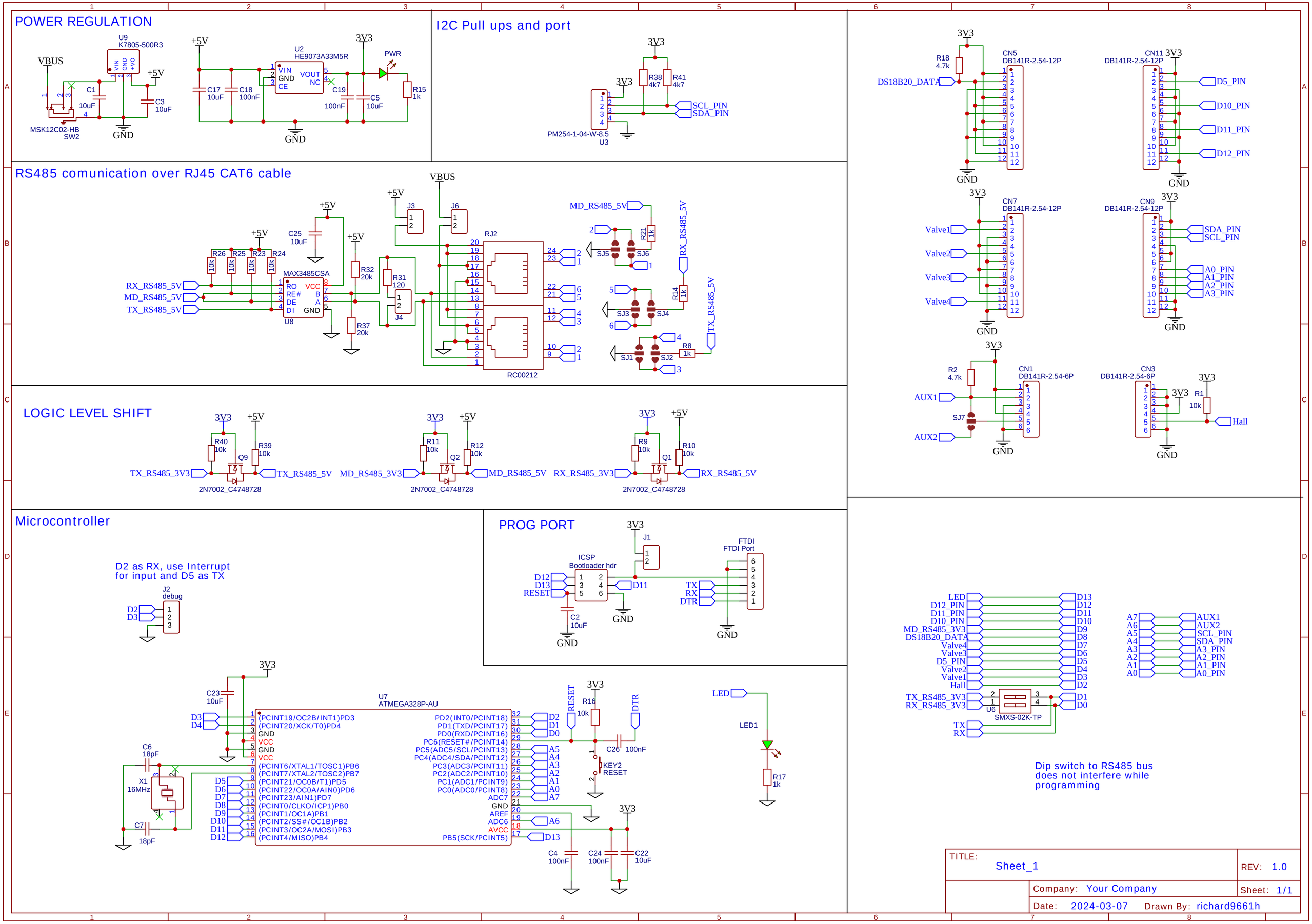
POWER REGULATION
U9
K7805-500R3
VBUS
VIN
GND
+VO
+5V
C1
10uF
C3
10uF
MSK12C02-HB
SW2
GND
+5V
U2
HE9073A33M5R
VIN
GND
CE
VOUT
NC
3V3
PWR
C17
10uF
C18
100nF
C19
100nF
C5
10uF
R15
1k
GND
I2C Pull ups and port
3V3
R38
4k7
R41
4k7
SCL_PIN
SDA_PIN
PM254-1-04-W-8.5
U3
RS485 comunication over RJ45 CAT6 cable
VBUS
+5V
J3
J6
C25
10uF
R26
R25
R23
R24
10k
MAX3485CSA
RO
RE#
DE
DI
VCC
B
A
GND
U8
RX_RS485_5V
MD_RS485_5V
TX_RS485_5V
R32
20k
R31
120
R37
20k
J4
RJ2
RC00212
MD_RS485_5V
R21
1k
SJ5
SJ6
SJ3
SJ4
R14
1k
SJ1
SJ2
R8
1k
LOGIC LEVEL SHIFT
3V3
+5V
R40
10k
R39
10k
Q9
TX_RS485_3V3
TX_RS485_5V
2N7002_C4748728
R11
10k
R12
10k
Q2
MD_RS485_3V3
MD_RS485_5V
R9
10k
R10
10k
Q1
RX_RS485_3V3
RX_RS485_5V
Microcontroller
D2 as RX, use Interrupt
for input and D5 as TX
J2
debug
D2
D3
C23
10uF
U7
ATMEGA328P-AU
(PCINT19/OC2B/INT1)PD3
(PCINT20/XCK/T0)PD4
GND
VCC
(PCINT6/XTAL1/TOSC1)PB6
(PCINT7/XTAL2/TOSC2)PB7
(PCINT21/OC0B/T1)PD5
(PCINT22/OC0A/AIN0)PD6
(PCINT23/AIN1)PD7
(PCINT0/CLKO/ICP1)PB0
(PCINT1/OC1A)PB1
(PCINT2/SS#/OC1B)PB2
(PCINT3/OC2A/MOSI)PB3
(PCINT4/MISO)PB4
PD2(INT0/PCINT18)
