

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	Adafruit BMP388 - Precision Barometric Pressure and Altimeter - STEMMA QT	1	adafruit.com	\$9.00	-	-
3	SCD-41	Adafruit SCD-41 - True CO2, Temperature and Humidity Sensor	1	adafruit.com	\$48.90	-	-
4	SEN0308	Analog Waterproof Capacitive Soil Moisture Sensor	1	DFrobot.com	\$18.90	amazon.de	\$5.00
5	SEN0161	pH Sensor	1	DFrobot.com	\$29.50	amazon.de	\$32.60
6	7-Segment Display	4-Digit 7-Segment Display Common Cathode 4-Digit LED Displa	1	amazon.de	\$4.00	-	-
7	Limit Switch	Micro Limit Switch Long Hinge Roller Momentary SPDT Snap Action	1	amazon.de	\$3.80	-	-
8	Power ON/OFF Switch	Rocker Switch ON-OFF SPST 2-Pin	1	amazon.de	\$1.50	-	-
9	Rotary Potentiometer	10K Ohm Linear Taper Adjustable Rotary Potentiometer	1	amazon.de	\$4.00	-	-
10	BTS7960	High Power Double DC Motor Driver Module Board	1	amazon.de	\$9.55	amazon.de	\$6.50
11	DC Motor*	35W Mini DC Gear Motor Metal Speed Adjustable Large Torque Motor CW/CCW (12V 150rpm)	1	amazon.de	\$48.55	-	-

12	Energy Meter for rotary motor	Energy Meter for Rotary Motor	1	amazon.de	\$13.00	amazon.de	\$4.00
13	Energy Meter*	Electricity Control Switch (Relay) & Meter (Measure Power)	6	amazon.de	\$13.00	-	-
14	Relay Module*			amazon.de	\$3.00		
15	Raspberry Pi	Raspberry Pi 4 Model B with 4GB RAM	1	raspberrypi.com	-	amazon.de	\$108.68
16	Power Supply	DC 5V 3A Power Supply for Raspberry Pi	1	amazon.de	\$8.90	-	-
17	Camera	Rasberry Pi Camera	3	amazon.de	\$12.68	raspberrypi.com	-
18	Camera Driver	Arducam Multi Camera Adapter Module V2.2 for Raspberry Pi 4B	1	amazon.de	\$73.00	-	-
19	Spectrum Plant Lamp	Roleadro 45W/75W LED Plant Grow Lamp for Indoor Plants Gardening	1	amazon.de	\$30	-	-
20	12V SMPS	Power Supply Unit for Motor Control	1	amazon.de	\$17.38	-	-
21	5V Converter	Yizhet LM2596 DC to DC Buck Converter, 3.0 - 40 V to 1.5 - 35 V Power Supply Step Down Module	1	amazon.de	\$8.00	amazon.de	\$6.89
Total Cost					-		-

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