

Smart Grow Controller (SGC)

SL No	Name	Description	Quantity (pcs)	Product Reference	Price/Pcs (approx.)	Alternative Reference	Price/Pcs (approx.)
1	ESP32	Espressif ESP32 WLAN Dev Kit Board Development Bluetooth Wifi	2	amazon.de	\$11.00	-	-
2	BMP388	BMP388 Digital Pressure Sensor	1	DFrobot.com	\$7.00	amazon.de	\$11.00
3	DHT22	DHT22 Temperature & Humidity Sensor Module	1	DFrobot.com	\$8.90	amazon.de	\$3.30
4	SEN0159	Analog Electrochemical Carbon Dioxide Sensor (0-10000 ppm)	1	DFrobot.com	\$48.90	-	-
5	SEN0308	Analog Waterproof Capacitive Soil Moisture Sensor	1	DFrobot.com	\$18.90	amazon.de	\$5.00
6	SEN0161	pH Sensor	1	DFrobot.com	\$29.50	amazon.de	\$32.60
7	7-Segment Display	3-Digit 7-Segment Display Common Cathode 3-Digit LED Displa	1	amazon.de	\$1.00	-	-
8	Limit Switch	Micro Limit Switch Long Hinge Roller Momentary SPDT Snap Action	1	amazon.de	\$3.80	-	-
9	Power ON/OFF Switch	Rocker Switch ON-OFF SPST 2-Pin	1	amazon.de	\$1.50	-	-
10	Rotary Potentiometer	10K Ohm Linear Taper Adjustable Rotary Potentiometer	1	amazon.de	\$4.00	-	-
11	BTS7960	High Power Double DC Motor Driver Module Board	1	amazon.de	\$9.55	amazon.de	\$6.50
12	DC Motor*	35W Mini DC Gear Motor Metal Speed Adjustable Large Torque Motor CW/CCW (12V 150rpm)	1	amazon.de	\$48.55	-	-

13	Energy Meter for rotary motor	Energy Meter for Rotary Motor	1	amazon.de	\$13.00	-	-
14	Energy Meter*	Electricity Control Switch (Relay) & Meter (Measure Power)	6	amazon.de	\$13.00	-	-
15	Relay Module*			amazon.de	\$3.00		
16	Raspberry Pi	Raspberry Pi 4 Model B with 4GB RAM	1	raspberrypi.com	-	amazon.de	\$108.68
17	Power Supply	DC 5V 3A Power Supply for Raspberry Pi	1	amazon.de	\$8.90	-	-
18	Camera	Raspberry Pi Camera	3	amazon.de	\$12.68	raspberrypi.com	-
19	Camera Driver	Arducam Multi Camera Adapter Module V2.2 for Raspberry Pi 4B	1	amazon.de	\$73.00	-	-
20	Light*	Plant Lamp E27 LED, Full Spectrum Red Blue Plant Light Foldable Bulb 200 W to 500 W IP55 Plant Growing Lamp for Indoor Plants Gardening	1	amazon.de	\$69	-	-
21	12V SMPS	Power Supply Unit for Motor Control	1	amazon.de	\$17.38	-	-
22	5V Power Supply	Micro USB Power Supply 5V 3000mA / 3A Charger for Microcontroller & Sensor	1	amazon.de	\$13.00	amazon.de	\$6.89
Total Cost					-		-

Note: The components marked with an asterisk (*) may be modified based on your preference.