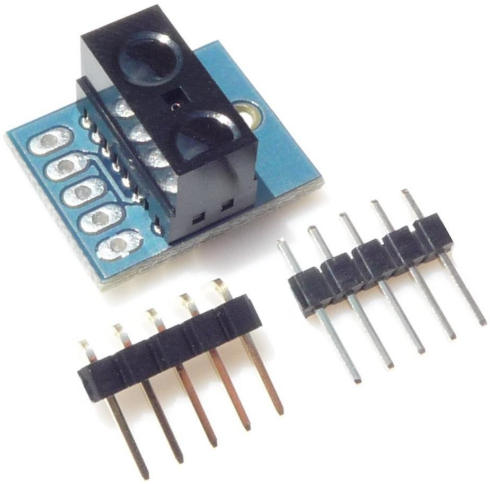
Name: **Digital Distance Sensor with GP2Y0D810Z0F**
Code: **MR003-004.1**



GP2Y0D810Z0F is a distance measuring unit, composed of an integrated combination of PSD (position sensitive detector), IRED (infrared emitting diode) and signal processing circuit.

The output voltage of this sensor stays high in case an object exists in the specified distance range. So this sensor can also be used as proximity sensor.

The variety of the reflectivity of the object, the environmental temperature and the operating duration are not influenced easily to the distance detection because of adopting the triangulation method.

Sensor output drives a mosfet configured in Open Drain mode; this allows to drive relay and other loads with operating voltages up to 60V and operating current up to 115mA.

Note that for power saving sensitive applications it is possible to shut down the sensor, reducing the current to 5uA.

This board breaks out all the signals to a 0.1" (2,54mm) standard spacing header, in this way it is simple to use it with prototyping boards and also with breadboards.

Typical applications are:

- touch-less switch;
- obstacle detection;
- robotics;
- navigation.



MICROBOT di Prosseda Mirko – Via della Stazione 288, 04013 Latina Scalo (LT), Italy
web: http://www.microbot.it email: info@microbot.it tel: +39-347-8684579

The board is provided with a 5x1 0,1” strip connector and with a 5x1 0,1” right-angle strip connector.

For more details on the sensor please refer to Sharp GP2Y0D810Z0F datasheet.

## *CONNECTIONS*

| | |
|---|---|
| VCC | Power Supply (2.7 – 6.2V) |
| OUT | Sharp sensor Output |
| SLP | Stand-by Input |
| FET | FET Open Drain Output |
| GND | Ground |

***Tab.1 – Connections***

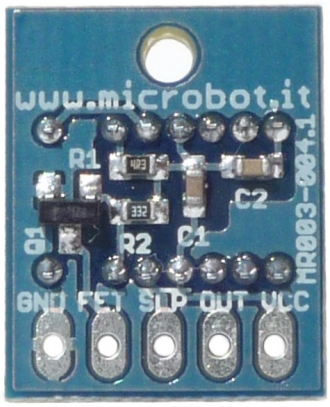



Fig. 1 - Signals

## *SPECIFICATIONS*

| | |
|---|---|
| Supply voltage | 2.7 – 6.2V |
| Supply current | 5mA typ. (5uA in stand-by) |
| Temperature range | -10 / +60°C |
| Detecting Distance | 10cm |
| Drain voltage | 60V Max. |
| Drain current | 115mA Max. |
| Dimensions | 18.4 x 14.9 x 10.4 mm (connector not included) |
| Weight | 0.06 oz / 1.7g |

***Tab.2 - Specifications***