

LED3\_OUT  
GND\_LED  
LED2\_OUT  
GND\_LED  
LED1\_OUT  
GND\_LED  
+12/24V\_LED  
GND\_LED

ADC0 GND  
ADC1 GND  
ADC2 GND  
ADC3 +3V3  
ADC4 +3V3

+5V0 GND  
SCL GND  
SDA GND  
1wire GND  
+3V3

GND  
T\_feed  
T\_lamp  
GND  
1wire  
+3V3

ISP programmer  
+3V3 MISO  
MOSI SCK  
GND RST

Nextion display

GND  
TXD  
RXD  
+5V

pH probe

AUX N L CO2 N L SKIMMER N L HEATER N L on UPS! PUMP2 N L on UPS! PUMP1 N L 230V L 230V N

A

A

B

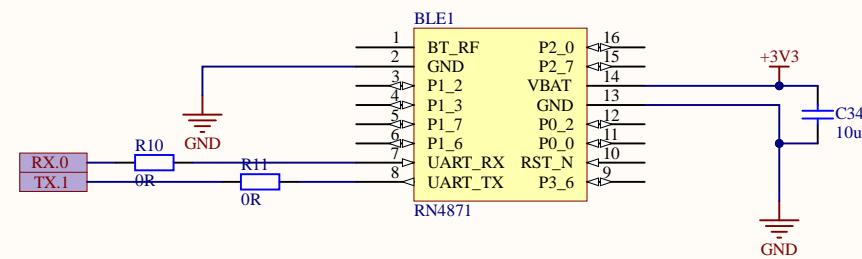
B

C

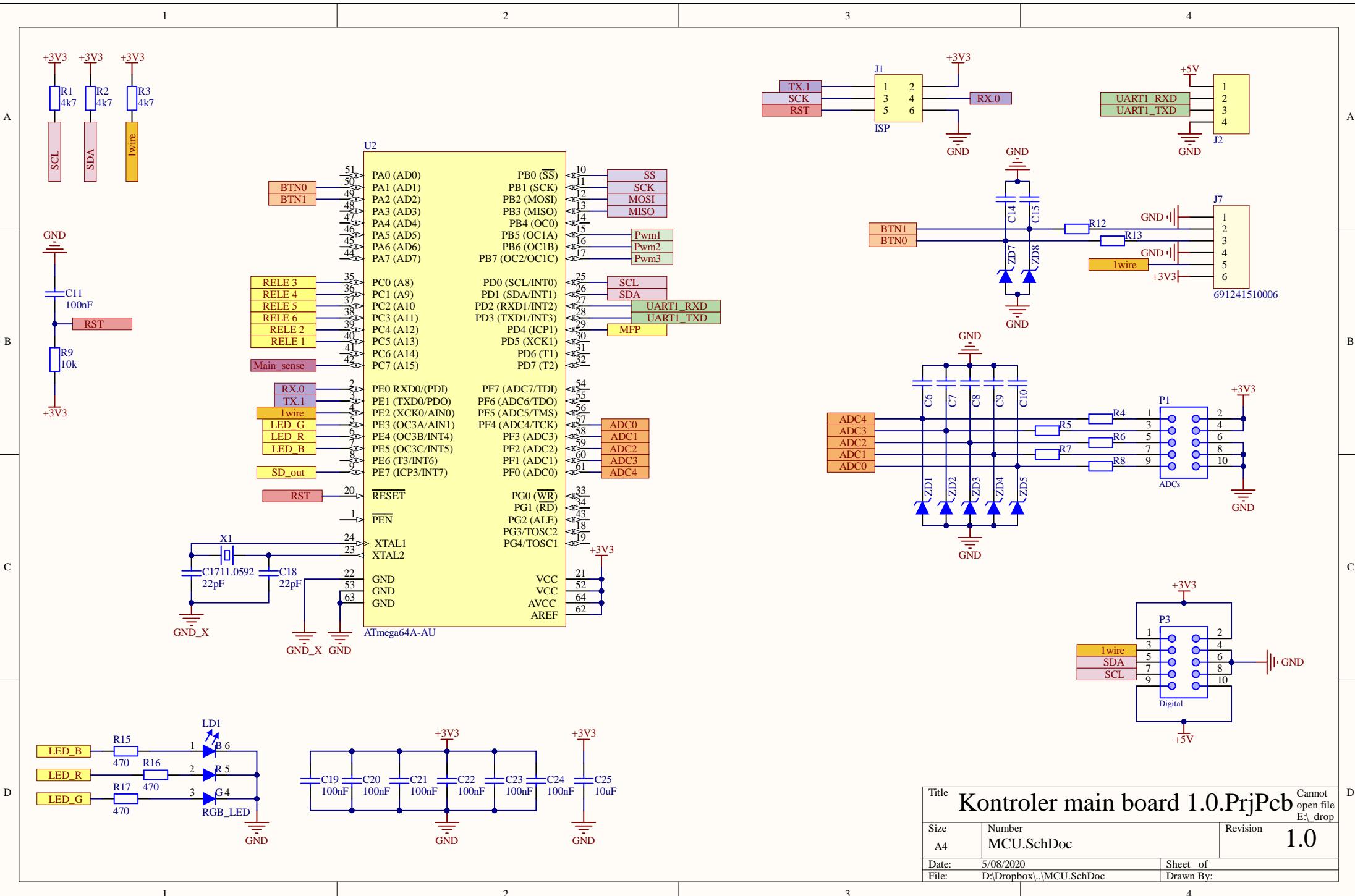
C

D

D



Title Kontroler main board 1.0.PrjPcb		
Cannot open file E:\drop		
Size A4	Number BLE.SchDoc	Revision 1.0
Date: 5/08/2020	Sheet of	
File: D:\Dropbox\..\BLE.SchDoc	Drawn By:	



