

# **RANCANG BANGUN AUTOMATIC TRANSFER SWITCH (ATS) AUTOMATIC MAINS FAILURE (AMF) DENGAN ARDUINO BERBASIS ANDROID**

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## **ABSTRACT**

*Power outages can disrupt service connectivity, especially in servant activities in the trade, hospitality, hospital, and industrial sectors. The distribution of electric energy to PLN is often a disrupted in its distribution due to internal and external factors. The demand for continuing electrical energy must be met. Other electrical energy sources are needed so that if there is a power cut from PLN, the consumer's need for electrical energy is not disturbed. These electrical energy sources are temporary to serve the electricity load in using PLN electricity as the primary energy source. Automatic Transfer Switch (ATS) is a tool that functions to move the connection between one mains voltage source and another automatically or manually. Alternatively, it could be called Automatic Change Over Switch (COS). In contrast, the Automatic Mains Failure (AMF) functions to start the generator engine if the load being served loses the primary source of electrical energy, namely PLN. Thus, the primary function of ATS / AMF is to turn on the generator if the primary electricity source is off and connect the power/electricity from the generator to the load automatically. The final project research creates an Automatic Transfer Switch (ATS) system that can automatically move the electricity source from PLN to the generator when PLN experiences a blackout and Automatic Mains Failure (AMF). It functions to turn on the generator automatically if it detects that PLN is experiencing a blackout. Furthermore, it can be monitored via an Android smartphone using a Bluetooth connection. From the test results, the Automatic Transfer Switch (ATS) Automatic Mains Failure (AMF) system with Android-based Arduino can work as expected, and the percentage of voltage error is 0.265%.*

**Keywords:** Automatic Transfer Switch (ATS), Automatic Mains Failure (AMF), PLN, Generator, Arduino.