3*4 Matrix Keypad Microcontroller keyboard



Description

This is a basic 12-key keypad designed to facilitate user input and functionality. The keypad has 12 buttons arranged in a 3x4 matrix. You only need 7 microcontroller pins to scan the keyboard to see which of the 12 buttons is pressed.

We also have a 4x4 version of our matrix keyboard, <u>click here</u> to learn more.



Feature

- 4x3 12-button matrix keyboard module;
- Keyboard Matrix allows you to quickly add controls to your electronics projects;
- It provides numbers from 0 to 9, as well as standard star (*) and hash symbols;
- Easy communication with any microcontroller.

Specification

Connector	7 output pins
Dimension (L x W x H)	70*52*9 (mm)
Operation Temperature	-20 to +60 °C

Features of the 4x3 Matrix Keypad

Keypads are one of the most popular components that are widely used in electronics. Everybody can communicate with the system by switches. Normally, every key occupies one digital pin of the microcontroller. But by using a 3×4 keypad you can reduce the occupied pins. With this module, you can use all 12 switches by occupying only 7 pins of the microcontroller.

How it works

The Keypad 4×3 features a total of 12 buttons in Matrix form. Consider 4 rows as input and 3 columns as output. Each switch is connected from one side to a row and from the other side to a column. For example, if we press switch number 1, the input of this row is saved at the output of its column. The image below shows the internal circuit of this keyboard.

4x3 Matrix Keypad Pinout

This module has 9 pins:

- **ROW1**: Input pin Row 1
- **ROW2**: Input pin Row 2
- **ROW3**: Input pin Row 3
- **ROW4**: Input pin Row 4
- **COL1**: Output pin Column 1
- **COL2**: Output pin Column 2
- **COL3**: Output pin Column 3
- NC: Not used

Package List

• 1x 3*4 Matrix Keypad