ABSTRACT

Title: Automatic Exhaust with Dust Sensor

The [automatic exhaust with dust sensor](http://kitsguru.com/) is having a dust sensor, which can sense dust particles of the order of millimeters also. As soon as any dust particle is found, it automatically turns on the exhaust. The system serves two purposes; first it can detect and hence inform us about any dust particle preset around us. This is very important at several places like semiconductor manufacturing, medical research etc. Secondly, it avoids energy consumption as the exhaust runs only when it is required to run.

The automatic exhaust with dust sensor is having a dust sensor with digital output. If any dust particle enters in its cavity, its output becomes high and hence the microcontroller comes to know about it. The exhaust fan is connected with a motor driver, which runs the fan, hence the microcontroller turns on the fan via motor driver. The system is powered up with a dc power supply of 12V, 1A. It consists of a bridge rectifier and a filter; hence it can be provide either DC or AC power supply of 12 V. The system can be future upgraded and can be connected with an alarm system if required. It can have a GSM system to intimate the user remotely.

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