

# Cde for sensor working

```
#include <LiquidCrystal_I2C.h>
LiquidCrystal_I2C lcd(0x27, 20, 4);
float cm;
float inches;
```

```
#define ECHO_PIN 12
#define TRIG_PIN 13
float dist;
```

```
void setup()
{
  Serial.begin(115200);
  pinMode(LED_BUILTIN, OUTPUT);
  pinMode(TRIG_PIN, OUTPUT);
  pinMode(ECHO_PIN, INPUT);
  //pir pin
  pinMode(34, INPUT);

  //ledpins
  pinMode(23, OUTPUT);
  pinMode(22, OUTPUT);
  pinMode(21, OUTPUT);
  pinMode(15, OUTPUT);

  lcd.init();
  lcd.backlight();
  lcd.setCursor(1, 0);
  lcd.print("");
}
```

```
float readcmCM()
{
  digitalWrite(TRIG_PIN, LOW);
  delayMicroseconds(2);
  digitalWrite(TRIG_PIN, HIGH);
  delayMicroseconds(10);
  digitalWrite(TRIG_PIN, LOW);
  int duration = pulseIn(ECHO_PIN, HIGH);
  return duration * 0.034 / 2;
}
```

```
void loop()
{
```

```
  if(digitalRead(34))                                //pir motion detection
  {
    Serial.println("Motion Detected");
    Serial.println("Lid Opened");
    digitalWrite(10, HIGH);
    delay(10000);
    Serial.println("Lid Closed");
  }
```

```

}
else
{
    digitalWrite(10, LOW);
}

if(cm <= 100)                                //Bin level detection
{
    digitalWrite(21, HIGH);
    Serial.println("High Alert!!!,Trash bin is about to be full");
    digitalWrite(22, LOW);
    digitalWrite(23, LOW);
}
else if(cm > 150 && cm < 250)
{
    digitalWrite(22, HIGH);
    Serial.println("Warning!!,Trash is about to cross 50% of bin level");
    digitalWrite(21, LOW);
    digitalWrite(23, LOW);
}
else if(cm > 250 && cm <=400)
{
    digitalWrite(23, HIGH);
    Serial.println("Bin is available");
    digitalWrite(21, LOW);
    digitalWrite(22, LOW);
}

float inches = (cm / 2.54);                    //print on lcd
lcd.setCursor(0,0);
    lcd.print("Inches");
    lcd.setCursor(4,0);
    lcd.setCursor(12,0);
    lcd.print("cm");
    lcd.setCursor(1,1);
    lcd.print(inches, 1);
    lcd.setCursor(11,1);
    lcd.print(cm, 1);
    lcd.setCursor(14,1);
    delay(1000);
    lcd.clear();

}

```

<https://wokwi.com/projects/347331949637927506>