A

A

B

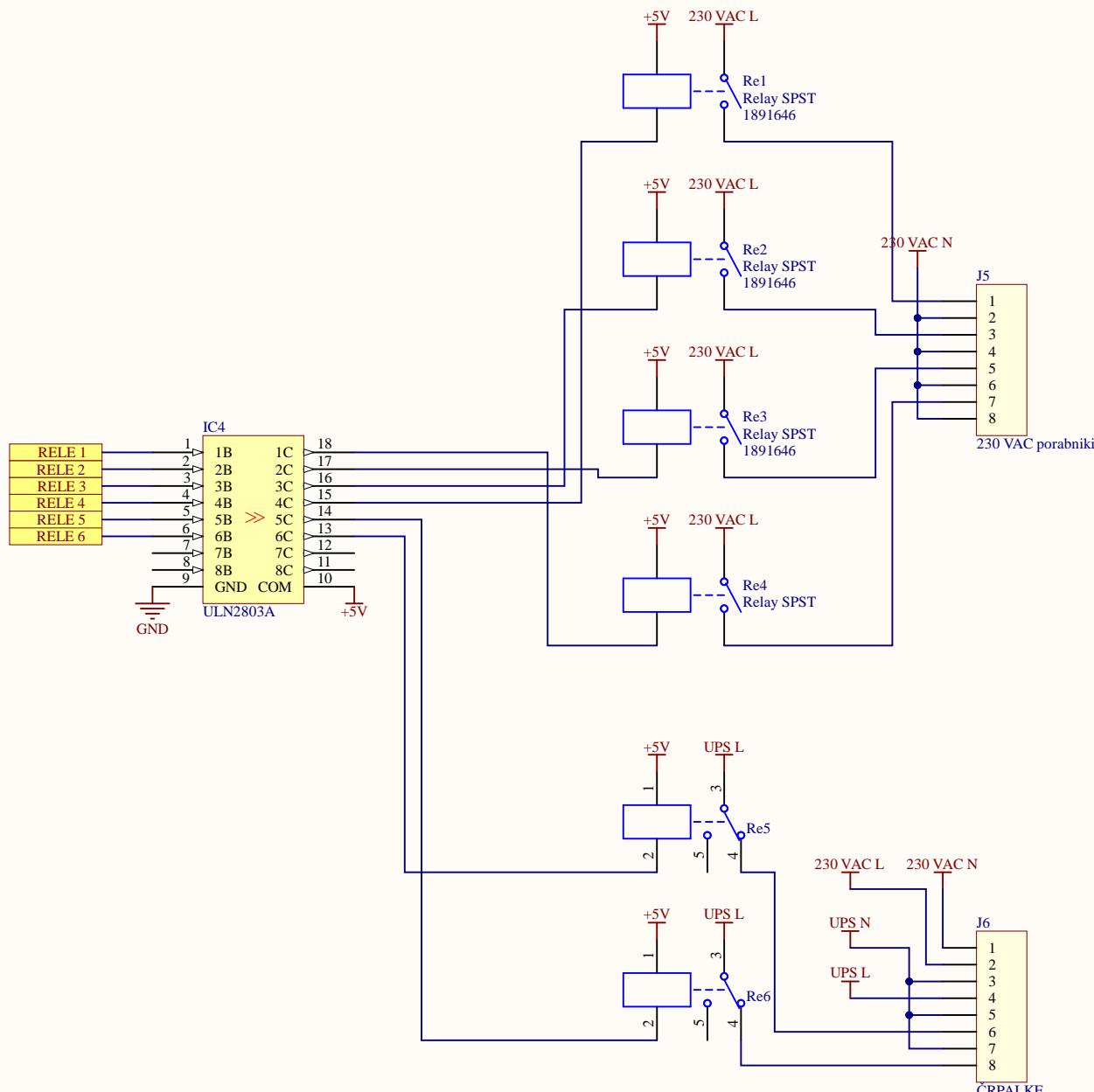
B

C

C

D

D



Title Kontroler main board 1.0.PrjPcb		
Size A4	Number OUT_230VAC.SchDoc	Revision 1.0
Date: 5/08/2020	Sheet of	
File: D:\Dropbox\..\OUT_230VAC.SchDoc	Drawn By:	

