STUDENTS TO CONTROL PHOTORESISTORS USING SOFTWARE

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Annotation

In this article, the knowledge of controlling photoresistors with the help of an Arduino board is formed in students in the field of robotics in the block of specialized sciences of the technological education direction of higher educational institutions.

Keywords

Photoresistor , thermoresistor infrared sensors, arduino , arduino uno , marketing board, pap-papa wire, USB cable.

Photoresistor is light power under the influence of own resistance that changes to the resistor it is said .

Photoresistor - light with when irradiated resistance that changes half conductive device . His pn transition place no , that's why for flow of flow from the direction of strict Look , it's one different to conductivity have

Of radiation directly effect because of half of the conductor electricity of resistance change event photoresistive effect or internal photoelectric is called the effect [1].

Materials preparation

Photoresistors work release for solution being done problem is optimal for network space with semiconductor materials is used . So visible   the light note to do for selenide and cadmium sulfide , from Se prepared photoresistors is used . Infrared radiation to the list get for often at low temperatures cooled Ge (net or with Au, Cu or Zn added), Si, PbS , PbSe , PbTe , InSb , InAs , HgCdTe is used . Semiconductor glass or quartz under thin layer in the form of laid down or one of crystal thin plate in the form of will be cut . Semiconductor layer or plate two electrode with provided and protection to his bag placed

Photoresistor half conductive device being   light with when irradiated resistance changes . Mon compound no , that's why for flow of flow from the direction of strict Look , it's one different to conductivity have

Of radiation straight away   effect   because of half o ' of the conductor electricity of resistance o ' change event **photoresistive effect** or internal photoelectric effect is called

Photoresistor of resistance to the light depending on example his the most important parameters are :
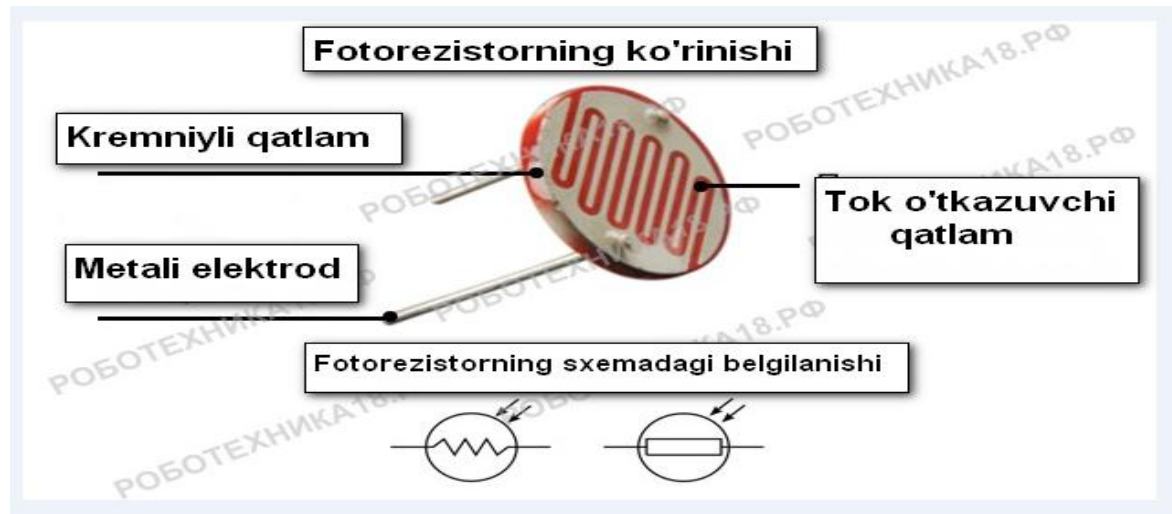
integral sensitivity - falling of radiation unity to power tension change ratio (supply at the nominal value of the voltage);

sensitivity limit - photoresistor by note of the minimum signal value , work frequency range to the unit belongs to

Photoresistors of light weak flows to the list get ready   products sorting and in the calculation ,

different different of parts quality and readiness control to do for used ; polygraphy in the industry paper on the tape interruptions identify , to the printing house given paper sheets the number control to do medicine , village economy and another in the fields .

