, but the converter can be located outside the seismograph area. The generator power supply is used because only that device may be available in the vicinity of the site.

Promotional text

Transfer power supply from solar panel to main generator.for AS043

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