

Project's part	Item	Quantity	Price per item	Total price	Link
Power Supply	12V 3.33A power supply	1	€5.95	€5.95	https://www.pollin.de/p/stecker-schaltnetzteil-cwt-12-v-3-33-a-352217
	Adjustable/ 12V to 5V Step down converter	1	€2.61	€2.61	https://www.banggood.com/Mini-DC-DC-Converter-Step-Down-Module-Adjustable-Power-Supply-p-920327.html?mmnds=search&cur_warehouse=UK
	Switch on-off R13-66 250V	1	€0.80	€0.80	https://www.conrad.de/de/wippschalter-250-vac-6-a-1-x-ausein-sci-r13-66a-02-rastend-1-st-700847.html
	DC power jack with cable	1	€0.55	€0.55	https://www.pollin.de/p/stromversorgungskabel-mit-hohlkupplung-daycom-ak-hk5-5-ve-562521
	Multiple conductor shielded cable 6x1.4, 1m	1	€0.99	€0.99	https://www.pollin.de/p/steuerleitung-ilycy-6x0-14-5-m-562654
Motor controller board	Wire to board 3.5mm 2 position connector	3	€0.61	€1.83	https://www.digikey.de/product-detail/en/on-shore-technology-inc/OSTTE020104/ED2740-ND/2351816
	N-Channel MOSFET IRFZ24N	2	€0.66	€1.32	https://www.digikey.de/product-detail/en/infinion-technologies/IRFZ24NPBF/IRFZ24NPBF-ND/811776
	P-Channel MOSFET IRF9Z34N	2	€0.83	€1.66	https://www.digikey.de/product-detail/en/infinion-technologies/IRF9Z34NPBF/IRF9Z34NPBF-ND/811960
	1N4001 Diode	4	€0.09	€0.36	https://www.digikey.de/product-detail/en/micro-commercial-co/1N4001-TP/1N4001-TPMSCT-ND/773688
	NPN transistor BC547B	2	€0.18	€0.36	https://www.digikey.de/product-detail/en/on-semiconductor/BC547BTA/BC547BTA-ND/1532789
	100K through-hole resistor	4	€0.08	€0.32	https://www.digikey.de/product-detail/en/stackpole-electronics-inc/CF14JT100K/CF14JT100KCT-ND/1830399
	100R through-hole resistor	2	€0.08	€0.16	https://www.digikey.de/product-detail/en/stackpole-electronics-inc/CF14JT100K/CF14JT100KCT-ND/1830400
	1K through-hole resistor	2	€0.08	€0.16	https://www.digikey.de/product-detail/en/stackpole-electronics-inc/CF14JT100K/CF14JT100KCT-ND/1830401
	22K through-hole resistor	2	€0.08	€0.16	https://www.digikey.de/product-detail/en/stackpole-electronics-inc/CF14JT100K/CF14JT100KCT-ND/1830402
	Wire to board 3.5mm 2 position connector	1	€0.61	€0.61	https://www.digikey.de/product-detail/en/on-shore-technology-inc/OSTTE020104/ED2740-ND/2351816
Microcontroller board	ATMEGA328P 32-TQFP	1	€1.26	€1.26	https://www.digikey.de/product-detail/en/microchip-technology/ATMEGA328PB-AUR/ATMEGA328PB-AURCT-ND/5722706
	16MHz SMD crystal	1	€0.33	€0.33	https://www.digikey.de/product-detail/de/abracon-ltc/ABL S7M2-16.000MHZ-D-2Y-T/535-12830-1-ND/5135076
	6x6mm SMD tactile switch	1	€0.57	€0.57	https://www.conrad.de/de/drucktaster-12-vdc-005-a-1-x-ausein-wuerth-elektronik-ws-lsw-430473025826-lastend-1-st-711722.html
	0.1uF 1206 SMD capacitor	1	€0.09	€0.09	https://www.digikey.de/product-detail/en/kemet/C1206C104K5RAC7867/399-1249-1-ND/411524
	22pF 1206 SMD capacitor	2	€0.13	€0.26	https://www.digikey.de/product-detail/en/samsung-electro-mechanics-america-inc/CL31C220JBCNNC/1276-1203-1-ND/3889289
