TEMPERATURE READER ON 16X2 LCD USING LM35 AND PIC16F676

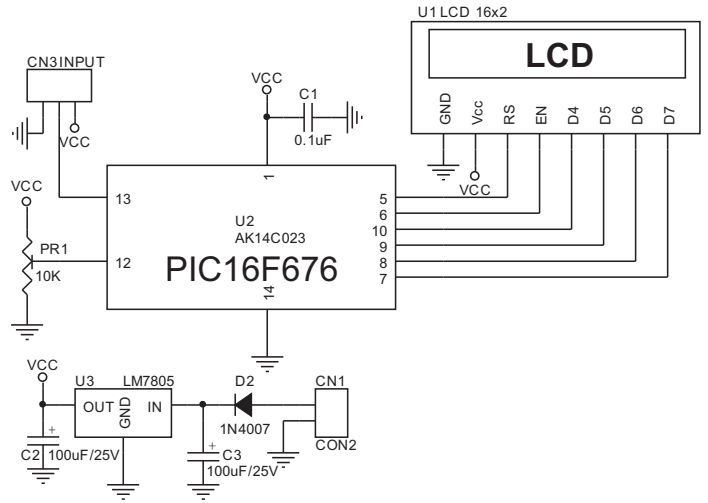
Temperature Reader - LM35 project displays temperature of the surrounding area an LCD screen. This is not a controller but just a reader.

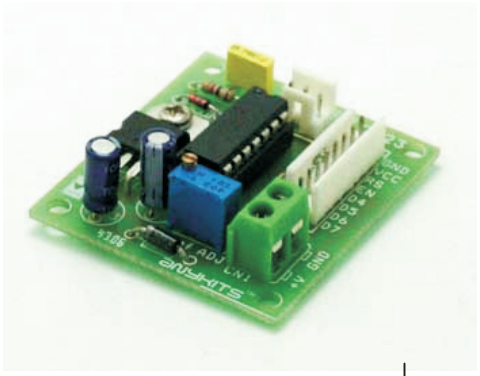
- LM35 based sensor design
- LCD based display (C013)
- Voltage regulator for providing regulated supply on board
- PBT type connector for connecting power supply to the board
- Relimate type connector to connect the sensor to the board and LCD
- Diode protection against reverse polarity connection of power supply
- Four mounting holes of 3.2 mm each
- PCB dimensions 48 mm x 43 mm

This is a simple circuit to measure the temperature of any environment and display it on a 16x2 LCD module (C013). This is just an temperature indicator project and not a controller circuit.

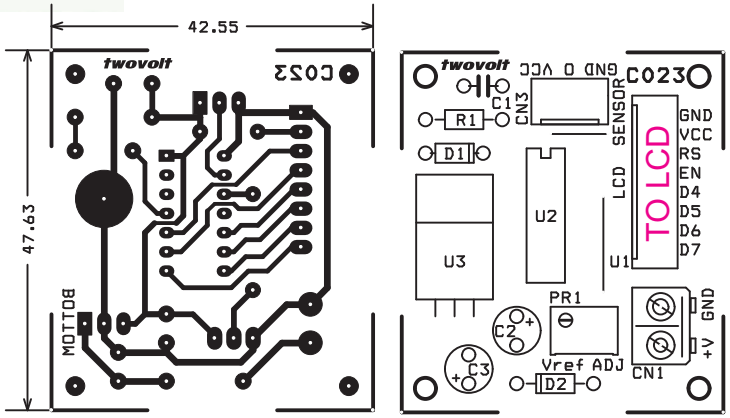
The circuit uses a pre-programmed Microcontroller to read a LM35 Temperature sensor and display the results on the LCD. The onboard ADC on the microcontroller converts the analog signal from the LM35 sensor, computes the results and displays it on the LCD.

- Preset PR1 allows the user to adjust the ADC Reference voltage for the project. Adjust Preset so that the voltage at pin #12 is 2.5V
- Temperature sensor (LM35) is connected by a relimate connector at CN3 connector.
- U3 is a voltage regulator IC, 7805 which provides a regulated voltage to the entire circuit.
- D2 is a reverse polarity protection diode to prevent against wrong polarity connection of DC supply at connector CN1.
- LCD Module - C013 is connected at connector marked U1. Please solder corresponding pins marked on this PCB with the One marked on the PCB.