Below in the picture of the photoresistor structure given .

Photoresistor program using manage for of the following we use (Figure 4):

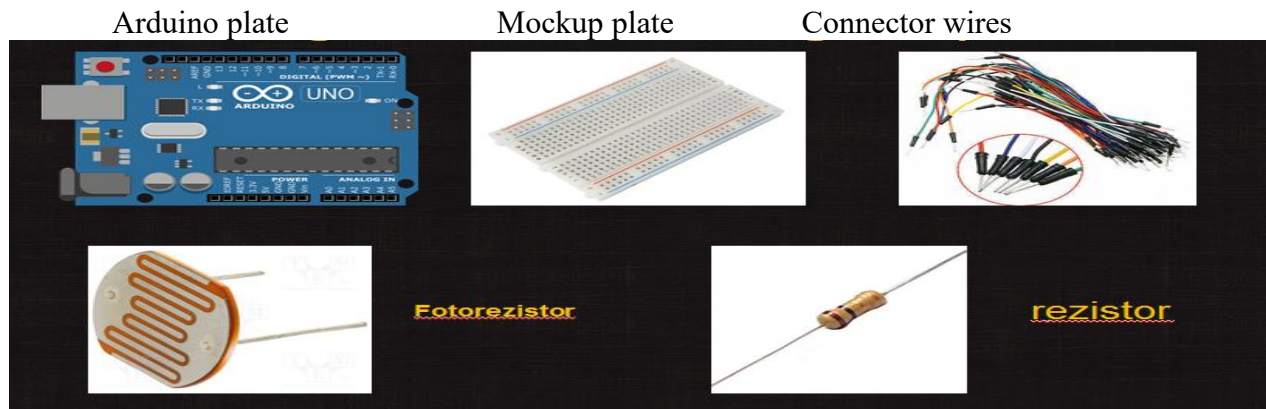Arduino plate   Mockup plate   Connector wires

Figure 4.

Photoresistor to Arduino Analog signal (A0 to A5) issuer from the part we use

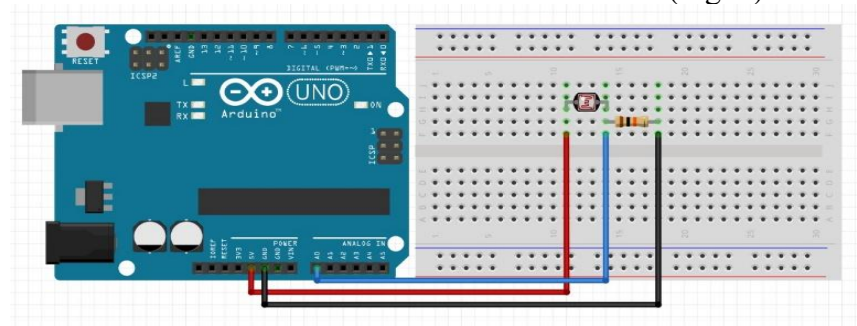- **Photoresistor to Arduino** connect scheme (Fig. 5).

Figure 5.

On the computer arduino to the application simple photoresistor work situation check for simple program Create a serial port open checking we see (Figure. 6).

```
void setup() {
  Serial.begin(9600);

}

void loop() {
  Serial.println(analogRead(A0));

}
```

```
35
35
35
36
35
36
36
36
36
35
36
35
36
36
36
36
```

Figure 6. Software part

Now the serial port to open for left mouse button his sign on one times press **(Fig. 7).**

Serial portni ochish uchun

Figure 7. Serial port icon

Opened app from the mirror the following let's see possible (Fig. 8).


```
35
35
35
36
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35
36
35
36
36
36
36
```

Figure 8.

This is an application in the mirror numbers light indicators is considered

Summary instead of   that's it to emphasize maybe to students simple programs through photoresistor program using to manage teach , own on working , photoresistor with the help of managed small projects if he learns , this students in the future different different big projects work output , and professional in action learned their work many to the reapers to teach can

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