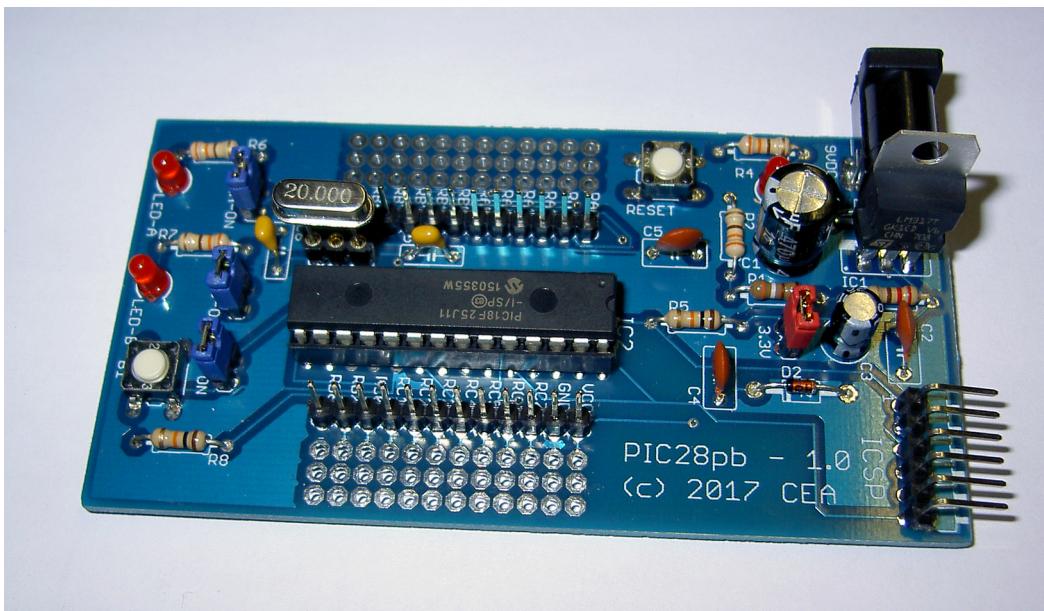


PIC28PB

Proto board



Manuale utente – User manual

Revision A

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INTRODUCTION:

PIC28pb is development board which allow you to prototype and develop code for all Microchip's PIC microcontrollers with 28 pins.

The on-board ICSP connector allow you to program the PIC on the board without pulling it of the socket, by ICSP programmer like PICMCP, PIC-PG1, PIC-PG2, PIC-PG3, PIC-PG4 or to program and debug it with PIC-ICD2, PIC-ICD2-POCKET or PIC-ICD2- TINY. **IMPORTANT:** all programmers provide power supply through ICSP connector during the programming PIC-P18 should not be powered via the external power jack!

PIC28pb must be powered by an external power supply that provides DC current at possibly 9V, although it can be powered by the DC card at a range of +7.5 - 15V. The LM317 voltage regulator delivers a current of 1.5A and, via jumper, it is possible to select the working voltage between 3.3 or 5 volts.