A

A

B

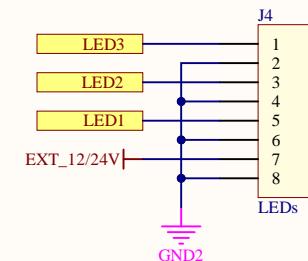
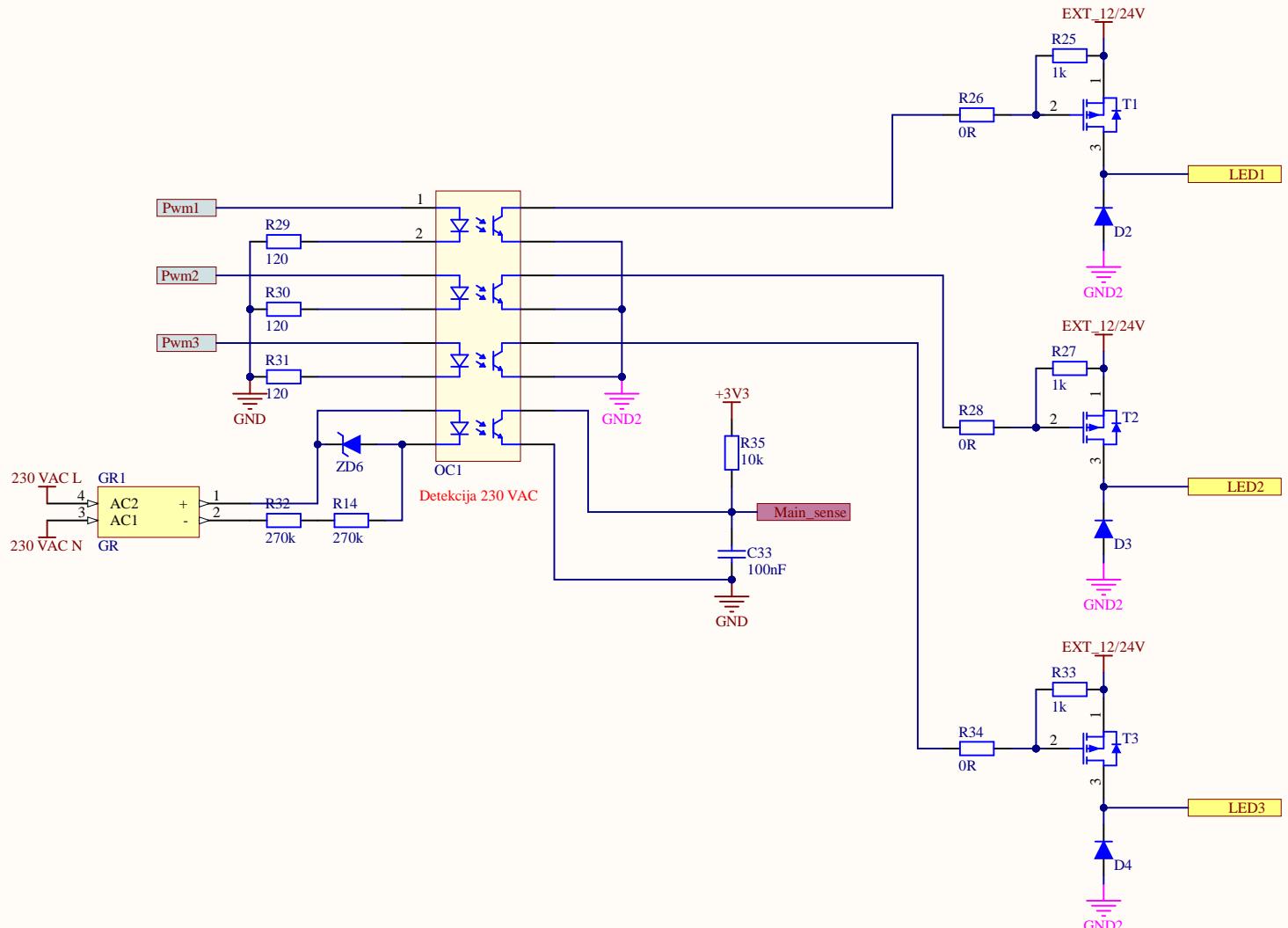
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C

C

D

D



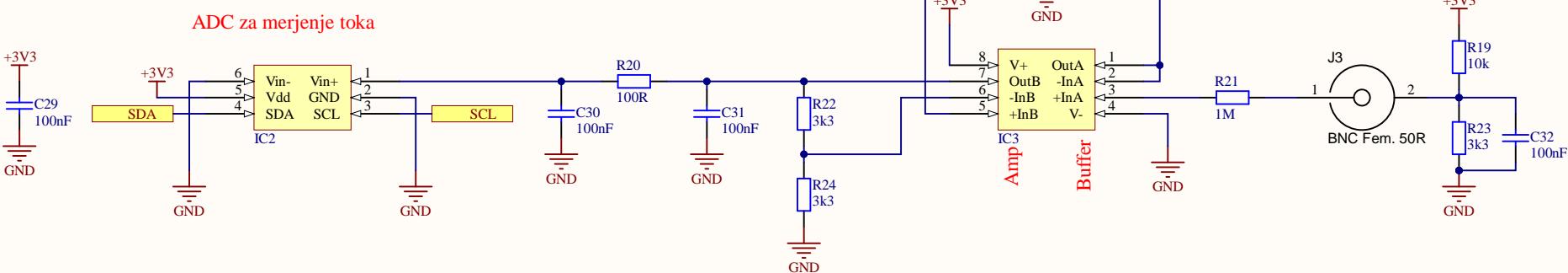
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Date: 5/08/2020	Sheet of	
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A

A

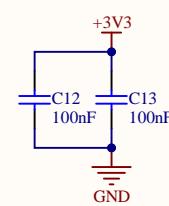
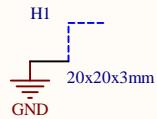
B

B



C

C



D

D

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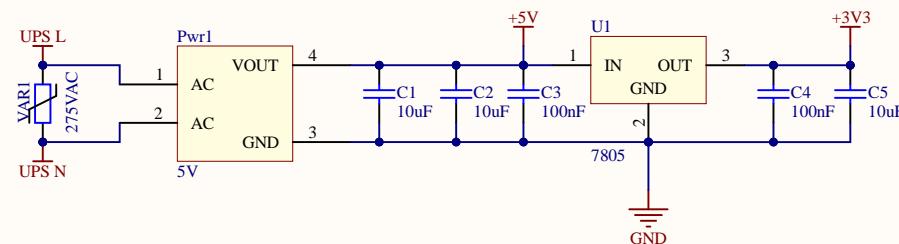
A

Za 230 VAC priklop in UPS glej OUT\_230VAC

A

B

Napajanje za logiko in releje



B

C

C

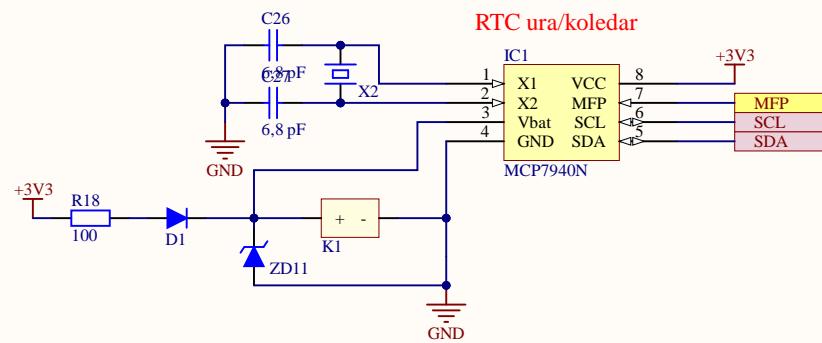
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D

