**VIBRATION SENSING CIRCUIT**



A vibration Sensing circuit is designed with vibration (microphone) sensor, OP\_AMP(IC LM358), and Transistor. The vibration sensor converts vibrations variations in to difference in the resistance. The resistance variation is inversely proportional to vibration. Here the OP\_AMP is used as a voltage comparator. The sensor is connected to the non-inverting terminal Pin No 3 of the OP\_AMP to provide the potential difference. The inverting terminal Pin No 2 of the OP\_AMP get the potential difference & variable resistor (10 KΩ), to adjust the Reference Voltage or a set value of the parameter. The LED connected at the collector gives an indication of sensing temperature when it exceeding the threshold value.

When the vibration value exceeds the predefined value Because of this condition the voltage at Pin No 3 i.e. non-inverting terminal of the OP\_AMP changes and its output goes high which in turn activate (Saturate) the transistor. This signal is connected to buzzer, transmitter, relay or microcontroller unit to take further actions like alert indication, sending information, controlling action etc. this circuit can be used for detection door break for home safety, detection of hunting gun fire etc. which detects the noise level.