

SHIELD NCS314 V2.0 (BOM revision B2) 23.03.2018

	#	Designator	Quantity	Value	PackageReference	Comment
1 - Resistors	1	R63	1	18.2k	0805	Resistor
	2	R62	1	95.3k	0805	Resistor
	3	R61	1	0.1 Ohm	2512	Resistor
	4	R58	1	10k	3296W or 3266	Variable Resistor
	5	R56, R35, R41, R42, R67	5	4.7k	0805	Resistor
	6	R55	4	10k Opt	0805	Resistor See details in the scheme.
	7	R51	1	1 Ohm	1206	Resistor
	8	R50	1	1.5 MOhm	0805	Resistor
	9	R37, R38, R48, R54	4	1k	0805	Resistor
	10	R19, R20, R21, R22, R23, R24, R25, R26, R11, R12, R13, R14, R15, R16, R17, R18, R27, R28, R29, R30, R31, R32, R33, R34, R65	25	150 Ohm	0805	Resistor
	11	R7, R8, R9, R10, R36	5	150k	0805	Resistor
	12	R1, R2, R3, R4, R5, R6	6	24k	0805	Resistor
	13	R0	1	0 Ohm	1206	Resistor
	14	R53	1	0 Ohm	0805	Resistor
2 - Capacitors	16	C14	1	10nF 50V	0805	Ceramic capacitor
	17	C12, C13, C19, C20	4	10uF 16V	0805	Ceramic capacitor
	18	C1, C2, C3, C4, C8, C9, C10, C17, C21, C22, C23	11	100nF 50V	0805	Ceramic capacitor
	19	C7	1	10uF 16V Tantal	Size-A (SMD3216)	Tantal capacitor
	20	C18	1	100nF 250V	1206	Ceramic capacitor
	21	C11, C16	2	220uF 16V	TH & 'SMD 6.3x7.7mm	Aluminum capacitor 'NACE221M16V6.3X8TR13F
	22	C15	1	10uF 250V	TH & SMD 10x10mm	Aluminum capacitor NACV100M250V10X10.8TR13F
3 - Diodes	23	D15	1	SS26	SMA	Schottky diode
	24	D14	1	SMBJ220CA	SMB	TVS
	25	D12	1	LED RED	1206	Power indicator
	26	D11	1	SMAJ18CA	SMA	TVS Not required
	27	D10	4	1N4148 Opt	SOD-80C	DL4148 See details in the scheme.
	28	D9	1	ES2J	SMB	Fast diode
4 - IC's & Transistors	29	U1, U2	2	HV5122PJ-G	PLCC-44	HV Driver
	30	U3	1	CD4504BM	SOIC-16	Level converter
	31	U4	1	ULN2003D	SOIC-16	RGB Driver
	32	U5	1	DS3231S	SOIC-16W	IC RTC
	33	U6	1	LM3478MM	VSSOP-8	All ready soldered on PCB. Replace LM3488MM
	34	U7	1	RT8258	SOT23-6	All ready soldered on PCB. Replace: LMR12010/07, MCP16301). See details in the scheme.
	35	for connect TEM1 via Wire PH2.0-3p	1	DS18B20	TO-92	Temperature sensor
	36	IR1	1	TSOP4836	DIP-3	IR Receiver
	37	Q1	1	FDD6N25	DPAK	Transistor MOSFET N-Chanal
5 - Coils	38	L2	1	22uH 2A	SMD 10.8x10.8mm	Shielded inductance
	39	L1	1	220uH 1.5A	SMD 12x12mm	Shielded inductance
6 - Misc	40	GPS1	1	Jack 3.5mm	ST-11M-030-00-0	For external GPS
	41	DOWN, MODE, UP	3	SWT-3/13 Button	h=13, L=9	Control buttons
	42	BT1	1	Battery Holder CR1220	SMD CR1220	Backup for RTC
	43	insert into the battery holder BT1	1	Battery CR1220		Battery 3V Lithium
	44	B1	1	HCS0903G	SMD 8.5x8.5mm	Buzzer HCS0903G Replace STD0833C
	45	SPI1	1	PLD-4	Pich 2.54mm	Connect to Arduino
	46	DG3	1	PLS-4	Pich 2.54mm	Connect to Arduino
	47	AN1, PWR1	2	PLS-6	Pich 2.54mm	Connect to Arduino
	48	DG2	1	PLS-8	Pich 2.54mm	Connect to Arduino
	49	DG1	1	PLS-10	Pich 2.54mm	Connect to Arduino
	50	ExDOWN, ExMODE, ExUP, LS1	4	PH2.0-2p	Pich 2.0mm	For external buttons

	51	GPS1	1	PH2.0-4p	Pich 2.0mm	For external GPS
	52	TEM1	1	PH2.0-3p	Pich 2.0mm	For external c
	53	<i>for connect DS18B20 to TEM1</i>	1	Wire PH2.0-3p	L = 10-30cm	Wire for DS18B20
7- RGB LED	54	D1, D2, D3, D4, D5, D6, D7, D8	8	KT-SMD3528-RGB	3528 (PLCC-4)	LED RGB 3528
8 - Nixie Tubes	55	NX1, NX2, NX3, NX4, NX5, NX6	6	IN-14	Option	Nixie Tube
9 - Neon lamps	56	DS1, DS2, DS3, DS4	4	IN-3		Neon Lamp Replace NE-2H
10 - Mechanical	57	Hex Spacer M3 5mm	4		IN-OUT	
	58	Hex Spacer M3 12mm	4		IN-IN	
	59	Hex Spacer M3 18mm	2		IN-IN	
	60	Screw M3 L=6 mm	6			
	61	<i>for DS18B20 and Neon Lamp</i>	1	Heat Shrink 1/0.5mm	7cm	For insulation DS18B20 and Neon Lamp
	62	PCB NCS314 v2.0	1			Size 53.26x200mm