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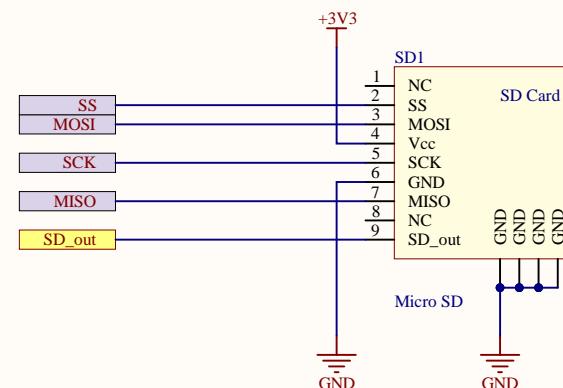
A

A



B

B



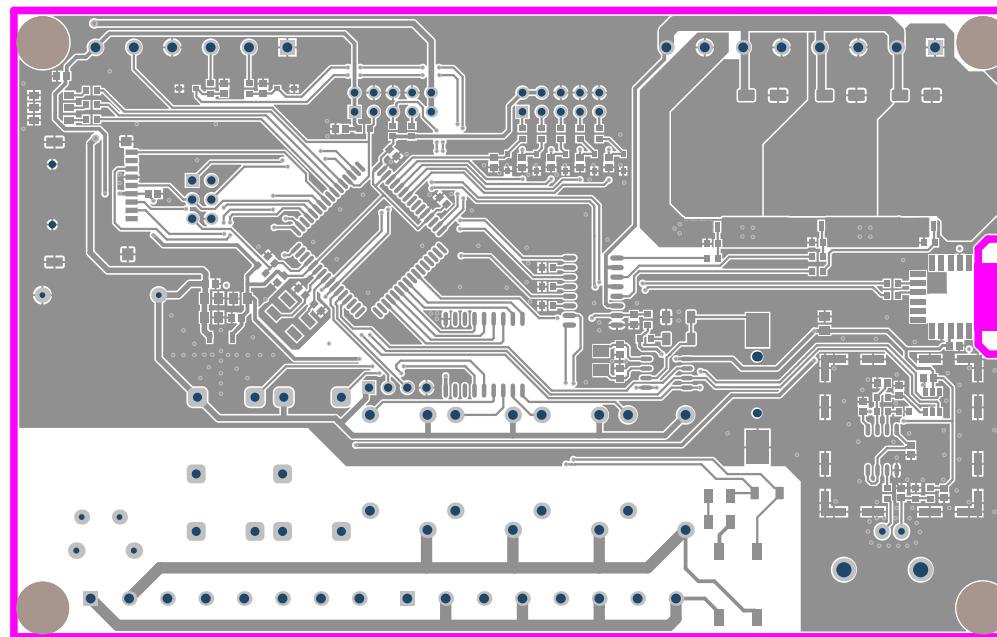
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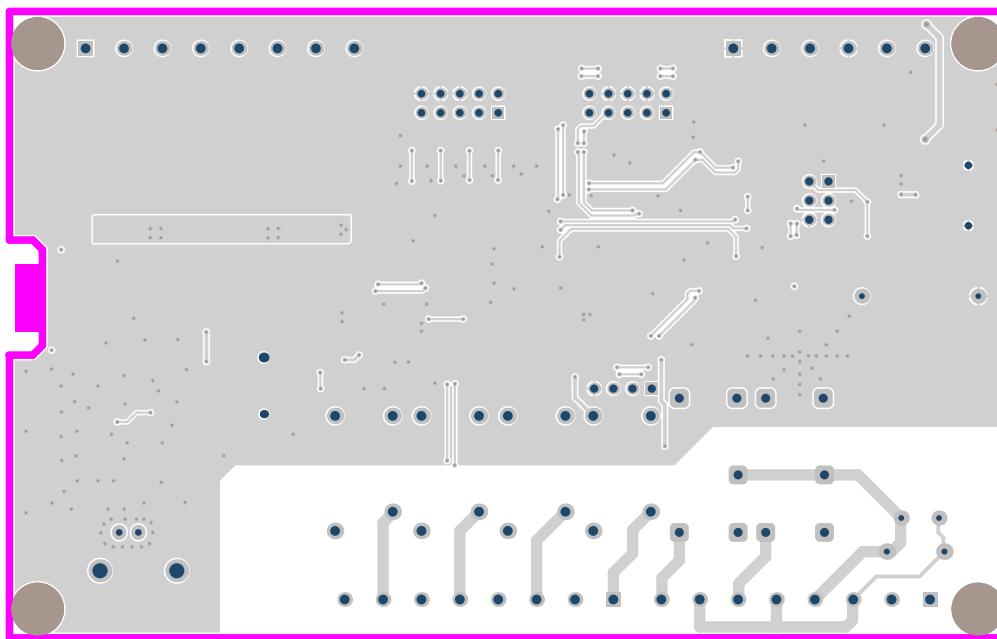
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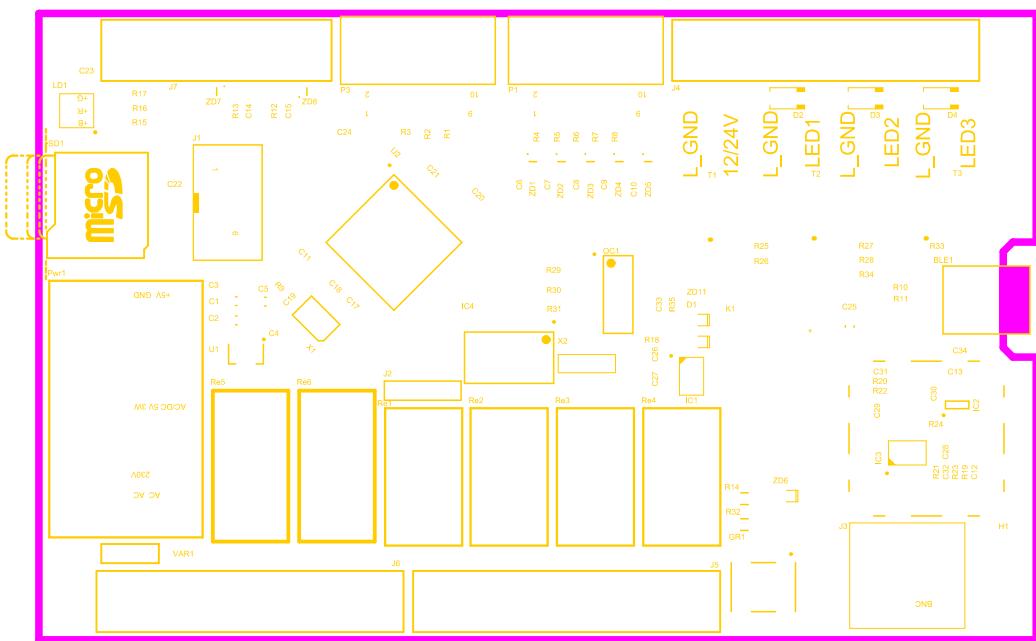
