

Digital Pressure Sensor

BMP180



Technical Manual Rev 1r0



The BMP180 Digital Pressure sensor consists of a piezo-resistive sensor, an analog to digital converter and a control unit with E2PROM and a serial I2C interface. The BMP180 delivers the uncompensated value of pressure and temperature. The E2PROM has stored 176 bit of individual calibration data. This is used to compensate offset, temperature dependence and other parameters of the sensor.

- UP = pressure data (16 to 19 bit)
- UT = temperature data (16 bit)

FEATURES/SPECIFICATIONS:

- Temperature measurement included
- I2C interface
- Fully calibrated
- Pb-free, halogen-free and RoHS compliant,
- MSL 1

GENERAL SPECIFICATION:

Input Supply: 3.3 V DC

Pressure range:

300 ... 1100hPa (+9000m ... -500m relating to sea level)

Low Power:

5uA @ 1 sample/sec in standard mode

Low noise:

0.06hPa (0.5m) in ultra lower power mode

0.02hPa (0.17m) advanced resolution mode

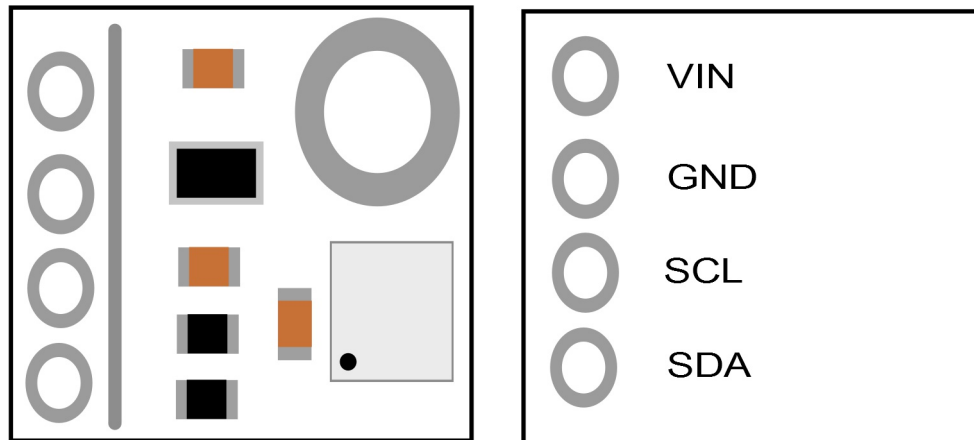


Figure 1. Major Parts presentation of GY-31 Color Sensor

Table 1. Pin Descriptions

Pin Name	Descriptions
VIN	Power supply
GND	Supply ground
SCL	Serial Clock - I2C Master/Slave Clock
SDA	Serial Data - I2C Master/Slave Data

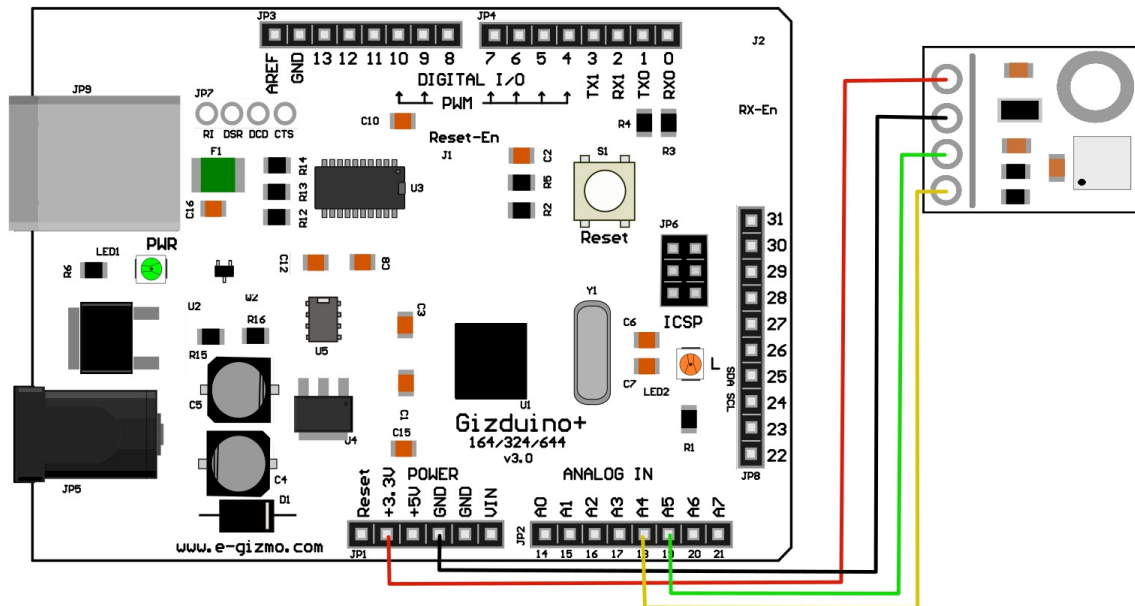


Figure 2. GY-31 Color Sensor Connected to a microcontroller.

To connect the GY-31 Sensor to the microcontroller:

- connect the red wire to 3.3V and VIN from the microcontroller and the sensor respectively
- connect the black wire to both the GND of the microcontroller and sensor
- connect the yellow wire to Pin A4 and SDA of the microcontroller and sensor respectively
- connect the green wire to Pin A5 and SCL of the microcontroller and sensor respectively