PD1(TXD/PCINT17)
PD0(RXD/PCINT16)
PC6(RESET#/PCINT14)
PC5(ADC5/SCL/PCINT13)
PC4(ADC4/SDA/PCINT12)
PC3(ADC3/PCINT11)
PC2(ADC2/PCINT10)
PC1(ADC1/PCINT9)
PC0(ADC0/PCINT8)
ADC7
AREF
ADC6
AVCC
PB5(SCK/PCINT5)
C6
18pF
X1
16MHz
C7
18pF
RESET
R16
10k
DTR
C26
100nF
KEY2
RESET
C4
100nF
C24
100nF
C22
10uF
LED
LED1
R17
1k
PROG PORT
J1
ICSP
Bootloader hdr
D12
D13
RESET
D11
C2
10uF
FTDI
FTDI Port
TX
RX
DTR
CN5
DB141R-2.54-12P
R18
4.7k
DS18B20_DATA
CN11
DB141R-2.54-12P
D5_PIN
D10_PIN
D11_PIN
D12_PIN
CN7
DB141R-2.54-12P
Valve1
Valve2
Valve3
Valve4
CN9
DB141R-2.54-12P
SDA_PIN
SCL_PIN
A0_PIN
A1_PIN
A2_PIN
A3_PIN
CN1
DB141R-2.54-6P
R2
4.7k
AUX1
AUX2
SJ7
CN3
DB141R-2.54-6P
R1
10k
Hall
LED
D12_PIN
D11_PIN
D10_PIN
MD_RS485_3V3
DS18B20_DATA
Valve4
Valve3
D5_PIN
Valve2
Valve1
Hall
TX_RS485_3V3
RX_RS485_3V3
U6
SMXS-02K-TP
TX
RX
D13
D12
D11
D10
D9
D8
D7
D6
D5
D4
D3
D2
D1
D0
A7
A6
A5
A4
A3
A2
A1
A0
AUX1
AUX2
SCL_PIN
SDA_PIN
A3_PIN
A2_PIN
A1_PIN
A0_PIN
Dip switch to RS485 bus
does not interfere while
programming
TITLE:
Sheet_1
REV: 1.0
Company: Your Company
Sheet: 1/1
Date: 2024-03-07
Drawn By: richard9661h