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Size	Number	Revision
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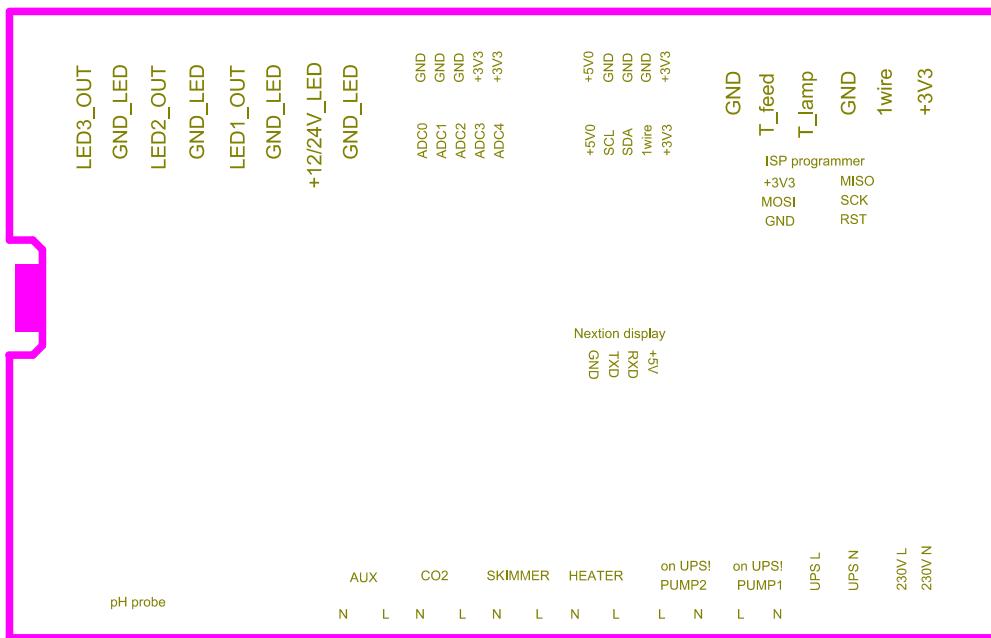
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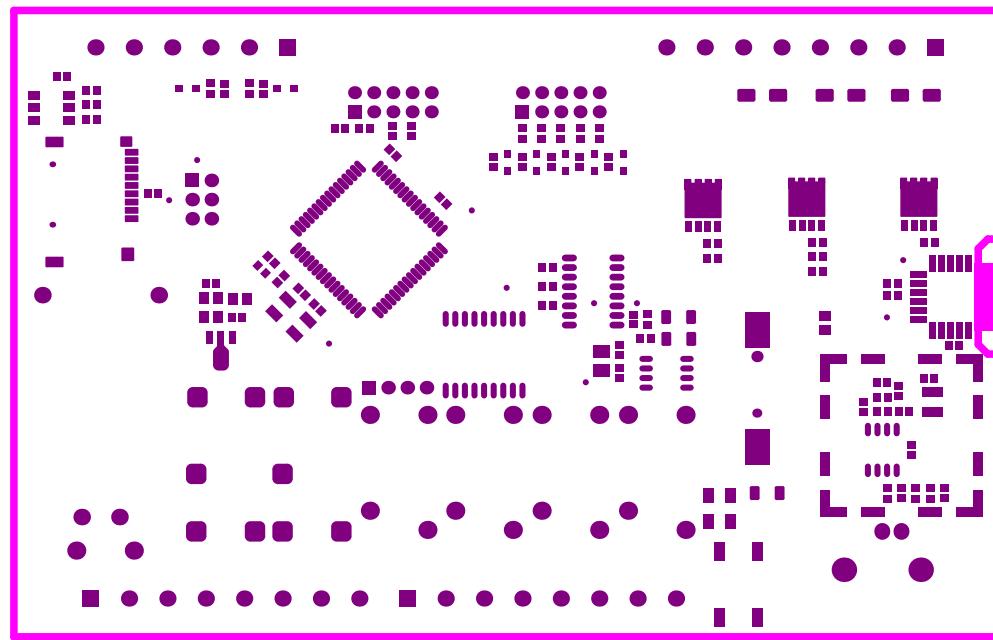
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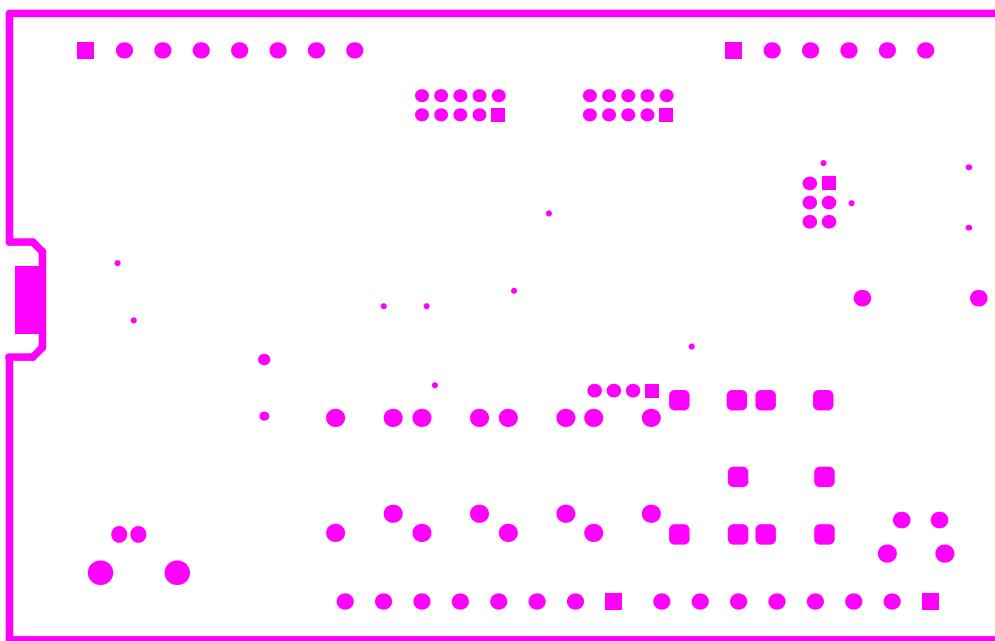


