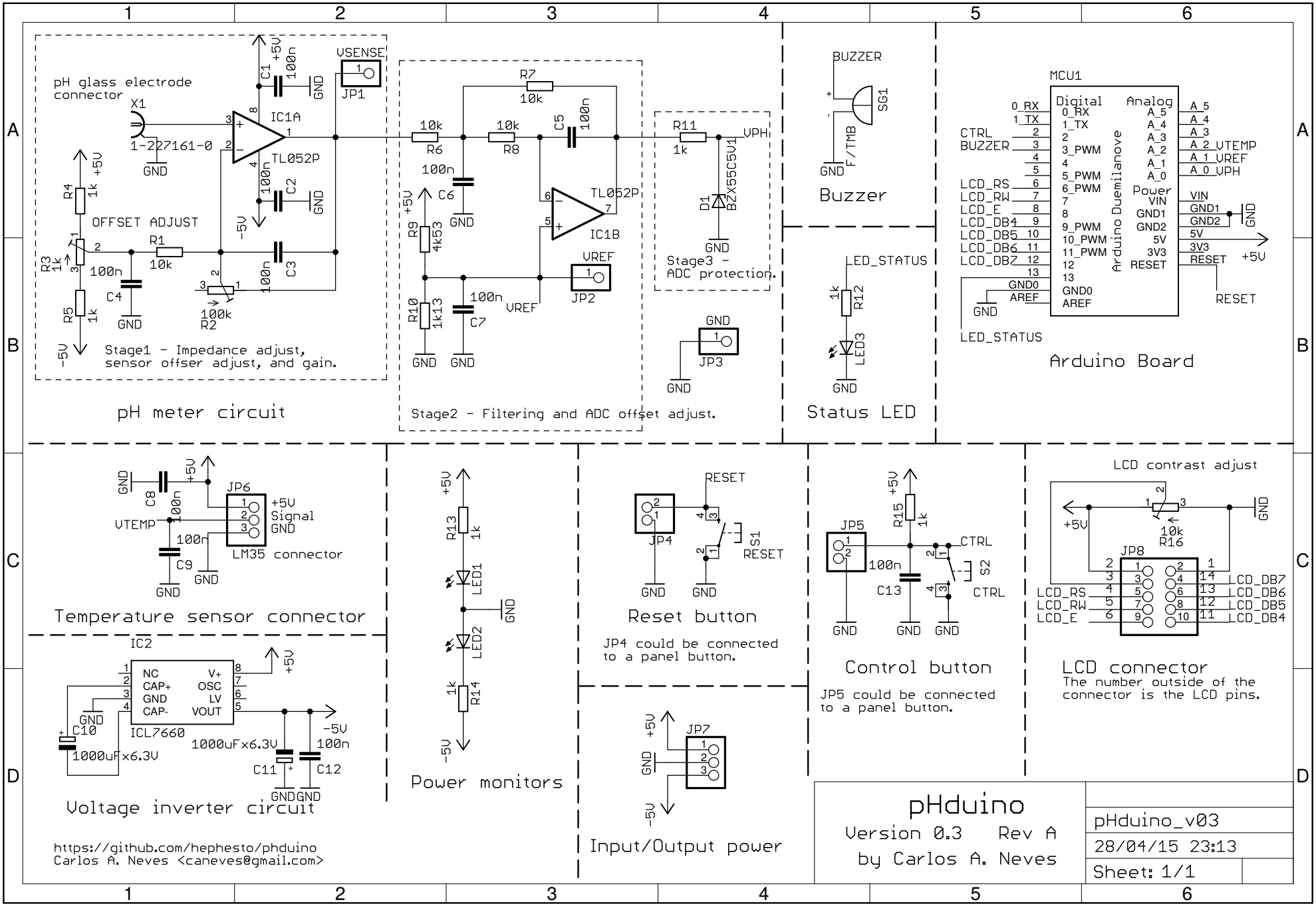
pH glass electrode connector
X1
1-227161-0
GND
IC1A
TL052P
C1 100n
C2 100n
C3 100n
C4 100n
+5V
-5V
VSENSE
JP1
R4 1k
R5 1k
R3 1k
OFFSET ADJUST
R1 10k
R2 100k
Stage1 - Impedance adjust, sensor offser adjust, and gain.
pH meter circuit
R6 10k
R7 10k
R8 10k
C5 100n
C6 100n
R9 4k53
R10 1k13
C7 100n
IC1B
VREF
JP2
Stage2 - Filtering and ADC offset adjust.
R11 1k
VPH
D1 BZX55C5V1
Stage3 - ADC protection.
JP3
BUZZER
SG1
F/TMB
Buzzer
LED_STATUS
R12 1k
LED3
Status LED
MCU1
Digital
Analog
Power
Arduino Duemilanove
0_RX
1_TX
2
3_PWM
4
5_PWM
6_PWM
7
8
9_PWM
10_PWM
11_PWM
12
13
GND0
AREF
A_5
A_4
A_3
A_2 VTEMP
A_1 VREF
A_0 VPH
VIN
GND1
GND2
5V
3V3
RESET
CTRL
BUZZER
LCD_RS
LCD_RW
LCD_E
LCD_DB4
LCD_DB5
LCD_DB6
LCD_DB7
Arduino Board
JP6
VTEMP
C8 100n
C9 100n
+5V Signal GND
LM35 connector
Temperature sensor connector
IC2
NC
CAP+
GND
CAP-
V+
OSC
LV
VOUT
ICL7660
C10 1000uFx6.3V
C11 1000uFx6.3V
C12 100n
Voltage inverter circuit
R13 1k
LED1
LED2
R14 1k
Power monitors
JP4
RESET
S1
Reset button
JP4 could be connected to a panel button.
JP7
Input/Output power
JP5
R15 1k
C13 100n
S2
CTRL
Control button
JP5 could be connected to a panel button.
LCD contrast adjust
R16 10k
JP8
LCD_DB7
LCD_DB6
LCD_DB5
LCD_DB4
LCD connector
The number outside of the connector is the LCD pins.
https://github.com/hephesto/phduino
Carlos A. Neves <caneves@gmail.com>
pHduino
Version 0.3 Rev A
by Carlos A. Neves
pHduino_v03
28/04/15 23:13
Sheet: 1/1