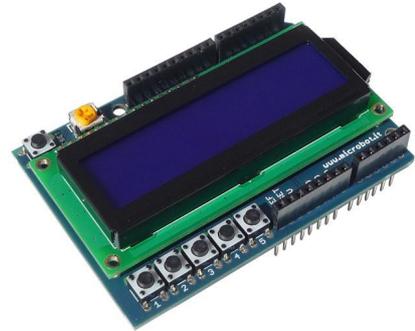Name: **LCD Shield for Arduino**

Code: **MR007-005.1**

The *LCD Shield for Arduino* allows an Arduino board to visualize informations on an attractive LCD display with white text on blue backlight.

5 push buttons make possible the implementation of projects where menus are visualized on the LCD display and selections are made by the pressure of the buttons, each of them numbered from 1 to 5.

The board equipment is integrated with a trimmer used to regulate the display contrast and there is also a RESET button used to reset the Arduino board below.

Formal Arduino shield connectors are mounted on the board, this allows to access all spare, not jet utilized, Arduino signals.

The control of the LCD display is done by the Arduino board through the connections showed in Tab.1 and it is possible to use the libraries already available in the Arduino programming software. The LCD display uses the SPLC780D controller.

CONNECTIONS

Arduino pin	Display function
7	RS - Register select
6	E - Enable
5	D4 - High 4-bit data
4	D5 - High 4-bit data
3	D6 - High 4-bit data
2	D7 - High 4-bit data
A0	Analog Input for buttons readings

Tab.1 – Connections

The pressure of one of the five buttons produces on the Arduino A0 pin an analog voltage which value is related to the button that has been pressed. The relation between the button pressed and the analog voltage produced on the A0 pin is reported in Tab.2. It is very important to notice that the analog voltage value produced could differ in the measure of a 10% from nominal value reported in the table below. For this reason it is recommended to keep in mind this variability during the creation of the Arduino sketch.

PUSH BUTTONS

Push Button	*Voltage on the A0 pin*
1	0V ±10%
2	1V ±10%
3	2V ±10%
4	3V ±10%
5	4V ±10%
none	5V ±10%

Tab.2 – Relation between push buttons and voltage on the A0 pin