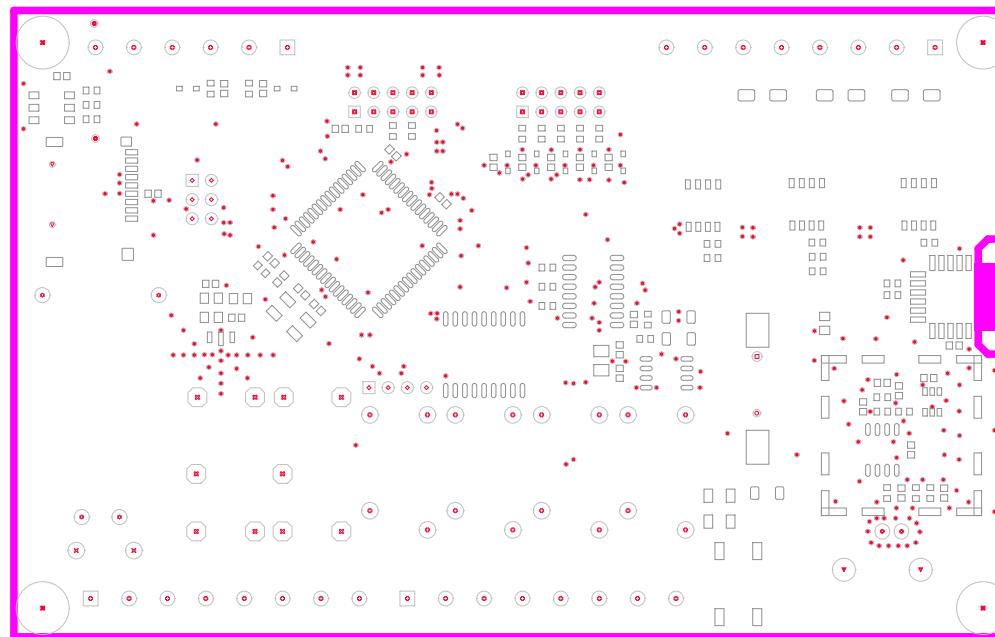


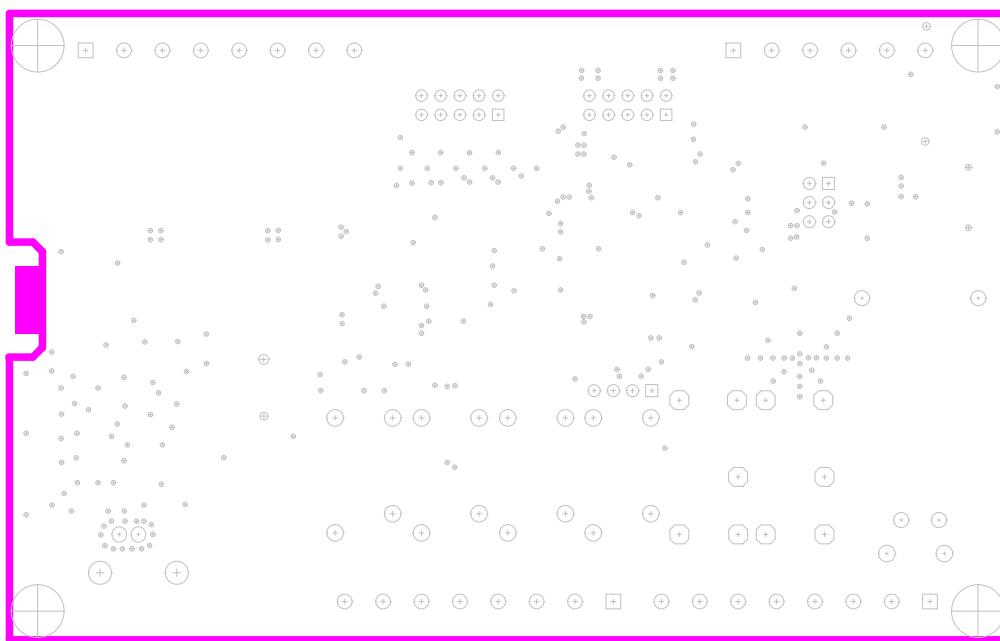


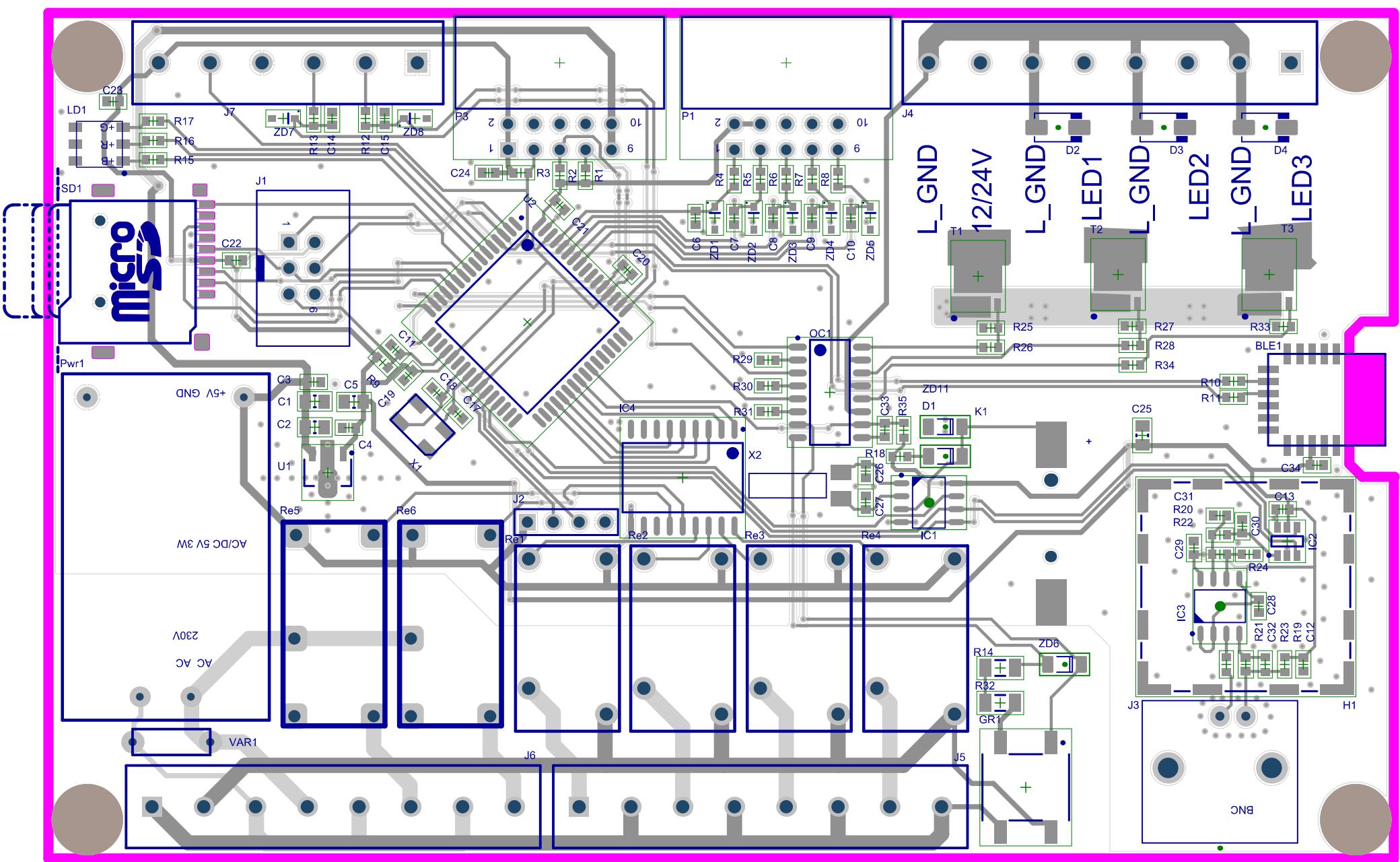


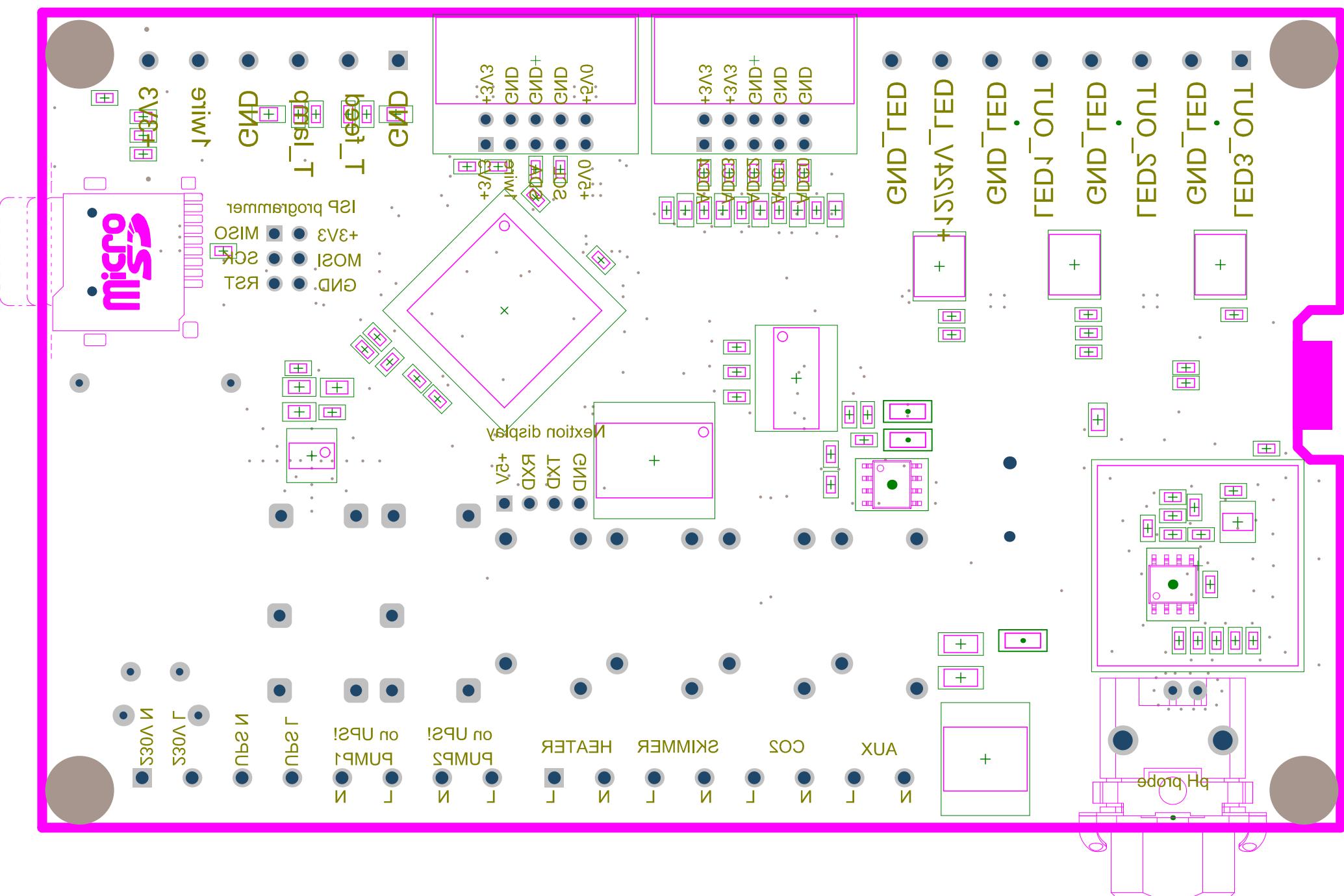












Designator	Quantity	Value	Description	Footprint	Comment
BLE1	1	RN4871-I/RM130		RN4781U	RN4871
C1, C2, C5, C25	4	10uF	Capacitor non-polarized	0805 CAP	10uF 0805
C3, C4, C6, C7, C8, C9, C10, C11, C13, C14, C15, C19, C20, C21, C22, C23, C24, C29, C30, C31, C32, C33	22	100nF	Capacitor non-polarized	0603 cap	100nF
C12, C34	2	100nF, 10uF	Capacitor non-polarized, Ceramic chip Capacitor - standard	0603 cap	10uF 0603
C17, C18	2	22pF	Capacitor non-polarized	0603 cap	22pF
C26, C27	2	6.8 pF		0603 cap	12pF
C28	1	100nF	Capacitor non-polarized	0603 cap	Capacitor
D1, ZD11	2	1N4148, NP, 3V, NP		SOD80	NP
D2, D3, D4	3	SS14	Diode standard	DO-214AC	SS14
GR1	1		WE-SHC Shielding Cabinet, One Piece, 20x20x3mm	SO14	GR
H1	1		WE-SHC Shielding Cabinet, One Piece, 20x20x3mm	369032055	20x20x3mm
IC1	1	MCP7940N-I/SN	RTC module	SOIC8	MCP7940N
IC2	1	ADS1110	16-bit ADC	SO123-6	ADS1110
IC3	1		Rail-to-rail OpAmp 2 ch	SOIC8	NE5532A