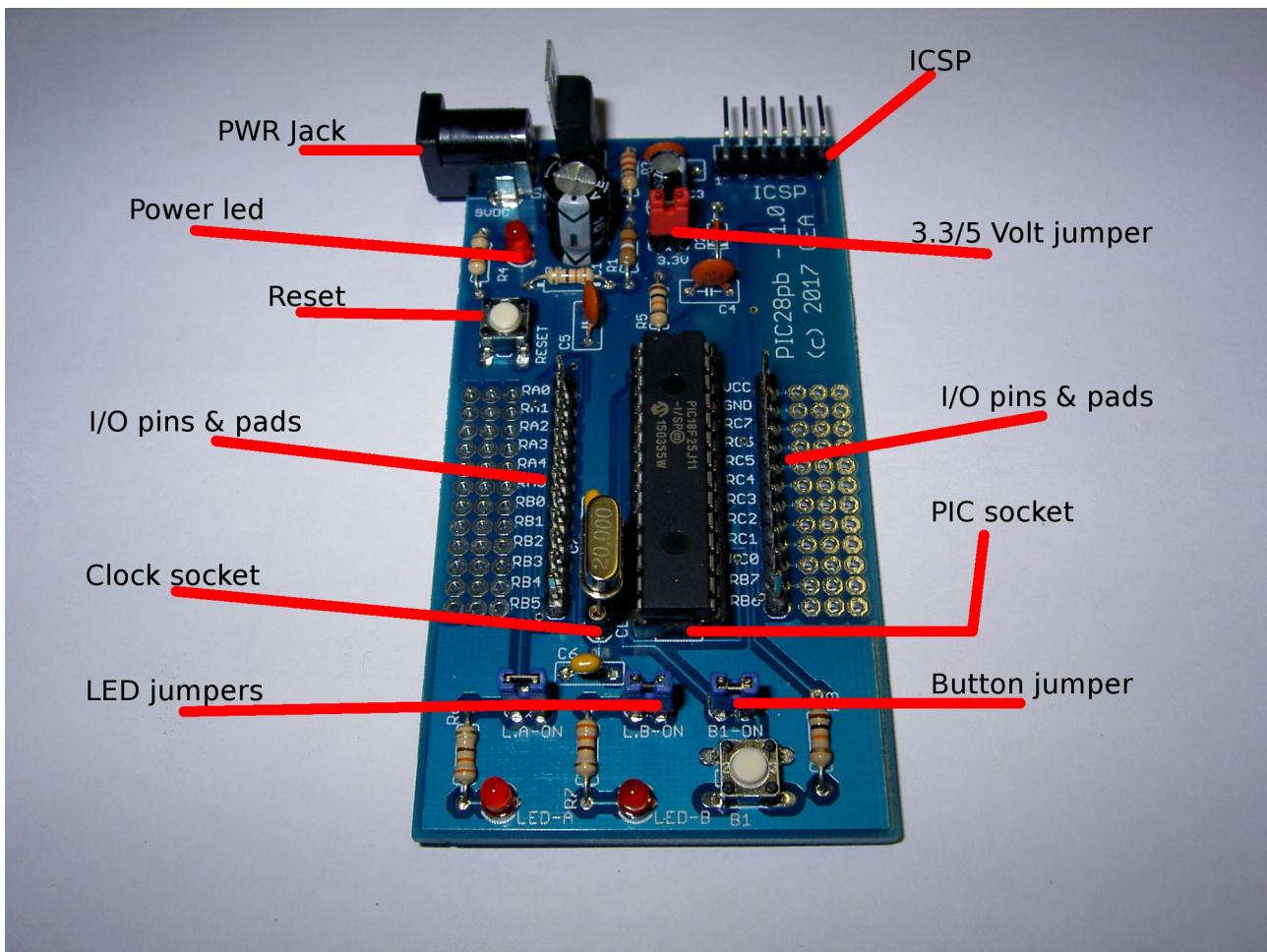
Proper DC power supply polarity

The card has a socket that allows the insertion of any crystal oscillator, leaving you the freedom to choose the work frequency you want.

PIC28pb has a reset button that allows you to reset the microcontroller at any time, plus it has two jumpered LEDs connected to the RA0 and RA1 ports and a user button connected via the jumper to the RA5 port.

The card provides the microcontroller ports (RA0..RA5, RB0..RB7, RC0..RC7 plus VCC and GND) and 12pin pin comb connectors at the sides of the PIC as well as solder pads that can be used freely by the user.

FEATURES:



- ICSP connector for programming and debugging. Pin 1 (MCLR) is the first to the far left, marked with "1".
- Socket DIL 28
- Socket for clock
- Two leds activated by jumper (L.A-ON and L.B-ON) connected to RA0 and RA1 ports
- User button connected via jumper (B1-ON) to RA5 port
- Reset button
- Power supply of the microcontroller selectable by jumper (3.3V) between 3.3 (closed jumper) and 5 volt (open jumper).
- Access the pins of the microcontroller tramiter comb connectors and/or solder pads
- Pin GND and VCC
- Reverse polarity protection
- Size: 50x100 mm

JUMPERS AND I/O PIN:

ICSP – In circuit serial programming

PIN	1	2	3	4	5	6
VALUE	MCLR	VCC	GND	PGD	PGC	PGM

GPIO 1 (comb connector and solder pads to the left of the MCU)

PIN/PAD	VALUE
1	RA0
2	RA1
3	RA2
4	RA3
5	RA4
6	RA5
7	RB0
8	RB1
9	RB2
10	RB3
11	RB4
12	RB5

GPIO 2 (comb connector and solder pads to the right of the MCU)

PIN/PAD	VALUE
1	VCC
2	GND
3	RC7
4	RC6
5	RC5
6	RC4
7	RC3
8	RC2
9	RC1
10	RC0
11	RB7
12	RB6

Jumper 3.3 – Allows you to select the PIC work voltage. If close sets the 3.3 volts, open the 5 volts. **WARNING! Powering a PIC designed to work with a voltage of 3.3 volts with 5 volts can cause damage to it.**

