WORKING PRINCIPLE OF THE SOLAR SEEKER

There is a power supply and LED’S along with the comparator is attached so that LDR could work. Since LDR gives the analog data therefore Iin-order to perform analog to digital i.e 0-1, we connected a comparator circuit and set a preset value to 1V which will set to logic 0 or 1. Along with the comparator there is an LED panel which will work with respect to the intensity of light.

* The moment there will be no light i.e at sunset or night or with respect to the movement of sunlight the LED will be off and the panel will move in the opposite direction i.e towards the direction where there is high intensity of sunlight and for that two LDR sensors are attached with the solar cell panel opposite to each other in-order to sense the intensity of the sun.

Flow of the circuit:

The intensity of the sunlight will be detected by two LDR sensors depending on the direction of sun. Since the detected value is analog in nature given by the LDR, therefore it will be transferred to the comparator ic which will convert that analog value to digital 0 or 1 on the basis of the preset voltage and thereby passing that value onto the input pin of the microcontroller(ATMEGA 328P) or arduino development board which will drive the motors through H-Bridge(L293D).

Furthermore, L293D (it is also known as current amplifier) is connected to the microcontroller which is used to amplify the current as per the requirement of the motor which is moving the solar cell panel and is indirectly working on the instructions of Analog value given by the LDR through comparator.