IC4	1	ULN2803ADW		SOIC18	ULN2803A
J1	1		WR-BHD 2.54mm Male Box Header	61200621621	ISP
J2	1		WR-PHD 2.54 mm THF Pin Header .04p	61300411121	.04p
J3	1		Connector BNC 50 Ohm right-angle PCB mounted	CONN_BNC_RA_PCB	BNC Fem. 50R
J4	1		WR-TBL Serie 2415 - 5.08 mm Horizontal Entry Modular with Rising Cage Clamp, 8p	691241510008	LEDs
J5	1		WR-TBL Serie 2415 - 5.08 mm Horizontal Entry Modular with Rising Cage Clamp, 8p	691241510008	230 VAC porabniki
J6	1		WR-TBL Serie 2415 - 5.08 mm Horizontal Entry Modular with Rising Cage Clamp, 8p	691241510008	ČRPALKE
J7	1		WR-TBL Serie 2415 - 5.08 mm Horizontal Entry Modular with Rising Cage Clamp, 8p	691241510006	691241510006
K1	1	S8411 battery holder S8411 for 1220	S8411 BAT HOLDER	S8411 bat holder	
LD1	1	Led_RGB_5050	LED RGB	LED_5050	RGB LED
OC1	1		4x Optocoupler SOIC16	SOIC16	HCPL-244
P1	1		Male Box Header WR-BHD, THT, Angled, pitch 2.54 mm, 10 pins	612010235221	ADCs
P3	1		Male Box Header WR-BHD, THT, Angled, pitch 2.54 mm, 10 pins	612010235221	Digital
Pwr1	1	HUK-PM12	AC-DC 5V 3W	5V	