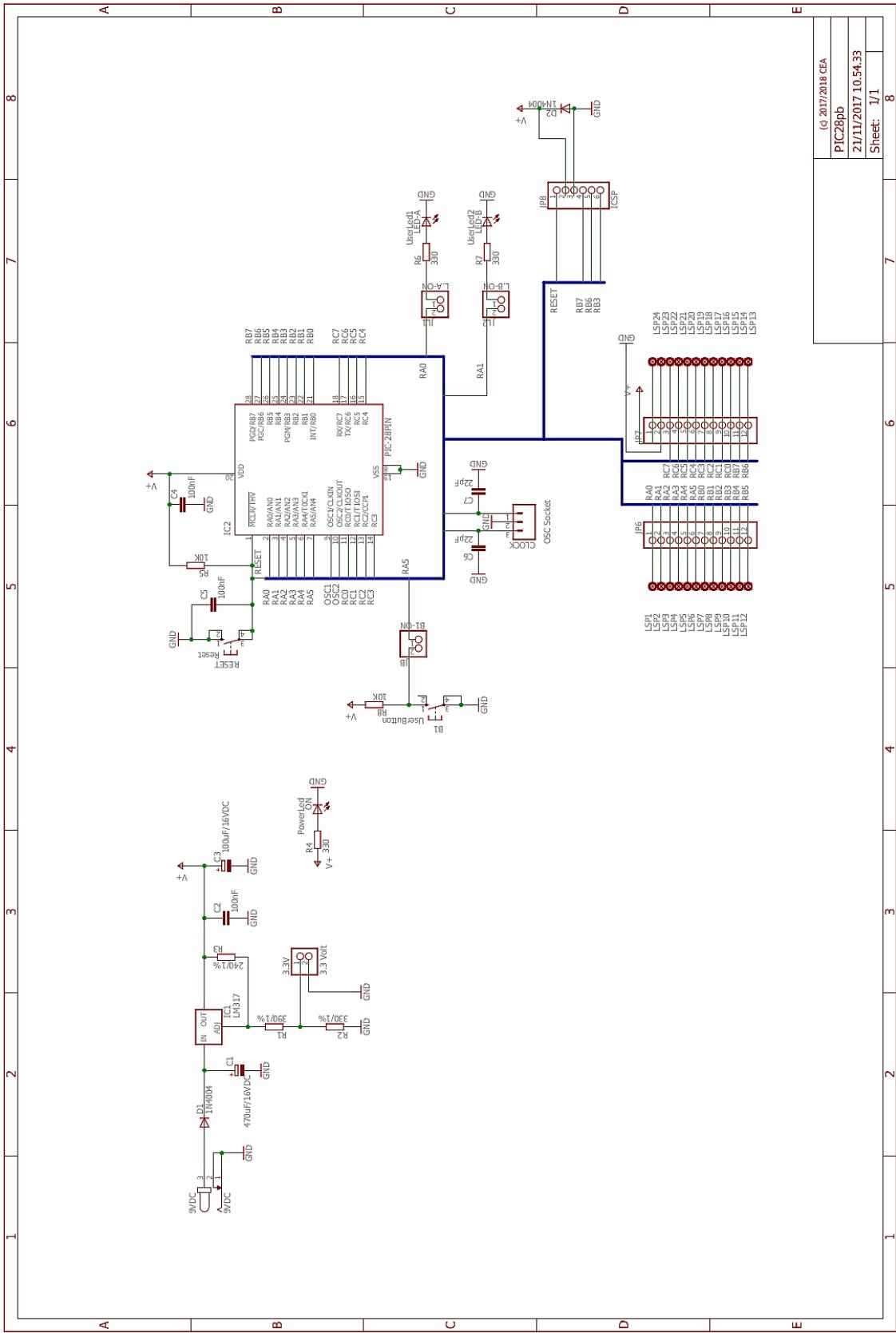
Jumper L.A-ON – If close, connects Led A to PIC RA0 port.

Jumper L.B-ON – If close, connects Led B to PIC RA1 port.

Jumper B1-ON – If closed, connects the B1 button to the PIC's RA5 port. Pressing this button puts a low VCC level on the pin, otherwise there is a high VCC level.

Clock socket – It houses the crystal clock. The two clock feet are inserted in the outside holes independently of the direction. The central hole is connected to GND.

SCHEMATIC:



SOFTWARE:

PBLEDA: PIC18F25J11 Led A blinking

This demo shows how to blink Led A.

Note: requires the closure of the L.A-ON jumper

PBLEDAB: PIC18F25J11 Led A/Led B blinking

This demo shows how to alternately blink Led A and Led B.

Note: requires to close the L.A-ON and L.B-ON jumpers

PBBUTTON: PIC18F25J11 Led A/Led B blinking via user button

This demo shows how to alternate between Led A and Led B by pressing the B1 button.

Note: requires to close the L.A-ON, L.B-ON and B1-ON jumpers

DISCLAIMER:

This board is intended for use for ENGINEERING DEVELOPMENT, DEMONSTRATION OR EVALUATION PURPOSES ONLY and is not to be considered as a finished product suitable for general use by the consumer. People who manipulate the product must have electronic training and observe the standards of good engineering practice. Consequently, the goods supplied are not intended to be complete in terms of design, marketing and/or production protection requirements, including the safety and environmental measures of the product typically found in products incorporating such components or circuit boards of semiconductors. This data sheet does not fall within the scope of European Union Directives on electromagnetic compatibility, FCC, CE or UL, and may therefore not meet the technical requirements of these directives or other related documents.

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