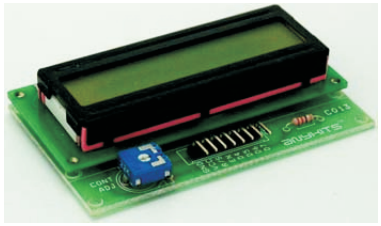
SR.	QTY	REF.	DESCRIPTION
1	1	CN1	2 PIN PBT CONNECTOR
2	1	CN3	3 PIN RELIMATE CONNECTOR WITH FEMALE
3	1	C1	0.1uF
4	2	C2,C3	100uF/25V
5	1	D1	1N4148
6	1	D2	1N4007
7	1	PR1	10K TRIMPOT - 3296
8	1	R1	1K
9	1	U1	8 PIN RELIMATE CONNECTOR
10	1	U2	PIC16F676
11	1	U3	LM7805
12	1	SENSOR	LM35
13	1	SOCKET	14 PIN DIP IC SOCKET
14	2	JUMPER	WIRE JUMPER
15	1	SCREW	SC02905
16	1	NUT	NT02900

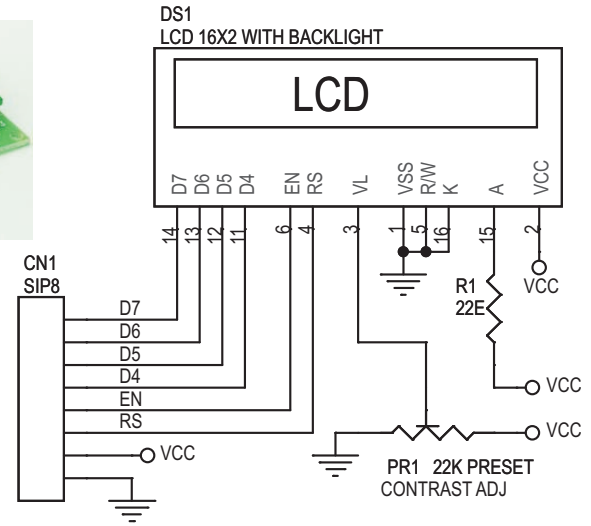


LCD MODULE

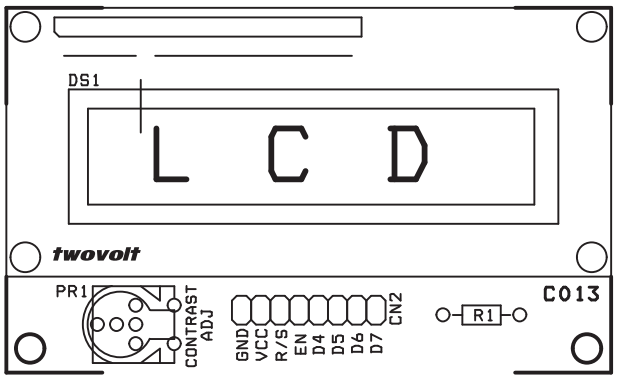
LCD Module project offers an easy way of interfacing a 16X2 Alphanumeric LCD.

- Interfacing 16X2 backlight alphanumeric LCD in 4 bit mode
- Onboard resistor to limit current to backlight LED
- Preset to adjust the contrast level of the LCD
- 8 Pin Berg connector for easy connection of all pins to the microcontroller board
- PCB dimensions 80 mm x 49 mm

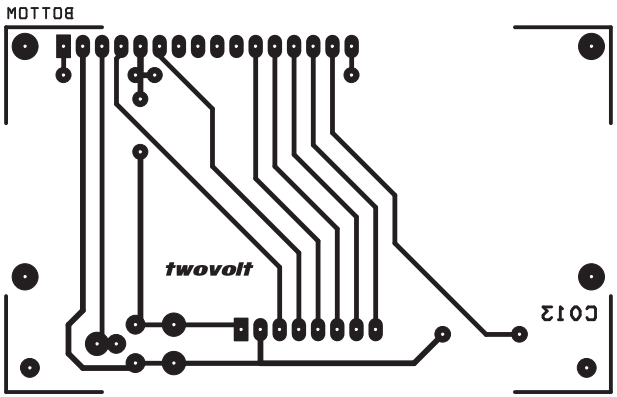




SILK SCREEN TOP



BOTTOM



This Project PCB will help you connect a standard 16x2 backlight Alphanumeric LCD to any of your microcontroller project in the 4 bit mode.

Many of our kits use this PCB for display purpose.

PR1 Preset will adjust the contrast setting of the LCD
R1 Resistor will help regulate current flow through the backlight LED
CN1 Connector is a 8 pin connector by which the LCD Display PCB would be connected to your project

A Berg connector is used to solder the LCD display to the Main PCB. Please remember to solder the jumpers first and then other components on the PCB.

Please refer to the schematic diagram for the configuration of this board.

SR.	QTY.	REF.	DESCRIPTION
1	1	CN1	8 PIN BERG CONNECTOR
2	1	DS1	LCD 16X2 WITH BACKLITE
3	1	PR1	22K PRESET
4	1	R1	22E
5	1	CONNECTOR	16 PIN BERG CONNECTOR
6	3	JUMPER	WIRE JUMPER