R1, R2, R3	3	4k7	Resistor SMD	0603 RES	4k7
R4, R5, R6, R7, R8, R12, R13, R25, R27, R33	10	1k	Resistor SMD	0603 RES	1k
R9, R19, R35	3	10k	Resistor SMD	0603 RES	10k
R10, R11, R26, R28, R34	5	0R	[NoValue], Resistor SMD	0603 RES	0R
R14, R16	2	270k	Resistor SMD	1206 RES	270k
R15, R16, R17	3	470	Resistor SMD	0603 RES	470
R18, R20	2	100, 100R	NP. Resistor SMD	0603 RES	100R
R21	1	1M	Resistor SMD	0603 RES	1M
R22, R23, R24	3	3k3	Resistor SMD	0603 RES	3k3
R29, R30, R31	3	120	Resistor SMD	0603 RES	120
Re1, Re2, Re3, Re4	4		Mini PCB Relay OJE	Relay SPST	
Re5, Re6	2		Relay single	Finder relay	Relay single
SD1	1	MicroSD holder		SD Card Micro	Micro SD
T1, T2, T3	3	PFET_SIR401DP-T1-G3	MOSFET P	TDS0N-8	MOSFET-P
U1	1	7805		SOT89	2V3 req
U2	1	ATmega64A	8-bit AVR Microcontroller, 2.7-5.5V, 16MHz, 64KB Flash, 2KB EEPROM, 4KB SRAM, 64-pin TQFP, Industrial Grade (-40°C to 85°C)	64A_N	ATmega64-AU
VAR1	1	275VAC		C7.5V/N	varistor
X1	1	Xtal 11.0592	Xtal	Xtal smd 3x5	11.0592
X2	1	32k	Xtal	Xtal-32k	32k Xtal
ZD1, ZD2, ZD3, ZD4, ZD5, ZD7, ZD8	7	Zener		SOD323	ZD3/6 SOD323
ZD6	1	5V1	Zener	SOD80	5V1