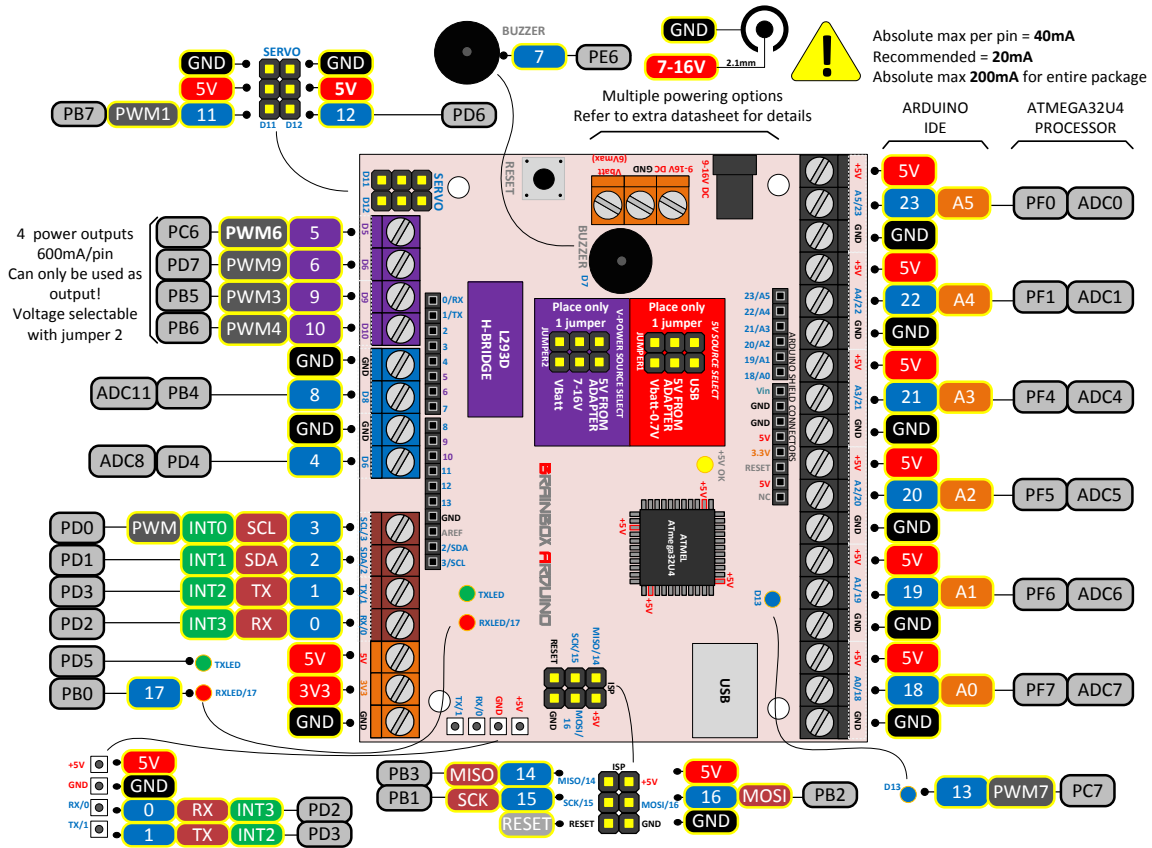





I-AN – READING ANALOG INPUTS



All pins marked with this “  ” -symbol can be used as digital input pins.

Be aware that Arduino IDE uses a inconvenient way of naming the pins. The Arduino pin name is displayed in the  -symbol.

Flowcode and all the other programming languages use the official pin names. These official pin names are displayed in the gray rectangles: 

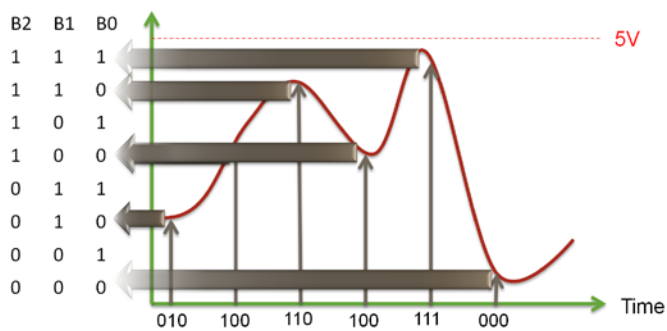
General knowledge on analog inputs:

Modern microcontrollers can measure analog voltages between 0V and 5V at several pins. This analog voltage is converted into a 8 or 10 bit binary value

- a. 5 Volt converts to 0b1111 1111 or 255
- b. 2.5 Volt converts to 0b1000 0000 or 128
- c. 0 Volt converts to 0b0000 0000 or 0

This diagram explains how a analog signal is converted into a 3 bit binary value. Be aware that our microcontroller converts this signal into a 8 or even a 10 bit binary value.

Arduino IDE only converts into 10 bit binary values.



	Nr of bits	stepsize
		0-5Volt
3 bit	8	625 mvolt
8 bit	256	19,5 mvolt
10 bit	1024	4,8 mvolt