Working Principle Sensor LM35

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The long distance necessary liaison which is not affected by interference from the outside, so use the cable sheath is earthed so that it can act as an antenna receiver and deviation therein, can also act as a rectifier which corrects in such cases, using the method of bypass capacitors from Vin to be earthed. So we can conclude LM35 sensor working principle as follows:

• The ambient temperature in the detection using the IC part temperature sensitive

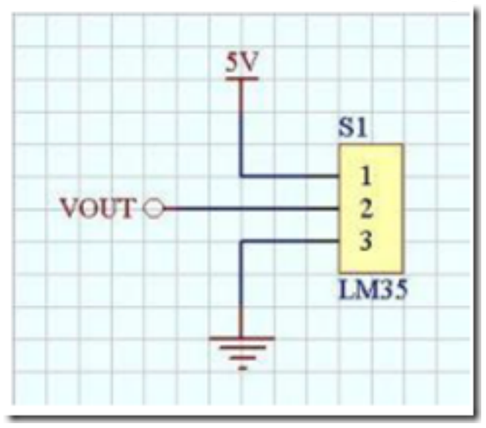
• The ambient temperature is converted into electrical voltage by a circuit in the IC, where the temperature change is proportional to the output voltage changes.

• In the series LM35

V_{out}=10 mV/°C

Every change of 1 ° C would produce a change in output voltage of 10mV s ebesar

Vout is a scalable sensor output voltage linearly with the measured temperature, which is 10 millivolts per 1 degree Celsius. So if Vout = 530mV, then the measured temperature is 53 degrees Celcius.dan if Vout = 320mV, then the measured temperature is 32 degrees Celsius. The output voltage can be directly fed as input to the signal conditioning circuit such as the operational amplifier circuit and filter circuits, or other circuits such as voltage comparator circuit and circuit Analog-to-Digital Converter.



The basic circuit enough to merely experiment or for applications that do not require a perfect measurement accuracy. But not for a real application. Evident from the experiments that I have done, sensor output voltage is not yet stable. At the temperature conditions are relatively similar, if my supply voltage fluctuates (I raise or lower), then Vout also changes.

Indeed, the logic of this seems true, but for the instrumentation it is not allowed. Compared with the level of precision, the degree of accuracy of measuring instruments more prominent since the measuring instrument should be used as a benchmark for its users. If the value is changeable relative to the condition that there is no change, then the measuring tool so it can not be used.

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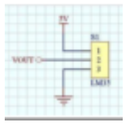
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