	1uF 1206 SMD capacitor	1	€0.21	€0.21	https://www.digikey.de/products/en?keywords=445-1423-1-ND
	10uF 1206 SMD capacitor	1	€0.21	€0.21	https://www.digikey.de/product-detail/en/taiyo-yuden/GMK316F106ZL-T/587-1352-1-ND/931129?keywords=587-1352-1-ND&cur=EUR&lang=en?keywords=587-1352-1-ND&cur=EUR&lang=en
	499R 1206 SMD resistor	1	€0.08	€0.08	https://www.digikey.de/products/de?keywords=311-499FRCT-ND
	10K 1206 SMD resistor	1	€0.08	€0.08	https://www.digikey.de/products/de?keywords=311-10.0KFRCT-ND
	1206 SMD LED Red	1	€0.31	€0.31	https://www.digikey.de/products/en?keywords=160-1167-1-ND
	1206 SMD LED Green	1	€0.28	€0.28	https://www.digikey.de/products/en?keywords=160-1169-1-ND
	12V 3A 300mm stroke 750N Linear Actuator	1	€31.41	€31.41	https://www.banggood.com/750N-12V-24681012-inch-Linear-Actuator-Adjustable-Actuator-Tor-Opener-Linear-Actuator-Motor-p-1110373.html?mmnds=search&ID=521248&cur_warehouse=UK
Electronic components	Acoustic buzzer	1	€0.35	€0.35	https://www.pollin.de/p/piezo-schallwandler-murata-pkm22epph20/5p-bu-22-mm-390124
	Adafruit Neopixel	1	€0.54	€0.54	https://www.exp-tech.de/zubehoer/led-leuchtmittel/7800/neopixel-mini-3535-rgb-leds-w/integrierter-treiber-im-weissen-gehaeuse-10er-pack
	OLED 128x64 pixels I2C	1	€5.30	€5.30	https://www.banggood.com/0_96-Inch-4Pin-White-IIC-I2C-OLED-Display-Module-12864-LED-For-Arduino-p-958196.html?mmnds=search&cur_warehouse=UK
	16mm panel mount momentary pushbutton	2	€0.95	€1.90	https://www.exp-tech.de/zubehoer/tasterschalter/5994/16mm-panel-mount-momentary-pushbutton-yellow
	10K Ohm pull-down resistor for pushbutton	2	€0.08	€0.16	https://www.digikey.de/product-detail/en/stackpole-electronics-inc/CF14JT10K0/CF14JT10K0CT-ND/1830374
	10K Ohm rotary Potentiometer	1	€2.35	€2.35	https://www.conrad.de/de/dreh-potentiometer-stereo-005-w-10-k-alps-rk0912b0-10kax2-1-st-441883.html
	1.4mm2 wires	1	€1.95	€1.95	https://www.pollin.de/p/schaltlitze-lycy-0-14-mm2-561622
Others	Male pin headers (optional)	30			
	Female pin headers (optional)	12			
	Shrink tubing (optional)				
	M8x90 screw	1			
	M8x60 screw	1			
	M8 nut	2			
	M3x40 screw	6			
	M3 nut	6			
	Total cost			€65.48	

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3D printed mounting brackets for linear actuator	PLA filament 2.85mm	37.95 EUR per 750g	220g	€11.13	https://www.innofil3d.de/produkt/pla-grey-2-85mm-750gr/					
Casing for electronics	3mm MDF	0.75 EUR per 500x250mm	1	€0.75	https://www.modulor.de/mdf-braun-unbeschichtet-3-0-x-250-x-500-mm.html					
PCBs	FR2 copper sheet single sided	2.23 EUR per 160x100mm	1	€2.23	https://www.buerklin.com/de/phenolharz-hartpapier-leiterplatte-positiv-fotobeschichtet/p/12h1191					
Desk frame	18 mm plywood	29.80 EUR per 2520x1720mm	1640x565mm	€6.37	https://www.modulor.de/pappel-sperrholz-im-zuschnitt-ca-18-0-x-max-2520-x-max-1720-mm.html					
	5mm MDF	6.40 EUR per 2070x2800mm	660x370mm	€0.27	https://www.modulor.de/mdf-braun-unbeschichtet-im-zuschnitt-5-0-x-2070-x-2800-mm.html					
	Total cost			€20.75						